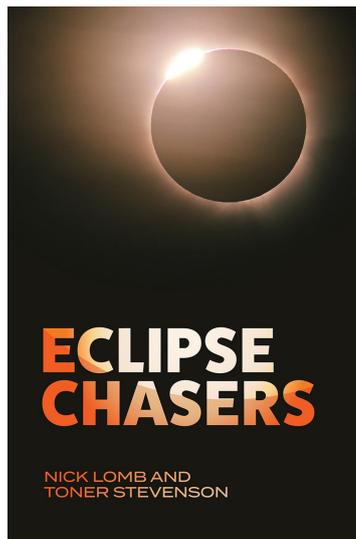


Reviews

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Nick Lomb and Toner Stevenson (2023)

Eclipse Chasers,
CSIRO Publishing,
Clayton South. ISBN:
9781486317073, \$39.99.

A total solar eclipse of the Sun is an incredibly rare event, requiring the perfect alignment of the Earth, Moon and Sun, so that the Moon blocks out the light of the Sun. Any given location on Earth will experience one roughly every 400 years, so most people are lucky

to see a single event in their lifetimes. People around the world have observed these events for thousands of years, and in recent times they have become very popular. In April 2023, the town of Exmouth, Western Australia was the only place in Australia to see a total solar eclipse, and visitors swarmed to view this special sight. Viewers of the eclipse included professional and amateur astronomers from around Australia and the world, including dedicated ‘eclipse chasers’ who plan for travel to view these events for years in advance. While the 2023 eclipse was visible only to a tiny area of Australia, over the next fifteen years there will be four further total solar eclipses crossing the country. The book *Eclipse Chasers* hopes to inspire us to view one of these upcoming eclipses, with a warning that the first experience of an eclipse often leads to a deep desire to view many future ones.

Eclipse Chasers is written by Nick Lomb and Toner Stevenson, with chapters contributed by Duane Hamacher, Uncle Ghillar Michael Anderson, Melissa Hulbert, Kirsten Banks, and Geoffrey Wyatt, and is published by CSIRO Publishing. The first chapter—‘Why observe eclipses’—is by Stevenson, and sets the scene for the rest of the book. Viewing an eclipse is more than just seeing the Sun and its faint corona,

and the ecological effects on plants and animals are described as a highlight of the experience. Cultural depictions of eclipses are also described, leading into the second chapter—‘Solar eclipses in First Nations traditions’—by Hamacher and Anderson. While many people know total solar eclipses were seen by ancient Western cultures as an omen or a message from the supernatural, the authors of this chapter share knowledge of the First Peoples of Australia, who tell stories of the Sun being covered by the Moon, showing deep scientific understanding of the true nature of an eclipse. A highlight of this chapter is the knowledge shared by Euahlayi Elder and Senior Law Man Uncle Ghillar Michael Anderson, including the story of Yhi (the Sun) and Bahloo (the Moon). Giving Indigenous knowledge holders the space to share their own stories follows the path of 2022s *Sky Country* by Gomerioi astrophysicist Krystal di Napoli and Gamilaroi astrophysicist Karlie Noon.

Lomb takes over for the next two chapters, detailing the first two total solar eclipses to occur in Australia after European settlement, in 1857 and 1871, and a series of three in the early 1900s. A fascinating part of this chapter is the development of astronomical technology and techniques that feel completely mundane in today’s world. For the 1857 eclipse, visible from Sydney, the science of solar eclipses was in its infancy, and following new developments such as advances in photography, spectroscopy, bigger telescopes, more accurate timing of the eclipse’s beginning and duration was a true delight. Lomb uses the records of observers to add colour to the accounts of these expeditions, emphasising the highs and lows of each in spectators’ own words. The photographs and illustrations also capture the difficulty of these expeditions—the 1871 event in far North Queensland required heavy equipment to be taken by ship, and a makeshift observatory constructed on an island off the coast of Queensland—and seeing the scale of the camp is impressive!

Historical depictions of eclipses continue in the next chapters, by both Stevenson and Lomb. The 1922 eclipse allowed for a test of the at-the-time new theory of relativity, and while I was familiar with the experiment, the authors do

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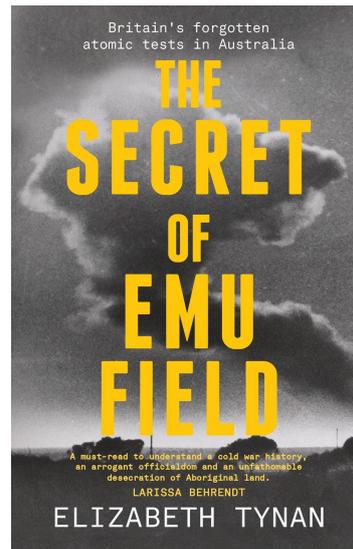
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a marvellous job of detailing how difficult these observations were to take. The short duration of totality (never more than seven minutes, and usually between two and three minutes); variety of different observations taken feels like a whirlwind while reading, and the success of the experiment a real relief. Also interesting is the changing attitude toward viewing a solar eclipse from the public. While the 1857 eclipse, seen from Sydney, was observed by the public, and the 1922 eclipse crowded the town of Goondiwindi, Queensland, in 1973 the public were informed not to view the eclipse, and instead to watch it on television where it would be safer. The potential that was lost for the public to be inspired by this eclipse, which travelled over the second-most populous city in Australia at the time, is a poignant end to chapter six.

One of the strengths of the book is building a sense of ‘connection’ between eclipse watchers. The final two chapters detail contemporary experiences of solar eclipses, and preparations for viewing upcoming ones in 2028, 2030, 2037 and 2038. The sense of celebration for a successful viewing is certainly inspiring, and the sadness of a failed event due to weather is palpable. Kirsten Banks’ description of the physics of a solar eclipse feels a little out of place near the end of the book, since the focus of the book is not necessarily on the ‘why’ of solar eclipses. Missing is a description of why viewing the Sun with your eyes is so dangerous—despite exhortations in each chapter to use eye protection, the reason for this is not given in detail, and would have been a useful addition to the final chapter on preparing for eclipses. Nevertheless, those who are eager to see their first total solar eclipse in the next decade will find a wealth of information here, and a deeply engaging story of scientific discovery and human endeavour. Your reviewer is looking forward to viewing the 2028 eclipse from Sydney, and preferably from Sydney Observatory, just like the observers in 1857!

The author declares no conflicts of interest.

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Elizabeth Tynan
(2022) *The Secret of Emu Field: Britain's Forgotten Atomic Tests in Australia*, UNSW Press, Kensington. 384 pp. ISBN: 9781742236957, \$34.99.

Seventy years ago, in October 1953, the United Kingdom conducted two nuclear tests at Emu Field, an isolated claypan in the desert of South Australia. Operation Totem was part of a wider British nuclear testing program, which saw twelve atomic weapons tests in Australia

1952–7, and a further nine nuclear tests in Kiribati 1957–8 to develop more powerful thermonuclear weapons.

In *The Secret of Emu Field*, Elizabeth Tynan details the health and environmental consequences of Operation Totem, with tragic impacts for Indigenous Anangu People and the civilian and military personnel who staffed the test sites. She notes ‘the wrenching irony and tragedy of Operation Totem for both the Aboriginal people and the military personnel caught up in the tests were that the harm was caused in pursuit of technology that was soon to become obsolete’.

This study complements Tynan’s previous history *Atomic Thunder: the Maralinga Story*. Her comprehensive account of atomic testing at Maralinga during Operation Buffalo and Operation Antler was awarded the Prime Minister’s Literary Award for Australian history and the CHASS Australia Prize in 2017.

One of the important features of Tynan’s research is the use of archival documents to highlight the knowledge of scientific and military staff at the time of the tests. However, her work has been hampered by the 2018 withdrawal from the United Kingdom’s National Archives of key files about British atomic testing in Australia. The Cold War secrecy that surrounded the tests and their after-effects in the 1950s continues to this day.

With Britain’s post-war nuclear ambitions constrained by American fears of Soviet espionage, the United Kingdom’s atomic and hydrogen bomb tests in Australia and Kiribati were crucial for Britain’s status as an imperial power. Tynan investigates the complex interactions between the United States, United Kingdom and Australia, interrogating the interplay of state secrecy, geopolitical gamesmanship and technological determinism that drove the tests forward, despite safety risks.

She profiles the key boosters of the project, including Sir William Penney, physicist Ernest Titterton, and Churchill’s chief scientific adviser, Frederick Lindemann, the first

Viscount Cherwell. Despite his involvement in the World War Two Manhattan Project, Penney could not gain access to United States' nuclear test sites in Nevada or the Marshall Islands for the development of Britain's nuclear arsenal. Instead, the United Kingdom scientist received significant support from the Menzies government in Australia, with the Woomera Rocket Range seen as a vast, empty space suitable for nuclear testing.

At the time, a financially and politically weakened United Kingdom government was reliant on support from Commonwealth countries like Canada, New Zealand and Australia for the development of its nuclear arsenal. Tynan condemns the casual way the Menzies government allowed Britain to use 'a tiny slice of a vast swathe of beautiful and wild central Australian territory' for nuclear testing, noting 'the fact that this pristine land was so casually handed over to a foreign power to test weapons of war speaks volumes about the particular bonds of colonialism'.

Tynan presents the isolated test site as 'small and temporary and ephemeral, almost a desert mirage', with low rainfall, high heat, dust and unpredictable winds. In the rush to develop atomic weapons, the testing facilities were quickly thrown together, in an area traversed by Indigenous People and near to communities within range of plumes of radioactive fallout.

The rush to hold the tests in October ignored the implications for local communities. Indigenous Anjangu were moving around the area's waterholes during dingo-pup hunting season and Tynan argues that 'the callous disregard the British displayed towards the local inhabitants of the region had the same effect as if they had overtly sought to use Aboriginal people as experimental subjects'.

The United Kingdom's scientific team misjudged the yield of the two Totem tests, and 'the meteorology at the site was not up to the task of managing the complex process of predicting and tracking atomic clouds—both Totem clouds went rogue once they had been detonated'.

It was only decades later, at the 1985 McLelland Royal Commission, that the Australian government would begin to address the full impact of British nuclear testing on Yankunytjatjara and Pitjantjatjara Peoples living at Wallatinna, Mintabie, Mabel Creek and other villages.

The late Yami Lester was ten years old when the Totem 1 test was conducted. Stricken with blindness, decades later he gave crucial testimony to the Royal Commission about the fallout, dust and 'strange black smoke... shiny and oily' that covered his home at Wallatinna. In his 1993 autobiography, Lester reported the aftermath: 'A few hours later we all got crook, every one of us. We were all vomiting; we had diarrhoea, skin rashes and sore eyes. I had really sore eyes. They were so sore I couldn't open them for 2 or 3 weeks. Some of the older people, they died. They were too weak to survive all of the sickness.'

Tynan makes a measured assessment of these reports of 'puyu' or black mist by Indigenous survivors—an issue of

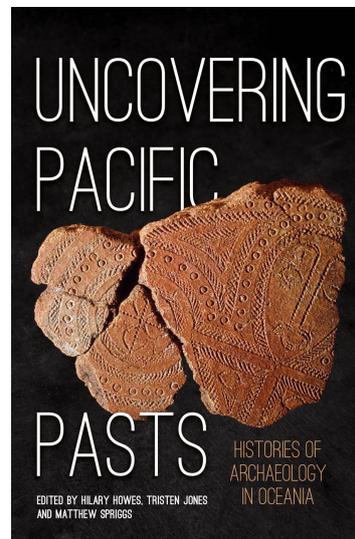
extensive dispute at the Royal Commission, with Penney and other scientists disputing any danger. Drawing on analysis by meteorologists and anthropologists, Tynan navigates the conflicting evidence, concluding 'the black mist was not just a physical phenomenon but a psychological one that shows the damage in populations altered by the possibility of unknown and unquantifiable harm'.

Drawing on her background as a journalist and science writer and current role as a researcher and academic, Elizabeth Tynan blends an intimate knowledge of the archives with an often poetic portrayal of the tragic legacies of Britain's nuclear follies in Oceania. The flow of the text sometimes slows with extensive detail, but the glossary of scientific terms, extensive referencing and comprehensive bibliography will be valued by students and researchers of nuclear history. On the seventieth anniversary of the tests, it is a crucial resource to remind people of the ongoing legacies of cold war nuclear policy.

The author declares no conflicts of interest.

Nic Maclellan

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Hilary Howes, Tristen Jones, and Matthew Spriggs (eds) (2022)
Uncovering Pacific Pasts: Histories of Archaeology in Oceania, The Australian National University Press, Canberra. 577 pp. ISBN: 9781760464868 (print), 9781760464875 (online), \$110.00.

The first day of March 2020 saw the simultaneous launch of the Uncovering Pacific Pasts exhibition at 38 different institutions around the

world, along with an online exhibition at uncoveringpacificpasts.org. The exhibition was the culmination of a five-year Australian Research Council Laureate project led by Matthew Spriggs that also involved dozens of collaborators, doctoral students, postdoctoral researchers, curators, and scholars. The project sought to create new knowledge about the development of Pacific anthropology and archaeology from its origins in European colonial knowledge to recent scholarship in a professionalised field. It also aimed to establish the history of Pacific archaeology as a distinctive field within the discipline.

Uncovering Pacific Pasts comprises the subsequently published collection of essays that also serves as the exhibition catalogue. It solidifies the establishment of the history of

Pacific archaeology while also opening up the great potential of this topic for continued research. The book goes far beyond what is often expected in exhibition catalogues. Several of the essays offer expansive visions of the field. For example, chapter four by Dotte-Sarout uses the marginalia in a single document dating to 1800 to reflect on the origins and evolutions of francophone anthropological thought. Likewise, chapter twenty by Jones and Ahlgren begins with an explanation of the role of American commercial expansionism in the establishment of Pacific collections in New England, resulting in the involvement of the Peabody Museum and Harvard University in founding anthropological scholarship in the region.

The book is divided into four sections, in roughly chronological order, though there is also overlap where scholars from one era are known to have influenced subsequent ones. Part one covers early European explorers and the development of colonial knowledge of the Pacific region and its inhabitants 1500s to the 1870s. Part two covers the earliest excavations and analyses of material culture that drove theories of origins 1870s–1910s. Parts three (1918–45) and four (1945–present) are punctuated by the end of the First and Second World Wars, respectively. Importantly, these sections demonstrate both ongoing patterns of thought and interpretation, and the role of new technologies, notably radiocarbon dating that allowed for the first (though often erroneous) absolute dates to independently compare the age of settlements across Oceania. Also featured are an introduction by the editors, summary chapters that provide useful overviews of each section (chapters two, eight, and nineteen by Spriggs and chapter twenty-six by Spriggs and Howes), and a conclusion also by the editors. Appropriately, the last word is provided by Pacific People, the community from Rakival, Watom Island, Papua New Guinea where Father Otto Mayer made the first published description of Lapita pottery in 1909 (skilfully covered by Howes in chapter fifteen).

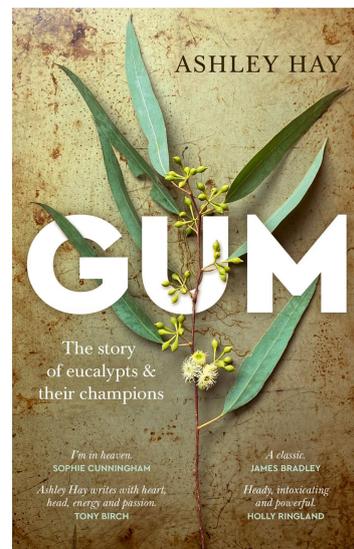
The geographic focus is on the Pacific generally, often blending into Australia and Southeast Asia, demonstrating the longstanding connectivity of scholarship within these regions. The narrative makes reference to scholars who will be well known to those with a background in Pacific archaeology, such as Katherine Routledge (Van Tilburg, chapter eighteen) or Roger Green (Sheppard and Furey, chapter thirty-three), but also those whose contributions have yet to be widely recognised, including key chapters covering the critical work by Pacific Islanders Juan Tepano (Rapa Nui/Easter Island, covered in Van Tilburg, chapter eighteen), Ratu Rabici Logavatu (Fiji, covered in Spriggs, chapter twenty-eight), and Aurora Natua (Tahiti/Society Islands, Dotte-Sarout and others, chapter thirty). Commonly referenced fieldwork, such as the Bayard-Dominick Expeditions of the 1920s or the Southeast Solomons Culture History Project in the 1970s are covered in multiple places, as are well known institutions, from the Polynesian Society to the Bishop

Museum. But, likewise, there are many lesser-known projects and institutions brought to light through extensive research presented across the thirty-six chapters.

The book is not meant to be encyclopaedic, but it certainly can be described as comprehensive in its geographic and temporal coverage and its inclusion of diverse voices, both from the past and in its authorship. It should be of great interest to scholars not only in archaeology but also history, anthropology, and Pacific scholarship more broadly. Researchers looking for an overview of the history of Pacific archaeology and adjacent fields would find this volume an ideal starting point. It should also be noted that being published by ANU Press the book is free to download, increasing its accessibility both in and outside of academia. *Uncovering Pacific Pasts* provides a lasting contribution by demonstrating the great value of developing new understandings of how Pacific archaeology developed and continues to evolve, and has great potential to inspire further research. The last section hints at the possibilities of the history of archaeology contributing to a perceived need to ‘decolonise’ Pacific scholarship (Spriggs, chapter twenty-six). It is not a major theme of the book, but the call toward decolonisation provides a great opportunity to push the boundaries with histories that challenge established narratives of who Pacific People are, how their past is represented, and who tells the story of that past.

The author of this review was involved with supervising the University of Sydney’s contribution to the *Uncovering Pacific Pasts* exhibition, but not in the writing, peer review, or production of the catalogue reviewed here and declares no conflicts of interest.

James L. Flexner
University of Sydney



Ashley Hay (2021)

Gum: the Story of Eucalypts and their Champions, NewSouth Books, Kensington.

312 pp. ISBN:

9781742237534, \$32.99.

Eucalyptus trees are important to Australia. Almost three-quarters of our native forests and nearly half of our plantations are eucalypts. From oil to hardwood pulp (and many more uses in between) eucalypts are Australia’s iconic trees. By focussing on just one

genus, *Gum: the Story of Eucalypts and their Champions* by Ashley Hay travels through time, across the continent and

around the world. It is an exciting journey that is worthy reading for anyone with an interest in eucalypts, botany and forestry. *Gum* delves into many important themes in Australian history: First Nations dispossession, colonialism, exploration, history of science, literature, environmental protest and art on the Australian continent.

Originally published in 2002, this book was recently reissued by NewSouth. The book covers ten chapters primarily following the ‘champions’ of eucalyptus. Character driven chapters include focus on the early European collections of *Eucalyptus* by Joseph Banks and James Cook, on the explorations of Thomas Mitchell, on the extensive work of Ferdinand von Mueller, on May Gibbs and the gumnut babies that captured the nation, and later chapters on Max Jacobs who sparked the international interest in eucalyptus, and Geoff Law and environmental protest in the Styx valley. In each of the chapters we look at *Eucalyptus* from a different angle—from science to art, from boosterism to protest. In the latter chapters the rise and fall of the ‘eucalyptus craze’, the demand for hardwood pulp and the ensuing environmental protests are fascinating in charting shifting environmental attitudes in not only Australia but around the world. Eucalypts came with significant costs, in countries such as Spain and India where there was the ‘eucalypt dilemma’.

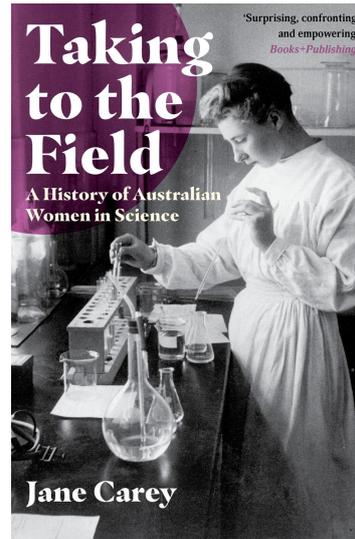
The new edition is widely updated with new data, additional stories and recent insights from scientists and artists. A highlight chapter, and new addition, is ‘The forest at the edge of time’. The chapter ‘imagines a land without its iconic trees’ and follows the story of eucalypts in light of their potential for adaptation. One of the most pleasurable parts of the book is that it takes the original great book on the history and imagining of eucalypts and continues the wonderful story two decades on with the challenges facing trees on a warming planet. The most substantive updates throughout the book are First Nations content and stories. These updates span from place names and inclusions of First Nations voices, through to additional paragraphs and new chapters.

Gum is both fascinating and beautifully written. For such a wide scope the book still bears some of the markers of its age. The post-humanist understanding of trees, an emerging field of critical importance, is largely missing. But, as Hay is keenly aware, noting in the final chapter, such a deeper narrative is more possible now than in 2002. Although there is no index, there is an extensive bibliography and there are many insights here that will be of interest to historians of Australian science.

In this book Hay shows the opportunities of historical narratives to cast a wide net and thread together a range of interconnecting elements within the binding of one book. For those interested in creative forms of telling the story of Australian science, this book remains a classic and is highly recommended reading.

The author declares no conflicts of interest.

Luke Keogh
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Jane Carey (2023)

Taking to the Field: a History of Australian Women in Science, Monash University Publishing, Clayton.

297 pp. ISBN:

9781925835410, \$34.99.

A new book on the history of Australian science, let alone one on its women, is a rare and welcome event, and warrants serious consideration by other historians. Unfortunately, we are not yet at a place in our history-writing culture

where gender has ceased to be a discriminatory factor, and general histories of science still do not include, as a matter of course, a commentary on the possibilities and achievements of half the population.

Jane Carey has taken a glass half-full approach to her subject in *Taking to the Field*, emphasising women’s *presence* in Australian science, and showing ‘what is possible for women, and for science, when they are given the opportunity to fully express their creativity and passion’. It is a laudable aim, made to ‘encourage more women to enter and succeed in science’, but also one requiring considerable effort to sustain in the face of compelling evidence of structural discrimination, and unconscious bias against women.

The book covers two and a half centuries of settler history, a period in which Carey argues women have always been part of scientific culture. Their level of engagement, however, has not followed a ‘simple progression’. She highlights a golden age beginning in the 1880s, when women were admitted to the first science degrees at universities, and scientific careers were an emerging possibility. The peak came in the 1930s and 1940s, when 30–40% of science graduates at Australian universities were women, and academic disciplines such as botany and dietetics were regarded as feminised domains.

Carey claims the discovery of this golden era took her ‘totally by surprise.’ In part she blames feminist historians for leading her to expect that women scientists were only a recent phenomenon, and for writing about them with an emphasis on ‘absence’ and ‘in terms of transgressions or exceptions.’ I wondered who she was talking about, and when I looked at her endnotes found a series of Western feminist classics from the last century, but nothing more recent. She singles out David Noble’s *A World Without Women: the Christian Clerical Culture of Western Science* (1992) as a particularly egregious example. This is surely a misreading of the author’s intent, which argues for masculine dominance in science rather than feminine absence, and

includes a chapter titled ‘Women in the world without women’.

It is difficult to get an overall view of Carey’s sources, as the book does not have a list of references, but I could not find any mention of more recent publications such as Ruth Watts’ *Women in Science: a Social and Cultural History*, 2013; or Kate Hill’s *Women and Museums 1850–1914: Modernity and the Gendering of Knowledge*, 2016. These and other works have expanded our understanding of scientific practice and of women’s participation in it. Nor do I find any reference to the developments in feminist scholarship surveyed in the 2015 issue of *Osiris*. Erika Milam and Robert Nye introduce this collection of essays, titled *Scientific Masculinities*, by arguing for an approach to the history of science that examines the ways in which ‘sex, gender, and sexual orientation are measured and serve as metaphors in society and culture.’

In reviewing the local historiography, Carey rightly observes that most publications on Australian women scientists are biographical. Her aim in *Taking to the Field* is to draw this literature together in a coherent and largely chronological narrative, identify patterns of women’s participation in different scientific disciplines, and to reflect on ways in which ethnicity and class have intersected with gender to influence the development of Australian science. These are important and welcome developments, although she is unable to venture far outside the experiences of white middle- and upper-class women, as there has been so little research on the participation of non-elite women in Australian science.

Chapter one covers ‘women and colonial scientific discovery’, where Carey claims ‘the common assumption that science in this period was something only men did’ is contradicted by ‘the significant tradition of women’s participation in amateur science that stretched across the nineteenth century.’ As Carey’s documentation includes numerous biographies and collective biographies that testify to the extent of colonial women’s engagement in botany, geology, zoology, anthropology (to which I could add chemistry and astronomy), I am left wondering who has made this ‘common assumption’?

The chapter also foregrounds the story of ‘amateur scientist extraordinaire’, Georgina King, who was, in many ways, unrepresentative of her female peers, not least because she claimed the right to be a ‘scientist’, and also called out sexist discrimination. King sits like a prickle in the historiography, and Carey echoes previous commentators in using doubts about King’s scientific conclusions to undermine her testimony on the way she was treated in male scientific circles. This kind of gaslighting of ‘difficult’ women in the history of science needs to be challenged, and I think King deserves better.

Responding to recent historical trends, Carey asks us to re-evaluate the scientific contributions of colonial women. As white, often elite, women, their activities ‘were entwined with

much larger imperial ambitions’, including dispossession, and theft of Indigenous places and knowledge, and the creation of a racist national identity. This is a challenge for all historians writing about Australia’s settler past, and I point to the ‘Digital Daisy Bates’ as an example of how to make historical ethnographic research available for a new generation of interpreters, including Indigenous Peoples seeking to revive their languages.

Chapters two and three deal with Australian women’s entry into professional science, beginning in 1885 when Edith Emily Dorwell was in the first, small, cohort of students to graduate with science degrees at the University of Adelaide. By the early twentieth century, women were being appointed to paid positions at universities and government scientific institutions, and they continued to expand their presence into the Second World War. Carey emphasises that there was significant public support for these developments, and a number of women experienced science as a meritocracy.

Carey has spent many hours interviewing women who began science careers between the two world wars, and also with their records, and asks us to be respectful of their ‘narrative of equality’. This group of women did not see themselves as remarkable, or as facing difficulties in finding work, and had little sense of discrimination. At the same time, Carey acknowledges they had unequal pay, faced a marriage bar, the ‘nepotism rule’, insecure work, a ‘glass ceiling’, and an earlier retirement age than men, to which I could add sexual harassment and a highly unequal share of domestic duties.

These women did not, however, tend to compare themselves to men. Having often exceeded their own expectations for a scientific career, they felt grateful for having more opportunities than most women, indeed more than most people. As Carey often repeats, they were ‘privileged white women’, but I do not think they were ‘entitled’. Rather than complaining about opportunities being taken from them, they experienced expanding career options. Nevertheless, they were alert to the risks of calling out sexism, suggesting that they were, in fact, aware of it. As botanist and geneticist Margaret Blackwood said, ‘it’s no good having a chip on your shoulder. You don’t get anywhere.’ Georgina King would no doubt have agreed with her.

Perhaps the women of this generation should be regarded as ‘woman-centred’ rather than ‘anti-feminist’, although they would not have recognised either term. Academic women scientists formed groups in the first quarter of the twentieth century to promote their interests such as the Australian Federation of University Women, and Lyceum Clubs. They worked with, and mentored, one another, and some, such as Margaret Blackwood, chose women as life-partners. Moreover, the unmarried women among them often resisted the title ‘Ms’ when it was coined in the 1970s, because they had striven to make ‘Miss’ respectable.

In chapter four, Carey breaks new ground on the participation of Australian women in the pseudo-science of

eugenics, and other sciences of social reform that sought to turn society into a 'better' place. This inevitably involves repugnant views on race, class, sexual orientation, and disability. It is difficult after knowing about the events of the Holocaust to sympathise with the eugenicist views of Marion Piddington—just as difficult, I would argue, as understanding a mid-century woman's denial of sexism from the vantage point of second-wave feminism.

The final two chapters deal with the post Second World War period. As male soldiers returned home from military service, women were expected to make way for them, and Carey argues that Australian science culture became increasingly masculinised. The number of women completing science degrees dropped and did not return to pre-war levels until the 1970s. Carey's final chapter—'A profession for men'—ends at a low point for women scientists in Australia: 'Science was

re-made to such an extent that women's earlier strong presence was all but forgotten.'

Taking to the Field confirms the presence of women in Australian science for over 200 years, and of a period in which the possibilities seemed to be greater than the impossibilities. I do not, however, see feminist historians as responsible for Carey's surprise over these findings. For me the challenge remains how to get the activities of women, and other marginalised groups, included in national histories. What will such histories look like? At the very least they will owe a significant debt to Carey and to *Taking to the Field*, but will also need to frame men's participation in science in terms of gender.

The author declares no conflicts of interest.

Sara Maroske
Royal Botanic Gardens Victoria