

Reviews

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Tony Kanellos: *Imitation of Life: A Visual Catalogue of the 19th Century Fruit Models in the Santos Museum of Economic Botany in the Adelaide Botanic Garden, a Collection of Papier Mâché Models Made by Heinrich Arnoldi & Co. Gotha, Germany (1856–1899)*. Board of the Botanic Gardens and State Herbarium: Adelaide, 2013. 384 pp., ISBN: 9780980702163 (HB), AUD \$69.00.

What place does art have in science and, by extension, in the history of science? And indeed, what place does art have in a botanic garden? These questions are prompted by the book under review, a substantial monograph of art-book-like specifications yet with a serious didactic purpose at its heart.

With thoroughness commensurate with its subject, the title says it all in this engaging story documenting a remarkable collection (commenced under the directorship of Richard Schomburgk and continued by his successor Maurice Holtze, pomological enthusiasts both). In essence, the German Arnoldi company supplied Adelaide Botanic Gardens with life-size and extraordinarily life-like *papier mâché* models of apple and pear varieties (along with a lesser number of plums, peaches, and apricots). Commencing in 1866 and then continuously received until 1899 in yearly instalments these models now form a rare and outstanding surviving collection demonstrating the diversity and significance of fruit varieties in the nineteenth century. Although George Francis, first director of the Gardens had established a museum collection (and a small building with which to house economic botany exhibits), it was his successor Schomburgk who pursued economic botany with a passion, and it was he who masterminded the jewel-box Museum of Economic Botany erected during 1879–81, to house a burgeoning collection. That Adelaide still holds 360 of a possible 456 models issued by Arnoldi—amongst the best

surviving ‘pomological cabinets’ worldwide—demonstrates the wonder of this sleeping beauty.

Dormant yet not discarded. How fortunate we are that the Adelaide Botanic Garden gently mothballed this collection in the early–mid twentieth century, yet did not follow the lead of many institutions in discarding such seemingly obsolete collections. And in this book, with its informative historical essay by Cultural Collections Manager Tony Kanellos, and short yet engaging introductions by Director Stephen Forbes and German-based historian Dr Jürgen Götze, the beauty and significance of the freshly displayed collection is revealed anew. Large format macro-photographs (by Paul Atkins) show each of the surviving specimens from a similar vantage point, set against dark, brooding backgrounds, reminiscent of George Brookshaw’s celebrated *Pomona Britannica* (1804–12). And the consistent viewpoint—embracing what Ruskin memorably described as ‘an almost servile veracity’ (he was speaking of his crumblingly didactic images from *The Stones of Venice*)—also makes the point that this is a *catalogue raisonné* not an art book.

Yet having said that, art triumphs over science in several respects that will trouble some pedants. The plates are sequentially numbered but there are no page numbers for the book itself (making precise citation difficult). Opinion will be divided about the dark settings of the imaging (but the images worked for this reviewer, placing the specimens as if in the dimly lit ambience of a gallery). And the luxurious format of the book (jacketed hardback with 384 pages) may be questioned in an era when scientific publishing is severely underfunded. Yet in my opinion, the Botanic Gardens of Adelaide has produced a publication of lasting value and great beauty, and its role in the venerated scientific tradition of exchange should repay the generous hand of its publisher with commensurate reciprocity.

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Ian Howie-Willis: *A Medical Emergency: Major-General 'Ginger' Burston and the Army Medical Service in World War II.* Big Sky Publishing: Newport, 2012. 487 +xii pp., illus., ISBN: 9781921941573 (HB), \$34.99.

This important and comprehensive book is one amongst very few which appraise the command and control aspects of Australia's medical war of 1939–45. A seasoned historian, Ian Howie-Willis deftly deploys sources, structure and narrative to keep *A Medical Emergency* consistently engaging. The book is edited, illustrated and produced to Blue Sky Publishing's usual exemplary standards, never faltering in its readability or historical clarity.

The author's key contentions are twofold. His first is that the Second World War represented a concatenation of crises challenging the organisation, staffing, supply and authority of Australia's Army Medical Services (AMS). His second argument is that the wartime AMS cannot be isolated from its supreme commander, Samuel Roy ('Ginger') Burston. Thus whilst it spans individual patient cases through to geopolitics and grand strategy, the text is predominantly biographical.

As an account of 'one of the great Australian commanders of World War II', Howie-Willis' monograph is unlikely to be superseded. He convincingly evokes his subject's character through surviving papers and numerous contemporary assessments, eulogies and reminiscences. Unsurprisingly for a military doctor, the text is richest where sources are most complete: Burston's First World War service and his high-level appointments in the subsequent conflict. A lacklustre student, Burston's command of a field ambulance and medical depot over 1916–7 marked him out as an upcoming military medical figure. Indeed, he remained one of the handful of doctors staffing the Australian Army Medical Corps (AAMC) reserve throughout the interwar years, later serving as Director General of Medical Services from 1942 until 1948.

But *A Medical Emergency* offers more than biography. By tracing the AAMC's First World War antecedents and patchy interwar records, Howie-Willis elaborates its hierarchies and logistical difficulties of the early war years. He ably transitions from Burston's everyday realities to wider challenges in training, deploying and

optimising a medical organisation which, at its 1942–3 peak, employed 32,000 personnel—8% of the army's total establishment. In particular, the early campaigns around the Mediterranean rim proved a formative crisis. Burston's adroit management of this contrapuntal series of retreats and advances ensured a high priority for medical supplies and staff throughout the remainder of the conflict, thereby marking him out for the top slot. Indeed, argues Howie-Willis, it was Burston's prominence as a field commander in the Middle East which made his name synonymous with the AAMC.

As the text moves into the war with Japan, however, its clarity of purpose diffuses. With Burston now responsible for the overall military, medical and political welfare of the AMS, biographical elements diminish in favour of overly detailed campaign histories. Although demonstrating a laudable engagement with the strategic and logistic aspects of Australia's Southwest Pacific operations, these summaries render the latter half of the book overly long and its medical elements too general.

This problem is most evident in discussing malaria, 'the greatest medical threat to the troops' health of the entire war'. According to Howie-Willis, Burston steered the AMS through its deepest wartime crisis not merely by coordinating research and treatment, but by prioritising field hygiene and anti-malarial discipline, from Generals to privates. Undoubtedly Burston oversaw these developments, but the author barely engages with Tony Sweeney's deeply researched argument that Neil Hamilton Fairley spearheaded the dramatic fall in malaria rates among Allied personnel over 1942–4.

Indeed, malaria receives altogether too little space in this work. In place of campaign narratives—readily available via scores of military histories—*A Medical Emergency* could productively have detailed the aetiology, treatment, operational impact and long-term sequelae of the disease. Contemporary material is certainly accessible via a plethora of records and technical bulletins, and could be read against the solid historiography of Australian, American and British efforts to contain malaria both in the Southwest Pacific and Southeast Asia. I was startled that the most elaborate description of malaria's clinical consequences emerged not from primary sources, but through a quote from

journalist-historian, Peter Fitzsimons. What of Mark Harrison's *Medicine and Victory*, or Mary Condon-Rall's careful scholarship, let alone Fairley's extensive papers at the Australian Academy of Science? Indeed, why such reliance on the official volumes comprising *Australia in the War of 1939–1945*; robust but now half a century old?

This is not to denigrate the diligent research underpinning Howie-Willis's work, nor to dispute his overall thrust. *A Medical Emergency* provides both a comprehensive biography and a jumping-off point spurring further questions about military-medical conjunctions in twentieth-century Australia. Why did so many doctors join the pre-1914 militia? What did combatant aeromedical evacuation suggest about mid-century integration of medical care and aircraft beyond hackneyed 'flying doctor' tales? What were the attitudes of serving doctors to the wartime nationalisation of medical care or post-war plans for a national medical service? One can only hope that Howie-Willis will take up this baton and fulfil this mission.

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Marcus Haward & Tom Griffiths (eds):

Australia and the Antarctic Treaty System:

50 Years of Influence. UNSW Press:

Sydney, 2011. 352 pp., ISBN: 9781742232232, AUD \$59.95.

As Marcus Haward and Tom Griffiths acknowledge in the introduction to *Australia and the Antarctic Treaty System: 50 Years of Influence*, 2011 was rife with Antarctic milestones. These included the 100th anniversary of Douglas Mawson's 1911 Australasian Antarctic Expedition; the 75th anniversary of the Australian claim to the Australian Antarctic Territory (AAT); and, most importantly, the 50th anniversary of the entry into force of the Antarctic Treaty. It is, of course, this last milestone that provided the opportunity to reflect on Australia's involvement in the Antarctic Treaty System (ATS). Boasting an impressive list of contributors, *Australia and the Antarctic Treaty System* addresses what the editors rightly characterise as 'a significant gap in Australian foreign policy history', a gap that exists despite the Antarctic's significant influence on the development of Australian science,

foreign policy, culture and even understandings of nationhood.

Employing an innovative structure, *Australia and the Antarctic Treaty System* is organised both chronologically and thematically. Beginning with the historical background to Australia's involvement in the Antarctic before the adoption of the Treaty, the book then explores sovereignty, law, science, mapping, resources, diplomacy, environment and culture. Under these themes, the contributors explore little-known episodes in Australian Antarctic history, including, among others, Australia's long history of championing the protection of the Antarctic environment, which is traced back to Australian biologist Robert Carrick's 1960 submission 'Conservation of nature in the Antarctic' to the Scientific Committee on Antarctic Research (SCAR). This paper precipitated the ATS's ongoing focus on the Antarctic environment, and the book covers the history of Australia's role in conservation measures, from the adoption of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), an agreement that pioneered an ecosystem approach to wildlife conservation and rational use, to Australia's monumental decision to reject the Conservation for the Regulation of Antarctic Mineral Resource Activities (CRAMRA) in favour of a comprehensive environmental protection agreement. The 1991 Environmental Protection Protocol, which banned mining on the continent, was a pivotal agreement that continues to shape the development of the ATS, and, as eminent former diplomat Richard Woolcott observes, 'was one of the most successful exercises in Australian diplomacy that I can recall.'

In Antarctic politics, science and diplomacy are closely linked, and the book also explores in detail the impact of the Antarctic on the history of Australian scientific research. Scientific enquiry, while perhaps less glamorous than discovery and exploration, has underpinned Australia's engagement with the Antarctic, and Australian scientists have a long history of influence in the ATS and its various scientific bodies. After the adoption of the Environmental Protection Protocol, for example, Australian officials and scientists played an instrumental role in the development of research programs looking at the impact of human activities on the fragile continent, in areas such as human-animal interaction and waste

management. Over the last fifty years, under the ATS, Australian scientists have developed a reputation for leadership and excellence.

As many of the contributors acknowledge, however, Australia's concern with both science and conservation has almost always been deeply embedded in the nation's territorial sovereignty claim to 42 per cent of the continent. Officially dating back to 1933, Australia's claim to the AAT underpins all Australian Antarctic policy, and much of the book is concerned with exploring the impact of this sovereignty claim. Based on a long history of discovery, exploration, scientific research and occupation, Australia's claim to the AAT, the book repeatedly assures readers, is both legitimate and unlikely to be challenged. The cultural impact of this sovereignty claim, and of the Antarctic itself, is the subject of the final chapter by Tom Griffiths and Sir Guy Green. A most fascinating look at changing perceptions of the continent, and its role in understandings of empire, colonialism, gender, internationalism and nationhood, this chapter raises many questions about the significance of the Antarctic to Australian politics and history, and signals an exciting new development in Antarctic scholarship.

Australia and the Antarctic Treaty System is a comprehensive history of Australian engagement with the ATS and the continent more broadly. Offering readers a gateway into this significant aspect of Australian foreign policy history, the book also raises many exciting possibilities for further inquiry. Impeccably researched, eminently readable and relevant to historians and general readers alike, the book is a significant contribution that most certainly fulfils Woolcott's hope that it 'will make a significant contribution to increasing public understanding of Australia's influence in this vital international regime.'

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Richard Aitken: *Cultivating Modernism: Reading the Modern Garden, 1917–71*. Miegunyah Press, Melbourne. vii, 215 pp., ISBN: 9780522861228, AUD \$39.99.

In the era of the e-reader it is a pleasure to pick up a paperback book as beautifully produced as

Richard Aitken's *Cultivating Modernism*. This book is richly illustrated with colourful images from a diversity of sources, magazines, gardening books, advertising materials, pamphlets and design plans. These dazzling pictures bring the modernist period sharply to life and create an important source book for designers, gardeners, historians and hipsters alike.

Overlapping with the closing chapters of Aitken's *The Garden of Ideas: Four Centuries of Australian Style* (2010), *Cultivating Modernism* takes a more focused look at five decades of modern garden making from the closing years of the First World War in 1917 to the end of Australia's involvement in the Vietnam War in 1971, a time of rapid and accelerating change across many frontiers in art, architecture, design and society both nationally and internationally. Aitken acknowledges that the Modernist Period is difficult to define and slippery when it comes to dating, 'still in living memory, yet the modernist legacy is little understood and even less appreciated'. It is likely that this book will itself change the way that modernist design is appreciated and defined in Australia.

In the Foreword to this work Philip Goad the Chair of Architecture at the University of Melbourne points to Aitken's definition of the Modernist Period as one encapsulated by a vision 'for a better world, where sun, light, air, and space might be shared by all'. A period in design and architecture that sought to deliberately create gardens as a backdrop for architecture, experimentation in design and outdoor living at both the 'high end' avant-garde and suburban context. Aitken's work considers both the international and national design context for gardens during this period pointing to the unique plants and landscapes of Australia as a special influence on the development of Australian modernist landscapes.

In this work Aitken looks at the role of science and technology, the fields of battle, the rise of town planning and the design professions, the emergence of ecology and the increasing interest in Australian native plants as contributing factors to the emergence of functional modernist gardens in Australia. This approach acknowledges that the influences on garden-making are deeper and richer than merely changing fashions. The breathtaking speed with which change occurred during this era is evident in both the range of

sources that Aitken draws on and the agents of change that are touched on only in passing in this work.

Aitken's love of both gardens and books is palpable in all his works. This love is referenced directly by the author himself in the introductory chapter 'I love books and I love libraries. For me, *Cultivating Modernism* is as much a homage to these as it is to garden-making.' Aitken's passion is evident throughout this book and is part of the reason why this work is such a joy to read, or to dip into, at your leisure and as a touchstone for deeper exploration of place-making.

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John Dargavel & Elisabeth Johann:

Science and Hope: A Forest History.

The White Horse Press: Cambridge, 2013.

269 pp., ISBN: 978-1-874267-73-7 (hb) £57.00.

John Dargavel and Elisabeth Johann's *Science and Hope: A Forest History* is a timely, useful and well-conceived history of forestry that explores the subject through its scientific development and aspirations. The book is timely because of the great challenges that the world faces in trying to manage the world's remaining natural forests in the face of pressing demands for timber, agricultural and residential land, and a wide suite of biological services, such as climate change mitigation and biodiversity preservation. It is useful because the book's goal is to make scientific history useable to a wide range of readers, especially historians and people without scientific training. Finally, it is well conceived because its organization carries readers with ease across different time periods and parts of the world.

Dargavel and Johann are established figures in the field of forest history. Both worked as foresters before turning their attention to forest history. This means they have a fluency in scientific terminology and methods than most historians whose training focused on historiography, the social sciences and language training. They use this special skill set to address what they believe (quite rightly) to be one of the central weaknesses in the now vast historiography of forestry: 'Much has been written on the origins and development of modern forestry in various countries...but there is little in the forest

history literature that explains what the science actually *is*'.

The concept of 'Hope' provides an intellectual basis to analysis the history of forest science. Forestry is 'hopeful' and 'trusting' in that forests take years, even centuries to grow, and we as humans are hopeful about the future when we undertake management of forests. This was especially true in the halcyon of forestry during the late nineteenth to the mid twentieth centuries. For many professional foresters, this hope has faded into pessimism, as the profession sees declining enrollments and the near abolition of programs in many regions of the world (such as Australia). But the authors argue that the history of the past offers hope for the future, even though we live (as we always have) in uncertain times with unpredictable futures.

The book is organized into five sections that provide the intellectual scaffolding to understand the major periodisations and thematic focus. Section one, 'Foundation', which traces the nascent origins of scientific forestry in Europe from the eighteenth to the nineteenth centuries. This section traces the 'classical' dimensions of forestry as it evolved, such as silviculture, forestry economics, measuring and regulation. Section two, 'Extension', looks at the regionalization and globalization of forestry around the world. This section covers now well-known histories, including the rise and spread of Empire Forestry, and the development of forestry in Australia and North America. 'Development', section three, examines key scientific developments, such as the genetic revolution and the use of fertilizers, which led to the rise of monoculture plantations. 'Divergence' traces the rise of three distinct movements that appeared in the 1970s: natural forest management through multiple use, protected areas, and social forestry. The final section, 'Millennium', focuses on twenty-first century issues such as climate change, indigenous knowledge and biodiversity.

Each chapter has a specific focus that is clear (e.g. 'Measuring' for chapter 1), with sub-headings that are oriented to untrained scientists. Any non-expert could easily follow the argument, evidence and organization of the chapters. Read from cover-to-cover, the book offers the most comprehensive analysis of how forestry science arose from particular conditions, spread globally, and changed over time.

Potted biographies and clear graphs, pictures and maps are peppered throughout the book, providing the reader plenty of visual stimuli to reinforce and illuminate concepts discussed in the chapters.

As befitting the authors' geographic and professional backgrounds, the book is particularly strong on its coverage of Europe (especially Central Europe) and Australia (as part of the British Empire and independent), although it provides strong coverage of other global 'hot spots', such as South Asia, North America, Brazil, etc. Any 'global' book such as this must be selective, and the authors are to be commended for their judicious selection of examples, and for offering truly global coverage.

Dargavel and Johann conclude their impressive book with an excellent conclusion 'Considering', which lays out the major issues facing the world's forests. They focus on the contradictions—between preservation and timber production, between access and authority, and between climate change agreement and disagreement—that divides the forestry community globally. Their strong coverage of present-day issues offers the readers the intellectual concepts to make their own opinions, and to see the views of various camps.

There is little to criticize in the book as it has been conceived and written. My biggest concern is that the authors' attempt to find a balance between science textbooks and historical monographs was oriented more towards the textbook than the monograph. That is to say, the book's encyclopedic scope and skillful analysis of the major themes and trends in forest history perhaps hindered the opinions of the authors, whose views seem muted. What can we make about the decline of forestry as a profession in many parts of the world? Whither the future of the world's forests?

Yet the authors cannot be faulted for their careful conclusion because they rightly leave it open to readers—and the future—to determine the future of forest science and its applications. They write, 'forest science is both enduring and transient...the findings of scientific research have accumulated in libraries and archives...they may or may not be applied; they may be altered or swept away by political power, or now overtaken by the problems of a changing climate...'. They recognize that no one paradigm

will ever be 'enough' to solve the world's challenges, but they conclude that the legacy of forestry science 'is not inconsiderable'.

This is an important book that will be used for years and decades to come. It will be a valuable repository of knowledge for non-scientific specialists, and for a generation of foresters who are now more akin to agriculturalists than the classical foresters of the nineteenth and twentieth centuries. I can only thank Dargavel and Johann for writing this timely, useful and well-conceived book.

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Lindsay Falvey: *Derek Tribe: International Agricultural Scientist, Founder of the Crawford Fund.* The Crawford Trust & Institute for International Development, 2012. 252 pp., ISBN: 9780980787542, free ebook available from The Crawford Fund <http://www.crawfordfund.org>.

Lindsay Falvey is well placed to write a biography of Derek Tribe's professional life and achievements. Having been Dean of Tribe's old Faculty of Agriculture at the University of Melbourne, as well as one of its recent historians, Falvey can speak authoritatively on Tribe's contributions to international agricultural research. The result is a book that is interesting and readable, provides a detailed account of Tribe's professional achievements, and gives some insight into the methods through which he achieved them. What is absent is Tribe's life outside of professional pursuits.

Derek Tribe: International Agricultural Scientist begins with two short chapters examining Tribe's early life, entrée to academia and move from Britain to Australia. Three longer chapters then focus on Tribe's career at the University of Melbourne and his extensive involvement with international development, especially his role in the establishment of the CGIAR International Livestock Research Institute in Africa. Four further chapters, comprising more than half the book, examine Tribe's transition from Academia to 'the real world' (chapters 6 & 7) and his eventual establishment of the Crawford Fund (chapter 9). Falvey also devotes a chapter to Tribe's 'Good Philosophy' which examines the

popular agricultural texts *Doing Well by Doing Good* (1991) and *Feeding and Greening the World* (1994).

The early chapters covering Tribe's efforts to establish himself as an academic are perhaps the most engaging as Falvey does a good job of explaining some of the strategies that Tribe used to create career opportunities and develop professional networks. The biography reveals a charismatic and determined young man who was capable of prodigious academic output. For example, by the age of 25, Tribe had completed a PhD and 20 papers including an article in *Nature*. Falvey observes that Tribe saw early on the importance of establishing and maintaining a wide-ranging network of professional colleagues. He identifies Samuel Wadham as an important mentor in Melbourne, the British colonial administrator Sir Donald MacGillivray as influencing Tribe's interest in international agricultural research, and Sir James Crawford as educating Tribe on the machinations of global development bureaucracies. Falvey shows how successful Tribe was in using these three men's networks to create career opportunities for himself and then to build research and funding opportunities for the University of Melbourne. Tribe's ability to mix with and persuade political and business élites created an impression among some in the University of Tribe as an 'English snob'. Falvey argues rather that Tribe possessed the rare academic talent of being able to convince others of the importance of his own work and thus draw together funding and political will to forward agricultural research.

The second half of the book examines Tribe's post University career in international agricultural research and development bureaucracy. Falvey provides a detailed account of the myriad of institutions (and acronyms) with which Tribe was involved and at times gets bogged down in their complex creations and evolution. What Falvey does clearly show through Tribe's post-University career is the transition within agricultural research and bureaucracy from an older style slightly paternalistic approach based on personal networks (often among the former colonial bureaucrats) and newer styles of managerialism and commercialism. Falvey's explains Tribe's ill-fated involvement with the International Development Program and Agritech during the 1980s as a consequence of Tribe's

frustrations with the 'brash new management ideology'.

Given the subtitle (and publisher) of the biography, it is unsurprising that Falvey devotes a lot of time to the creation of the Crawford Fund. Falvey envisages the Crawford Fund as the culmination of Tribe's professional career and throughout the book as he attempts, sometimes unsuccessfully, to draw parallels between Tribe's early life and needs of the fund.

In his acknowledgements, Falvey describes compiling the biography as a 'debt of honour' and acknowledges the problems this poses for objectivity. However, Falvey's account while always respectful of its subject does gently correct some of Tribe's exaggerations and understatements in the unpublished autobiography on which Falvey extensively draws. Falvey also delicately explores Tribe's somewhat acrimonious departure from the University of Melbourne in 1980 and points to the division that Tribe's international commitments provoked among some of his more Australian-focused colleagues in the Melbourne Faculty of Agriculture. Indeed, as Falvey himself notes, many people had been 'outsmarted' by Tribe throughout his career and, while Falvey suggests that most did not mind, one can read between the lines in this biography to see Tribe's entrepreneurial attitude ruffling feathers in academia, business and government.

As a biography of a prominent agricultural scientist, Falvey's work must draw comparisons to Ross Humphreys' 2000 biography of Tribe's mentor *Samuel Wadham, Scientist for Land and People*. Falvey's work is similar to that of Humphreys (who incidentally was his doctoral supervisor) in its almost exclusive focus on professional career and his avoidance of the social element of the story. Complete biography must involve both, and Falvey, like Humphreys, does fail in this regard. For example, from reading Falvey's book we know virtually nothing about Tribe's wife Charlotte or his family life and how this influenced, supported and was affected by Tribe's demanding professional commitments and extensive travel. While a figure in a different field and 18 years older, comparisons could also be drawn with the career of W. K. Hancock who, like Tribe, was heavily involved with the last stages of British colonial development. While perhaps unfair, a comparison of Jim Davidson's masterful biography *A Three Cornered Life* gives

an indication of what might have been possible with such a rich life as lived by Wadham or Derek Tribe. Humphreys' and Falvey's books are representative of recent efforts of retired agricultural scientists to write the history of their discipline, which have unfortunately produced works that lack the appropriate social context in both narrative history and biography.

Derek Tribe: International Agricultural Scientist presents the professional life of an impressive academic who combined an ability to network, efficiently research and write, communicate his research to public and élites, gather widespread funding but who also saw his role as undergraduate teacher as central to his vocation, and who remained committed to the ideas that universities should be places of teaching rather than profit. In presenting this portrait of Tribe, Falvey's biography succeeds and is a valuable book. What it unfortunately does not deliver is an account of the man himself, or of his family life and friendships.

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Thomas A. Darragh & Roderick J.

Fensham (eds): 'The Leichhardt diaries: Early travels in Australia during 1842–1844', *Memoirs of the Queensland Museum: Culture*, 7 (1) (2013), x, 1–540. ISSN: 1440-4788, AU \$40.00.

Roderick J. Fensham (ed.): 'The Leichhardt papers: Reflections on his life and legacy', *Memoirs of the Queensland Museum: Culture*, 7 (2) (2013), 541–652. ISSN: 1440-4788, AU \$40.00.

The first volume considered here consists of Leichhardt's Australian diaries, covering April 1842 to July 1844. Previously accessible only in the Mitchell Library to readers of archaic German script, Tom Darragh's translation makes them available, for the first time, to English-speakers. Since Leichhardt was an able zoologist, botanist and geologist, this is welcome news for historians of science.

Leichhardt is reasonably well-known as an explorer. However, his mysterious disappearance in 1848 has largely eclipsed the memory of his 1844–5 expedition across Australia to Port Essington and, until the 1968 publication of Marcel Aourousseau's translation of Leichhardt's

substantial correspondence, and the 1988 publication of Colin Roderick's biography, Leichhardt's earlier science-driven travels remained little-known.

'The Leichhardt diaries' record Leichhardt's observations in European-occupied eastern Australia north of Sydney. From the Liverpool Range to beyond the Darling Downs (introduced to Europeans by botanist-explorer Alan Cunningham) Leichhardt travelled along the pastoral frontier, often in Cunningham's footsteps. Leichhardt's diaries provide a rare snapshot of people, activities and landscapes in the early 1840s. He described flora, fauna, forests, pastures and farming on various soils under various rainfall patterns, and catalogued 247 (mainly tree) specimens for the Muséum d'Histoire Naturelle in Paris. Where Aboriginal Australians had not yet been completely deprived of their land, he recorded indigenous animals and plants that they hunted and gathered and names from several Aboriginal language groups (Appendix 4). Even within Cunningham's collecting grounds, much of Australia's flora had yet to receive scientific names, so it is not surprising that Leichhardt often used Aboriginal plant-names.

Geological (but not biological) terms are explained (Appendix 1). A map and tabulated latitude and longitude co-ordinates for places along Leichhardt's long route (Appendix 3) allow readers to follow his footsteps. Appendix 2 provides brief biographical information about people he met along the way.

Extensive studies in Europe equipped Leichhardt to make informed observations across a huge range of disciplines—linguistics, anthropology, zoology, botany, geology, agriculture and meteorology—and influenced his desire to document Australia's natural history, rather than a narrower field. His diary observations confirm his competence across biological and earth sciences. Now Leichhardt's diary descriptions can readily be compared with the records of his several thousand extant plant collections provided by Australia's Virtual Herbarium.

Leichhardt's diaries reveal a curious observer, whose experiences in 1842–4 prepared him to explore beyond the European invasion frontier and, had he lived, to document Australia's natural history.

The second volume considered here contains six interpretive essays that focus on the

content of the Leichhardt diaries, including their cultural context (Angus Nicholls), social observations (Geoffrey Ginn), geology (Darragh), botany (Rod Fensham), megafauna (Fensham and Gilbert Price), and Aboriginal linguistics and ethnography (Anthony Jefferies).

Darragh's essay provides an overview of Leichhardt's geological education via lectures, museum collections and field excursions in Europe, and identifies Lyell and von Humboldt as major influences. This is followed by a description of the state of Australian geological knowledge in 1842, Leichhardt's interactions with Thomas Livingstone Mitchell and William Branwhite Clarke, and his application of European knowledge to Australian geology. Darragh argues that Leichhardt's remarkable geological work remained virtually unknown in Australia, because his findings were published posthumously in German in little-known publications, and because none of his geological specimens remained in Australia.

Leichhardt sent fossil bones from the Darling Downs to London anatomist Richard Owen (who introduced Leichhardt to Mitchell), and dared to challenge Owen's taxonomic determinations. The essay by Fensham and Price considers the importance of Australian megafauna in mid-nineteenth-century scientific discussions about fossils and evolution, and Leichhardt's unacknowledged identification of Owen's *Diprotodon* as a marsupial, not a pachyderm.

Leichhardt's botany is discussed in Fensham's essay. It identifies as important influences the French botanists Adrien de Jussieu and Adolphe Brongniart (who would later purchase Leichhardt specimens), but overlooks Leichhardt's Göttingen lecturer, Friedrich Bartling, who devised a natural system for plant classification. Using correspondence and diary entries, Fensham outlines Leichhardt's Australian botanical endeavours, highlighting his use of Aboriginal guides to provide information and specimens, and his Humboldtian approach to collecting data on the factors that influence vegetation patterns in a way that presages ecological interests and investigations.

On Leichhardt's untimely death, the numerous species and vegetation descriptions, and distribution records in his diaries remained unpublished. Thus Leichhardt could not contribute directly to plant taxonomy, or to

'phytogeography' (the pre-ecological study of vegetation patterns and species distributions pioneered by Humboldt). Nevertheless, as Fensham does not seem to realise, in 1860, Ferdinand Mueller 'borrowed' Leichhardt's herbarium specimens from the Australian Museum in Sydney. He published a number of new taxa based on them, and included many specimens in the shipments to George Bentham for the preparation of *Flora australiensis*, which resulted in numerous references to Leichhardt in this important flora.

The translated Leichhardt diaries, appendices and essays are welcome outcomes of substantial effort. Their publication will, as Fensham hopes, invigorate renewed interest in Leichhardt. The diaries will also, I hope, stimulate further research, especially in botany. A comparison of Leichhardt's plant collection records with his diary descriptions would reveal the accuracy of his descriptions. A comparison of his species and vegetation distributions with their current distributions would be instructive of the impact of European settlement. Other botanists' publication of names and descriptions of species whose earlier descriptions by Leichhardt remained unpublished has effectively quashed Leichhardt's taxonomic potential, but the use of other information in his diaries may enhance his botanical legacy.

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Philosophical Studies
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W. M. Goss: *Making Waves: The Story of Ruby Payne-Scott: Australian Pioneer Radio Astronomer*. Springer-Verlag: Berlin, Heidelberg, 2013. 262 pp., illus., ISBN: 978-3-642-35752-7, 32,12 €.

Intended for the non-specialist reader, this book is a simplified version of *Under the Radar the First Woman in Radio Astronomy: Ruby Payne-Scott* (2009) by W. M. Goss and Richard X. McGee. Equipped with their expert knowledge of radio physics and their passion for capturing the history of Australia's pioneering work in this field, astronomers Goss and McGee are responsible for bringing out from 'under the radar', with meticulous detail, the brilliant academic career and inspiring personal story of Ruby Payne-Scott, Australia's first female radio astronomer.

Keen to share the story of Ruby Payne-Scott with as many as possible, Goss has written this second book in the same engaging style as the first, but with less technical detail and with additional introductory chapters on solar physics and radio telescopes. Like *Under the Radar*, this book documents the history of the early days of radar astronomy in Australia and the scientific career of Ruby Payne-Scott. These two narratives are told for the most part in chronological order with an impressive attention to detail. Both are held together throughout the book with wonderful interspersed stories about working at CSIRO (then known as CSIR – Council for Scientific and Industrial Research) and the challenges Ruby faced in being a woman scientist in that period. This creates underlying themes in the book of leadership style, bureaucracy, and the social norms of Australian society in the 1940s and 1950s.

Keen radar enthusiasts, physicists and astronomers may prefer to keep with Goss's first book, *Under the Radar*, and revel in its historical and scientific detail and thorough referencing. The hardback cover and black-and-white only photos suit this more technically demanding read. For everyone else, I recommend reading *Making Waves* instead. Printed in paperback, and with colour pictures, the book even looks easier to read. While Goss has opted to cut back on some of the detail on astronomy and radar research, he has retained the detail on Ruby herself. This has the effect of bringing greater focus to Ruby the person, a focus she thoroughly deserves. Ruby's colleagues are also brought more to the fore, particularly Ruby's boss, Dr Joe Pawsey, the 'father' of radio astronomy in Australia.

As a mother and women radio astronomer working in CSIRO I identified with both books. I was confronted by reading about the blatant discrimination Ruby was subjected to in the workplace simply because of her gender and was at the same time inspired to see how she challenged this discrimination head on (for example, the rule against married women at CSIRO maintaining permanent employment status). These controversies have been documented in many other publications, which Goss references in both books.

It is fitting that Goss has structured *Making Waves* with detailed information starting first on

Ruby's ancestors and her early childhood and education, followed by her successful scientific career spanning some 20 years from 1930 and then finishing with the successful careers of her children. At the end of her professional career in 1951, when she was only 39 (and in the absence of accessible daycare and maternity leave), Ruby is quoted as saying 'Obviously I can't do two things at once ... I can't do my job properly and look after young children'. No, we can't Ruby, and you did an amazing job with both.

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Holger Stoecker, Thomas Schnalke & Andreas Winkelmann (eds): *Sammeln, Erforschen, Zurückgeben? Menschliche Gebeine aus der Kolonialzeit in akademischen und musealen Sammlungen*. Ch. Links Verlag: Berlin, 2013. 525 pp., ISBN: 978-3-86153-745-8 (PB), €49.90.

For Germany, the year 2014 simultaneously marks the centenary of the First World War, 75 years since the outbreak of the Second World War, and 25 years since the fall of the Berlin Wall. All three anniversaries commemorate events both more recent and—for most Germans—more immediate than the colonial activities of the late nineteenth and early twentieth centuries: a compelling explanation of why Germany has, in general, been slow to confront its colonial past.

Now, however, there is movement at the station. Following early repatriations of *toi moko* to New Zealand in 1991 and 2006, four separate handovers of ancestral remains to Namibia and Australia have taken place since 2011 alone. The Charité University Hospital in Berlin, the returning institution on three of these occasions, has taken a pioneering role in German repatriation efforts. *Sammeln, Erforschen, Zurückgeben?* (Collecting, Researching, Returning? Human remains from the colonial era in academic and museum collections) brings together the results of a conference held in October 2012 as part of the three-year Charité Human Remains Project. The volume's contributors include museum professionals, physical anthropologists, ethnologists, medical historians, ethicists and jurists, many of whom were also involved in compiling the German Museums Association's recently-published *Recommendations for the Care of*

Human Remains in Museums and Collections (2013).

As the title suggests, the chapters in *Sam-meln, Erforschen, Zurückgeben?* are grouped thematically into three sections. 'Collectors and Collections' addresses the sociocultural contexts of colonial-era collecting, the histories of major German collections, and the activities of individual collectors. 'Methods of Provenance Research' describes the advantages and shortcomings of various techniques and approaches—biological/anthropological, ethnological, and historical—available to researchers wishing to clarify the origins of ancestral remains. 'Restitution' combines theoretical perspectives on repatriation with case studies of specific instances in which ancestral remains were returned to their communities of origin. English-language summaries of each chapter appear on pages 494–508.

Chapters dealing with Aboriginal and Torres Strait Islander ancestral remains will be of particular interest to Australian readers. These include, in the first section, Birgit Scheps's chapter 'Skeletons from Queensland – the collector Amalie Dietrich', and Daniel Möller's description of the Alexander Ecker Collection in Freiburg. In the second section, Andreas Winkelmann and Barbara Teßmann outline provenance research relating to a certain Harry Cocke from Coonamba Station, Tarcoola, whose mortal remains have since been returned by the Charité to their Traditional Owners; Maria Teschler-Nicola discusses the provenancing and repatriation of Indigenous Australian and Khoi-San ancestral remains in Vienna's Natural History Museum. Three chapters in the third section—Sarah Fründt's examination of international repatriation movements, Anne Wesche's overview of existing recommendations for the care of human remains, and Estella Weiss-Krejci's discussion of repatriation as an instrument of cultural and national identity politics—address Australian examples in a comparative context.

Contributors are divided on the fundamental question of whether or not to repatriate. Some are supportive: the abovementioned chapter on Harry Cocke concludes by acknowledging 'the urgent need ... of today's Indigenous Australians to know that their ancestors are buried in their home lands'. Others are sceptical.

Barbara Teßmann and Bettina Jungklaus argue for the preservation of historically acquired anthropological collections on the grounds of their value for modern scientific research; Markus Schindlbeck notes that in some cases indigenous groups played 'an active role in the purchase and exchange of human remains', and suggests that contemporary repatriation debates show 'elements of a millenarian movement' (for an alternative perspective on this point, I recommend Michael Pickering's 2008 essay 'Lost in Translation', available from www.borderlands.net.au).

Readers, no doubt, will have their own views. What is important in the current context is that the varying opinions of key stakeholders in German repatriation debates are clearly and openly expressed. Without the honest exchange of views as a basis for further discussion, no progress is possible. The Charité Human Remains Project and the contributing authors of the present volume are to be congratulated for providing such a basis.

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Notices

Mark Hutchinson: *A University of the People: A History of the University of Western Sydney*. Allen & Unwin, 2013. 272 pp., ISBN: 9781743312902, AUD \$39.99.

Founded in 1989, as a federation of colleges, the University of Western Sydney is now a unified institution with more than 40,000 students. Hutchinson overlays this story of the University's progress over a larger narrative of 'the swings and roundabouts' that have beset higher education in Australia.

Jennifer M. T. Carter & Roger Cross: *Ginger for Pluck: The Life and Times of Miss Georgina King*. Wakefield Press: Kent Town, SA, 2103. 304 pp., ISBN: 9781743051719 (pbk), AUD \$29.95 (inc. GST).

Based on an unpublished autobiography, this book retells the story of a woman who denounced the discrimination she experienced while trying to establish a scientific career at the end of the nineteenth century.