Book Review Section

Compiled by John Jenkin*

Tim Bowden, *The Silence Calling: Australians in Antarctica 1947-97 – The ANARE Jubilee History*. Sydney: Allen & Unwin, 1997. xxvii + 593 pp., illus., $59.95.

To judge by the Sunday papers, Antarctica is today a tourist destination; less than twenty years ago, it was the least known region of the earth. Since Aristotle and Ptolemy, the lure of a great unknown southern continent has stirred the human mind. Today the place has lost nothing of its appeal to adventure, and to science. The thrill of discovery – and of that special sense of self-discovery that seems to accompany polar travel – has remained undiminished two centuries after Cook's second voyage began the modern era of scientific encounter with the windiest, highest, driest, coldest and most silent continent on earth.

For much of this time, Antarctic exploration has been chronicled in stories of heroism and tragedy, in a spirit that combined the ambitions of strategy and science. Today it is a museum of natural history, holding in its oceans and beneath its surface secrets vital to our understanding of global change. It has lost none of its dangers and none of its hold on the imagination. Logistics continue to dominate Antarctic thinking.

Australians sometimes forget Australia's remarkable and continuing presence in a place so far removed from everyday life, despite the existence of a Federal Territory that is approximately the size of Australia itself. To remind us of this legacy and responsibility is the task and achievement of this handsome volume, a salute to the fiftieth anniversary of the Australian National Antarctic Research Expedition (ANARE), and an introduction to Australia's political and scientific engagement with the region.

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Historical Records of Australian Science, 12(4) (December, 1999)

If few fail to be fascinated by the eerie silences and irenic grandeur of the ice, fewer will resist this book of over 500 pages, commissioned by the Antarctic Division and written by Tim Bowden, noted ABC broadcaster and self-confessed 'Antarctic recidivist'.

As a commemorative survey, this volume traces the post-war history of Australia's scientific presence, from what Bowden calls the 'testing times' of exploration and discovery in the late 1940s, through the 1970s, to the no less testing times of current political and environmental debate. The pursuit of science in Antarctica historically links the interests of nationalism and geopolitics. Equally, Antarctica is the first territorial expression of international scientific cooperation. These twin themes recur throughout the history of ANARE and give it shape. The story is written in suitably Homeric style, pausing frequently to reflect upon changing mentalities and methods, and upon logistic choices and rival jurisdictions. It traverses a region of science and politics dominated by powerful personalities. It dwells upon the culture of explorers who, making the best use of inadequate equipment and limited budgets, somehow perservered and succeeded in wresting knowledge from an uncompromising nature of unsurpassed beauty.

Readers of this journal should come to Bowden's account knowing that Australians had a substantial 'prehistory' in the Antarctic, dating from the late 1880s, when George S. Griffiths and Baron von Mueller led in pressing for colonial surveys of the region. An imperial vision stirred Britons and Australians to pre-empt rival claims by regional and European powers, and even where romance was superseded by science, Douglas Mawson enshrined its legacy. Then in 1936, the Australian Antarctic Territory (AAT) was established – of which, since 1947, the Antarctic Division has been the scientific custodian and de facto representative in the councils of international science. But even at the moment of its birth, as Bowden wrily notes, the Antarctic was

'not in the forefront of the Australian government's postwar thinking'. It was for familiar strategic reasons that in 1946 the Department of External Affairs proposed a naval expedition 'to maintain Australian and British interests' by establishing stations on southern islands and then on the Antarctic continent itself. As conventional 'occupation' was impracticable, science became the signifier of sovereignty. Whatever may be said about Bowden's heroic style, it is undoubtedly accurate to view the Division's early history as an epic of almost constant struggle, from which leaders emerge with almost mythic reputations.

The research programme began along the 6000-km coastline of the AAT, with weather and cosmic-ray studies linked with the University of Melbourne and led by Phillip Law, who in 1948 succeeded the first Director, Stuart Campbell. The life sciences were less favoured because no Australian university could support studies of Antarctic biology. Vital links with university science remained incomplete and were to remain problematic for the Division, but science was, and remained, the Division's first responsibility.

In 1948, three parties were sent south, one to Macquarie Island, one to reconnoitre sites for a continental station, and a third to a secret destination – later identified as Heard Island – included at the request of the British to head off American claims. The legendary LST 3501, that first went to (and claimed) Heard and then Macquarie Islands, was 'chosen more for its flat-bottomed cargo capacity than for its ability to corkscrew through the southern seas'. Whether the LST would crack apart was a matter of constant concern; collecting data could become incidental to the business of staying alive and sane. 'You have to be lucky', Law aptly entitled his autobiography, and repeated observances of the unexpected disaster become a subtext to the narrative.

Bowden tells of situations where leadership was quickly demonstrated or quickly lost. He recounts near-fatal accidents, rudimentary medical treatment and, in one quixotic case, a circumcision. In the early expeditions, resupply by air was at best difficult and in winter impossible. Not even a proper ship could be regularly relied upon. In 1953, the government leased the Danish vessel, the *Kista Dan*, which served faithfully for many years, but not owning a purpose-built ship remains an issue today. In 1954, expeditioners reached the Antarctic continent and the Division exchanged its Heard Island base for what became Mawson Station, on the western extremity of MacRobertson Land.

By 1957, the Division had launched an ambitious research programme, but it had only one base on the coastline. Bowden describes this tenous hold, but also suggests that terrors of wind, sea and ice could pale before the hazards of political infighting in Canberra. From birth, ANARE was the ward of several departments: formally part of External Affairs, its science paid for by the CSIRO, the RAAF handling its procurement and the RAN its victuals. Reconciling the interests of these departments and the Treasury proved a formidable task, at which Law proved a master. Miraculously, Antarctica remained above the Cold War. The climacteric International Geophysical Year of 1957-58 transformed Australia's position in the region and elevated the status of Antarctic science. Using the timely argument that Australia must offset Russian incursions into the AAT, Law persuaded Canberra to establish a second station; and when, in 1959, the Antarctic Treaty suspended national territorial claims, replacing the discourse of political sovereignty with the language of science, the path was open to international co-operation, not only in science but also in mineral and marine conservation.

Indirectly, these events helped put the Division on the map and gave Law fresh opportunities; for example, to begin ozone measurements, already a matter of global concern. Bowden leaves us in no doubt of his sympathies towards Law's dealings with departments that always held the upper hand. In the 1960s, wary of creating 'yet another scientific bureaucracy', Canberra specifically forbade the Division from developing 'its own capacity in scientific research'. Negotiations with the University of Adelaide's Mawson Institute failed when the university declined to fund research in oceanography and marine biology that could have complemented ANARE's work in meteorology and geophysics.

Throughout the 1960s, in subtle and not so subtle ways, the Division was reminded of its Cinderella status. Bowden records that ANARE staff were eventually paid at CSIRO levels, but its Director was not. In

1974, the Labor Government established an advisory committee that issued the first Green Paper on Scientific Research in Antarctica. In 1976, women first visited the bases, a step that eventually led to the first woman wintering in 1981. Its budget remained modest in proportion to its value to national prestige. Canberra continued to view the Division with benign neglect; over the period, it was moved between three different ministries.

In the early 1980s, the Division was moved from its home in Melbourne to a new $8.9M facility outside Hobart. The Department of Science and Technology conducted a Joint Management Review that recommended the creation of a new advisory body and procedures designed to 'drag ANARE, kicking and screaming if necessary, out of an era of perceived *ad hoc* decision making and disparate scientific projects', to a 'system of accountability for program performance in terms of scientific merit, relevance, and results achieved'. This resulted in changes to its procedures, the dismissal of its director, and the appointment of a manager to 'increase Australia's international Antarctic standing and the amount of ANARE science being done'.

These 'turbulent times' were accompanied by many reforms, including VIP visits, the construction of modern facilities, improved communications at the three stations, and attempts to stretch research funds by increasing summer trips. But personalities and visions clashed, procedures were questioned, and inquiries followed. In 1988, the manager was replaced. To the corporate pressures were added new global responsibilities, especially those associated with proposals to designate Antarctica as a 'world park'. As the Division moves towards 2000 and reviews its long trajectory, Bowden revisits the views of the current Director, Rex Moncur: that insofar as the interests of Australia lie in Antarctica, so the Treaty system and the research programme remain of enduring importance to Australia.

Today, judging from Bowden's account, the Division feels beleaguered, even besieged, by changing expectations and repeated cost-cuttings. Over the last fifty years, its culture has changed perceptibly – and in the last ten years, dramatically. Its philosophy has shifted from exploration to conservation; from the regulation of international exploitation to international environmental surveillance. Women are now expeditioners and station leaders. The aura of struggle, of personal fitness, survives, but the lone individual (and his dogs) has given way to team work and technology. Just as science is central to understanding global climate change, so science is vital to protecting the Antarctic environment, and expeditioners are now practising environmentalists. Geophysics shares time with biology and the consequences of human contamination, and life in Antarctica gives lessons about the ways in which human beings perform in isolated, confined spaces.

What of Antarctic science and ANARE's scientific contribution? Today Antarctica is a huge laboratory. Ironically, the treatment of scientific practices and outcomes is perhaps the weakest aspect of the book. Bowden devotes relatively little attention to the work of the scientific advisory committees, and even less to the 'quality' of science produced. He remains focused upon the long years of inventory science that the Division represents and in many ways ennobles. The book is dedicated to 'the men and women of ANARE'. Perhaps this is why he says little about Antarctic science produced by Australian researchers outside the Division. Some comparative comment – in relation to New Zealand, if not also to Britain, the United States or other consultative nations – would also have been valuable. Bowden says surprisingly little about the ways in which the Division has made use of new technology.

The veteran Antarctic leader Pat Quilty is given almost the last word: 'study of the Antarctic', he writes, 'is probably just about the most important study, on a continental basis, you can do anywhere round the world'. With this it is difficult to disagree, and Bowden's inspiring and sensitive account makes it impossible. He has produced a book of suitably epic proportions, beautifully illustrated, that does great credit to his sponsors. His message is equally clear. Australia's responsibilities are matched only by its opportunities. One hopes that Canberra remains open to the prospect and keeps its ears attuned to the silences.

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Kathleen Ralston, *Phillip Law: The Antarctic Exploration Years, 1954-66.* Canberra: Ausinfo, Department of Finance and Administration, 1998. xvii + 278 pp., illus., $39.95 pb.

Two major themes are evident in the evolution of Australia's Antarctic Division and its field arm, the Australian National Antarctic Research Expeditions (ANARE). The first was the necessity to explore the coastline (and selected hinterlands) and establish bases on Australian Antarctic Territory, while the second was to conduct scientific research there. Up until the International Geophysical Year (IGY, 1957–58), the first theme was dominant in the eyes of the Australian government. Science was tolerated in those early days because it gave a modern reason for the existence of bases. Research into upper-atmosphere physics, geomagnetism and cosmic rays gave support to arguments for 'wintering over'. The Australian Antarctic Division was in the administrative control of the then Department of External Affairs (DEA), and Antarctic treaty matters had not yet subsided as the major concern of those nations that claimed a slice or two of the Antarctic pie. In time, scientific research gathered momentum to become, today, a prime purpose for Antarctic bases.

From 1948 to 1966, Phillip Law found himself in this most important period of 'post-heroic' Antarctic history, leading to the fully blown scientific research phase. The purposes of his exploration were of a different character from those of a Shackleton or a Mawson. Some observers may judge Law's contribution by the examples set by the explorers of the heroic era, but such comparisons miss the mark: the goal posts had been moved. Law had to establish scientific bases and supervise their development over a long period. His 'hit and run' technique of coastline exploration during summers was entirely appropriate to, and indeed could be said to be demanded by, the charge he had; that is, to establish and develop bases. Law's record of achievement in this regard is remarkable, gained not only through his own personal efforts but also by those of his selection of excellent colleagues. He also had an unusual faith in the ships, the planes and the other equipment of exploration. He became involved in numerous hazardous situations, from which he was able, often with 'Law's luck', to extricate himself. Law's achievements should be gauged against the needs of his epoch. By any standards they were outstanding. He was the right man, in the right place, at the right time. Furthermore, besides his own work, he created opportunities for hundreds of other people to develop their particular fields of endeavor.

The present book by Kathleen Ralston gives us a window into Law, almost 'warts and all', and is a sequel to her book on his earlier years of Antarctic work, 1948-54. It is heavily based upon his diaries and gives a readable account of the nitty-gritty of his work. The author draws also from numerous communications to and from Law's colleagues, both inside and outside the Division and the DEA. There is an extensive reference list after each chapter. This is all very interesting reading, full of accounts of Antarctic adventures and dealings between Law, the DEA and ships' captains. The book covers both Law's part in the summer logistics and exploration operations of ANARE, and his role for the rest of each year, planning for the next twelve months. His dealings with DEA would have been much smoother if Law had not taken some of the initiatives that his tasks demanded, and if his views of his role did not sometimes conflict with those of some senior government officers. Law was fortunate in having Richard Casey as his Minister, and, with serendipity, Petrov to help ensure Casey's continuity as Minister – see the book for more on this titbit! It appears that, more than anyone else in the government or the Public Service, Casey gave Law real moral and practical support.

The book is good reading, full of adventure. It shows Law's great ability to lead expeditions, to master the skills of 'reading' the ice and weather conditions for safe ship navigation, his initiatives in exploration, and his basic humanity in the straightforward way in which he dealt with people in often very trying circumstances. Although it was not until I was about a third of the way through the book that I got any feeling that it was more than a piecing together of selections from Law's diaries, I finished the book with strong impressions of his tenacity, courage, dedication and level-headedness. Law's Antarctic exploration, integrated over nearly two decades as Director of the Antarctic Division, represents a contribution unsurpassed in its character and volume. At many points in the book there are also accounts of some of the outstanding work done by Law's closer colleagues in exploration, and there are

tributes to his wife, Nell. Their contributions were clearly of great importance to Law's success.

I looked for the place of Law's work in its historical context more broadly. Of course, this could not come out of diaries of the time; one can use the 'fast-forward' button only in the past tense. This is not a criticism of the book, but some decades later his work can be seen to have had far more consequence than could have been foretold at the time. This book provides a significant amount of historical 'raw data' from that earlier period. Kathleen Ralston has done a thorough piece of research and has come up with an excellent account of it. A number of color photos and some maps add to its interest.

From the vantage point of the 1990s, we can see, in the post-war years, renewed interest in polar science because the USA and the USSR faced each other across the Arctic, each in possession of long-range ballistic missiles. Then there was renewed interest in global science, which blossomed into the International Geophysical Year. The IGY recognized polar regions as crucial arenas of geophysical and space science. The initiation of the space age by the USSR's Sputnik in 1957, and the launching of polar-orbiting satellites, gave even more purpose to intrinsic Antarctic science. There evolved the necessity to have observatories on the ground to support satellite observations of phenomena in space, and satellite remote-sensing of the atmosphere, oceans and polar ice caps. Antarctic science is now a huge component of geophysical and space research, requiring the continuous observation of many key phenomena. Law's stewardship of the Antarctic Division coincided with the preparation and execution of the IGY and the beginning of the space age. The Antarctic was destined to play, as it is now doing, a crucial role in geophysical and space science. This led to a gradual increase in support by the government for scientific research in Antarctica. The Law years did more than could have been expected to establish our foothold in Antarctica, that allowed Australia to make many meritorious contributions to science. It is now clear that it is in Australia's self-interest to foster science in the region to our south, all the way to the pole, and in the space above it. These domains have a great influence upon our habitat and our links by space communications to the rest of the world.

Kathleen Ralston's book describes an important Australian piece of the jigsaw of this larger picture. Her book offers us the opportunity to learn much about what we owe to Australia's Antarctic expeditioners and what it takes to establish scientific observatories in hostile environments.

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R.W. Home, A.M.Lucas, Sara Maroske, D.M.Sinkora and J.H. Voigt (eds), *Regardfully Yours: Selected Correspondence of Ferdinand von Mueller, Volume I: 1840-1859.* Bern: Peter Lang, 1998. 842 pp., illus., $99.95.

This is a remarkable book about a remarkable person. *Regardfully Yours* contains the first selection of letters of Baron Ferdinand von Mueller, the botanist who worked in Melbourne and influenced science in the latter half of the nineteenth century. It is the first of four volumes, spanning and recording the life of this notable man. Since his correspondence is so massive (about 12,000 letters are extant), only selections are to be published – in the first three volumes. The complete record will be issued on CD-ROM. The fourth volume of this treatise will be his biography. The work has spanned ten years and has involved five workers distributed on several continents, each contributing their individual skill and particular expertise. This volume being the first, in addition to the letters there are a number of additional guides: a short introduction to Mueller's life, the editorial conventions adopted, a biographical register, a bibliography of his publications, a list of his plant names, some letters about Mueller, and an index of botanical names. The letters themselves go back to the teenage German-speaking schoolboy in Germany (here also translated), and end with the Government Botanist in the young colony of Victoria. In this position, Mueller corresponded with many important people: Charles Darwin, the two Hookers, Asa Gray, Ronald Gunn, Augustus Gregory (leader of the North Australian Exploring Expedition, in which he participated), Frederick McCoy,

Justus von Liebig (the eminent German chemist), and innumerable goverment and private Australians.

Ferdinand Müller was born in 1825 in northern Germany into an educated family, but the great scourge of the nineteenth century, pulmonary tuberculosis, early killed his parents and several of his siblings. Following his guardian's and his own wishes, Müller studied to become an apothecary. During his early apprenticeship, he became increasingly interested in botany and assembled a large herbarium. He gained his first experience in a pharmacy in Husum, in his home county of Schleswig-Holstein. During his years in the pharmacy and studying at the University of Kiel, Müller made friends with other botanists, and by the time he had passed his state examination, he was exceptionally well versed in botany. For fear of further family tuberculosis, the young man took his remaining two sisters and migrated to the wholesome climate of South Australia. Here, while employed by a German pharmacist, he became part of the local German intelligentsia and botanized energetically in the exciting new environment. Müller had no intentions of staying permanently in Australia, but was planning his future like his idols, the botanical explorers Robert Brown, Alexander von Humboldt and Carl von Huegel, who had all returned home with their botanical trophies. However, he soon advertised his intentions of writing a work of natural history on the plants indigenous to the colony, and only two years after his arrival, Müller became a British subject and anglicized his name to Mueller.

In 1852, Mueller sailed to Victoria, with an introduction to Governor La Trobe, with whom luckily he shared a passion for natural history and who appointed him to the newly-created position of Government Botanist on 26 January 1853. Mueller wrote at once (3 February 1853, denoted 53.02.03) to Sir William Hooker, Director of the Botanical Gardens at Kew. He wanted to make contact with this important botanist immediately, writing from his camp at the Darebin Creek *en route* to north-eastern Victoria. This is a most significant letter, written in pencil, showing Mueller's urgent desire to relieve the loneliness of the scientist in isolation. This is also the beginning of the Hooker correspondence – with the father, Sir William Hooker, and the son, Dr Joseph Hooker – that lasted all his life. It shows his ardent need to talk about botany, but the letters took three months to reach Europe and it took at least six months for a reply to arrive. Mueller wrote to the Hookers without knowing them personally. Never having seen their faces or heard their voices, he nevertheless raised all the intricacies of botanical thought and poured out his heart to them. They were his mentors, his helpmates, his botanical lifeline.

Mueller was a most fanatic letter writer. His correspondence is massive, and it displays not only his personal feelings but also the climate of the times – visions of Melbourne's intellectual life and of public opinion. Mueller felt compelled to communicate his ideas and thoughts, and to share his experiences with others. In days when the physical exertion of collecting plants in the tropical environment of the Kimberley Plateau would have taxed him to the utmost, for example, Mueller spent the evenings writing encyclopedic letters to Joseph Hooker.

Reading the letters carefully, I experienced two different letter writers in Mueller. The first is the official Mueller, the administrator, the public servant, the scientist, the newly-appointed Director of the Botanic and Zoological Gardens, the public figure, the brother. These letters are beautifully annotated by the editors. Mueller's correspondents are diverse and variable, and here they are all clearly presented, either in the generous footnotes or in the very useful personal register at the end of the book.

The second writer is a private person and a botanist. These are personal letters, even more so than his family letters. He communicates his own feelings, his hopes, his sorrows, his disappointments. In the nineteenth century, people came to Australia as convicts, as goldseekers in the broadest sense, or because they had tuberculosis. In the twentieth century, they came because of political persecution or for business reasons. They were all, at one stage or another, homesick. Even the political refugee feels pangs of homesickness from time to time. Mueller writes to Joseph Hooker, 'hereditary tuberculosis banished me from my lovely native country'. I wonder on how many Christmas eves his mind went back sadly to the surroundings and celebrations of his childhood and he tried to suppress them with another stint of hard

work at his desk? Why did Mueller wear that muffler all his life? To hide his feelings perhaps; to the Hookers he laid them open.

To William Hooker he writes about the necessity, as a migrant, to consolidate his position, and the constant uncertainty about his future. As he has no peers in Australia, he seeks confirmation of his worth from Hooker: 'I confidently hope that I shall enjoy the indulgence of the botanists, as I stand here perfectly alone, without any aid, only scantily provided with books, without access to authentic specimens and even without a magnifying-glass powerful enough to examine the anther appendices of ...'. On the other hand, he sometimes argues or disagrees with them. Thus, following a letter from Joseph Hooker accusing him of stepping on his domain with a description of Tasmanian plants while at the same time asking him to give up description of the Chatham Island plants, Mueller replies, 'I should not in fairness hide from you that I do not think the request reasonable, as you do not leave the Tasmanian plants to me!'.

Nevertheless, it is gratifying to read that Mueller's enormous industry, his hard work and his dedication were recognized by his employer and the public at large. Lieutenant-Governor La Trobe writes about 'my clever little Botanist' after Mueller's return from his first alpine exploration in 1853. The Hookers write to a friend in England: 'It would be difficult to speak too highly of the extent & value of Dr Mueller's labors, as a Colonial Botanist & Director of the Victoria Botanic Gardens... he has displayed an amount of well-directed zeal & energy, in the performance of his Scientific duties ...such as has never been surpassed'. Mueller, like other giants of the Victorian age, spared no energy or self-denial. I wonder if they were more driven by the shadow of death. Why were they able to perform the super-human tasks of writing so many letters and publishing so much scientific work?

This book is wonderful reading because one can uncover so many different facets of Mueller. He was involved in an enormous number of academic pursuits during his early years in the colony of Victoria: he was a member of the North Australian Exploring Expedition of 1855-7; he planned and hoped to write the flora of Australia; he was on the Victorian Board of Science and on the Victorian Board of Agriculture; he was a member of the Philosophical Institute of Victoria, later the Royal Society of Victoria; he wrote monthly reports about his activities to the Victorian goverment (all by hand); and in those first years in Melbourne, he published about 120 botanical papers and ten parts of his *Fragmenta phytographiae Australiae*. I have restricted my discussion here largely to Mueller's relationship with the Hookers, but other readers will be more interested in these many other activities.

My very high opinion of the book is not matched by its production. It bears the mark of a stingy designer, where corners have been cut and margins made as narrow as possible. The beautiful frontispiece of a hitherto unpublished watercolour by Thomas Baines, from the North Australian Exploring Expedition, is not inserted opposite the title page, itself not a thing of beauty. I did not like the colour or design of the modest cover; but on the positive side, I found that the book opened well to a pleasing typescript. The numerous and generous footnotes are set out very clearly at the bottom of the pages, not often done nowadays, and having the dates of the letters in the margins of every page is very useful indeed.

The book reflects something important: the classical, scholarly, hardworking man that Mueller was. He may have been small, ill at ease, often sick and definitely not handsome, but he exhibited all the most admirable characteristics of a scientist. *Regardfully Yours*, like Mueller himself, has an ugly exterior hiding a golden kernel. He is fortunate to have these skilled scholars assemble his legacy for posterity.

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John Mulvaney, Howard Morphy and Alison Petch (eds), *'My Dear Spencer': The Letters of F.J. Gillen to Baldwin Spencer*. Melbourne: Hyland House, 1997. xviii + 554 pp., illus., $49.95.

Francis James Gillen (usually known as Frank) and Walter Baldwin Spencer are best remembered as the pioneer anthropologists who wrote *The Native Tribes of Central Australia* (published in

1899) and its updated version *The Arunta: A Study of a Stone Age People* (published in 1927). They were also responsible, in whole or in part, for a number of other anthropological classics, as well as more popular works (such as *Across Australia*) about travel beyond the colonial frontier into remote Australia. In addition, Spencer, as a professional zoologist, made major written contributions to that discipline, although he was again assisted by Gillen in this endeavour.

The phrase 'Spencer and Gillen' trips off the tongue so easily that now it seems impossible to separate the two men, although they did not always work in tandem and, in any case, made different kinds of contributions to the works that eventually came to public view. Received wisdom has it that Spencer was the real professional in the partnership, which began during the Horn Scientific Expedition to Central Australia in 1894, driven by his initiation into, and continuing contact with, the heart of intellectual life in England. Spencer, we have been led to believe, from his medial position in Melbourne (at the University of Melbourne and the National Museum of Victoria), negotiated the boundary between core and periphery to achieve a synthesis of cutting-edge Imperial anthropology (particularly the ideas of James Frazer) and the steady accumulation of brute ethnographic facts by Gillen, who remained almost constantly 'in the field'. As Mulvaney notes in his introductory essay, it was Spencer, not Gillen, who was the primary recipient of honours and awards on the world stage.

Gillen was not formally a learned man. As an employee of the General Post Office, responsible for the running of the Overland Telegraph Line between Adelaide and Darwin, Gillen worked in Central Australia for almost thirty years. From the mid-1890s until 1899, he used his position as Post and Telegraph Stationmaster at Alice Springs, where he was also Sub-Protector of Aborigines and Justice of the Peace, furiously to collect ethnographic information, indigenous artefacts and zoological specimens, although his interest in ethnographic matters did predate his collaboration with Spencer. Spencer worked with Gillen in Alice Springs for some months in 1896, and the two men returned to Central Australia for further work during their acclaimed Across Australia expedition of 1901–2. After Gillen's premature death in 1912, Spencer undertook some work in Central Australia by himself, but it remains fair to say that, in the main, the partnership between Spencer and Gillen was a symbiotic one between writer and fieldworker. Questions remain, however, about what this conventional account fails to disclose about Gillen's status as a scholar. There is also the added question of the degree to which both men can be credited with significant advances in anthropological knowledge, as opposed to being the instruments of Frazer. These are some of the principal questions in the history of Australian science that *'My Dear Spencer'* helps both to pose and to answer.

The answers can be arrived at implicitly or explicitly, since the book is essentially divided into two parts. The first consists of two essays by Mulvaney and Morphy which, in addition to the editors' preface, serve as extended introductions to the second part of the book, comprised almost entirely of letters sent to Spencer by Gillen between 1894 and 1912. (The main exception is a collection of journal extracts from 1901, and there is also a very thorough and helpful glossary of 'Arunta' [Arrernte] terms compiled by David Wilkins.) The extensively-annotated and contextualized letters are truly fascinating documents, from which one can make one's own judgement about Gillen's standing, although the essays by Mulvaney and Morphy will (if read first) have nudged readers into a certain frame of mind already. Mulvaney's essay ('F.J. Gillen's Life and Times') is a sympathetic biographical sketch that builds upon the detailed statements he has made already in his magisterial biography of Spencer (*So Much that is New*), published in 1985. Morphy's piece ('Gillen – Man of Science') is equally sympathetic, but also (as the title suggests) far more substantial in terms of arguing for a reassessment of Gillen's reputation. It is well known that there was a good deal of controversy surrounding the publication of this book, because, as Nicolas Rothwell is quoted as saying on its cover, it 'promises to bring in its train a re-evaluation of intellectual history'. It is Morphy's essay in particular that tries to get that re-evaluation under way.

The letters do, indeed, reveal much about Gillen's (as well as Spencer's) scholarship – and about much, much else besides. Of particular note here is the way in which Gillen and Spencer were engaged in

theoretically-informed dialogue, particularly about kinship, marriage, totemism and religion. Frazer apparently cautioned Spencer on one occasion to leave theory out of his writing of *The Native Tribes of Central Australia*, on the grounds that 'What we want in such books...is a clear and precise statement of facts...concerning the particular people described'. Yet it is clear that, while both Gillen and Spencer were meticulous data and specimen collectors, with a thoroughly empiricist bent (Gillen almost emerges from the letters as a fanatic in this regard), their data-gathering exercises were constantly weighed against general propositions, and vice versa. Morphy seems to suggest that, insofar as Spencer and Gillen gestured away from some of the dominant social evolutionist thinking of the time, it was in no small measure due to Gillen's unique vision of Aboriginal life, resulting from the kind of fieldwork immersion that one understands to be characteristic of a much more 'modern' style of anthropology. There is no doubt that, in the 1890s, Gillen was one of the best-informed ethnographers, but it is not really clear whether he was completely original in this regard.

Rothwell's claim, that this book promises to initiate a re-evaluation of intellectual history, could be rephrased in terms of the mythology of scientific discovery. All disciplines have their origin myths, although they are rarely uniform in character and quite often compete with each other. This is particularly apparent when one examines national scientific traditions. As another reviewer (Diane Austin-Broos in *Oceania*, **69**, 209-16) has already pointed out, *'My Dear Spencer'* is a very British book. It tends to position Spencer and Gillen within an anthropological lineage that includes the adoptive Englishman, Bronislaw Malinowski (who undertook extensive anthropological fieldwork later than Gillen, but who has been called 'the father of fieldwork'), but excludes not only the adoptive American, Franz Boas (who undertook extensive anthropological fieldwork prior to the 1890s), but also a whole continental tradition of anthropological scholarship, like that of Carl Strehlow, that was also based on fieldwork in Central Australia, beginning in 1894. While none of this detracts from the need to see Gillen in a new light, it does suggest that we need to be cautious about the character and extent of claims which situate both Gillen and Spencer as pioneering scientists. In that respect, *'My Dear Spencer'*, while giving Gillen his due, is probably less a British book than an Australian one, reflecting, on the academic plane, the recent decentering of Imperial legacies. Gillen emerges there as something of a national hero, but I am certain that the outstanding scholarship that has gone into the production of this rich and evocative account of anthropological partnership will nourish many other stories for years to come. It is an invaluable resource; and, at $49.95 for nearly 600 pages, a bargain too!

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Anita Herle and Sandra Rouse (eds), *Cambridge and the Torres Strait: Centenary Essays on the 1898 Anthropological Expedition*. Cambridge: Cambridge University Press, 1998. xv + 252 pp., illus., $135.

When the interdisciplinary team of scholars led by A.C. Haddon visited the Torres Strait Islands in 1898, vast changes had begun to occur in the islands. During the preceding twenty-five years, the Islanders had been converted to Christianity, they had been 'disarmed' by missionaries and government officials, and in varying degrees, they could read, write and do basic accounting. 'Dangerous and savage as the people of these Islands were', the Government Resident at Thursday Island wrote in 1885, 'they are now perfectly harmless and friendly'.

Mer or Murray Island in eastern Torres Strait and Mabuiag in the western group were the two focal points of the team of six scientists from Cambridge University. At both islands, they found people qualified and willing to write down information and stories about their cultures. At Mer, where the team found a continuing respect and reverence for old belief and custom, a government school had been going for six years, and this had been preceded by the establishment of a London Missionary Society seminary at Mer in 1879.

Pasi, one of the three priests of the Meriam god known as Malo-Bomai and now a Christian, requested an exercise book. For Haddon and the linguist Sidney Ray, he then filled fifty-three pages with myths, legends, folklore and custom, in English and his own language. At Mabuiag too, Waria, the government representative, also wrote a manuscript for Haddon; and he followed this with a letter to Haddon in 1904, asking on behalf of his people to have their 'old time stories ... printed in books in their own language'.

Haddon and his team believed that the information and objects they were collecting were part of a rapidly 'vanishing past'; he and his colleagues needed to hurry. The results of their efforts were recorded in the six-volume *Reports of the Cambridge Anthropological Expedition to the Torres Straits* (1904-1935), in a popular account known as *Headhunters: Black, White and Brown*, a collection of some 1,600 artefacts, perhaps the largest from any indigenous people, numerous manuscripts, photographs, sound recordings, and a short film re-enacting the Malo-Bomai ceremonial dances at Mer that the missionaries had prohibited the Meriam from performing. Honouring a prior arrangement, the whole collection was given to Cambridge University.

In 1998, Cambridge University opened an exhibition of the Torres Strait collection as a celebration of its centenary. A volume of nine essays, nicely illustrated with photographs taken in 1898 (and, unlike the *Reports*, with an index), focuses on the meanings of the Expedition and its outcomes. As the editors of the volume conclude in their introductory essay, the very vastness and diversity of the Expedition's 'astonishing legacy' has been daunting. The exhibition (that has been visited by some Torres Strait Islanders) and the essays mark an opportunity, perhaps somewhat belated, for dialogue. The 'contemporary resonance' of the objects in the collection, both for anthropology and for Torres-Strait-Islander culture, has begun to be explored.

Haddon's research was integral with 'salvage anthropology'; Islanders 'as a distinct people' might soon cease to exist. Therein lay 'the urgency of studying them', as anthropologist Jeremy Beckett observes in his essay. Beneath these expressions of intention lay beliefs held within anthropology and other disciplines of Haddon's time: these were primitive peoples, now being 'removed from savagery', as he put it. They had no future except as 'assimilees' of a higher-order and more vigorous culture. So deep-seated was this belief that, even into the 1960s, the magnitude of changes among 'primitive peoples' remained the focus. The 'Savages of Torres Straits' and 'Savage Islanders and their World' persisted as descriptions of the peoples whose recent past Haddon and his colleagues had sought to understand.

Haddon was equipped admirably for the task he set himself. As a marine biologist, he had visited the Torres Strait in 1888 to acquire tropical marine specimens. His work, as Herle concludes, 'was largely driven by his enthusiasm for collecting'. His 'object-oriented vision' was quickly rewarded: five days after arriving for his first voyage around the Torres Strait he was bartering for numerous objects, and he collected 250 artefacts during this first visit. A decade later, he set off with phonograph, movie camera and currency. Original objects were intellectually and emotionally exciting for Haddon: they moved him in ways that resembled religious experience.

The numerous achievements of the team are many-sided and go far beyond the collections and the *Reports*. James Urry says rightly that the post-expedition work of Haddon, Seligman and Rivers helped establish those 'basic methodological practices and a range of analytical approaches that repositioned anthropology as an academic discipline'. Anna Shnukal, the authority on Torres Strait Creole, the lingua franca of the Islanders that evolved from Pacific Island Pidgin, concludes that Sidney Ray, the team's linguist, 'demonstrated conclusively the existence of a group of Papuan languages which were not Austronesian'.

There were also questions that the team failed to ask. Why did Pasi himself choose to write down the myths and customs? Why did he and others want the Malo-Bomai ceremonies re-enacted before Haddon's camera? Herle suggests that Pasi was asserting Meriam authority in the face of the missionaries; she also deduces a 'seriousness' in the Meriam's view of the secret-sacred masks from the alarm shown by the men when Haddon allowed a woman to see them.

Senior Meriam people today believe that their great-grandparents were preserving important parts of their culture by using the

only avenues open to them. The 'old time stories' that the people of those times liked 'best to know', as Waria explained in his letter to Haddon in 1904, were also the ones they wished to pass on to their descendants. Understanding the Islanders' actions is assisted by reflection upon what they didn't tell Haddon and the tangibles of their culture they refused to part with. Nor did they tell Haddon the meaning of the sacred god Bomai, the god whom the Meriam held in utmost awe: 'If you said his name in olden times you wouldn't see the sun go down'.

Haddon's activities were anathema to the LMS missionary pastor at Mer, and the ceremonies were performed 'over his head'. Haddon boasts gleefully of how he obtained rain charms by secretly taking the rainmakers into the bush beyond the eyes of the missionary. While he saw the missionary presence as an impediment to his collecting activities, at a deeper level their activities were complementary. Without the missionaries' efforts over the previous two decades, much of Haddon's project could not have succeeded: one converted, prohibited and destroyed, the other collected the ritual objects that the former sought to render obsolete. And beneath the complementarity of their actions lay a deeper sharing: the belief that Torres Strait Islanders were carriers of a barbaric culture. As primitive peoples, they were being saved and educated. Together they were an unintended force for a certain kind of tragedy: not that of plunder, but the tragedy of the civilizing mission of remaking, the tragedy of the bereft, the making of the nobody.

The Islanders entered the breach between the missionaries and the anthropologists for their own purposes: the recording of ceremony and heritage. No one asked them about their project, yet Pasi's eldest grandson told me in 1981 how he saw the old men cry when a new wave of missionaries allowed them to perform the Malo dances in 1924, for which they composed a new chant 'which signifies the life that is handed down from the previous generation to the present one'. His younger grandson, an Anglican priest and plaintiff in the Mabo case, explained to the court in 1989 what he had told me nine years earlier: Malo survived despite the first wave of missionaries because 'Jesus Christ is where Malo was pointing'.

Anita Herle writes of the lives of objects and their changing significations. The two men who reluctantly made a replica of a Malo mask for Haddon asked to be paid a gold sovereign. They wished to have it, not to keep or as currency but to place it in the church collection plate. Even as the old meanings were being stripped away, such actions were indicative of a symbolic journey. The Islanders have travelled far since then, through 'the dark days' of the 1930s and the 1950s, as they call them, to Mabo and native title. Theirs is an epic journey beset with the contradictions of loss, destruction, change and revival. Twenty years ago, when I first visited, reawakenings of suppressed cultures worldwide were finding expression as tiny waves in the Torres Strait Islands. These waves, that took the Meriam to Mabo and the Islands as a whole to regional autonomy, drew upon past as well as newer strengths. There was no 'inherent identity' lying dormant. That chapter of the Torres Strait is not the subject of this important centenary volume, but one to which it makes a valuable contribution by the questions and dialogue that the essays activate.

In the meantime, the works of Haddon and his colleagues remain important sources for scholars of the Torres Strait Islands and Islanders. The late Edward Koiki Mabo, first plaintiff in the Murray Islanders' Mabo case, reflected in court on how he used to read the report volumes in the library of James Cook University, where he worked as a gardener.

Haddon's work became an important source for Islanders, but he gives only an occasional insight of the effect of the Torres Strait on himself. A seemingly prosaic man, moved to emotion in his acquisition of ritual and other original objects, he relates only one or two aesthetic experiences: one is the re-enactment of the Malo ceremonies, 'a fantasy in red and green lit up by spots of sunshine'.

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Bridget Goodwin, *Keen as Mustard: Britain's Horrific Chemical Warfare Experiments in Australia*. St Lucia: University of Queensland Press, 1998. xviii + 361 pp., illus., $29.95 pb.

There is a custom in the publishing of scholarly books that demands two titles, the one short and eye-catching, the other dull and descriptive. While formally adhering to the first part of the binary code, however, Bridget Goodwin's sub-title is anything but dull. And nor is the book, since although it arises from a history thesis, it had its origins in a current-affairs television report and has been preceded by a feature-length film, which has been shown in six countries. The video is widely available in university libraries.

When Allied military planners considered the use of mustard gas in the Pacific war against Japan, they set up trials in north Queensland in the summer of 1942-43 to see how effective this form of chemical warfare might be in the tropics. Australian military volunteers were involved in the trials, that were conducted by British and Australian scientists, with American observers sometimes present. The initial tests showed that mustard gas was much more effective in tropical settings than it had been in the cooler climates of the First World War in Europe. Further 'research' was then undertaken during 1943 and 1944, to confirm that existing protective measures were largely useless. It is a feature of gas warfare that the chemical agents are easily manufactured or procured, and so one has to prepare defences and assess likely outcomes because the other side could retaliate or even make a first strike.

Fifty and more years on, we know that mustard gas was never used in Pacific theatres of war. We also know that information on the tests was hard to come by, although rumours had circulated in Australia for years. Government departments and archives were loathe to release information, and participants (who had signed documents under the Official Secrets Act) were reluctant to talk, even after the required thirty-year period expired. Slowly, Goodwin prised information from both groups and put together her story.

We should not be surprised to learn that volunteers were poorly informed, at least by present-day standards, about just what they were volunteering for. It is understandable that, given the circumstances of major conflict and the esteem in which scientific and medical staff were then held, volunteers expressed great confidence that those leading the project would look after the welfare of their human subjects. It takes a deeper understanding to appreciate the *macho* attitudes that underlay the reluctance of volunteers to withdraw from the project, even in the face of obvious chemical damage to their health. To do so would have meant 'letting their mates down'. The reluctance of volunteers to break this unwritten but powerful moral code was well understood by those in charge, who reinforced it by stressing, on the one hand, national pride and, on the other, what damage their formidable enemy could inflict on 'wives and sisters' if the Japanese advance could not be halted. Organizers of the trials knew, too, of the sheer boredom of the life behind the battle lines, from which most volunteers had come, and the power of incentives such as 'a bottle of beer a day, or extra leave, or a few shillings in their service pay'.

Goodwin's story is set extremely well in the historical background to chemical warfare and the military organization of the Pacific war. She names names, and describes places. The photographs that illustrate the book include the apparatus used, the smiling participants, and the horrible (her word) blistering which was experienced by volunteers exposed to mustard gas. In one particular series of trials, on islands of the Brook group off the Queensland coast near Cairns, bombs filled with liquid mustard were dropped even before a research team was ashore to measure gas concentrations and to determine the fate of tethered animals, most of which perished in the 'attack'. Next, volunteers with scant protection in the way of respirators, chemically-impregnated clothing or skin creams, were landed on a mustard-saturated island and required to stay there for twenty-four hours before being repatriated. One lost his voice (although he could speak again after a few days), and all suffered respiratory problems from mustard vapour and serious chemical burns from liquid mustard that dripped off foliage or formed puddles into which volunteers sometimes fell.

There were women there, too, showing the same strong sense of mateship and the determination never to let the side down. Many were nurses, not fully informed about the trials that delivered their patients to

them, but others were technicians who assisted with experimental work, sampling air concentrations and monitoring the performance of exposed volunteers. In one bizarre instance, the women delivered liquid mustard in domestic watering cans.

Horrific? Absolutely! Goodwin's account manages to combine detailed reporting with human stories traced over the decades, but she avoids condemnation and justification, either or both of which might have been expected to draw a writer's fire. It's a great book – wonderfully written and macabre in its fascination.

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Antonia Macarthur, *His Majesty's Bark Endeavour: The Story of the Ship and Her People*. Sydney: Angus & Robertson, 1997. ix + 86 pp., illus., $19.95 pb.
Paul Brunton (ed.), *The Endeavour Journal of Joseph Banks: The Australian Journey*. Sydney, Angus & Robertson, 1998. 114 pp., illus., $24.95 pb.

In Australia today, history gets a very mixed press. On all sides of politics, politicians trot out their pet historical viewpoints and journalists register shock and dismay when they find that schoolchildren are unable to name the first Prime Minister; hardly surprising when history as a formal study has almost disappeared from the curriculum. Judging by the rudimentary command of historiography displayed by members of the One Nation Party, for example, one suspects that this deficiency has deep-rooted origins. Yet at the same time, interest in our past has never run higher, as evidenced by the ever-growing interest in genealogy and local history, by concerns for the preservation of the natural and built environment, and by the ceaseless stream of history publishing.

How great is the contrast between the Australian history books that whetted the curiosity of budding historians even as late as the 1950s, and those available today. Then history books were expensive and suitably worthy, but often dull and unattractive, with crabbed illustrations. Just a cursory look at these two recent books, aimed at the school and public-library market, demonstrates how complete is the change. *His Majesty's Bark Endeavour* and *The Endeavour Journal of Joseph Banks* are attractive yet low-cost books, the contents of which take aim squarely at the heart of the problem that Australians have with their history. It is likely that most people today would have heard of Joseph Banks, and everyone would claim a knowledge of Captain Cook, yet to most they are remote figures whose lives, ideas and achievements have slipped beyond recall. In these two books, readers can get an enticing glimpse of real people living real lives as our history was being made. They go a long way to bringing the gentlemen, officers and men of the *Endeavour* to life for Australians of all ages.

His Majesty's Bark Endeavour charts the background and first voyage Cook and his crew undertook to the South Pacific. Running counterpoint to the historical material are photographs and other information from the ambitious Bicentennial project to research, build and sail a replica of the Endeavour. The book glows with colour from contemporary pictures and modern photographs and is packed with fascinating details, ranging from old charts to lists of the ship's company and the rations they were issued each day. The book's table of contents – principally covered in sections headed 'Beginnings', 'The Ship's Company' and 'Endings' – belies the wealth of intensely-readable information that the author, a renowned researcher specializing in the replication of historic ships, has poured into the text.

Cook emerges from the book as a leader whose skill and innate grasp of psychology were responsible for bringing the voyage to a satisfactory conclusion, and whose promotion to the rank of Commander and warm reception by King George III were richly deserved.

Sir Joseph Banks, the patrician botanist and gentleman promoter of colonization in the southern continent, seems a good deal less accessible than Cook to modern Australians, who can at least comprehend the magnitude of the Captain's feats of seamanship and admire the way he got his crew to eat their greens. However, while the most cursory study of Australian history inevitably brings the reader into contact with Banks because of his longevity and life-

long interest in Australian affairs, getting to know him as a person is more difficult. Even Banks' portraitists have served him ill. The 1809 portrait, by which he is usually represented, depicts him as a Very Important Person indeed – gouty, aloof and unapproachable in his finery.

The *Endeavour Journal of Joseph Banks* changes all this. To spend a few months (April to August 1770) with the 25-year-old Banks as he explores the Great South Land is a revelation. This Joseph Banks, as revealed by his *Journal*, is a most curious, entertaining, strong-willed, contrary and, above all, flesh-and-blood human being, despite the unfamiliar eighteenth-century turn of phrase. Banks' writing is always fresh and often apt. His first impressions of the eastern shores instantly strike a familiar chord with the modern reader. His portrait of the landscape is a strikingly description of our bony continent: 'it resembled in my imagination the back of a lean Cow, covered in general with long hair, but nevertheless where her scraggy hip bones have stuck out farther than they ought accidental rubbs and knowck have intirely bard them of their share of covering'.

His delight in the botanizing side-trips is infectious, and his eagerness to get ashore to see what new specimens might be revealed is palpable. He lets nothing stand in his way. On a field trip ashore in Queensland, Banks records that he and his party were troubled by clinging grass seeds with backward pointing spines that 'pushd forward till they got into the flesh', to say nothing of the 'Musketos that were likewise innumerable [and] made walking almost intolerable'; but 'we were not however to be repulsd but proceeded into the countrey'. On another occasion, he and his collectors slog through a mangrove swamp at low tide. One can only admire the huge reserves of energy Banks possessed. He wasted no opportunities by sea or land to collect and, having collected, to set his men to preserve and draw at an astonishing rate while he and Solander discussed and recorded. When the *Endeavour* was threatened by shipwreck, Banks' thoughts flew to the preservation of his specimens – hardly surprising considering the trouble they had caused him.

Yet Banks did not approach his science in a dry, detached manner. He enthuses over the beauty of new specimens, such as the crabs he caught in Keppel Bay, 'ornamented with the finest ultamarine blew' and whose underpart 'was a lovely white, shining as if glazd and perfectly resembling the white of old China'. The birds, especially the parrots, dazzled him, but he was equally impressed by the sudden sight of the sky filled with millions of butterflies 'of a velvet black changeable to blue'. He is amused by a seaman's account of a creature 'as large and much like a one gallon cagg, as black as the Devil and had 2 horns on its head'; but he was eager to see for himself 'the beast so much talkd of' and did so the following day.

Modern readers can but admire the way in which the *Endeavour* voyagers experimented with new types of food, driven as much by necessity as by scientific curiosity. Banks constantly noted the food scraps and other remains he found around Aboriginal fireplaces so as to ascertain the safety of potential sources of food, although on one occasion a snack of palm nuts resulted in 'a hearty fit of vomiting and purging', and the pigs who also indulged died 'extremely ill of indigestions'.

Banks' interest in the 'Indians' is a fascinating thread running through his *Journal*. He is at times piqued that the Aborigines were 'so intirely unmoved by the neighbourhood of so remarkable an object as a ship', and that the clothes and trinkets that the Europeans gave to one group seemed to excite their curiosity for only a short time. He is appalled by what he perceived as the grimy nakedness of the 'Indians', yet on bivouac, plagued by mosquitos, he and his men were only too glad to huddle in the midst of their smoky campfire. When Europeans and Aborigines encountered one another, it was often when both were foraging for food and hence liable to dispute ownership.

If attractive and readable books like *His Majesty's Bark Endeavour* and *The Endeavour Journal of Joseph Banks* do no more than momentarily bring the past to life for a new generation of readers, then they serve an admirable purpose; but they can do much more than this. They can inspire a serious interest in the past, a habit of critical exploration of the links between past and present, and a sense of ownership of our history, including its admirable and not-so-admirable ingredients. If this were to happen, then woe betide the politician who glibly calls on history to support a shallow point of view.

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Libby Robin, *Defending the Little Desert: The Rise of Ecological Consciousness in Australia*. Melbourne: Melbourne University Press, 1998. xii + 203 pp., illus., $24.95 pb.

The history of ecology includes the shaping of ecological ideas and the influence of those ideas, both within and outside the discipline itself. In the late nineteenth century, ecological ideas emerged on both sides of the Atlantic. During the twentieth century, they were developed in, and applied to, diverse types of vegetation around the globe, including Australia and New Zealand. By the second half of the twentieth century, ecology was taught in Australian universities. Sometimes ecological ideas have been drawn into political discussions; sometimes they have influenced community ideas and attitudes and the patterns that those communities have etched on the landscape.

In *Defending the Little Desert*, Libby Robin presents a comprehensive case-study of a political dispute, the resolution of which involved ecology and affected land-use decisions across Victoria. It is based on Robin's interdisciplinary doctoral studies in the School of Botany and the Department of History and Philosophy of Science at the University of Melbourne. Her research was timely. The dispute concerned the Little Desert Settlement Scheme that was proposed in 1968, and it is sufficiently recent for details to remain in living memories. By mining these memories, as well as archives and related publications, Robin has captured impressions before they are dispersed. She recorded interviews with more than sixty interrogants – politicians and pastoralists, bureaucrats and economists, naturalists and scientists, and concerned citizens. Many were key players in the dispute.

The Little Desert is hundreds of kilometres north-west of Melbourne. It is neither postcard picturesque nor scenically spectacular. Nor does it have great agricultural or pastoral potential. Today, its biodiverse vegetation contrasts with the agri-pastoral landscape of the surrounding Wimmera. In the 1960s, most of it was public land, but parts were being considered for sale. Robin explains how the government's 1968 proposal to sell land in the western part of the Little Desert provoked a response that grew into a substantial, sophisticated and successful conservation campaign. It was a 'watershed' in conservation history. She describes how protagonists, including two ecologists, managed to save the Little Desert from agricultural and pastoral exploitation, and explains how the consequences of the campaign extended in time and space far beyond the Little Desert.

Using the watershed metaphor, I would say that Robin has explored the extensive catchment of the Little Desert campaign. She found and followed trickles that became streams of conservation consciousness, and examined their confluence and growing currents of concern. They flowed through regional and city conservation groups, government bureaucracies and the press. But *Defending the Little Desert* reveals more than the geography of the campaign. In explaining how individuals and institutions interacted and influenced each other in the dispute's development and resolution, Robin has presented an ecology of the dispute.

The immediate landscape was affected by the campaign. In 1969, the government left the disputed part of the Little Desert as public land and established a national park in the lower-rainfall eastern part. Nearly two decades later, western additions extended the Little Desert National Park to the South Australian border. However, as Robin explains, as well as 'saving' the Little Desert, the campaign had a wider outcome – the establishment of a mechanism to determine future public land-use decisions in Victoria. To prevent a recurrence of the divisive rancour of the Little Desert dispute, two new organizations were formed – the Conservation Council of Victoria (CCV) in 1969 and the Land Conservation Council (LCC) in 1971. As an umbrella organization for Victorian conservation groups, the CCV would provide advice on conservation matters. With help from the Natural Resources Conservation League, the history of which Robin has earlier documented, the CCV supplanted, and in a sense grew out of, the Save Our Bushlands Action Committee, that represented metropolitan conservation groups that had affiliated specifically to fight the Little Desert Settlement Scheme. The LCC replaced an earlier government body – an advisory council of departmental heads that, due partly to the Little Desert dispute, was disempowered in 1969 and disbanded in 1970. The LCC was an independent, although government-approved, body with responsibility to

inquire into public land management. Two of its twelve members represented conservation interests and, following the successful participation of the public in the Little Desert campaign, the inquiry process of the LCC would allow public participation. Thus, before the widespread emergence of green politics, Victoria had machinery to allow a green glint in state land-use decisions.

Noting Robin's claims that the Little Desert dispute 'offers an opportunity to analyse the role of scientific ecology in the political arena' and 'provides a local perspective on the rise of ecological consciousness', I began reading the chapter, 'The Ecologists', with great expectations. Who provided the ecological voices? What particular aspects of ecology were used in the dispute? How did ecology influence the dispute? And how did the dispute influence or reflect ecological consciousness? Robin presents the conservation interests of the late John Turner who, as Professor of Botany at the University of Melbourne, fostered ecological research in his department, including work on the Bogong High Plains. But Robin makes no specific links between that research and the Little Desert dispute or the ecological consciousness of the wider community.

Robin introduces the two botanists in Turner's department who became involved in the Little Desert dispute, Dr Peter Attiwill, a forest ecologist, and Dr Malcolm Calder, a pollination ecologist. Because it is a botanically-interesting area that was being considered for agricultural development, Attiwill selected the Little Desert for a botany field trip for agricultural science students in 1969. Their week-long fieldwork in August provided the students with field experience and yielded data on Little Desert plant communities. As the author explains, Attiwill presented data from this preliminary survey to a parliamentary inquiry into the proposed scheme. Perplexed by Robin's confusing description of the fieldwork, I consulted Attiwill and his 'Statement to the Little Desert Settlement Committee'. Since there were species lists but no detailed accounts of the various plant communities in the Little Desert, the aim of Attiwill's excursion was to study the nature of the communities – 'changes in the composition, structure and diversity of the plant communities in relation both to climate (rainfall) and soils'. Within each of five plant communities, numerous nine-square-metre quadrats were placed randomly, and all species found growing within the quadrats were recorded. The total number of quadrats was 180 (not ten). Species varied across the Little Desert; some were found in the western but not the eastern section, and vice versa. Attiwill also commented on the diversity within plant communities, and pointed out that the yellow gum and mallee broombush communities exhibited a greater diversity in the western than in the eastern section. He concluded that the government's proposal would cause a reduction in diversity, and suggested the declaration of the whole area as a national park. Only then could the complete floristic diversity of the Little Desert be conserved.

Calder helped direct the ecological field work in August 1969, and like Attiwill, visited the Little Desert on other occasions and addressed the parliamentary inquiry. He spoke on behalf of the Save Our Bushlands Action Committee that, he explained, had been formed as a forum through which Victorians could 'express their concern over the failure of the government to recognise the social, scientific and even moral responsibility they have to conserve large areas of our natural environment'. Calder advocated the establishment of a national park with a field study centre.

There is apparent confusion about the relationship between ecology and conservation. Robin writes that 'Turner was the architect of the union between conservation as science and as a popular concern', but that Turner 'did not believe that conservation itself was a science' and 'saw science, conservation and citizenship as inextricably linked'. She acknowledges that 'Conservation was a matter of negotiation rather than an absolute science'. Correct; conservation is not a science. Science may contribute to conservation conversations or be applied to conservation problems. On the other hand, the science of ecology can provide descriptions of, and explanations for, the species composition of plant communities. There are many justifications for conserving a patch of landscape – nostalgic, aesthetic, spiritual, social, a desire to conserve particular plant communities or ecosystems. Ecological data was used during the Little Desert dispute and subsequent LCC surveys. However, it does not of itself preclude other inputs and

interpretations in political discussions. The author mentions also the willingness, but inadequate number, of Australian ecologists who contribute to public discussions, and the lack of specific ecological information during the 1970s. Detailed ecological research requires much time and money.

To chart accurately the context and consequences of the Little Desert dispute is an enormous and complex task. Robin has traced its development from prior agricultural and conservation concerns, and shown how it shaped Victorian organizations and landscapes. It is a fascinating story. For those interested in the history of conservation, *Defending the Little Desert* is essential reading. For the historian of science, it is of interest for two reasons. First, it reveals a small but significant example of the inter-relationship between politics and science, and second, it provides a comprehensive explanation of the establishment of a state system to ensure scientific input into Victorian public land-use decisions.

The book is timely for, in 1997, the Kennett government replaced the LCC with a three-member Environment Conservation Council. Victoria no longer provides a pathway for public and scientific consultation for land-use decisions. With the birth and death of the LCC in her purview, Robin concludes with a wise warning.

> By ... removing the negotiating table set up in the aftermath of the Little Desert dispute, the government risks a return to confrontational environmental politics.

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William J. Lines, *False Economy: Australia in the Twentieth Century*. Fremantle: Fremantle Arts Centre Press, 1998. 364 pp., illus., $22.95 pb.

On seeing the word 'science' in a paragraph printed on the front cover of *False Economy*, I forgot the warning 'Never judge a book by its cover' and succumbed to the lure of Lines' claim that, in twentieth-century Australia, the vulnerability of nature and country arose from 'the construction of a social order based on bureaucracy, science, and technology that profaned nature and human life and reduced both to resources'. Since few Australian historical studies reveal the often arcane role of scientific endeavour in determining the biological patina of the Australian landscape, I was eager to see how Lines related science to social order and nature in twentieth-century Australia. Then I noticed the following quotation which precedes Lines' prologue, 'In much wisdom is much grief; and he that increaseth knowledge increaseth sorrow. Ecclesiastes 1:18'. This did not augur well for science.

Lines is appalled at the destruction of vast areas of Australia's indigenous vegetation and the extinction of many indigenous species during the twentieth century, and attributes these terrible losses to the efficient alliance of science, technology and economics. Using his forbears as narrational signposts, he plots a unique route through twentieth-century Australia to discuss the destructive consequences of this triumphant triumvirate. Lines links personal narratives of his parents and grandparents with contemporary attitudes and events far beyond the parts of Queensland and Western Australia in which they lived, to produce a quirky kaleidoscope of Australian landscape and social history.

The following paragraph is typical of Lines' thesis:

> Poisoning, killing, draining, clearing, and destroying are the ways of violence. Directed by science, sanctioned by economics, and sponsored by government, land settlement in Australia in the 1920's became an increasingly violent enterprise. Violence inhered in a world view that held that all benefits in the world were human-made – products of scientific, technological, and economic progress. Nature was only raw material, valueless in itself. To create wealth, humans had to engineer nature.

Lines races through a plethora of projects, the landscape resulting from which was welted in the name of development and progress – roads and dams, irrigation, hydro-electric and settlement schemes. Science is ever-present as the generator of the destructive characteristics of each effective technology. Scientists, including David Rivett, Ian Clunies Ross and A.E.V. Richardson, emerge in the text, but their appearance is spasmodic and fleeting.

Lines is aware that Australia's early national scientific institution, CSIR, grew out of discussions during and after the

Great War. He mentions the 1916 conference to establish an organization to co-ordinate Australian scientific research. Without mentioning CSIR's precursors, Lines discusses the 1926 bill to establish CSIR and the accompanying powerful rhetoric linking science and technology with prosperity and progress. The reader must recognize that the powerful pro-science prose presented in 1916 and 1926 was designed to convince. To establish a national institution that would encroach on State responsibilities of research and agriculture, the arguments had to be convincing.

False Economy reveals some links between science and environmental and industrial changes, changes that Lines asserts result from a convenient compatibility between social and scientific goals and a pervasive faith in the ability of scientific endeavour to satisfy social demands and deliver solutions to social problems. Science enabled human control of the world's natural resources. Exploitation has caused incredible destruction of Australia's landscape, and science does underpin some of that destruction. Lines is right. But the scientifically illiterate reader may gain the impression that science feeds only exploitation and destruction. Lines does not consider the compelling curiosity underlying scientific endeavour, the desire to understand the natural world for its own sake, the uncommitted generation of scientific data. Nor does he acknowledge the use of biological data in considering conservation and biodiversity.

Historians of science will find only snippets of Australian science in this book. Lines provides fragmentary glimpses of the emergence of scientific institutions and projects and mentions certain social and environmental consequences of their efforts; but he does not examine critically the social attitudes and conditions which shaped Australian society's confidence in scientific practice. Nor does he examine the degree to which scientific individuals and institutions shaped or followed particular social agendas and expectations.

There is no coherent scientific underpinning of the text. That is not Lines' intention. *False Economy* presents a collage of landscapes, the destruction of which Lines attributes to society's uncritical acceptance of economics, science and technology. Science appears simply as a progenitor of technologies which, during the twentieth century, were used to control, exploit and destroy Australia's natural environment.

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Angela Taylor, *A Forester's Log: The Story of John La Gerche and the Ballarat-Creswick State Forest 1882-1897*. Melbourne: Melbourne University Press, 1998. xvii + 224 pp., illus., $29.95.

As one who has spent some years of his life in Creswick, the home of John La Gerche from 1882 to 1897, it is a pleasure to review Angela Taylor's well-researched, appropriately titled and well-presented book, *A Forester's Log*.

At first glance, John La Gerche seems a most unlikely subject for such a scholarly book; but as the story unfolds in the hands of an excellent story-teller and student of her subject, it becomes clear that it is not only an unusual choice but a challenging one that few might have tackled. Angela Taylor's choice says much for her training and background in public history, as is evident, for example, from the considerable local, regional and State-wide interest it has already aroused.

A possible 'trivial' story becomes 'great' very quickly – and a notable personal and local history too. With the tendency these days for some people to be critical of the role of the forester in our society, it is salutary that the author examines, at the 'dirt' level, what it is that foresters do. She shows that they gather and raise seeds, plant them in the nursery that they have built, nurture them, and then plant them out as trees for many purposes. In 1883, for example, La Gerche embarked on one of his principal tasks: restocking the forest. Over the years, he experimented with a range of eucalypts, pines and other introduced species. He planted each tree by hand, for there were then no planting machines. He was one of the earliest to recognize the potential of Pinus insignus (now known as P. radiata). Such was the pattern of La Gerche's life's work. It was a major achievement by this 'ordinary man', for the benefit of his fellow citizens.

Angela Taylor has made the life of this dedicated forester into a compelling story to the extent that most readers will say 'I would like to have known this man'. His battles with his superiors, the bureaucrats of the city, will also ring a bell with many people, as will his turning of a blind eye when he was directed to expel old Chinese residents and others from their bush homes – in which they had grown up and where, along with La Gerche, they were the true forest guardians. To his superiors, of course, he was still 'your most humble and obedient servant'.

In *The Age* newspaper of 20 March 1999, Mary Ryllis Clark made the interesting comment that La Gerche had far more trouble from illegal wood-cutters and wattle-bark-strippers (selling to local tanneries) than from forest occupants such as the Chinese. The former were his natural enemies, responsible for a great slaughter of saplings. Indeed, La Gerche would often sleep in the forest at night to prevent the theft of his young trees. His diligence, especially in the early years, was not always supported by distant officialdom and the bureaucrats he disdained.

Despite the intervening hundred years and more, this is still a good story for young people, showing how a dedicated man can enjoy the results and pleasures of his life-time's work and look back with pride on his achievements. La Gerche must have wondered frequently what happened to all the seedlings he raised and to the trees he sold subsequently from his large State Nursery. Are they still gracing some attractive garden, creating a wind-break or shelter-belt, or just gently providing shade for grateful stock?

Taylor has picked up the feel of the bush and the forest as well as the pressures on people such as La Gerche, trying (and succeeding) to be conscientious and loyal to his employer but at the same time living in a small town with his wife and six children and wanting them to receive kindness and care from their neighbours. I believe the author has sensed and very ably appreciated the loyalties and as well the local adaptations that a noble man found it essential to make. She sees him as a user-friendly man in his life's work and in how he lived it.

The light that the author shines on her subject and his work has added greatly to the town of Creswick as the 'cradle of forestry' in Victoria, and has led to a fresh appreciation of the State Nursery and its plantations that otherwise may have been taken for granted as simply the trappings of another little country town. The new La Gerche Walk has been created with the help of Ron Hately, himself a modern-day professional forester and one whose father was a first-class naturalist in his own right. It is an obvious conservation and forestry focus for Creswick, that will extend interest in the life and inspiration of John La Gerche – renewed here by Angela Taylor – well into the future. This unique walk, now with its rich biographical background, adds another dimension to the town that has produced a number of notable people, such as Sir Alexander Peacock (a Victorian Premier), John Curtin, and the Lindsay family of artists and authors. To these famous Australians is now added the name of a simple man, brought to life for posterity for 'doing his job'.

Both Angela Taylor and Ron Hately point out that La Gerche was not the only forester in Victoria to do such pioneering work; but because his original meticulously-written work books, letters and reports were able to be rescued from possible destruction by an alert archivist, much of his life and memory is now recreated. And for Ron Hately at the School of Forestry, La Gerche's Sawpitt Gully Plantation is a unique teaching resource. He takes his students through it to give them a better understanding of the development of silviculture, and of the significance of La Gerche's early work.

My knowledge and admiration of Creswick being as it is, I find it difficult to be critical of Angela Taylor's book in any serious way. I believe it will stand the test of time as an excellent, scholarly and human study of a man doing his job in a rather special way, brought to life by a first-class piece of research and writing.

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Jill, Duchess of Hamilton and Julia Bruce, *The Flower Chain: The Early Discovery of Australian Plants*. Sydney: Kangaroo Press, 1998. 160 pp, illus., $39.95.

As Anthony Grafton writes in *The Footnote* (1997), without footnotes 'historical theses can be admired or resented, but they cannot be verified or disproved'. There is much about *The Flower Chain* to admire. It is a very readable and well-illustrated account of the history of the European discovery of Australian plants for the first 200 years of contact, 1606 to 1804. Nevertheless, its lack of documentation and curious list of suggested reading, that omits the kind of works obviously used to put the book together, are a serious source of annoyance if not resentment.

For readers with a working knowledge of Australian botanical history, it will be apparent that Hamilton and Bruce have used a wide range of specialist and up-to-date materials in their writing (although more careful editing would have eliminated some errors in plant names and other details). Learned readers might also acknowledge that, for a book of its size, *The Flower Chain* contains all that one might reasonably expect in the way of subject matter, including references to Aboriginal plant knowledge. Nevertheless, such readers are not likely to seek out this book for themselves because, as is largely obscured by its lack of documentation, they will be familiar with much of its content already.

Australia's early European history is rich in botanical tales of discovery, rivalry and tragedy, and the best of these have been well-told a decade ago in accounts such as C. M. Finney's *To Sail Beyond the Sunset* (1984) and Ann Moyal's *A Bright and Savage Land* (1986). These two books are also lavishly illustrated, readable and have the added virtue of being documented. Hamilton and Bruce do introduce the notion of a flower chain as a novel way of linking their version of events together but, while this is an evocative image, it tends to give a false impression of what the authors actually confess is a very disconnected and discontinuous story.

The first contacts of Dutch and British sailors with Australia were motivated by commercial concerns and botany, when it was pursued, was only an adjunct. Even when science was a major focus of British, French and Spanish expeditions, risky transport, mortality of participants and problems with publication dogged scientists' botanical efforts. Moreover, early European settlers were very dismissive of Australia's flora and eager to replace it with what they knew from 'home'. The use by Hamilton and Bruce of short chapters – twenty-one in all – emphasizes the episodic nature of this narrative. Their highlighting of environmental concerns and their anti-imperialism leave them with few unambiguous heroes.

No reasons are given for the lack of footnotes, but common ones used are that they are intimidating and complicate layout, although the versatility offered to publishers by current technology make both these excuses redundant. *The Flower Chain* is not offered as a scholarly work, but to have properly sourced the illustrations and quotations (at least) would not have made it less accessible to general readers. A book that re-presented the early European history of Australian botany, incorporating the research of the last decade, with documentation, would have been a useful contribution to the history of Australian science. But for its bashful scholarship, *The Flower Chain* could have been that book.

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Trisha Dixon and Jennie Churchill, *The Vision of Edna Walling: Garden Plans 1920-1951*. Melbourne: Bloomings Books, 1998. xx + 150 pp., illus., $49.95.

Edna Walling was a horticulturist who also became an environmentalist. Although she had an initial dislike of Australian native plants, spending time in the bush transformed her into an ardent advocate of its preservation. She gave voice to her concerns in articles and books that reached a wide audience of gardeners, many of whom no doubt shared her early preference for exotic species. For these efforts, and for the success she had in influencing what was put in back-yards, she deserves a place in Australian environmental history. 'Seldom, if ever', she was to write, 'do we achieve the quiet perfection of nature's planting'.

Most often Walling is lionized for the art in her life, not its science. *The Vision of Edna Walling* is no exception. It is concerned with celebrating her ideas about domesticated landscapes and, in particular, those she created before her senses became attuned to Australian views. The authors do not ignore her environmentalism, but it is not their main concern. In fact, the foreword seems to suggest that her regard for native plants is a source of regret amongst some of her devotees, quoting one of them as saying that Walling did her best work 'before she got interested in natives'.

The book opens with a well-illustrated biographical sketch, arranged thematically. Walling spent her first sixteen years in England, moved with her family to New Zealand in 1911, and then came to Melbourne in 1914. She was a student at Burnley Horticultural College for two years and finished at the top of her class, although she saw the experience as being of little benefit to her later work. She was one of the first women in Australia to work as a professional landscape designer, and by the mid-1920s she had an established reputation and was able to start augmenting her income by writing articles for popular magazines such as *Home Beautiful*.

Following the biographical sketch are accounts of the forty-seven gardens she created for which colour plans exist. This section of the book is peppered with additional details about Walling's life and with quotations from her publications, such as, 'Don't imagine for a moment that you cannot make little pictures on that suburban block'. The gardens illustrated, however, all surrounded the residences of the select number of wealthy clients who could afford to pay her for personal interviews. There is an unresolved tension in *The Vision of Edna Walling* between the authors' insistence that Walling was a popular and influential figure and their focus on grand homes and gardens.

Visually the book is very alluring, with its juxtaposition of exquisitely-drawn plans and photographs of horticultural details of some of the gardens as they are today. The current status of a number of the gardens is said to be 'unknown', although why that should be so is not explained. Many of Walling's clients also remain shadowy figures, with no indication that the authors were interested to find out about them. There are detailed pictorial acknowledgments at the end of the book, but the lack of textual ones (not even for direct quotations), and the absence of a bibliography, limit the book's usefulness to historians.

The field is still open for an environmental historian to appraise Walling's work and life. Her change of heart about native plants would seem to make her an obvious environmental heroine. Nevertheless, the complexities of developing a 'green' consciousness in a period when such a thing was itself being defined cannot be discounted. Thus, while Walling put a conservationist message in her book *The Australian Roadside* (1952), some of her so-called 'signature' plants (listed in an appendix here) are among the environmental weeds that can be found along Australian roadsides.

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Editorial note

With this issue I step down after fifteen years as Book Review Editor (can it be so long?). It is time for a new face with new ideas and an augmented stable of reviewers. It has been a pleasure rather than a chore and I have learnt a great deal. I express my warmest gratitude to the reviewers, who have given freely of their time and talents, and for no identifiable reward. Dr Libby Robin, ANU Centre for Resource and Environmental Studies (libby.robin@anu.edu.au), is an admirable replacement; welcome Libby!

John Jenkin.