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Reviews

Compiled by Libby Robin

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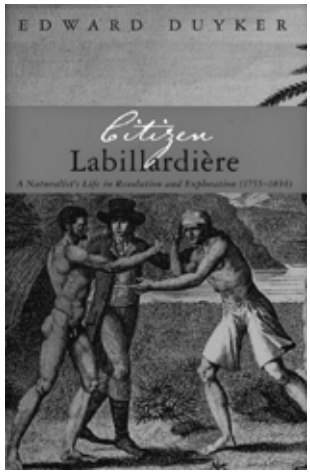
STOP PRESS: Libby Robin's latest book *The Flight of the Emu: A Hundred Years of Australian Ornithology 1901–2001* was awarded the inaugural Prize for Science Writing in the 2003 Victorian Premier's Literary Awards in November. Congratulations Libby!

Edward Duyker: *Citizen Labillardière: A Naturalist's Life in Revolution and Exploration* (*1755–1834*). The Miegunyah Press, Carlton, 2003. 383 pp, b&w illus., ISBN: 0 522 85010 3 (HB), $59.95.



Most students of southern Australian botany learn something of Labillardière, the subject of this biography. Labill., the shortened form of his name, still appears as a botanical authority after a number of common Australian plant names, including the floral emblems of three Australian States. Furthermore, his name is commemorated in several plant names currently in use, such as in the genus *Billardiera* and in the species *Poa labillardieri*, the common tussock grass of southern Australian grasslands. Labillardière also wrote what has been called the first Australian Flora in 1804–06. So it is appropriate that this book fleshes out for the first time the life and times of the person behind the botanically famous name. And how well it does that task!

Labillardière was born in the lower Normandy town of Alençon, where his family had been resident for at least several generations. Labillardière's full name was Jacques-Julien Houtou de Labillardière, so that it is just as well that it can be shortened to Labill. when used as a botanical authority. The young Labillardière studied medicine at Montpellier initially and finished his course at Reims. Like many medically trained students of his time, he turned to natural history soon after graduation, a field in which he quickly became notable. Following graduation, Labillardière botanized in the French alps and the eastern Mediterranean, and then spent two years in Britain where he established his botanical credentials with Banks and Smith, the results of which were to prove so useful to him subsequently.

At the age of 36, Labillardière was appointed as a naturalist on the d'Entrecasteaux voyage to the South Pacific that sought to find La Pérouse's whereabouts after the latter's ships failed to return to France. The two d'Entrecasteaux ships — the *Recherche* and the *Espérance* — failed to find any evidence of La Pérouse or his

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crew, although they got very close to the site of the wrecked ships off Vanikoro. In the search for La Pérouse, the d'Entrecasteaux expedition visited both south-western Australia and southern Tasmania (the latter twice) — partly to take on fresh water, some greens and freshly killed protein, but also to collect plants, insects, rocks, birds and mammals. It is these collections (except for most of the insects that were subsequently lost) that comprise the major interest in Labillardière's scientific contributions for Australian biologists, because they were often the first collections of species that subsequently were described and named.

The story of the return of the various collections to Europe is as diverse and as adventurous as the collectors' own return trips that involved, variously, imprisonment in Batavia, because of the political hostilities between Holland and France, and even some deaths from dysentery. Eventually Labillardière was re-united with his plant collection, which had been confiscated by the British, after he returned to Paris, mainly through the goodwill of Sir Joseph Banks and his influence in London. In Banks' words: 'The science of two nations may be at peace while their politics are at war'. Duyker's description of the complexities of both the London and Paris worlds at this time is masterly and shows that influential connections between fellow scientists could overcome the revolutionary and wartime conditions and even Queen Charlotte's regal prerogatives.

Following Labillardière's return in 1796 to a very different Paris from the one he had left five years earlier, he joined a group of French *savants* on a trip to northern Italy to assess a wide range of important art and scientific treasures that Napoléon Bonaparte chose to re-locate to Paris. In 1800 Labillardière was elected a member of the *Académie des Sciences*. For the next 30 or so years Labillardière resided at a number of Paris addresses; during that time he married an Alençon woman but their relationship did not persist nor yield children. Increasingly Labillardière seems to have become a recluse socially, in part because his first priority seems to have been to publish both his account of the voyage (which he did in 1800) and the results of his collecting in foreign lands, including Australia (1804–06) and New Caledonia (1824–25). Duyker only hints at the personal state of mind of Labillardière over this latter period and we as readers are left wondering about the botanist's psychological state during the time before he died in Paris in his 79th year. Whatever the case, his scientifically notable legacy remains, especially in our knowledge of the Australian flora.

The subtitle of this book is *A Naturalist's Life in Revolution and Exploration* and one aspect that I greatly enjoyed reading was that while Labillardière was in the Southern Hemisphere till shortly after he returned to France, the effects of the French revolution were being played out. France was at war with England and Holland, and many of Labillardière's aristocratic scientific colleagues in Paris were being guillotined or imprisoned. It was a time of major upheaval in Parisian society and yet Labillardière seems to have survived it all with little interruption to his collecting, considerable publications and to his personal standing among his scientific colleagues. On the voyage to the South Pacific, the republican Labillardière was not always popular, especially with d'Entrecasteaux or his successors as leaders, and yet he survived the voyage and the Revolution, seemingly both in terms of personal health and psychological resilience, when many of his colleagues, both on the voyage of exploration and in revolutionary Paris, did not.

This book is a work of real scholarship and is highly recommended reading for historians as well as scientists. Melbourne University Press, through its Miegunyah

Press subsidiary, has done much to enhance knowledge of the French exploration in Australia, including Horner's earlier book on the d'Entrecasteaux voyage and its navigational achievements; the present book adds further distinction to that excellent record. The high standards set by this publisher are maintained in the present volume, with separate botanical and zoological indexes as well as a general one, together with copious pages of notes at the end of the narrative that add so much to the value of the text. In a previous book by the same author from the same Press on the life of the Swedish botanist Solander, who accompanied the Cook voyage, there is a list of plants collected by locality; inclusion of a similar list in the Labillardière book would have increased its usefulness to plant taxonomists. Apart from this minor (and personal) quibble, this book is another outstanding contribution to Australian history and scholarship from the author and his publisher. I wonder whom Edward Duyker will choose for his next scholarly biography? Irrespective of who may be chosen, I look forward to reading an equally good 'yarn' told so engagingly, while at the same time being a work of considerable scholarship.

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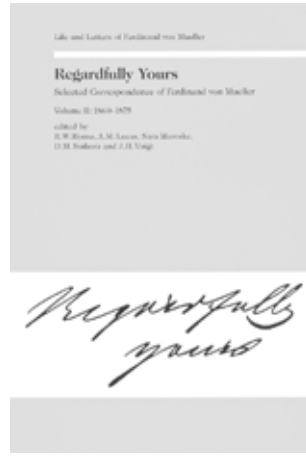
R.W. Home, A.M. Lucas, Sara Maroske, D.M. Sinkora and J.H. Voigt (eds): *Regardfully Yours: Selected Correspondence of Ferdinand von Mueller. Volume I: 1840–1859* [842 pp], *Volume II: 1860–1875* [865 pp]. Peter Lang AG: Bern, 1998 and 2002. illus., ISBN: 3-906757-06-4 (Vol. 1), 3-906757-09-9(Vol. 2), (HB), $US73.95 each.



These two volumes result from an extraordinary project designed to trace the surviving correspondence of Australia's most important nineteenth century scientist, Baron Ferdinand von Mueller (1825–1896). Under the leadership of R.W. Home, an international team working in Australia, the United Kingdom and Germany gradually located documents in official archives and private collections, developing a network of contacts that rivalled Mueller's own formidable global network.

Ten years of research led to the first volume of selected correspondence in 1998, the second volume was published in 2002. A third volume is planned together with a CD-ROM of the complete extant correspondence. A new biography informed by the materials brought to light by the project will make up a fourth volume. Working with R.W. Home

(University of Melbourne) are A.M. Lucas (King's College, London), Sara Maroske (University of Melbourne), Doris Sinkora (Royal Botanic Gardens, Melbourne) and Johannes Voigt (Historisches Institüt, University of Stuttgart). Research and editorial support since 1997 has come from Monika Wells. Throughout the project, Helen Cohn and other botanical and archival specialists from the Royal Botanic Gardens, Melbourne, have assisted. The acknowledgments section at the beginning of volume I indicates the substantial contribution made by many other colleagues in Australia and overseas. The project was a huge undertaking and is probably unrivalled in the history of science field in Australia.

The editorial team responsible for the project believe that the 12,000 items from Mueller's correspondence that have been located represent a small percentage — perhaps just five percent — of letters written by him. The first two volumes provide us with selected correspondence designed to represent different aspects of Mueller's life and work 1840–1859 and 1860–1875 respectively. There are personal letters from family members and old friends, official correspondence on administrative matters and letters that illuminate scientific research networks and controversy. Each volume has a valuable end section with brief biographies of people mentioned in the selected letters, an index of plants names and a list of Mueller's publications. A lengthy introductory article for each volume, produced by the editors, provides background material on Mueller's life and work. The introduction tells the readers something about the nature of the correspondence selected, whetting our appetite for what is to follow:

- the tragedies of family deaths in Europe
- Mueller's early experiences in Australia
- his early work collecting and exploring
- his attempts to gain official recognition for his work and funding for botanical research
- his support for expeditions of exploration
- his painstaking collection of reference material to be used in Australia
- the struggle to establish an Australian base for research (while the scientific elite in England and continental Europe continued to insist on the legitimacy of their own continued control of major publications)
- the highs and lows of Mueller's career in Melbourne, including the attempts to discredit him and the ongoing counter-attacks by his supporters and his many years working in Melbourne as a brilliant yet somewhat tragic figure.

Of particular interest is the way the letters highlight some of the many problems of work 'at the periphery', or as the editors comment, problems of dependence and authority within science. Added to his distance from London, Mueller is very conscious of his 'foreign' status: 'English scientists are jealously looking down on the work of a foreigner', he writes to Julian Haast in 1864 (L64.03.12 Vol. II (translated), p. 243). Mueller regretted that Bentham was given the opportunity to undertake the Australian Flora 'which generally left the impression here that I was unqualified to deal with such a task myself'. He expressed his fear to Daniel Oliver 'that many of Mr Bentham's newly established species will not stand the field test' (L63.12.25, Vol. II, p 234).

Within Australia we see Mueller concerned with plans for expeditions of exploration, as well as undertaking his own. He supported Peter Warburton ahead of Robert O'Hara Burke (of the Burke and Wills expedition) and was very active in supporting efforts to mount a search expedition for traces of Ludwig Leichhardt. There were also letters of support for explorers such as Edward Eyre and Ernest Giles, as well as the invitation from Augustus Gregory on 11 May 1855 for

Mueller to join what became known as the North Australian Exploring Expedition.

Many letters relate to exchanges of living plant material and acclimatization, the 1860s being active years for the Acclimatization Society of Victoria. Given the importance of German born scientists in Australian colonial history, the correspondence with compatriots such as Friedrich Krichauff in South Australia, Julius Haast in New Zealand, Eduard Regel in St Petersburg and with Carl Phillip von Martius in Munich are of interest. Mueller's correspondence with the great German geographer August Petermann was vital in bringing to Europe new knowledge about Australia. Martius and Mueller shared a strong dislike of Darwinian theory. 'What an infinitely more exalted emotion is aroused by this view, than if we followed Darwin's fallacious conclusions to ascribe the indivisible harmony and completeness of each living entity not to divine omnipotence, but as originating in mere chance', Mueller wrote to Martius (64.03.25 translation, Vol. II p. 249) Correspondence with William and Joseph Hooker, and George Bentham in London also provides a colourful, outsider's view on the British-Australian scientific world of the time.

Then there are glimpses of Mueller's personal life. He was devastated about the death of his sister Bertha, showed concern for the well-being of a former employee, and was outraged at the behaviour of men who swam in the Yarra within the gaze of lady visitors to the Gardens. He also had interesting correspondence with those who were negotiating for him to be awarded honours from European dignitaries.

Along the way we see his unsuccessful efforts towards the elusive goal of domestic happiness. One remarkable set of letters was found hidden in a desk that was presented to the Royal Melbourne Botanic Gardens. Sent to Euphemia Henderson to whom Mueller was engaged for some months in 1863 they give us a rare glimpse of a Mueller who is excited about a new relationship rather than a new plant species. In what seems to have been a tragic move, Mueller then decided to break off the engagement because he had come to believe that Euphemia was past child-bearing age. One can only agree with the opinion of the editors that despite a lack of children, Mueller might have enjoyed some domestic happiness with Euphemia. Instead the letters bear witness to two further and unsuccessful attempts by Mueller to find a suitable wife: letters relating to his second betrothal, this time to a very young woman who subsequently broke off the engagement, and letters that allude to a third attempt. This third person has not yet been identified. The hapless Mueller, apparently hoping to pursue someone with aristocratic connections; was hopeful that his barony might aid his suit.

In the absence of domestic happiness, Mueller kept writing letters. It seems he wrote very many of these at night. The limitations of oil lamps and the absence of resources for keeping a copy of his originals were just two of many practical problems revealed in the correspondence. There were precious type specimens that he sent to Britain that did not ever arrive, problems relating to the cost of postage and who should pay it, labels misplaced and specimens that were damaged en route.

There were misunderstandings due to different styles of communication and disagreement about classification that arose because the botanists were working at a distance and could not share reference material. There was disagreement over how broad or how narrow the approach to classification should be. Unlike earlier botanical collectors in Australia did not want to send his material to Europe for identification but was determined to publish his own descriptions. He spent a

considerable proportion of his income on reference materials including books. These generally had to be ordered unseen and with the assistance of colleagues. Colleagues such as the Hookers strongly believed that Mueller should go to London. The correspondence throws some light on Mueller's dilemmas: would he retain his position if he left? Could he trust others to keep on with his work in Australia? Could he afford the expenses of the trip? Would the overall gain be worth the costs? We see him close to making the decision to go, then reneging. Despite the physical feats he achieved in his collecting expeditions in remote parts of Australia, he was haunted by the fear that he will follow other family members and die prematurely of tuberculosis or some other disease, and thus might be unable to complete work that he has begun.

The transcriptions reproduce Mueller's idiosyncratic spelling and turns of phrase — the title 'Regardfully Yours' reflecting one of the notable 'Muellerisms'. The correspondence shows his limitations, too. His letters reveal his single-minded concern with scientific aspects of his work at Melbourne's Botanic Gardens and little interest in landscape design or garden presentation. To Charles Duffy he writes, 'With greater advantage in shelter, soil and water supply and with comparatively large means these excellent and well-managed institutions of our neighbouring colonies achieved great success in superior ornamentations and floral displays; but they were not call on to furnish very extensive supplies, or to enter on ample scientific or industrial researches, or to issue voluminous publications' (L72.02.06, Vol. II p. 617). All of this throws some light on his problems with civic leaders that led to his removal from the Botanic Gardens directorship during the turbulent years covered by the second volume. As noted in the introductory essay to Volume II, his 'constant fawning to social superiors, his name-dropping and his political naivety' are part of the Mueller who was 'quintessentially provincial'. He hoped that the European honours he received would help bolster his position, but if anything they seemed to make his Melbourne critics more determined to cut him down to size. Nor were there much needed family members in Melbourne to discourage him from wearing too many medals at once, or from his eccentric choice of a woolly scarf in summer. You cannot help but think that Euphemia Henderson would have been a valuable influence in this respect!

Eccentric he may have been, but the correspondence shows the breadth of his interest in natural history and geography, his desire to add to spread of human knowledge, his support for educational and cultural organizations, as well as his boundless energy and sheer hard work. While we await the substantial and authoritative biography of this central figure in Australian colonial science, these two volumes of Mueller's correspondence are all the more important. Above all, the letters bring to life those days of colonial Australian exploration, when Darwin's theories were being debated, the biological sciences were the 'big science' of the day, when systematic botany was so well supported by the scientific community and Australian contributors to scientific research were establishing their position.

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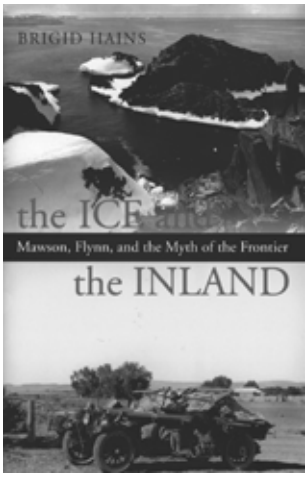
Brigid Hains: *The Ice and the Inland: Mawson, Flynn and the Myth of the Frontier*. Melbourne University Press: Melbourne, 2002. xii + 219 pp., illus., ISBN 0-522-85036-7 (HB), $49.95.



In a marvellous combination of extreme heat and cold, this book tells the wider stories of two Australians, scientist and Antarctic explorer Douglas Mawson and missionary John Flynn, who were contemporaries. Mawson (1882–1958) became a heroic figure for his exploration in the extreme cold of Antarctica. Flynn (1880–1951) — romanticized by Ion Idriess in his 1932 novel *Flynn of the Inland* — established the Australia Inland Mission. The Aerial Medical Service, later the Royal Flying Doctor Service, was his great legacy to inlanders. Both men are folk heroes.

Hains examines the lives each man in turn. After a short introduction, there are four chapters each on Mawson and Flynn, interleaved with a short 'Interlude'. A six-page 'Finale' follows, in which the two are reunited, and the endnotes for the chapters conclude the book. This reviewer is grateful for an index and for the inclusion of endnotes. Despite considerable debate about history writing today, books on historical themes are often shorn of references. In her extensive research for the study, Hains has used many archival sources in Australia and England. Some of Flynn's black and white photographs are reproduced here, together with some of Frank Hurley's iconic Antarctic images. (I would like to have seen the photographs attributed individually with place and date, where possible).

From Hains' writing on Mawson, it becomes clear that the glamour of Antarctica hides crippling boredom and inactivity which have to be endured for much of the year, in a harsh environment where only short periods of weather are clement enough for adventure. Hains does not restrict herself to Mawson's own record of his experiences on the frozen continent, and for good reason — he was a practical man, not a self-reflective thinker. She draws on the diaries of his companions, including that of the thoughtful Archibald McLean who, during the first Antarctic winter, wrote that 'the incessant wind had kept us immured for so long and with a minimum of physical exertion there is a corresponding mind apathy' (pp. 27–8) and Charles Laseron, who she says gave up his diary 'in disgust at the lethargy, boredom and incessant bad weather' (p. 27).

How much can we learn from the comparison of these two essentially unlike men? Though they were contemporaries, they crossed paths only once, in northern South Australia in 1911. Here near Beltana, Mawson inspected a radium mine and Flynn was the local minister. A few months later Mawson left for Antarctica, leading the Australasian Antarctic Expedition of 1911 to 1914 in which his two companions died on a sledging trip and he came perilously close to dying himself.

Mawson and his expeditioners in Antarctica 'learned the landscape' that was, at that time, 'still a mysterious blank presence around the South Pole' (p. 2).

Their horizons were formed by the sheet ice of an unpopulated continent. By contrast, Flynn's inland had been populated since ancient times, and was only now being newly settled by Europeans to whom it was a most alien environment. In Hains' words, the former was 'a pure wilderness', the latter 'a much more complex place'.

Over time, both men became familiar with an unfamiliar environment, sharing their knowledge with readers when they described either the little-known far north of South Australia or the edge of the Antarctic continent. In her chapter 'True scientists', Hains analyses Mawson's motives as being economic, scientific, and nationalistic/imperialist, an imperialism manifested in territorial claims. 'Knowledge and possession,' she says, 'began with mapping' (p. 45), as she details his act of possession of the Australian Antarctic coast in February 1912.

The strength of this book lies in its analysis of the concerns of the era and in Hains' detailed examination of how Mawson and Flynn embodied the trends. Flynn viewed the urban environment as a moral failure and romanticized the country, believing that the bush would produce a healthier and broader outlook in Australians than the city. In his early work he shared the general view that Australia's arid lands were underpopulated and needed denser settlement, and he was worried by the lack of marriages in the bush. With obvious faith in the white pioneer, he wrote in 1922:

> If thousands … of our most virile and adventurous pioneers, comprising our A1 human stock, are allowed to remain celibate, sinking under the scythe of time without trace; and if the lands to Centre, North, and West, are thus allowed to remain practically void of real family life, that indeed will be The Funeral of Australia.

Hains describes Flynn's more sophisticated understanding later in his life of the inability of fragile arid lands to support the sort of settlement he at first advocated. She depicts him as striving to find and maintain a sense of community amid isolation, establishing this connection through new technology — notably the turn of the century invention of the wireless and rapidly developing air transport.

The modern 'myth of the frontier', from which the subtitle comes, is, says Hains:

> …a potent blend of nature romanticism, individualistic rebellion against conformity, and social nostalgia. It is a reworking of other stories: the pioneer legend; the Anzac myth of a bush-based race; the romantic hero against the elements; the adventure quest whereby a man, and therefore his race, is tested and redeemed... It is the paradoxical myth of a nation both ill at ease in a landscape, and driven to celebrate its distinctive harshness. (p. 171)

But she acknowledges that both men

> …remained fascinated — as we still are — by the wild elements of the environment. For it was increasingly clear in the early twentieth century that the remaining frontiers would never be 'closed', never be woven tightly into the fabric of settled lands (p. 4).

Though the places remain outside the tight fabric, Mawson and Flynn correctly predicted the rise of tourism in extreme climates. In 1911 Mawson wrote that 'in the near future [Antarctica] is sure to be the scene of summer pleasure cruises from Australia and New Zealand' (p. 18), a future of the sort of tourism already happening in Alaska by the turn of the nineteenth century. Hains argues that both men strove to persuade the Australian public 'that the frontier mattered' (p. 83). Such frontiers, which in 21st century Australia include the Red Centre, Broome, and Far North Queensland, are today 'central … to our sense of Australia landscape' though most of us are city dwellers. 'This vision of metropolis and frontier', she concludes, 'is the legacy of Mawson and Flynn'.

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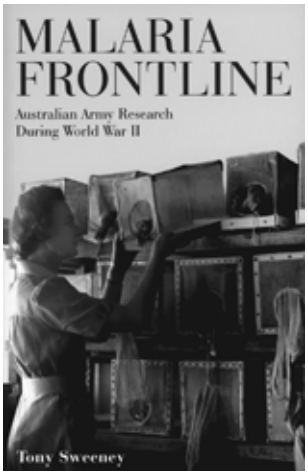
Tony Sweeney: *Malaria Frontline: Australian Army Research during World War II*. Melbourne University Press, Melbourne, 2003. xxii +354pp., illus., ISBN: 0 522 85033 2 (PB), $39.45.



Suppression of malaria was a main contributor to the Allied victory in Papua New Guinea and some of the Pacific islands. Equally, Japanese neglect of preventative measures helped bring about their defeat. Late in the war almost 100% of Japanese soldiers in these island coastal areas were infected, with a 10% death rate, often from particularly virulent strains and intercurrent illnesses. The Australians, after initial terrible infection rates of over 80% around Milne Bay in late 1942 and United States troops with rates of over 90% at Guadalcanal in 1942–3, contained the disease. This vital achievement came from strictly enforced medication, principally Atebrin, based on Allied scientific cooperation and brilliant research by the Malarial Experimental Group working at Cairns. The Japanese had captured the world's quinine supplies when they took Java in early 1942; but they wasted this huge advantage with uncaring slack distribution and dosage regimes, as they did later with Atebrin.

Dr Neil Hamilton Fairley was the scientist who possessed the foresight and personal force to press the need to find and test alternatives to quinine. He also saw the necessity to deepen the Allies' understanding of what was still a mysterious disease. Fairley is the hero of this book. He persuaded the Prime Minister, John Curtin, and the Australian military authorities to act immediately. Fairley quickly gathered a brilliant team of young entomologists, epidemiologists, chemists, nurses, pathologists, clinicians, support staff and nearly 900 Army volunteer subjects. He group comprised a galaxy of talent: Adrien Albert, Rod Andrew, Robert Black, C.R.B. Blackburn, Bobbie and Frank Fenner, Ted Ford, Jo and Ian Mackerras. Fairley was the creative driving force among them and the builder of cooperation — not always smooth — between malariologists in the United Kingdom, the United States and Australia. His diplomacy between some big outfits and egos was vital to securing drugs for investigation. Many of these compounds, Atebrin included, had been discovered and synthesized in Germany in the 1920s and 1930s, but had become subject to American and British patents and remained little known.

Dr Sweeney has done a marvellous job in working through massive archives of reports, minutes of meetings, experimental designs and documentation, diaries, private letters and notes in Canberra, Washington, Liverpool and elsewhere. His researches have yielded a thorough, lucid, compelling account of creative, fast, tireless interdisciplinary effort-establishing and managing mosquito breeding systems, determining plasmodium parasite strains and their developmental processes, finding toxicity limits and optimal dosages of Atebrin, sontochin, plasmoquine, primaquine, sulphadiazine, paludrine among several other possible suppressants. Between June 1943 and February 1946 the

entomologists, led by Jo Mackerras, performed over 37,000 dissections of mosquito salivary glands to investigate the presence of sporozoites and regulated 20,900 infective mosquito bites to volunteers. This work issued in the largest set of data on mosquito malarial infection ever collected from human experiments. The Cairns Group's discoveries included the crucial conclusive knowledge in April 1944, held secret from the Japanese like all their research unlike that of some of their allies, that doses of one 100 mg tablet taken daily every day throughout the time of exposure and maintained for four weeks after the last infective bite completely eliminated falciparum infections and brought 100% cure. They also found that the tricky South West Pacific strains for vivax malaria could be completely controlled by daily 100 mg doses for 14 days before exposure and for 23 days afterwards, but if dosage ceased relapse set in three seeks. Soldiers with relapse vivax malaria needed hospital treatment and could emerge still below full combat fitness. Readers interested in intra-Allied relations will find this episode intriguing.

The experiments were carefully conducted: no volunteer died from malaria. But the tests were no picnic; a chilled sweating case often found a pool of sweat under his bed. Dr Sweeney provides a nominal roll of them. Rubbishy journalism in the Melbourne *Age* and *Sydney Morning Herald* in 1999 alleged that the men were exploited and numbered an unduly high proportion of Jews. These claims, Dr Sweeney shows, are unfounded.

This authoritative, cogent addition to the history of fateful ingenuity, preservation and destruction, might, one hopes, help persuade the designers of histories of warfare henceforth to include medicine and science in the main argument and course of events, rather than huddle them in ancillary volumes that, judging from pristine copies in second-hand bookshops, remain unread. Dr Sweeney's work contains lessons widely applicable in both war and peace and deserves an equally wide readership.

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Francesca Beddie: *Putting Life into Years: The Commonwealth's Role in Australia's Health since 1901*. Commonwealth Department of Health and Aged Care, Canberra, 2001. 135 + viii pp., illus., ISBN: 0 642 50301 X (PB), $39.95.

The administrative history of the Commonwealth Government raises barely a flicker of interest in the reading public and has relatively few adherents in the scholarly world. The tendency for commissioned histories of government agencies to be an unfortunate mixture of genealogy and press release has not added to the appeal of the subject.

Faced with the task of adding to this unpromising genre, author, Francesca Beddie (backed by a solid team of editorial advisers), focuses on the larger story of the Commonwealth Government's involvement in health policy, administration and care, rather than writing an institutional history of the Commonwealth Department of Health. As she notes, the Department of Health is the main character of the book, but the approach enables the author to engage with broader and more complex themes than a conventional organizational history might allow.

The book offers insights into policy-making processes and the mindsets of health ministers and bureaucrats in so far as a relatively brief text permits. J.H.L. Cumpston, one of Australia's most dominant and interesting administrators in the first half of the twentieth century, is given generous treatment. Cumpston was energetic and creative, with instincts shaped by scientific training rather than political sensibility. The expansiveness of his vision — and his impatience to realize it — invited numerous bureaucratic skirmishes. His determination to eradicate communicable diseases and link quarantine to national defence brought him into early conflict with state governments. Further conflict arose over his desire to coordinate the national distribution of doctors and his wish for constitutional change to achieve uniformity of Australian health legislation. Within the Commonwealth Government he sought policy connections between health, welfare and social reform and battled Treasury over national health insurance schemes. Cumpston's apparent lack of regard for established lines of authority affronted some within the Commonwealth Government. Little wonder then that when the department of health was established in 1921, some felt it should be conditional on an administrator rather than a doctor running it. Indeed not so many years later administrators did run it, an indicator of profound change in the health policy environment, where concerns over financing and Commonwealth-State coordination supplanted the initial emphasis on pathology and the eradication of disease.

The book traces very well the changing nature of the discourse through which health policy measures have been articulated. Cumpston's ideas were expressed within a nationalist discourse with a continuum of racial, militarist, maternalist and welfarist elements. His particular interest in tropical health, national fitness and rehabilitation, the health of indigenous Australians and New Guineans, in maternal and child welfare, and industrial hygiene all find accommodation within the both the discourse and the administrative units in his Department. There were successes on many fronts, and a notable

failure on one — indigenous health, a subject on which the book is forthright.

The development of expensive new medical technologies raised concerns about cost containment, and the discourse became less medicalized and more concerned with consumption. Over the past few decades, new Commonwealth-State funding agreements, the development of care models such as 'casemix', public-private partnerships and the rise of the informed patient suggest a policy outlook that is focused on the management of health consumption. Preventative health care is as important as in Cumpston's days, but its locus has steadily moved from the large-scale eradication of communicable diseases, with the program in the hands of experts, to the actions of individual citizens. *Putting Life into Years* suggests that health care policy in the latter part of the twentieth century emphasized the responsibility that health consumers should take for their own well-being, whilst monitoring demand and supply of medical services. However, as the twenty-first century opens, it suggests the discourse will undergo further change as legislators and consumers respond to new ethical and medical challenges brought about by developments in gene technology and the re-emergence of infectious diseases in an era of mass global transit and growing resistance to antibiotics.

Arguably, few areas of Australian public administration have changed as dramatically as health. Change, though, is also initiated by the search for new approaches to the underlying challenge of policy-making: managing conflict that arises as interest groups compete for resources and public legitimacy. From this perspective, *Putting Life into Years* outlines very well the manoeuvring between the Commonwealth and State governments, the medical associations and the insurance companies over the nature and degree of state intervention in the health sector. The account of previous attempts to establish national health insurance provides a particularly useful context for current debates.

Minor concerns about the synoptic nature of some parts of the text aside (the author covers a century of health care in around 30,000 words), my main criticism of the book is its design. Spread sideways across glossy A4 stock, the book is awkward to hold and difficult to read in certain lights. On many pages the main narrative is supplemented with boxed text containing biographical portraits of key Ministers and Departmental officials, or describing diseases, or new policy initiatives or Departmental areas. This is a useful way of adding context and depth to a complex story, but it tends to interrupt the narrative flow. The rather predictable timeline running across the foot of the page is a triumph of style over substance, but without the style. Running counter to this trend towards simplification are endnote-style references and an essay on further bibliographic sources. Photographic sources get rather lesser treatment. Images taken from Departmental records are sprinkled throughout the book, but these are used mostly as design elements rather than information sources. The story touches in part on the Department's innovative use of publicity campaigns for health promotion purposes (for example tuberculosis and HIV-AIDS) but the book might have rescued more pictorial sources from the designer.

This genre also suffers from the finishing touches to the manuscript by high officials as it finds its way through the portfolio approval process. *Putting Life into Years* has three ministerial introductions and an afterword from the Departmental Secretary. This level of intervention may also explain the tendency for the text to drift somewhat from an objective historical analysis of policy and administration to a somewhat egregious political profiling

of current initiatives as the story moves to the present day.

Putting Life into Years is an interesting and accessible survey of the Commonwealth's role in health care in Australia. I hope the author's intention that the book is widely read as a contribution to 'the consumer's knowledge about the health system' is realized through generous distribution, and that the book does not end up as ballast in Department of Health publicity packs.

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D. M. J. S. Bowman and S. L. Farrer (eds): *Measuring and Imagining: Exploring Centuries of Australian Landscape Change. The Special Issue Australian Journal of Botany, 50 (4)*. CSIRO Publishing, Melbourne, 2002. 174 pp., illus., ISSN: 0067-1924, ISBN: BT50/4 (PB), $75.00.

The *Australian Journal of Botany* (*AJB*) has marked its fiftieth anniversary with a special issue on the theme of understanding Australian landscape change. The Joseph Lycett painting of Aboriginal groups hunting with weapons and fire reproduced in colour on the cover sets the scene. This volume is, however, more than an examination of past landscape depictions: it is a stocktake and illustration of methods of detecting century-scale change in Australian landscapes.

It might have expected that the anniversary would be excuse enough to cast an eye back across *AJB*'s contributions to Australian botanical science, but it was straight to the business pre-empted by the title. The papers in this issue are not particularly typical of *AJB* fare of late. Does this signal a departure from tried and true fields? Or does the special issue simply mark a pause from botanical subjects to reflect on related aspects of landscape? Whatever the reason, this special issue,

offers a welcome contribution to Australian historical ecology and environmental history.

In his preface, David Bowman, who commissioned many of the papers, gives scant acknowledgment of the journal's half-century, and focuses on the theme of the special issue. Perhaps the intention was to challenge *AJB* to set a new course for the fifty years ahead? I was left wondering why this wasn't a special issue of *Austral Ecology*, rather than *AJB*.

The theme of the issue is how space and time separate the processes investigated by ecologists on the one hand and the palaeoecologists on the other. In between there are century-scale landscape changes that are the bread and butter questions of environmental historians and historical ecologists alike. The answers have important contributions to make to the science and debate about Australian land management: the perception and measurement of vegetation change, the role of humans as agents of landscape change and the values applied to and derived from landscapes.

Part one comprises seven papers on reviews and meta-analyses of environmental history and historical ecology. Tom Griffiths' paper is the only one specifically concerned with environmental history, what the term means and some of the major studies that have shaped the field, particularly outside Australia. His review of the cultural debates about those pithy topics of Australian landscape — clearing, pastoralism, regrowth and burning — is drawn together to demonstrate how knowledge of the past decodes present landscapes. Historical ecology was obviously one emphasis in the issue, but Griffiths' paper sits alone. At least one application of environmental history among the case studies section of the special issue would have offered readers a more comprehensive array of explanatory techniques. In the following paper, Ian Lunt offers a very ambitious and useful review of the ecological literature on century-scale Australian vegetation change, but steers clear of environmental history. Lunt analyses a collection of 101 studies into 11 classes and 88 sub-classes by methodological and environmental attributes. There are clearly gaps in our understanding of century-scale change, and Lunt seeks to identify these through his quantitative analysis. There is certainly much work to be done. The remaining five papers in part one each deal with a specific class of materials or techniques employed in historical ecology — repeat photography, aerial photography, dendrochronology, stable carbon isotopes and sedimentation.

Part two is a mixed collection of three historical ecology case studies over three different time scales — 20, 50 and 200 years approximately. The work by M. J. Brown *et al.* on two decades of change at Bathurst Harbour, Tasmania, at first seemed out of place in a journal issue devoted to century-scale landscape change. However, the lack of change detected over 20 years reinforces the general thrust of the issue, that major changes are often identifiable when a longer time period is analysed. The study by A.N. Start and T. Handasyde used old photographs of the Ord River area to show environmental change over the past 50 years. They identify some limitations to using this type of record for historical ecology. Several approaches more often associated with palaeoecology — palynology, lead-210 and trace element analysis — were combined in western Tasmania by Katherine J. Harle *et al.* to demonstrate the way in which natural archives can be quantified to validate, characterize and amplify historical records over the same period.

The third part examines landscape carbon dynamics in terms of century-scale landscape change. Sandra L. Berry and Michael L. Roderick conclude from their model of two centuries of land-use and CO_2 change on Australia vegetation, that

woody vegetation has probably thickened since European annexation. They compared the present (1988) vegetation with the pre-European (1788) vegetation as it would have been had it persisted until 1988, and suggest an interesting question. Is the 'baseline' natural vegetation of Australia used in a wide range of studies (typically termed 'pre-European vegetation') a snapshot from 1788, an extrapolation from then to the present day, or an extrapolation from modern remnants back to 1788? In the final paper Rodney J. Keenan sets out the present and future of quantifying carbon fluxes (as they relate to vegetation dynamics). Such a study plays a growing role in policy and economic investment, and underscores the key role of historical ecology and environmental history in underpinning the assessment of change.

The common theme borne out in the papers is the recognition of a need to enhance, develop and adapt the techniques of historical ecology, environmental history and palaeoecology to distinctively Australian ecological problems. Overall the special issue, covering as it does retrospective, prospective and applied aspects of historical ecology and environmental history in Australia, is a very useful one-volume introduction to these fields of enquiry. It is, in the sense employed in the title of Bradd Witt's paper, 'a big bag of tricks' for exploring century-scale Australian landscape change.

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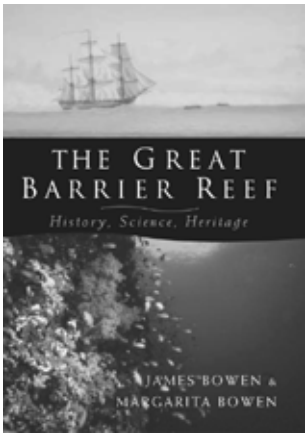
James Bowen and Margarita Bowen: *The Great Barrier Reef: History, Science, Heritage*. Cambridge University Press, Cambridge, 2002. 474 pp., illus, ISBN: 052182430 (HB), $79.95.



The Great Barrier Reef is the main title for this book, but its subtitle better describes its scope and content. History, science, heritage — and present and future policy-making — are all explored within and beyond the large and rich coastal ecosystem we know as the Great Barrier Reef.

James Bowen, the first author, is a polymath who places what Cook called the 'Labyrinth' or the Great Barrier Reef on a huge canvas. The labyrinthine nature of the reef does not just apply to its surveying difficulties. Bowen applies the metaphor equally to its history. On picking up the book, I did not expect to find descriptions of the possible Portuguese discovery of Australia (or the reef), for example, along with the better known Cook, Flinders and other 'exploration' stories. At times his enthusiasm for stories takes us rather beyond his Great Barrier Reef brief. The story of the dismissal of Gerard Krefft from the Australian Museum in 1874 — when he was bodily carried out of his office, still in his Director's chair — seems to be rather outside the scope of the reef,

but it is nonetheless enjoyable. It has been a long time since Colin Finney and Ann Moyal's work on colonial science in the 1980s, and this book provides a surprisingly good overview on the intercolonial scientific worlds of the eighteenth and nineteenth century. The transition from natural history to professional science is well-described and summarized.

Bowen is also strong on economic history — an area increasingly neglected by formal university training, yet essential to understanding environmental exploitation and management. The pearling and bêche-de-mer industries, are not just considered for their culture contact and social aspects, but also their real economic impacts. The reef science of William Saville-Kent, Commissioner of Fisheries in Queensland 1889–92, and later Charles Hedley from the Australian Museum in the 1920s, is read through an economic lens. This is very much in keeping with the ideas of the original protagonists about 'economic biology', in their government worlds dominated by progressivist rhetoric.

Social history is not neglected either. The reef has had more than its fair share of culture contact. The desert island trope is alive and well in the famous 1836 story (sensationalized at the time in London, Sydney and New York) of Eliza Fraser, a white women shipwrecked and cared for by Aboriginal people. Bowen reflects on this with the distance of a century and a half, but does not comment on its perpetuation in national myth-making in the 20th century through, for example, Patrick White's *Fringe of Leaves*. Eliza Fraser's remarkable survival is counterpointed by the 1881 story of Mary Watson, whose husband left her on Lizard Island (with their baby and two Chinese servants) at what proved to be an important ceremony time for the Dingaal people. They asked her to leave, but she did not understand, so they attacked the 'white intruders', killing Ah Leong and wounding Ah Sam. Mary, Ah Sam and the baby sailed away in a tank used for boiling bêche-de-mer, but died of thirst and exposure when the tank foundered on the Howick Group.

It is when we move into Part II, which is about the scientific basis for conservation and heritage that Margarita Bowen's strong scientific background becomes evident. In the earlier chapters she clearly provides scientific precision in, for example, the descriptions of bêche-de-mer, but by the late nineteenth century voyages of Alexander Agassiz and the British Association for the Advancement of Science/ Royal Society of New South Wales expeditions to Funafuti in 1896–8, she works to provide a solid scientific framework in the historical patterns of scientific ideas as they emerge. Darwin's theories of the formation of corals are obviously pivotal to both exploration (Part I) and to the reef science that emerges in the second part.

Reef science is as multifaceted as its history, and the unfolding reef stories demand understandings of the histories of geology, evolutionary biology and ecology in equal measure. The question of science's institutional role in political conflict has a deep past, dating back to the era that led to the establishment of the Great Barrier Reef Committee in 1922, and coming right up to the present, with the Oyster Point controversy and the 'dugong wars'.

In a book as rich in ideas as this one, it is a great pity that the illustrative material is so weak. The book demands interdisciplinary readers (though the index and extended contents pages are good and will help readers in search of single issues). Good pictures throughout — rather than a bunch of presentist colour snaps in a batch in one spot would have helped hard-working readers. Sandra Nobes' cover is delightful, but the quality of the images inside was not up to the average tourist brochure. Apart from an unexplained 'key chart of the Low Isles' (used as a frontispiece), historical images and maps are

totally lacking, something astonishing for a place where so much rich pictorial material exists, and where geographical precision still can mean survival (or not).

The *State of the Great Barrier Reef World Heritage Area 1998* report, where the book finishes, documents many of the baseline facts that were unavailable to campaigners in the 1960s and 1970s. It also provides some solid bases for managing the future. The Bowens argue that the scope of reef management has to embrace the adjacent rural and coastal lands from where farm chemicals and sediments leach out into the sea. It also must reach even further afield to practices that affect global warming and sea-level rises, something well beyond the regulatory power of the Great Barrier Reef Marine Park Authority, but which will ultimately decide the future of the reef's natural and cultural heritage. Climate change is particularly relevant to the reef, which is a bit like a canary in the planet's mine. The 'reef' has not limited the Bowens' study. Perhaps politicians and environmental managers might use the example of its broad canvas to scale up their arguments, which must also reach out to influence the global as well as local.

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Richard Aitken and Michael Looker (eds): *The Oxford Companion to Australian Gardens*. Oxford University Press, Melbourne, 2002. 700 pp. illus., ISBN: 0195536444 (HB) $120.00.

I was once walking beside the River Loire in France, minding my own business, when a large Alsatian dog ran up to me and, unprovoked, bit my leg. A doctor recommended a tetanus jab and suggested that if I noticed any froth about the mouth over the next couple of days I should come back to see him *tout de suite*. I didn't, so I didn't, but it has taken me several years to overcome the completely instinctive thrill of fear I feel whenever I see an Alsatian. I have never overcome the similar feeling I have towards roses.

Roses don't like me and I don't like roses. I agree that their appearance may please, their scent may intoxicate. But the number of scars I bear from when, approaching too close to an apparently innocent rose bush, my flesh has been grabbed and slashed and torn by their evil thorns has given me a dislike for the tribe in general. The physical scars of being attacked by a rose may heal, the mental ones do not. I now read in *The Oxford Companion to Australian Gardens* that roses were probably introduced into Australia in the late eighteenth century, and that one Alister Clark, a gentleman farmer

of Glenara, Bulla (Vic.) used his early 20th century leisure and income to pursue a personal goal of breeding roses that would flourish in the Australian climate. Even today, I am told, societies exist all over this previously rose-free continent to encourage their propagation. *The Oxford Companion to Australian Garden* fails to tell me why.

The shelves of most bookshops and libraries (and many private homes) contain scores if not hundreds of books about gardening. Gardening shows are among the popular programs on television. How to grow roses or vegetables, how to build a water garden, a desert garden, an Australian native garden, how to encourage birds or discourage pests, which plants to put where — you name it, someone has written a book on it. Do we really need another book on Australian gardens? Having read *The Oxford Companion to Australian Gardens*, I say 'yes'.

The book describes the plants, places and people that have contributed to the diversity of gardens that we see in Australia today. Over 1500 entries are arranged in alphabetical order. Some are only a paragraph or two, some are the length of small essays. Though there is a general level of enthusiasm for all things horticultural throughout — I suspect that few of the more than two hundred writers who contributed to the book have never cleaned soil from under fingernails — it is essentially a book of history.

The contributors range from the academic historians and scientists to serious gardeners and even a professional golfer. Yet with such a diverse range of interests to call on, the editors have produced a book that, while delighting the reader in its eclectic nature, remains true to its theme of the garden in Australia. Of particular interest are the 750 biographical sketches. Joseph Banks, Robert Brown and Ferdinand von Mueller appear of course, but they are joined by a large supporting cast of botanists, garden designers and horticulturalists, many of them women. Edna Walling is there, but so is Olive Mellor, Walling's lesser-known contemporary. I particularly like the photograph of women students at the Burnley School of Horticulture in Victoria — where Mellor was the first female full-time student — about to embark on a secateur sally against some unsuspecting rose bushes. Unsung though no less important, many nursery-workers are also included, as well as botanical writers, illustrators, architects, landscape architects and town planners.

The Companion is above all concerned with garden history (it is published by Oxford in association with the Australian Garden History Society) and any entries on specific plants tend to emphasize their historical rather than horticultural aspects. The article on roses is one such, and though I was pleased to see that sweet peas (so pretty, so sweet-smelling, so harmless) also get an entry, the choice of which plants to include seems somewhat arbitrary. Why Sweet Peas but not Sweet Williams? Why Elms but not Oaks? But perhaps in a work such as this, a certain arbitrariness should be seen as a virtue, since *The Oxford Companion to Australian Gardens* is as much about serendipitous discovery as structured enquiry. The book is well-illustrated and the editors have a fine job with cross-references. I recommend it as an addition to the library of gardeners, historians, and even rhodophobes.

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Archives

Australia's Lost and Missing Scientific Documentary Heritage

http://www.amw.org.au

The destruction of the library at Mount Stromlo in the Canberra bushfires on 18 January 2003 has again brought to our attention the vulnerability of significant parts of our scientific heritage. The recent television coverage of the looting of libraries, archives and museums in Iraq has reinforced this vulnerability and has forcibly brought to our attention the need to support efforts to preserve important documentary heritage. (Documentary heritage is defined as items that are moveable, made up of signs/codes, sounds and/or images, preservable, reproducible and migratable, and the product of a deliberate documenting process. It includes all of the kinds of material found in libraries and archives, including information in digital form.).

The Australian *Memory of the World* Program aims to heighten awareness of these issues by establishing and maintaining the Australian *Memory of the World* Register (see http://www.amw.org.au). This Register will include a section about lost and missing heritage.

Significant parts of Australia's documentary heritage have been lost or are missing. It is important to record what documentary heritage is lost and missing because such a record is a precursor to the possibility of virtual reconstruction of lost and dispersed memory. Lost heritage is material whose decay or destruction is reliably documented or can be reliably assumed. Missing heritage is material whose current whereabouts is unknown, but whose loss cannot be confirmed or reliably assumed. This material would have been eligible for inclusion in the Register if it had survived or was accessible. There are some difficulties in recording material that is not available to be examined. For instance, precise description is unlikely to be possible, so only a general description may be the best we can do.

Ross Harvey and Anne Lloyd are compiling a list of Australia's lost and missing documentary heritage for the Australian *Memory of the World* project. We are keen learn about lost or missing documentary heritage of scientific interest, and are interested in receiving your responses to these questions:

- 1) Can you tell us about any collections or items that you think fit into the definition of lost or missing documentary heritage of **national** significance? (Australian, that is)
- 2) Can you suggest anyone else we should contact?

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Where are the Women in Australian Science?

http://www.austehc.unimelb.edu.au/wisa/wisa.html

The *Where are the Women in Australian Science?* project was launched on 22 August 2003 at The University of Melbourne by Professor Nancy Millis as part of National Science Week.

This project provides information about women and the roles they played in the history of Australian science, technology and medicine from the earliest periods of European engagement to the present day. It is an online exhibition linked to biographical, bibliographical and archival

information held in the *Bright Sparcs* database (at http://www.asap.unimelb.edu.au/bsparcs/). It allows readers to create their own searches.

Bright Sparcs is a register of people involved in the development of science, technology, engineering and medicine in Australia. It includes references to archival holdings and bibliographic resources. It began in 1985 with a focus on recording information about existing Australian archival collections relating to science, technology and medicine. Later it expanded to cover people involved in the historical discourse in science, technology and medicine more generally. By the mid-1990s, though, women represented only just over 7% of people registered. Although women have always played a significant role in the history of Australian science, technology and medicine they often disappear from the historical record. Just by reflecting the historic process, *Bright Sparcs* itself was perpetuating the underrepresentation of women in the history of Australian science, technology and medicine. This ongoing project redresses this imbalance by providing a specific gateway to the women in *Bright Sparcs* and seeking actively to increase the numbers of women registered.

In order maximize impact, we began by adding women in the era when men are least well represented, that is the period from the 1970s to the present (2003). A variety of sources were used to identify who played prominent roles in this period, including recent volumes of *Who's Who in Australia*.

Through this process we achieved the goal of doubling the number of women in the database, bringing the percentage of women to almost 15%. It is still well short of the percentage participation of women in Australian science, technology and medicine. Different disciplines and different eras have seen widely varying numbers of women involved, but we are striving towards a more representative 30–40% women eventually. We are hoping that this project, supported by the Commonwealth Office for the Status of Women, will help uncover missing archives and stories of women in science, technology and medicine. If you have suggestions we would welcome them.

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