

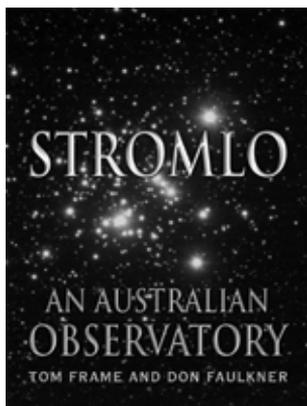
Review Section

Compiled by Libby Robin

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Tom Frame and Don Faulkner: *Stromlo: an Australian observatory*. Allen & Unwin: Sydney, 2003. xix + 363 pp., illus., ISBN 1 86508 659 2 (PB), \$35.



Few institutional histories could boast such a dramatic conclusion as *Stromlo: an Australian observatory*. The manuscript was substantially complete when a savage fire-storm swept through the pine plantations flanking Mount Stromlo, destroying all the major telescopes and many of the observatory's buildings. Among the losses was the Oddie Dome, built in 1911 to test the site — one of the first buildings in the nation's yet-to-be-inaugurated capital. This sudden twist of fate forced the authors to add an epilogue, providing both a poignant account of the fires, and an expression of hope for the institution's future. Inspecting the scene shortly after the devastation, Prime Minister John Howard promised government assistance in rebuilding the site. Like many others, he lamented the

loss of what he described as a 'national icon'.

Institutional histories are often suffused with a sense of inevitability. Looking back from the security of a firmly grounded present, the road seems straight and well marked. The journey that is reconstructed is one where the end point is always known, where uncertainties and diversions are forgotten — a journey that lands neatly on the institution's front doorstep. Institutional histories are often burdened, too, by the expectation that they will not merely tell a story, but provide a record of achievement. Written for the institution's staff, as well as broader public, they can become bogged down in the details of personnel and projects. In this case, the fires of January 2003 add an unexpected final act to what is a fairly traditional story of growth and success. The force of nature intervenes to remind us of the limits of inevitability, to fashion from the end point another beginning.

The book is roughly divided into halves. The first six chapters recount the Mount Stromlo Observatory's origins and early history, concluding with its incorporation into the Australian National University. The latter five chapters each describe the institution's development under successive directors, from Bart Bok to Jeremy Mould. As the preface explains, this division also reflects the contributions of the two authors. Historian Tom Frame was largely responsible for the first half, while Don Faulkner, the observatory's former Associate Director for Education and Outreach,

took on the second after Frame's appointment as Anglican Bishop to the Australian Defence Force. I have to confess to a certain weary familiarity when I learned of the structure and division of responsibilities. Too often, it seems, the recent past is deemed to be the province of retired scientists rather than professional historians.

I was won over by the book's engaging style, and enjoyed the second half more than the first. Although the latter chapters mainly comprise a summary of the observatory's changing research effort, they gain much from the author's enthusiasm. The sense of excitement builds, particularly as the observatory pursues fundamental questions relating to the nature and history of the universe. The MACHO Project, an attempt to track down the universe's 'missing matter', is probably the most well known of these endeavours, having won the coveted front page spot in *Nature*. At times the narrative does fall back into lists of people and projects, but the feeling is less one of worthy commemoration than an expression of the joy of research. You are left with a sense of the observatory's intellectual evolution, and a desire to get outside with a telescope.

Equally as fascinating are the personalities of the directors themselves. They were, to put it mildly, a diverse bunch, both in their research enthusiasms and their personal habits. As Ben Gascoigne observed of Richard Woolley and Bart Bok: 'they were men of widely different character and temperament who detested each other' (p. 131). The differences were perhaps not always so acute, but with contrasts such as those between the extroverted Bok and the shy Olin Eggen, or the refined patrician Woolley and the self-confessed larrikin Alex Rodgers, it is difficult not to see this line-up as a lesson in the differing styles of scientific leadership. And I am still trying work out how Eggen, whose working day was between noon and near-dawn, managed on one meal a day.

The way in which the passions of the directors shaped the observatory's research priorities are interestingly observed, however, the impact of staff is not so easy to determine. Bok, for example, insisted that all staff and students undertake observational projects, forbidding purely theoretical studies. This is described as 'especially hard' on some researchers, but you are left wondering about the tensions that ensued (p. 151). The directors tend to loom so large within the narrative that it is difficult to form much of an impression of the community as a whole.

One characteristic that a number of the directors did seem to share was a peculiar sense of humour. Woolley, it is suggested, was 'addicted to the one-line put-down', demonstrated most painfully at the 1947 ANZAAS congress. When asked where he thought the exciting new field of radio astronomy would be in ten years' time, he replied, 'Forgotten!' (p.108). This was perhaps one of the lowest points in the often frosty relationship between Mount Stromlo and the Sydney-based radio astronomers, a relationship that provides one of the connecting themes in the second half of the book. Even though collaborations between the optical and radio astronomers became increasingly common, the first signs of a lasting thaw did not emerge until Don Matthewson, who had worked both at Stromlo and in the CSIRO Division of Radiophysics, was appointed director in 1977.

The other major characters in the Stromlo story are the telescopes. Perhaps more than any other scientific institution, the history of an observatory is bound up in the history of its instruments. In Stromlo's case, the telescopes existed before the observatory, as inaugural director, Geoffrey Duffield, gathered donated instruments from around the world even as he was lobbying the Commonwealth government for its creation. Successive directors continued arguing for bigger and

better facilities. Woolley secured a 74-inch reflector, Bok obtained an additional site at Siding Spring, and Eggen championed Stromlo's interests in the development of the Anglo–Australian Telescope, while Matthewson pushed forward with the Advanced Technology Telescope. But even as each victory was won, the realisation firmed that neither Mount Stromlo, nor the continent as a whole, could provide a site that would enable Australian optical astronomy to compete with the world's best. In later years emphasis shifted towards involvement in large, internationally funded facilities overseas.

The early chapters, detailing the establishment of the observatory, don't seem to carry the same sense of excitement. Duffield's personality appears somehow more elusive, and his energetic efforts on behalf of solar physics become rather submerged in the detail of meetings and resolutions. There is some confusion in the chronology. Even though the shifting political fortunes of the early twentieth century are complex, it doesn't seem quite fair to make Liberal Prime Minister Joseph Cook a minister in the Fisher Labor government (p. 28). In fact it was Cook, not Fisher, who met with a high-powered delegation of astronomers during the British Association for the Advancement of Science meeting in 1914. A minor matter of detail, perhaps, but made more significant by the fact that the delegation also included Cook's former leader, Alfred Deakin. Moreover, a slip of this kind seems to reflect a feeling that politicians and bureaucrats are essentially dispensable in what is, after all, a story of scientific achievement. Rather than being active participants, politicians and bureaucrats tend to be slow and uncertain, providing only obstacles for the determined, clear-sighted scientists. This hardly does justice to enthusiasm of Deakin or Littleton Groom, nor to the administration's hopes for the Mount Stromlo site.

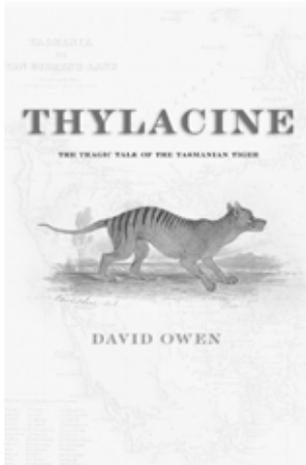
Related to this is the book's failure to offer any real explanation of its title — what is it that makes Stromlo 'an *Australian* observatory'? Duffield's campaign succeeded with the establishment of the Commonwealth Solar Observatory, later simply known as the Commonwealth Observatory. The institution was one of the first to be built in the nation's capital, and would eventually become part of the Australian National University. It was one of the Commonwealth's earliest forays into the realm of scientific research, and yet we are offered no suggestions as to how the observatory might have contributed to a sense of national prestige or hopes for national development. Instead of examining the place of science and education in the nation-building agenda, or the imperial cachet of the solar physics enterprise, we are directed instead towards the scientists' powers of persuasion.

Despite a number of setbacks and difficulties, astronomy in Australia has benefited through the public support of a series of large and expensive projects. The Great Melbourne Telescope did not bring the success hoped for it, but it was followed in the twentieth century by the Commonwealth Solar Observatory, the Parkes radio telescope, the Anglo–Australian Telescope, and the Australia Telescope. The latter notably opened amidst a cloud of green and gold balloons, funded as part of Australia's bicentenary celebrations. There has been a nationalistic element to the country's astronomical ambitions. Perhaps such themes are reckoned beyond the scope of an institutional history, but we might at least have expected a greater attempt to locate Stromlo within its Australian context. The early history of Australian astronomy is granted little more than a paragraph, while most of the introduction is turned over to a hand-waving invocation of astronomical greats from Copernicus to Einstein. That the history of a major Australian scientific institution should regard it

as more important to affirm its subject's connection to the scientific revolution than to its local circumstances, seems to indicate a lingering sense of illegitimacy. In the aftermath of the 2003 bushfires we are left wondering what it is that makes the Mount Stromlo Observatory a 'national icon'. As rebuilding begins, it would seem a question worthy of further consideration.

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David Owen: *Thylacine: The Tragic Tale of the Tasmanian Tiger*. Allen & Unwin: Crows Nest, 2003. 228 pp., illus., ISBN 1 86508 758 0 (HB), \$29.95.



Thylacine: The Tragic Tale of the Tasmanian Tiger is an easily read account of the environmental, social and economic factors involved in the extinction of this near mythical animal. For this first-time reader on the subject it served as a pleasant introduction.

Author David Owen, well known for his *Pufferfish* detective series and as the editor

of *Island Magazine*, juxtaposes the contemporary glamorization of the species for profit with its historical demonization as a sheep killer and scapegoat for failures in the agricultural industry. Owen often sees the humour in this, a quaintly black example of which is the Tasmanian coat of arms, which depicts two thylacines protectively embracing a ram. With the Wedge-tailed Eagle, the thylacine was blamed for sheep losses in the struggling (read mis-managed) sheep industry. Reports of slaughter were certainly exaggerated and mostly likely unwarranted for, like the eagle, the thylacine was probably happy to feed on carrion and only occasionally killed stock.

There are vestiges of another, related, ethos still at work on the island: the taming of a savage land at a remote corner of the Empire. In the 1800s the requirement to fight off the wild beasts was taken out on the thylacine, a relatively benign and already uncommon animal eking out an existence in the remains of its former expansive range, from Tasmania, across Australia to New Guinea. The recent wilful and illegal release of another sometime sheep predator, the fox, to the island is a throwback to that time and attitude.

I must admit that the unsubstantiated comment 'it is arguable that generations of scientists have peddled and recycled misleading thylacine information' (p. 38) stuck in my craw. And, as a biologist, the flaws in Owen's examination of the scientific wisdom probably coloured my impressions of the book. For example, that the thylacine's tail could be 'held vertically when sexually aroused' (p 48) sounds too phallic to be true and hardly seems possible in an animal with tail 'stiffly united to the spine' (p. 38). Contrary to the photo caption on p. 43, Tasmanian Devils are not thought to be the thylacine's closest relative and the males do not have pouches — among marsupials the male pseudo-pouch is a feature unique to the thylacine. Owen

cites ‘persistence of the European Myth that wolves ate children’ and biologist Ellis Troughton’s statement that the thylacine’s stripes ‘which provide a similar protective camouflage to that of the tiger when moving amongst foliage barred by sunlight’ as part of the demonization process (p. 8). He attempts to debunk Troughton’s supposition using reference to work on the function of the zebra’s stripes and in doing so misses the point that in both animals stripes probably serve to visually confuse: prey, in the case of the predator (thylacine) and predator, in the case of the prey (zebra). And, though no one would disagree that the wolf–thylacine comparison was overplayed, wolves do indeed kill people. Suggestions such as that ‘Perhaps it [the thylacine] lacked the ability to scavenge’ (p. 24) followed on the facing page (and elsewhere) with descriptions of an animal being lured into offal-baited traps do little to sort fact from fiction.

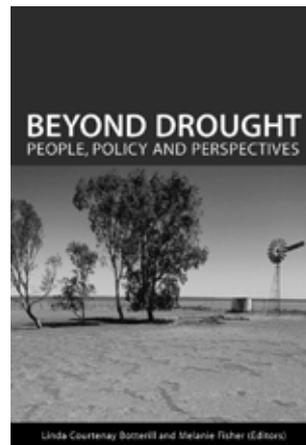
Owen rails against the use of names such as Tasmanian tiger, hyena or wolf, which he believes contributed to the creature’s demise. Quite probably they didn’t help but if a ‘bad’ name spells doom, why is the Tasmanian Devil still with us? Owen himself, in attempting to reconstruct the thylacine’s hunting methods, makes comparisons with African hunting dogs. He also appears comfortable to repeat a heavily Europeanized ‘how-the-thylacine-got-its-stripes’ Aboriginal legend in which a ‘hyena’ pup becomes a ‘tiger’ for an act of bravery.

Still, the political machinations are interesting and most of the elements of the ‘story’ get at least passing mention, from the role of dogs and Indigenous people to the dream to rebuild the thylacine from scraps of aged DNA in museum specimens. The book will surely find a place in libraries of the many with an insatiable interest in the fate and resurrection of this unfortunate creature. It will be a brave tiger indeed that materializes from the

bush to face the gene banks and videocams of the twenty-first century.

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**Linda Courtenay Botterill and
Melanie Fisher (eds): *Beyond Drought:
People, Policy and Perspectives*. CSIRO
Publishing: Collingwood, 2003.
xvi + 229 pp., diagrams, maps, illus.
(colour and b/w),
ISBN: 0 643 06954 2 (PB), \$39.95.**



‘Drought’ resists any simplifying definition beyond something like ‘a variously extended interval of moisture deficit’, and of course that begs so many questions. In the modern era the drought phenomenon has occupied an increasingly contested space between natural events systems and the manipulations, or environmental investments, made by human communities. Perhaps it is indeed best seen in its relationship with a complex spectrum of hydrological demands: incomprehensible, seemingly, without reference to the kaleidoscope of needs and wants.

In that light, the development of urbanization, industrialization and commercial agriculture pits various styles of risk-taking against inadequately understood natural rhythms and properties. That helps to explain why identical physical parameters are often associated with starkly contrasting characterizations of ‘normality’ and ‘hazard’. So-called ‘drought incidence’ is partly, therefore, a product of aspirations and perceptions reflecting the water requirements of differing approaches to production — from the most basic forms of pastoralism to advanced, profit-seeking ranching; from nomadic ‘subsistence’ hunters and gatherers to peasant farmers; from peasant farmers to agribusiness; and so on. It follows that, despite delusive popularizations, interpretation cannot safely rely on hydrological data alone.

Over the past two centuries Australia has become notoriously and problematically ‘dry’ as its new occupants sought to impose escalating demands upon its modified ecosystems. Each ‘drought’ episode has exhibited and refined a matrix of economic, social, political, cultural and even psychological modes, and the matrix has become part of the problem taken up by the ‘policy-makers’. *Beyond Drought* attempts to address these complexities in such a way as to provide useful background for the educated public and the makers and deliverers of policy. The hazard attending Australia’s high levels of ‘rainfall variability’ is of course central. Yet a good deal of the entrenched mystique derives as much from the importation of limited understandings as from apparently chronic failures to appreciate the accruing evidence of physical underpinnings.

These reflections persuade the editors to take up an intriguing burden: to ‘place drought on the public agenda’ and thereby to inform policy-makers, while wishing that the very term itself could be ‘removed from the national lexicon’ (p. ix). This

translates into a commendable civic intention — to promote an improved depth of field — that influences both the structure of the book and the adoption of relatively straightforward language.

An opening overview (invitingly entitled ‘Living in the Australian environment’) succeeds in introducing primary ecological considerations with which our dominant production systems have been somewhat incongruent. This nicely turned piece then outlines the issues confronting policy-making, including a need to encourage enlightened adaptabilities and the targeting of a multiplicity of scales. ‘Climate and drought in Australia’ elaborates on underlying environmental processes and patterns, and on the need to accept the cursed term as a complicating ‘human construction’. The corollary is that it remains susceptible to reason and therefore to the kinds of viewpoints drawn here from academia, the CSIRO, key bureaucrats and consultants. So to later chapters discussing the major state and federal responses to drought (and to related public concerns, however based); the role of media representations in ventilating and shaping public anxieties; the effects on families and communities; the economic impacts of drought and of associated government interventions; proposed enhanced articulations (or better ‘matches’) between human use systems and nature’s dynamics, together with flexible policies to assist environmental learning and adaptability; a description of the variously supportive and unfortunate differentiations between taken-for granted players (farmer, scientist, policy economist); and a reinsertion of Australian approaches into the global context.

These perspectives seem justified by the fact that we find ourselves recurrently in drought crisis mode after more than two centuries of non-indigenous settlement — speaking volumes about an insecure grasp of environmental constraints and opportunities. The joint aim is to focus ‘inter-

disciplinary' expertise on the need for policy improvements benefiting the Australian public as a whole, as well as farmers and rural communities. But the sensitivity towards the rights and responsibilities of our much broader voter-taxpayer base might have recommended a more thorough consideration of urban and industrial situations. Similarly, although this agreeably focused co-operation does indicate some of the promised 'inter-disciplinarity', pointed and eminently accessible historical scholarship could produce a telling supplement. After all, we are in turns blessed and stressed by economic upturns and depressions, and by wars, diseases, floods, fires, droughts, whatever. If the resultant psychological, structural and other behests have profoundly influenced community stances and general preparedness across the board, then surely the visitations of drought are not so easily disentangled as we might be led to suppose. Provided an inherited distaste for critical scientific and technological constructions is discarded, well-directed historical monographs should be able to supply the missing element by injecting innovative, persuasive accounts of the experience of a number of judiciously selected communities through good and bad times.

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Geoffrey Cary, David Lindenmayer, and Stephen Dovers (eds): *Australia Burning: Fire Ecology, Policy and Management Issues*. CSIRO Publishing: Collingwood, 2003. 276 pp. illus., ISBN: 0 643 06926 7 (PB), \$39.95.



Over the past decade the developed world has rediscovered fire. It has seemed everywhere, as though some ancient scourge, long forgotten and buried, had resurrected itself out of the slime; savaging fringe cities, searing rainforests, incinerating nature reserves, corroding climate with its effluent; vicious, primitive, unregenerate, and unwanted. As the planetary climate has wobbled into drought, massive fires have broken loose from Ethiopia to Alberta to Provence. In 2003, despite the most elaborate firefighting apparatus anywhere, wildfires blasted upscale communities in California and, after rambling widely through the Australian Alps, lashed viciously into Canberra. It was, for modern nations proud of their wildland estates, a shock perhaps as profound as the burning of the twin towers. The events sparked a media bonfire.

One might expect that the world would have rallied to the study of fire. It hasn't. The core response has been to bolster fire suppression programs and to condemn the global warming that seemingly supplied the

tinder. There are two exceptions: the United States and Australia, each of which has rekindled a major investment in fire research and promulgated broad-shouldered schemes to shield communities from the flames. To a considerable extent, they are carrying the global burden of fire scholarship. In the planetary economy of fire, Australia is a world leader, known not only for its Outback-sized conflagrations but for its innovations in fire science. What it has to say on the subject of bushfire matters.

Australia Burning is the record of a National Fire Forum held at Australian National University in February, 2003. Originally conceived as a modest symposium among experts, the convenors aimed 'to broaden the discussion beyond the usual areas of dialogue within academic, government agencies and emergency services community.' The Canberra fires pumped that gathering up to a public event. The session followed a rigid prescription. There were five major areas for discussion: Ecology and environment; Fire behaviour and fire regime science; People and property; Policy, institutional arrangements and the legal framework; and Indigenous land and fire management. Each area hosted two speakers who addressed what he or she 'believed to be key research and development implications.' A three-member panel then commented on the speakers, followed by a compiled summary. The final chapter expanded this formula into a suite of syntheses by the editors.

Inevitably, some contributions are better than others. And while the formula works to capture consensus opinions, distilling wide-ranging observations into a kind of executive summary suitable for policy committees, it sieves out the quirky, the punchy, and the politically incorrect. Yet the best papers (I thought) were precisely those that argued original, forceful, unconventional opinions, or managed to inject a sense of personality, the kind of presence one imbibes by watching the live perform-

ance but that can leach out of an edited volume. Among that select group I would place the papers by David Bowman, Phil Cheney, Neil Burrows, Christopher Henri, Rosemary Hill, Lynette Liddle, and Charles Krebs (disclosure: I know personally the first three); the pieces by Bowman and Krebs are gems of the genre.

The poorest pieces, and most of the attempts to summarize, suffer from an encumbering, technocratic language that seems wildly at odds with the subject. But that, in truth, may have been the intent: to wrestle the apparently ineffable bushfire into tractable, bureaucratic formulas, in part by removing it from the hands of its more passionate practitioners.

If so, the convenors may have cured the disease at the cost of killing the patient. I found the book a disappointment: the vigour of Australia's fire community overleaps its pages. The Australian bushfire scene is one of spectacular ferment and diversity, little of which actually gets between these covers. Australia is fire's lucky country because, alone among the industrialized nations, it has kept alive a tradition of landscape burning. Clearly that practice needs to adapt to new circumstances, as it has often in the past; but this issue barely breaks into print, not even in its politically volatile incarnation as hazard reduction burning. Australia, too, offers a Third Way of fire management, apart from the European obsession with the garden and the American fascination with wilderness, what might be called an aboriginal model. Of course Aborigines figure prominently in the forum, but as partners in the fire administration of nature reserves. No larger vision of what this might mean outside those elect areas—a new strategy of fire management that the world needs—emerges from the scrub of technocratic text.

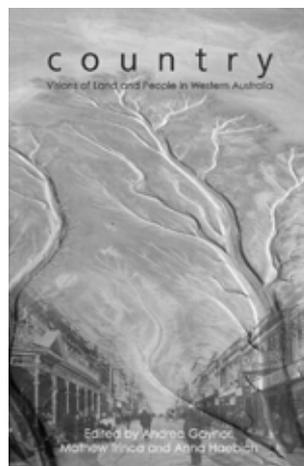
They are honoured, the Aborigines; and their traditional knowledge applauded, even to the point of allowing them to hoard what they know. Yet the very prominence

accorded them—the 400 Pitjantjatjara, for example, allowed to face down the global establishment of modern science—highlights a vast gap in the forum's scope and ambitions. Andrew Campbell hints at that lacuna when he explains that his family has farmed in Victoria since the 1860s, that his father never left the farm during bushfire season for fear of wildfire, and that 'ploughing firebreaks and burning off against them was an annual ritual and I grew up with a palpable sense of fire risk and preparedness.' Nowhere in *Australia Burning*, however, is rural Australia allowed a voice. Nowhere is there a place for the 'indigenous' knowledge of rural Australians who have control-burned their fields and paddocks for a couple of hundred years, adopted bushfire-prevention measures often learned at painful cost, and continue to staff the volunteer bushfire brigades that are the legitimate pride of Australia's fire community.

The agenda, that is, belongs with a metropolitan, even cosmopolitan, elite. Nature reserves matter, farms don't. Aborigines count because they can be fitted into a global project of multiculturalism; white countryfolk can't. The bitter fights over fire practices, however, occur exactly along the fissures of identity politics that divide city from country. *Australia Burning* is the assembled voice of the metropole, and that is its value. But reading its carefully crafted prose while, at the same time, scanning the daily summaries of the coronial hearings underway at Canberra regarding the 2003 bushfires would lead one to question whether the two gatherings were talking about the same country.

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Andrea Gaynor, Mathew Trinca and Anna Haebich (eds): *Country: Visions of Land and People in Western Australia*. Perth, Western Australian Museum, December 2002. 274 +ix pp., illus., ISBN: 0 7307 5812 5, \$24.95.



In 1827, Captain James Stirling described the coastal plain of south-western Australia as a 'paradise' blessed with fertile soil and a temperate climate. Two years later, the first European settlers were cursing the sandy soils and heat. Imagining the Australian land from a distance as Arcadian (echoing the myths of the old-world) has always been easier than facing it day to day, sweat dripping into soil, constantly measuring the distance between vision and reality.

The last decade has seen the publication of an increasing number of environmental histories. In Australian literary and academic circles, 'the land' has become the theme of the moment, the lodestar of historians, journalists and novelists, so much so that the term 'environmental history' no longer seems adequate to describe the histories that have emerged in the last few years.

I could grasp for another label, invent a new phrase (and I have tried), but none seems capable of capturing the diversity of

this new writing. Informed by historical research, often filtered through personal experience with place, sometimes economic or political in focus, sometimes cultural, often grounded in science or art history, sometimes all of these and more. There is no aspect of human experience—lived or mythical—and no environment, natural or built, tangible or imagined, that can escape the rubric of ‘environmental history’.

In their introduction to *Country: Visions of Landscape and People in Western Australia*, Mathew Trinca and Andrea Gaynor describe the histories of place and environment that follow as ‘belonging to a new global story telling’. While this phrase tends to depoliticize such histories, and is so broad as to mean almost anything, it is still preferable to the notion of environmental history that purports to study the ‘human impacts’ on the environment. The word ‘impact’ implies that environments are first posited as non-human and that the task of the environmental historian is to measure and assess the various effects of the human footprint. Understanding human interaction with environments (and recognizing the indivisibility of these two concepts—the human and the environment) reveals a far richer and more unpredictable history. This collection of essays shows why.

The editors of this volume have brought together a wide range of environmental histories of Western Australia. Contributors have not had to pass the ‘sand-groper’ test before having their work accepted. Many live and work in other parts of Australia. They are also drawn from a range of fields in the humanities and social sciences. Trinca and Gaynor rightly point out that histories of Western Australian places have tended to be absent in national histories. Their aim is not only to redress this familiar national imbalance, but to ‘reconnect stories of Australian experience to those of other cultures and places around the world’. By and large, they have

succeeded admirably. The introduction alone contains a valuable survey of environmental history both nationally and in Western Australia.

Gaynor and Trinca were inspired to publish the volume through their contact with the *Western Australia Land and People* exhibition at the Western Australian Museum. One of the finest essays in *Country* is Trinca’s reflection on the many difficulties associated with representing environmental pasts in a museum context. Echoing Marshall McLuhan’s dictum that ‘the medium is the message’, Trinca demonstrates how ‘the translation of historical knowledges and ideas into exhibitions and public galleries’ constitutes new histories and new understandings of the past. Drawing on the work of Tom Griffiths, Trinca is alive to the way in which ‘the deep time’ perspective—so central to the practice of environmental histories—can tend to dwarf the cultural and political concerns of the moment and render historical change of any kind ‘inevitable’. He also writes of the ‘reticent objects’ held in museum collections. Many of these artefacts, especially those collected in the nineteenth century, have a symbolic power that tends to represent ‘settler stoicism’ and resist critical perspectives. The challenge for museum staff, writes Trinca, is to encourage a plural reading of the past.

Other essays in *Country* focus on the development of Perth’s transport system (Phil McManus), the city’s poor air quality (Sue Graham Taylor), environmental campaigns in the 1980s to save bushland in Perth’s southern suburbs (Liana Christensen), visions of Old Growth forests in Western Australia (Jean Hillier), the management of Garden Island (Marion Hercock) and a revealing examination of Whaling and the Albany community in the mid-twentieth century (Adam Wolfe). There is also an impressive survey of Vegetation and Environmental History in Southern Western Australia by four

geographers from UWA, John Dodson, Freea Itzstein-Davey, Lynne Milne and Annabel Morris. They explain the genesis of the south-west's remarkable flora, an area of extraordinary biodiversity and many endemic species. In addition there is Andrea Gaynor's study of land degradation in the eastern wheatbelt (from woodland to wheat farms), one driven by the settlers' deep psychological need to establish a class of yeoman farmers. Patricia Crawford's detailed study of the Group Settlement Scheme at Northcliffe dovetails nicely with Gaynor's chapter, which traces the journey of the Settlement Scheme from rural idealism to the bitter disappointment of the 1930s.

Two chapters deal specifically with Indigenous relationships to land, Steve Kinnane's evocative reflection on his personal connection to the East Kimberley and anthropologist Sarah Yu's discussion of Karajarri people's complex cultural relationships to water in the West Kimberley. Kinnane insists that Indigenous ideals of 'natural and cultural resource development' must be built upon the cultural and spiritual relationships Indigenous people have to these same resources. The alternative, he writes, is no change in the 'colonial conditions' currently experienced by Indigenous people in the Kimberley.

This collection of essays makes a valuable contribution to our knowledge of environmental histories in Western Australia. But perhaps more importantly, it engages critically with issues that bear relevance across the field of 'global story telling' (for want of another term!). It also makes this easterner long to visit Western Australia.

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John Dargavel, Denise Gaughwin and Brenda Libbis (eds): *Australia's Ever-changing Forests V. Proceedings of the Fifth National Conference on Australian Forest History*. Centre for Resource and Environmental Studies: Australian National University, Canberra, 2002. 442 pp., illus., ISBN 086740 530 9 (PB), \$30.



Australian forest history has provided a fertile field for the interaction of science and history in the exploration and elaboration of Australian environmental history — thanks in no small part to the energy and expertise of John Dargavel, whose *Fashioning Australia's Forests* (OUP, 1995) was reviewed in *HRAS* in 1996. John Dargavel co-organized the inaugural national conference of the newly-established Australian Forest History Society (AFHS) in Canberra in 1988 and subsequent AFHS conferences at Creswick, Victoria (1992), Jervis Bay, NSW (1996), Gympie, Queensland (1999) and Hobart, Tasmania (2002). Published proceedings of these conferences and a conference on Australia's *Callitris* forests (2000) provide an interesting record of Australian forest history research. This volume presents 28 papers delivered at the fifth national conference on Australian forest history in Hobart in

February 2002, when Dargavel was still conference co-convenor and co-editor of the proceedings, as well as AFHS president, newsletter editor, secretary (except for minutes) and de facto treasurer.

The second paper concerns an older forest history group — a section of the oldest international scientific union, the International Union of Forest Research Organizations (IUFRO), whose foundation in 1892 was prompted by ‘the need to unify the character of forest experimental systems and to make the methods of measurement and results comparable so that they could be developed and consolidated’ (p. 16). The author is Elisabeth Johann, Coordinator of the IUFRO’s Forest History Research Unit whose origin dates back to 1961. With an initially predominantly scientific membership, the history section developed guidelines for scientific papers dealing with the history of forest stands and districts, and now, with a much diversified membership, it organizes meetings and publishes conference proceedings and *News of Forest History*. John Dargavel organized the first meeting of the Unit’s Tropical Forest History Working Group in association with the first AFHS conference in 1988.

With its very diverse membership, the AFHS aims ‘to advance historical understanding of human interactions with Australian forest and woodland environments’. At a time of burgeoning interest in environmental history, the AFHS continues to act as a catalyst for the historical investigation of Australia’s tree-clad landscapes. It welcomes a diversity of voices and perspectives, and has pressed for the preservation of historical records, but remains neutral on contemporary forest policy conflicts.

Dr Dargavel surveyed the contents of the six AFHS conference proceedings, and in ‘Sources and silences in Australian forest history’ shows the preponderance of south-eastern forests, of state forests, of eucalypt

forests, and of twentieth century studies. The two dozen papers with a scientific focus cover ‘age biogeography, botany, climate, dendrochronology, evolution, historical ecology, litter, palynology, phytoliths, soil, stumps, [and] wood anatomy’ (p. 44).

The papers presented in this volume indicate the wide range of Australian forest history research across place, time and technique. Because the fifth national conference was held in Hobart, there is a substantial Tasmanian focus, with a third of the papers addressing Tasmanian forests, from early nineteenth century extraction of sawlogs and wattlebark to twentieth century reservation of national parks. In addition there is John Dargavel’s play, ‘Hard work to starve’, set in Geeveston, south of Hobart, in the early 1920s. The post-conference study tour to Geeveston included tall stands of *Eucalyptus regnans* (where they are called Swamp Gum rather than Mountain Ash), areas of cool temperate rainforest and even a few remnant riparian Huon Pines. With two related pioneering saw-milling Geeves families, Geeveston has a Forest and Heritage Centre and a long association with the timber industry.

Other papers address a diversity of aspects of Australian and overseas forest history, including historical glimpses of European woodlands, USA fire management, New Zealand forests, logging in Papua and New Guinea, and even Chinese poems.

The question that guided my reading of the papers in this volume was ‘Have scientists or scientific ideas shaped past knowledge or management of Australian forests?’. I wondered particularly about the influence of botanists on our understanding and use of Australian forests and woodlands. In ‘Joseph Dalton Hooker and Tasmanian flora’, Sybil Jack discusses Joseph Hooker’s visit to Tasmania in the early 1840s and his later published ideas about the flora of Tasmania. Passages

quoted reveal some of his ideas about the distribution and taxonomy of plants in Tasmania and continental Australia. These related to plant geography not (as Jack suggests on p. 80) plant ecology, which had yet to grow out of plant geography.

Philip MacMahon trained under Joseph Hooker (who succeeded his father, William Hooker at the Royal Botanic Gardens at Kew, England) and directed Brisbane's Botanic Gardens for sixteen years before his appointment in 1905 as Queensland's Director of Forests. In 'Early Queensland forestry: George Board and Philip MacMahon' Peter Holzworth provides glimpses of MacMahon's view of forests as precious sources of valuable timber.

Tasmania's honorary government botanist, Leonard Rodway, shared some of Philip MacMahon's ideas. Rodway was a prominent member of the Tasmanian branch of the Australian Forest League. In his discussion of the formation and activities of the League's Tasmanian branch in 'Save the Forests: forest reform in Tasmania, 1912–1920', Stefan Petrow describes the influence of Rodway and the Tasmanian Forest League in the establishment of Tasmania's Forestry Department in 1920. Rodway claimed that forests should be protected for their valuable timber, and argued in the press for the adoption of modern forestry, which he defined as 'the science and art' of determining how 'to make the best use of our woodlands' (p. 179). Debbie Quarmby and Kevin Kiernan also mention Rodway's involvement in the reservation of Mt Field National Park, which was proclaimed in 1915, in 'Old forests and Tasmania's early national parks movement' and 'Conservation, timber and perceived values at Mt Field, Tasmania'.

Several authors discuss 'scientific forestry'. In 'Kim Kessell: a first class sensible bloke', Jenny Mills explains that this product of German thought infused the British civil service and led to the develop-

ment of forest management systems and rules for topographical surveys, management plans and fire protection, that were not always suitable for Australian forests. Legg notes that, from the late 1860s, the term 'scientific forestry' was often used in Victoria, and Petrow that the concept underpinned the substantial report on Australian forestry published in 1916.

Of course there are other sites of intersection between silvan and science history. In the field of botany two questions spring to mind. What can forest history research reveal about Australia's past vegetation? What silvan practices have facilitated the generation of botanical studies and ideas?

The composition of vegetation existing at any time is determined by past and present environmental conditions and management practices. Consequently historical investigations of particular landscapes can enhance an understanding of its vegetation — for example Kevin Kiernan's 'Conservation, timber and perceived values at Mt Field, Tasmania', Jane Lennon's northern NSW study, 'Long Creek: from logging to World Heritage', and Daniel Lunney's and Alison Matthews' 'Ecological changes to forests in the Eden region of New South Wales'. The inclusion of 'ecological' in the title of Lunney's and Matthews' interesting contribution is somewhat misleading. They discuss landscape change without explanatory ecological details.

Two other papers provide illuminating glimpses of forests lost long ago to European exploitation. In 'Life in a lost Tasmanian rainforest, winter 1827', Brian Rollins describes the excruciatingly slow process of slashing a road southward from the north-western coast of Tasmania into magnificent but foreboding forests. Diary entries provide some botanical details of these cool temperate rainforests dominated by Myrtle Beech, *Nothofagus cunninghamii*. In 'Historical records of tree density in the "Big Scrub"', Brett Stubbs and Alison Specht cleverly use survey records

to provide information about another extensively-removed rainforest, the subtropical rainforests in the Richmond River catchment in northern NSW. They show how information on early survey plans can be used to calculate tree densities in forests of Ironwood, Bean, Boowong, Cedar and Mahogany, which the surveyors described as 'dense brush' or 'dense scrub'.

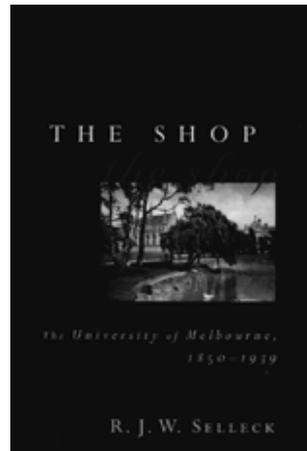
Several papers discuss the reservation of national parks. Reserves that exclude logging and grazing are scientifically important because they allow investigations of vegetation spared these destructive pressures. Such research can yield information about ecological relationships, intra- and inter-specific genetic diversity, plant diseases and pests, and phytochemicals. And, as J. C. G. Banks shows in 'Wollemi pine: tree find of the 20th century', new species can still be discovered.

Unfortunately the lack of an index in *Australia's Ever-changing Forests V* prevents your picking up traces of Leonard Rodway or Stephen (Kim) Kessell in different papers without reading the text. Authors' addresses are given, but a few more details about their positions and interests would help contextualize their contributions. The papers are not peer reviewed, and some are in need of fine editorial tuning. But publication puts their work in the public domain so we can enjoy their 'richdom' (as Mueller would say).

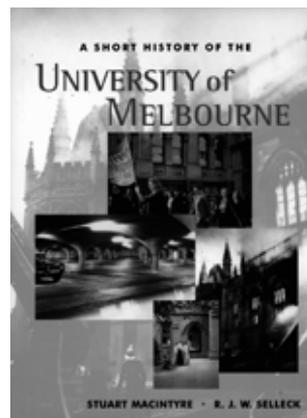
John Dargavel and his co-organizers and co-editors deserve landscapes of thanks for developing the AFHS and its conferences as fine catalysts for Australian environmental history research. The papers in this volume show that, in providing a forum for discussions about Australian forest history, they have also provided glimpses of some aspects of the history of Australian science.

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R. J. W. Selleck: *The Shop: The University of Melbourne 1850–1939*. Melbourne University Press: Carlton, 2003. xx + 855 pp., illus., ISBN 0 522 85051 0 (HB), \$80.



Stuart Macintyre & R. J. W. Selleck: *A Short History of the University of Melbourne*. Melbourne University Press: Carlton, 2003. vi + 193 pp., illus., ISBN 0 522 85058 8 (HB), \$24.95.



Institutional sesquicentennials provide the occasion for reflection and celebration, and an opportunity for publishers to market related works. The celebrations of the 150th anniversary of the foundation of the

University of Melbourne by the passing of its *Act* in January 1853 and the inaugural meeting of its Council in May, has seen some celebratory volumes commissioned by the University and the two new histories reviewed here have been issued to mark the event. Both are works of scholarship: *The Shop* is fully documented and noted, a work to be studied and mined as well as read for enjoyment; *A Short History* is a vivid and lively evocation that I read through in a single sitting.

Each book discusses relationships between the university and the Victorian state government, between the professorial board and the Council, and the new relationships between the Council and the staff introduced when a full-time salaried Vice-Chancellor was created in 1935, and the *Short History* also covers the multiple relationships between the Council, the Vice-Chancellor and staff and boards as the University adapted to the entry of the federal government into the funding/control equation. Neither book is driven by a need to campaign for the University, although the *Short History* has been used by the University as a presentation volume to guests at the celebrations in May 2003. The books are, of course, written from a strong perspective, perhaps best characterized by a commitment to the values of an 'academic vocation depend[ent] on the capacity of teachers and researchers to make their own judgements' (*Short History*, p. 173) and illustrated by the critical questioning of 'regulatory aggrandisement' (*Short History*, p. 174) and the allocation of funds with 'rewards and penalties for meeting the university's objectives' (*Short History*, p. 167). The University as an institution does not come out of either study smelling of roses, but it does emerge as an institution that has adapted and continues to adapt to changing circumstances.

Science featured in the University from its beginning. According to reports of the now lost inscription on the cavity in the

foundation stone of the first building, the University was 'instituted in honour of God, for establishing young men in philosophy, literature and piety, cultivating the talent of youth, fostering the arts and extending the bounds of science' (*The Shop*, p. 2). The very design of the first buildings, implying instruction via public lecture (and not private tutorial as in Oxbridge), included, under the influence of the first mathematics and science professors, lecture rooms that allowed audiences to view demonstrations consistent with an empirical, even if not necessarily an experimental, epistemology. The first professors were appointed by a London Committee, acting independently of the Council: Frederick McCoy, Professor of Natural Science, arrived in Melbourne on the same day as the Chancellor read the letter telling the university of the names of the appointees, all of whom had left London by the time McCoy arrived. McCoy, who was primarily a museum palaeontologist, quickly obtained the honorary position of Director of the National Museum of Victoria, and his teaching was heavily museum centred. William Wilson, Professor of Mathematics, who had, like McCoy, been a foundation professor in Ireland, also taught natural philosophy, although severely hampered by the delay in the arrival of the demonstration equipment that he has ordered before he left London.

With the addition of the Medical School in 1862, natural science teaching was expanded, with chemistry being initially taught in his own laboratory by John McAdam, Government Analyst, because McCoy would not allow him to use the natural science lecture theatre. Chemistry teaching was expanded from the medical school, initially to cater for engineers, but it was not until 1882 that the first chair of chemistry was filled, by the lecturer in the medical school, J. D. Kirkland. At the same time, a separate chair in natural philosophy

was filled by H. M. Andrew (then a member of the Council and a lecturer in the discipline). The competition for these chairs was limited to Australians and New Zealanders. Selleck agrees that they 'would not have been selected by an impartial committee if the positions had been advertised overseas', going on to point out that 'the cynicism of the exercise ... is suggested by the date on their applications: in each case ... the day of the meeting' (*The Shop*, pp. 198–9), with an 'ill-informed Council preferring the noisy and the demanding to the brilliant and retiring' (*The Shop*, p. 298).

It was not until the appointments, again by international competition, of Orme Masson (to the Chair of Chemistry in 1886) and Baldwin Spencer (Biology 1887) that the systematic initiation of students into a research culture began. While both McCoy and Wilson had published works, gaining personal recognition and prestige, research was not for them the defining responsibility of a university as it was for Masson and Spencer. When Thomas Lyle came as professor of Natural Philosophy (1889), Melbourne had a 'brilliant triumvirate of young scientists'. They pushed for, and got, strong assistants and new buildings, soon demonstrating with their students the 'intellectual power and enthusiasm' generated in the science buildings of the University (*The Shop*, p. 299, 330). Spencer, in his pioneering anthropological partnership with Francis Gillen, the post and telegraph station master at Alice Springs, ensured that 'for about two decades the University of Melbourne could claim to be a centre of a major international research endeavour, a claim that today's universities make almost as a matter of routine, and routinely justify with evidence much less convincing than Spencer and Gillen provided' (*The Shop*, p. 382).

Medical science had, with the notable exception of the physiologist Charles

Martin who taught in Melbourne from 1897 until 1903, few research active staff until the second half of the 20th century. Research activity in this area, especially that in conjunction with the Walter and Eliza Hall Institute (which produced Macfarlane Burnet's Nobel Prize), does not feature in *The Shop*, and is only sketched *very* briefly in the *Short History*. Even in *The Shop*, the detail that can be given to the developments in science after the first 50 years or so diminishes, as the University expanded its range, requiring less attention to be given to each area than is the case for the earliest years.

By their nature neither work is a history of science education and research in the University of Melbourne. But together they provide signposts for such studies, well documented in the case of *The Shop*, and indicated in the *Short History*. As well as discussion of science in the University itself, we find tantalizing glimpses of science off-campus. For example, Masson and the intrigues that accompanied creation of the Council for Scientific and Industrial Research; the involvement of the 'outstanding, manipulative and tragic' Thomas Laby (*The Shop*, p. 676), Professor of Natural Philosophy, in the Commonwealth X-Ray and Radium Laboratory and the Optical Munitions Panel of World War II; and other uses of the relevance of science to agriculture and industry to wrest funds from parsimonious governments. We also have the outlines of a study of the advancement of women in science, especially in biology, including the unsuccessful attempt to appoint Ethel McClennan as Alfred Ewart's successor in the Chair of Botany and Plant Physiology. (John Turner was appointed from abroad in 1938).

The Shop especially, will provide useful context for these and other developments in Australian science, including those not primarily associated with the University of Melbourne. The standard of its publication, however, leaves much to be desired.

Many typographical errors were missed in proof correction, illustrations do not always show what is indicated (was the illustration supplied cropped so that the point of reference was omitted?), and the spine of the heavy volume (1.6 kg) shows serious signs of wear after one reading.

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Exhibition Review

Australia and the Nobel Prize: National Portrait Gallery, Canberra. 5 December 2003–15 February 2004.

Only in 1998 did Australia begin a collection for a National Portrait Gallery. The Old Parliament House in Canberra is now where we celebrate the achievements of our extraordinary citizens, reluctantly, unless of course they are sportsmen or sportswomen! It is refreshing, therefore, to note the Gallery's recent exhibition: 'Australia and the Nobel Prize'.

There are just three laureates who were born, educated through to tertiary level, and did their prize-winning work in Australia: Macfarlane Burnet (Physiology or Medicine, 1960), John Eccles (Physiology or Medicine, 1963), and most recently, Peter Doherty (Physiology or Medicine, 1996). Others were born and educated here but worked overseas: Lawrence Bragg (Physics, 1915), Howard Florey (Physiology or Medicine, 1945), and John Cornforth (Chemistry, 1975). William Bragg (Physics, 1915) and Robert Robinson (Chemistry, 1947) had a significant Australian connection and influence. Aleksandr Prokhorov (Physics, 1964) was born in Queensland but left Australia at age seven and never returned. By contrast,

Patrick White (Literature, 1973), was neither born nor educated in Australia and said he did not feel particularly Australian, but won his prize 'for an epic and psychological narrative art which has introduced a new continent [Australia] into literature'. The Swiss, Rolf Zinkernagel, shared the Physiology or Medicine prize with Doherty in 1996 for research conducted in Canberra, but did not work in Australia either before or after the prize-winning period.

The exhibition was not a collection of large, colourful oil portraits of these men (and they are all men), but rather a 'biographical exhibition', in which the lives and personalities of these high-achievers were highlighted. The focus was small, intimate and moving black-and-white photographs of the laureates, together with personal letters, items of equipment, medals and citations, ephemera and memorabilia. Visitors who spent time absorbing the atmosphere and reading the informative captions found themselves inspired and uplifted. These men were revealed as fully human, and the foundation of their fame was made understandable.

Dozens of institutions and individuals contributed more than 200 items, splendidly arranged and displayed by curator, Sarah Engledow. There were many photographs simply and elegantly presented in unadorned wooden frames. A few had been widely reproduced before, but the originals carried a freshness, clarity and immediacy that was surprising. While Burnet and Florey stared sternly at each other across one room, the poignant photos of the introspective and serene John Cornforth, locked within his deafness, glanced away from the viewer in another. A haunting photograph of Patrick White arrested the visitor in a third room.

Doherty's award was also used as a focus for the Nobel Prize award ceremony itself. Swedish pride and precision was evident in every detail: from the mundane

but precise instructions given to laureates for receiving the award from the Swedish king, to the beautiful table-setting provided at the associated banquet.

Yet a cloud hung over the exhibition opening in December 2003. The jocular tone of the Australian Minister for the Arts, who used his speech to make flippant remarks about our local Nobel Laureate, contrasted sharply with the elegant dignity of the carefully chosen words of the Swedish ambassador. The Laureate himself, Peter Doherty, used his speech to plead for the modest funds needed to

rebuild one of our most honoured research institutes, The John Curtin School of Medical Research at the Australian National University. The two speeches together showed just how poorly Australia and its political leaders regard intellectual pursuits and achievements.

The nature of the exhibition precluded it travelling to other cities; a pity, since it should have been seen by many more Australians.

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