

Errata

In *Historical Records of Australian Science*, volume 19, number 1 (June 2008), in both the Table of Contents and in the Book Reviews section at p. 109, the authors and titles of two of the works reviewed appear incorrectly. The correct details are as follows:

Bob Seaman, *ANMRC: Victim of Institutional Politics?* (Metarch Papers No. 15).

Bureau of Meteorology: Melbourne, 2005.

Tim Sherratt, *Inigo Jones: The Weather Prophet* (Metarch Papers No. 16). Bureau of Meteorology: Melbourne, 2007.

Reviews

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Neil Chambers (ed.): *Scientific Correspondence of Sir Joseph Banks, 1765–1820* (6 Vols). Pickering & Chatto: London, 2007. ISBN: 97818519667667, £595/\$US995.

Generations of Australian schoolchildren have learned of Sir Joseph Banks as ‘the father of Australia’, the gentleman–naturalist who accompanied Captain James Cook on his epic voyage during which he discovered the east coast of Australia, and who was later instrumental in persuading the British Government to establish a penal settlement at Botany Bay. Banks, however, was much more than this. In an era when, especially in England, science was still for the most part a hobby pursued by leisured gentlemen, Banks was the great panjandrum, the very embodiment of England’s scientific Enlightenment. Though he did not himself publish a great deal, he lorded it over British science as president of the nation’s premier scientific institution, the Royal Society of London, for a record term of forty-two years from 1778 until his death in 1820. He became, himself, a great patron of science, spending freely from his own considerable fortune in support of scientific work. In the absence of more formal channels within the administrative structures of government, he also functioned, as John Gascoigne has demonstrated, as a personal link between the British scientific community and a government that sought more and more often to bring scientific knowledge to bear on issues confronting it.

Throughout his adult life, Banks maintained a large and wide-ranging correspondence and, though now widely dispersed, many letters written to or by him have been preserved. Warren R. Dawson summarized the contents of over 7,000 letters in British repositories in *The Banks Letters: A Calendar of the Manuscript Correspondence*, published in 1958, while Harold B. Carter added information about letters held in repositories in other parts of the world, especially in the United States and Australia, in the course of preparing his edition of *The Sheep and Wool Correspondence of Sir Joseph Banks, 1781–1820* (1979) and his biography of Banks published in 1988. The Banks Archive, the massive file that Carter assembled at the Natural History Museum in London, underpins the present publication.

Carter identified a number of overarching themes in Banks’ correspondence. By publishing the sheep and wool correspondence separately, he also established a thematic rather than a more orthodox chronological framework for the larger project of publishing all of the letters. This is faithfully reflected in both Neil Chambers’ edition of the ‘scientific’ correspondence and a forthcoming edition of Banks’ papers relating to Iceland, and will presumably be maintained as other parts of the correspondence are published. The thematic arrangement undoubtedly brings greater internal coherence to what would in a simple chronological arrangement be an extraordinarily diverse set of documents, and it also divides the whole into segments that are more manageable from a

publishing point of view. Yet it brings its own problems with it. Above all, one loses touch with the overall, day-by-day development of Banks' activities. Also, many letters deal with more than one of Carter's themes, and there is no obvious way of deciding in which series such letters should be included. Since republishing them in each series to which they are relevant is clearly not a feasible option, readers wanting to pursue a particular theme will still have to move backwards and forwards between different series. In addition, the thematic arrangement is likely to require significant duplication of the associated editorial apparatus such as notes identifying correspondents and people mentioned in letters, or providing a context for particular incidents that are mentioned.

The vast majority of the 2,215 documents brought together by Chambers in the present series and published in chronological order have not been published previously. In addition to the text of the letters, the edition includes an excellent introductory overview of Banks' life and work and, in the final volume, a calendar of all the letters included in the edition and an index to all six volumes (individual volumes do not have their own index). The calendar is arranged alphabetically by correspondent. It includes a brief biographical summary for each correspondent and an archival citation for each letter to or from the correspondent that is included in the edition. In transcribing letters, the editor has striven admirably to reproduce faithfully what was written, preserving even the most idiosyncratic spelling, punctuation, abbreviations and capitalization. Only occasionally have proper names defeated him, for example 'Grandaine de Montigny' for France's Intendant des Finances, Trudaine de Montigny (I, 196), 'Domastinoff' for the controversial Director of the St Petersburg Academy of Sciences, Sergei Domashnev (or Domashneff) (I, 202), or 'Heminer' for J. J. Hemmer, secretary of the Academy of

Sciences at Mannheim (III, 65). Generally speaking, therefore, the edition provides reliable and easy-to-use access to the letters published in it. Letters are published in the language in which they were written; for those written in languages other than English, an English translation is supplied in a footnote. Other, explanatory footnotes are also included, though more sparingly than many readers might have wished, to provide further context for some of the matters discussed in the letters.

And what a wide-ranging and fascinating set of letters it is! Banks' own special scientific interests, especially botany—though not his administration of Kew Gardens, letters relating to which are treated as a separate thematic group—are, of course, particularly well represented, with a steady stream of letters on technical issues within the science; but all the major themes of late eighteenth- and early nineteenth-century science appear, as a result of the edition's including the correspondence generated by Banks' long period as (in Jan Ingenhousz's words) 'President of the first Learned Society of Europe' (III, 38). Thus, the rise of the 'new chemistry' is well documented, as are the excitement of ballooning, William Herschel's astonishing astronomical discoveries, Luigi Galvani's discovery of 'animal electricity' and the subsequent development by Alessandro Volta of his 'pile' as the first source of continuous electrical current, and Humphry Davy's spectacular use of such currents to isolate a series of new chemical elements including sodium and potassium. Scientists and enthusiasts wrote to Banks from all parts of the world with reports intended for the Royal Society, or to solicit his or the Society's assistance, or in the hope of being elected to the Society. Many letters are concerned with the administrative affairs of the Society, on which they often shed fascinating new light, for example in relation to the upheavals in the Society in the early 1780s when a group of disaffected members

sought to overthrow Banks as President. Others show Banks offering scientific advice to government, whether in his own name or in that of the Society. We also see the emergence of notable new scientific institutions such as the Linnean Society, the Royal Irish Academy and the Royal Institution. There are letters of introduction that visitors presented to Banks, and others that he wrote for Britons travelling abroad, from which we gain an insight into the astonishingly broad international scientific network of which Banks was a leading spirit. Especially from the letters that passed between Banks and the curator of his library and herbarium, Jonas Dryander, we get a sense of the richness of the resource that Banks assembled and of the generous way in which he made it available to the scientific community of the day. Throughout the correspondence, we get a strong sense of Banks the man—an upper-class eighteenth-century English gentleman, comfortable with his place in society and with a strong sense of *amour propre*, politically savvy, impatient with cant, but warm-hearted and generous towards those who kept within what he regarded as the boundaries of acceptable behaviour. The edition as a whole is a wonderful resource that will be mined for years to come by both historians of science and historians of British culture.

As is well known, not only was Banks a leading promoter of the British colonization of Australia, he was, following settlement, the chief patron of the scientific exploration of the continent. However, neither these activities nor his earlier involvement in Cook's voyage appear as more than passing references here. That does not mean, of course, that he wrote no letters on these subjects. Rather, the 'Pacific' correspondence has evidently been separated out and reserved for publication in a later series. Historians of Australian science will thus benefit only indirectly from the present edition, from the insights it offers into the intellectual

and scientific environment 'at Home' during the first years of European settlement, as well as into the mind-set of Banks himself. The edition will certainly whet their appetite, however, and leave them eagerly awaiting the publication of the 'Pacific' letters. Unfortunately, the extraordinarily high price that has been set will discourage potential buyers and make it highly likely that only a few major reference libraries will acquire the work.

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Mike Morwood and Penny van

Oosterzee: *The Discovery of the Hobbit*.
Random House Australia: Sydney, Year.
326 pp., ISBN: 978 1 74166 702 8,
\$34.95.

'Every discovery of a fossil relic which appears to throw light on connecting links in man's ancestry always has, and always will, arouse controversy', wrote the famous anatomist and palaeoanthropologist Sir Wilfred Le Gros Clark in 1958. The announcement of the discovery, in 1857, of the Neanderthal skeleton was greeted by a chorus of disbelief: it was surely a pathological specimen of an ordinary man—an idiot or even just a hermit, said C. Carter Blake in 1861, or bandy-legged through too much horse riding, said A. F. Mayer in 1864, while six years later Rudolph Virchow, the man known as the father of palaeopathology, constructed an elaborate scenario that included childhood rickets followed by trauma to the head in adulthood and arthritis deformans in extreme old age. This same Rudolph Virchow in 1895 led the many 'sceptics' against the then newly discovered *Pithecanthropus* ('Java man'), which he dismissed as merely a giant gibbon. Thirty years later the new-found infant skull of *Australopithecus* was relegated by four eminent anthropologists and at least one leading zoologist to the status of

a baby chimpanzee or, alternatively, gorilla. Given this woeful history, it was perhaps predictable that the latest surprising and strikingly different addition to the catalogue of near-human fossils, *Homo floresiensis*, nicknamed 'the Hobbit', should also have been heaped with scorn and scepticism. In the tradition of Virchow, the Hobbit has been diagnosed with any number of pathologies: microcephaly of several different types, dwarfism or some other generalized growth deficiency, Laron syndrome and, most recently, cretinism. The world seems to be no more ready to accept *Homo floresiensis* as a reality than it was *Homo neanderthalensis* a century and a half ago.

The story of the events leading to, surrounding, and following the finding and description of the Hobbit is recounted in this book by the main discoverer himself, the Australian archaeologist Mike Morwood, together with the noted science writer and environmental consultant Penny van Oosterzee. It follows another palaeoanthropological tradition, one that has become established much more recently than Virchow's: of no-holds-barred books on human evolution and its practitioners. When a major discovery had been made in Indonesia, one's immediate presumption would have been that that country's leading palaeoanthropologist, the late Professor Teuku Jacob, would have been involved in its description, and in this book you will learn precisely why the discovery team—which included many respected Indonesian archaeologists—chose not to involve Jacob in the Hobbit's description. And you will learn that, as you might expect, Jacob did not react kindly to the decision to exclude him, and initiated a campaign to discredit the Hobbit as anything important in palaeoanthropology, an effort in which he involved others, including some Australians. This campaign, of course, continues even today, a year after Jacob's death. It is one which, in my opinion, relies on rather superficial analyses, of varying

degrees of sophistication, and sometimes stretching credulity (is it really likely that nine pathological dwarfs, or whatever they are supposed to be, and nobody else, lived and died in that one cave on Flores between as long ago as 75,000 and as recently as 14,000 years ago?).

The book is nicely set in context. The senior author tells of his early career studying rock art; how and why he began excavating in south-eastern Indonesia; his reopening of Father Verhoeven's open-air sites on Flores (more or less neglected since the 1950s), and finding that they were of the order of 800,000 years old; and finally of collecting a team to reopen another of Verhoeven's excavations, this one in Liang Bua ('Cold Cave'), leading to the discovery of the Hobbit.

Although the fuss has still not quite died down, the political climate has at least changed sufficiently that the Liang Bua excavations have been resumed, and Morwood has extended his reach to other parts of Indonesia, notably Sulawesi and West Java. Can we expect more new, startling hominins to emerge? Hold the front page.

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John Mulvaney and Hugh Tyndale-

Biscoe (eds.): *Rediscovering Recherche Bay*. The Academy of the Social Sciences in Australia: Canberra, 2007. 156 pp., ISBN: 9780908290222 (PB), \$29.95.

John Mulvaney: *'The Axe Had Never Sounded': Place, People and Heritage of Recherche Bay, Tasmania*. ANU E Press and Aboriginal History Inc.: Canberra, 2007. 141 pp., ISBN: 9781921313202 (PB), ISBN: 9781921313219 (Online).

At the end of February 2007, I attended a three-day forum in Hobart 'to celebrate the cultural, historical and scientific signifi-

cance of Recherche Bay' in south-eastern Tasmania. The participants were in celebratory mood, as the forum was the culmination of a five-year campaign to recognize the site as National Heritage, a rare victory for heritage politics in the Howard era. Recherche Bay was preserved, however, not by the sensible actions of federal and state ministers invoking heritage legislation, which in this case was inadequate and overridden by logging legislation, but by a strategic campaign organized by Emeritus Professor John Mulvaney, the doyen of Australian archaeology, and Senator Bob Brown, and the amazing generosity of philanthropists Dick and Pip Smith. The latter appeared at a critical moment, like knights in shining armour, with the offer to underwrite the purchase of the property at the centre of the dispute. It was an extraordinary moment in the nation's history.

Of the seventeen papers presented over two days, twelve were selected and edited for publication, with the overall focus on the significance of Recherche Bay as a site of eighteenth-century European science. Six of the papers assess the scientific work conducted by members of the d'Entrecasteaux expedition, which 'discovered' the bay in 1792, and the observations they made of the Tasmanian Aborigines. Two others focus on zoological issues relating to the bay in the early nineteenth century, and the remaining four assess the ways the site was entered on the heritage list and the implications for its future management.

Editing *Rediscovering Recherche Bay* was clearly a labour of love for Mulvaney because he not only contributed a chapter to this volume, but also prepared his own history of the site, *'The Axe Had Never Sounded': Place, People and Heritage of Recherche Bay, Tasmania'*, to complement the papers in the edited collection. Both texts are available in affordable paperback editions (Mulvaney's own text is also avail-

able through ANU E Press), with drawings, maps, photographs and very useful reference lists, although neither has an index. How, then, do the texts complement each other and how do they make their case?

Alan Frost begins *Rediscovering Recherche Bay* by arguing that the d'Entrecasteaux expedition was launched at a critical moment of change in late-eighteenth-century scientific exploration. It combined the political ideas of the French revolution with the long-standing British approach of political and imperial imperatives, it coincided with the emergence of modern scientific disciplines, and it prefigured the transformation in the way European exploration in the Indian and Pacific oceans was conducted, from 'predominantly vast ocean sweeps punctuated by sojourns at harbours, to the close surveying of the coastlines and the collection of scientific data which the development of new instruments made possible' (pp. 9–10). Frost explains that the accidental 'discovery' of Recherche Bay was made at the end of an ocean sweep, from which d'Entrecasteaux had set course for the 'known' anchorage at Adventure Bay in south-eastern Tasmania, 'discovered' by Tobias Furneaux in 1774. In straying off course, however, d'Entrecasteaux 'discovered' Recherche Bay, where he was so taken with the new anchorage that, after circumnavigating Australia, he returned to it nearly a year later. This was fortuitous because it enabled detailed ethnographic observations of the Aborigines and the scientists to continue the most sophisticated geomagnetic and hydrographic surveys then known and to complete their detailed botanical collections. It was the expedition's second visit that put Recherche Bay on the European scientific map.

In his chapter, John Mulvaney argues that varying observations of the expedition's positive interaction with the Tasmanian Aborigines confirmed the latter's humanity in ways that subsequent

expeditions failed to do. Indeed, as Iain Davidson points out, over the next 175 years scientists preferred to believe that the Tasmanian Aborigines were either lacking in full human status or were in cultural decline. Yet, he argues, the French observations of the Tasmanian Aborigines at Recherche Bay clearly shows that the opposite was the case.

Michael Pearson assesses the significance of the charts made at Recherche Bay by the expedition's principal marine surveyor and cartographer, Charles-Francois Beautemps-Beaupre, by placing his work in the context of the time. He points out that one of the key differences between British and French approaches to hydrographic surveying in this period is that the British maritime explorers were often competent surveyors but poor chart-makers. The French maritime explorers, on the other hand, were more likely to employ specialist hydrographers, who were often poor surveyors but good chart-makers. Beautemps-Beaupre, however, was not only good at both but had access to the latest surveying and chart-making technology. This enabled him to produce a chart of Recherche Bay that, according to Pearson, represented 'the pinnacle of hydrographic practice at the time' (p. 32).

Gintaras Kantvilas makes a similar claim for Labillardiere's botanical collections. When the latter stepped ashore at Recherche Bay, just about every plant he saw was new. The two extended periods he spent at the site meant that his collections 'represented the beginning of the detailed, extensive, botanical exploration of the island that continues to this day'. According to Kantvilas, the records Labillardiere made in his journals, which by a miracle survived, 'represent the earliest impressions of the Tasmanian landscape, flora and fauna and Indigenous people made by a European scientist' (p. 37).

Archaeologist Jean-Christophe Galimard is the only contributor to conduct

research at the site. He tackles the question that galvanized the campaign to preserve Recherche Bay: is the surface stone layout 'discovered' in 2003 part of the garden established by Felix Delahaye during the d'Entrecasteux expedition's first visit to the area? Galimard's excavation team found that the layout was probably not the garden and was more likely associated with timber harvesting operations in the late nineteenth century or later. However, he believes that there is sufficient evidence to locate the site nearby, which would make it 'the first European mark on the Tasmanian landscape. Its hidden nature', he concludes, 'should not minimize its historical significance' (p. 116).

The two contributions that relate to zoological issues are very different. Stewart Nicol, in a fascinating paper on the echidna, points out that the earliest French observations of Tasmanian mammals led to the first study of the hibernation of the echidna, made by Prosper Garnot in 1824. He argues that our understanding of hibernation in echidnas has been hampered by northern-hemisphere approaches to the practice. As a result, we still have much to find out about their lifestyle. Ian Rae surveys the technology of shore-based whaling at Recherche Bay from 1830 to 1860, when whale-oil products began to be replaced by petroleum and vegetable oils. Rather than conducting a detailed analysis of whaling in this period, however, he focuses instead on the weapons used for ocean-based whaling in the later nineteenth century. This shift makes for an uneven contribution.

In the final section, four contributors from different disciplines review the ways in which Recherche Bay could have attained its present heritage status, and its implications for the future. Architect Joan Domicelj details UNESCO's recently-devised conceptual framework for understanding and protecting extraordinary natural and cultural environments, to point out that current heritage legislation in

Australia does not provide for this new approach. More provocatively, political scientist Aynsley Kellow argues that the site was preserved for the wrong reasons: by a campaign of what he calls 'whirlpool politics', a coalition of disparate groups who would normally share little in common, rather than by legitimate political processes. But he fails to acknowledge, as lawyer Tom Baxter does, that the space for normal processes was closed off by logging legislation that currently overrides federal and state heritage legislation. Finally, environmentalist David Lindenmayer argues for a better understanding of conservation and management of ecological communities because there is no 'high quality empirical data to evaluate the effectiveness of many specific on-the-ground management actions... for almost all forested regions Australia-wide' (p. 151). Overall *Rediscovering Recherche Bay* makes a very strong case for the significance of the bay as a key site of eighteenth-century European science.

The purpose of John Mulvaney's history of Recherche Bay is to show how it emerged as a cultural landscape over the last 215 years. In the first section, which takes up two thirds of the book, Mulvaney plugs some of the gaps in the edited collection, with biographical profiles of key members of the d'Entrecasteaux expedition and the significance of the geomagnetic measurements made by Lieutenant Rossel. He then compares the detailed observations of the Tasmanian Aborigines made by the expedition with those made by the Baudin expedition a decade later and finds that the latter are not as reliable as the former. He concludes with an important discussion of the significance of Delahaye's garden in relation to other possible sites in the area, his view being that the necessary detailed archaeological work has barely begun.

In the second section, which comprises three chapters, Mulvaney explores colonial

economic and social activities at Recherche Bay, such as shore and deep-sea whaling, the dramatic story of piracy on the Cyprus brig, and the visit to the site by Lady Jane Franklin in 1838 and her search for Delahaye's garden. He details how twentieth-century economic activities such as coalmining, ship-building, timber-getting and saw-milling were not only unplanned, but also unsuccessful, rendering Recherche Bay an environmental victim of the search for riches that never arrived. It was only saved from total destruction by the extreme environment, but concludes that the use of modern technology would now completely destroy it.

In the final section of two chapters, Mulvaney draws on his own experience of cultural heritage policy-making in reviewing the ways in which heritage legislation in Australia emerged in the 1970s and how, over the last decade, it has failed to keep up with changing policy adopted by UNESCO. At present, it consists of three dynamic categories: (i) landscapes deliberately designed and created, such as those created for the nobility by Capability Brown; (ii) organically evolved landscapes, such as Kangaroo Valley in New South Wales; and (iii) associative cultural landscapes, such as Recherche Bay, which includes traces of Aboriginal occupation, links with significant events and people, and various industrial and occupational activities over historical time. This failure to keep up is exacerbated by the decision of federal and state governments to make logging legislation override heritage legislation.

Of the two texts, *Rediscovering Recherche Bay* is the more optimistic. The chapters on the scientific work of the d'Entrecasteaux expedition convey the excitement of new discoveries. Even the later chapters on the vagaries of heritage politics appear to offer a way out of the current morass. By comparison, *The Axe That Never Sounded* is more pessimistic.

Its complex narrative links a past and the present in which the human frailties of narrow-minded nationalism, greed and broken promises, dominate. Even though the campaign to list Recherche Bay as National Heritage was ultimately successful, Mulvaney sourly notes that the purchase price paid for the property at the centre of the dispute was far beyond its market value.

Both texts, however, foreground the sad fact that neither of the mainstream political parties is committed to supporting, let alone promoting, the now widely-accepted concept of the cultural landscape as part of our national heritage. Until then, John Mulvaney stands like a mighty Trojan as the champion of the nation's cultural heritage.

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David Day: *The Weather Watchers: 100 Years of the Bureau of Meteorology.* MUP with the Bureau of Meteorology: Melbourne, 2007. 530 pp., ISBN: 0 522 85275 0, \$49.95.

The weather was a major focus of public attention here in Australia in 2007. Reports of extreme weather events were coming in from all around the world. A severe drought continued to affect most of our continent. Questions of climate change were widely debated—normal variability or new patterns? It is fitting that in 2007 a book celebrating 100 years of the Bureau of Meteorology in Australia should be published.

In his preface, David Day points out that his 'commission was to write a single volume of approximately 200,000 words charting the history of the Commonwealth Bureau of Meteorology from its inception in 1906, as well as dealing with its colonial antecedents'. He was to 'combine a social history of the employees and the chal-

lenges they faced, an administrative history of the Bureau and its changing roles and functions over the century and the wider context of the Bureau in terms of the ongoing efforts by Australians and others to understand the elements'. The reader is warned that 'It was not to be a history of meteorological science in Australia...' Dr Geoff Love, present Director of the Bureau, makes it clear in his Foreword that that we 'will have to await the preparation of a separate volume'. Many whose interest is in the development of the science will share my hope that this largely separate dimension of the story will soon be told.

At first blush, reading a book on a history like this might seem daunting and possibly a dry and arduous task. It is a big history! But David Day managed to capture my interest from the first page and hold it throughout the book. The stories of some of the people who worked for the Bureau (often under amazingly difficult circumstances) also outlines a very rich part of Australian history of which most people have not been aware. For example, many would be unaware that a proposal to use a series of atomic bomb blasts to create deep water ports on the Western Australian coast went as far as a Government feasibility study (p. 350).

The Bureau at various times was given a wide-ranging series of briefs. It was asked, among other things, to provide services for farmers and graziers, to make aviation forecasts and hydrological evaluations, to offer advice to mining companies and oilrigs, to give warnings of cyclones and floods, and to undertake Antarctic Atmospheric Research. These roles were largely additional to its central task of establishing weather monitoring stations and recording and analysing the data. It also played a key part in Australia's war efforts. Dependence on Government finance, and the limited funding available

to it, made it hard for the Bureau to provide all aspects of the services demanded of it.

Chapters of the book are arranged in chronological sequence, and each chapter begins with a brief social commentary on the times. The current role, status, ambitions and leadership of the bureau is then quickly brought into the story and linked to the historical context. I really liked the apt choice of chapter titles, and the way that they were elucidated as the story unfolded.

When the Bureau is shown to be so actively involved in Australian policy implementation in so many areas, it is surprising that the huge Snowy Mountains project is hardly mentioned. There is only one small reference, related to cloud seeding in the Snowy Mountains area long after the establishment of the scheme (p. 433). A large part of the original rationale for the scheme involved diverting stream flows from coastal rivers to the Murray–Murrumbidgee inland system for irrigation purposes. It would be surprising if the Bureau had not been consulted at some level; if it was not, that in itself would be a story worth telling!

There are many decisions to be made in the production of a volume such as this. The book itself is very heavy to handle, but each chapter title page is illustrated with an amazingly beautiful photographic image, and there are many other photographs interspersed throughout the text, interesting and important. The decision to use glossy paper enhances these images, many of which are visually striking; unfortunately, however, the glossy paper sometimes makes the text harder to read because of awkward reflections. Also, the typeface chosen is small and dense, with small page margins. I often found myself jumping a line and having to go back to re-read the section.

These difficulties aside, this book is well worth reading. It is a volume that clearly earns a place on the shelf of anyone interested in the history of atmospheric science. Day writes in a style that is acces-

sible. He has done an excellent job of linking and sequencing a very complicated and multi-faceted history.

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Bob Seaman and ANMRC: *Victim of Institutional Politics?* (Metarch Papers No. 15). Bureau of Meteorology: Melbourne, 2005. 29 pp., free.

Tim Sherratt and Inigo Jones: *The Weather Prophet* (Metarch Papers No. 16). Bureau of Meteorology: Melbourne, 2007. 59 pp., free.

Kirsty Douglas: *'Under Such Sunny Skies': Understanding Weather in Colonial Australia, 1860–1901* (Metarch Papers No. 17). Bureau of Meteorology: Melbourne, 2007. 54 pp., free.

This year marks the centenary of the Bureau of Meteorology, and what a rich history it has had. As an organization it has been concerned over the last twenty years or so to re-discover aspects of its history and of meteorology in Australia. Much of the impetus for this came from two of the Bureau's long-time directors: Bill Gibbs and John Zillman, the latter who also commissioned a centenary history of the Bureau (*The Weather Watchers: 100 Years of the Bureau of Meteorology*, see above). Under their leadership and that of the present director, Geoff Love, the Bureau's regular newsletter also became an important and well-produced resource for information about the Bureau and its past. Some of its articles, along with other information on the history of the Bureau and of meteorology in Australia, have been made available online by the University of Melbourne's Australian Science and Technology Heritage Centre. Included on its website are the Metarch Papers, a series of longish historical articles of varying quality on a wide range of topics, which have been published by the Bureau from 1986.

The three most recent Metarch Papers continue this tradition, with papers ranging from academic articles on Inigo Jones and on colonial meteorology to an account by a former staff member of events surrounding the disbandment of the joint CSIRO–Bureau entity, the Australian Numerical Meteorology Research Centre (ANMRC), and its replacement by the Bureau of Meteorology Research Centre. Bob Seaman's insider account of the ANMRC's closing is notable, for it is based partly on documents that Seaman obtained through the Freedom of Information Act and, to its credit, the paper was published by the Bureau despite it not being an officially-approved account of those events. It is likely to be of interest, however, only to those who were associated with the ANMRC or who have a deep interest in the organization of atmospheric research.

The other two Metarch Papers are more accessible and likely to appeal to wider audiences. Again, it is a credit to the Bureau that it has devoted one of its Metarch Papers to a study of Inigo Jones, the freelance meteorologist who was trained by the Queensland government meteorologist Clement Wragge and who went on to provide popular forecasts for farmers and others in competition with the Bureau. The Bureau privately disparaged Jones' work, based on sunspots and other cosmic phenomena, while publicly presenting an attitude of studied indifference. Jones had such a popular following that the Bureau was loath to attack him directly. He also had some influential political supporters and received several government grants for his work, including one from Ben Chifley. Neither does Tim Sherratt attack Jones in his very readable, well-researched and relatively sympathetic study of a man who aspired to be a serious scientist, but became instead little more than a snake-oil salesman to gullible farmers.

From his observatory at Crohamhurst in southern Queensland, Jones purported to

provide farmers with long-range weather forecasts that were beyond the reach of meteorological science at the time. Such forecasts were also beyond the reach of Jones, as studies of his results showed. But his customers seemed not to care and accepted his explanations when the predictions proved awry in practice. Sherratt charts the prolonged attempts by Jones to receive scientific acceptance and his struggles with the meteorologists of the Bureau and other scientists, who mostly refused to concede the scientific basis, let alone the efficacy, of his work. Nevertheless, as Sherratt shows, the tireless work and lobbying by Jones prompted the Bureau in the 1930s to begin its own serious attempts to develop a system of long-range or seasonal forecasting. Eighty years on, those efforts are beginning to show results.

Jones had begun his work as a weather observer in 1887, which is the period with which Kirsty Douglas is concerned in her Metarch Paper on colonial meteorology. Those looking for a simple narrative charting the changes from the incomplete record-gathering of the early nineteenth century to the more rigorous, standardized and scientific approach of the latter decades will be disappointed. Douglas certainly examines the major figures in colonial meteorology, from Wragge in Queensland to Russell in New South Wales, Ellery in Victoria and Todd in South Australia, but she is more concerned to place them and their science in a wider social and historical context. Her paper begins in 1893, with a lecture by Sir Charles Todd looking back on the history of meteorology in the colonies, before she goes on to examine the changing attitudes to weather and how the expansion of colonial observatories led to climatology and meteorology becoming concerned with the large-scale and the long-term at the expense of the local and the short-term. But the observatories and their astronomer/meteorologists were not the

only ones studying the weather and climate of the continent. Looking at the activities of the local royal societies and the Australasian Association for the Advancement of Science, Douglas shows how meteorology was drawn upon by scientists from many other disciplines to inform their own work and how, by the end of the century, it was increasingly recognized as a science in its own right.

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Penny Olsen: *Glimpses of Paradise: The Quest for the Beautiful Parakeet.* National Library of Australia: Canberra, 2007. 232 pp., ISBN: 9780642276520.

In many senses, the paradise parrot is the thylacine of the ornithological world. This was a distinctive species, indeed ‘one of the prettiest to have lived’, it displayed a restricted distribution, then suffered a decline attributed at least in part to man’s activities. Ultimately, concern for its survival arrived too late to ward off an impending extinction. In death too, thylacine parallels have continued, with vocal supporters who championed the bird’s existence long after others had given up all hope, secret expeditions in search of this lost treasure, intriguing contemporary sightings that may or may not make the grade and yet other reports with a healthy dose of deceit. Add to this a line-up of characters with the depth and variety of a good novel and one could be forgiven for thinking this was all a work of fiction. But fiction it is not, and Penny Olsen has done a wonderful job of bringing this subject to print.

While the parrot persisted, this was a story of great discovery followed all too often by great loss. It started with John Gilbert’s 1844 letter to his employer, the father of Australian ornithology, John Gould, highlighting the discovery of ‘a

totally new parrot...without exception the most beautiful of the whole tribe’. Collected on the Darling Downs of south-east Queensland, this was an exciting find in a period when new discoveries in the bird world were beginning to dwindle. Tragically, twelve months later Gilbert was fatally speared whilst participating in Leichhardt’s expedition to Pot Essington. He died before receiving any correspondence from Gould concerning one of his most significant finds. Also lost around the same time as Gilbert was one of the original specimens, stolen and never to be recovered, soon after its arrival in London.

Being such a beautiful bird, a large number of specimens found their way into collections. Indeed, almost 150 stuffed specimens are known to survive. Yet, even this considerable record reveals great loss, or at least lost opportunity. Many specimens exist as mounted jewels within Victorian-era cabinets and glass domes alongside other brightly coloured novelties. Usually, these are bereft of any collection details and so, whilst priceless from one point of view, are of limited historical value. Similarly, the past practice of replacing original collectors’ and preparators’ labels with ‘new’, neatly prepared labels means that many of the museum-held specimens are now also bereft of an important link with the past. Today, only three Paradise Parrot specimens bear Gilbert’s and Gould’s original labels, although a number of other likely Gilbert specimens exist. Even the identity of the all-important type specimen remains a mystery for this reason.

In March 1922, Cyril Jerrard took a series of photographs of a pair of Paradise Parrots at the entrance to a nest tunnel carved into a termite mound (as was their breeding habit). These are the only known photographs of a wild Paradise Parrot. They establish Jerrard’s credentials beyond doubt. As a consequence, a later sighting documented in his personal

nature journal on the 13 November 1927 is often treated as the last confirmed record of the species. Jerrard's notes, which span an eight-year period, are also some of the best observations concerning the ecology of the parrot. It is perhaps ironic that these observations and the only photographs of the living bird go hand-in-hand with the Paradise Parrot's extinction.

After 1930, the narrative takes a distinct turn. Early chapters drew on parrot specimens, explorers', collectors' and naturalists' diaries and a remarkably intact record of correspondence between key players, to build a picture of the distribution and ecology of the species. But now, in the apparent absence of the bird, the text focuses on the more contemporary characters involved. This is Olsen's most timely contribution; tracking down observers and correspondents to record their tales before they, too, are lost. Two well-documented claims of sightings are carefully deconstructed and their flaws highlighted. Ultimately, neither stands up to Olsen's scrutiny though the second claim, relating to reported observations in 1990, led to three separate expeditions, at least one with 'official' support, in search of the bird. More intriguing is the chapter dealing with crooks, counterfeits and contraband, where evidence for extensive trapping and smuggling operations involving a sister-species, the termite-mound-nesting Golden-shouldered Parrot, are outlined. Also detailed are claims of captive Paradise Parrots in the 1960s and 1970s—the photograph is later proven to be that of another species—and attempts to breed hybrids that resemble the lost parrot. Here, Sir Edward Hallstrom, long-time director and trustee of the Taronga Zoo in Sydney until his sudden retirement in 1966, is implicated in many of the more shady dealings.

The final chapter makes for sobering reading, drawing on much that is detailed in earlier chapters to provide an overview of the parrot's discovery, decline and ulti-

mate extinction. Olsen relates changes in the parrot's reported abundance to landscape-altering events. Prominent in the list are the introduction of cattle grazing, the Federation Drought, and widespread clearance of native vegetation and the establishment of exotic grasses. Coupled with other, more parrot-specific influences such as heavy localized collecting pressures and the destruction of the anthills in which the parrots nested, these resulted in the Paradise Parrot slipping away.

This is a beautiful and well researched book. Olsen has a pleasing style and I found the chapters easy to read. The research involved is impressive and source material for every chapter is carefully documented in a twenty-page bibliography. As an added bonus, further information including an unpublished article and extracts from the diaries of Cyril Jerrard and others has been made available online (www.nla.gov.au/pub/paradiseparrot). The pages are full of colour—quite an achievement given that the living subject was only ever captured on black and white film! Photographs of dozens of individual specimens, deposited in various museums around the world, demonstrate that this was indeed 'one of the prettiest to have lived'. Numerous artists' renditions, from Gould's in 1846 through to contemporary paintings and plates from field guides and handbooks, are liberally distributed throughout. Also included are copies of original documents and photographs and sketches of key players, scenery and locations. The result is a well-crafted work, thoroughly researched and containing material that I found to be of great interest. It presents a story that so thoroughly permeates Australian ornithological history that I feel sure it will be of interest to a wide readership.

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Exhibition: *Rational Order: Carl von Linné 1707–1778*. Macleay Museum, University of Sydney, 2006–07. Curator, Dr Jude Philp.

It seemed auspicious that I should view this exhibition on the 23 May 2007: it was the 300th anniversary of Linneaus' birth, which was the reason that the exhibition appeared in the Macleay Museum. Linneaus' work in the classification of nature marked a particular moment in the history of enlightenment science. His binominal classification, which he called a natural system, became the foundation upon which science built a map of the global environment. While his system was first used in the botanical world, this exhibition concentrated on the organization of the zoological. Linneaus' book *Systema Natura*, first published in 1735, was used to select items from the Macleay collection for the exhibition. Each cabinet related to one of the six orders demarcated in this work: *Vermes*, *Amphibia*, *Aves*, *Pisces*, *Mammalia* and *Insecta*. Beautiful shells, eerily floating snakes in dainty glass bottles, a glassy-eyed albatross and a snarling raccoon, all indicated the range and variation of the animal world, which Linneaus sought to capture within a system of names.

The Macleay Museum houses the collections of the Macleay family: an important family of British settlers who connected into a transnational scientific community through their collecting and maintenance of global collections in Sydney. Most of the items on display in *Rational Order* came from the collections of the Macleay family, donated to the University in 1891. At the rear of the gallery were four cabinets celebrating the collecting and classification work of Alexander, William Sharp and William John Macleay. Here we were reminded that Linneaus' work helped to build transnational networks of scientists by ensuring

that, as they used the Linnean system of nomenclature, 'naturalists... would know exactly what they were talking about'. Naming constructed this community, just as much as it constructed the objects under glass in the gallery.

Given that the exhibition only displayed items found in *Systema Natura* in the mid-seventeenth century, the geographic range of animals in the exhibition was remarkable. *Lycodon aulicus*, the wolf snake of India, *Ava militaris*, the military Maccaw of South America, and the *Acherontia atropos*, a Death's Head Hawkmoth of Madagascar, demonstrated the global nature of binominal classification. While the exhibition displayed the animals of each order, the curator had been mindful to include the technologies that enabled classification to take place. Wet specimens, collecting bottles and taxidermy were explained alongside the rational order of the Linnean naming system. The expansion of Europe into other places of the globe was enabled through this combination of naming, methodology, technologies and a scientific community that operated across both imperial and national borders.

While the complementary text was quick to reiterate the importance of naming to the accumulation of knowledge about the world, the link between this knowledge and the complicit practices of science within structures of colonization was left unexplored. One was left wondering what the impact of classification was on indigenous communities and habitats in South America, Asia and Australia. Jim Endersby's text celebrated the continuing mapping of biodiversity and warned that 'we might lose some vital cure for cancer' if this mapping remained incomplete. This celebration of the Linnean system ignored both the indigenous perspective and that of the global justice movement that considers this process bio-piracy for corporate interest. Endersby's approach to telling the varied effects of the gathering and naming

of global biodiversity for science might have benefited from a little more social context.

One of the innovative features of this exhibition was the invitation to artists to respond to the displays. Eco-philosopher and poet John Bennett's suite of sonnets was included within the exhibition itself, cleverly displayed in the same interpretative format as the scientific material. The relation between Linneaus' rational order

and the role of imagination was suggested through this juxtaposition. In addition, three installations consecutively graced the gallery space: John Bennett's 'Rhurbarb and Pearls: order an disorder', photographic artist Jenny Pollack's ironically titled work 'Untitled', and one by Murawari artifact maker/artist Roy Barker.

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