Ruth A. Morgan: Running Out?
Water in Western Australia.
University of Western Australia Press: Perth, 2015. 320 pp., illus.

How can it be that people might notice a national water problem only once it affects their backyard? Surfacing early into this compelling scholarly history of water in Western Australia, this question lingers to its closing page. As historian Ruth Morgan notes in the introduction, it was not until water restrictions took effect in Perth in 2001, and followed suit in other capital cities from 2005, that the reality of water scarcity hit home for many Australians.

Touchingly, Morgan can relate. Recalling the summers of her youth—the sound of sprinklers hissing, smell of lawns sweating, sight of her grandfather watering the buffalo grass on the verge—she writes that she too once felt sheltered from the region’s environmental realities. Water problems, like other ecological crises across the wide brown land, had always seemed to exist elsewhere, out there, far beyond the suburbs.

Yet with the West Australian Government mooting seawater desalination for the coastal capital and residents in the water-stressed south-west grappling with a drying trend, Morgan responds with a new line of historical inquiry. How did West Australian relationships with water—and cultures of water use—emerge over time? Could they have developed differently?

Environmental history takes up the challenge to think differently about nature, people and place in recognition of a human-induced geological age, the Anthropocene. In that context, Morgan’s work offers a much-needed West Australian perspective on the water challenges that have dogged Australians since 1788. Her study of human relationships with water illuminates who and what played key roles in shaping thirsty aspirations in the West.

Yet this story of hardship and persistence is framed to underscore its relevance to the present—and its implications for the future. The book’s organizing principle is chronological, charting water use through episodic themes, from the foundations of the Swan River Colony in 1829 to the addition of recycled wastewater to Perth’s water supply in 2013. Each chapter’s underlying message, nevertheless, is critical. It is a testament to Morgan’s skill as a public intellectual that we never lose sight of the present-day environmental impacts, challenges and consequences of historical understandings of water and climate.

The author draws extensively on archival records and a wide range of sources to explore the West’s particular vulnerability to water scarcity since European colonization. Following the dispossession of the Nyoongar people, who had lived in the south-west for at least 50,000 years, came patterns of colonial settlement, governance, agriculture and resource use. Alongside intensive hunting for mineral wealth, Morgan writes, these processes exposed our ‘western third’ to critical variations in water supply and climate.

One of the strengths of Running Out? lies in Morgan’s detailed historical examination of water management policies buoyed by the spirit
of development and pursuit of technocratic solutions. From the achievement of colonial self-government in 1890, she writes, ‘an unprecedented passion for development’ has exacerbated Western Australia’s vulnerability to water scarcity and diminished its hydroresilience. After World War 2 this ethos bolstered the rise of Big Water, itself the product of an enduring partnership of government and science. But although the expansion of suburban and rural water systems raised living standards, it also led consumers and industries into a dependency upon the promise of continuous, reliable and copious supplies. Time and again, the lessons of experience—the Great Water Famine of the late 1890s; the imposition of water restrictions on Perth’s gardening enthusiasts in 1920; state encouragement of householders to supplement supplies through backyard bores in the 1990s—were forgotten, overlooked or usurped by visions of progress.

Grand visions are not merely the domain of developers, of course. Australians themselves have long admired the big fixes (dams, pipelines, plants) proffered for the nation’s water problems. Critically, Morgan does not champion the people against the bureaucratic and the technocratic. Rather, she acknowledges the enduring power of the everyday association between a dry lawn or garden and a so-called ‘uncivilized’ household. A quote from a resident in the affluent Perth suburb of Applecross testifies to the persistence of a profligate water culture: ‘If you drive down the street and everybody has got reasonable lawns and one’s got a dead path, it’s like pointing the finger of scorn isn’t it?’ More citizen voices might have given us even greater insights into this cognitive dissonance, the influence of social, normative and affective factors as well as rational deliberations, and the complexity of developing new relationships with water and cultures of water use.

This book makes a landmark contribution to Australian environmental history. Conceived amid a dramatic shift in national awareness of anthropogenic climate change, it makes apparent the human and historical dimensions of water—and their significance in deepening a national climate conversation ever-entrenched in belief politics. Indeed, these dimensions connect a history of local, regional and statewide experience to a story of relevance well beyond the ‘western third’.

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**Erik Eklund and Julie Fenley (eds): Earth and Industry: Stories from Gippsland.**

Erik Eklund and Julie Fenley bring a regional approach of the study of environmental history in *Earth and Industry: Stories from Gippsland*. The editors work hard to encapsulate the variety of historical experiences in a place of many environments: Gippsland, Victoria. This region stretches from Western Port Bay in its southwest, along the coastline to the border with New South Wales, up into the Kosciusko Plateau, then back to the bay.

It is a region with vast environmental differences, incorporating an ocean edge, extensive lake systems, rich farming land, alpine areas, many different-sized towns and substantial forests. As Eklund and Fenley point out, earth and industry could be conceived as binary opposites, one crudely representing nature and the other human endeavour. However, instead of setting them in opposition, the editors ambitiously look to multiply our ways to understand the relations formed through these two perspectives. In some places this means documenting conflict and exploitation as settlers (and these are mainly settler stories), pit themselves against nature, rather than working with the environments in which they live and make their livelihoods. Although themes of industry are more prevalent than earth in many of the chapters, Eklund and Fenley have pushed their contributors to consider a more nuanced and complex view of relations between humans and the places they inhabit in Gippsland.

The strength of the collection lies in the very personal histories of families who arrived in the mid to late nineteenth century. Many of the families discussed here carved away the forests and made new kinds of lands, building up commercial enterprises that tapped into the global economies of the times. Family lives are
interwoven with the ups and downs of forestry, farming, and mining—the significant industries in the stories from the nineteenth century to the present. It is heartening to see that fishing is included in these attempts to make new lives on Gunai-Kurnai lands. David Harris’ chapter is a welcome addition to the growing environmental histories of fishing in Australia, showing the conflict that arose between sport and commercial fishers in the lakes area. Like many of the histories presented here, these are conflicts that echo in contemporary debates between the same groups.

Another strength of the collection is the inclusion of chapters written by local historians. These accounts allow a more personal approach, where knowing Gippsland in the present has a clear and important influence on how its history is written. This is particularly true of the chapters by Deb Foskey, Jillian Durrance, Deirdre Slattery and Helen Martin. Each focuses on their own experience of the Gippsland forests, contextualizing their stories of land and family into the broader political and social milieus that shaped the way that forests were in some cases destroyed, and in others protected. The cycles of change and elements of continuity connect through each of these chapters, but it is the personal motivations of each of the authors that bring a fresh perspective to their stories.

Another group of chapters focuses on the ways that Gippsland is represented as text, whether newspaper reporting—as in Stephen Legg’s chapter—or Meredith Fletcher’s treatment of Jean Galbraith as a person of influence in the region. Fletcher reveals how Galbraith’s early writing is valuable for its descriptive prose, but in latter years as the environment changed, her writing changed too, becoming a form of activism. Ruth Ford’s chapter, on letters written to the editor by Gippsland women, similarly shows the importance of the press in relaying the ways the landscape was understood, both for its natural values and for the economic importance of the changes made by farming.

One of the major weaknesses of the collection is the lack of Aboriginal histories of the Gippsland region. Only one chapter addresses this important area of study: Ruth Lawrence’s work on Northern Gippsland. Where are the histories of other parts of Gippsland? And more importantly, where are the histories of how Aboriginal people have survived colonisation and continued to foster and nurture their connections with country?

These stories parallel the sustained efforts of settler people to campaign for the conservation of forests and other environments of Gippsland. Aboriginal people’s activism for the return of their country is made invisible by these absences. These seem a problematic omission, as Lawrence’s chapter might leave readers with the impression that after the frontier wars, the Gunai-Kurnai and their various family groups disappeared altogether. This is an area that environmental histories in Australia have generally not yet grasped. Given the importance of environments to both settlers and Aboriginal people, we have not yet embraced its full potentials and possibilities. Perhaps it is time to write new ways of understanding settler dispossession and Aboriginal activism, both sides of this story told in one narrative.

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Cameron Muir is concerned with three primary ideas. First, that Western Agriculture in the twentieth century developed in the wake of Ecological Imperialism. Second, nineteenth- and twentieth-century constructs of biology became entangled with cultural ideas about inheritance, race, population and civilization. Third, he argues that there is a connection between how we treat each other and how we treat the land. This last theme is explored through the concept of ‘slow violence’—as he puts it ‘the grinding ecological damage wrought by agriculture’. Muir applies this idea to case studies of frontier violence, intensive agricultural development, responses to ecological degradation, and the water-politics of the Murray–Darling Basin.

Muir’s geographical span is the western plains of New South Wales, although he ranges far beyond this ‘gritty local detail’ to draw on
Australian and international trends. This willingness to roam widely is both a strength and (minor) weakness of this book. He ably connects American, British and Australian concerns about race and empire, linking them to the rise of ‘scientific’ agriculture and land management bureaucracy. Elsewhere, these comparisons gloss over important differences between Australian and (particularly) American agricultural history.

The Broken Promise of Agricultural Progress is especially concerned with the social and cultural context of agricultural science. His analysis thus omits much of the technological and economic context of farming, providing both a compliment and a corrective to the dominance of economic and social (mostly labour) historians within the history of ‘rural place and agriculture’.

The book is divided into seven thematic chapters titled: hooves, bores, scrub, wheat, dust, reeds and cotton. Through these themes, Muir explores the pastoral frontier, the ideal of closer settlement, European perceptions of nature, the imperial context to Australian agriculture, the rise of soil conservation (and rural sociology) and the politics of the Murray–Darling basin.

Muir begins with first contact in the area—of the violence and environmental devastation caused by European settlement, for which he cites the account of the early explorer, Thomas Mitchell. Muir follows Geoffrey Bolton’s analysis that Australian environmental history is made up of ‘exploiters’ versus ‘civilisers’. He grapples with cultural and social reasons why Aboriginal peoples were disposed, species destroyed, and water and land squandered on the western plains. Muir’s ultimate conclusion—that the ‘fractured and strained’ society on the frontier had ‘little capacity for conservation’—is an interesting contribution to explaining early European exploitation.

‘Bores’ explores the history of closer settlement in the western rangelands. Focusing on the ill-fated settlement of Petra Bore in inland NSW, Muir links its social context to the rise of ‘scientific’ agriculture and the establishment of Government Departments of Agriculture throughout Australia. He emphasizes the similarities to the USA in terms of shared anxieties about the damaging cultural effects of extensive dispersed settlement, fostering governmental desires for more compact and ‘civilised’ agricultural enclaves. Muir perhaps overstates the suddenness of the interest in intensive agriculture at the close of the nineteenth century, taking too much at face value the optimistic pronouncements of government progressives. The Broken Promise of Agricultural Progress is nevertheless an important addition to the story of NSW agricultural development, which has been somewhat neglected over the past few decades.

In ‘Scrub’, Muir draws upon Melissa Bellanta’s work on the Arcadian movement to discuss cultural perceptions of scrub and landscape. He explores cultural concerns over masculinity, racial decline, and the need to populate Australia’s interior with ‘white’ British farmers. Muir uses the dust storms of the 1930s to consider the social condition of rural communities from the 1890s to 1930s. Drawing heavily on North American scholarship, his comparison between Australia and the USA is interesting and worthy of further development.

‘Reeds’ examines the rise of soil conservation and the environmental impacts of irrigation dams. Via the case of soil conservation in combination with irrigated closer settlement and dam buildings, it provides an interesting account of the shift in from a nature-focused conservation bureaucracy to more productivist development agendas.

Muir’s chapter on ‘Cotton’ examines the establishment of large-scale irrigated cotton growing in NSW. This reads as a concluding chapter, drawing together the cultural history of intensive agriculture based on scientific principles with the impact of European settlement’s ‘slow violence’ on the Indigenous peoples and native landscape of the western plains of NSW.

Muir’s book is a good account of how culture, society and government policy influenced the development of agriculture, particularly in the rangelands. It provides an interesting integration of broad international themes with detailed local history. His great achievement is to link regional histories of Australian agriculture with broader themes in international environmental history. As such, The Broken Promise of Agricultural Progress is best read in conjunction with—and as a reaction to—more traditional histories and historical geographies of the region.

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The Royal Botanic Garden Sydney: the First 200 Years achieves a fine balance between historical narrative, scientific discussion and commemoration. Arranged into four subject areas, it has been written by nineteen contributors. Each author discusses a different aspect of the Garden and its evolving history since 1816. Thanks to Jennie Churchill’s skilled editing, the narrative flows seamlessly and cohesively from beginning to end. This is a significant achievement.

The book’s first subject area, ‘History and evolution’, begins with a chapter titled ‘Cadi jam ora’. Meaning ‘you are in Caadi!’, the words remind us of the tragedy for the local Cadigal (Gadigal) people of Sydney that began on 26 January 1788. Author Clarence Slocklee (the Garden’s Educational Coordinator) asks the reader to ‘reflect and commemorate 20,000 years at the very least of Aboriginal presence on this land’—land that the European settlers sought to make their own.

The Garden’s history is closely linked to the roles played by botanical luminaries such as John Carne Bidwill, Allan and Richard Cunningham, Charles Fraser, Joseph Maiden and Charles Moore. Discussion of their contributions to the Garden is a recurring theme. The Cunningham brothers’ association with the Garden is tinged with sadness. Richard, who had been appointed Superintendent in 1833, died in 1835 while on an expedition with Major Thomas Mitchell. Allan accepted the position of Superintendent but, suffering from tuberculosis, died there in 1839.

Colleen Morris provides an excellent overview of the Garden’s history in her chapter ‘History and evolution’. Established to serve the dual functions of the Governor’s kitchen garden and Sydney’s botanic garden, Richard Cunningham sought to transform it into a living scientific collection. The Garden’s role in advancing commercial crops, timber and fruit is not forgotten, nor is the growing schism between science and horticulture. Colleen Morris discusses this divergence in the aptly titled section ‘Not all roses—the divorce of science and horticulture 1924–72’.

My favourite chapters from the subject area ‘Plants and nature, collections and collectors’ include those addressing the Herbarium, the Daniel Solander Library and the Botanical illustrations. ‘Nature in the Garden’ is also a must for those with an interest in Australia’s fauna as well as its flora. Today, few visitors to the Garden realise that it was the site of Sydney’s first aviary and zoo. The urban wildlife, which for many decades has made the Garden its home, is not forgotten. Not surprisingly, there is a section dealing with infestation of flying foxes between 2007 and 2010. It poses the question: ‘flying fox conundrum—trees or bats?’.

‘Science and research’ is the publication’s third subject area. Brett Summerell, writing on ‘Science at the Gardens’, discusses the scientific work that is carried out in the Garden, giving us a behind-the-scenes look at this important and enduring role. He also considers the impact of scientific advances, such as Crick and Watson’s 1950s work on DNA and the 1994 discovery of the Wollemi Pine, ‘a landmark event for the garden’.

The fourth subject area, ‘People and Society’, features chapters on Garden staff, including volunteers, the Botanic Garden Foundation and its Friends. The staff and volunteers undertake research, manage, maintain, cultivate, plant, sort, code, catalogue, conserve and mount specimens, alongside preparing, labelling, educating, guiding, writing and raising funds for the Garden. It also looks at those who use the Garden—school children, tourists and others seeking peace and quiet in the midst of the bustling city.

The illustrations have been well chosen—a mix of botanical, historical and photographic images. The contemporary photographic views of the Garden are outstanding. The beautiful reproductions of the botanical illustrations by Margaret Flockton are a highlight.

This is not simply a history of the Royal Botanic Garden Sydney. The contributors have contextualised its history within that of Sydney and New South Wales. An amusing snippet relates to Charles Darwin’s 1836 visit to the city, twenty-three years before publishing On the Origin of Species. Although impressed with the city’s gardens, he said of Sydney ‘you are too great and ambitious for affection, yet not great enough for respect; I leave your shores without sorrow or regret’. Today one of the jewels...
in the Garden’s library collection is a unique first-editition printing of Darwin’s publication.

With its foreword by John Valder and two indexes—alphabetical and chronological—plus notes, acknowledgements, a map and picture sources, *The Royal Botanic Garden Sydney: the First 200 Years* will have wide appeal. It is a testament to those who have cared for the Garden in its first two centuries, and a fitting tribute to Australia’s oldest botanical garden and scientific institution.

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*The Red Kangaroo in Central Australia* is a son’s tribute to his father but also a younger scientist’s homage to a pioneer. Discovered amongst former CSIRO ecologist Alan Newsome’s papers three years after his death in 2007, the unfinished text had been intended for publication in the mid-1970s. While others have advanced understandings of the red kangaroo in the intervening period, the lasting contribution of this slim volume lies in its lively account of the methods, attitudes and lived experience of a field ecologist working in Arrente country north of Alice Springs from the late 1950s to the early 1970s.

When he first joined the Northern Territory’s Animal Industry Branch in 1957, Newsome was just 22 years old, with a freshly minted Bachelor of Science from the University of Queensland. Directed to investigate the red kangaroo (then *Macropus rufus*, now *Osphranter rufus*) as a pest to the pastoral industry, he was well aware that he had a lot to learn and listened carefully to kangaroo hunters, cattlemen and Indigenous elders. Newsome studied the red kangaroo intensively through the 1960s, applying careful scientific methods and a good measure of seat-of-the-pants improvisation. Aerial surveys, days spent observing soaks and the post-mortem examination of some 2000 carcasses built up Newsome’s deep knowledge of his subject.

Beginning with an historical introduction, the book is organized into seven chapters that place the red kangaroo in its physical setting of the Central Australian landform, climate and vegetation. It then considers the species’ distribution and numbers, its highly adapted reproductive processes, food preferences and water sources, and group behaviour (labelled ‘Sociology’).

Chapter 2, addressing climate, is now of greater interest than when it was first drafted. Although unaware of the El Niño phenomenon, Newsome produced evidence of cycles of wetter and dryer years back to 1892, including the record dry he himself witnessed between 1958 and 1965. He furthermore made the link between drought and interracial violence that is now being explored by historians.

By tracking kangaroo populations through this cycle, in Chapter 3 Newsome addressed his employer’s concerns about competition with sheep and cattle. Red kangaroos had expanded their range as new dams and bores allowed more individuals to survive times of drought, and the consumption of long dry grasses by introduced livestock encouraged the sprouting of the green grass needed by kangaroos. Newsome solved some of the riddles of kangaroo populations, showing that while they preferred to live in mulga scrub, mobs moved onto open plains during drought. Thus they created an impression of increasing numbers just when cattlemen were most troubled by their presence—and also when successful reproduction fell to near zero.

In Chapters 4 and 5, on physiology and diet, Newsome described his methods and findings in sufficient detail to satisfy other ecologists, but with an immediacy that also readily engages the non-specialist. Comparisons with better-known animals make the distinctive adaptations of the red kangaroo to their arid environment stand out, including the reflective pale red fur that lessens the heating effect of the sun. Even with these attributes, Newsome concluded that red kangaroos lived at the limits of their capacity for survival in Central Australia, with numbers kept in check by regular droughts.

For historians, the human as well as human–animal relations described by Newsome are of great interest. His book portrays a strikingly masculine world in which not a single female name is recorded. Unnamed Aboriginal women do appear in the text, voiceless in comparison with their male counterparts with whom Newsome hunted and prepared kangaroo for consumption.
He acknowledged the long shared history of Arrente people and red kangaroos and described his own research into this relationship, informed by the contemporary work of anthropologist Ted Strehlow. In his 1980 *Mankind* article, reprinted in full in the final chapter, ‘Ecomythology’, Newsome made a case that the stories told by Aboriginal elders had an underlying ecological rationale, with dreaming tracks crossing habitats most favoured by red kangaroos and restrictions on hunting at dreaming sites reducing pressure on populations. That Indigenous people have a deep environmental knowledge that is embedded in traditional stories, is now widely understood but was then only just being recognized in the wider society. According to his son, this was Newsome’s least cited article but the one of which he was most proud.

Thomas Newsome was well placed to serve as his father’s editor: he is also an ecologist who has worked in the Alice Springs area. He rounded out incomplete chapters and inserted tables, charts and photographs from other pieces of Alan’s work, also adding a foreword, maps and explanatory notes. In the absence of a conclusion, an afterword would have been welcome, to explore how Newsome’s research was received, its impact and longevity. This could have been supported by suggestions for further reading in ecological and anthropological texts that have advanced or challenged his findings.

The Red Kangaroo in Central Australia is an engaging and informative book that draws the reader into the world of a curious ecologist. Seeking answers to questions that had practical applications at the time, they hold even greater layers of significance now.

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**Sandra Darroch:** *Power for the People: an (Uncensored) Story of Electricity in Australia, 1770–2015*.

This book, despite the expansive subtitle, focuses only on the development of electricity supply to Sydney. When it was finally determined that the City of Sydney required a public electricity system, the Sydney Municipal Council passed the *Electric Light Act* in 1896, although it took eight years to provide any supply. Finally, the ‘Electricity Undertaking’ or simply the ‘Undertaking’, as it was called, started to supply electricity when the Lady Mayoress closed the switch on 8 July 1904.

With the recent privatization and sale of Energy Australia and Ausgrid, which evolved from the original system, it is an appropriate time for a documented history of the development of the Undertaking into a major electrical supply utility.

This book is the result of a commission by the utility to write a history to celebrate the centenary of the Undertaking in 2004. The author was given total access to all records relating to its various evolutions. Although she provided a manuscript, pressure of change at the time precluded publication of the official version. This book is thus an unofficial version of the history and comprises a ‘warts and all’ review. There were certainly some significant warts in the history, including substantial corruption issues, particularly in relation to the Bunnerong power station in the eastern Sydney suburb of Matraville.

The construction of Bunnerong caused one of the darkest periods of the Undertaking, and indeed of the City’s Council. There were instances of bribery and corruption involving particularly the Deputy General Manager of the Undertaking, who absconded to New Zealand. Four Royal Commissions into the alleged corruption followed and the City Council was eventually removed from office by the state’s Premier. This dismissal led to the establishment of a new electrical entity with representatives from all councils in its network, plus the Chief Engineer, who took overall charge of operations. Thus, in 1935 the Sydney County Council (SCC) came into being.

As the SCC, the utility expanded very rapidly, with the growing domestic appliance market leading to a significant increase in electricity use. After World War 2, as in most other developed countries, Sydney experienced a surge in demand that led to difficulties in maintaining electrical supply. By the 1950s, nevertheless, the SCC was entering a boom period. Industrial developments in Australia during the
war provided the basis for a homegrown electrical manufacturing industry, with locally produced electrical supply system equipment reducing reliance on overseas suppliers and feeding ever-increasing demand.

In the period to the 1960s the SCC workforce reached a peak of nearly 8000 employees, at a time when consumer numbers comprised over 500,000 residents. Times were so good for the SCC that in 1957 it actually reduced its electricity tariff.

The seventies proved to be the SCC’s halcyon years, with profits ploughed back into infrastructure and a workforce that enjoyed very good conditions. The beginning of the end of this comfortable existence came in the mid-1980s when it was forced to pay significant amounts from its profits to the State Government. It was then corporatized as Sydney Electricity, became EnergyAustralia in 1995 and was finally privatized over 2012–16. While the retail arm retained the EnergyAustralia name, the ‘poles and wires’ section became Ausgrid.

With corporatization and the development of the National Energy Market, Ausgrid became subject to a national regulator. As the supply of electricity became more and more subject to fiscal control, tariffs and infrastructure development were carefully monitored and controlled by the Australian Energy Regulator. Over the ensuing years these changes saw the utility undergo substantial downsizing.

*Power for the People* provides a very readable and interesting account of the development of the ‘Undertaking’ from its beginning until its eventual privatization. The accounts of its trials and tribulations, alongside the significant corruption that accompanied these evolutions, are well documented and discussed. While the book gives a very good account of the administrative and social history of the utility, sadly, there is no real attempt at provide any coverage of the technical aspects of the network development. Despite its political and administrative problems, the SCC and its derivative, Ausgrid, became a very technically proficient utility with a supply system comparable to world’s best practice, while offering a superior training programme for its engineers and technical staff.

Unfortunately the book suffers from a lack of adequate editing, including numerous typographical and printing errors. Further, and sadly for such a useful historical account, there is not one photograph to illustrate the text. Despite these deficiencies, however, *Power for the People* provides a most interesting overview of the history of electrical supply in Sydney.

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