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From mysterious Lake George to classy Lake Burley Griffin: the white settlers' tale of two lakes

Abstract

In New South Wales, Australia, around 1820, the white discovery and colonisation of Weereewa (renamed to Lake George) and the Limestone Plains (now Canberra) went hand in hand. However, the development paths of the two regions had separated, when, after the 1901 Federation of Australia, competition for the site of the National Capital was won by Canberra in 1908, and Lake George missed out. Consequently, the artificial Lake Burley Griffin in Canberra was created and subsequently developed into the classy water body that Parliament House is reflected in today. Lake Burley Griffin is intimately known, loved, photographed, talked about as one of the symbols of the Nation, and its artificial water body is used for various recreational activities. On the contrary, Lake George remained a generally untouched, intermittent natural lake, mysterious and distant for most Canberrans.

This paper summarises and contrasts the story of Lake George and Lake Burley Griffin, underlining how landscape influenced colonial and modern history.

Key words: *Lake George NSW, Weereewa, Lake Burley Griffin, Federation of Australia, National Capital of Australia, Canberra*

Preface

During the entire time of writing of this paper, I had an unsettling feeling. I knew that I was only writing half of a story, the story of two lakes from the white settlers' point of view. I need to apologise to my Aboriginal friends for this one-sided view, and the only excuse I have is that I wish to present the other side, the Aboriginal side of the story, in the most truthful and complete way, which requires further research.

Introduction

The initial inspiration for this work came in the form of a painting from 1901 (Fig. 1). This artwork depicts the vision of Canberra, the then future National Capital, on the shores of Lake George as an Australian Venice, with elaborate architecture, lush vegetation, sail boats and picturesque jetties, boat sheds and promenades. The artist, Charles Coulter, was an architect commissioned by the Lake George Capital Site League, a lobby group for the future National Capital to be built around Lake George, to design a parliament building and city centre around the lake. The painting was published in Melbourne in the *Proceedings of the Congress of Engineers, Architects, Surveyors, and Others Interested in the Building of the Federal Capital of Australia* in 1901, seven years before the location of the National Capital was decided [Barrow 2012: 60].



Fig. 1. Artist's vision of "An ideal federal city, Lake George, NSW". Architectural design by Charles Coulter, 1864-1956. Watercolor by Ch. Coulter 1901, source: nla.gov.au/nla.obj-13520423

In the light of both Lake George's landscape and Canberra's cityscape today, this painting is so unexpected, so unusual, that I felt it required some explanation. Today Lake George is an intermittent lake in a natural rural landscape, about 40 km north of Canberra, while the central lake in Canberra is the artificially created Lake Burley Griffin. So I decided to investigate the history of the two lakes. I knew that Lake George was a contestant in the running for the location of the National Capital but missed out. However, Coulter's painting hinted that there is another story, a lesser known one, waiting to be discovered. I was interested in the role that the unique landscape of Lake George played in the making of our National Capital.

What I found is a fascinating story of a young nation carefully considering its options for the location and image of a new capital city, planned to be the best in the world. Walter Burley Griffin, the architect wrote of his design: *I have planned a city not like any other city in the world. I planned it not in a way that I expected any government authorities in the world would accept. I have planned an ideal city – a city that meets my ideal of the city of the future* [National Capital Authority Primary Education Kit 2016: 34]. This city was to be built in a landscape so different from European setting, that it took many decades for the 'Founding Fathers' to understand the geographical situation, generate viable alternatives and make informed decisions. The final solution involved creating a new lake, Lake Burley Griffin, by damming the small Molonglo Creek at the centre of the new National Capital, abandoning the dream depicted on the painting by Coulter.

In the first half of this paper I reiterate the story that has been told many times (for example [Gale 1927, White 1954, Wigmore 1972, Sheldon 1975], and many others), and is even taught in Australian schools [National Capital Authority Primary Education Kit 2016]; the discovery of the Limestone Plains, and the process of selecting the site for the Federal Capital. This story is so well known and well documented, that it is not my aim to add anything to the storyline. The short format of a paper necessitates simplifications and omissions of historical details. However, it is my intention to highlight the role that Lake George or Weereewa played during the selection process, by way of its unique landscape characteristics. Firstly, it inspired the vision for the future capital as a lake-side city. That vision became a reality, a hugely successful one, although required some adjustments. Secondly, the history of dramatic, natural lake level fluctuations of Lake George alerted the "Founding Fathers" and inspired extensive engineering studies, related to the water supply for the future capital [Andrews 1990]. By setting aside a large catchment area as part of the Australian Capital Territory, as well as creating a range of artificial lakes and reservoirs to supply Canberra's drinking water and a recreational platform, the challenging task has been resolved, although over many decades of debates, planning and construction. The lessons learned from the landscape of Weereewa over more than a century, have been incorporated into the landscape of today's Canberra.

Since the 1970's, attention is gradually turning back onto Lake George, this time from scientists, rather than politicians and engineers. In the second half of this paper, I show why Lake George is such an important site in Australia for Quaternary

landscape-, paleoclimate- and paleo-environmental research. I approach the story of the lake from the viewpoint of new lessons that could be and should be learnt for the future, by centring our attention on the role this unique landscape played, on many levels and time scales in the past, throughout our natural and human history.

Lake George – the traveller’s reverie

Lake George, or Weereewa, is located in New South Wales, South-eastern Australia, 40 km north of the National Capital, Canberra. When travelling by road from Sydney to Canberra, the traveller will reach the northern tip of the lake bed on the left, and the steep escarpment, a rugged 80 km long line of the Lake George fault towering above the road, on the right. The emerging view, as the vehicle winds its way along the highway southbound, is unusual and attention-commanding. After the ups and downs of the Great Dividing Ranges left behind, the completely flat lake bed, opening up and disappearing into the horizon ahead, turns every head in the vehicle. The very steep, rocky escarpment along the western side of the highway is none less unique. The numerous wind turbines, dwarfed on the far eastern horizon as the latest addition to this landscape, are the only indicators that the road trip is taking place in 2016 and not 6000 years ago. Not mentioning, of course, the flocks of sheep grazing next to several large mobs of kangaroos on patches of land still dry, as the unusually rainy winter began to fill some of the lake bed. It had been empty of water and full of sheep before, this last time for several decades. Above the grass, eagles, proud rulers of the skies glide for prey in pairs, and their loud calls mix with the softly buzzing noise of intermittent flow of vehicles down below. Then, the road climbs up onto the escarpment, and sweeping views of the majestic landscape conduct a general silence in the vehicle (Fig. 2).



Fig. 2. The view of Lake George on 07 July 2016, looking south-east from Geary’s Gap Lookout. On the lake bed, which has been dry for 20 years, some water is beginning to collect, as a result of an extended rainy period. Photo credit Stuart Cohen, Bottlebrush Media

Local Aboriginal people around the Australian Capital Territory and Weereewa

Aboriginal occupation of the area is a topic that deserves a much more detailed and in-depth description and analysis. Here, only a very brief mention of a few well-known occupation sites is provided, without the possibility of completeness.

The earliest direct evidence for Indigenous occupation in the wider area comes from a rock shelter at the Birrigai area near Canberra, excavated by Josephine Flood [1980], which has been dated to approximately 25,000 years ago. However, it is likely (based on older sites known from the surrounding regions) that human occupation of the region goes back considerably further [Williams et al. 2014].

On the surrounding hills, and further south in the hills of the ACT, a small number of rock shelters (Hanging Rock, Tidbinbilla Nature Reserve), some with paintings (Yankee Hat Rock Shelter) are recorded. Other evidence of Aboriginal occupation includes recorded sites of grinding grooves (Theodore, Latham) and canoe trees (Lanyon). The vast majority of known sites near Weereewa are small camp sites on aeolian sand dunes, with fire place remains and stone scatters [Papp et al. 2016]. There is ongoing research into the Aboriginal occupation history of the Lake George basin and surrounding area.

White discovery of “Weereewaa”, renaming it to “Lake George”

Only 33 years after the First Fleet arrived at Botany Bay with the first settlers of Australia, Dr Charles Throsby, an ex-naval surgeon turned explorer, received word from local Aboriginal people that there was a large inland river, called Murrumbidgee, flowing from the Snowy Mountains northward, through fertile territory – so he decided to explore it. Throsby sent Joseph Wild, originally an English convict assigned to him as a servant, by then a freed explorer himself. Wild could not find the river, but on the 19th August 1820, he found a large lake called ‘Wee-ree-waa’ by the local Aboriginals, ‘home of swans, ducks and geese in abundance’ [Wigmore 1972:10].

Throsby reported the find to Lachlan Macquarie, a British Army officer and colonial administrator, serving as the fifth and last Governor of New South Wales, touring the area as part of a Royal Commission to inquire into the condition of the Colony.

Governor Macquarie travelled from Parramatta with his companions to inspect Lake Wee-ree-waa, and on the 28th October 1820 he renamed it ‘Lake George’ after the British monarch, King George III.

White discovery of the ‘Limestone Plains’, the naming of Canberra

Macquarie was still very interested in finding the elusive river called Murrumbidgee, so he set up a party, including Wild, to explore for it further. The party reached the fertile area that is now Canberra, camped at the current Duntroon site near the Molonglo River, but did not reach the Murrumbidgee.

A third attempt, a new party with Throsby leading, finally succeeded in 1821, and with the Molonglo – a tributary of the Murrumbidgee River – in sight, the ‘Limestone Plains’ was settled by pastoralists in 1825. The first European settler in the area was Joshua John Moore, who established a stock station called ‘Canberra’,

approximately where Canberra city centre and the Australian National University is currently located [Davies, Hoffman & Price 1990:13].

The name ‘Canberra’ comes from the name ‘Kamberri’, one of local Aboriginal tribes, significant for the region [Jackson-Nakano 2001]¹. In 1913 ‘Canberra’ became the official name for the area.

Australian Federation and the problem of the National Capital

Australia as a nation did not exist until 1901. There was Australia as a continent, with six separate colonies of the British Empire. *Throughout the nineteenth century, there were lively debates about whether the separate colonies should become a federation, and about which city should be the national capital of the federation* [Davies, Hoffman and Price 1990: 33]. The most fiercely competitive were New South Wales and Victoria, fuelled by the wealth accumulated during the gold rushes of the second half of the 19th century. They advocated that the most obvious choices for the capital of Australia would have been Melbourne or Sydney. However, the other colonies resisted, believing that the National Capital should not be a colonial capital as well. This competition, as well as the problem of choosing a site for the National Capital, had been the main obstacles to Federation, delaying it by several decades.

Eventually, the Premiers’ Conference in Melbourne in January 1899 changed the Draft Constitution, Section 125, to save the Federation: *The seat of Government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney* [Commonwealth of Australia Constitution Act 1900].

With this important decision finally made, the Commonwealth of Australia was born on the 1 January 1901, but the site of the National Capital had not been selected yet. *The Times* wrote in 1903: *But in Australia itself people know that a bush capital is the only possible sedative of the present inter-State irritation, and that it is not merely the most peaceful but also the cheapest solution of a difficulty that has from the first haunted the steps of Australian federation... A bush capital, therefore, was an essential condition of federation* [Davies, Hoffman and Price 1990: 36].

Lake George and the Limestone Plains: from friends to foes

As we have seen, the white “discovery” of Lake George and the Limestone Plains – the area that is now Canberra – went hand in hand. However, the two places

¹ Local Aboriginal people described three language groups, all meeting in the Canberra area. The Ngunawal to the north, the Ngarigo to the south, the Walgalu to the west [Davies, Hofman & Price 1990 :7]. The Kamberri tribe belongs to the Walgalu language group.

soon became competitors, as both were considered, amongst other locations, as candidates for the site of the future National Capital.

Requirements for the site to be selected were numerous. For example, John Forrest, an explorer, also the first Premier of Western Australia and a cabinet minister in Australia's first federal parliament, set an excellent example of environmental determinism: *I believe that a cool climate is best for health and for raising up a sturdy race – not a hot climate, which induces laziness, or, at any rate, the desire not to exert oneself too much* [Davies, Hoffman and Price 1990: 38].

Coastal sites were not considered for the National Capital due to concerns about military attacks from the sea. The first powered flight only took place in 1903, around the time of the selection process, so aerial attacks were not assumed at that time. However, neither Sydney nor Melbourne wanted a rival port developed at the expense of the Commonwealth [Davies, Hoffman and Price 1990: 38]. Further criteria for selecting the National Capital were: a good climate, a good water supply, fertile soil, a picturesque location, community and political support, easily accessible from Melbourne and Sydney, proximity to an existing rail line, closeness to an existing city or town to reduce building costs [A capital choice. Teachers' Resource. 2016 – online].

Finally, after much consideration and parliamentary debate, a number of places were carefully selected. The most popular potential National Capital sites were: Albury, Armidale, Bathurst, Bombala, Braidwood, Canberra, Dalgety, Goulburn, Lake George, Lyndhurst, Orange, Queanbeyan, Tooma, Tumut, Wagga Wagga, Yass. First the Senators, then the Members of the House of Representatives, were asked to visit all these places in fifteen days, then make a choice by a series of ballots.

Fluctuating water levels of Lake George

At the time of white discovery, Lake George, or Weereewa, was full, with water levels 8 metres above current lake floor. This, according to records (Fig. 3), is the highest water level ever measured, although it also reached a similar level in the 1870's. When the water exceeds 8 metres depth, it starts to overspill from its bed, mainly towards the north, and form a “mega-lake”. The maximum height of the water column, given current geomorphological conditions, can be around 37 metres above the present lake floor, witnessed by shoreline deposits at that elevation [Coventry 1976]. Any excess water will drain into the Lachlan River to the north. Since discovery, water levels have fluctuated. Just before Federation the lake was several metres deep, but lake levels fell during years of drought and the lake was dry from 1901 to 1915 and on several occasions since. During the selection process for the site of the new National Capital, luckily the lake bed was dry, preventing very costly possible mistakes.

As lake level variations have been monitored since European discovery, Lake George represents the longest historical record of water level for any lake in Australia [Jacobson, Jankowski and Abell 1991].

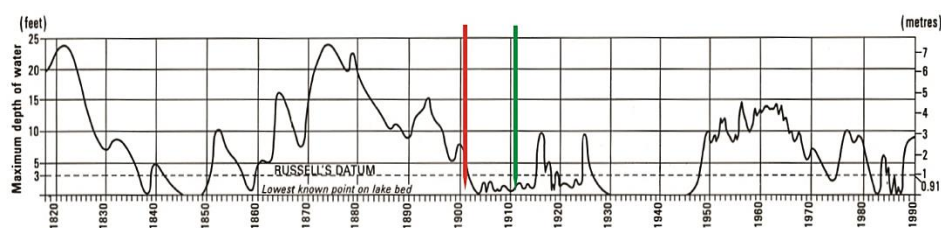


Fig. 3. The longest historical water level record in Australia: Lake George 1819-1990 [Jacobson, Jankowski and Abell 1991]. The red arrow shows the year of Federation, 1901, while the green arrow marks the year of the declaration of the Australian Capital Territory, including Canberra, in 1911

Lakeside National Capital alternatives

As the merits of nominated sites were being investigated, advocates favouring the various sites formed lobby groups, paid consultants and developed plans about their site. The NSW Government commissioned Alexander Oliver, who suggested building a large dam wall in the middle of the Lake George Basin to reduce surface area therefore evaporation, reclaiming half of the lake bed as dry land and converting the other half of the basin into a reservoir. Or, if that is not possible, cutting a tunnel through Geary's Gap, and diverting all lake water into the Yass River.

Frederick Gipps, a civil engineer had very similar ideas, which he presented to the Victorian Branch of the Royal Society. His alternative plan was damming the Molonglo River on the Molonglo Plain south of Lake George, creating an artificial lake there and transferring the water via a canal and tunnel system to the Lake George basin where the new Capital to be built.

Another passionate supporter of Lake George as the site for the new Capital was A. Evans, who gave a paper at a Melbourne congress of 1901 about his ideas. His object was 'to show that Lake George will afford the loveliest waterside site the heart of man can desire'. It seems that Evens never heard of the water level fluctuations of Lake George, or simply ignored them [Barrow 2012: 60].

As arguments about the site dragged on, the Commonwealth appointed a group of four Commissioners in 1902, to assess the qualities of the eight best sites. A parliamentary vote, new elections, then a new ballot followed. Finally, Lake George was eliminated in 1908, and the process came down to the final choice between Dalgety near the Victorian border, and Yass-Canberra in the Limestone Plains. At first, the votes were divided evenly between the two centres, but finally one Senator switched sides, and Yass-Canberra won by nineteen votes to seventeen.

From Lake George to Lake Burley Griffin

The selected Yass-Canberra area was quite large, and included several of the recommended locations (Yass, Canberra and Queanbeyan). At this point in time, Lake George had a second chance of getting involved with the site of the National

Capital. Charles Robert Scrivener (1855-1923) a New South Wales surveyor, who later became the Commonwealth's first Surveyor-General, surveyed the area and reconsidered the options of a very large dam, a tunnel, or an embankment. Finally he concluded that evaporation losses in any solutions involving Lake George would be very great, and in 1909 recommended that the actual site for the National Capital should be around and including the flood plains of the Molonglo River. One of the reasons for the recommendation was the site's ability to store water "for ornamental purposes at reasonable cost".

Once the site was selected, the Australian Capital Territory was declared on 1st January 1911 (Fig. 4). In the same year, an international competition for the design of Canberra, the new capital city, was launched and Scrivener's detailed survey of the area was supplied to the competing architects. Most of the proposals included artificial bodies of water.

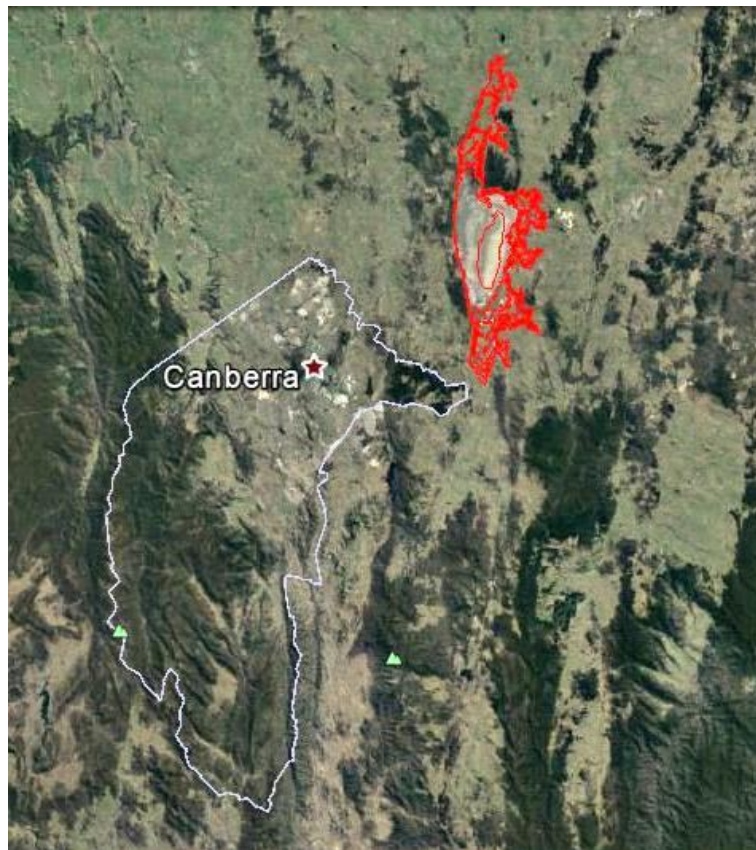


Fig. 4. The borders of the Australian Capital Territory, shown with white outline. The centre of Canberra's urban area and the location of Lake Burley Griffin is marked with a star. Lake George 5 metres elevation contours are shown in red, 672 m – 712 m [Google Earth image, public domain. Access 14 April 2017]

An American architect, Walter Burley Griffin won the competition, and today's Canberra has been built largely following his original plans. An essential part of Walter Burley Griffin's plans was an artificial lake in central Canberra. *"Griffin was a man with remarkable powers of imagination and genius of topography. Unable to visit Australia, he studied a plaster model of the city site to a scale of about 1:5000, provided for the information of competitors in the British Consulate General in Chicago. From this, he had grasped, as his rivals and critics had not, the significance of the Molonglo flood plain."* [Andrews et al. 1990: 88]

Lake Burley Griffin and the ACT lakes and reservoirs

Charles Scrivener, the Commonwealth's first Surveyor-General, proposed that the future Capital Territory should include the catchments of the Molonglo and Queanbeyan Rivers, to prevent pollution of future drinking water supply [Andrews et al. 1990: 87]. That proposal was rejected, but the total catchment of the Cotter, Tidbinbilla and Gudgenby Rivers, as well as some of the Molonglo and Murrumbidgee Rivers', did become part of the new Territory. Indeed, these catchments define the shape and location of the current Australian Capital Territory.

As the lakes and rivers were being developed for water supply, four dams have also been constructed: Cotter, Corin and Bendora Dams on the Cotter River in the ACT and the Googong Reservoir on the Queanbeyan River, in NSW (Fig. 5).

When construction of the capital started, Griffin moved to Canberra and was appointed 'Federal Capital Director of Design and Construction' in 1913. Once he was able to examine the site, he somewhat modified his original plans. The Departmental Board, a Government body, had developed their own version of plans. Subsequently, numerous reports, revisions and schemes operated. Griffin was demoted from his position and left Canberra in 1917. The lake was only completed in 1963, after much debate and several alterations of the original plans, by damming the Molonglo River with the Scrivener Dam.

As Lake Burley Griffin is a man-made lake, the account of its history and details of its making can be found mainly in the engineering literature rather than in scientific or historical texts. *Before the lake could become a reality, engineers had to embark on a detailed program of investigation and design work, including a study of the river and its behaviour; rainfall, hydrology....The basic design of the lake and its essential services had been determined by field survey, and a concrete study model was constructed. In the model, there was a calculated variance of horizontal and vertical scale, to allow accurate observation of normal and flood flow water characteristics. The basic requirements of the dam were also determined from the model. It had to provide adequate storage capacity, yet remain capable of discharging sudden excessive flooding, to which the Molonglo River is subject. The model also influenced the final placing and the engineering specifications for the two main bridges. Lake depth, contours of embankments, the positioning of ornamental ponds and children's pools, all these and many other details were decided by the behaviour of the water in the model. Before the lake could begin to*

form, a dam had to be built. Bridges constructed, and the bed of the lake cleared and formed. (Transcript from the Commonwealth Film Unit 1965. Available at: <https://www.youtube.com/watch?v=wqsxXTv7ZUk> [Access 15 Nov. 2016] – Transcript published with the permission of National Film and Sound Archive of Australia).

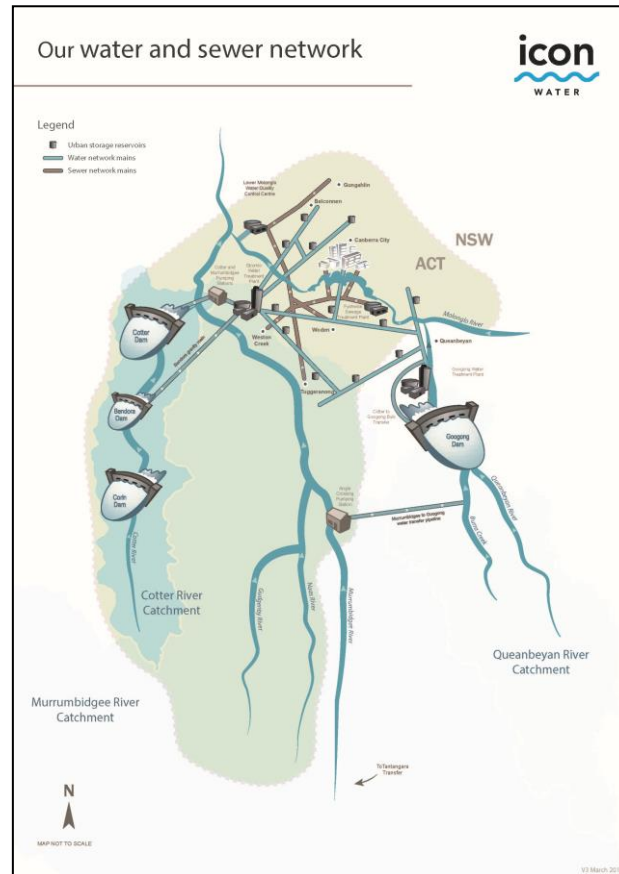


Fig. 5. The elaborate drinking water supply scheme for Canberra, with Cotter, Bendora and Corin Dams on the Cotter River in the ACT and the Googong Reservoir on the Queanbeyan River, in NSW. [<https://www.iconwater.com.au/Water-and-Sewerage-System/ACT-Water-Supply-Map.aspx> Reproduced with the permission of Icon Water, 2 May 2017]

On 17th October 1964, the lake was inaugurated by the Prime Minister of Australia, Sir Robert Menzies, who opened with his remarks with the formal inauguration of the lake and continued by affirming the national spirit the lake represents: *I declare this lake duly inaugurated. Now, of course, it has been beautifully done. Do let me say this to you if it needs to be said. Now, the lake is more than a sheet of water. You can have a sheet of water, if you spend enough money on it, anywhere I suppose, around-about, even in the middle of Australia! But*

*it's what's around a sheet of water that helps to set the beauty of the lake. And all the work that has been done on the foreshores, in the surrounds of this lake, all the additions of beauty that have been met, will – I think – put us under permanent debt to those who have been responsible for their design and for their execution. This is not just a matter of pride for us, this is a matter of national importance! Because more and more, as people understand that this is the capital of the nation, a capital of which they may be proud, then more and more will they begin to realise instinctively, that the nation is more important than any part of it. And that the nation is symbolised by the capital of the nation, in this place. In other words, this I think is doing a great deal to create a genuine national spirit. But from now on, here it is. The centre of recreation. A lake that will give completeness, for example, to all of the scholastic facilities that exist and will exist in this city. A lake that will complete the amenities of life. Really there is something here for all of us. And so as I said at the beginning, I have a great feeling of official privilege and a great feeling of personal delight in declaring this lake to have been inaugurated by me a quarter of an hour ago. (Transcript from The Commonwealth Film Unit 1965 *The Canberra Lake, Springtime Sixty-four*. [video] Film Australia Collection, from the National Film and Sound Archive of Australia Available at: <https://www.youtube.com/watch?v=wqsxXTv7ZUk> [Access 15 Nov. 2016]).*

Lake Burley Griffin, named after its original designer, together with Parliament House, became one of the best-known landmarks of Canberra and symbols of modern Australia, featured on countless photographs, posters, illustrations, websites, school books and tourist guide books (Fig. 6).



Fig. 6. Lake Burley Griffin and Canberra. View from the Telstra Tower. By Redlands597198 [https://upload.wikimedia.org/wikipedia/commons/0/02/Canberra_view_from_telstra_tower.jpg Access 31 March 2017]

Back to Weereewa: paleoenvironmental research in the Lake George basin

6000 years ago people would have looked around from the Lake George escarpment and seen almost the same landscape, with lake levels fluctuating within similar limits as today. We know this from analysis of drill core sediments obtained from the lake bed in the 1970's and 1980's by the Bureau of Mineral Resources and the Australian National University [Truswell 1984; Singh & Geissler 1985, Jacobson Jankowski and Abell 1991]. From those drill cores, it was recognized that the Lake George basin contains the longest known continuous continental Quaternary sedimentary record in Australia and one of the longest in the World – an up to 165 metres deep sequence of sediments deposited over the last 4 million years, based on magnetostratigraphy and cosmogenic nuclide burial dating [McEwan Mason 1991; Macphail et al. 2015]. The sedimentary sequence therefore spans the late Pliocene and the entire Quaternary Period (Pleistocene and Holocene Epochs).

Pollen analyses by Singh and Geissler [1985] indicate that during the last 780,000 years (since the Matuyama/Brunhes paleomagnetic reversal), the vegetation fluctuated between subalpine grass/herb fields during glacial periods and sclerophyll woodland during interglacial periods. The cool temperate taxa disappeared and the sclerophyll taxa returned about 7,700 years ago. Since then, the vegetation has remained largely unchanged.

These two examples demonstrate how the archives of Lake George sediments provide detailed information on past climates, vegetation, lake level history, as well as aiding our understanding of human occupation history for the area.

A new research project, supported by the Australian Research Council and industry partners (ARC LP120200626) is currently re-examining old drill cores, as well as collecting and analysing new data in the Lake George basin and surroundings. This multidisciplinary approach will result in an improved paleo-environmental reconstruction, leading to a better understanding of the detailed process and long-term effects of climate change.

Lake George today

Instead of Australia's Venice, Lake George today is the natural intermittent lake it had been before colonisation. Since "settlement", the lake bed is used as grazing land when dry. The boundaries of the lake are lightly fenced by local pastoralists, just as much as it is necessary to keep the feeding animals from wondering away or mixing with the neighbour's stock. The general view across the landscape of the lake is still largely undisturbed, with old fence posts providing a poetical counterpoint, a light indication of human presence (Fig. 7).



Fig 7. Lake George as a grazing land. Photo by É. Papp 2016

Conclusions

The history of Lake George, or Weereewa, and Lake Burley Griffin are very different, but the modern histories of both lakes are intimately connected with the history of Federation. My focus has been on underlining how the major historical event of the Federation of Australia, which required a National Capital to be built, was shaped by constraints of natural landscapes and climate, particularly by the scarcity of water on this dry continent. The location for Canberra was selected largely based on the site's capacity for satisfactory water supply and storage.

The Founding Fathers' collective dream of a new National Capital included the vision of an ornamental freshwater lake. Lake George was examined and found unsuitable, because of its changing – and often disappearing – water table. Consequently, several regulated, artificial lakes, dams and reservoirs were built, supplying the Capital with drinking water. Lake Burley Griffin, an ornamental lake was constructed as the crown jewel. Since the planning and building of the artificial lake, attention turned away from Lake George and onto Lake Burley Griffin. The new lake has been successful in fulfilling the role it was designed for by becoming a symbol of the nation and a recreational platform for Canberrans.

However, from the early 1970's, the attention of local scientists from the Bureau of Mineral Resources (now Geoscience Australia), and the Australian National University turned back onto Lake George. A series of drilling programs obtained a substantial number of very good quality cores from the lake sediments. Study of these cores revealed that the lake contains the longest continuous Quaternary sedimentary record in Australia and one of the longest in the World, spanning the

last 4 million years. Lake George hence became one of the most important known Quaternary sites in Australia.

The lessons learned from the first 100 years (1820-1920) of fluctuating water level records of Lake George cautioned our forefathers a century ago, and deeply influenced the development of the Australian Capital Territory and the National Capital, Canberra. The successful creation of the drinking water supply and ornamental waterways of Canberra would not have been possible without those early lessons, learned from Weereewa and applied to the concept, design and construction of Lake Burley Griffin, the new national symbol. As Sir Robert Menzies expressed it in the Lake's inauguration speech: *the nation is more important than any part of it. And that the nation is symbolised by the capital of the nation, in this place. In other words, this I think is doing a great deal to create a genuine national spirit.*

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