

Natural Sciences Loop Safari

Day 1 – Sun 27/8/23 - Arrive at Kidman's Camp, north of Bourke

Timeline

Morning – Arrive and set up, Kidman's Camp is on the Mitchell Highway, 7kms north of Bourke.

1:00pm – Drive south from Kidman's camp to Back O Bourke Centre to purchase Jandra paddleboat cruise tickets - \$28 (if it is running, they are currently having staffing issues), Back O Bourke Centre tickets - \$21 and Mt Oxley tickets \$9. You can also pick up any tourist information and souvenirs you may want from the visitor's centre.

2:00pm Jandra paddle boat cruise from Kidman's Camp wharf

5:00pm Meeting in Camp Kitchen

Highlights

Experience the beautiful Darling-Baaka River aboard the majestic Jandra Paddleboat. Once on board, the Captain will inform and entertain you with a delightful commentary on river life, flora, fauna, and the history of the riverboat era. The original Jandra was a steam paddleboat built in Mannum, South Australia, in 1894 for Arthur Senior of Bourke. Our modern paddleboat was built by Russell Mansell and his family and commissioned in 2000. It is the first paddleboat to operate on the Darling River in over 60 years.

History of Bourke

The landscape is one of the oldest on the planet, unaltered by unstable geology; the fragile sands and the species they support are a testament to the ages. The Aboriginal culture stretches back thousands of years, evidenced by the Aboriginal fish traps in Brewarrina which are the oldest man-made structure on the earth.

Great exploration expeditions punctuate European history in the region. Captain Charles Sturt and Sir Thomas Mitchell traversed the country to the site of Bourke itself, and Burke and Wills trod its tragic path through the region. With exploration came opportunity, with adventurers eager for fortune and fame. Sir Sidney Kidman and Sir Samuel McCaughey were two of the great pastoral barons to stake their claim.

When Australia sought to articulate its identity in the late 19th century, writers rushed to the Back O' Bourke to define the collective psyche of the land. Authors like C.E.W. Bean and Henry Lawson found the kind of men that fitted the mould of frontier mateship, which Bean went on to codify in the Anzacs of WW1, while Lawson famously quipped, "If you know Bourke, you know Australia."

With necessity comes invention, and soon the Darling-Baaka was transformed into a super-highway to carry out all that the region was produced in an era of paddleboat history that was a hundred times more colourful than its parallels elsewhere in the country. Afghan cameleers and drovers traversed great swathes of overland routes to meet the newly formed railheads, with Bourke the end of the line for steam trains, with an important port and a thriving transport hub.

Within these broad themes are thousands of stories of shearers, unions, missionaries, miners, doctors and nurses, coppers and bushrangers, the wild, the ambitious, the sacred and the profane. Their stories are written into the very buildings of Bourke, and their characters are etched into the landscape.

Day 2 – Mon 28/8/23 - Bourke

Timeline

8:50am Drive to Back O Bourke Centre \$21 – optional morning tea at cafe

10:40am Drive around town - stop at bridge, Percy Hobson Mural, cemetery

11:20am Drive to weir, lock (7kms) and then to the fishing reserve. Return to Bourke wharf.

12:00pm See Crossley engine start, walk to wharf

12:30 pm Optional walk to court house and poet's corner before having lunch – in town or return to caravan park

2:30pm Drive to Mt Oxley from caravan park - about 50 km (40 minutes) from Bourke. Bring your permit.

Highlights

Back O' Bourke Information and Exhibition Centre – this is set amongst the native garden of the river red gums on the banks of the Darling River. The centre allows you to experience a journey through life in the backcountry, rediscovering the stories of Australia through modern eyes, taking you from the rich cultural history of the past through to the future of the Australian outback. This world-class centre employs a series of interactive installations and stunning visual screen displays to immerse visitors with stories of the Australian outback, bringing them to life and actively engaging visitors with the area's rich history. Engage and uncover stories of early exploration, the poets, local bush rangers, the grazing industry, outback legends and conflicts.

North Bourke Bridge - is Australia's oldest movable span bridge. This bridge is one of the most historic bridges in New South Wales. It is the sole survivor of New South Wales's first two lift bridges. Opened on May 4, 1883, this lift bridge was designed by J H Daniels and modified in 1895 and 1903 by E M de Burgh, both Public Works bridge engineers. Built at the start of the River Trade, its construction was begun by David Baillie and completed by McCulloch & Co. The 1895 modifications led to improved designs for subsequent lift-span bridges.

The North Bourke Bridge was designed and constructed at the height of the River Trade era when the principal mode of transport for Western NSW and the Riverina District was some 200, paddle steamer-barge combinations operating the Murray-Darling River system. It served as a Gateway structure for 114 years before being bypassed in 1997.

Percy Hobson Mural was completed in April 2021, on the Bourke water tank, by the renowned Lightning Ridge artist John Murray, local artists Brian Smith and Bobby Barrett, Melbourne Street artist Lucas Kasper, and a crew of local young Aboriginal artists. As a finishing touch, the Bourke community added their hand prints to the bottom of the mural. The mural honours Bourke's Commonwealth gold medallist, showing Percy Hobson clearing the high jump bar with Red-tailed Black cockatoos on the other side of the tank.

At the 1962 Perth Commonwealth Games, Percy Hobson became the first Aboriginal athlete to win a gold medal for Australia. Aged 20 years at the time, Hobson took victory in the high jump, clearing the bar at 6ft 11in. (2.11m), setting a new Commonwealth Games record.

Historic Cemetery -this predates the town and contains the graves of bushrangers, drovers, cameleers, river boat, a constable that was shot ...and of course Fred Hollows. The coolabahs of Bourke Cemetery stand guard over a fascinating piece of Australia's frontier history and clues to some of the most poignant stories you could ever imagine. While the new (and current) section of the Bourke Cemetery continues to serve the community in remembrance of their loved ones, the historic old section holds the secrets of a bygone age.

Fred Hollow's grave is a ~415 Ma Adelong Norite (a slab now in the National Rock Garden in Canberra), with sandstone blocks from Mount Oxley. A sign describes his life and his connection to Bourke. Fred said once that, "Ever since I became well known, I stopped being Professor Hollows, or Dr Hollows, I became just Fred. People would stop me in the street or shout out "Good on ya Fred". I like that". Fred first visited Bourke in 1971 when he was the Chair of the Division of Ophthalmology. He connected instantly with the town and the people. The first clinic he had in town was in a marquee at the Showgrounds. He was providing eye care for the underprivileged and poor. He also wanted to help to improve the health of indigenous Australians. There was a state funeral for Fred when he died in Sydney, but his wish was to be buried in the Outback...so he is buried here under a coolabah tree. He is buried with his glasses, a bottle of whisky, letters from his children, sawdust from his workshop, his pipe and a tin of tobacco. He was a remarkable man who contributed so much to people before passing away from cancer.

But there is also a corrugated iron Afghan Mosque. The small hut/shed was used by Muslim Afghan Traders as a place of worship. The Afghan traders were immigrant camel drivers who came from the North West of India. They were experts in handling, training and breaking of camels and they carried goods to remote arid areas. Just across the way, Chinese characters are depicted in reference to the souls who came to Australia to bring the first market gardens and establish the first Asian communities.

Sons of Ireland, Scotland and every corner of the British Empire were dispatched to Australia to make their mark, and whether they made it or not, many found their final resting place in the Bourke Cemetery. A visit will take you back into a world of bush rangers and drovers, cameleers and river boatmen, lost children, and local heroes. So many of the epitaphs tell of the tragedy that constantly stalked the western plains; "drowned", "killed by lightning", "murdered", "sheer isolation took its toll", "poisoned himself", "shot dead by police", and "found hanging in the bush".

The Lock at the Bourke Weir -the first lock built on the Murray/Darling River systems. Built-in 1897, the lock measures 59.5 metres between gates and is 11 metres wide. It was concreted and converted into a weir in 1941. Phil Gilmore suggests that while here we should contemplate how flat this part of Australia is. The ~3m high weir holds back ~48km of river. Phil thinks Bourke is about 105m elevation – but it is something like 2000 km by river to the mouth of the Murray River.

Crossley Engine -located at the Wharf area is 1923 Crossley oil fuelled stationary engine. This particular engine was originally used from 1923 to 1938 in the Sydney Power House to generate electricity for Sydney. From 1938 it was used in the Allowrie Butter Factory in Coffs Harbour until 1949, when it went to a property in Narromine to pump water for irrigation until 1964.

Donated to the Bourke Shire Council in 2002, it was fully restored to working condition and is started at 12pm Monday to Friday. Over the years more than 100,000 Crossley oil and gas engines were built, and it is a testament to their quality that many are still in use today.

It is an example of an early water-cooled four-stroke diesel-type engine, which followed the steam era. With two cylinders sitting side by side and a 6-ton flywheel between them, the 6,562 cubic inch engine produced 138bhp at 260rpm or 108.6 litres with 103kW of power using modern measures.

Historic Bourke Wharf - the original wharf fell into disuse in the 50's and was let go. It was demolished in the 80's. This replica was built in the 90's. It is a reconstructed wharf and gives one a great idea of the height the waters

obviously used to reach in Bourke. It was certainly a piece of history with the wool industry in this region of NSW. In the late 1890s Bourke was a major inland port for wool. At its peak, the wharf had three steam driven cranes handling 40,000 bales of wool a year. This was shipped down the Darling to ports in South Australia and Victoria, sent by rail to Adelaide and Melbourne for local textiles and export. Following the advent of irrigation on farms in the 1880s, cotton, citrus fruits and wheat were also shipped. The paddle steamers used massive amounts of timber, sourced from the riverbank, to fuel boilers for power, causing a long-term reduction in habitat for animals and riverbank stability. They were also responsible for large-scale removal of fallen trees from the river to improve river navigation. However as snags provide hiding, spawning and resting places for native fish, fish reservoirs of food for invertebrates and other organisms, roosting places for birds, habitat for tortoises and water rats, the paddle steamers had a detrimental effect on the environment.

Court House - built in 1900 at the cost of 9,500 pounds. It is the farthest inland Maritime Court in Australia.

Poet's Corner is in the northeast corner of Bourke's Central Park. It has memorial stones for local poets and writers - including Henry Lawson, Will Ogilvie, Harry "Breaker" Morant and Francis Humphris Brown. Henry Lawson wrote some of his most memorable poetry and short stories from his outback experiences in this area during 1891-92.

Other things to do

Fort Bourke Stockade is a re-creation of the stockade built by Major Thomas Mitchell when he was in conflict with the local Aborigines. The stockade is 16 km out of town. The replica fort is little more than a few logs near the river. When wanting to visit the Fort Bourke Stockade, please drop into the Back O' Bourke Exhibition Centre, as there is a \$10 deposit for a key to unlock the gate.

Bourke Aboriginal Art Gallery - located between the Chemist and the Commonwealth Bank in the main street of Bourke. Be amazed at the wide range of Aboriginal art created in the local Bourke area.

Notes on Mt Oxley

Distance- Mt Oxley is about 50 km (40 minutes) from Bourke. 28 km on the Kamilaroi Highway and then a right turn onto Rossmore Station which requires a permit to enter.

Cost - \$9 per person. This permit is purchased at the Back O' Bourke Centre.

Facilities- Picnic area with toilets

Mt. Oxley consists of two sandstone hills that rise out of the plains. It has the characteristics of a mesa or jump-up (Qld) having a flat plateau-like top and steep perpendicular cliffs and talus slopes.

Captain Charles Sturt was the first European to set foot on

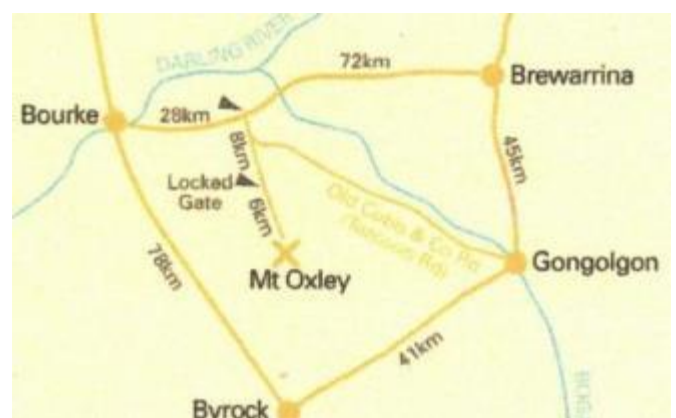


Figure 1 Mt Oxley-Rossmore Station Brochure.



Figure 2 Mt Oxley - The History & the Mystery Brochure

Mt Oxley in late Dec, 1828.

On the summit are found small craters in two distinct lines containing blocks of Quartzite. These slabs of rock are due to the flat-lying bedding and vertical jointing of the rocks. They are indurated from weathering and slight recrystallization of the quartz grains (low grade regional metamorphism) (Reference: Phil Gilmore).

How these craters have formed is a mystery but one theory is that the explosions heard emanating from Mt Oxley are due to the intense heating of the rocks on calm, very hot days and the rapid cooling of the rocks at night causing them to explode.

Mt Oxley is called "Oombi Oombi" by the Ngemba people of the Wongaibon Aboriginal language group. It was a Women's site and source of grinding stones.

Stop 1 will be at the base of the mesa to view the unconformity between the folded basement Ordovician rocks of the metasandstone of the Booda Formation (453± 15Ma) and the conglomerate and upward fining sequence of the overlying Devonian rocks of the Moira Formation (411± 9Ma).

Stop 2 will be at the Mt Oxley Formation.

Stop 3 will be at the summit to investigate the craters and quartzite rocks. Afternoon tea will be taken in the picnic area and to take in the amazing views.

Regional geology

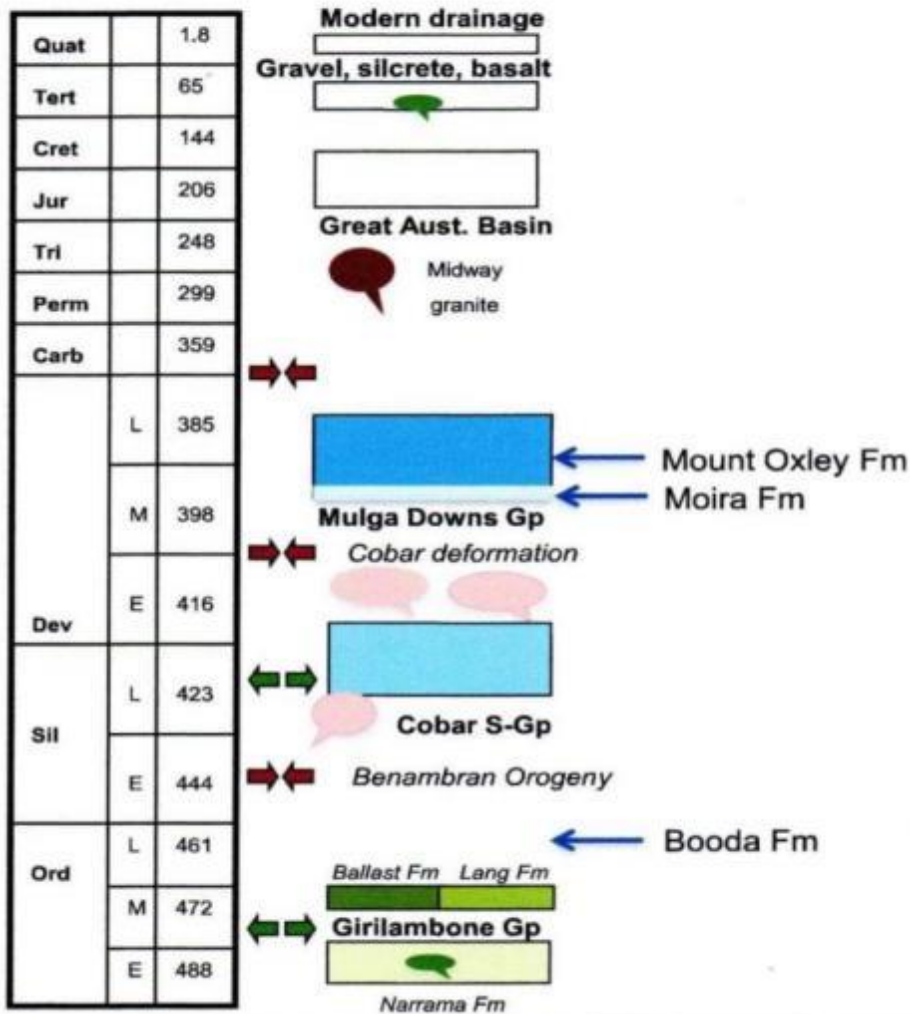
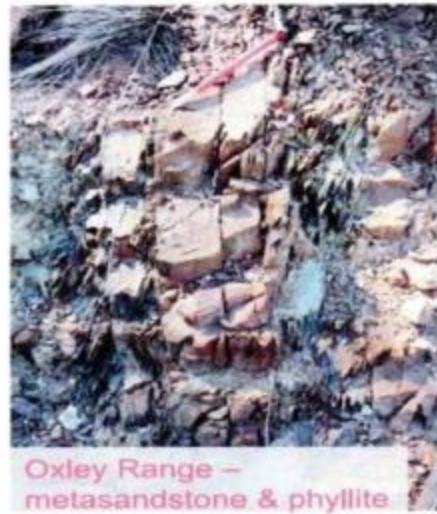


Figure 3 Geological Survey of NSW- Fraser et al, 2013



Oxley Range – slate



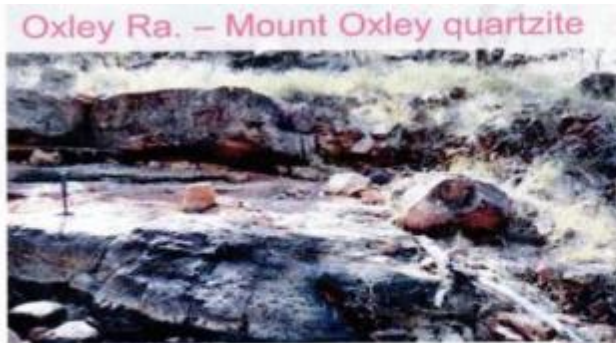
Oxley Range – metasandstone & phyllite



Mount Oxley – metasiltstone

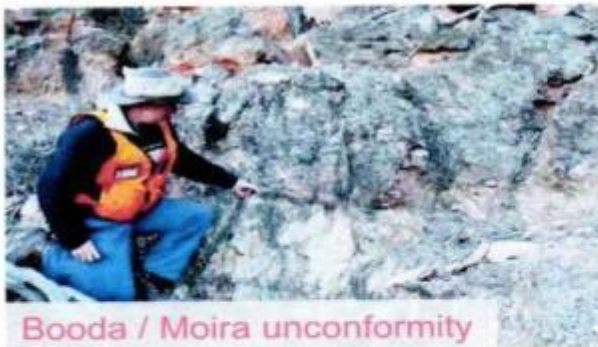
Booda Formation

SHRIMP II U-Pb age of $\sim 453 \pm 15 \text{ Ma}^1$ as the maximum depositional age of a metasandstone sampled from the base of Mount Oxley



Oxley Ra. – Mount Oxley quartzite

Oxley Range – Moira Fm continental redbeds



Booda / Moira unconformity

Moira & Mount Oxley formations

SHRIMP II U-Pb age of $411 \pm 9 \text{ Ma}^1$ as the maximum depositional age of feldspathic quartzose sandstone from Moira Formation

Figure 4 Source: Lorraine Campbell, Phil Gilmore, Steven Trigg, Rosemary Hegarty "In the Footsteps of Major Mitchell update for explorers in the Bourke Region" -2013.

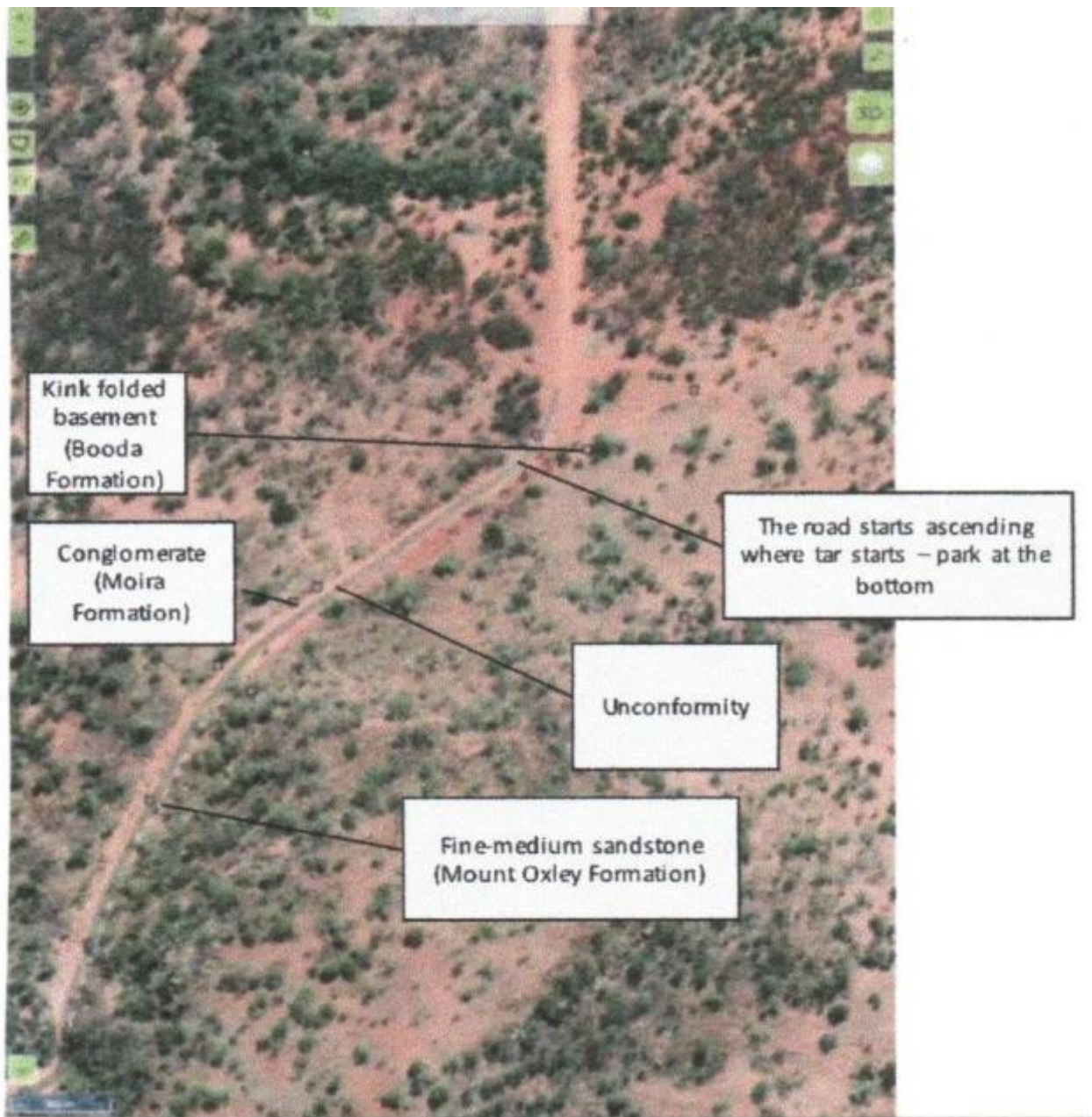


Figure 5 Mt Oxley formations

Day 3 –Tues 29/8/23 - Gundabooka NP (58kms)

8:30am Depart from Caravan Park for the drive south of Bourke. Bring morning tea and lunch if doing all of the walks - Yapa (Mulgowan) Aboriginal art 1.2km walk, Little Mountain Walk - 4.8km, Valley of Eagles walk (1km, easy walk to platform, 5.7km to summit).

Gundabooka National Park covers an area of 92 131 hectares. It stretches from the banks of the Darling River, across the plains and over the Gunderbooka Ranges. Mt Gundabooka rises 495 m among the rust-coloured cliffs, gorges and hills of the Gundabooka range. It is an outcrop of quartzite sandstone of the Mulga Downs group that

was deposited around 385 Ma in the Devonian period. Older underlying rocks of the Girilambone Group dating from the Ordovician period 436 Ma outcrop to the north at Little Mountain.

Tectonic movements in the earth's crust caused uplift and folding of the area in the Devonian and Cretaceous periods and a syncline was formed giving rise to the Gundabooka Range. The range is the remains of this syncline- a downward folded bend of layers of hardened sandstone. Mount Gundabooka and ranges is located at the junction of two large geological zones, the Girilambone Anticlinorial Zone and the Great Artesian Basin.



Figure 6 Source: NSW Government National Parks and Wildlife Service -Gundabooka N.P. Plan of Management page 1.

The mountains horse-shoe shape acts as a rain catching basin to funnel water into the creeks and rockholes. Sediments deposited mainly in the Quaternary Period (last 1.8 Ma) have subsequently blanketed the slopes and plains around the mountain range. These sediments consist generally of orange-red clay sands on green-grey clays over gypseous clays as well as arkosic gravels. The undulating lowlands occur over a wide area and are of low relief with a gentle grade towards the north. The regolith is composed of saprolite and aeolian deposits and drainage lines are shallow and undissected. The northern plains are flat with widely spaced sandy hummocks separated by plain surfaces and drainage is disorganized.

There are four main ephemeral creeks-Yanda, Gundabooka, Ben Lomond Gorge and Mulareenya Creeks that flow for a short time after major rain events. The Darling River borders the area in the north.

There are 21 different plant communities from River Red gums along the watercourses to woodlands on the plains of bumble box, western red box and mulga. Ironwood and Belah plant communities are found on the northern plains. In the hills are found mulga, white cypress pine and grey mallee.

137 bird species have been identified including 8 threatened species. There are 19 different reptiles and 14 mammals.

After World War 1 the area was subdivided into smaller stations for Soldier Settlement. It is marginal farming country and many of the stations did not remain viable. They were either abandoned or amalgamated into larger stations. Three of the smaller stations, Ben Lomond, Belah and Mulgowan make up 43 000 hectares of the park. The region is of great significance to the local Ngemba people and the range has a history of ceremonial gathering and rock art sites. "Captain Starlight" was captured on a rock ledge near a waterhole on Christmas day in 1868.

Walks:

Little Mountain walk- A 2-3 hours walk through mulga woodlands to nearby Little Mountain-lookout, medium grade, 4.2 km from Dry Tank Picnic Area.

Yapa (Mulgowan rock art site)- a 45minute to an 1hour 15minutes return walk from the carpark, 1.4 km to rock art sites along Mulareeya Creek. Painted beneath a massive rock overhang the artwork depicts animal motifs, dancers, hand stencils and hunting tools.

Valley of the Eagles Walk- A 2- 3 hour steep walk to the summit of Mt Gundabooka, 5.7 km-views over the Darling River floodplain or 1 km easy walk to the base of the range.



Figure 7 Map of Gundabooka NP

References:

Lorraine Campbell, Phil Gilmore, Steven Trigg, Rosemary Hegarty "In the Footsteps of Major Mitchell update for explorers in the Bourke Region" 18th June, 2013

Geological survey of NSW. Sent as an e-mail attachment from Phil Gilmore. Geological Sites of NSW- Mt Oxley.

Pamphlets from the Back o' Bourke Centre:-

- The Dowling track-a journey of discovery-Bourke to Quilpie.
- Mt Oxley-Rossmore Station Bourke
- Mt Oxley The history and the Mystery
- National parks of Bourke Dept. of Environment and Climate Change NSW
- Visitor's guide Back o' Bourke- National Parks of NSW
- Welcome to the National Parks of Bourke, NSW

Day 4 – Wed 30/8/23 - Bourke to Cunnamulla

Timeline

Please ensure you have a full tank of fuel as you cannot purchase fuel in-route.

Morning Pack up and drive to 257kms to Cunnamulla. The caravan park is at 65 Watson Street, Cunnamulla. You might like to stop at Enngonia and/or Barringun.

3:00pm Drive to the start of the Warrego River walk at the west side of the bridge across the river on Adventure Way on the left- hand side of the highway (1.4km from the caravan park). You can do a short walk along the river or the 2.5 km walk to the lookout

5:00pm Meeting in camp kitchen

Highlights

Enngonia - is 98 kilometres north on the Mitchell Highway. In 1859, Cornelius "Con" Bride, an Irish man established a property along the Warrego River and called his rough shack, 'Erin's Gunyah' (gunyah being an Aboriginal word for 'hut' so 'Irish Hut'. He is known for his leading role in the Hospital Creek Massacre of Aboriginal people which occurred in 1859.

Look for the metal artwork of a bushranger, on the southern approach to the town. Due to its isolation Enngonia became a centre for bushrangers and stock thieves. Enngonia has a public school, a post office, church, CWA rest room, and the Oasis public hotel.

Barringun – is located on the New South Wales-Queensland border 111 km north of Bourke and 146 km south of Cunnamulla. It has been suggested that Barringun, in the language of the Barranbinya Aborigines, means 'fish die in water' which is plausible given the harshness of the climate in the region. This border town was once a stopover for shearers, drovers, mailmen, labourers, adventurers and Cobb & Co coaches but it is now a sleepy village, losing the last pub, Tattersalls, to a fire in 2017. However, the roadhouse sells coffee, snacks and hearty meals. It is also a cheap caravan park.

Cunnamulla – means “long stretch of water” and is at the junction of the Mitchell Highway and Adventure Way. The area's first European explorer was Thomas Mitchell who passed through the region in 1846. A settlement arose due to a reliable waterhole where two major stock routes intersected. A town survey was conducted in 1868, the same year a courthouse was built and the railway was completed in 1899. The first interstate game of Rugby League (between New South Wales and Queensland) was played between Cunnamulla and Bourke. Cunnamulla had sewerage installed in 1939, the first in Queensland.

Warrego River Walk

The trail begins at what was once a police paddock, where police horses were kept and stock that had been impounded sometimes held. From here, there are two routes, with the first being a short walk to a viewing area over the river, where you can do some birdwatching. Interpretive signs provide information about wildlife and local flora. The longer path offers a better view of the landscape because it heads away from the river and soon takes you into a flat, open plain. The river is 1,380 km long. You may see flocks of geese, corellas and galahs, rainbow bee-eaters as well kangaroos.

Day 5 – Thurs. 31/8/23 - Cunnamulla

8:30am Meet at Caravan Park and drive to 4 Watson Street – Water Tower Art

8:40am Drive to Cunnamulla bushlands walk (1.5km easy loop walk) - 1 km from town.

9:40am Return to town to visit Artesian Time Tunnel at Fella Centre, Bronze statue, Jane Street.

10:30am Morning tea at Cunnamulla bakery or have your own in the park.

11:15am Walk to view Memorial Fountain and coach stop mural. Return to cars.

11:40am Drive to Stockyard Street to view Robbers Tree then to Alan Tannock weir, 4kms Weir Road

12:20pm Return to the Caravan Park for lunch

2:00pm Meet at camp kitchen at Caravan Park for walk around the sand hills

4:10pm Drive to the Railway Station - covered platform (only 3 in Qld) - Sound and light show \$22

Highlights

Water Tower Art – In May of 2019, Guido van Helten began painting the tower which features the youth of Charleville. Painted in a 3D style around this very tall and narrow 30 metre high tower are four children intertwined through sport. The mural has been made possible with funding from RADF. The Regional Arts Development Fund is a partnership between the Queensland Government and Murweh Shire Council to support local arts and culture in regional Queensland.

Cunnamulla Bushlands - walking track through Mulga Lands, sand hills, Gidgee Stands, Mitchell Grass Plains, Brigalow Country and Wetlands.



Figure 8 Map of Cunnamulla wetlands taken from Cunnamulla brochure

KEY

- 1. Mulga Area
- 2. Gidgee Area
- 3. Brigalow Area
- 4. Dry Land Area
- 5. Sandhill Area
- 6. Mitchell Grass Plains
- 7. Jumpup Area
- 8. Ironbark, Wilga and Box Flats
- 9. Wattle
- 10. Bluebrush

Cunnamulla Fella Centre, Art Gallery and Museum – site of the Visitor Centre, Artesian Time Tunnel, art gallery, museum and Cultural Theatre. The museum has an extensive collection of local artefacts and portrays how the locals lived last century.

The Artesian Time Tunnel "transports visitors back 100 million years in time to the beginning of the Artesian Basin when dinosaurs roamed the planet. The beginnings of the Artesian Basin preceded opal formation and the Age of Mammals." The first Queensland flow from the Great Artesian Basin was near Cunnamulla in 1887. Cunnamulla stands on the world's largest underground river.

The Cunnamulla Fella Sculpture

The song, "The Cunnamulla Fella", was written by Stan Coster and recorded by Slim Dusty. In 2005 a statue which was twice life size was created by sculptor Archie St Clair. The statue sits outside the Paroo Shire Hall in Jane Street and depicts a Cunnamulla Fella, a typical Aussie bushman with a wide-brimmed hat and a mug of tea.

Cunnamulla War Memorial Fountain

Located in John Street, at a five-way intersection, this impressive memorial, dedicated to those who died during World War I, was built in Brisbane in 1924.

Cunnamulla Coach Stop Mural

Located on a wall at the Five Ways corner (it can be seen from the Memorial Fountain) the mural is a celebration of the importance of Cobb & Co to the town.

Robbers Tree

At the southern end of Stockyard Street is a solitary tree on a sand dune where the bank robber, Joseph Wells hid after making an armed withdrawal from the local bank. It is listed on the *Queensland Heritage Register* which records the event as: "In 1880 an incident occurred that provided the township of Cunnamulla with considerable publicity. On 16 January 1880 Joseph Wells, a station hand, robbed the Queensland National Bank at Cunnamulla at gunpoint. The alarm was raised and as Wells was about to leave the bank, storekeeper William Murphy from next door attempted to restrain him, and in the scuffle, was shot accidentally in the shoulder. This allowed Wells to escape from the bank, only to find that a crowd of onlookers was gathering outside.

"As he tried to leave the scene on horseback, the horse's bridle broke and, in desperation, the robber ran toward the outskirts of the town. The police were alerted and organised an intensive search for the robber, helped by a sheep dog which had followed Wells' scent and sat barking under a tree. Wells had taken refuge in the branches of the tree and was arrested and stood trial in Toowoomba, charged with armed robbery with wounding. He was found guilty and received the maximum penalty, death. Wells was executed on 22 March 1880. However, the saga had its legacy, with Wells becoming the last man to be executed for armed robbery with wounding in Queensland. .

Sand hills Walking Tracks- the sand hills are an excellent opportunity to explore the fauna and flora of the desert around the town. There is also a lookout and it is possible to go sandboarding.

Railway Station

Located in Railway Street, the Cunnamulla Railway Station operated between 1898 (when the railway arrived in the town) until it was closed to passenger trains in 1994. The sound and light show involves relaxing in the modern theatre as our holographic host, the Station Master (Steven Tandy), whisks you back in time on a memorable journey to the "end of the line". Experience the Outback's true pioneering spirit and discover how Australia was built on the sheep's back and narrow-gauge train tracks! Laugh out loud as locals share in their own words what life was like growing up in Cunnamulla, where wool was king, and rail was their lifeline to the world!

Day 6 – Fri 1/9/23 - Cunnamulla to Eulo

Please ensure you have enough groceries for the next 9 days as this is the last town with a supermarket before we arrive at Quilpie.

Timeline

Morning Pack up and drive to 68kms to Eulo. Eulo Queen Hotel is in Leo Street. You may want to spend the morning in Cunnamulla where there are more facilities or go bird watching and wild flower viewing at Bowra wildlife sanctuary, 15 km west of Cunnamulla.

2:00pm Meet at the hotel for a walk around town. Those that want to walk further can go down to the Paroo River.

5:00pm Meeting in camp kitchen at the hotel

Highlights

Eulo – has a population of less than 50 people. Historically it was a place where opal miners from the nearby mines gathered. It was also known for the famous 'Paroo Track' where the world lizard racing championships were held each August up to 2000 at the Lizard lounge. Beekeepers bring their bees in winter to feed on the flowers of the local native Yapundah tree. Warrego honey is dark and delicious.

Eulo Queen Hotel

The Eulo Queen Hotel was named after Isabel Gray, who became known as the Opal Queen of Eulo. She had arrived in Australia in 1868, worked as a governess on a station near Bourke. In 1871 she married Richard Robinson. The couple ran the store near Cunnamulla where the Cobb & Co. coaches stopped. With the profits from this venture they bought the hotel at Eulo. It was here that the opal miners came to drink and it was through this connection that Isabel accumulated a collection of opals which were reputedly worth over £4000 and she became known as the 'Eulo Queen'. Her complaisant husband and a stock of liquor in her bedroom helped her to entertain groups of gentlemen with conversation, gambling and more intimate entertainment.

'Kenny' - The Diprotodon Sculpture - a handsome bronze statue representing the many megafauna fossils that have been discovered near Eulo including a large Diprotodon, nicknamed Kenny. Kenny's fossilised bones were used by palaeontologists and sculptors to help reconstruct this full-sized, fleshed out bronze statue.

Lizard Lounge – a picnic area and site of the lizard races. The curved galvanised walls of represent a frilled necked lizard's body and the canvas sail overhead depict the frill.

Eulo Police Cell – The first police officer was Constable Thomas Pettit in 1876.

Eulo General Store – has displays of megafauna' fossils amongst its basic groceries and local honey. At the side of the store is Euro's air-raid shelter. It is an Anderson design made of heavy-gauge corrugated sheet curved over a large trench. It could hold 50 people and is on the direct flight path between Darwin and Melbourne.

Eulo Queen Opal Centre – has rough opal, cut opal and unique jewellery in the old post office building.

Day 7 – Sat 2/9/23 – Eulo Mud Springs and Yowah

Distance: Eulo Mud Springs is 9km west of Eulo on Adventure Way. Eulo Mud Springs to Yowah is 82 km (about 1 hour). Travel 9.1 km along Adventure Way from the mud springs and turn right onto the Eulo to Toompine Rd. Travel 47.2 km and continue straight for 5.3 km along Jandel Rd. At the T intersection. Jandel Rd becomes Yowah Opal Fields Rd. Travel 19.7 km to Yowah.



Figure 9 Map of Eulo showing Adventure Way. Source: <https://2ua.org/aus/eulo/map>

Timeline.

9.00 am depart Eulo. Travel to Eulo Mud Springs. Walk and explore area.

10.00 am depart Eulo Mud Springs travel to Yowah.

11 am to 2 pm Tailgate markets in Yowah. Have lunch during this time. Visit opal outlets and explore the town.

2.10 pm drive 4 km to The Bluff (150 m) 180° views.

2.45 pm return to Yowah. Explore Fossicking area or enjoy a bore bath in the Artesian waters open air baths. Free time to explore the town bore, have a coffee at the café and then return to Eulo at your own discretion.



Figure 10 Map of Yowah Source: <https://2ua.org/aus/yowah/map>

Reference:

Natural Science Loop Field Notes

Eulo Mud Springs pages 7 & 8

Yowah Opal Fields pages 8 & 9.

YOWAH FOSSICKING AREA

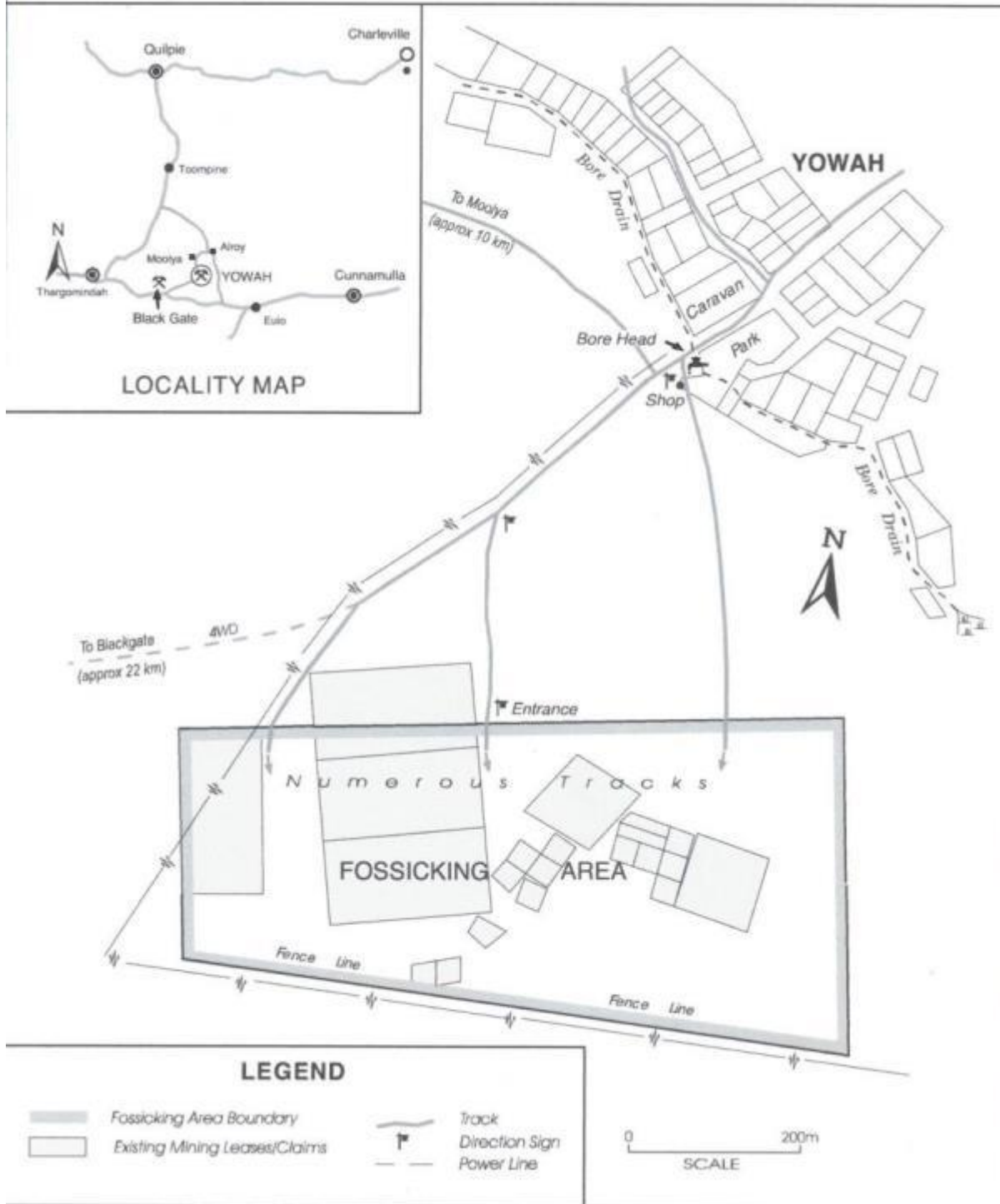


Figure 11 Map of Yowah Fossicking area.

Day 8 – Sun 3/9/23 - Currawinya National Park and Hungerford

8.30 am- Depart. Bring everything you need in the way of food, toilet paper and water. Ensure you have enough fuel to cover around 300 km.

Distance: Travel 4 km west of Eulo towards Thargomindah. Turn onto the Hungerford Road. This is a gravel road. It is about 60 km to the park entry and a further 40 km to the park office (about 1.5 hours). The Granites is 15 km from the park office on Boorara Road. The hotel at Hungerford is 20 km from the park office. It is 84 km return to the lakes on sandy tracks from the park office (allow 3-4 hours return). All roads within the park are gravel or sandy and 4 WD is recommended. Tyre pressure must be lowered for a comfortable ride.

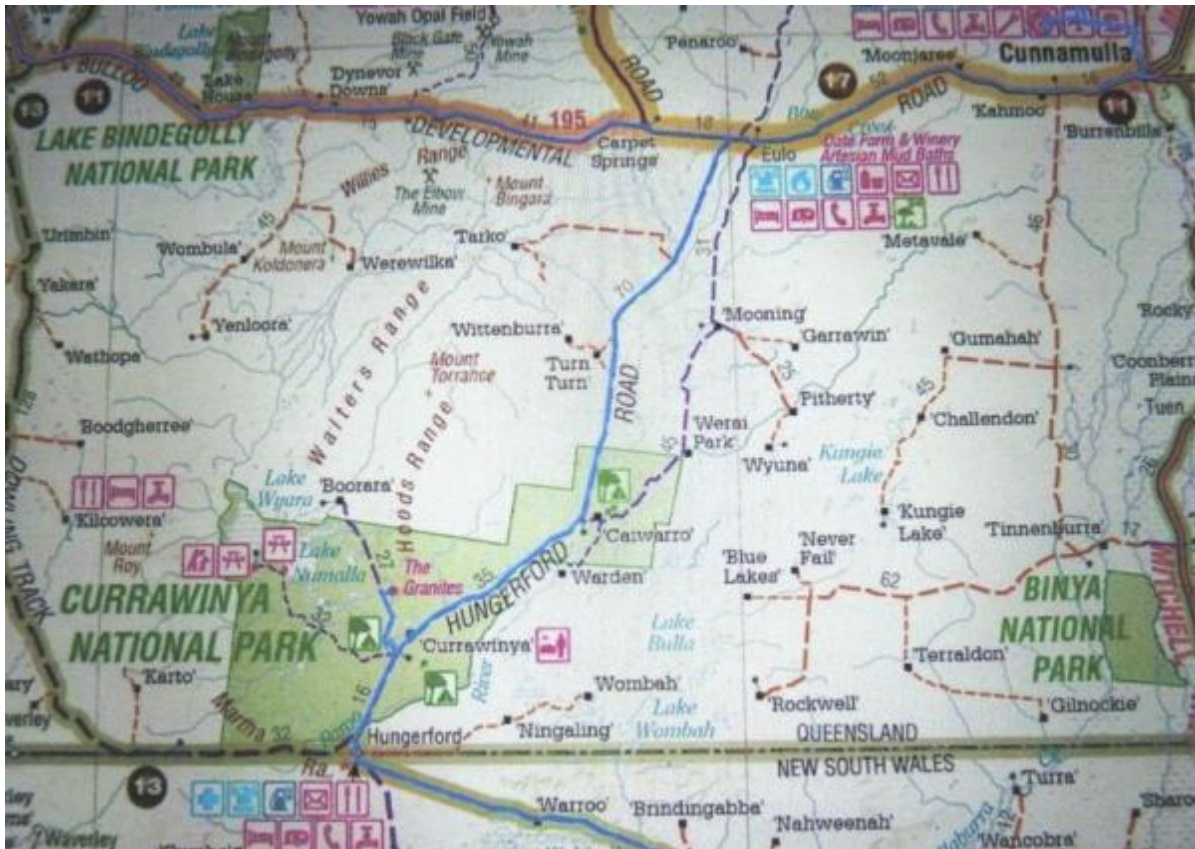


Figure 12 Route of today's journey from Eulo to Currawinya National Park.

Facilities: We must be totally self-sufficient. This is a remote area with no mobile reception. There are two toilets within the park. One is at the Old Caiwarro Homestead Ruins and is a long drop and one at the Currawinya Woolshed which is flushing. Bring your own toilet paper. We will travel to Hungerford to have our picnic lunch but some of you may decide to have lunch at the Royal Mail Hotel at Hungerford (limited menu), dated 1873 a former Cobb and Co stop on the border with NSW. Afternoon drives will be optional depending on time and weather.

Overview of Currawinya National Park - This park is located in the Mulga Lands bioregion. The Mulga Lands dominates 254,000 km² of semi-arid outback, extending from south-west Queensland into northern New South Wales. It's a sparsely populated region. Its vast expanses are mostly used for grazing sheep and cattle.



Figure 13 Aerial view of the mound springs in the park.

Mulga Country overlies the Great Artesian Basin. It contains an

estimated 64,900 km³ of water within a layer of porous sandstone that was formed about 250 million years ago. Pressure within the aquifer forces water through faults in the rock to vent on the surface in springs and soaks at temperatures of 30-100°C. There are more than 70 artesian springs in the national park, providing important refuges for endemic plants and animals in this semi-arid environment.

Remnants of mound springs occur in the Hoods Range area. These springs are part of the Eulo Artesian Springs Super group. They appear as circular depressions often with a raised rim.

Currawinya National Park covers an area of 344 331 ha of former pastoral properties dating from the 1860's. The first two properties were purchased by the Queensland government in 1991. They were the Currawinya and Caiwarro sections. The Kilcowera section was added in 1992. In 2015 three more adjacent properties (Boorara, Werewilka and Oolamon sections) were purchased and this doubled the size of the park. In 2018 the park was opened to the public.

The Currawinya National Park is one of Queensland's largest conservation reserves and an internationally significant Ramsar wetland. The Currawinya Lakes was listed under the Ramsar Convention on 11th March, 1996. Up to 100 000 waterbirds inhabit the wetlands. It is on the Australia- East Asia flyway for migrating birds.

One of the endangered animals in the national park is the bilby *Macrotis lagotis*, which once occurred over much of south-west Queensland before predation by feral animals and competition with livestock drastically reduced its numbers and distribution. In 2001, a rehabilitation program began in the park with a colony of captive-bred bilbies and rehabilitated bilbies inside a 25 km² enclosure surrounded by an electrified predator-proof fence. The colony thrived for ten years until floods in 2011-12 damaged the fence, allowing feral cats and foxes into the exclusion zone to once again decimate the marsupials. The fence has been repaired enabling conservationists to re-establish the colony in significant numbers.

The traditional owners of the land are the Budjiti - the Pademelon people who have inhabited this landscape for over 14 000 years. The Paroo River, lakes and floodplains were an integral part of the daily lives of the Budjiti people as were the mound springs. The Federal Government recognized their Native Title claim to the park in June, 2015. Currawinya still has great cultural and spiritual significance for the Budjiti, who work closely with QPWS in protecting their heritage and managing the national park. Evidence of the Budjiti's occupation of this land is found at many sites across the park in stone arrangements, native wells, scarred trees, artefact scatters, quarries, hearths, middens and burial grounds.

The park straddles the iconic Paroo River. The Paroo River, its channels and floodplains are fringed with yapunyah (*Eucalyptus ochrophloia*), coolabah (*E. coolabah*) and river red gum (*E. camalldulensis*).

The river rises in the Warrego Range, west of Charleville and flows generally south for 600 of its 1200km through the park in a series of waterholes, lakes and wetlands that connect after plentiful rains. Although considered a tributary of the Darling, the Paroo usually ends on a floodplain (the Paroo Overflow) east of White Cliffs, in NSW. Very rarely, and only during large floods, does the river join the Darling just upstream of Wilcannia. It has a catchment of 70 000 km². It is the last free-flowing river in the Murray-Darling basin.

The park is dominated by the mulga (*Acacia aneura*) which has dark fissured bark and silver-grey foliage that varies widely in habit, height and shape. It can form dense forests up to 15m high but typically occurs as a heath-like shrub of about 2m, interspersed among eucalypts and native grasses. An understorey of turkeybush (*Eremophila spp.*) has replaced the grasses in many locations. In its ideal habitat, mulga can grow vigorously and is very long-lived, up to 250 years. The species is well-adapted to the region's hot, dry environment, where summer temperatures are extreme and annual rainfall is meagre and unpredictable.

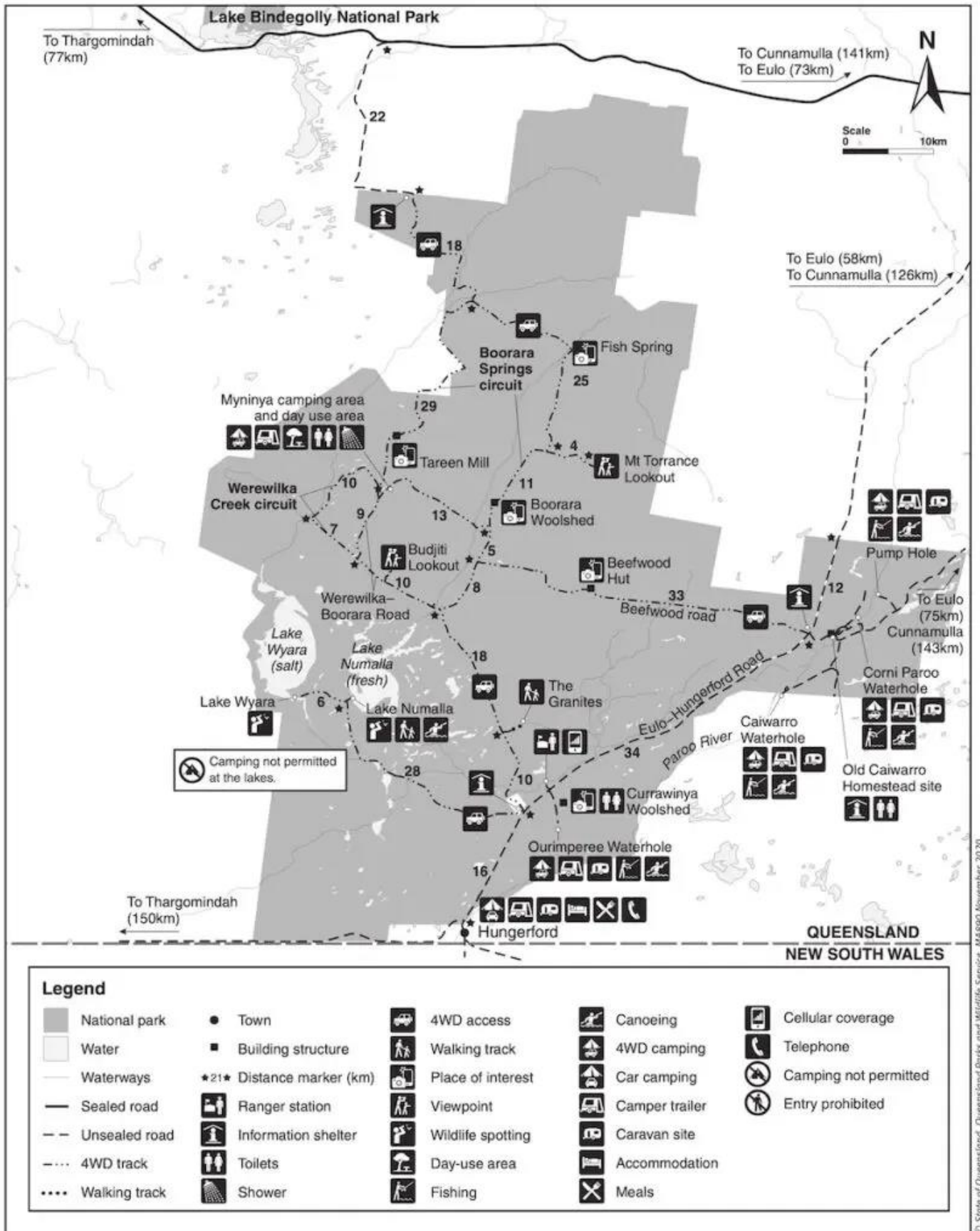


Figure 14 Map of Currawinya National Park (source: Queensland Government). <https://topwiretraveller.com/currawinya-national-park/>

Mulga was a vital resource for Budjiti people who used its hardwood to make digging sticks, woomeras, shields and bowls. The acacia's seeds were ground to meal for seedcakes, eaten with a honey-like gum from a lerp scale on

mulga branches. European pastoralists used its durable timber as a building material and for fence posts, and the mulga leaves were a valuable fodder for livestock in times of drought.

Currawinya National Park consists of a mosaic of flat sandplains, undulating low dunefields, and ranges of long, low hills, and occasional sandstone mesas flanked by deeply weathered scarps. The rugged hills which rise about 50 m surround a central wetland system of semipermanent and ephemeral lakes, claypans, salt pans and alluvial grey plains associated with the Paroo River and its tributaries.

These sand plains and dunefields are mostly composed of aeolian sands derived from Tertiary and Cretaceous sandstones which overlie Quaternary alluvial deposits. Scrublands of turpentine bush (*Eremophila sturtii*) and hophbush (*Dodonaea viscosa*) dominate the low eroded dunefields.

The southern extension of the Hoods Range lies on the north of the park. This range consists of deeply weathered sediments of the Cretaceous Winton Formation. In some places this is overlain by remnants of quartz sandstones of the Tertiary Glendower Formation. Fresh sediments of the Winton Formation with a thin silcrete cover are associated with these. (Dawson and Boyland 1974).

On Hoods Range, Bastard mulga (*Acacia stowardii*) and Lancewood (*Acacia petraea*) grow.

The Currawinya Lakes form one of the richest and most diverse wetland systems of inland Australia. Its complex landscape includes five freshwater and two saline lakes, ranging in size from 3813 ha (Lake Wyara) to pans of less than one hectare, as well as riverine waterholes and artesian springs. Some are permanent but most are intermittent, filling only after heavy seasonal rains or when the Paroo floods.

The two major lakes, Wyara and Numalla, are the centrepiece of this complex system. Although separated by only 3 km of Quaternary sand deposits, they have different catchments and are chemically distinct, as reflected in the wildlife and plant communities they support. Black box (*E. largiflorens*) and boobiala (*Myoporum acuminatum*) border Lake Numalla and many smaller temporary lakes. Lake Wyara is fringed by low scrubland of salt tolerant samphire (*Halosarcia sp.*).

Lake Wyara (93,400 ha) is a closed lake that fills about every seven years but regularly dries to a vast white saltpan. The lake receives water from Werewilka Creek whose tributaries drain from the Willies Range and Walters Range. The lake's clear, saline water supports dense beds of flowering lilies, pondweed and widgeon grass that attract plant-eating waterbirds, such as black swans, coots, ducks and grebes.

An extensive dissected tableland, with steep escarpments, rubble slopes and occasional isolated mesas occurs to the west of Lake Wyara with associated low hills to the west and south of the lake. The area consists of Tertiary Glendower sediments, frequently silicified overlying fresh or chemically altered Cretaceous Winton Formation sediments which are often exposed. The undulating plains and low hills associated with the tablelands consist of remnants of the Tertiary Glendower Formation sediments, interspersed with superficial Quaternary silcrete gravel deposits (Dawson and Boyland) 1974.

Large populations of invertebrates provide abundant food for wading birds like sandpipers, avocets and stilts. Islands within the lake are significant breeding sites for Australian pelicans, black swans, Caspian terns, silver gulls and cormorants. In contrast, Lake Numalla (2904ha) is fed freshwater by Boorara Creek which drains the eastern slopes of the Willies Range and the western slopes of the Hoods Range and Carwarra Creek which drains the southern and eastern slopes of the Hoods Range. It also gains from overflow from the Paroo when it floods. It only dries about once every 20 years. The lake's turbid waters are populated by shrimp and native fish such as yellowbelly, bony bream and spangled perch, which attract large waders and fish-eating waterbirds including broilgas, herons, pelicans, egrets, cormorants and darters. Extensive reedbeds along the shoreline provide protected

breeding sites for ducks, grebes and spoonbills. The dryland species of birds seen are the Major Mitchell's cockatoo, the chestnut-crowned babbler, orange chat, mulga parrot, white-fronted honeyeater and splendid fairy wren.

A mosaic of low dunefields, lakes claypans and salt pans occupies a central strip of the area between the Hoods Range and the western tablelands while extensive sand plains occupy much of the remaining area to the south and the east. Numerous lakes and swamps are scattered throughout the alluvial areas of low relief.

A small area of granite, of Middle Devonian age lies at the foot of the range. It dates from 395-380 Ma. It is one of only four outcrops of granite exposed at the surface in the Eulo Ridge within the Thomson Orogen. The Granite Springs granite is found 52 km WSW of Eulo. Within the park are the Currawinya granite and the Hungerford granite. (Source <https://www.researchgate.net>).

The remaining lands of the national park consist of alluvial plains mostly associated with the Paroo River and its local tributaries. These consist of Quaternary alluvial deposits mostly of clay. Channels are steep sided and braided. There are minor areas of poorly drained swamps. The gradient of the Paroo floodplain drops about 15 m from north of Old Caiwarra Homestead to Hungerford a distance of about 60 km.

Currawinya's diverse habitats support a rich array of native plant and animal species. At least 747 plants, 256 birds, 56 mammals, 94 reptiles, 23 amphibians, eight fish and a tortoise have been recorded in the park. Of these, some 23 species are classified as threatened, vulnerable or endangered. For all of them, the wetlands provide a vital refuge in times of drought and a critical waypoint for shorebirds during their global migrations.

Red and eastern grey kangaroos are most common. Darker western grey kangaroos, wallaroos and swamp wallabies also inhabit the park. Emus are readily seen.

Poplar box (*Eucalyptus populnea*), beefwood (*Grevillea striata*), emu apple (*Owenia acidulate*), leopardwood (*Flindersia maculosa*) and whitewood (*Atalaya hemiglauca*) are the common trees.

Stop 1 Caiwarro Homestead ruins. Turn left towards Corni Paroo Campground off the Eulo- Hungerford Road. Just after the turn off to the campground is the homestead near the Paroo River causeway. Distance is 3 km. The Currawinya homestead complex includes a meat house, living quarters and woolshed pens. Though little remains of the old Caiwarro Homestead, the site still has much to interest. The layout of the homestead complex reflects the social stratification of station life, and the ruins give an insight into construction techniques of the time. Old pastoral



Figure 15 Old Caiwarro homestead ruins.

machinery stands around the site and a short walk leads to the remnants of a pumping station on the bank of the Paroo River that was used to irrigate a fodder-growing.

The original buildings were of pise construction: Very thick walls made of a heavily-compacted composition of sand, clay and gravel. Despite a levy bank around the old Caiwarro Homestead, floods took a heavy toll and the buildings are but a remnant of their former glory. The historic buildings/ruins give a great insight into what life was like way out west at the turn of the century. Steel-framed skeletons of later year buildings complete with a wood-fired 44-gallon drum hot water system still stand stubbornly against the elements.

At one stage, when more than 100 workers were on the station, three cricket teams were formed and matches were played every Sunday. With a tennis court, cricket pitch, school and shop near the grand homestead of Caiwarro it must have been a tight knit community. Caiwarro station was eventually shut down in 1971 after many severe floods and droughts, even though as many as 25 bores were sunk looking for good water.

We will stop here for 30 minutes. Re-join the Eulo Hungerford Road and travel 34 km to turn off to Currawinya Woolshed (about 4 km).

Stop 2. Morning tea and viewing of Currawinya Woolshed (45 minutes)

Located 4 km SE of the ranger base. The massive shearing shed is remarkably well preserved and is open for inspection by visitors. Walk around the stalls, monkey press, scales, sorting rack and slips. In the surrounding area you can wander around other outer buildings, meat house, accommodation blocks and the wool-shed pens.

Caiwarro dates back to the mid 1880's when it covered nearly 1 million acres running sheep and cattle through the billabong system and sand dune country. In 1906 there were 20 shearers working at Caiwarro with about 60 000 sheep.

Stop 3 Photo stop at Currawinya National Park entry and information panels. (15 minutes)

Stop 4 The Granites. Travel 15km from the ranger base along Boorara Road. View mound springs on the way. Stop for

photos. Walk 1.5 km (**allow 40 minutes**) to the small outcrop of granite rocks which are a unique feature of the park. The Eulo Ridge is a high basement in southwest Queensland and northwest New South Wales where Thomson Orogen rocks reach the surface at scattered localities. Refer to Figure 58 page 8 of Safari Field Notes. Note that there are very few places in the Eromanga Basin where the Devonian granitic basement rocks outcrop.



Figure 16 Currawinya Woolshed



Figure 17 Currawinya NP sandstone sculptures.

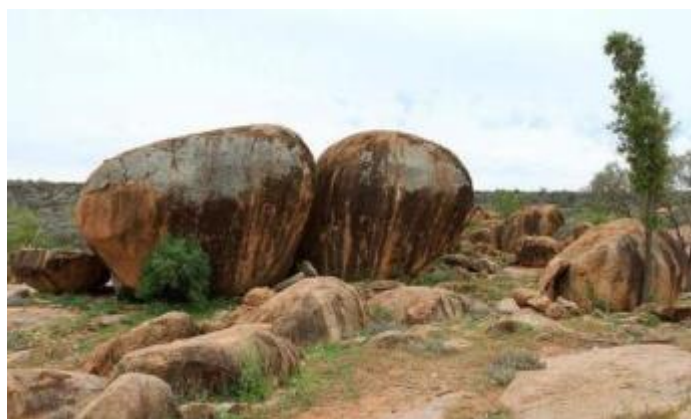


Figure 18 The Granites



Figure 19 The Granites aerial view.

Sample core drilling has determined the granite as a biotite monzogranite. The surrounding landscape has weathered away due to the effects of wind and rain over millions of years leaving these granite boulders exposed. These boulders are at the southern edge of the Hoods Range. The Granites comprise two distinct rock outcrops and are culturally significant to the Budjiti people. One group is a men's site and the other a women's site. The skeletal remains of goats and kangaroos can be found in the crevasses between the boulders where they have fallen. Ground water is forced up through a myriad of cracks in the granite to form the mound springs.

The Budjiti people request that we respect this site by not climbing onto the rocks.

Stop 5 Royal Mail Hotel, Hungerford.

Return to the Eulo-Hungerford Road and travel south to Hungerford. This will be our lunch stop. Explore the historic displays within the hotel. Check out the border gate to NSW.

After lunch given the distances involved, participants may wish to return to Eulo directly or do one of the following suggested drives. All distances are given from the ranger's office

1. Drive out to the lakes to bird watch-84 km return



Figure 20 Royal Mail Hotel, Hungerford

2. Drive out to Budjiti Lookout -about 38 km one way.

3. After the lookout return to the Eulo-Hungerford Road via Beefwood Road about 50 km.

4. Drive to Boorara Woolshed and Mt Torrance Lookout via Boorara Road (56 km one way) and return via Beefwood Road (53 km).

Whatever you choose to do make sure two vehicles are travelling together for safety. We will seek the advice of the ranger whilst in the park.

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Day 9 – Mon 4/9/23 - Eulo to Thargomindah

Timeline

Morning Pack up and drive to 131kms to Thargomindah. Caravan Park is 88 Dowling Street. Stop on the way to view Lake Bindegolly. You park at the picnic area on the right side of the highway, about 86kms from Eulo.

2:55pm Meet near the entrance of the caravan park for a convoy guided drive around town. Make sure you have a working CB radio. \$20

Highlights

Lake Bindegolly –You can walk around the bridge area or do the longer 4 hour circuit walk around a combination of salt and freshwater wetlands. These wetlands provide a welcome habitat for over 190 bird species traveling through this arid landscape and many other flora and fauna. Bring a long lens or binoculars for the best viewing.

Leahy House - built in 1885 of locally made mud brick, was owned by John and Patrick Leahy. It was sold to Sir Sydney Kidman in 1912. Kidman bought it, gave it to Jack Watts who worked for him as a manager, and the purchase entitled Kidman to become a member of the Bulloo Divisional Board. The house was lived in until 1995 when the Bulloo Shire Council purchased it, restored it and gave it, in trust, to the Thargomindah Historical Society which opened it as a museum in 2001. **Post Office** - opened in 1870 and was originally built out of mud bricks. A storm in 1877 destroyed it and it was replaced. It currently operates as a post office with a range of gifts and other services.

Old Thargomindah Hospital - opened in 1888 and built from mud bricks, is a reminder of the scarcity of materials on the edge of the desert. The bricks were made from the black soil taken from the banks of the Bulloo River. The bricks were left to dry and, amusingly, they were walked over by local dogs and cats and even emus. It is now a museum with displays showing the harshness of the outback in the old days.

The Old Jail - was constructed in 1930 of cypress pine with a galvanised iron roof and lined with hardwood.

Artesian Bore - was drilled in 1891 and by 1893, having drilled to a depth of 795 m, the water came to the surface. Once the bore started delivering hot clean water, the town attempted a unique experiment. The pressure from the bore water was used to drive a generator and this, in turn, was used to supply the town's electricity. This has been Australia's first hydro-electricity scheme. The system operated until 1951. Today the bore still provides the town's water supply. The water reaches the surface at 84°C. The bore produces around 1,300 m³ of water a day.

Day 10 – Tues 5/9/23 - Free day

Some are driving 142 km west to stay at the Noccundra Hotel or to free camping area by the river. If you need AC power for your van then you need to stay in Thargomindah.

Noccundra Hotel has been listed by the National Trust. It is one of the oldest buildings standing in south west Queensland and it has interesting stylistic similarities to buildings in South Australia. It is a single storey stone hotel with an iron clad roof and was built in 1882 although the first license was not granted until 1886. It was created to meet the needs of the local stockmen and to encourage them to stay in the area. Located to the west of the hotel are the stone ruins of the Noccundra Store which was established in 1891. Supplies were brought to the town by camel train.

Day 11 – Wed 6/9/23 - Noccundra/Thargomindah to Eromanga

Morning Drive from Noccundra (166 km, 2 hours) or from Thargomindah (280km, 3 hours) to Eromanga. Set up camp. Explore town and have lunch before the afternoon tour of the Natural History Museum.

1:50pm Meet at Eromanga Natural History Museum for 2pm tour. You either have the 2 hour tour with 1 hour in fossil lab - \$85 or the 1 hour tour - \$32. To get there drive 3 km south of town, first along Deacon St and then turn left at Mount Margaret Rd and finally turn left into 1 Dinosaur Drive and park at the Natural History Museum.



Figure 21 <http://2ua.org/aus/qld/eromanga/map>

The Natural History Museum is the home of Australia's largest titanosaur, called "Cooper". It is one of many significant fossil discoveries from Queensland's Channel Country.

Not only does the Museum have dinosaurs which are 2-5 million years younger than the Winton dinosaurs but some of the world's largest megafauna (10 species found) and a variety of micro fauna which have been discovered and excavated near Eulo and thought to be 50 000 -100 000 years old.

The megafauna evolved when the dinosaurs became extinct. The most common megafauna is the Diprotodon meaning "two forward teeth", a giant marsupial about 3 m in length and weighing 2-3000 kg. It lived about 1.6 Ma and became extinct 40 000- 20 000 years ago. Its modern- day relatives are the koalas, wombats, possums and kangaroos.

The first Diprotodon excavated at Eulo is nicknamed "Kenny" after the landowner who originally found the site. A life-size bronze sculpture of it is located in Eulo.

Other megafauna found at Eulo sites are Megalania (a giant terrestrial lizard), Phascolonus (marsupial in the wombat family), Procoptodon goliath (a giant short faced kangaroo), Pallimnarchus (a crocodile like animal), Protemnodon (like a wallaby), Quinkana (a land- based crocodile) and Tropsodon (an extinct species of kangaroo).

Many examples of microfauna are also being uncovered on the same sites including fish, chelid turtle, myrid rodents, echidna and eastern bearded dragon. Plant fossils have also been uncovered that relate to the climate at the time.

The Natural History Museum sits on a low ridgeline with mulga to the west, a line of bloodwood trees at the base of the ridgeline and an open plain to the east. An open floodplain and the town of Eromanga is to the north. It is located in Boonthamurra country. It was designed in 2018 by Architectus



Figure 22 Architectus-Architecture and Design Photo Brett Boardman

and Stages 1 and 2 were completed in March, 2021. The building contains a reception, office, shop, café, theatre, gallery and courtyard. Three laboratories where fossils are prepared and storage facilities have recently been constructed.

Dinosaur Discovery in Eromanga - The story begins with the discovery of a special rock reminiscent of a fossil found by a 14-year-old, Sandy MacKenzie while he was mustering cattle in 2004. His parents are Stuart and Robyn MacKenzie who own and work a property west of Eromanga on Cooper Creek. The rock was later identified by the Queensland Museum as a dinosaur bone.

Between 2006 to 2009 Queensland Museum and Eromanga Natural History Museum excavated the site revealing the skeletal remains of the largest dinosaur found in Australia at the time. It has the nickname of 'Cooper' named after Cooper Creek and Cooper Basin where it was found. The dinosaur bones were found in the Winton Formation, within the Cooper-Eromanga Basin.

Cooper was described in 2021 as a new genus and species of Titanosauria, *Australotitan cooperensis* meaning 'Southern giant'. This dinosaur lived in the Cretaceous period 95-98 Ma when Australia would have been attached to Antarctica. 'Cooper' from toes to hip is 5-6.5 m tall (the size of a two-storey building), has a length of 25-30 m (size of a basketball court) and weighed 74 tonnes (the weight of 9 African elephants). It was a plant eater. Cooper is in the top ten of the largest dinosaurs in the world. This type of dinosaur has mainly been found in South America previously.



Figure 23 "Cooper" titanosaurs in comparison to Eromanga town buildings. Source: www.aquariustraveller.com



Figure 24 The site of the excavation of 'Cooper'. Source: Brisbane Times Photo by Gary Granitch.

Other Things to see in Eromanga: All are within walking distance in town.

1. iOR Oil refinery is an oil microrefinery which specializes in producing mining equipment fuel. It was first established in the town in 1985. Refer to Safari Field Notes page 10-11.
2. Eromanga town bore. The bore was sunk to 1,304 m and completed in March, 1909. It produced 1 050 000 litres daily at a temperature of 92° C. Up until the sinking of the bore by contractor Woodley the town suffered chronic water shortages.
3. Huge Concretion outside the Caravan Park. This concretion was excavated on Plevna Downs in 1980 by David Bollard. It was found in the Winton Formation 98 Ma. It was transported to Eromanga in 2002 by Bill Pegler. There are bowling ball sized concretions nearby.
4. Old Royal Mail Hotel built in 1885 a former Cobb and Co Staging Post and the only surviving hotel of four originally in the town. Meet some of the local opal miners. Lookout for “Giggles”.
5. Opalopolis Park -Opal Mining Memorial – opal studded memorial to opal miners, past, present and future. Opalopolis was the original name given to the town,
6. Knot-A-Saurus Park Sculpture. Made out of 100 metre lengths of twisted aluminium is a sauropod and two babies. This sculpture was commissioned for the 2014 Brisbane G20 summit to showcase Queensland’s rich fossil heritage and was donated to the town. The sculptor is Cameron Griffen Searle.
7. Living History Museum-(Key obtained from the hotel) Watch a 15 minute video on the town characters and how the dinosaur project began. Steve Fossett landed his balloon “The Spirit of Freedom” on Durham Downs Station west of Eromanga on 4th July, 2002. His journey and remnants of the balloon are also explained here. Information panels tell of opal mining, the Artesian Basin, of the oil and gas fields and pastoralism in the region.

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Day 12 – Thurs. 7/9/23 - Eromanga to Windorah

Timeline

Morning - Drive to Windorah (215kms - 2.5 hours). Set up camp.

3:00pm - Meet at Whitula Gate Museum, 7 Maryborough Street, Windorah.

3:30pm - Drive via the art garden to the Solar Power Plant and then take the 12km nature drive to the Cooper Creek crossing followed by a 10km drive west to the Red Sand Hills - the reddest you will ever see so bring your camera and drinks if you want to stay for the sunset

Highlights

Windorah is the Aboriginal word meaning "Big Fish"

Whitula Gate Museum and Information Centre is based on an original slab hut built by the Rabbit Board in 1906 as a boundary riders' hut. The hut was moved to its present location in 1996. The museum has been designed to re-create a 1800s homestead. The museum has household and station equipment as well as aboriginal artefacts on display. You can also pick up any brochures you want on the area.

Solar power plant – the viewing bay explains the workings of the plant that supplies Windorah with most of its energy requirements.

Nature Drive - winds its way through the different landscapes between Windorah and Coopers Creek. 45 plants have been identified and signposted along the drive. The Coopers Creek floodplain has a number of distinctly different plant communities including coolabah woodlands, alluvial herb land, lignum shrub land, gidgee open woodland and spinifex grassland.

Windorah Red sand hills - you may like to come prepared with your favourite sunset drinks and nibbles so you can really soak up the serenity of this perfect sunset location.

The Old Courthouse - one of Windorah's best-known characters is local resident, Tar Pot. Tar has worked as an outback drover for most of his life. Now he enjoys sitting on the front porch of his one room house, ready for a yarn. Believe it or not, Tar Pot's house was originally the local Police Station courthouse that was relocated for his use.

Quilpie Show – this is on Friday 8/9 and Saturday 9/9. Friday night will see all the thrills and spills of the rodeo action as the toughest cowboys battle to stay on the 8 seconds and take home the prize. Saturday morning the Show is in full swing with plenty to do including stalls of all kinds, show pavilion and great entertainment. Enjoy the best fireworks display in the west as it goes dark then dance long into the night with great music. For an outback experience with true country hospitality, make the Quilpie and District Show your big weekend out!

Day 13 – Fri 8/9/23 – Welford National Park / Drive to Quilpie

8.30 am - Drive 1.5 hours to Welford National Park. Bring your own water, food, fuel and toilet paper. 4WD only.

Distance: Leave Windorah on Maryborough St to travel in an ENE direction on State Route 14 (Diamantina Development Road) for 22.4 km (sealed single lane). Turn left onto Hammond Downs Road and travel 55.8 km (gravel). Turn left into Jundah-Quilpie Road 5.8 km (gravel) to entry to Welford National Park. Travel 10 km to Little Boomerang Waterhole Campground. Even small amounts of rain can make roads impassable so always be prepared.

Facilities: One long drop toilet located in Little Boomerang Waterhole Campground. Roads within the park are recommended 4WD. We must be totally self-sufficient in terms of water, food and fuel. Bring your own toilet paper.

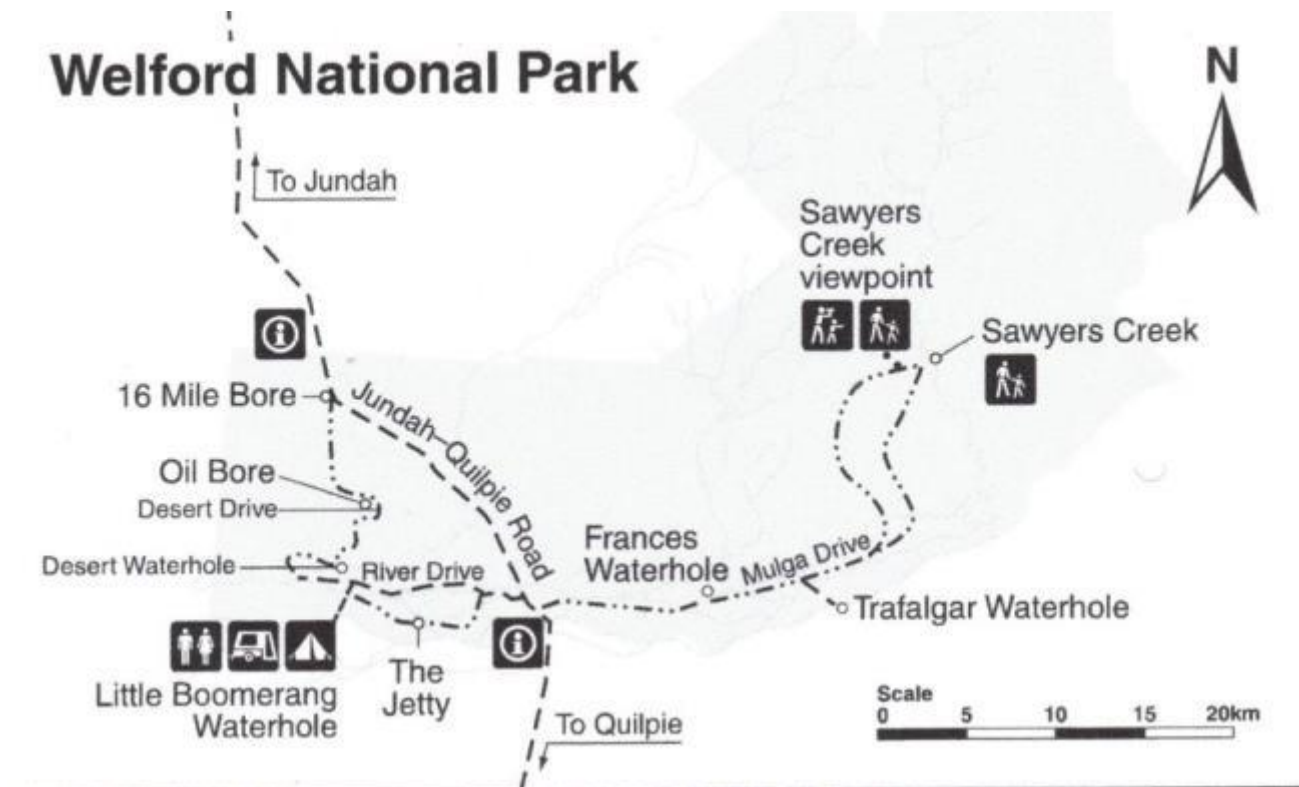


Figure 25 Queensland National Parks and Wildlife Service -April 2019.

Drives:

1. Desert Drive—22km one- way to 16 mile bore at northern end of park. (Allow at least 1.5 hours) 4WD access only -sandy patches. Return via Jundah-Quilpie Rd.

Travel north from Little Boomerang Waterhole and take the western turn, which marks the start of the Desert Drive. Visit Desert Waterhole. Look among the coolabaha for white-plumed honeyeaters. Then explore spinifex and red sand country, where soil colours range from rose-pink through to impossibly red. White ghost gums stretch over spinifex and fallen timber under a vivid blue sky. Welford's isolated dunes, Simpson Desert-style dunes, are at the eastern reaches of the Lake Eyre sand dune system. Take a walk up 'Little Red' sand dune. Continue on to the Oil Bore, here oil was sought up to 1,800m from below ground in 1986, and the Southern Cross Bore. This grand old windmill once pumped precious water up into troughs for stock.

2. River Drive—12.3km one- way to the southern exit of the park. (Allow at least 30 minutes) 4WD access only From Little Boomerang Waterhole travel north and take the right turn-off towards the banks of the Barcoo River. Impressive river red gums offer shade and tranquillity — a cool place to rest and watch birds. Visit 'the jetty', a natural rock bar that protrudes out into the waters of the Barcoo River.

The Barcoo River is a series of billabongs in dry times, flood debris caught in high branches tells of dynamic wet times when the river floods the vast plains and cuts all roads. When the Barcoo is in flood, debris is washed down with such force that the entire appearance of the landscape is altered.

3. Mulga Drive—71km return. (Allow at least 3-4 hours) 4WD access only

Spend the day discovering the eastern reaches of the park. Turn east off the Jundah-Quilpie Road, past the stockyards (stop for a glimpse of the old, rammed earth homestead) onto the Mulga Drive. Follow the flat expanse of the Barcoo River floodplains, along the way visit Frances Waterhole and Trafalgar Waterhole, the perfect place for a picnic and paddle. Then continue up into mulga country, dissected by stony escarpments and gullies. Look for wildlife at Sawyers Creek and stretch your legs to enjoy the panoramic vistas at Sawyers Creek viewpoint.

Sawyers Creek viewpoint—1.2km return walk (Allow 30 minutes), Grade 3.

Park your vehicle near the sign marking the turn-off to Sawyers Creek viewpoint on the Mulga Drive. Take in panoramic views of exposed rocky outcrops, slopes and the mulga woodlands stretching out in all directions. Bright green foliage along the creek line stands out like a vein carrying lifeblood—water. Watch for mulga parrots and at dusk yellow-footed rock-wallabies.

Source: Central West Queensland National Parks Brochure pages 12-13.

Overview.

Welford National Park was gazetted in December 1994 and is approximately 124000 ha, supporting significant landscape features and biological communities of the Mulga Lands, Mitchell Grass Downs and Channel Country bioregions.

Majestic river red gums line the Barcoo River which forms the southern boundary of the park. Three former grazing properties—Adaford, Gwandalan and Old Jedburgh holding make up the park. The park is named after Richard Welford a previous owner of one of the properties. Fourteen properties share a common boundary with Welford National Park. These run sheep and cattle.

Welford Station was taken up in about 1870 by Richard Welford who migrated to Australia from Britain in 1863. He named his property Walton Downs. It was renamed Welford Station after his death. Welford Station had special associations with the community as one of the first pastoral stations in the region.

Richard Welford and his station-hand were killed in 1872 by an Aboriginal man known as *Kangaroo* or *Jiu-Jiu* who had deserted from the Native Police. Subsequently the murders set off a frenzy of revenge massacres by the pastoralists who shot many of the local Aboriginal population along the Barcoo River on Welford Station.

The homestead on Welford National Park was constructed in 1882–83 using the pise method (a form of rammed earth construction), the homestead is a rare surviving example of its type. It demonstrates a high degree of creative achievement in using natural resources for building.

The homestead was severely damaged by fire in 1956 and the stone kitchen, which became unsafe after heavy rain, was demolished in 1963. Major renovations were undertaken in 1989, and the homestead is now the park ranger's residence and not available for public viewing. Associated historic buildings include rangers' quarters, stone cottages, and the meat and poultry house. Typical of many sheep yards throughout the district, arsenic was commonly used to dip sheep at Welford. The shearing shed and shearers quarters are nearby.

Other relics of the park's pastoral history include dog netting and livestock fences, old water bores, windmills and stockyards. The remains of a polocrosse ground, including collapsed horse yards, loading ramp, bough shed bar, timber log seats and corrugated iron toilet, can be found near the Jundah-Quilpie Road on the northern banks of the Barcoo River.

The entire park, including the homestead complex, is listed on the Queensland Heritage Register.

First Nations people of the area have a long and ongoing connection to the land and waterways of the Barcoo River—the park contains Aboriginal wells, stone arrangements, stone hearths and other places of significant cultural heritage.

Geomorphology.

Welford National Park is positioned in a broad transitional zone between eastern and western Queensland, and this is reflected in the diversity of native plants and wildlife, and a mosaic of landscape types, including braided river channels, sand dunes and dissected uplands.

Welford's stunning red desert dunes are the north-eastern extent of the Lake Eyre sand dune system, making them some of Australia's most easterly desert dunes. More than half the park lies in the Mulga Lands Bioregion. This eastern section is dominated by stony hills and silcrete uplands (residuals) with shallow, loamy lithosols that often have a gravelly or stony surface.

Nineteen of the 90 land systems described as part of the Mulga Lands Bioregion are found on the park, and of these, 11 are currently conserved only in Welford National Park.

Sand plains with many small sandhills and fewer, larger but more mobile steep-sided sand dunes, dominate the park's western end. The park's southern edge is bordered by the Barcoo River and the adjacent floodplain comprised of cracking clay, isolated ephemeral waterholes, Mitchell grass downs and gibber or ironstone flats (Porter, 2004).

The park's far eastern edge is a small area of undulating rises and low hills with stony, brown cracking clays supporting woodlands. This borders soft mulga on sandy soils with a spinifex understorey. This very small portion of the park lies within the Mitchell Grass Downs Bioregion and, outside of the park, this vegetation community has been extensively cleared (Addicott, 1998).

The spinifex-clad sandhills and associated sand plains, interspersed with soft mulga woodland in the west of the park, are the most easterly example of this landform in central Queensland.

Landscapes have been changed by pastoral activities. Sections of the park are recovering from the impacts of grazing.

The Climate.

There are three distinct seasons in the region. Most of the annual rainfall, averaging about 400 mm, is received in mid-summer to mid-autumn, where winds are predominately south-easterly to north-easterly. Late autumn and winter produce fine, clear days with cold nights and strong, southerly and south-easterly winds. The storm season in spring and early summer is typified by humid weather from the north-east and hot weather from northern and inland Australia.

Animals.

Numerous large, permanent waterholes on the Barcoo River's floodplains are important refuges for birds, particularly during severe droughts. Look for pelicans, brolgas, black swans, cormorants, whistling kites and whiskered terns. In late winter male emus will walk across the open grasslands followed by his tiny striped chicks. The female emu's parental role ends when she lays the eggs.

Major Mitchell's cockatoos, mallee ringnecks, red-winged parrots and mulga parrots provide a flash of colour in the Mulga Woodlands. Nomadic budgerigars are regularly on the move, their preferred diet; grass seeds on the grassy plains. Near threatened grey falcons can be found patrolling the skies near the Barcoo River.

Although not restricted to sandy areas, sandy inland mice reach their eastern limit around Welford National Park. Cracking soils, spinifex grasslands and hollow logs in timbered country all provide ideal habitats for small carnivorous mammals.

Red and grey kangaroos and wallaroos are common on the grassy plains. Yellow-footed rock-wallabies are approaching the western limit of their distribution (Porter, 2004).

Twelve species of frogs have been recorded in the permanent waterholes, artificial waters and the river on the park. The Cooper Creek turtle, is a species that is restricted to the Cooper Creek and Diamantina River systems, concentrating in the remaining waterholes during extended dry periods.

Plants

Welford National Park contains a variety of plants typical of the Mulga Lands, Mitchell Grass Downs and Channel Country bioregions. Currently, 24 regional ecosystems are mapped and conserved on the park. Of these, five are of concern.

Mountain yapunyah, poplar box, bendee and lancewood are at the extreme western boundary of their range in Welford—a major reason for it becoming a national park. They grow around the headwaters of Sawyer's Creek in the Mulga Woodlands.

The main channels of the Barcoo River are lined with river red gums and coolabah with tea tree also common on the banks. Herb fields are common on the cracking clay floodplains between the river and channels, and gidgee and false sandalwood occur on the infrequently flooded alluvial plains. Further upstream, around the headwaters and upper tributaries of Sawyer's Creek in the Mulga lands, are woodlands of poplar box and river red gums, with large areas of mulga. The vegetation communities on the park contain more than 300 native plant species. On the sand plain land system, the larger sand dunes support isolated low shrubs, such as parrot pea and sandhill grevillea. The smaller, more common sand dunes are dominated by sandhill hopbush.

Since being managed as a national park and with grazing reduced, the park has seen some reappearance of native grasses, such as small flinders grass, button grass, katoora grass and barley Mitchell grass.

Water

The park consists largely of dissected residual ranges that feed several creek systems. These run into the Barcoo River, forming part of the drainage basin for the Lake Eyre catchment. The Barcoo River typically breaks its banks at about 9 m, spilling onto the floodplains, filling up many smaller braided channels following good rain in December or January. Flood waters in June, 2023 have closed this park. As well as the Barcoo River bordering the park's southern boundary, Welford has small seasonal creeks, channels and permanent lagoons close to the homestead. A minimum of 15–20 mm of rain will cut local roads (K. Coulthard, pers. comm., 2008).

Welford National Park lies squarely within the bounds of the Great Artesian Basin that delivered a reliable source of groundwater to pastoral activities in the area. Permanent water allowed sheep and cattle to be raised on the Mitchell grass, mulga and spinifex plains, an otherwise impossible feat in these semi-arid lands. Before the properties were gazetted as a national park, 17 water bores were drilled. With pastoral activities stopped, groundwater is no longer required to manage the land, and all bores within the park are now capped. This has reduced water wastage and improved pressure, allowing artesian spring flows to recover.

References :

<https://aquariustraveller.com/welford-national-park> (2nd Sept, 2021)

<https://www.outbackqueensland.com.au>

<https://topwiretraveller.com/remote-camping-welford-np> (13th August, 2021)

<https://queenslandandbeyond.com/welford-national-park> (2nd May, 2020)

[Welford National Park | Parks and forests | Department of Environment and Science, Queensland](https://www.parks.des.qld.gov.au/parks/welford)

[\(https://www.parks.des.qld.gov.au/parks/welford\)](https://www.parks.des.qld.gov.au/parks/welford)

Day 14 – Sat 9/9/23 - Windorah to Quilpie

Timeline

Morning - Drive to Quilpie if you are not there already. 236 kms. Set up camp. **Note** Some are driving to Quilpie on day 13. Caravan Park is 21 Chipu Street. Also, the shops close at 12 on Saturday for the weekend including the supermarkets. The Friendly Grocer may open on Sunday between 9 and 11:30am. IGA is closed Sat afternoon and all day on a Sunday...

2:30pm – Drive from Caravan Park to start of the Bullo River walk, just east of the town area.

5:00pm – Meeting in camp kitchen.

Highlights

Quilpie - the business Centre for the Shire and the youngest of the towns. It was proclaimed a town in 1917 with the arrival of the Railway Line from Charleville and to this day is still the ‘End of the Line’.

Bullo River Walk - Located just off the main road to the left if you are heading east along the Baroo River, it provides a pleasant short marked riverside walk that includes featured trees being signposted as to what they are. 1.8 km return, go out and back along the same track

Day 15 – Sun 10/9/23 - Quilpie – free morning

Airport Mini Museum, Powerhouse Museum, Visitor Information Centre, Museums & Gallery should be open from 9 to 1pm, shops will be closed however the pubs will be open.

3:30pm Drive to Baldy Top lookout and Table Top Lookout. Travel west from the caravan park along Broilga St which becomes the Diamantina Developmental Rd for 2.3 km. Turn left into the Quilpie – Toompine -Thargominah Rd and travel 2.2km south. Turn right and travel 2.3 km to Baldy Top Carpark.

Baldy Top Lookout Walk - Follow the track to the middle of the rocky outcrop. It takes about 10 minutes. Where the track divides at the base of the scarp take the right-hand path. This path will take you around the right side of the rock formation to the back and then forward to the lookout point. It is a gentler approach. The left -hand path is a more difficult scramble to the top. Once on top explore at will.

Overview.

Baldy Top is part of the Grey Range. The Grey Range is the line of hills in SW Queensland and NW, NSW extending from the Gowan Range to the Barrier Range. At its closest point, 32 km to Quilpie, it has an elevation of 244 m above sea level. The Grey Range acts as a major watershed for the SW, with all its water on the east going into the Bulloo River Catchment System and with water on the west side flowing into a sub-catchment area of Kyabra Creek. This then continues into the larger Cooper Creek catchment of the Lake Eyre Basin.



Figure 26 Walking path to Baldy Top Lookout Photo taken by Barbara Dunn June, 2018.



Figure 27 Baldy Top. Photo taken by Barbara Dunn, June, 2018.

Baldy Top is one of the most elevated points in South West Queensland. Baldy Top appears quite small in its surroundings, but once on top of the summit, one is amazed by the breathtaking panoramic landscapes that stretch out before you. Table Top another mesa can be seen to the south west. Explore the caves and crevices. Look for the mud bottle-shaped nests of the fairy martins on the roof of caves. The magnificent boulder formation was created naturally over millions of years.

The Formation of Baldy Top

During the intense and prolonged weathering of the Tertiary landscape, many of the deeply weathered profile

became indurated (cemented) due to the residual accumulation of secondary minerals within the profile and/ or due to the lateral mobilisation, accumulation and precipitation of soluble minerals such as silica and iron. Because of their indurated character, these surfaces are resistant to erosion and are still preserved. Cainozoic duricrusts formed on a variety of rock types, usually forming mesas.

At Baldy Top the ferricrete capping of the duricrust is exposed as a result of erosion of the Winton Formation. Scarp retreat occurs where the erosion of the softer moderately weathered bedrock causes undercutting and collapse of the resistant upper part. Colluvial slopes (talus) form below the duricrust and are of weathered gravels in a thin layer covering soils formed in situ. Pediments of detritus material from erosion of the deeply weathered profile extend beyond the talus. They are covered in shallow infertile soils or exposed rocks. The absence of vegetation on the bare rock and scarp areas is typical. (Source: Land Zones of Queensland- pages 62-63)

Refer to page 5 of the natural science loop safari field notes.

References

<https://environment.des.qld.gov.au>. Land Zones of Queensland.

<https://quilpie.qld.gov.au>- Quilpie Shire Council

Day 16 – Mon 11/9/23 – Quilpie – morning town walk, free afternoon

Timeline

9:30am Town walk from Caravan Park to End of the line, Mural Park, Information Centre and Art Gallery, the Opal Hunter, St Finbarr’s Church

Mural Park – features a mural created by artist Cheryl Pratt, depicting Quilpie’s history. It also has Opal inlaid wrought iron tables and overlooks the quaint Quilpie Shire Railway Station that was relocated from the town of Cheepie to this site early in 2017.



Figure 28 Cave with mud bottle nests on Baldy Top. Photo Barbara Dunn June, 2018



Figure 29 Photo Barbara Dunn, June, 2018.

St Finbarr's Church – In 1976, the Priest at the time, Father John Ryan, decided to compliment the opal mining background of the area by commissioning local miner, Des Burton to install a border of opal around the carving of Our Lady of Perpetual Succour. Instead, Des offered the Priest 'a bit on the wall'. This turned out to be almost an entire wall, which is now installed on St Finbarr's altar, lectern and baptismal font. Bill Durack who was part of a Toowoomba Architectural firm who designed Quilpie's St Finbarr's Church and his sister Mary Durack, author of Kings in Grass Castles, donated the beautiful coloured glass windows in the western side of the church, in memory of their ancestors.

Day 17 – Tues 12/9/23 – Quilpie to Charleville

Timeline

Morning Drive to Charleville 210 km and set up camp. Bailey Bar Caravan Park is 196 King Street.

2:00pm Drive to Graham Andrews parklands for Vortex Steiger Guns and native tree walk

5:00pm Meeting in Camp Kitchen

6:00pm Beef Spit Roast dinner at Caravan Park – Safari dinner \$25 – pay on arrival at caravan park

Highlights

Charleville - is a rural service centre on the Warrego River and has a population of over 3,000. Surrounded by rich pastoral land, it grew to prominence as an important transportation stopover between the vast properties of western Queensland and the vital railhead at Roma. Today the town houses both the School of Distance Education and the Royal Flying Doctor Service.

Charleville was surveyed in 1868 by William Alcock Tully (Queensland under-secretary for public lands and chief commissioner for crown lands) who named the town after his childhood home at Charleville in County Cork, Ireland. The name had originally come from Charleville-Mézières in France.

Graham Andrews parklands for Vortex Steiger Guns and native tree walk - We will walk along the pathways and read about 18 different species of Outback Trees along the native Outback Timber Walk, feed the ducks, see the rustic sculptures, and look for galahs, red rump parrots, a variety of finches, wrens and sulphur-crested cockatoos.

The Steiger Vortex Rainmaking Guns, which were fired under a suitably cloudy sky in the hope of breaking the drought, were used by the Queensland Government Meteorologist Prof. Clement Wragge at Charleville on 26 September 1902. The history of the experiment is amusing. As recounted in the Queensland Historical Atlas: "The Steiger Vortex gun is a cone-shaped barrel, fabricated from sheet steel, designed as a rainmaking device. The gun was originally designed by Albert Steiger with the aim of preventing destructive hailstorms in a wine growing region of Austria. The firing of the cannon-like device caused a discharge of gas which set up vibrations in the clouds, causing rain. While on an overseas visit, Clement Wragge, Government Meteorologist, hit upon the idea of using the gun to make rain in drought-stricken Queensland ... Six guns made at Harvey and Son, at Globe Ironworks in Brisbane, to the order of Clement Wragge. It was manufactured in the hope that the technology could induce rain during the Federation Drought. Trialled in Charleville in September 1902, the six guns were set up in two rows, spaced over a kilometre apart and fired at two- minute intervals. Unfortunately, the experiment met with no success, with no sign of the desperately needed rain. Worse still, the failed experiment was seen by some as heralding the beginning of the end for Wragge's career in meteorology." It is said that Wragge addressed a group of local citizens in Aeschmann's Hall in Charleville and, so rumour has it, was greeted with considerable scepticism and derision. He left town the next day.

Day 18 – Wed 13/9/23 - Charleville

Timeline

9:00am Meet at entrance to Caravan Park for drive to Charleville airport for weather balloon release.

9:15am Weather station balloon release

10:00am WW2 base \$28 tour.

You may want to call in to the Royal Flying Doctor Service Visitor Centre, just down John Flynn Way while you are out here. You could also look through the displays at the Cosmos Centre.

Lunch

1:30pm Mulga Art Gallery free entry

1:45pm Historic House \$8

2:45pm Meet at Visitors Centre

3:00pm Bilby Experience tour \$22

4:15 pm Water tower

7:15pm Cosmos Centre tour \$30.00 per person

Highlights

Weather Balloon Release A weather balloon is released automatically at precisely 9:15am every morning. It collects data such as temperature, wind direction, speed and helps with weather forecasting.

WW11 Secret Base & Tours - Follow a guide in your own vehicle to leftover bunker sites and learn about the classified base. Afterwards visit the Secret Base building which will tell you about the 3500 US Army and Air force Personnel stationed there.

The Royal Flying Doctor Service Visitor Centre - tells the story of the Royal Flying Doctor an introductory film and displays which highlight the complexity of the operation and show the equipment used. Entry is by donation.

Charleville Historic House and Museum - located in the 1887 Queensland National Bank building in Alfred Street the house contains a comprehensive collection of items relating to the early years of settlement. Before the 1970s, it was a private boarding house.

Charleville QLD Bilby Experience - is next to the tourist information centre at the Railway Station in King Street (Warrego Highway). A guide explains endangered Bilby's and the programs in place to help save their species. You will then go to a dark room to see them. As they are nocturnal animals, red lighting in the area will help you observe them running around during the day

Big Sky Observatory (Night Tour) - located off the Matilda Highway at 1 Milky Way Road south of Charleville, the Cosmos Centre is the perfect place to experience the wonders of outback skies. The Big Sky Observatory tour allows you to look through the 14" Meade telescopes at items in the sky. The guides at the centre help visitors see star clusters, planets, the moon and binary stars at night time. You should also visit during the day to hold a meteorite, watch the movie in the Cosmos Theatre and learn about the Solar System.

Day 19 – Thurs 14/9/23 - Charleville

8:50am Meet at entrance of Caravan Park for drive to Date Farm

9:00am Date Farm tour – includes morning tea

10:45am View Charleville’s oldest tree

11:00am Warrego River walk

Lunch

2:00pm Coronas Hotel Stories a history tour \$27

Highlights

Date Farm Tour - Outback Date Farms is a family run enterprise where you can experience a fully working date plantation. You should enjoy a delicious date loaf morning tea while admiring rows of magnificent palm trees. Be inspired by the farmer who turned a long- term dream into reality. You will learn how dates grow, and how reclaimed water came to be used for this environmentally friendly project. And best of all - how incredibly healthy dates are for you! Wear closed in shoes.

Warrego River Walk - a pleasant 2.9km walk along the bank of the Warrego River just outside Charleville. The Warrego River is the most northern tributary of the Darling. Signs along the walk document the Bidjara People, the Rainbow Serpent, and the flora and fauna of the river ecosystem.

Hotel Coronas - located at 33 Wills Street, this remarkable hotel (completed in 1929) is a symbol of immigrant initiative and imagination. Harry ‘Poppa’ Coronas, a native of the Greek island of Kythera, arrived in Australia as a penniless immigrant in the early 1900s and by 1929 had built this amazing hotel. It was in high demand for exclusive balls, parties, and banquets. Capable of seating 320 at dinner, the hall was built for coolness with a number of high-set windows and electric ceiling fans. The lights with Venetian shades of various hues were adjustable either to dimness or the reverse, and an orchestra platform added to its popularity and beauty. Furnishings throughout, including the bedroom furniture, dining room, lounge room, chairs, settees, sideboards were designed and manufactured by the well-known Queensland home furnisher F Tritton Ltd of George Street, Brisbane using beautiful Queensland maple.

Day 20 – Fri 15/9/23 – Charleville to towards home – last day of safari

References

[Charleville, QLD - Aussie Towns](#)

[Eulo | Best things to do when visiting Eulo \(travelactionmatildacountry.com.au\)](#)

[Experience Charleville | Outback Queensland](#)

[Homepage | Back O' Bourke - Official Tourism Website \(visitbourke.com.au\)](#) and links

[Outback Queensland Eromanga - Outback Queensland](#)

[Outback Queensland Quilpie - Outback Queensland](#)

[Thargomindah, QLD - Aussie Towns](#)

[Things To Do – Paroo Shire Council \(cunnamullatourism.com.au\)](#)

Also various tourist brochures related to the itinerary.

Natural Science Loop Safari – Be Prepared Note

The days when we are travelling to National Parks require us to be prepared for remote locations and travel on gravel roads. These parks may be closed if there has been recent rain 5-10 ml. When there are options let the leaders know what your plans are as a safety precaution. Try to travel with another vehicle where possible.

Be prepared:

- Full tank of fuel.
- Use AGSHV two-way radios.
- Lower tyre pressure.
- Spare tyre and/or tyre repair kit.
- Closed in walking shoes.
- Wide brimmed hat.
- Sunscreen/insect repellent.
- Fly nets.
- Walking poles.
- Sunglasses.
- Plenty of food.
- Plenty of water.
- Layered clothing.
- Binoculars.
- Camera.
- Day pack.
- Snacks.
- Plastic bag for rubbish/toilet paper waste.
- Toilet paper.
- First aid kit.
- Torch.
- Beanies, gloves and warm jacket for early morning and evenings.