



Mount Magnet Quilt Project

Mount Magnet Astro Rocks Fest 2019

booklet compiled by Pat Forster





The **Mount Magnet Quilt Project** grew out of a suggestion by Karen Morrissey, Mount Magnet Shire Counsellor and co-ordinator of the **Mount Magnet Astro Rocks Fest**, to exhibit quilts at the Fest, 20-22 September 2019, jointly with paintings by Wirnda Barna Artists <http://wirndabarna.com.au/>. Mount Magnet is 'outback', in the mid-west Murchison region of Western Australia, 580km north of Perth. Wirnda Barna Art Centre, which is run by Badimia Land Aboriginal Corporation (BLAC), supports and represents Aboriginal artists from Badimia and Wajarri Country in Mount Magnet and the neighbouring town Yalgoo. Patricia Edwards, CEO of BLAC and Artist representative, welcomed the joint exhibition.

Stella King, Pat Forster, Elizabeth Humphreys and Meg Cowey organised the quilt exhibit as part of their ongoing Aboriginal reconciliation efforts. Friends also contributed quilts. The quilts depict topics or landscapes that have astro links for Aboriginal people, or that feature rocky terrain near Mount Magnet or in surrounding country. In this booklet, an astro link is indicated by a ★.

Statements under the quilt photos in the booklet are personal responses by the makers, pertinent photographs follow, together with quotes taken from the literature about Aboriginal culture. We have read widely about Aboriginal culture and quote practices and stories only if these are in the public domain, for example, in research papers, early settlers' journals, Native Title reports, and web pages by Aboriginal organisations.

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★ Lake Ballard



79cm x 40cm

by Roberta Chantler, 2019

Should you travel to Lake Ballard you will be rewarded by a fascinating spiritual experience. The huge lake contains 51 Anthony Gormley statues and is the largest outdoor gallery in Australia. It's not surprising that the lake is a sacred site in Aboriginal culture, connected to the Seven Sisters Dreaming, the islands being part of the story.



Lake Ballard, quilt inspiration

photos by Roberta Chantler 19/10/2008

Lake Ballard, just over 50 kilometres West of Menzies, has become the newest attraction for the region. It has created international attention for the 'Inside Australia' exhibition, created by Antony Gormley. He has created 51 figures, all derived from laser scans of the inhabitants of Menzies at the time, which are placed around a seven square kilometre area of the salt lake bed. The sculptures travelled 780kms from the foundry in Perth to the site on Lake Ballard, and it took a team of 18 volunteers, 4 days to install all 51 sculptures. This really is a sight to behold - its why we go on about it so much!

Lake Ballard is also a significant part of the region's salt lake system and is a breeding habitat for species of waterfowl, the Banded Stilt. Due to Cyclone Bobby in 1995, the vast salt crusts had been covered in warm shallow water, the long dormant brine shrimp were once again hatching. There was then an unbelievable frenzy of activity with an estimated 4,500 nests within days. Birds seem to be bustling in every direction. This was a very rare occurrence having only occurred approximately seven times in 215 years at Lake Ballard.

<https://www.kaloorlietourism.com/lake-ballard>

Aboriginal connection

★ Seven Sisters Dreaming

Paddy Walker [Aboriginal Elder] told us the story in a soft voice, speaking mostly in his own Ngulutjara language [which was translated by a younger Aboriginal man] : 'This is woman's dreaming. You are a lucky man to have found a woman's dreaming. You know the seven sisters' stars? The seven sisters' stars in the sky? This is on their path. They come across the lake here, playing around. They stopped here.

That island right in front of us, the largest of the islands, that is the oldest of the sisters. The other islands, heading out there, up the lake, are the other sisters, the younger ones. Down the lake there are two hills, look like young girls' breasts. Those hills were made by the splitting of an egg-shaped stone by a boomerang. Further on is a place where her breasts went into the ground, and where her face touched the ground.

This is where the sisters came down from the sky and were playing around out there. Then a man began chasing them, trying to catch the youngest one. So they had to run away. They had to hide. They hid in rock holes. There are rock holes down the shore of the lake, back where we came from just now, and they hid in those seven holes. This is on the camping route to Jeedamya and Morapoi. Then they came up through the lake, and became the islands out there. One island leads to another, one after the other, way up the lake there. That's where they were heading, to this place. You have to know what you are looking at, what these places are.'

... Later I was to hear other parts of the 'Seven Sisters Dreaming' story. I was taken to see the rock holes where the sisters hid. I was shown a little of how the line of the story reached to the north, touching the earth as rock holes and dream sites, until it reached another dreaming line going across the Seven Sisters. In one version of the story, the sisters are chased by a wild man, penis out and erect, with many ritual scars and determined to seize the youngest of the girls. In another version, I was told of a handsome young man who loved one of the sisters and wished to dance with her. And I was told about a tree at the end of Lake Ballard that is one of the sisters, standing there, alone, and waiting to join the others. The stories were many, various, complicated and, at times, confusing. But they always led from the lake, or the rock holes, in dream tales to other places.

Brody in Gormley (2005), Inside Australia.

Other places associated with the Seven Sisters in the Eastern Goldfields, WA, include:

- The Die Hardy Range including the hill known as Mt Geraldine, represents and is associated with the man who pursues the Seven Sisters. The Yokradine hills, particularly each of the peaks represent and are associated with the Seven Sisters. The name of the Yokradine Hills is based on the Noongar term *Yokrakine, yoka kaany, women's spirit place.* (pers comm. Tim McCabe 2012)

https://consultation.epa.wa.gov.au/seven-day-comment-on-referrals/marda-east-gold-project/supporting_documents/App%20K%20%20Cultural%20Heritage%20Reports.pdf

- Josie Boyle (Wongai elder) speaking about the Seven Sisters sites in the Eastern Goldfields

So these particular places are very special... I go to the one in Coolgardie, because that's easier going past there....[we] pay our respect that it deserves, because it's a dancing site, see? So everything has a different story of the sites of what happened, when the seven sisters were here on earth, see, and that was a dancing site and it was like the celebration site of the end of the journey on the earth. And that was where the boundary line came for the Noongar people, and the Noongar people came from Coolgardie, back to Perth, see, so it was all danced, the Seven Sisters, and they made the boundaries as they went over the land, wonderful story really.

... And then we have lots and lots of lakes that nobody goes to much today... sites relating to the seven sisters. Beautiful sites. I was only sitting down with my son of law who grew up out there, ... and I was talking to him about the distances between sites, ... There are about six that are out there still. I was asking him the other day, how much distance is between Gindowee, and Niagra Falls [Dam?], and Boorley Well, and another site out there, and there are six out there, Goldsmith (2014) <https://espace.curtin.edu.au/handle/20.500.11937/665>

See brilliant photos of Lake Ballard, including with the Night Sky, at <https://500px.com/search/Lake%20Ballard-photos>

★ *Spinifex and Corrugations, Canning Stock Route*



80cm x 40cm

by Elizabeth Humphreys, 2019

Believed to be part of a traditional trade route, the Canning Stock Route is also part of the Seven Sister's Songline. Many of the sites on the journey of the Seven Sisters are now understood to be wells on the track. Stretching from Halls Creek in the North to Wiluna in the South, the journey takes about three weeks for the very well prepared adventurer.



Northern end of Canning Stock Route, near Halls Creek

photo by Elizabeth Humphreys 11/09/2018

Alfred Canning, who plotted the Canning Stock Route in Western Australia, used Aboriginal guides... Canning was a cruel man who kept Aboriginal trackers in chains and would deprive them of sustenance for long periods. He would then release the unfortunates from the chains so they could direct Canning's team of cattle to water. Hewitt quoted in Kerwin (2006)
<https://www120.secure.griffith.edu.au/rch/items/9c3fbf9b-f090-1cb0-eca0-9a4b18280912/1/>

In 1883 Buchanan, after establishing at Richmond Downs, drove 4000 head of cattle to the Ord River in Western Australia, a distance of 2240 kilometres. In his quest to find lucrative outlets, he drove his beasts to the Goldfields of Murchison in Western Australia, to sell his beasts. He pioneered stock routes ... from Roy Hill, Fortescue River to Murchison. The latter stock route is about 3000 kilometres and is known today as the Canning Stock Route.

Barker in Kerwin (2006)
<https://www120.secure.griffith.edu.au/rch/items/9c3fbf9b-f090-1cb0-eca0-9a4b18280912/1/>

4WD tourist route

Start Wiluna, finish Halls Creek. Distance 2006km. Minimum days 16.

The Canning Stock Route is one of the most remote and isolated 4WD tracks in the world and holds its appeal as the "last frontier". ... there are no towns along the way, no major services, and a general absence of emergency support.

<https://www.exploroz.com/treks/canning-stock-route>

Aboriginal connections

The Canning Stock Route is along part of the Seven Sisters' Songline. Water holes on the songline were made into wells including at Kalypa (Well 23), and Tiwa (Well 26). Macfarlane and McConnell(2017). <http://www.environment.gov.au/system/files/resources/ef91ad97-f6dc-42b6-b3ca-df1f96c9e089/files/waters-australian-deserts.pdf>

Song-lines, also called Dreaming tracks, are paths across the land (or sometimes the sky) which mark the route followed by localised 'creator-beings' during the Dreaming. The paths of the Song-lines are recorded in traditional songs, stories, dance, and painting. By singing the songs in the appropriate sequence, Indigenous people could navigate vast distances, often travelling through the deserts of Australia's interior. ... A knowledgeable person is able to navigate across the land by repeating the words of the song, which describe the location of landmarks, waterholes, and other natural phenomena.

<http://www.ancient-wisdom.com/aborigines.htm>

★ In Aboriginal cultures across Australia, and in other cultures around the world, the Pleiades star cluster is associated with the story of the Seven Sisters. Minyipuru Jukurrpa is the Martu version of this story. When Martumili Artists was established in 2005, this was the first Dreaming story the Martu women agreed to paint for a broader public.

The Minyipuru began their journey from Roebourne as a big group of sisters and their mothers. At various places along the way, they lost members of their party until eventually only seven sisters remained. At Kalypa (Well 23) the Minyipuru met a group of Jukurrpa men; it was the first time either group had seen members of the opposite sex. The men tried to grab the women, but the Minyipuru chased them, hitting them with their digging sticks and leaving them lying there.

At Pangkapini the sisters met Yurla, an old man who had followed them from Roebourne. Yurla grabbed one of the women at Pangkapini, but her sisters tricked him and managed to rescue her. At another site further east, he tried to catch five of the sisters, but again they escaped, flying on to Marapinti. Many of the sites on the Seven Sisters' journey are now wells on the Canning Stock Route.

From the Canning Stock Route Project (interactive exhibition of art and other exhibits)
http://www.nma.gov.au/exhibitions/yiwarra_kuju/artworks/minyipuru_jukurrpa

A search on 'Canning Stock Route' on the Aboriginal Heritage List for Western Australia yields:

2119 Canning Stock Route, Painting

12090 Canning Stock Route/Well 16, Artefacts/Scatter, Camp

12106 Kaalpa/Well 23, Artefacts/Scatter, Ceremonial, Mythological, Quarry, Camp, Water Source

12005 Canning Stock Route/Well 24, Ceremonial, Engraving, Grinding Patches/Grooves, Mythological, Painting, Water Source

12130 Canning Stock Route/Well 26, Artefacts/Scatter, Mythological

12131 Canning Stock Route/Well 32, Artefacts/Scatter, Mythological, Water Source

12132 Canning Stock Route/Well 37, Artefacts/Scatter, Camp Water Source

12122 Canning Stock Route/Well 40, Artefacts/Scatter

<https://maps.daa.wa.gov.au/AHIS/>

★ Heart of the Pilbara



79 cm x 41 cm

by Hilary Arber

Flying home from Port Hedland under cyclonic cloud, spread below me was a deep red land like a heart muscle rippled with the arteries and veins of semi dry waterways. The hills were partially speckled with Spinifex. The Pilbara's red earth hides not only a rich store of minerals such as iron ore but is also a keeper of ancient aboriginal history.



Google Data SIO, NOAA, U.S. Navy, NGA, GEBCO Landsat / Copernicus Camera : 499 km 22°35'0

For high resolution aerial photos of the Pilbara by commercial photographer Rob Dose, see dose.com.au/Explore WA/Pilbara



Oxer Lookout, Karijini National Park, The Pilbara photo by Pat Forster 05/05/2019

Over 2500 million years ago where you are now standing was the sea floor. Layers of silica (white and red) and iron oxide with silica (dark grey) built up over time squeezing out the water to form tough, well-bedded rock. Colliding continental plates caused these rocks to buckle and develop numerous vertical cracks before being lifted up to form dry land. Erosion over millions of years has sculptured the rocks you see in the present landscape. Signage at Oxer Lookout

Aboriginal Connections

The Pilbara Aboriginal Language Centre Wangka Maya says that the name for the Pilbara region derives from the Aboriginal word *bilybara*, meaning 'dry' in the Nyamal and Banyjima languages. Alternatively, The Western Australia Gas Industry claims that the region takes its name from *pilbarra*, an Aboriginal word for the mullet (fish).

<https://en.wikipedia.org/wiki/Pilbara>

The Aboriginal population of the Pilbara ... predates, by 30–40,000 years, the European colonisation of the region. Archaeological evidence indicates that people were living in the Pilbara even during the harsh climatic conditions of the Last Glacial Maximum. ... Working conditions in the pearling and pastoral industries for Aboriginals in the Pilbara region around 1900 have been described as slavery with no wages paid, kidnapping as well as severe and cruel punishments for misbehaviour ... The first strike by Indigenous people in Australia took place in 1946 in the Pilbara, when Aboriginal pastoral workers walked off the stations ... a strike that lasted for

over three years. ... [Today] Many Pilbara communities face the many complex effects of colonisation, and lack adequate access to housing, health and education. Relations between police and aboriginals are very often tense.

<https://en.wikipedia.org/wiki/Pilbara>

★ The Seven Sisters Songline [which goes west to east across Western Australia] is an epic story, one of the most widespread Ancestral Songlines in Australia, crossing from near Roebourne across the Pilbara, the Gibson Desert and the Great Victoria Desert; the country of many language groups.

Macfarlane and McConnell (2017). <http://www.environment.gov.au/system/files/resources/ef91ad97-f6dc-42b6-b3ca-df1f96c9e089/files/waters-australian-deserts.pdf>

<image download of map showing the songline>

The thick red line (10) that starts at Roebourne in the west and stops at Innga in South Australia indicates the Seven Sisters Songline described above. The thin line (4) that coincides with the Songline indicates the Canning Stock route which starts at Wiluna and goes North East to Halls Creek.

Macfarlane and McConnell (2017), p. 125

<http://www.environment.gov.au/system/files/resources/ef91ad97-f6dc-42b6-b3ca-df1f96c9e089/files/waters-australian-deserts.pdf>

★ Wave Rock



79cm x 40cm

by Meg Cowey, 2019

When I viewed Wave Rock for the first time, I knew time had stood still for millennia. The wave felt infinitely permanent and enduring. Using strips of aboriginal designed fabric in recognition of Wave Rock's significance to the Aboriginal people, I created an impressionist view of the rock's dominance of the landscape when standing at the base.



Wave rock

photo by Pat Forster, 30/07/2019

Aboriginal Connections, Katter Kich (Wave Rock)

Wave Rock has cultural significance to Ballardong people. Local tribes believed that the rock was a creation of the Rainbow Serpent, and was created in her wake by dragging her swollen body over the land after she had consumed all of the water in the land. They respected this area as an icon of cultural learning; a moral from this Dream time tale was to be remembered for life.

http://www.wikiwand.com/en/Wave_Rock

Near Hyden in the South-East (of Western Australia) Katter Kich is significance to Noongar people, because it is a Noongar keniny (dancing) ground. A little way from there would have been a camping place, ceremonial place, where there are gnamma – (water holes) and it was also part of a Noongar trade route.... The rock is a granite cliff, 15metres high and 110 metres long. Its wave-like shape has been caused by weathering and water erosion, made over 60 000 years ago, which has undercut the base and left a rounded overhang. In 1960, some crystals from Katter Kich were dated as being 200 million years old, among the oldest in Australia.

http://www.wheatbeltnrm.org.au/sites/default/files/knowledge_hub/documents/Nyungar%20Dictionary%20-%20Final%20-%20Website.pdf

There is a gnamma hole that was used around this area (Quairading), it might be covered now because the white people did not believe in them. This happened to gnamma holes at a meeting place near Wave Rock.... It is said that a lot of the Noongars from all over the place used to gather at Wave Rock. Noongars, Yamatjis, and Wongis as it was their meeting place. They would hold a lot of corroborees.

<https://www.noongarculture.org.au/ballardong/>

[In Noongar Country] Mulka's Cave (north of Wave Rock), Wave Rock, Jilakin Rock, Jitaraning Rock, Dumbleyung Lake and Puntapin Rock are all connected by an ancient Dreaming trail [songline] that reaches the coast at Augusta

<https://www.dpaw.wa.gov.au/images/documents/get-involved/n2n/schools/excursions/Exploring%20Woodlands%20With%20Nyongars.pdf>

Near the banks of the Swan River, at Claisebrook there is a mosaic of a Bibbulmun Dreaming (creation narrative) with a plaque alongside which reads as follows: Long before the Nyitting, (cold times) there lived a giant Charnock (evil spirit) woman named Woor-Jall-Luk who went from Kallep to Kallep (campfires) stealing Koolungahs (children). She had very long white hair and was taller than the Karri and Jarrah trees. She stole children to feed her man, Mulchin-Jal-Lak. (His cave is known as Bates Cave). She used her hair as a net to place the spirit children, leaving her

hands free to gather more. The spirit people of the south west of Western Australia were worried their children were disappearing. One night they set a trap to observe what was stealing the children. They tried to stop the evil woman, but they could not get close enough to kill her.

One day the spirit people turned themselves into a totem of the magpie (Coolbardies). They knew that the only way to get close to her was by flying at her in a flock and that this way they had a better chance of freeing the Koolungahs. But on seeing them attack, Woor-Jall-Luk grabbed a big fire stick to beat the Coolbardies. But it did not stop the Coolbardies from swooping to free the children and a great fight followed all over the Bibbulmun nation. The spirit children who fell to the ground and turned to stone are called Bwia-Ee-Koolungah-Nyinna (the stone where the little babies fell).

★ As Woor-Jall-Luk was hurled into the sky by jumping on Gnadie-Darange-E-Noo (Wave Rock) and made our Bibbee-Goor-Ee (Milky Way), a great many children fell out of her hair and fell back to mother earth. They made the first Bwia-Ee-Koolungah's -Nyinna place which we know as Hippo's Yawn.

*Hippos Yawn is a rock near Bates Cave. Bates Cave is north of Wave Rock and is also known as Mulka's Cave.

Goldsmith (2014). <https://espace.curtin.edu.au/handle/20.500.11937/665>

Noongar elder Noel Nannup relates an alternative account of the spirit woman leaping off Wave Rock: Later the spirit woman was standing on some soft stone, which oozed into a great big wave, which these days is called Wave Rock. When she was standing on Wave rock, it felt just like a trampoline under her feet. And as it sprang up, it lifted this great spirit woman into the sky. Higher and higher she went, until she knew she could never walk on the earth again. She would live in the sky now.

in Morgan et al. (1951).

https://books.google.com.au/books?id=3xZuHuvx_F4C&q=star#v=snippet&q=star&f=false

★ Star map

A prominent Noongar song line is the W in the sky, as told by Noel Nannup. The 'W' is formed by the five bright jindang (stars): Canopus, Sirius, Rigel, Betelgeuse and Aldebaran. ... When compared with a map the 'W' in the sky appears as a mirror image of the 'W' formed between ... Stirling Range, then towards Wagin Narrogin, then towards Katter Kich (Wave Rock), then through to beyond near Merredin, and back up across to Lake Moore. ... Each star lines up with a prominent granite rock in the land which marks a turning point along the songline

Summarised from the video at <https://www.bbc.co.uk/programmes/p04xx7s3>

★ *Stirling Ranges*



78.5cm x 40cm

by Stella King, 2019

I lived in Albany for ten years and fell in love with the majestic landscapes of the Great Southern – particularly the Stirling Ranges. The surrounding colours change with the seasons. Verdant after winter rainfall and interspersed with patches of yellow canola fields in spring; gold with ripening wheat and then the dry summer parches the landscape.



Stirling Ranges, taken on Cranbrook-Katanning road

photo by Ron King, 22/05/2019

Aboriginal connections, Koikyenunuruff (Stirling Range)

★ Noongar Elder Noel Nannup describes a star map for a route from the Stirling Range to Lake Moore. Stirling Range is the star Canopus on the map. See 'Star Map' on p. 18 of this booklet.

<https://www.bbc.co.uk/programmes/p04xx7s3>

Stirling Range names, published in the West Australian, 21 June, 1947: Following Major Lockyer, his successors ... learnt from the lips of Mokare, their aboriginal guide, and from Nakina, his brother, the names of the northern (Corjernurruf) and southern (Purringorep) ranges. .. On April 29, 1831, Collie tabulated in his journal the names of some of the main peaks of the Koi-Kyeunuruff mountains (Stirling Range) Collie's list was: MAGGERIP, MONDYURUP, KOWRU-U-LARIRUP, TOOO-YE-YERUP, CONICAL HILL (Remarkable), WESTERN HIGH PEAK OF RUGGED MOUNTAIN, CONSPICUOUS HUMMOCK OR EASTERN SHOULDER OF RUGGED MOUNTAIN.

The following is a list of the names of the 18 peaks comprising the Stirling Range [1947]. Where there is a dual name the aboriginal name appears first, the spelling being as appearing on the present-day maps. ...

1. MADYERUP (Roe) Peak Donnelly (1,400ft.) should be spelt Donnelly.
2. ROSS PEAK. 3. HUME PEAK (1,800ft.). 4. MONDURUP (2,831ft.).
5. PEAK BARNETT. 6. PEAK HENTON. 7. TALYUBERLUP. Mt. Magog-Twin Peaks.
8. TOOLBRUNUP (3341 ft.) with northern spur Mt. Hassell
9. MOUNT TRIO (Roe) 10. WARRUNGUP.
11. YUNGERMERE, the conical hill of Collie's reference.
12. NORKIA (Roe). Mt. Success. 13. COYANARUP.
14. BLUFF KNOLL (3,640ft.), the Mt. Rugged of Flinders.
15. PYUNGOORUP. 16. ISONGERUP.
17. KOIKYEURNERIF, Ellen Peak (3,420ft.). 18. ANDREW HILL.

... The meanings of the aboriginal names possessed by most of the peaks are as unknown ... None of the earliest explorers gave the slightest record of the meaning of the place names.

<https://trove.nla.gov.au/newspaper/article/46320387>

Joey repeats the song he sang to us at Bulla Miele [Bluff Knoll], with the Noongar names of the formations "kaya, kaya, Bulla Meile, Yonger Mir, Mabrunup, Toolyul-brup". The hill of the eyes, the kangaroo with the spear thrower on top, the place of the 'special men', and the beautiful woman sleeping. I am struck by how much the shapes of the mountains, appear to be what they are named, particularly Toolbrunup. I can see the woman clearly, the profile of her face, her arms at her side

and her rounded pregnant belly.

Traveller describing his experience on Poonarti Aboriginal Tours

<https://www.pressreader.com/australia/outer-edge/20161101/281930247604915>

Stirling Ranges, Barren Ranges and Fitzgerald Ranges: There is a suite of narratives relating to these locations, which account for the tracks or route of spiritual beings. The first relates to the Kangaroo people and the Emu people, who originally lived together in the Stirling Ranges. They had a fight and the Emu people were badly injured. They escaped to the Fitzgerald Ranges, spilling their blood on the ground as they went. This blood is now manifest as a red rock outcropping across the area between the Stirling Ranges and the Fitzgerald Ranges.

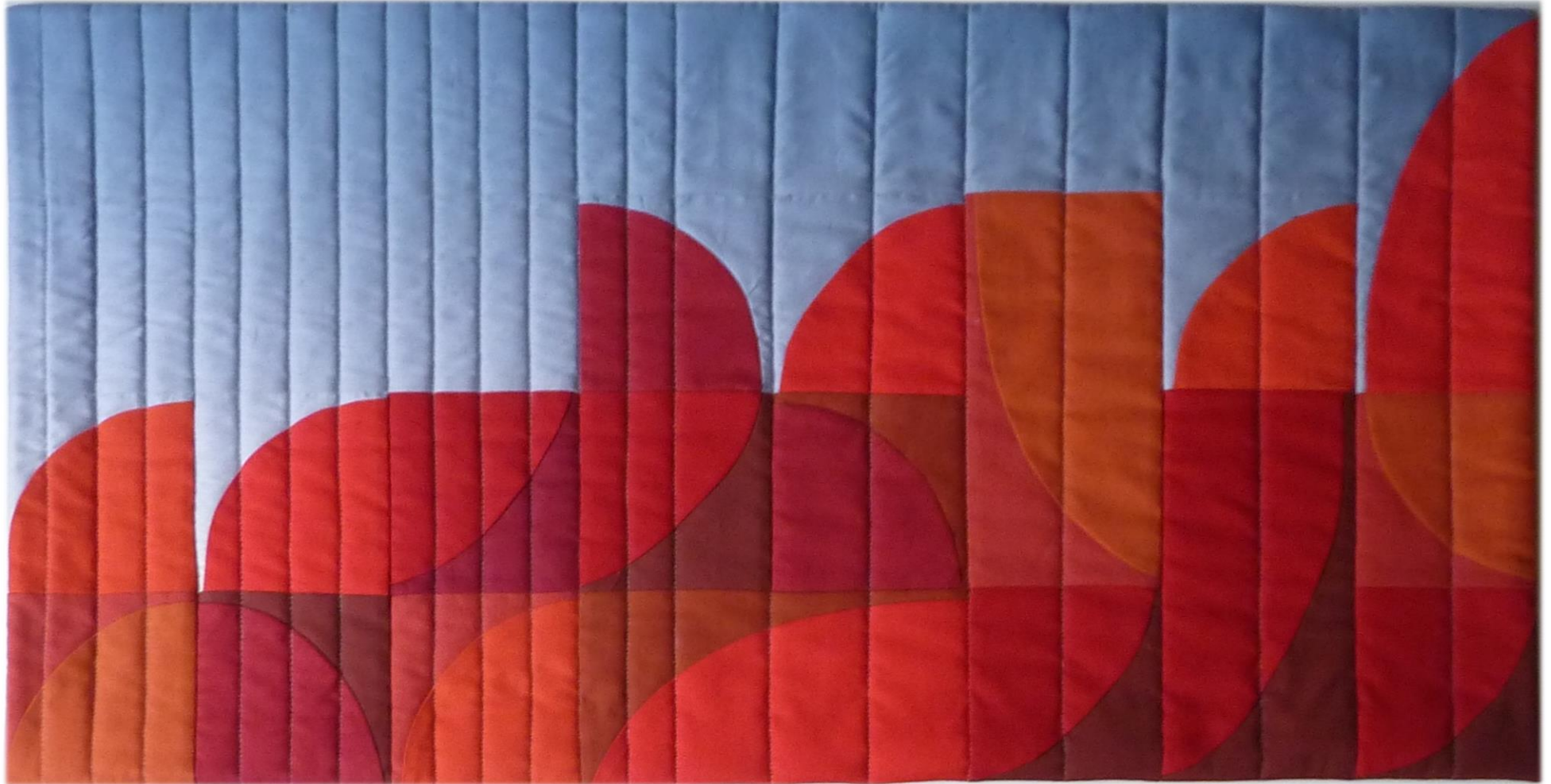
A second narrative relates to the Kangaroo people of the Stirling Ranges and the Emu people of the Barren Ranges. The former had promised a girl as a husband to an Emu man. When the time came for her to leave, a party of Emu people assembled to accompany her. She was saddened by the thought of leaving her pet dog, which was in turn upset at her departure. As they left, in the middle of the day, the dog howled. The party turned around to see why the dog had howled and were all turned to rocks. The girl became the Stirling Ranges, now seen as the 'Sleeping Lady', the profile of the ranges viewed from the Chester Pass to Albany road, which resembles a supine woman.

.... Finally, there is a narrative of a narcissistic Kangaroo Man who spent his time preening himself in his reflection in a pool. His wife, tired of his vanity and consequential failure to supply her needs, cooked herself and her baby some meat. He returned to the camp to discover this and beat her as a punishment. She crawled away, mortally injured, forming the Kalgan River. She died and her pet dog buried her. Her grave is now Green Island, while she is also the Sleeping Lady of the Stirling Ranges. Her family, much aggrieved at her treatment, killed the Kangaroo Man, who became Bluff Knoll. The Noongar name for the mountain is Meilya, which means 'many eyes' and is a reference to the fact that the face of the Bluff alters as the mist blows across it, but can be seen to represent the face of the warrior. Seen from afar, the mist covering the mountain is understood to be his hair blowing in the wind, showing that he is still alive. ...

Hassell did record that Bluff Knoll was inhabited by a malevolent spirit being called Noatch, whose shape-changing attributes were reflected in the many faces that can be seen in the Bluff. Hassell gives the name for Bluff Knoll as *Bullah Meual*, which she interprets as 'Great Many Face Hill' ...

https://aiatsis.gov.au/sites/default/files/products/monograph/noongar-people-noongar-land_2.pdf

★ *Rocky Outcrop at Sunset*



78cm x 40cm

by Pat Forster, 2019

Perching on rocky vantage points to watch the sun go down, while enjoying drinks and canapes, is a feature of living in or taking trips to 'outback' Western Australia, including the Murchison. Iron content means that ranges and other rock formations blaze in the sunset.



Rocky Outcrop at Sunset on Wooleen Station

photo by Pat Forster 5/9/2004

Aboriginal Connections

Rocky outcrops and ranges were/are important to the life of Aboriginal people. The importance is summarised in the headings below which are from Bindon's (1997) paper on granite outcrops:

Water supplies

Rainwater collected in depressions in the rock (gnamma), and these were sometimes enlarged using fire and pounding. Water runoff also collected at the base of the outcrops thus forming soaks. Wells were sometimes constructed to allow the water to be scooped out.

Example: Camel Soak [near Mount Magnet] is a well-vegetated depression beside a large, low granite dome. It was a watering point for cameleers using the old road from Cue to Meekatharra. ... The depression is probably an enlargement of a pre-existing Aboriginal soak.

Webb (2007) [https://www.rswa.org.au/publications/Journal/90\(3\)/vol90pt3115-125I.pdf](https://www.rswa.org.au/publications/Journal/90(3)/vol90pt3115-125I.pdf)

Hunting and gathering sites

Various plant species favoured the rim of rocky outcrops, exploiting the zone where run-off ... was concentrated. Two very important trees to arid land dwellers, Kurrajongs (*Brachychiton gregorii* F Muell) and Quandongs (*Santalum acuminatum* (R Br) D C) are commonly found around granite outcrops. They provide fruit, wood and sometimes medicinal products for Aboriginal people, but also attract emus and other bird-life.... The occurrence of food plants and water also attracted animals such as macropods and reptiles, many of which also contributed to Aboriginal diet.

Bindon (1997) [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

Places frequented by heroic ancestral beings

A traditional belief of Aboriginal people is that they are descended from ancestral beings. And since they live in the landscape created by these ancestors, it follows that every person is linked by their lineage to the landforms, to other living things in the same environment, and to the associated mythology. ... By re-enacting the activities of their ancestors in ceremonies, Aboriginal people re-affirm and reinforce their beliefs ... Numbers of granite domes were used as ceremonial areas by Aboriginal people. ... Stone arrangements often mark these ritual places.

Bindon (1997) paraphrased [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

The terms Songline or Dreaming trail are used for the passage of ancestral beings, and rocky outcrops on them, besides being ceremonial places, were navigational markers.

<https://www.dpaw.wa.gov.au/images/documents/get-involved/n2n/schools/excursions/Exploring%20Woodlands%20With%20Nyoongars.pdf>

★ Noel Nannup, Noongar elder describes the 'W in the sky' songline, see p. 18 of this booklet. ... Each star lines up with a prominent granite rock in the land which marks a turning point along the songline.

<https://www.bbc.co.uk/programmes/p04xx7s3> https://incubator.wikimedia.org/wiki/Wp/nys/Song_Lines

Art sites

Numbers of granite domes ... contain extensive galleries of Aboriginal art.... In [the Pilbara] the various motifs are usually produced by hammering, battering or pecking away the dark patinated surface from the rock to expose the lighter coloured fresh inner core. Just south of the Kimberley region ... a very different art genre exists. Here, circular forms composed of a number of concentric rings are joined into larger compositions using one or more parallel straight or sinuous lines ... this art represents ... journeys [of ancestral beings] through the landscape.

Bindon (1997) [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

Mulka's Cave ... near Hyden... features 452 motifs, an extremely high number for the region where most sites have fewer than 30 motifs. The artwork is dominated by 275 handstencils, with 40 sprayed areas, 23 handprints, 23 paintings, 3 drawings and a single object stencil produced with a wide range of colours.

Gunn (2006) <http://museum.wa.gov.au/research/records-supplements/records/mulkas-cave-aboriginal-rock-art-site-its-context-and-content>

Quarries

... fist-sized pebbles used as hammers or millstones have been found. Large grinding plates of granite are also found, especially where seed-grinding contributed significantly to Aboriginal diet. ... Fissuring and thermoclastic weathering of the surface of granite ... results in the scalar detachment of successive layers of roughly circular rock plates ... Aboriginal people most likely utilised these found objects.

Bindon (1997) [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

Sandplain at Sunset



78cm x 40cm

by Pat Forster, 2019

Red-sand and red-dirt plains in the mid-west through to the north of Western Australia blaze in the sunset. Driving through the same results in red dust penetrating every possible crevice on a vehicle. Those with fair or grey hair can expect to look as though they have used a pink rinse.



Pinnacles Desert (early morning, not at sunset!

photo by Jim Forster 14/04/2013

Aboriginal Connections

Sand as a medium for mapping and art

Traditionally paintings by Aboriginals were drawn on rock walls, ceremonial articles, as body paint and most significantly drawn in dirt or sand together with songs or stories.

<https://www.aboriginal-art-australia.com/aboriginal-art-library/the-story-of-aboriginal-art/>

That [sand] map, when we go in different area people show us, This the main jila [spring]; or even jurna [soak]. At night, that people gotta sing that song and tell you that story, how that place been come, and then you are in the picture. You can't just go anywhere, we gotta wait for people to show us. Every water got a song.

Joe Brown 2008, in La Fontaine and Carty (2011, p. 68)

★ Josie Boyle, Wongai elder, Eastern Goldfields, speaking about her mother: She came from (Ooliar?) [Ooldea Soak in South Australia?], see, and they did lots of journeys across the Nullarbor, straight across the Nullarbor where the railway line is today. ... That was the walking path of those people, my people, that walked from (Ombi?) [Ooldea Soak?], long time ago, for ceremonies for star stories and star aligning stories, they all came across to these sites, ... where they were going to their ceremonies. Everybody coming together all singing the songs of the earth and sky songs, you know, dancing the Gurandura, and that's what she talked about all the time see, and see she drew these things in the sand..

Goldsmith (2014) <https://espace.curtin.edu.au/handle/20.500.11937/665>

The area for each sand painting [for ceremony] is always carefully prepared, the ground is cleared and the surface is spread with termite-nest gravel mixed with water to a paste, when dried this hardens to give a firm surface. The senior lawmen then create the Dreamtime story showing, land, animals, plants and spiritual symbols; created with sand, ochres, leaves, feathers and sticks. The designs can be a series of round circles, wavy lines, mounds or any of the many symbols that represent their Dreamtime journey and the land that it represents. The majority of these sand paintings are restricted to senior lawmen. Sand paintings can cover a huge area and can be as large as one hectare, they are always destroyed at the end of the ceremony.

<http://www.reddesertdreamings.com.au/red-desert-dreamings-blog/aboriginal-sand-paintings>

Finding water in the desert

The secret is the elders told them stories about the landscape that detailed every source of water to be found. Pointers include landscape such rock, where water

seeps off when there are rains, into sand which protects the water from evaporation; and plant growth such as patches of grass.

Paraphrased from Mears (2012) at <https://www.youtube.com/watch?v=Deo9Z9yVBYS>

Water extraction from sand

[When stranded in the Gibson desert, Thomson wrote of a well he was led to by desert people] Lola was situated at the bottom of a depression among low hills and dunes and here, even at an advanced stage in the hot season – well into September - the water-table was only 3 feet from the surface. The well itself was about 14 inches in diameter and there was a step about 2 feet down on the shelving bank. The people had no drinking utensils and when they came to water, each one in turn knelt down and drank Of Lola, the Bindibu say 'nabba pala' - good water."

quoted in Bayly (1999) [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

McLeod relates a story told to him by an old prospector by the name of Long, observing an Aboriginal man and woman: The man took the throwing stick he was carrying and worked it into the sand. He then broke off a hollow reed and, placing it in the hole he had thus developed, lay down on his stomach and appeared to suck up something through the reed. His companion repeated his movements before they quietly moved on... Without delay Long, with the aid of a shovel, proved the existence of a soak of sweet water, from which he replenished his supplies... Only a few days later in the same place, another prospector had the same Blackfellow bailed up, threatening to shoot him unless he revealed a source of water. However, [they were] interrupted by yet another prospector riding a camel. The Blackfellow took advantage of the confusion and threw a spear into the bush and escaped.

On the diggings, a hue and cry was raised over this alleged murderous attack and a party was quickly organised to set out and teach the Blackfellows a lesson - for daring to protect their water. Mustering what guns they could, the punitive party went out to what later became known as Skull Creek, and shot every Blackfellow they could find. The bodies were buried in shallow graves.

[https://en.wikipedia.org/wiki/Soakage_\(source_of_water\)](https://en.wikipedia.org/wiki/Soakage_(source_of_water)) quoting McLeod (1984), How the West was Lost, pp. 27-28

★ Rock Platform, Dinosaur Coast



80cm x 41cm

by Pat Forster, 2019

Clambering down the cliffs at Minyirr (Gantheaume Point), Broome was worth the struggle when we spotted dinosaur footprints on the rock platforms. They are visible at low tide. They are emu-like in shape but larger, they are classified as being from a theropod, and are named *megalosauropus broomensis*, meaning big lizard-foot of Broome



Three-toed footprint, Gantheaume Point, Broome

photo by Pat Forster 26/06/2009

The intertidal zone along the Dampier Peninsula coastline from Roebuck Bay to Cape Leveque, excluding the area from Dampier Creek to Yinara (Entrance Point), is included the Australian Heritage List which states:

The Dampier Coast dinosaur tracks have outstanding heritage value to the nation under criterion (b) as the best and most extensive evidence of dinosaurs from the western half of the continent, some of which are unknown from body fossils; for the diversity and exceptional sizes of the sauropod prints; and the unique census of the dinosaur community that they provide.

http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106063

Aboriginal connections

The [dinosaur] tracks are integral to a song cycle that extends along the coast from Bunginygun (Swan Point, Cape Leveque) to Wabana (Cape Bossut, near La Grange) and then inland to the southeast over a total distance of approximately 450 km.

... One of the important Bugarrigarra [creation time/Dreaming] beings within the Song Cycle is called Marala (the Emu Man). Marala ... was the 'lawgiver,' and instilled in country the codes of conduct for behavior needed to help ensure its well-being, In the process of moving through the Song Cycle from south to north, as well as in and out of the sea, Marala left behind threetoed tracks. He also left behind the grooved impressions of his tail feathers (his 'ramu' or ceremonial engravings) when he sat down to rest and create his law ground. Today, three-toed dinosaur tracks (typically those assigned to *Megalosauropus broomensis*) and impressions of cycad-like bennettitaleans (Marala's tail feather impressions and ramu) are seen as testimony to Marala's journey as narrated in the Song Cycle.

★ Marala's emu-like form persists today as a shadow of dark nebulae running virtually the length of the Milky Way, his head (the Coalsack) near Jina (eagle's claw prints; the Southern Cross) and his neck along Gwuraarra (naala, or 'hitting stick'; the Pointers)

Although some locations along the Song Cycle where dinosaurian tracks and plant fossils occur are law grounds, more broadly it is the presence of these trace fossils in the country through which the Song Cycle passes that is the most important thing. The disappearance of some tracks through natural processes is seen as part of ongoing unfolding of Bugarrigarra, as is the appearance of new ones. It is accepted that tracks will come and go as knowledge of them is needed.

Because the land through which it passes has remained largely undisturbed and its custodianship maintained, the traditional law and culture encoded in the Song Cycle remains an important part of the way of life for many indigenous people across the

Dampier Peninsula. Traditional ceremonial activities are still maintained, attended by people who travel hundreds of kilometers to participate. ;;;

Not long after their rediscovery by Jones [in 1945], the theropod tracks at Minyirr came to the attention of Elizabeth Durack, who arrived in Broome in October 1945 and spent time at the lighthouse keeper's cottage. Over the next 8 months, Durack painted a series of 93 artworks for her first solo exhibition... The first painting in this series was Legend, which depicted the dinosaur tracks at Minyirr and the story of Warragunna.

Greater detail about the songline is available in the reference:

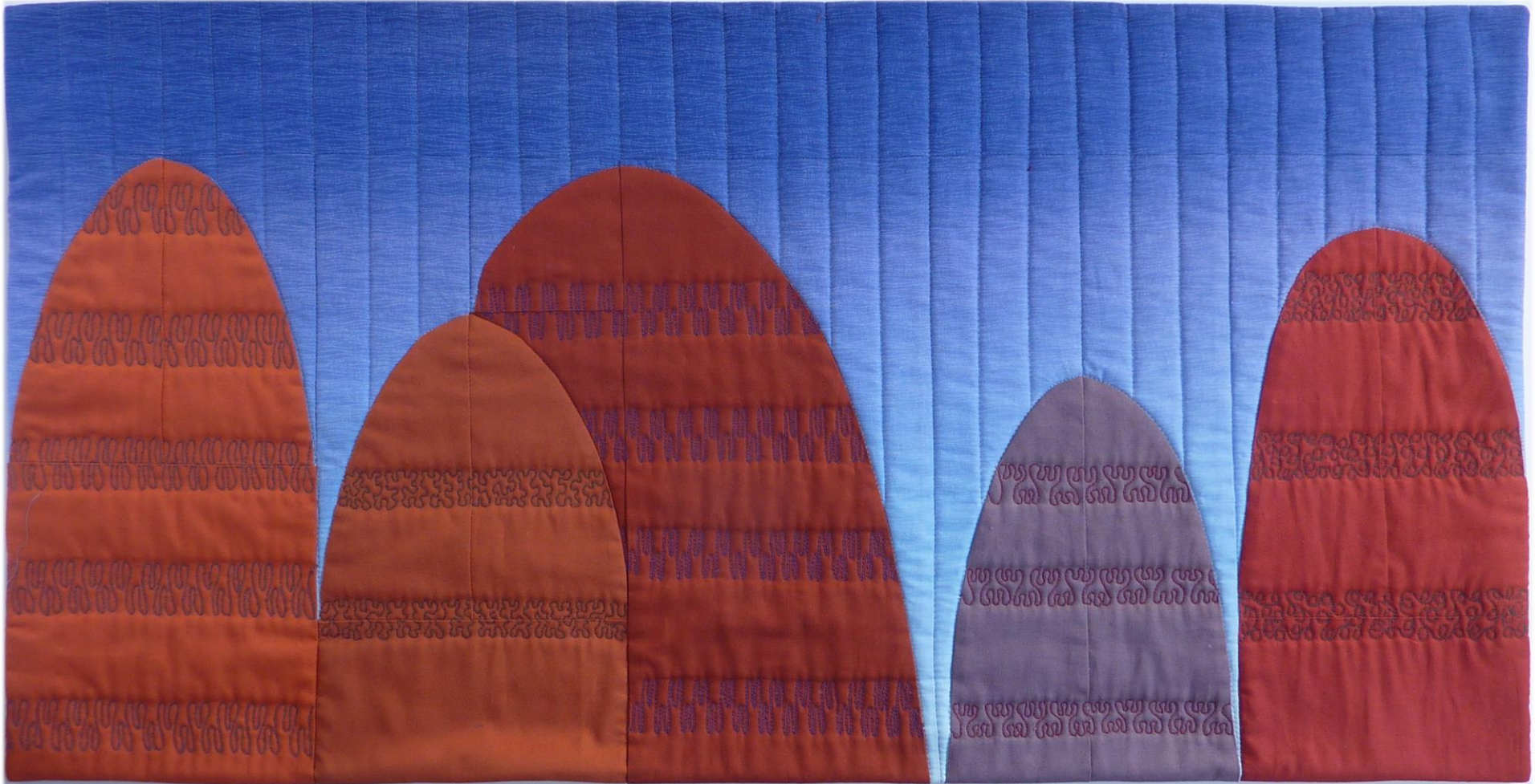
Salisbury et al. (2016), p. 30 <https://www.tandfonline.com/doi/full/10.1080/02724634.2016.1269539>

<image download.>

Legend by Elizabeth Durack, 1946, oil on masonite, 180 x 70 cm (est)

http://www.elizabethdurack.com/artworks_series.php?img_id=201&series_id=37&curPage=0

★ *Bungle Bungles at Sunset*



78cm x 40cm

by Pat Forster, 2019

I'll never forget visiting the Bungles: negotiating the 4 wheel drive track and setting up camp; walking into narrow Echidna Chasm with towering sandstone walls almost sandwiching us; walking to Cathedral Gorge, a natural sound shell; viewing the 'beehive panorama' as it changed colours at sunset - mauve through to blazing red and orange; and the brilliant, clear night sky. An early morning no-door helicopter ride was another treat—strapped in tight and weaving along the precipices and valleys of the range.



Bungles

photo by Jim Forster 12/07/2009, early morning from a helicopter

Purnululu National Park, home to the Bungle Bungle Range

Aboriginal Connections

The Gija and Jaru people are the Traditional Custodians of Purnululu National Park.

Local Aboriginal people maintain a strong connection to Purnululu's ancient landscape. There is a continual connection and association from the dreamtime through to now which is expressed through stories, songs, art and visits to country. Local people continue to use resources in Purnululu that have sustained their lives for thousands of years. These are mainly spiritual resources which are deeply important.

.... Aboriginal people have lived in this part of Australia for more than 20,000 years. The traditional lifestyle changed when the first colonial explorers, led by Alexander Forrest, came to the Kimberley in 1879. They were searching for mineral resources and land for grazing stock. Life changed for the Aboriginal people but their strong connection to country remains. Some of Australia's most famous Aboriginal artists come from this country. Rover Thomas and Queenie McKenzie (now both deceased) painted of this land and the Warmun art centre is a creative hub for contemporary Aboriginal art.

<https://www.bunglebungleguidedtours.com.au/news/aboriginal-connection-to-country-at-purnululu/>

Warmun Art Centre <https://warmunart.com.au/>

★ Works by artists associated with the Warmun Art Centre, owned by Gija People, with a published 'Astro' link, include the following:

- **Moon Dreaming, or Garnkeny Ngarranggarni**, painting by Mabel Juli 2010. The Moon Dreaming narrative is about marriage lore and is available at: <http://desertriversea.com.au/art/155>
- **Garnkiny du Wardel du Lalanggarrany du Darndal, The Moon and the Star, the Crocodile and the Turtle**, painting by Mabel Juli 2013. Depicts two Dreaming narratives, available at: <http://desertriversea.com.au/art/159>
- **Two Mothers for the Moon, Theliny Theliny-Warriny**, painting by Rusty Peters, 2012, narrative at <http://desertriversea.com.au/art/246>
- **Fire Stick Ceremony and Pentecost**, painting by Queenie McKenzie. The traditional Aboriginal Firestick ceremony and the Christian ritual are morphed in this painting. Gija [East Kimberley] people perform the **Fire Stick ceremony** to welcome the new moon and ensure bountiful hunting. A stick is lit from a fire and held up to the moon and the moon is asked to bring good hunting. It is said that if you do not welcome the new moon you will have a very bad month for hunting. Massola (2016) <https://core.ac.uk/download/pdf/156703713.pdf>

- **Moon, Sun and Stars** by Paddy Jaminji, painted ceremonial board c 1979

The Milky Way is depicted in a symbolic ceremonial design.

https://www.cooeart.com.au/gallery/artworks/artist/paddy_jaminji_jaminji/cooe_8983/?sort_by_id=size

World Heritage Listing

The 239,723 ha Purnululu National Park ... contains the deeply dissected Bungle Range composed of Devonian-age quartz sandstone eroded over a period of 20 million years into a series of beehive-shaped towers or cones, whose steeply sloping surfaces are distinctly marked by regular horizontal bands of dark-grey cyanobacterial crust (single-celled photosynthetic organisms). These outstanding examples of cone karst owe their existence and uniqueness to several interacting geological, biological, erosional and climatic phenomena.

Outstanding Universal Value: Purnululu National Park... includes the Bungle Range, a spectacularly incised landscape of sculptured rocks which contains superlative examples of beehive-shaped karst sandstone rising 250 metres above the surrounding semi-arid savannah grasslands. Unique depositional processes and weathering have given these towers their spectacular black and orange banded appearance, formed by biological processes of cyanobacteria (single cell photosynthetic organisms) which serve to stabilise and protect the ancient sandstone formations. These outstanding examples of cone karst that have eroded over a period of 20 million years are of great beauty and exceptional geological interest.

... Purnululu National Park has become recognised internationally for its exceptional natural beauty. The prime scenic attraction is the extraordinary array of banded, beehive-shaped cone towers comprising the Bungle Range. These have become emblematic of the park and are internationally renowned among Australia's natural attractions. The dramatically sculptured structures, unrivalled in their scale, extent, grandeur and diversity of form anywhere in the world, undergo remarkable daily and seasonal variation in appearance, including striking colour transition following rain and with the positioning of the sun. The intricate maze of towers is accentuated by sinuous, narrow, sheer-sided gorges lined with majestic *Livistona* fan palms. These and the soaring cliffs up to 250 metres high are cut by seasonal waterfalls and pools, creating the major tourist attractions in the park with evocative names such as Echidna Chasm, Piccaninny and Cathedral Gorges.

<https://whc.unesco.org/en/list/1094>

★ Venus Appears Over Kandimalal



80cm x 40cm

by Roberta Chantler, 2019

While living under canvas in the Kimberley, I was fully aware of the surrounding environment. Camped at Kandimalal (Wolfe Creek Crater), I watched each afternoon for the appearance of the Evening Star (Venus) shortly after sunset, marvelling at the splendour of the Universe, my place within it, knowing hundreds of generations star gazing before me have had the same experience.



Sunrise at Wolfe Creek, Tripadvisor photo, required attribution:

https://www.tripadvisor.co.za/LocationPhotoDirectLink-g495059-d797665-i68389662-Wolfe_Creek_Crater_National_Park-Halls_Creek_Kimberley_Region_Western_Aust.html#68389662
This photo of Wolfe Creek Crater National Park is courtesy of TripAdvisor

★ Wolfe Creek Meteorite Crater (Kandimalal to the local Aboriginal people). About 90 km south of Halls Creek, Western Australia. Formed about 2 million years ago [??] when a nickel-iron meteorite crashed into the Kimberley plains. The 30 m-high walls of the crater are circular, 850 m in diameter at the top of the rim and 107 m deep, but there are 55 m of windblown sand in the bottom. The flat-topped, near uniform rim is composed of angular blocks of sandstone and quartzite.
https://austhrutime.com/wolfe_creek_meteorite_crater.htm

Morning/Evening Star (planet Venus)

Because the orbit of Venus is inside that of the Earth, Venus is always seen close to the Sun. Because the sky is too bright to see Venus when it is high in the sky, Venus is only visible as either a Morning Star just before sunrise, or as an Evening star just before sunset. ... Venus rises before dawn only at certain times (approx every 1.5 yrs),

Norris (2016) <https://www.cambridge.org/core/journals/publications-of-the-astronomical-society-of-australia/article/dawes-review-5-australian-aboriginal-astronomy-and-navigation/6485EEA891C19A2FC6F0C94DBC24DB75/core-reader>



Photo by Brian Humphreys, 1983

★ Aboriginal connections

Interview with Elder Jack Jugarie: *This place where we are here now, in this Wolfe Creek Crater, we call this place name Murring, that's the name of this Wolfe Creek Crater, Murring, that's it.*

Goldsmith (2014) <https://espace.curtin.edu.au/handle/20.500.11937/665>

... local families called the crater Kandimalal, which means no potatoes, as local people noticed the tasty bush potato didn't seem to grow in the area around the crater. Ms Darkie, Aboriginal Heritage Kimberley resident:
<https://www.abc.net.au/news/2019-07-07/the-three-stories-of-wolfe-creek-crater/11274576>

It is clear that there are Aboriginal accounts of the origin of the crater, and that this is commonly expressed as the “star” or “evening star” that fell to Earth. What is not clear, however, is the extent to which this may be due to the adoption and incorporation by Aboriginal people, of relatively recent scientific knowledge of the origin of the crater. ..

[Interview with Indigenous Elder Jack Jugarie at Wolfe Creek Crater, indicating knowledge of soakwaters/sinkhole] : *...in the early days, the first Mob, they never saw any white people, they reckon, star... second star from the big one, you know, be fall. We call him Wada that star. Wada it fall in this ground. It makes big noise and shakes this country and made a round rim right round, and in the centre, down there, it's a hole, no water stay in there. Doesn't matter how much rain the water don't stay, it goes in the hole. Sink holes, right in the middle.*

Jack Jugarie's account of the origin of Wolfe Creek Crater ... takes the point of view of an eye witness account. ... The meteorite impact is believed to have occurred some three hundred thousand years ago, which is clearly more ancient than the oldest known Aboriginal occupation of Australia. If we assume that due to the time discrepancy it is not possible for any eye-witness observation to have occurred of the impact, then the recounted story must have an alternative origin. Such alternatives could include a description of meteor activity or a meteorite fall, which has now been attributed to Wolfe Creek Crater.

Goldsmith (2014) <https://espace.curtin.edu.au/handle/20.500.11937/665>

One well-known story deals with the passage of two rainbow snakes, which formed the nearby Wolfe Creek and Sturt Creek as they crossed the desert. In the Dreaming, one snake emerged from the ground, forming the crater.

Goldsmith (2014) referring to signage at the crater
<https://espace.curtin.edu.au/handle/20.500.11937/665>

For scientists and researchers, Wolfe Creek Meteorite Crater is a place of great scientific importance. For Indigenous communities, “Kandimalal” is a part of their rich cultural heritage, and bond with the land. For Western Australian's, the crater is a remarkable landscape.

Goldsmith (2014) <https://espace.curtin.edu.au/handle/20.500.11937/665>

★ From Noongar language (SW Western Australia)

Teean benne kwejjiat Hoolat Venus, daylight now coming
recorded by Bates, in Thieberger (2017) <http://bates.org.au/text/43-055T.html>

★ Various narratives have been recorded for Venus including that Venus was the elder of two brothers - his younger brother and a dog spent most their time catching food for Venus. Western Desert narrative in Johnson (2014) <http://www.aboriginalastronomy.com.au/wp->

★ *A Night Outback*



80cm x 40cm

by Stella King

I love the boab trees that are common in the Kimberley region. They remind me of the part of Africa that I grew up in. This work is inspired by the amazing photography of Benjamin James Kapinski and Mark Wassell as well as many awesome photographs of the Milky Way that can be found on the internet. 'Emu in the Sky' is depicted, formed by black spaces in the Milky Way, with the Southern Cross in front of its head. It is a common subject of Aboriginal narratives.



Boabs near Parry Lagoon, Kimberley photos by Pat Forster 09/07/2010



Aboriginal connections



Emu in the Sky. Creative Commons photo owned by Barnaby Norris and Ray Norris
https://en.wikipedia.org/wiki/Australian_Aboriginal_astronomy

The Emu in the sky is an aboriginal 'constellation' which is common to many groups across Australia. Unlike European constellations which are made from bright stars, the "Emu in the sky" is made of the dark clouds in the plane of our Milky Way galaxy, overlaying the background star fields. The emu is known in Noongar as weitj. The "Emu in the sky" is a male weitj which is guarding the eggs. After the rains in Makuru (June/July - Winter) the night skies are brilliantly clear and the "Emu in the sky" is very conspicuous ... Here signals the time to go to collect the eggs (always leaving one). ... It can be difficult for people accustomed to European constellations to make out the "Emu in the sky", although once recognized it is difficult not to see it! As a guide for people who can only see the stars and not the clouds, the Southern Cross is like a crown. The weitj's head is known to European astronomers as the Coalsack Nebula. The pointers, Alpha and Beta Centauri show where its neck is.

https://incubator.wikimedia.org/wiki/Wp/nys/Emu_in_the_sky

[For Badimia people in the Murchison]: In the night sky stories were attached to various star clusters. The Yalibirri or emu dreaming was the most powerful being made up of the dark patches across the Milky Way. In autumn, once the nights became colder and following the first rains, this emu in the night sky became clearly visible. Below the emu is a cluster of eggs (known as Wallah). This signified that the time was right to look for emu eggs.

Day and Morrisey (1995). Drawn to Mount Magnet. Wannars, Dolly Pots, Shears. Dowling (2017).
<https://espace.curtin.edu.au/bitstream/handle/20.500.11937/73585/Dowling%20C%202017.pdf?sequence=1&isAllowed=y>

.... I had been sitting there for some time feeling too languid to talk and taking but a faint interest in the [Aboriginal] girls conversation we heard a low mutter of thunder. It growled and muttered for quite a long time and I fervently hoped the storm would travel our way. Again the thunder growled and rumbled. Waitch tiered very tired said Tupin. Waymen nodded "Long time to settle down very heavy load today". My interest was roused "What are you two talking about there are no waitch about no

green grass" I exclaimed. "Oh Missus" laughed Tupin Waitch not here. Waitch faraway there she move again as the thunder rumbled again "Well Tupin tell me the story. I am tired today is it anything like the Chudic " Waymen grinned "Tupin tellum stories well. Yes Tupin tell um Missus" Tupin is undoubtedly a good storyteller and she has heard a good deal of Native law from her mother Yilga and her old husband Winmar. "Well Missus, you may (remember) Waitch in the sky among the Gindies (Stars). "Yes Tupin I replied I looked at her, every night.

Long long time ago Waitch was blown up into the sky in smoke from a big big fire by a big big wind but when she got there she found no place to stop so she went to the moon and tried to rest between her horns but by and by the moon got fat and round and she squeezed Waitch out then Waitch went to the sun but the Nunghars in the Sun said they did not want her she talk too much. Then she went to the Gindies and asked them to give her place to camp in. The Gindies talked together and they said "Here are we a lot of us keeping the earth up and we have to keep close together, so we can't go out and hunt or play for if we did the earth would drop and we are tired of keeping so close together" so they told Waitch if she wanted to camp with them she must take part of their load. Waitch agreed to this and where the stars were closest they spread out and let Waitch settle down between them but after a time they got cunning and moved a little bit further away from Waitch and gave her a little more road. Now Waitch is afraid to grumble too much for she has no other place to go and by and by the Gindies little by little put all the load on Waitch's back she had to spread out her wings to keep it in place but sometimes it gets very heavy and Waitch dare not close her wings for the Gindies tell her if she lets a little bit drop she will be blown away again. Sometimes she lets a little bit drop and is like a Gindie dropping down but she is frightened to do too often. So when she gets very very tired she groans and moved one part of her load from one wing to the other and while she is doing that the weather is very hot and you can hear her groaning. Sometimes when she moves her load she does it with a jirk and then the whole earth trembles but she is frightened to read it too often therefore only moves it gently and grumbles and growls nearly all the time. If she makes too much fuss the Nunghars in the Sun get angry and make it dark and send out flashes of light to frighten her and make her quiet. Then when it rains very hard that is Waitch crying because her load is so heavy. But after a time she gets quiet and settles down to rest again. Sometimes the Gindies cluster together and help her a little bit but they don't do it often for they are afraid if they get too close together Waitch would make a big jerk and perhaps move the whole earth on to them again. So they only now and then just hold the edge up a little bit so as to rest her and keep her quiet.

Hassell (1861-1910), South Coast WA

<https://indigenous.sl.nsw.gov.au/collection-items/my-dusky-friends-sketches-south-eastern-natives-western-australia-1861-1910>

★ Murchison Night Sky



by Meg Cowey, 79.5cm x 79.5cm

Without interference of city lights, the Milky Way blazes over the rocky landscape. Human intrusion is revealed by an occasional satellite: a pinpoint reflection of the sun moving contrarily to the stars.



The core of globular cluster 47 Tucanae [Southern Hemisphere], a vast cloud of old stars found within the southern constellation Tucana that contains 25 known millisecond pulsars. <https://www.insidescience.org/news/some-einsteins-space-time-ripples-have-yet-break-their-silence> Photo credit: ESO, <http://creativecommons.org/licenses/by/4.0/>

When it comes to stargazing and astronomy, West Australians are very lucky. WA is quickly becoming an iconic global astronomy destination because the stars and science are right on our doorstep.

Being so isolated, WA has some of the darkest night skies on earth. Plus the Square Kilometre Array mega-science project is being built in our Mid West [the Murchison] which will help solve some of the deepest mysteries of the universe. Scientists and stargazers are coming from around the world to enjoy the amazing natural asset over our heads. We have some of the best night skies in the world and some of the most remarkable places to view them from. All you have to do is turn out the lights. <https://www.perthnow.com.au/travel/caravan-camping/why-western-australia-has-the-best-lightshow-on-earth-ng-65ec4d00fe9d0d34453a43cf415bd578>

Aboriginal Connections

Aboriginal people have an holistic worldview, which includes reference to the night sky, expressed here in relation to songlines: 'Each songline has a story, a song, dance and art, sometimes multiples of them ... It will include the wind, the rain, water itself, the sky, clouds, the sun and the moon, the stars. All these things are crucial to us'. Noel Nannup, Noongar Elder, in Tonello (2014)

Connections to the night sky for Aboriginal groups in Western Australia include the following with examples (there are many to pick from!):

The landscape

In the Jukurrpa (dream time) two dingoes travelled to Wilarra, following the call of the moon. Wilarra, which also means 'moon' in Manyjilyjarra, is a very significant site lying on the edge of the large salt lake, Lake Dora. The dingoes gave birth to a litter of puppies at Wilarra, where they were looked after by the moon. The dingoes stayed for a time at Wilarra, scratching into the earth to create several distinctive small saltwater pools, which are still visited by the Martu for their healing properties.

<http://www.aboriginalsignature.com/martumiliartpeintureaborigene/nora-nungabar-country-around-the-canning-stock-route-152-x-76-cm-13-282>

Art

Dale's Cave, located north east of Perth on the Avon River, was called the Moon Cavern by the Perth Aborigines because, people said, the moon once entered there to rest while on her journey across the sky. She leant against the wall of the cave, and left the impression of her hand, which has survived even to this day.

Armstrong (1836) in Tilbrook (1983)

<http://ro.ecu.edu.au/cgi/viewcontent.cgi?article=8068&context=ecuworks>

Ancestral spirits

Marala the Emu Man, a law giver for the Goolarabooloo people along the Dampier Peninsular, is seen to persist today as Emu in the Sky, see page 33 of this booklet Salisbury et al. (2016) <https://doi.org/10.1080/02724634.2016.1269539>

For Noongar people, Charnock, the evil spirit woman, who gathered spirit children in her hair, was hurled into the sky at Wave Rock when a flock of magpies flew at her to try to free the children. She now resides in Hyades - the red star Aldebaran is her campfire, see page 48 of this booklet

Goldsmith (2014). <https://espace.curtin.edu.au/handle/20.500.11937/665>

Seasonal changes

... the appearance of *Danacat* (the Seven Sisters) on the horizon at the break of dawn is a sign that *Cielba* (the "grass season", which is similar to autumn) is near. *Cielba* is one of six Noongar seasons.

<https://www.nacc.com.au/wp-content/uploads/2018/06/Sharing-Noongar-Knowledge-low-res.pdf>

In southern parts of the Western Desert, the rising of the *Kungkarungkara*, the Pleiades, marks the *nyinninga* season from May to September, which is cold and dry At this time of the year, women .. collected vegetable foods, such as grass seed, to sustain their band. (Mountford, 1976) in Clarke (2015)

https://www.researchgate.net/publication/276207234_THE_ABORIGINAL_AUSTRALIAN_COSMIC_LANDSCAPE_PART_2_PLANT_CONNECTIONS_WITH_THE_SKYWORLD

Standards of behaviour

For Noongar people, the Southern Cross is four women who were swept in to the sky as a result of visiting a sacred waterhole which was forbidden to women.

Reneke (2015). <https://www.davidreneke.com/night-skies-of-the-noongar/>

For the Mowanjum community in the Kimberleys, dark patches on the moon were from when a whirlwind which carried away a disobedient girl and put her into the moon.

Utemorra et al (1980) in Johnson (2014)

http://www.aboriginalastronomy.com.au/wp-content/uploads/2018/05/Night_Skies.pdf

Star maps

Star maps are used to teach Songlines and to guide journeys along them, see W in the sky on page 48 of this booklet

<http://www.bbc.co.uk/programmes/p04xx7s3>

Time indicator

Rather than being measured, the passing of time is experienced in traditional Nyoongar life by the passage of the sun and the moon, the tides and the six seasons.

Robertson et al. (2016) <https://research-repository.uwa.edu.au/en/publications/ngalak-koora-koora-djinang-looking-back-together-a-nyoongar-and-s>

★ Night Sky



78cm (wide) x 79cm (high)

by Pat Forster, 2019

The quilt celebrates Aboriginal night sky understandings that emanate from Western Australia.

Patterned fabric is 'Seven Sisters in the Milky Way' designed by Marlene Doolan of Aboriginal heritage. The galaxy block is original. The emu is copied from a public domain photo owned by Barnaby Norris and Ray Norris.

Text on the quilt, starting at the top left block and rotating anticlockwise

- emu in Milky Way black spaces signals seasons, signifies Marala the emu man
- star maps guided navigation
- moon a distance time indicator
- Seven Sisters, Pleiades
- Jundas campsite, Hyades
- morning star (Venus)
- (no text) comet/meteor sequin

★ *Aboriginal connections*

Emu in the sky

The emu is made of the dark clouds in the plane of our Milky Way galaxy, overlaying the background star fields. There is a male weij which is guarding the eggs. After the rains in Makuru (June/July - Winter) the night skies are brilliantly clear and the "Emu in the sky" is very conspicuous. Here signals the time to go to collect the eggs

https://incubator.wikimedia.org/wiki/Wp/nys/Emu_in_the_sky

Star map example

A prominent Noongar song line is the W in the sky, as told by Noel Nannup. The 'W' is formed by the five bright jindang (stars): Canopus, Sirius, Rigel, Betelgeuse and Aldebaran. ... When compared with a map the 'W' in the sky appears as a mirror image of the 'W' formed between ... Stirling Range, then towards Wagin Narrogin, then towards Katter Kich (Wave Rock), then through to beyond near Merredin, and back up across to Lake Moore. ... Each star lines up with a prominent granite rock in the land which marks a turning point along the songline Summarised from video at <https://www.bbc.co.uk/programmes/p04xx7s3>

Moon a distance time indicator

Across millennia, the four major Noongar clans living in the country we now call Perth would send a solitary runner to travel as far north as Geraldton, then down to Esperance, before returning home. It was an epic journey that took four full moons to complete. He would be carrying message sticks to give to the medicine men of each nation he encountered, inviting them to return to his country for an important annual gathering.

<https://thewest.com.au/opinion/inside-cover/bronze-art-delivers-message-of-unity-ng-b88324043z>

Dom Rosendo Salvado (1814–1900), commented "The months are distinguished from one another by the moon, but they are not given individual names, or divided into weeks. Again the days are not distinguished except by the position of the moon" ... Moreover, Salvado noted that Nyoongars reckoned weeks and days according to the moon, but that these smaller divisions of time were not as important as the six seasons in the Nyoongar temporal order.

in Ryan (2013) <http://ro.ecu.edu.au/cgi/viewcontent.cgi?article=1634&context=ecuworks2013>

Seven Sisters, Pleiades

Danakat [Seven Sisters, The Pleiades] is the tragic story of how seven sisters lost their lives while searching for their father. The story tells of a family's love and devotion to each other and how they stayed together for eternity.

Walley et. al. (2013) <https://trove.nla.gov.au/work/184453351?q&versionId=200879365>

Junda's campsite, Hyades

The story of Junda, whilst known to some as the tale of the Charnock/Charrnock /Jarnok Woman, is quite literally translated as the "Tale of the Evil Spirit Woman, Junda"

[https://incubator.wikimedia.org/wiki/Wp/nys/Charrnock_Woman_\(Junda\)](https://incubator.wikimedia.org/wiki/Wp/nys/Charrnock_Woman_(Junda))

Near the banks of the Swan River, at Claisebrook a plaque alongside starts with a version of the Charrnock woman Dreaming (see page 5 in this booklet) and continues: As Woor-Jall-Luk [Charrnock woman] was hurled into the sky by jumping on Gnadie-Darange-E-Noo (Wave Rock) and made our Bibbee-Goor-Ee (Milky Way), a great many children fell out of her hair and fell back to mother earth. They made the first Bwia-Ee-Koolungah-Nyinna [the stone where the little babies fell] place which we know as Hippo's Yawn*. The five stars, (Hyades Star Cluster) represents her Kallep [country, home, fire], they are like an upside down 'V' and located halfway between the three Women Elders (Orion's Belt) and the Pleiades Star Cluster (Seven Sisters). The star Aldebaran on the bottom right side of the Hyades Group is her campfire and it is always burning brightly

Goldsmith (2014). <https://espace.curtin.edu.au/handle/20.500.11937/665>

Morning star (Venus)

When I was last in the bush [Noongar Country] in search of the natives, the stars were shining brightly at night. "What star is that?" I said to Deenat, pointing to Venus. "Oh, that is Julagoling," was the answer, "What is it—a man, or a woman, or what?" I enquired. "Oh, very pretty young woman," was the reply. "Where is her husband?" I said. "She has no husband; she has had some children, but she always kills them; she is very powerful in magic. Ah, there she goes off to the West, now to practice her enchantments upon us. Moore (1842)

https://books.google.com.au/books?id=1e8UAAAAAYAAJ&printsec=frontcover&dq=George+Fletcher+Moore&hl=en&ei=cY39TKLJEI30cf7SrMAG&sa=X&oi=book_result&ct=result#v=onepage&q&f=false

(no text) Comet/meteor sequin

Binnar. A meteor, described by the natives as a star of fire; seldom visible, but when seen considered by them as an omen of death. Moore (1842).

https://books.google.com.au/books?id=1e8UAAAAAYAAJ&printsec=frontcover&dq=George+Fletcher+Moore&hl=en&ei=cY39TKLJEI30cf7SrMAG&sa=X&oi=book_result&ct=result#v=onepage&q&f=false

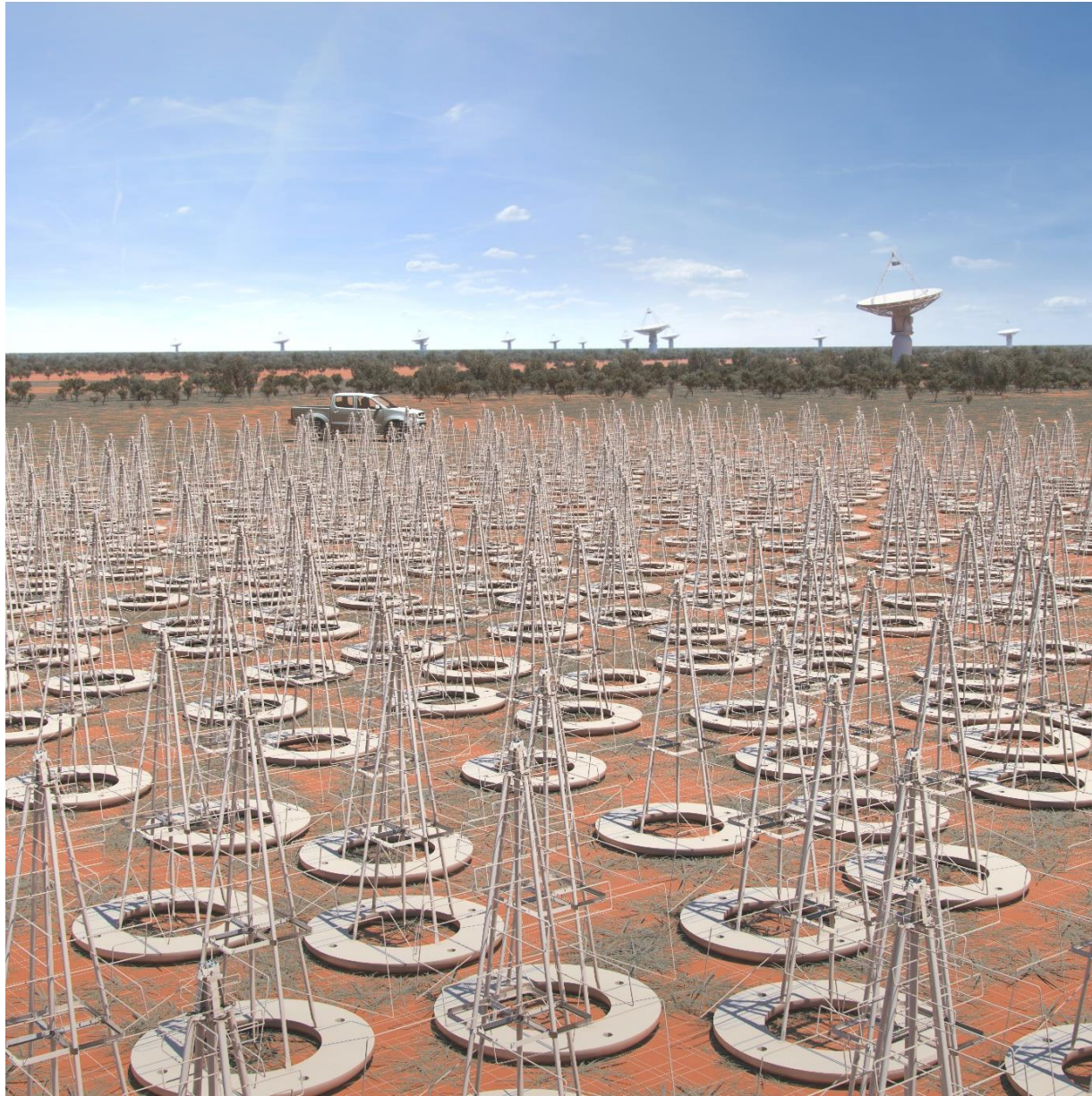
★ Red Dirt Plain



78cm x 40cm

by Pat Forster, 2019

Red-dirt plains in the mid-west come alive in spring with wildflowers - everlastings, wreath leschenaultia, and many others besides. Red-dirt plains of the Murchison, land of the Wajarri Yamatji (Aboriginal) people, are also home to the Square Kilometre Array, a component of an international radio-astronomy project (in development).



Square Kilometre Array Low Frequency Aperture Array in the Murchison.

photo credit SKA Organisation

photo available under the Creative Commons license

<https://www.skatelescope.org/multimedia/image/ska-low-frequency-aperture-array-close-up-australia/>

Aboriginal Connections

Accessing water on red dirt plains

[In arid Australia] Aboriginal people generally first used ephemeral water resources which disappear most rapidly. Claypans and other playa lakes that have great surface areas and little depth diminish quickly through evaporation. Following observation of storms in particular areas, people moved to the recently watered area. There they exploited whatever food resources they could while awaiting game attracted by new growth, and the flowers and fruits that follow a month or more after the storm passes. During their wait, they used the water in the claypans for their daily needs. As these resources diminished, the group would move back to more reliable water sources, perhaps well shaded deep rock pools in narrow rocky valleys. Being well acquainted with the probabilities of the climate and knowing intimately all the water storages of their region, their actions and movement to new water sources were always carefully thought out with all likely possibilities considered. When the group did decide to move, their course would often involve travelling between a series of granite domes, which then became not only resource bases, but also navigational markers.

Bindon (1997) [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

In the Great Sandy Desert, claypans were favoured camping places when they held water because they attracted game.

Bayly (1999) quoting Lowe and Pike [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

... in the western Gibson Desert, the well known as Ngarinarri sustained the aborigines, Warri and Yatungka, the so called “last of the nomads”, during a prolonged drought in the 1970’s. This well, which was dug through a claypan, was 3.5 metres deep.

Bayly (1999) [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

Red dust storms

You go 1000km north east of Perth. So you got to go north east all the time going out into our lands.... people, actually, you know a long time ago, probably before my mum, everyone... brought these rock, from east and west of the land, and the walls are still there, you know, like Stonehenges in England, and they have these walls there still in the bush. And they are all still there, ... these big trenches for dust storm sites, where people sheltered from the dust storms and there was all like all these stones came out and hit you pelted you for three days sometime, you just couldn’t see in front of you, so the people had to shelter.

Goldsmith, interview with Josie Boyle (2014) <https://espace.curtin.edu.au/handle/20.500.11937/665>

Red dust storms video <https://www.youtube.com/watch?v=V7Lq4Ylrik8>

Square Kilometre Array

The Murchison Shire, red dirt country, is approximately 50,000 square kilometres in size. The Council serves 29 stations and a population up to 113.

<https://www.murchison.wa.gov.au/>

The above extremes of a very large area and very low population was a major reason why the Murchison was chosen as the site for radioastronomy installations for an international radioastronomy project: the extremes mean very low radio wave activity which is crucial when trying to detect faint radio-wave signals from outer space. The site is 300 km from Geraldton.

Components of the project in the Murchison will be/are:

- the Australian Square Kilometre Array Pathfinder, by CSIRO, which consists of 36 antenna [radioastronomy dishes] each 12m in diameter working together as a single instrument [radio telescope]
Australian Square Kilometer Array Pathfinder pamphlet by CSIRO
- the Murchison Wildfield Array, developed by a multinational consortium led by Curtin University, which consists of 126 aperture array tiles each made from 16 fixed dual-polarisation dipole antenna [small in size], designed to measure low frequencies, and linked to a high performance computing structure
‘Murchison Widefield Array’ pamphlet by Curtin University
- 2m tall ‘Christmas Tree’ antenna [on a roundish base and reaching a point at the top]. In the first phase of these , 130 000 will be spread over 80km. In phase 2 there will be up to a million.
‘Image a Big Telescope’ pamphlet, by SKA Square Kilometre Array Australia

The installations are on land of the Wajarri Yamatji (Aboriginal) people. Consultations and steps are being taken to preserve the integrity of the land. The ‘Shared Sky: The SKA’s Indigenous Art/Astronomy Exhibition’ (2014 -) was facilitated for Yamatji artists, other descendants of the Wajarri people, and African people from a linked ray facility in Africa, to reflect the concept – that no borders exist in the sky and that the night sky is an increasingly scarce natural resource that belongs to and is shared by all humanity.

Web links www.ska.gov.au

<https://www.skatelescope.org/>

Quartz and Jam and Mulga



80cm x 40cm

by Elizabeth Humphreys, 2019

Acacia accuminata, the Raspberry Jam wattle, and acacia aneura, the Mulga, along with other varieties of wattle, are highly prized and have many uses. First Nations people used these trees for wood, tools, food and medicine, often adding a sharp chip of quartz to make implements. Early European settlers found the jam tree excellent for fences.



Quartz boulder landscape, Mount Magnet

photo courtesy of Karen Morrissey, Meeline Station, Mount Magnet

Aboriginal connections

Uses of acacia from Leyland, E. (2002). Wajari Wisdom, Food and Medicine Plants of the Mullewa/Murchison District of Western Australia as used by the Wajarri people

Seeds and gum

The seeds of acacias *acuminata*, the Raspberry Jam wattle, are eaten raw or baked when they are soft and green. When ripe and hard, they are ground into flour for making damper. The tree is also a source of edible gum and the wood provides excellent wood for artefacts. A very prolific bearer (p. 8)

The seeds of acacia *aneura*, Mulga, when still green and soft, are ground into a paste which is eaten raw. It doesn't seem to have been ground into flour except in times of scarcity of better seeds. The tree has edible gum (p. 9).

Galls

Acacia acuminata, *acacia aneura*, *acacia coolgardiensis* (Spinifex Wattle) and *acacia ramul* var. *linophylla*.

Insect galls are found on many trees, particularly Acacias. They are the rounded swellings where insects, usually a species of wasp, have pierced the skin of a plant's stem to lay their eggs. As the larvae hatch and grow larger, the plant grows a protective swelling, or gall around the developing insects which are feeding on the sweet sap within. These galls can be eaten, but their flavour is sometimes a little bitter or astringent....It is the contents of the gall, the insect larvae and the chewed inside, that is eaten. It both looks and tastes like coconut. When the small hole in the centre of the outer cover is open, it means the insect has hatched and the 'coconut' is no longer edible (p. 78).

Witchety Grubs

Acacia aneura is a host for witchety grubs (p. 79).

Sweetener

The flowers of many acacias including *acacia acuminata* and *acacia aneura* are soaked in water to provide a sweet drink (p. 80).

Spears

the dreaded quartz edged spear was up to ten feet long and about one inch in diameter and made from the mungurn (swamp wattle). This spear was made in the Ellensbrook and Wonnerup areas.

<https://www.noongarculture.org.au/language/>

Quartz

Moore (1842) who resided in the South West (Noongar Country) describes

- boryl, gidjiboryl a spear the head of which is armed with jagged broken pieces of quartz or glass glued on to the wood.
- miro The throwing-board used by the natives to launch the spear. It is about two feet long, about four inches broad in the middle, and tapering off at each end. One end is armed with a piece of glass or quartz, set on with Kadjo, or grass-tree gum, which is used particularly for scraping and tapering the points of spears.

https://books.google.com.au/books?id=1e8UAAAAYAAJ&printsec=frontcover&dq=George+Fletcher+Moore&hl=en&ei=cY39TKLJEI30cf7SrMAG&sa=X&oi=book_result&ct=result#v=snippet&q=spear&f=false

Other uses of quartz (references drawn from the South West)

tabba a knife made of sharp pieces of quartz connected to a short wooden stick, as thick as a thumb, by kodja or blackboy tree gum

<https://www.noongarculture.org.au/language/>

yandi or coolamun – A dish that is carried by women, (made by the men who would cut piece of bark out of a tree using quartz stone and shape it into a bowl.

<http://www.melvillecity.com.au/newproxy/service/api/node/workspace/SpacesStore/ce4232b5-715a-4a2d-aafc-2963c49166e0/Noongar%20Six%20Seasons/content/Noongar%20Six%20Seasons>

George Grey (1841) describes how the contents of a Noongar woman's bag included

- Quartz, for the purpose of making spears and knives;
- Pieces of quartz which the Noongar doctors have extracted from their patients, and thus cured them from diseases; these they preserve as carefully as Europeans do relics.

<http://gutenberg.net.au/ebooks/e00055.html>

Springtime in the Outback



80cm x 40cm

by Elizabeth Humphreys, 2017

In springtime a great variety of wildflowers emerge from the iron rich, red, soil. Varieties of mulla are wide-spread and abundant in most areas after good winter rain. Herbaceous annuals appear in colours ranging from pink and purple to yellow and white. The wildflower areas are also havens for wildlife.



photo by Elizabeth Humphreys, near Canna, Morawa Shire 09/09/2009



photo by Pat Forster 05/09/2004

Wildflowers at Walga Rock



80cm x 80cm

by Elizabeth Humphreys, 2019

Once a traditional meeting place for Aboriginal people from distant areas, Walga Rock (Walgahna) has a wealth of history. The rock art gallery includes a sailing ship. Wildflowers are abundant in the springtime. A beautiful place to visit. The rock is located approximately 50 kilometres south west of Cue.



Walga Rock

photo by Pat Forster 3/9/2004

Aboriginal connections

Walganna or Walga Rock, located about 60 km east of Cue, is 1.5 km long and 500 m wide [a monolith]. It emerges from a very flat semi-arid landscape clothed with dispersed Mulga (*Acacia aneura*) woodland. Situated adjacent to a temporary water hole, a shallow west-facing shelter runs for more than a hundred metres on the south-west side. This shelter developed along sheet joints... The rear wall of the rock shelter is decorated with paintings in red, yellow and white pigments. ... excavation of six square metres which reached about 3 metres in depth revealed three distinct sedimentary units. ... Evidence of human use of the shelter was found throughout the whole of the excavation sequence, giving us indications of human activity in the vicinity for the last 10 000 years. Occupation was intermittent and more or less in the same temporal pattern as delineated by other authors writing about arid inland Australia (Gould 1977; Smith 1988; Veth 1989). Periods of sparse use begin the sequence, followed by a gradual increase in visitation that culminates in an intensive occupation over the last few thousand years. At around 4 000 years ago, small delicately flaked stone tools begin to appear here just as they do around this time in many other Australian archaeological sites.

Bindon (1997) [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

Cast in rich red ochre, the granite walls of Walga Rock near Cue bear testament to generations of Aboriginal people. Walga Rock was a meeting place for Aboriginal people coming from across Australia. Over thousands of years, paintings representing snakes, goannas, spears, handprints and even a sailing ship were painted by visitors before they moved on. A report by the University of Western Australia indicated there were more than 988 motifs on a 100-metre-long panel. <https://www.abc.net.au/news/2016-09-15/creating-tourism-and-jobs-at-walga-rock/7848162>

The name is Walga, meaning blood, like come from a kangaroo, kangaroo blood. Used to be a meeting place.....had plenty of water...

From the video, Creating tourism and jobs at Walga Rock

<https://vimeo.com/182500708>



Walga Rock

photo by Pat Forster 3/9/2004

London Bridge, Sandstone



80cm x 80cm

by Stephanie Knudsen, 2019

London Bridge near Sandstone WA is a naturally formed arch of weathered basalt some 350 million years old. The formation is about 800 metres long and 3-10 metres in height.

The old goldmining town of Sandstone is situated between Mount Magnet and Leinster and is a tourist attraction and popular picnic area.



London Bridge, Sandstone

anonymous traveller's photo accessed from Tripadvisor

https://www.tripadvisor.com.au/Attraction_Review-g488367-d6602257-Reviews-London_Bridge-Sandstone_Western_Australia.html

London Bridge, a prominent attraction in Sandstone, is part of a larger formation about 800 metres long, varying in height from around 3 to 10 metres. It is formed of weathered basalt and the rock is believed to be about 350 million years old.

Unfortunately with time the bridge is getting thinner and thinner and will eventually fall. We do ask that you enjoy the picture from ground level to preserve this natural wonder, and for your own safety as well.

For over 100 years London Bridge has been a popular lookout spot in Sandstone.

<https://www.sandstone.wa.gov.au/london-bridge.aspx>

Aboriginal connections

It is believed there were two distinct tribes within the Sandstone district. The Wongi in the eastern half and the Yamagee in the western half. It has been suggested that neither tribe would cross into the other's territory except for tribal meetings.

Furthermore, considering the scarcity of water in the area it is also thought both tribes may have only lived in the area on a non-permanent basis. After that, very little is known of their presence in Sandstone. The only available information has been gathered from a scant number of publications throughout the years.

There are, however, definite signs of an Aboriginal presence through the district. These include hand stencils on rock formations, old camping grounds, stone cairns and the evidence of flint tool making. Gnamma holes have also been discovered throughout the years, mainly by farmers when their stock fell into them. Sadly, many of these holes have been filled in since then for this exact reason.

<https://www.sandstone.wa.gov.au/traditional-owners.aspx>

★ Granite Outcrops



78cm (wide) x 78cm (high)

by Pat Forster, 2019

Granite outcrops are sites for fresh water, animals and plants that rely on water, ingenuity by Aboriginal people in the collection of the water. and rock art and ceremony.

Patterned fabric: Goanna and Snake Dreaming by Audrey Martin Napanangka of Aboriginal heritage.

Text on the quilt

- Dreaning narratives, ritual, ceremony, gender specific or shared
- gnamma..rockholes, formed by weathering, fire, pounding; pit and pan shapes, cleaned and covered
- soaks with wells, flora, fauna...pit traps
- stone arrangements
- rock art
- navigation markers, key points on songlines
- grinding patches for seed and ochre, slab shelters and lizard traps



Wooleen Station, granite slabs detaching, cave shelter, water soak/hole near bottom right, plant growth sustained by water runoff. photo by Pat Forster 5/9/2004

Aboriginal connections

Dreaming narratives

★ see Wave Rock, Charnock Woman example on page 18 of this booklet.
Goldsmith (2014). <https://espace.curtin.edu.au/handle/20.500.11937/665>

Ceremony

By re-enacting the activities of their ancestors during commemorative ceremonies, Aboriginal people re-affirm and reinforce their religious beliefs. Amongst the activities which ancestors first performed, and which modern Aboriginal groups often maintain, is the creative formative journey first taken by the ancestor figure during the establishment of the present landscape. These ancestral journeys began so long ago that they now possess the qualities of dreams. ... Thus, the activities of ancestral beings around granite domes which occurred during the *tjukurrpa* (Dreaming) are mirrored by the actions of the most recent Aboriginal groups..
Bindon (1997) [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

Gnamma

The Narkeening Gnamma Hole [NE of Nungarin] is historically important as an example of Aboriginal adaptive use of environment. ..Barry Cornish discovered the main hole on 15th January. It was completely filled with dirt, numerous rocks, and remains of bush timber, and was barely able to be discerned from the surrounding area. Once excavated, the hole proved to be more than 6 feet deep, and of considerable capacity. The smoothly irregular shape of the hole bears testimony to the method of construction, with hollows that suggest that fires had been lit to crack the rock.
<http://inherit.stateheritage.wa.gov.au/Public/Inventory/PrintSingleRecord/b3421a19-7d67-4f35-bb24-99a13c740e8a>

Shape

Bayly (1999) groups gnammas into two basic forms: pits and pans ... Both types of rock-hole occur on the upper surfaces of inselbergs where the inclination is less than 20 degrees, indicating a threshold for rock-hole formation.
https://www.waterconnect.sa.gov.au/Content/Publications/DEW/dwlbcb_2009_08_GawlerRangesReport_5Feb.pdf

Cleaned and covered

Water kept our people alive, so gnammas were sacred. They were guarded and regularly cleaned. Slabs of rocks were placed over some smaller pit gnammas to reduce evaporation and prevent wildlife from falling in and drowning.
https://www.wheatbeltm.org.au/sites/default/files/knowledge_hub/documents/The%20Derdibin%20Gnamma%20Storybook%20Final%20Web.pdf

Soaks with wells

Example: Hunts Soak. Located at Lake Koorkoordine, 8km north of Southern Cross on the Bullfinch Road, in the Golf Club Common. Hunts Soak is one more of the remarkable daisy-chain of wells and soaks which provided the Goldfields Track with water until O'Connor built his pipeline. These wells were always built adjacent to granite rocks because of the water soakage from the rock.
<https://www.wheatbelttourism.com/natural-wonders/granite-outcrops-in-the-wheatbelt/>

Flora

Various plant species favoured the rim of rocky outcrops, exploiting the zone where run-off from the all too rare rainfall was concentrated. Two very important trees to arid land dwellers, Kurrajongs (*Brachychiton gregorii* F Muell) and Quandongs (*Santalum acuminatum* (R Br) D C) are commonly found around granite outcrops. They provide fruit, wood and sometimes medicinal products for Aboriginal people.
Bindon (1997) [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

Fauna, pit traps

The occurrence of food plants and water also attracted animals such as macropods and reptiles, many of which also contributed to Aboriginal diet. Austin observed "In many places about the country, and particularly near some of the rocks, brushwood fences are found that serve, or have served, the purpose of trapping game. ... At the end of the fence or at the convergence of two of these, holes were dug into which fell any animals that followed the fences to a gap.
Bindon (1997) quoting Austin (1856)
[https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

Stone arrangements

Stone arrangements often mark ... ritual places. The constructions, formed from slabs and other weathering products from the inselbergs [granite outcrops], take the form of a 'W', are erected as a sinuous line or may be piled into a series of scattered mounds.
Bindon (1997) [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

Rock art

Petroglyphs are carved into the rock surface, pictographs [or pictograms] are painted onto the surface.
https://en.wikipedia.org/wiki/Rock_art

Navigation markers, key points on songlines

Being well acquainted with the probabilities of the climate and knowing intimately all the water storages of their region, their actions and movement to new water sources were always carefully thought out with all likely possibilities considered. When the group did decide to move, their course would often involve travelling between a

series of granite domes, which then became not only resource bases, but also navigational markers

Bindon (1997) [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

★ Songline example linked with stars: see 'W in the sky' on page 18 of this booklet
<https://www.bbc.co.uk/programmes/p04xx7s3> https://incubator.wikimedia.org/wiki/Wp/nys/Song_Lines

Grinding patches

Grinding patches can be defined as rock pavements or slabs worn smooth by Aborigines grinding on their surface. They are most commonly found in arid regions, where Aboriginal people, especially women, carried out seed grinding. Residue analysis has shown that some grinding hollows were used for pulverising ochre and some for grinding up food substances such as hard fruits.

Webb (2007) [https://www.rswa.org.au/publications/Journal/90\(3\)/vol90pt3115-125I.pdf](https://www.rswa.org.au/publications/Journal/90(3)/vol90pt3115-125I.pdf)

Rock shelters

Using loose tabular pieces from weathering processes, windbreaks can be made fairly quickly, particularly if some brushwood is incorporated into the structure. Lack of archaeological remains other than the walls in these structures hinders their exact interpretation.

Bindon (1997) [https://www.rswa.org.au/publications/Journal/80\(3\)/80\(3\)bindon.pdf](https://www.rswa.org.au/publications/Journal/80(3)/80(3)bindon.pdf)

Lizard traps

... *karda mia* (lizard 'traps'), consisting of a granite slab propped by a smaller rock to catch reptile prey on granite outcrops, are hypothesised to have been used throughout *Noongar* country.

[the structures do not trap the lizards, they allow lizards shade, and it has been shown that lizards frequent them more often than other locations on granite outcrops. The construction of them can be classed as special husbandry of animal food]

Lullfitz et al (2017) <http://www.conservationandsociety.org/article.asp?issn=0972-4923;year=2017;volume=15;issue=2;spage=201;epage=216;aulast=Lullfitz>

Water Management



79cm (wide) x 78cm (high)

by Pat Forster, 2019

The survival of Aboriginal people during drought in Western Australia depended on their knowledge and custodianship of water resources.

Patterned fabric: Bush Plum and Waterhole by June Bird of Aboriginal heritage.

Text on the quilt

- holistic view of water land sky nature, kinship group ownership and responsibility
- moved camp to optimise water use, knowledge transferred between generations
- creation Dreaming, songlines that link waterholes, star maps for songlines, ceremony ritual lore
- Dreaming that conveys a moral
- rivers creeks lakes, gnammas, soaks with wells, springs, flooded claypans, river waterhole, waterholding frogs, trees
- vessels, purification
- symbols, language



Pit gnamma at the Humps near Wave Rock, depth approx 83cm, measured with walking stick!

photo by Pat Forster 31/07/2019

Aboriginal connections

Holistic view of water land sky nature, kinship group ownership and responsibility
Understand that Indigenous peoples of Australia ... have complex systems for ensuring their ancestors (creators) are kept happy. Part of this responsibility is being custodians of one's land, sky and waters. This is through a strong kinship system that mandates a people's responsibility to care for the land. Moggridge (2011)

<http://archive.riversymposium.com/index.php?element=B3C+Moggridge.pdf>

Moved camp to optimise water use

.... family groups have a traditional access to a tract of land, which they travel across in a seasonal journey following the availability of food and water resources.

Knowledge of water is critical in this process. It defines where the animals will be found and how the native plants will flower and bear fruit and nuts that are then gathered by Aboriginal people. By knowing the location and condition of local water sources, Aboriginal families reinforce their ownership of their traditional lands.

<https://japingkaaboriginalart.com/articles/water-the-centre-of-life/>

Knowledge transferred between generations

Finding water in the desert The secret is the elders told them stories about the landscape that detailed every source of water to be found. Pointers include landscape such rock, where water seeps off when there are rains, into sand which protects the water from evaporation; and plant growth such as patches of grass.

Paraphrased from Mears at <https://www.youtube.com/watch?v=Deo9Z9yVBys>

Creation Dreaming

Aboriginal people's understanding of their groundwater system permeates Dreamtime stories. For example, the rainbow serpent is a key symbol of creation but its journey from underground to the surface also represents groundwater rising to the top via springs.

Paraphrased from report on Moggridge in Skatsoon (2006)

http://www.abc.net.au/science/news/ancient/AncientRepublish_1590192.htm

Songlines linking waterholes

Song-lines, also called Dreaming tracks, are paths across the land (or sometimes the sky) which mark the route followed by localised 'creator-beings' during the Dreaming. The paths of the Song-lines are recorded in traditional songs, stories, dance, and painting. By singing the songs in the appropriate sequence, Indigenous people could navigate vast distances, often travelling through the deserts of Australia's interior. ... A knowledgeable person is able to navigate across the land by repeating the words of the song, which describe the location of landmarks, waterholes, and other natural phenomena.

<http://www.ancient-wisdom.com/aborigines.htm>

★ Star maps for songlines

Example, Josie Boyle speaking about sites on the Seven Sisters songline in the Eastern Goldfields: And then we have lots and lots of lakes sites relating to the seven sisters. ... There are about six that are out there still. I was asking him [her son-in-law] ... how much distance is between Gindowee, and Niagra Falls [Dam?], and Boorley Well, and another site out there, and there are six out there, and why are they zigzagged, and he said, well, he looked at it that there were six out there specially because they were aligned to the stars, and that's where they had their ceremonies.

Goldsmith (2014) <https://espace.curtin.edu.au/handle/20.500.11937/665>

Ceremony, ritual, lore

Water is at the centre of knowledge of the land, and much of the ceremony and culture of Aboriginal Australia is focused around the locations of water, which are also linked to important ceremonial sites.

<https://japingkaaboriginalart.com/articles/water-the-centre-of-life/>

Unnecessary interference with a site may result in dire, or at least unfortunate, consequences.... There is a range of actions that Noongar people customarily adopt in order to safeguard against the potency of spirits when visiting their country....It appears to be common Noongar practice to perform a short ritual as acknowledgment of the spirits of the country. This normally involves taking a small quantity of sand from the edge of a creek, pool or lake in one's hand, and throwing it into the water.

Palmer (2016) http://aiatsis.gov.au/sites/default/files/products/monograph/noongar-people-noongar-land_2.pdf

Dreaming that conveys a moral

Example: In the Kimberley region of Western Australia the Dreamtime stories tell of Wonnaira, a giant serpent, who travelled inland from the sea, making the rivers as he went. The places he rested along the way became the big waterholes. Sturt Creek flows into a shallow lake, he camped at this lake, turning the water salty when he urinated....

https://austhrutime.com/salt_water_creation.htm

Rivers creeks lakes, gnammas, soaks with wells, springs, flooded claypans, river waterhole, waterholding frogs, trees

Gnammas are rock-holes commonly found in outcrops of hard rock, particularly granite Bayly (1999) [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

... it is thought that they [gnamma] were initially formed through weathering of faults in granite which Aboriginal people then enlarged by using fire.

<http://www.visitgoomalling.com.au/see/nature/oak-park>

A soak is water that seeps into hollows in freely permeable sediments.

Bayly (1999) [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

A spring may be ... where surface water has infiltrated the Earth's surface (recharge area), becoming part of the area groundwater. The groundwater then travels through a network of cracks and fissures.

[https://en.wikipedia.org/wiki/Spring_\(hydrology\)](https://en.wikipedia.org/wiki/Spring_(hydrology))

In literature on Indigenous use of water, the word 'spring' seems often to have been misapplied to soaks.

Bayly (1999) paraphrased [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

A mound spring is a system fed by carbonated water under hydrostatic pressure.

Bayly (1999) [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

Example: There are mound springs within the Mandora Marsh area [at the western edge of the Great Sandy Desert, WA, close to Eighty Mile Beach]. Graham (2001) https://www.dpaw.wa.gov.au/images/documents/about/science/projects/waaudit/great_sandy_desert01_p326-331.pdf

Well, example: Roe (1836) exploring east of Perth, in Hercock (2014, pp. 262-263). Came to a patch of excellent grass...between two water courses ... In the furthest, which drained in a green grassy hollow 100 yards wide, was a large deep native well 10 feet in diameter and containing a depth 4 feet water ... The well is a spring...

Flooded claypans: water lying in a depression in soft sediments with low permeability

Bayly (1999) [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

In the Great Sandy Desert, claypans were favoured camping places when they held water because they attracted game.

Bayly (1999) quoting Lowe and Pike [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

Riverine waterholes: water in holes scoured out of riverbeds by water movement. The holes are scoured out during floods. The water may evaporate leaving the hole dry but some holes have permanent water.

Bayly (1999) [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

Water from trees: They obtain water from a protuberance, or belly, on the paperbark tree (umebuk). They cut it with a tomahawk (cadjo) about an inch or so through the wood, the water runs out clear and cool and somewhat acid. I have obtained several gallons from a large protuberance. It staves thirst and acts as an aperient in a mild form.

Bates in Thieberger (2017), Murray District <http://bates.org.au/text/43-055T.html>

Tree roots from the desert kurrajong are also used In severe drought. The women look for cracks on the ground that indicate a swollen root which is dug up, shaved, and the shavings squeezed to obtain water.

Ray Mears' World Of Survival - The Red Centre <https://www.youtube.com/watch?v=Deo9Z9yVBYS>

The waterholding frog (*Cyclorana platycephala*) has the ability to take up a large amount of water (stored in the bladder) before burrowing beneath the surface of a claypan ... Desert people appreciate the significance of some indistinct marks on the surface and cut into the rockhard clay with a hatchet to recover one of these frogs at a depth of about 30 centimetres. It was a common practice for Aborigines to squeeze the body water out of this frog and drink it.

Paraphrased from Bayly (1999) [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

Vessels

A piece of the bark placed in a hollow scooped in the ground is used by the natives to hold water. Also a piece folded into the shape of a cup is used for drinking. (Moore, 1842)

https://books.google.com.au/books?id=1e8UAAAAYAAJ&printsec=frontcover&dq=George+Fletcher+Moore&hl=en&ei=cY39TKLJEI30cf7SrMAG&sa=X&oi=book_result&ct=result#v=onepage&q&f=false

yandi or coolamun – A dish that is carried by women. Uses: - to carry seeds and nuts that were gathered by the women, as a water bowl, for carrying a baby

<http://www.melvillecity.com.au/newproxy/service/api/node/workspace/SpacesStore/ce4232b5-715a-4a2d-aafc-2963c49166e0/Noongar%20Six%20Seasons/content/Noongar%20Six%20Seasons>

[Aboriginal people in Broome] were constrained in their exploitation of changing food stocks by the distance they could move from a small source of fresh water, either *in situ* or carried in a baler shell [large balers can carry several litres]. <https://ses.library.usyd.edu.au/bitstream/2123/11408/1/Chap6-Sullivan-Customary-Marine-Tenure.pdf>

Purification

The native is careful not to drink directly from stagnant water, but scrapes a hole in the sand at a little distance and drinks the filtered water. And even in springs he frequently inserts a quantity of grass-tree [Xanthorrhoea] leaves, so as to act as a strainer; this is to guard against swallowing insects, a precaution which might be prudently imitated by the settlers. Moore (1842)

https://books.google.com.au/books?id=1e8UAAAAYAAJ&printsec=frontcover&dq=George+Fletcher+Moore&hl=en&ei=cY39TKLJEI30cf7SrMAG&sa=X&oi=book_result&ct=result#v=onepage&q&f=false

Water kept our people alive, so gnammas were sacred. They were guarded and regularly cleaned. Slabs of rocks were placed over some smaller pit gnammas to reduce evaporation and prevent wildlife from falling in and drowning.

https://www.wheatbeltmrm.org.au/sites/default/files/knowledge_hub/documents/The%20Derdibin%20Gnamma%20Storybook%20Final%20Web.pdf

Water symbols

Important cultural stories are portrayed and communicated through the generations by symbols/icons through their artwork. These vary from region to region but are generally understood.

<https://www.aboriginal-art-australia.com/aboriginal-art-library/symbolism-in-australian-indigenous-art/>

<image download>

Symbols used in Papunya Central Desert (NT) art

<https://www.aboriginal-art-australia.com/aboriginal-art-library/symbolism-in-australian-indigenous-art/>

Water was/is also represented symbolically on

- sand maps

Brown, in La Fontaine and Carty, 2011, Ngurra Kuju Walyja, One Country One People, Stories from the Canning Stock Route.

- engraved maps at rock art sites

McDonald and Clayton (2016) <https://www.environment.gov.au/system/files/resources/90e93195-385b-4e34-89f9-14d44a189b3b/files/rock-art-thematic-study.pdf>

- the back of spear throwers

Thomson in Bayly (1999) [https://www.rswa.org.au/publications/Journal/82\(1\)/82\(1\)bayly.pdf](https://www.rswa.org.au/publications/Journal/82(1)/82(1)bayly.pdf)

Language

Moore's (1842) vocabulary of Noongar language which he recorded phonetically in the absence of Aboriginal written language contains many words that relate to water:

stream/creek	bilu
river	bilu
estuary	willa, darbel
swamp with little water	gotyn
small swamp	zapornia, warraja
big swamp	bura, mulyin, yalgor
small lake	nguru
large lake	mulur
dried up lake	nguru data
water standing in a rock hole	ngamar
native well	nguru
fresh water	gabbi djikup
saltwater in lakes/streams	gabbikarning
pool of water	gabbiwarri
pool in river	monong

flowing spring	garjyt
running water	gabbi garjyt
shallow water	danjal - shallow
deep water	gabba moordak
mud, muddy	nano
discoloured stream of fresh water	gabbi yuro
dried up where water had been	datta

https://books.google.com.au/books?id=1e8UAAAAYAAJ&printsec=frontcover&dq=George+Fletcher+Moore&hl=en&ei=cY39TKLJEI30cf7SrMAG&sa=X&oi=book_result&ct=result#v=onepage&q&f=false

Aboriginal place names provide significant information about that place including the presence of water. For example, in Noongar Country: Gabbi Darbal (estuary) 'the place where salt and freshwaters mix

<https://www.noongarculture.org.au/language/>

Quaada Gabee (Bicton foreshore) from Quaada beautiful, Gabee water (freshwater springs)

Collard et al (1997) https://incubator.wikimedia.org/wiki/Wp/nys/Whadjuk_Mia_Kwel_-_Whadjuk_Placenames

Spear Hill



by Virginia O'Keeffe, 124cm x 127cm

Motivation for the quilt

I find it distressing that the oldest living culture on the planet has to fight every inch of the way for recognition of their culture.

Context

Fortescue Metals Group (miners) applied to build a railway-line through Spear Valley (near Karijini). Aboriginal custodians campaigned against the route because it would impact on significant historical sacred sites. The State Government approved it. Appeals to various authorities failed. The WA Environmental Protection Authority negotiated a solution which involved rerouting the line around, rather than close to, sacred rock art and dancing grounds.

Recent archaeological digs found the sites, which contain rock shelters, wall niches, and rock art, date back 23,000 years. ... Spear Hill, located within Spear Valley, is a culturally significant site for the Eastern Guruma people.

"They would camp, live and hunt in that area, and then harvest the wood from Spear Hill for ceremonial purposes," Mr Bevan said.

"It (Spear Hill) has spear wood which is very rare in the Pilbara. It's quality spear wood so they would then trade that with the other (indigenous) groups as well."

<https://www.abc.net.au/news/rural/2018-03-16/federal-review-twiggy-fmg-destruction-indigenous-cultural-sites/9553352>

Spear Hill, near Karijini National Park, is the subject of a dreamtime creation story about the importance of gathering and sharing resources, one of the few stories in the region to survive the upheaval in the local culture over the past 150 years, and still taught to young men as they 'go through the law'.

...The hill is accessed through a valley of rock shelters full of artworks and secret niches where Aboriginal people traditionally hid sacred objects. Radiocarbon dating confirms Aboriginal people have used the area for at least 23,000 years, before the end of the Ice Age, and Spear Hill is protected under WA's Aboriginal heritage laws. FMG last year gained Aboriginal heritage approval to build a railway through the area linking its proposed Eliwana iron-ore mine to the rail network at the Solomon Hub mine, north-west of Tom Price, and while the East Guruma people did not oppose the mine or the railway, they wanted the railway to go around their sacred sites. They asked the Department of Planning, Lands and Heritage for more time to prove their significance before FMG's heritage application was determined.

The department gave traditional owners the go-ahead... [after court action, review and consultation]...The EPA [Environmental Protection Authority] has now recommended WA Environment Minister Stephen Dawson give environmental approval for the project, but with conditions including protection and monitoring of predicted impacts on places of recognised Aboriginal cultural heritage, including the Nharraminju Wuntu Rock Art Precinct and Kumpanha Dancing Grounds. EPA chairman Tom Hatton said this would "minimise direct and indirect impacts to cultural sites, including noise and visual impacts".

Wintawari Guruma Aboriginal Corporation chairman Glen Camille said traditional owners wanted to congratulate the EPA and Dr Hatton for the consultation process.

<https://www.smh.com.au/national/sacred-site-fight-ends-as-fmg-agrees-to-re-route-120-kilometre-railway-20190429-p51i9o.html>

Materials and Techniques

Lake Ballard by Roberta Chantler

Hand dyed cotton fabrics, organza overlay on the sky, machine and embroidery thread. Chenille work. Machine quilting. Embroidered figure.

Spinifex and Corrugations, Canning Stockroute by Elizabeth Humphreys

Multiple layers of cotton fabric, stitched, then slashed through to expose the various pieces underneath creating the effect of corrugations. Hand dyed fabrics. Spinifex, hand appliqued then criss-crossed in a combination of stiff synthetic and variegated cotton threads reminiscent of spiky, itchy spinifex. Desert Cassia appliqued by hand and machine. Colonial knots.

Heart of the Pilbara by Hilary Arber

Needle-felted wool and silk fibre over pre-felt. Couched ribbon, machine and hand embroidery.

Wave Rock by Meg Cowey

Aboriginal designed cottons and commercial cotton (sky), cotton thread. Strip piecing combined to give a sense of the shape of the rock formation.

Stirling Ranges by Stella King

Hand dyed and commercial fabrics. Machine appliqued.

Rocky Outcrop at Sunset by Pat Forster

Cotton fabrics, polyester wadding, cotton polyester thread. Designed on a 4 x 8 grid using the drunkards path block drawn freehand, machine pieced and quilted.

Bungle Bungles at Sunset by Pat Forster

Cotton fabrics, polyester wadding, cotton polyester thread. Designed on a 5 x 10 grid using the drunkards path block drawn freehand, machine pieced and quilted.

Sandplain at Sunset by Pat Forster

Cotton fabrics, polyester wadding, cotton polyester thread. Designed based on drunkards path blocks drawn freehand on a 5 x 10 grid, machine pieced, hand quilted and free-motion machine quilted.

Rock Platforms, Dinosaur Coast by Pat Forster

Cotton fabrics, polyester wadding, cotton polyester thread. Designed on a 4 x 8 grid using the drunkards path block drawn free hand, machine pieced and quilted, hand embroidered.

Venus Appears over Kandimalal by Roberta Chantler

Hand dyed and commercial fabrics, glass beads and sequin. Organza overlay on the sky. Machine embroidery and quilting.

A Night Outback by Stella King

Commercial fabrics – cotton; polyester organza. Machine appliqued.

Night Sky by Pat Forster

Celebrate the Culture of Australia's First People Series 2, by Pat Forster

Machine pieced, hand quilted, hand embroidery, machine quilted curves and text, sequins.

Murchison Night Sky by Meg Cowey

Cotton top and backing; polyester, cotton and rayon thread. Patchwork, raw-edge appliqué, machine pieced and quilted.

Red Dirt Plain by Pat Forster

Cotton fabrics, polyester wadding, cotton polyester thread. Designed based on drunkards path blocks drawn freehand on a 5 x 10 grid, machine pieced, hand quilted and free-motion machine quilted.

Quartz and Jam and Mulga

Needle turn appliqué and stem stitch embroidery. Fabric for the daisies was fused to the background before embroidering with detached chain stitch. Sari silk strips were used for dead trees. Machine quilted.

Springtime in the Outback by Elizabeth Humphreys

Commercial and hand dyed cotton fabrics. Curved piecing. Eucalyptus blossoms hand embroidered in assorted cotton threads using stem stitch and colonial knots over appliqued circles. Perle and six stranded cotton. Mulla created using modified leaf stitch. Rocks hand appliqued. Hand and machine quilting.

Wildflowers at Walga Rock by Elizabeth Humphreys

Inspired by a photo taken on a visit in the springtime. Commercial and hand dyed cotton fabric and gauze. Rocks and trees appliqued using the needle turn method. The everlasting daisies were made by fused fabric, embroidered in detached chain stitch. Buttonhole stitch and stem stitch. Quilted using a domestic machine.

London Bridge, Sandstone

Cotton fabric and threads. Machine pieced and quilted, machine applique and hand embroidered.

Granite Outcrops by Pat Forster

Machine pieced, hand quilted, hand embroidery, machine quilted curves and text, machine stippling.

Water Management by Pat Forster

Machine pieced, hand quilted, hand embroidery, machine quilted curves and text, machine stippling.

Spear Hill by Virginia O'Keeffe

Recycled Hi Viz clothing, embroidery threads, machine pieced and hand stitched.

Quilt photo credits

by Meg Cowey

Lake Ballard
Spinifex and Corrugations, Canning Stockroute
Heart of the Pilbara
Stirling Ranges
Wave Rock
A Night Outback
Murchison Night Sky
Quartz and Jam and Mulga
Springtime in the Outback
Wildflowers at Walga Rock

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Rocky Outcrop at Sunset
Sandplain at Sunset
Venus Appears Over Kandimalal
Rock Platform, Dinosaur Coast
Bungle Bungles at Sunset
Red Dirt Plain
Night Sky
Granite Outcrops
Water Management
Spear Hill

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Appendix : Outcomes

QuiltWest Exhibition, Perth Convention and Exhibition Centre, May 2019

Spinifex and Corrugations by Elizabeth Humphreys, 1st Small Quilts Professional
Wildflowers at Walga Rock by Elizabeth Humphreys, 3rd Pictorial Quilts Professional
Night Sky, Granite Outcrops, Water Management triptych by Pat Forster, exhibited

Western Endeavour Rotary Breakfast July 16, 2019

Presentation and quilt display

Melville Civic Centre Foyer, July 10 -25, 2019, starting in NAIDOC week

Night Sky, Granite Outcrops, Water Management triptych by Pat Forster, displayed.

Spring into Parks Astrotourism Workshop, September 2, 2019

Display and short presentation

Contemporary Quilt Group Presentation, September 13, 2019

The Mount Magnet Quilt Project display and short talk

Mount Magnet Astro Fest, September 20 – 22, 2019

Wirnda Barna Canvas and Quilt Exhibition, joint exhibition with Wirnda Barna Artists

Feature Article, *Quilters Companion Magazine*

Special issue #102019, *Great Australian Quilts, by invitation*

Celebrate the Culture of Australia's First People

(*Night Sky, Granite Outcrops, Water Management* triptych)

Feature article, *Textile Fibre Forum magazine*

Mount Magnet Quilt Project, submitted

U3A Melville Lecture, March 21, 2020

Powerpoint presentation