

Toward the Municipal Mapping of Traditional Aboriginal Land Use

Jim Poulter

All Australians know that this land was not 'Terra Nullius'. However, the idea still insidiously influences our thinking. Few people are aware that Aboriginal people were not 'hunter-gatherers', but *permaculture farmers*.

Using the municipality of Manningham east of Melbourne on the Yarra River as a case in point, the land use patterns existing prior to British colonisation are described. This included grass seed farms on the hilltops, myrnong farms along the gullies, yabbie and blackfish farms along the creeks, possum farms in copses that were separated by open land, sparsely-treed kangaroo and emu farms along the river flats, plus fish, eel, yabbie and freshwater mussel farms along the entire length of the Yarra River.

These land use and living areas were interconnected by Songlines, traditional travel routes that criss-crossed the whole of Australia. Hopefully this mapping begun in Manningham will be replicated in every municipality.

TOWARD THE MUNICIPAL MAPPING OF TRADITIONAL ABORIGINAL LAND USE

The lingering infection of Terra Nullius

Intellectually, all Australians nowadays know that our continent was not Terra Nullius. Under this legal fiction Australia was purported to be a vast, empty and unused land waiting to be peacefully settled.

The problem is that that this present-day intellectual understanding of the myth of Terra Nullius is not matched by a practical awareness of traditional Aboriginal land use patterns. People are just not aware of how sophisticated and extensive these land use patterns were across the whole of Australia. In reality, Terra Nullius still today remains a lingering infection on our thinking, and it continues to insidiously and unconsciously shape our perceptions in negative ways.

The myth of Terra Nullius was sold so successfully to settlers that it prevented them recognising what was in front of them. Much of Aboriginal technology was so environmentally harmonious that it was usually invisible to European eyes. We have therefore unconsciously inherited this conditioned inability to see and properly understand many of the things that are still before us.

Unfortunately, it is still a widely believed myth that Aboriginal people were just simple, primitive, pagan, uncivilized, nomadic, stone-age, hunter-gatherers, who did not use the land productively.

Occasionally, some fish traps and weir walls were so obvious that the settlers recognised them as such, but in the main, Aboriginal land use engineering was simply not recognised. Settlers and explorers frequently marvelled at the ordered beauty of the landscape, but then automatically assumed this was a pristine, natural environment, untouched by human hands. Any alternative idea was just not credible.

Even before the first settlers arrived, the spurious notion of Terra Nullius, and inbuilt ideas of the superiority of Western civilization, prevented the earliest explorers from properly interpreting what they saw. Even today we still fall for the same trap. We still fail to detect and correct the misinterpretations of early explorers and settlers, and so perpetuate the myth of Terra Nullius.

Early explorers and settlers did not understand what they saw

For instance, way back in 1642 Abel Tasman described the vista of Tasmania's south coast near present day Hobart as:

*'...pretty generally covered with trees standing so far apart that they allow a passage everywhere...unhindered by dense shrubbery or underwood.'*¹

This spacing between trees and an absence of dense undergrowth is not what we see today. When colonisation began, regular firing of the environment by Aboriginal people was prevented from the outset. Forest areas and dense undergrowth have therefore inexorably grown back. This regrowth has of course provided fuel for our regular devastating bushfires, that Aboriginal people were able to avoid by regular planned burns in every part of Australia.²

The observations of Abel Tasman in 1642 were however far from unique and were echoed by subsequent explorers. For instance, in May 1770 Lieutenant Cook (later to become Captain) noted after landing on the east coast of Australia:

'The woods are free from under wood of any kind and the trees are at such a distance from one another that the whole country ...might be cultivated without being obliged to cut down a single tree'.³

When the First Fleet finally arrived in 1788 the colonists were again similarly struck by the ordered beauty of the landscape before them. An officer on the First Fleet, Captain Watkin Tench noted soon after arrival that:

'...the face of the country is such as to promote success whenever it shall be cultivated, the trees being at a considerable distance from each other and the intermediate space filled, not with underwood, but a thick rich grass growing in the utmost luxuriance'.⁴

Many other settlers and explorers often commented that the whole country looked like an English gentleman's estate. The following quote about Westernport Bay in Victoria is typical:

'In parts it resembles the park of a county seat in England, the trees standing in picturesque groups to ornament the landscape'.⁵

When the colony in Tasmania was established in 1803, these comments were repeated. Settlers moving into the hinterland often recounted how they emerged from forest areas into lightly treed pastures of great beauty. They then gave these places names like 'Eden' 'Paradise' and 'Promised Land'. These are town names that still endure today. However, these very same names show how it was presumed to be a pristine environment, as if it had been put there by God himself, without any human agency.

Similarly, when John Batman first arrived in Port Phillip in May 1835 and landed at Geelong, he was incredulous at what he saw. With some hint of understanding he noted in his diary:

'...as rich land as I ever saw with scarce a tree upon it, the grass above our ankles...Most of the high hills were covered with grass to the summit, and not a tree...The whole appeared like land laid out in farms for some hundred years back, and every tree transplanted. I was never so astonished in my life'⁶

Three days later further up the west coast of the Bay, Batman sailed into what is now known as Hovell's Creek and noted the highly obvious fish-traps there:

'We saw several places on going up, which the natives had made with stones across the creek, to take fish... The walls were built of stones about four feet high and well planned out. Two or three of these places following each other down the stream with gates to them...'⁷

It seems highly likely that had the weir wall been one foot high rather than four feet, Batman would not have seen the water races and sluice gates that functionally related to the weir. The innumerable aquaculture sites along **all** Australian rivers therefore often remained invisible to the eyes of almost all the settlers unless the sites were starkly obvious.

Four years after Batman first ventured into Port Phillip, the Surveyor T.R. Nutt was in 1839 delegated to assess the suitability of the land to the east of the Yarra. This was in present day Manningham and surrounding areas. He described the vista before him as:

'Grassy hills, thickly timbered stringy bark forests and gums'.⁸

Notice how there is a pattern in the observations? Grassy hilltops, picturesque copses, and open sparsely treed areas? Because we have been so indoctrinated with the idea of Terra Nullius, these words usually go straight through to the keeper. We are unconsciously led into believing that this was a pristine, natural environment. However, if we pause and consider their implications, these words can become pungent with new meaning. Aboriginal oral history can in fact often help provide this deeper meaning.

Permaculture Farmers *not* Hunter-Gatherers

For instance, the grassy hilltops were explained to me by the iconic Gunditjmarra Elder Banjo Clarke some forty years ago.⁹ He said that these hilltops were in fact grass seed or grain farms. Banjo explained that clans routinely cleared the hilltops of trees then contour ploughed or ringed them with stone terraces. This meant that the rain did not readily run off, thereby helping the growth and continual self-sowing of grain grasses. Banjo added that kangaroos and emus would not go up to the hilltops because there was no shade or protection there.

When ripe in summer, grain was harvested from these hilltop seed farms, threshed and stored in kangaroo skin bags for later use. These bags would often weigh as much as 50 kilograms. Explorers like Charles Sturt for instance found storage wells and hollow trees holding bags that totalled literally tons of seed.¹⁰ When the grain was later required, particularly at times of large inter-clan gatherings, the grain seeds were used to grind into flour and make damper.

The more thickly wooded areas, noted by Tasman, Cook, Batman, Nutt and many others, varied in size. This might be from a hundred metres to a couple of kilometres in width, and these copses were always surrounded by a curtilage of open ground.¹¹ As possums do not like crossing open ground, these separated copses were protected habitats that were in reality possum farms.

The more open areas where the trees were a regular twenty-five to fifty metres apart^{12 13} were in fact kangaroo and emu farms. The trees provided sufficient shelter for early morning and late afternoon grazing and also provided a strategic stalking distance for Aboriginal hunters. However, in the heat of the day and at night, the kangaroos retreated to the denser cover of the possum farms.

It is intensely interesting to note that even in 1991, an archaeological survey of the Manningham area implicitly assumed that the original vegetation areas of the municipality were 'natural' rather than having been shaped by human hand. The report for instance notes:

*'Aborigines made use of different plants for their food supply and utilitarian needs. Different vegetation communities attracted different animals, for instance possums are plentiful in the forests, but browsing animals like the kangaroo are found in the grassy open woodlands of River Red Gums.'*¹⁴

But there were more than just possum farms and kangaroo farms. Like on the hilltops, flatter areas would be cleared of all trees to form grain farms and myrnong farms. Grasses preferred by kangaroos would then be encouraged adjacent to the grain farms, so as to form grazing borders to the kangaroos.¹⁵

Gullies and creek valleys were also subject to annual firing so as to promote the growth of myrnong, the native yam.¹⁶ Each spring these myrnong farms would be a blaze of yellow with the flowering of the yam daisy. Cultivation and harvesting techniques employed by the women ensured constant regeneration and proliferation of the yams in designated areas.¹⁷

To ensure that creeks did not run dry during the summer, dams and chains of ponds would be created. When required, yabbies, fish and mussels would be carried in coolamons to stock the ponds.¹⁸ These protected breeding grounds then became a series of yabbie and mussel farms up the creek valley, and were often flanked by myrnong farms. In reality Australia was a series of 'farms without fences'.¹⁹

Deep water areas in the rivers were also constantly cleared of rubble and excavated to act as deep-water nurseries and breeding pools for fish and yabbies, as well as retreats for eels. Conversely the shaded, eddying river shallows were maintained as freshwater mussel farms. These mussels were often a staple part of the Aboriginal diet, as evidenced by middens, the piles of discarded shells at camp sites.

At these river shallows, the natural rock formations were built on and extended to form weir walls, races and sluice gates through which fish and eels were caught. Once the process of British colonisation began, Aboriginal people were unable to conduct their yearly summertime fish trap maintenance. After a few short years, many of these fish traps were washed away by floods and became even less visible to European eyes. However even today, the general architecture of these sites is still visible if you know what to look for at river rapids areas.

Aboriginal trade and travel routes

Agriculture and aquaculture were however not the only forms of land use by Aboriginal people. The reality is that Australia was criss-crossed by carefully maintained trade and travel routes that were often just as invisible to European eyes. Again, if the travel routes were identified by settlers they were often just seen as ‘natural pathways’ or ‘animal tracks’, rather than having been made and fastidiously maintained by Aboriginal people.

For instance, Watkin Tench, an officer with the First Fleet simply commented a couple of days after arriving at Sydney Cove in 1788 that the convicts soon: ‘...*found the road to Botany Bay.*’²⁰

These trade and travel routes were known as ‘Songlines’ for a simple reason. Just like the GPS in your car gives you directions as to when and where to turn, Aboriginal people coded the directions for travel in a continuous song that was chanted as you went along.²¹

More than this, it was also a song of praise. Aboriginal people were obliged to sing their appreciation of all they saw in their travels. Birds swooping, animals grazing, the vistas and landmarks they saw and the Dreamtime creation stories embedded in the landscape.²² This was a process called ‘Singing Country’ and it was in fact your passport to unhindered travel through the lands of other tribes.²³

Many of these major Songlines traversed thousands of kilometres and were also celestially coded into the constellation movements. One such Songline for instance went from Uluru in Central Australia to Byron Bay, the most easterly point of Australia. Such a trip involved a journey of some 3,500 kilometres and would therefore have taken four or five months across winter and spring to complete one way. After a sojourn of six months or so the honoured visitors would return home in the cooler months of the following year.

To ensure water was available on such Songline journeys, in this case across the Simpson and Strzelecki Deserts to Birdsville and beyond, wells up to seven metres in depth would be excavated at regular intervals.²⁴ The location of such wells across the Great Artesian Basin would then become part of the song. Apart from the strategic location of wells along major Songlines, people carried with them a daily supply of water in bags made from animal skins or intestines.²⁵ They would also always carry with them a supply of smoked meat.²⁶

But this of course begs the question as to why people from Central Australia and Byron Bay should trek 3,500 kilometres to visit each other? The answer is simple. People from Byron Bay wanted to see the majestic Uluru for themselves, whilst the people from Uluru wanted to see the ocean. More than this though, they wanted to see how the people from Byron Bay used dolphins to help catch fish. Each dolphin was known by name, and they would respond to commands and signals to drive a shoal of fish into the shore.²⁷ Then when the catch was complete the locals would share it equally with the dolphins.

Although there is a mystical quality associated with Aboriginal Songlines, there is also an intensely practical aspect to the routes taken. Songlines invariably followed ridge lines, valley lines and easy contours. For Aboriginal people it was like following a system of flashing neon lights, regardless of the coded song instructions. To European settlers these flashing neon lights

only operated at a subliminal level and they simply followed what seemed to be a ‘natural’ route.

For instance, when settlers began arriving in Port Phillip at present day Melbourne in mid-1835, they simply got in their carts and on their horses and followed the paths of least resistance. The routes they followed soon became established as cart-tracks. They were then gravelled, then bitumenised, and ended up as the present-day major roads that now radiate out of Melbourne. All these major roads generally follow along ridge lines, valley lines and easy contours.

Think about it from an aerial perspective. Geelong Road, Ballarat Road, Calder Highway, Sydney Road, Plenty Road, Heidelberg Road, Maroondah Highway, Burwood Highway, Dandenong Road and Nepean Highway were all originally Aboriginal Songlines. We drive along such roads every day without the faintest apprehension of their true history. After all, they are just road routes that our hardy settlers forged through this vast, empty continent.

Far from being Terra Nullius then, Australia hosted a civilization that had for untold aeons sustainably managed the environment, so that everyone lived in continuous plenty. In traditional Australia there was no such thing as poverty, starvation, disease, inherited advantage or disadvantage, and no such thing as the subjugation or enslavement of others.²⁸

Because warfare has been such an integral part of world history over the last 5000 years, many people nowadays refuse to believe that there were in fact never any wars of conquest or invasion in Aboriginal Australia. The proof that this proposition is true is however stark and simple. Try and find one myth, legend, song or story from anywhere in Australia that tells of the exploits of a warrior king, the overthrow of a despot, or the subjugation of another people. It just never happened.

The first step before us as Australians is therefore to re-evaluate our history without the blinkers handed down to us. We need to strip away the preconceptions and unconscious biases that we have received in the guise of conventional wisdoms. Australians are the most fair-minded and egalitarian people on Earth, but we still look through the goggles of institutional racism that we have received from our colonial forefathers.

The second step is therefore to embrace this in practical ways, so that it becomes part of our own lived experience. Toward this end it is suggested that each municipality in Australia needs to undertake the mapping of its traditional land use patterns and Songlines. This also includes an inventory of local Aboriginal place names and sites, so that a true shared history can emerge. To begin this process, a limited discussion of land use and Songlines in the City of Manningham in suburban Melbourne will be attempted.

A brief account of Manningham’s history and heritage

Manningham is a municipality that lies east of Melbourne in the Middle Yarra region. It has a rich Aboriginal and pioneer history and is best known as having been the primary fruit orchard area of Melbourne from the 1850’s to the 1960’s.

The Yarra River forms its northern boundary, running in a meandering southwest to northeast direction. Manningham’s southern boundary is formed by the east-west flowing Koonung Creek then the upper reaches of Mullum-Mullum Creek. Its eastern boundary is basically defined by the north flowing Brushy Creek. Manningham is some 1000 square kilometres in area and has a population around 120,000 people.

In tribal times Manningham was occupied by a clan of the Woiwurung speaking people, now known as the Wurundjeri, who belonged to the Kulin Federation of Central Victoria. In the first contact and early colonial period the Woiwurung had leaders of great stature, all of whom had close connections to the Manningham area.

Headman Bebejern, along with Billibelleri and Jagga-Jagga were the three main 'signatories' to John Batman's purported deed of sale of Kulin land in 1835. This meeting occurred on the Plenty River at present day Greensborough. When Bebejern died in 1836 Billibelleri became Headman and sought to establish an Aboriginal Reserve at Bolin-Bolin in Bulleen, then at Pound Bend in Warrandyte. Jagga-Jagga fought a resistance war against local settlers, burning their paddocks and driving off their stock. This involved confrontations with local settlers such as Major Newman and James Anderson.

Following the death of Billibelleri in 1846, Simon Wonga assumed leadership of the Kulin in early 1851. He sought work opportunities for his people with local settlers to learn white agricultural and stock management skills. Fortuitously, when workers deserted their employers to go to the goldfields, it drove up Aboriginal wages and work opportunities and enabled Wonga's plan to succeed. Wonga in fact gained the contract to build the first public house on the Warrandyte goldfields.²⁹ The local suburb, Wonga Park was also named after him in honour of his leadership and horse-mustering skills.³⁰

In 1852 Wonga organised the last great intertribal corroboree of the Kulin people which was held at Pound Bend in Warrandyte. Wonga's purpose was to allow his people to draw the curtain on their traditional life and find a way to survive in the new world that had been thrust upon them. For fourteen days and nights in March 1852 the Kulin people held traditional ceremonies and played their traditional games.³¹

Wonga went on to finally establish Coranderrk Station at Healesville in 1863. His cousin, William Barak, born in 1823 at Brushy Creek in Wonga Park, succeeded Wonga as Headman when Wonga died in December 1874. Barak built on Wonga's legacy and over the next thirty years became a famed civil rights figure. Barak died in 1903 after seeing off several attempts to close Coranderrk.

There are therefore many sites of archaeological and historical significance in Manningham. Birth sites, burial sites, camp sites, ovens and fish farms, but not many have been formally recorded. They are only known through the oral history of both Aboriginal and pioneer families. The following brief mapping of Manningham's land use patterns and Songlines therefore draws on both formal records and oral history.

Toward an Aboriginal land use and Songline map of Manningham

Our excursion starts at the Koonung Creek confluence with the Yarra River and follows the creek eastward. It can be safely presumed that this southern boundary of Manningham was developed as a chain of ponds that were in reality a series of yabbie, blackfish and mussel farms. In flatter adjacent areas, such as at Bulleen and Belmore Park, there would most likely have been myrnong farms. An archaeological site identified at Wetherby Road confirms occupation of this area, as does a known burial site that about two hundred metres north of Koonung Creek, up Wetherby Road.

The sites of present-day bridges are often at or beside natural fords which were also Songline crossings. This is certainly the case where Doncaster Road crosses Koonung Creek. This Songline had its origins at Dights Falls in Abbotsford. It followed Studley Park Road and High Street Kew, before entering Manningham as now Doncaster Road. Continuing up the hill toward Shoppingtown a burial site existed on the south side of Doncaster Road, opposite the Eastern Golf Club. The top of the hill where the Council Offices now stand was a prime location for a grass seed farm, as were the succeeding points along the ridge at the Jacksons Court, Devon Plaza and Tunstall Square shopping centres.

At Tunstall Square the Doncaster Road Songline splits into two. The route to the southeast becomes Mitcham Road and leaves the municipality to join the Maroondah Highway Songline.

The route to the northeast follows Old Warrandyte Road and an artefact scatter has been found at this point. The Songline then becomes Tindals Road and a further artefact scatter has been found adjacent to Tindal's Road at Mullum Drive Reserve.

A third artefact scatter at McIntyres Road certainly adds weight to the assertion that Tindals Road was indeed a Songline. However the panoramic views to both east and west along the ridgeline near Aylesbury Way are enough to confirm its status. This ridgeline area would also have been a prime location for grain farms. From this point Tindals Road then drops down to become Pound Road, and terminates at what was a traditional living and meeting area at Pound Bend. This was the site where Simon Wonga held the last ever Kulin Federation corroboree in March 1852.

Returning to the junction of Koonung Creek and the Yarra, the Bolin-Bolin area along the Bulleen Road Songline was of course an important gathering place, especially in eel harvest season from mid-February to mid-March. Artefact scatters at the site of the old drive-in theatre confirm the occupation of this area, and there were several aquaculture sites along this stretch of river. This includes the Warringal Park ford opposite Heide Museum, which is where the Heidelberg Road Songline met the river.

'Yingabeal' the canoe tree and Songline Marker Tree, stands at Heide Museum on Bulleen Road. It may well be the most important Marker Tree in Melbourne as it marks the convergence of Songlines from five different directions.

First is the Songline heading west across the river to Heidelberg Road. Second is the Songline that heads south along Bulleen Road. The third Songline heads southeast along Manningham Road. This likely passed through a grain farm around Macedon Square shopping centre before joining the Doncaster Road Songline at Shoppingtown. The fourth Songline heads east along Templestowe Road which connected through to the junction of the river with Ruffey Creek and the campsite that was there near Parker and Foote streets. Fifth headed northeast, meandering along the south bank of the Yarra.

This area along the river flats contained a series of lightly treed kangaroo farms, most likely flanked on the hillsides by possum farm copses. At Finns Reserve where Ruffey Creek meets the Yarra, there was a significant two-hundred-metre-long aquaculture area for fish, eels, yabbies and freshwater mussels. This area was connected to the Koonung Creek junction by a Songline along Thompson's Road and to the Doncaster Road Songline by a Songline along High Street.

A permanent campsite existed where Parker Street and Foote Street cross Ruffey Creek. An Aboriginal oven was excavated into the rock at this location but was buried when the construction of Foote Street/Reynolds Road was continued over the creek in 1963. Middens were observed in this area which is testament to the presence of one-metre-deep damp earth 'refrigerators' where freshwater mussels were stored. Once the mussels were placed in these excavated pits and the damp earth placed on top, the mussels would go into suspended animation and stay fresh for up to two years.

Further up Ruffey Creek at present day Williamsons Road was a burial site. This site is incorrectly identified in a 1991 archaeological report as being near present day Shoppingtown. Present day Ruffey Lake Park, Rieschieks Reserve and Zerbe's Reserve would have been prime sites for myrmong farms. The course of this Songline along Ruffey Creek was then continued by present day Anderson's Creek Road. The Songline continued down beside Mullum-Mullum Creek to its junction with the Yarra.

Ruffey Creek was connected to Mullum-Mullum Creek by two main routes, first along the Yarra Trail via Westerfolds and second along the looping ridgeline Songline of present day Serpells Road, Smiths Road and Newmans Road. This ridgeline route would also have features

grain farms near the fire station on Williamson's Road, the Seminary on Smiths Road and at the beginning of Newman's Road. The importance of this route was underlined by the fact that until about 1928 an Arched Marker Tree (Birthing Tree) stood about a hundred metres from the junction of Newman and Websters Roads.

Along the river from Ruffey Creek to Mullum-Mullum Creek was a series of wetlands, lightly treed kangaroo farms, possum farm copses and hilltop grass seed farms, with myrnong farms extending up gullies like at Petty's Orchard and Green Gully.

A river crossing, fish nursery and freshwater mussel farm existed at the Mullum-Mullum Creek junction. Artefact scatters indicate there was a permanent campsite there, adjacent to where Pontville Homestead still stands. This is the oldest homestead still standing east of the Yarra. It was built in 1844 by Major Charles Newman, the first settler in the area. Newman was renowned for his antagonism to the local Aboriginal people, who responded by frequently breaking down his fences, burning his paddocks and driving off his stock.

The Mullum-Mullum Creek junction was linked to the Anderson's Creek junction by a Songline that picked up present day Warrandyte Road above Beasley's Nursery. It followed Warrandyte Road across the Tindals Road Songline then followed Old Warrandyte Road down to Anderson's Creek and the present-day Warrandyte Township. The Taroon Avenue Reserve was the site of an historic confrontation between Jagga-Jagga and James Anderson in early 1840, and which a few days later led to the Battle of Yering at Yarra Glen.

Like at Finns Reserve, the Warrandyte township riverfront hosted a two-hundred-metre-long aquaculture area. Middens were observed here by settlers and the current Warrandyte Bridge was the site of the Songline crossing. Like Tindals Road, the Kangaroo Ground Road is a wonderful example of a ridgeline Songline, with panoramic views to east and west.

Continuing upriver, the area east of Warrandyte is still renowned for its yabbies which are now protected from commercial exploitation. The area around Wonga Park of course replicated the possum farms, grain farms, kangaroo farms and myrnong farms in the rest of the municipality. There is also a fallen 'Ring Marker Tree' beside Reserve Road before the Brushy Creek junction with the Yarra. Such trees often mark the nearby location of a birthing place, and it is quite positively known that Barngeong (Brushy Creek) was the birthplace of William Barak.

The preceding should in no way be taken as an exhaustive or definitive account of Aboriginal land use and Songlines in Manningham, but simply a step and hopefully a stimulus toward a proper mapping process. To assist in understanding how to identify and map municipal Songlines a brief paper, previously drafted in consultation with Wurundjeri Elder Uncle Bill Nicholson, is appended.

APPENDIX:

How to do an Aboriginal Songlines Map of Your Municipality

What are Songlines?

Songlines are Aboriginal walking trails, pilgrimage routes and trade routes, and they were far more plentiful than people usually imagine. In traditional Aboriginal society Songlines crisscrossed the whole Australian landscape linking important sites and locations. They were maintained by regular traffic use, burning off and clearing.

These trails were also signposted by natural and man-made environmental signs, the man-made signs usually being in the form of 'Marker Trees'. These were trees that had either been scarred in the process of canoe or artifact making or had been tied together when young so as to grow in the form of an arch or ring, or were otherwise trees that naturally grew with a spiral grain. Such 'spiral marker trees' occurred naturally as occasional genetic freaks but were only allowed to grow if they happened to be doing so on a Songline.

A good example of a scarred tree also being a marker tree is the scar tree at Heidi, the Museum of Modern Art in Bulleen, Melbourne. This tree actually marks the convergence point of Songline from five different directions, but it simply is not known by the general public to have served this purpose as a Songline route marker. There are many such scarred trees in many other municipalities that served this purpose as Songline Marker Trees.

The word 'Songline' is used to describe such travel routes because the natural features and directions of travel along each trail were coded into a continuous song. This then had to be memorised and sung as you travelled in order to remind you of the route you wished to follow. There were literally thousands of lines to be learned and you had to know when to switch to the lines of verses applying to the particular route you wished to follow.

Travelling through the bush was therefore a joyous occasion for Aboriginal people. Not only would they always be singing the song that attached to their route and destination, but they would also be singing the coded ecological relationships within each area. 'Singing Country' was therefore an integral part of how they consciously exercised their responsibilities to the land and its ecological management.

All Aboriginal knowledge was integrated through the totem system to ultimately serve ecological purposes. Even the nursery rhymes sung to children had an ecological message.

Songlines, or 'Yingparring' in Woiwurung, were not restricted to the area of a single tribe and often stretched hundreds, even thousands of kilometres. For instance, the sacred site of Bunjil's Cave in the Grampians was connected by Songlines stretching to South Australia, New South Wales, Queensland and Eastern Victoria. These major Songlines were also coded astronomically, and the song was therefore also related to the movement and positions of various constellations.

One such known celestially coded Songline connects Alice Springs to Byron Bay, a distance of 3,500 kilometres. This was so that desert people could visit and see the ocean, but so that they could also witness dolphins help the local Aboriginal people herd fish. The coast people knew each dolphin by name and shared their final catch equally with the dolphins. The coast people on the other hand had the opportunity to visit the majestic Uluru and witness its wonder for themselves.

These major Songlines are also referred to as Dreamtime Pathways when they have Dreamtime creation stories attached to them. That is, they were the pathways forged by the movement of Creator Spirits across the landscape. Therefore, whilst all Dreamtime Pathways are Songlines,

not all Songlines are necessarily Dreamtime Pathways. However, some Songlines may also have Ancestor Stories associated with them. For instance, the course of the Yarra River is credited as being cut by two Ancestor Heroes.

When travelling through another tribe's territory the song for that section of the Songline had to preferably be sung in the language of that tribe, as a sign of the legitimacy of your travel. Failing this, the process of 'Singing Country' would be sufficient to prove the legitimacy of your travel.

In other words, the song you sang was very literally your **passport** through foreign lands, and it saved you from arrest and deportation, or worse.

How do we identify traditional Songline routes?

If we take Melbourne as an example, the roads that follow a north-south or east-west grid are usually government surveyed roads. The common practice after such surveys was to construct the road by cutting through the tops off the hills and dumping the fill in the valleys so as to reduce the amount of undulation in the road.

Aboriginal Songlines on the other tended to follow along valleys and ridges and along connecting contours. There were therefore few steep grades, as the Songline followed natural contours. However, this also meant they could also meander a bit in the easier course that they followed

When British settlement first occurred, settlers tended to follow these Aboriginal Songlines because the travel routes were along easier contours for horse drawn vehicles and you did not have to find your way through the bush. These travel routes quickly became cart-tracks and ended up being gravelled and then bitumenised.

Think of all the major roads that now radiate out of Melbourne in a meandering course following ridge lines and valley lines. Geelong Road, Ballarat Road, Calder Highway, Sydney Road, Plenty Road, Heidelberg Road, Maroondah Highway, Burwood Highway, Dandenong Road and Nepean Highway.

All these were once Aboriginal Songlines, but we travel along them every day without the faintest idea of their history. The same is true for nearly all Aboriginal technology.

\Because of the insidious influence of the doctrine of terra Nullius, Aboriginal use of the land was generally invisible to European eyes. The tendency was to see such things as Aboriginal fish nurseries as just 'natural swimming holes' rather than the product of conscious engineering.

In the same way settlers saw Songlines as 'animal tracks' and firestick farmed areas as 'natural clearings' rather than respectively being assiduously maintained travel routes or open farms for grazing prey.

Because the principles behind the establishment of these Songlines were eminently sensible, there are a number of easily followed handy hints to identify the Aboriginal Songlines in your municipality.

Handy hints for mapping Songlines in your municipality

1. Have a look at a road map of your municipality and adjacent municipalities and identify those roads that do not follow a north-south, east-west grid, but instead follow a meandering route.

2. Compare these meandering roads to a contour map or alternatively get in your car, go and drive along these roads and do a visual appraisal. Do these roads meander along a ridge line or a valley line? If so, then odds-on it is a traditional Songline.
3. If there are any cuttings on the route, this is obviously a shortcut engineered later, so check the natural contour to see where the Songline would have originally gone before rejoining the present road. Ink these routes you have identified onto your map of the municipal roads.
4. Now check all available historical documents and oral sources, especially Aboriginal oral sources, to identify the location of any previous or existing scarred, ring, arched, or spiral trees in your municipality. Mark these on your map and see if they are in close proximity to the routes you have already marked. If so, the evidence is mounting. If not, it is not necessarily evidence against the route being a Songline.
5. Get hold of a drainage or catchment map of your municipality and see how it relates to a road map of today. Also note any confluences, particularly major creeks and rivers. These were always important traditional sites, often with permanent or seasonal campsites.
6. Note these confluence points on your map and see if there is a present-day road linking the sites. Or is there a ridge-line road looping around and connecting the two sites? Again, if there is, it is odds-on that it is a Songline that also represents an effective short-cut between the two sites. If there are scarred or other marker trees on the route it is further supporting evidence.
7. In looking at all water courses, particularly major creeks and rivers; identify any area of rapids that offer a natural ford. These may well be the point at which a Songline crosses the watercourse. Conversely, if a ford is located near a confluence, then it is a virtual certainty it is part of the route of a Songline.
8. Next, if you can't readily do it yourself, ask your local historical societies to interrogate the records of early settlers, surveyors, Aboriginal Protectors, and Roads Boards to find any reference to walking trails, marker trees or ceremonial sites. Similarly, interrogate any specific Aboriginal heritage reports your council might have conducted sometime in the past. In consultation with relevant Aboriginal organisations, identify any sites of significance. Mark all these reference points and sites on your map and see if there are any old roads, ridge lines or valley lines connecting these sites.
9. Finally, when you have completed the exercise, take a step back and look at your map in total. What does common sense tell you about the total picture? Don't take the attitude that it is not a true representation of traditional Songlines unless you can prove that it is absolutely true. This is a niggardly-minded application of the null hypothesis that implicitly assumes this was indeed Terra Nullius. Take the attitude that Aboriginal people were part of a clever and sophisticated society, and over countless thousands of years learned how to manage their environment and live in harmony with it.
10. That is, make the null hypothesis work the other way. Put the onus on the doubters to prove it is **not** true.
11. In reality, the totemic system is a species conservation and land management system through which every square metre of Australia became part of a vast managed estate. Bill Gammage has so very rightly termed Aboriginal Australia as, 'The Biggest Estate on Earth'. So produce your municipal Songlines map with confidence that it is a true reflection of how Aboriginal people conducted their extensive curatorship of the Australian landscape.

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