

The Barragup Mungah – A site so well known that there's nothing left to learn?

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ABSTRACT

The Barragup mungah, is situated on Gnaala Karla Booja's land, it is a well-researched site and oral history from both traditional owners and settler communities. Traditional owners and Western academics emphasise the importance of the site to indigenous people for fishing, social and ceremonial activities.

Survey maps from the early nineteenth century of the region, and photographs that may be of the mungah, indicate the general location of the mungah. Despite all this information and research, the mungah's exact location on the Waangaamaap Bilya or Serpentine River is still in doubt. Ethnohistorical data which include indigenous and Western oral history, newly digitised early maps of the region and extensive fieldwork, may have relocated the mungah. In addition, it has raised the intriguing possibility of there being more than one mungah at Barragup.

With low visibility and thick mud in parts of the river, side scan sonar was used as a screening tool to help identify potential locations. The sonar also indicated possible site formation processes that may prove useful in detecting fish traps in riverine environments.

Future work will be directed by the Gnaala Karla Booja people.

INTRODUCTION

Mungah or fish traps were an important method of catching food for indigenous people living near water and were used throughout Western Australia. While some river sites are yet to be relocated such as the Como and Guildford mungahs in the Derbarl Yerrigan (Swan) River, others such as the Kalganup (Kalgan) River mungahs are well recorded (Dix and Meagher 1976:183). The Barragup and Como mungahs were being used by traditional owners during the early colonial period. Fish were traded or sold from Barragup (Hammond 1933, 46) while the Como fish trap was being worked by one indigenous family and the fish sold to settlers in Perth (Kelvin Garlett pers comm 03/09/22).

The Barragup mungah is situated somewhere on the lower reaches of the Waangaamaap Bilya (Serpentine) River, approximately 2.5 km from the Djilba (Peel) Estuary. Gibbs states that his mungah was used to trap marine fish that moved up the river as the salinity increased during the summer and then left the river systems when the first rains of autumn fell, and the salinity decreased (Gibbs 2011, 6). This cycle of fish movement is disputed by Weaver who states the movement of the fish has more to do with the mullet spawning (Weaver 1997, 91).

When the traditional owners noticed the fish moving along the river, they would first rebuild parts of the mungah as it was sometimes partly dismantled after a season's use and sometimes was damaged by seasonal rains (Gibbs 2011, 8; Hammond 1933, 46). Indigenous people from the surrounding areas were invited to the site to take part in this annual event. It is suggested that up to 300 people may have camped at the site in mias or huts (Gibbs 2011, 9).

Hammond wrote:

“To make this trap they chose the narrow neck of the river, at Barragup on the Serpentine, where the water was up to about four feet in depth. A wicker fence was built across the stream, completely closing it from bank to bank, except in the centre, where a small opening was left. Through this opening a race was constructed by driving two rows of parallel stakes in the riverbed. The bottom of the race was filled with bushes, until there was only about eight inches of clear water above the bushes for the fish to swim through. On either side of this race was built a platform, about two feet six

inches below the top of the water. On these platforms the natives stood to catch the fish as they swam through the race.” (Hammond 1933, 46).

Hammond also drew, from memory, a plan of the weir (Figure 1).

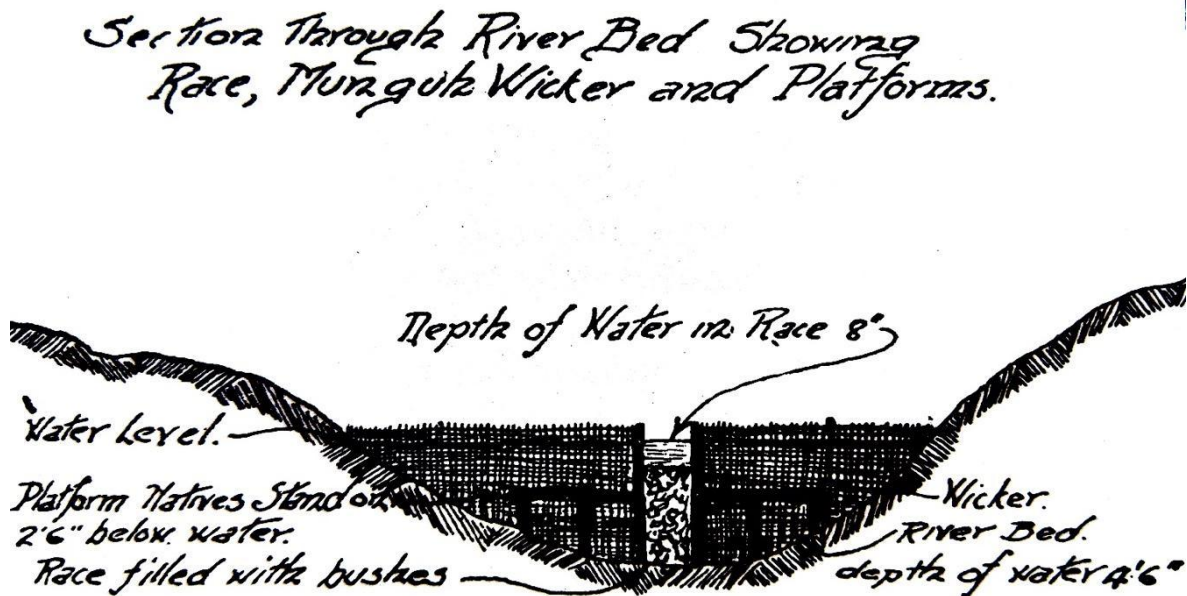


Figure 1. Barragup Mungah Serpentine River (Hammond 1933:47)

There are also two photographs taken at around 1900 and both are described as showing a mungah on the Murray River (Figure 2). Gibbs suggests that Figure 2 (right) may portray the Barragup mungah.



Figure 2. Left, fish trap on the Murray River, c. 1900, Western Australian Museum (Dortch 1997, 29 plate 5).
Right, Aboriginal fish trap, Murray River, c.1900,
Western Australian Museum, Anthropology Department collection (Gibbs 2011, 8).

Indigenous Oral History

The Gnaala Karla Booja people have several recorded stories relating to the Barragup mungah. Collard and Palmer have captured some of this information and included them in The Gcayut Research and Training Project. This document contains input from eight elders and knowledge holders of the region. Within this document are descriptions of the construction of the mungah, how it was used and the fish that were caught. There are details of ceremonies and songs performed at the site and the implements and goods that were made to trade with the other tribes who were invited to

Barragup to share the trapped fish.

Collard and Palmer mention that the elders:

“... obtained a Ngoonjook... interwoven wire grass used as a 'net', also used in the construction of the weirs” (Collard and Palmer 1996, 21).

Another fish trap is also mentioned:

“The narrow creek joining Goegrup Lake to the smaller south-eastern lake was blocked by a Mungah or fish trap” (Collard and Palmer 1996, 26).

In a video called Barragup Yarns George Walley describes a:

“... fish trap as being made of sticks” (Lyons, Barragup Yarns 2104)

And:

“... small trees, skinny ones placed vertically into the mud. And from there, there's horizontal pieces of wood that's tied up and you can make the small ropes from what we call Wagyls whiskers, from the reeds that grow along the waterways” (Our Knowledge Our Land 2016)

The website Our Knowledge Our Land Ngalang Kaadadjan, Ngalang Boodja includes a page on the Barragup mungah that contains a piece of information regarding the mungahs construction:

“... the stones that once formed the base of the fish mungah on the bottom of the riverbed are not visible from the surface.” (Our Knowledge Our Land 2015/6)

On the same website it locates the mungah:

“... where the Serpentine River forks in two directions, is Mungah on Serpentine”. Bilya cultural trail (Our Knowledge Our Land 2015/11)

Harry Nannup, in an interview transcribed from Stretch Festival Mandjar Dreaming Audio recording states:

“I don't think a lot of people know... where the real fish trap was. Just there on the Serpentine River, by the bridge there, in Barragup” (Stretch River Festival Mandjar Dreaming 2015),

Frank Nannup has also recorded interviews in July 1995 with the Winjan Aboriginal Centre about his early life living around the Waangaamaap Bilya (Serpentine) River. Though not directly mentioning the Barragup mungah his interview provides an insight into how local indigenous people caught fish in the river (Our Knowledge Our Land 1995). When at school he sometimes played with a local, Charles Norton, and they would talk about the fish trap and its location (Charles Norton pers comm 13/06/21).

In 2020 when discussing the use of fish traps on the Swan coastal plain, an individual who only wants to be identified as a Wadjuk Noongar person, mentioned that there was a method of trapping fish using two fish traps. The first weir would have an access point for the fish and would be upstream of a second continuous barrier. Once sufficient fish had entered through the first weir it would be blocked leaving the fish trapped in a small area where they could be kept alive and only removed when they were to be eaten. This technique has been recorded being used throughout Eastern Australia (Kelly 2014, 18; Kreij et al 2018, 149; Martin et al 2022, 108; Rowland et al 2011, 3). This possibility should therefore be considered when assessing potential fish trap sites.

These accounts build a picture of a site that is of great importance to the traditional owners. They describe aspects of its construction, general location and state that the mungah is part of a larger system of trapping fish. This includes another mungah north of the Barragup site at Goegrup Lake. Hammonds description of the munga matches the traditional owners oral histories, but the traditional owners add three additional pieces of information. First, that stones were placed at the base of the munga, second, that 'small ropes' were used to tie parts of the fish trap together and third that woven

nets were used to assist trapping the fish. Gibbs cites Stranger from a 1972 letter to the West Australian Museum stating that nets were used to catch fish that were strung across a six-foot gap that was made in the mungah. This was to allow boats to pass (Gibbs 2011, 13). It's not known if this is the use of nets that traditional owners mention.

Modern Oral Histories

The authors contacted a local, Charles (Charlie) Norton, after discovering he had first-hand information about the Barragup mungah.

Charlie was born on the 20th of July 1940 and lived on his family's 500-acre farm situated on the north side of the Waangaamaap Bilya (Serpentine) River.

Charles recalls seeing some of the fish trap wooden stakes still in situ in the mid 1950's. His father told him about the fish trap and how the indigenous people used it and it was made from casuarina sticks that were pushed into the riverbed at random angles.

Charlie took one of the authors to the location of where the sticks were seen. Charlie revealed that the riverbanks have lost around 4 metres from each bank due to erosion. The river at this location is now 36 metres wide so it was approximately 28 metres when Charlie first saw the sticks.

Modern Netting

At Nortons mungah location are two drill rods that have been driven into the south side of the riverbed. They are set at 90 degrees to the riverbank and angled at approximately 60 degrees towards the riverbank. These may have been used as anchor points for setting nets across the river.

The removal of the wooden stakes that Norton reported seeing in the 1950's may have been removed modern as they could have snagged modern nets set off the drill rods.

Early Maps

Early colonial maps that include the Barragup area were produced in the 1840's, the accuracy of which can be seen when compared to a modern map (Figure 3, Left). Browne's copy of a Watson map from 1841 is of particular interest (Figure 3, right. SRO 3844-250). The cartographer's notation on this map reads 'Barragup fishing ground', underlined in red by the authors. Both maps show little change in the river course over the past 183 years.

Brownes map has locations added by the authors marked by numbers from one to six. Position one on Brownes map is where some traditional owners indicate the mungah was (Our Knowledge Our Land 2015/11). Position two, the approximate position as the State Heritage office place number 09017 and the Department of Planning, Lands and Heritage site 3314. Positions three and four is where the authors suspect the fish traps are. Both Browne and Creerys maps show limited access for a boat trying to navigate the small branch of the river at position five. The unnavigable small creeks, position six, are still visible today. An 1840 map by Creery of the Geerginup estate, (SRO 3869-018), also matches the river course shown in Brownes map.

It can be said with some confidence that since the 1840's the main river channel is where the Barragup Fishing Ground is noted on Brownes map. This is likely to be the place where the Barragup fish trap was positioned as it would restrict boat access, and this is the reason given for it to be repeatedly damaged and finally removed in 1937 CE (Collard and Palmer 1996, 29; Gibbs 2011, 13).

If the mungah was at location one, there would be no reason to remove it as maps from the period clearly show this branch of the river is a dead end and not navigable for boats. Charlie Norton

mentioned that he had widened the ‘dead end’ at position five to increase waterflow, but this was well after the fish trap was removed.

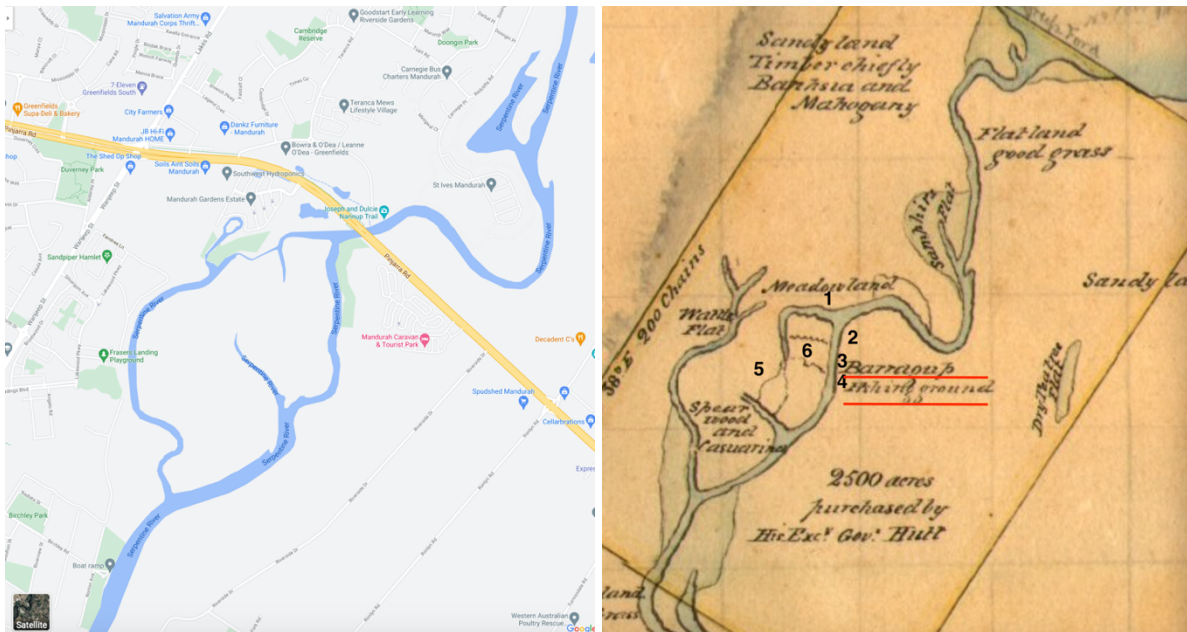


Figure 3. Left, Google Maps accessed 20/03/23. Right, Browne after Watson. 1841 SRO 3844-250

This is not discounting the possibility that there was once another mungah at location one. The river and lake system may have formed as early as the Late Pleistocene (Gibbs 2011,13) and over the millennia the river would have changed course many times. Any oral history locating the mungah elsewhere may be a reference to an earlier mungah.

First Site Visit

Barragup was first shown to McCann by David Austin, Michael McGee and Nicholas Reynolds from the Mandurah Museum Maritime Museum. The first trip to the area was aboard one of the tunnel boats that the group had restored. These boats have an inboard engine with a propeller that is recessed into the hull allowing the boat to navigate the shallow waters of the river.

Subsequent Surveys

Due to the shallow nature of the waterways, the initial visual surveys were conducted using canoes. Over 34 kilometres of river and lake banks were inspected with particular attention taken of any narrow sections of the waterways as well as any evidence of wooden structures.

The only wooden structures found were fence lines that extended into the lakes made up of closely spaced, split timber posts.

The Dortch Stake

The only physical evidence said to be from the Barragup mungah is a short wooden steel cut stake found by Charlie Dortch when diving in the area in the late 80's (Email Charlie Dortch 17/02/2020 and O'Connor et al. 1989, 14) and reported in the West Australian newspaper on the 18/02/89.

Over the past three years McCann has found seven wooden stakes within the surveyed area and all are of a similar size and shape to the one found by Dortch. They have been found along the riverbanks of

the Waangaamaap Bilya (Serpentine) River and one in the Djilba (Peel) Estuary 1800 metres south of the Waangaamaap Bilya (Serpentine) River mouth. All were steel cut, had a rough point at one end and the other end was cut flat. They were between 450mm to 550mm long and between 40mm to 70mm in diameter. The stake from the Estuary was driven vertically into the inlet bank.

Unfortunately, the authors have been unable to inspect the Dortch stake, which is currently held by the West Australian Museum Boola Bardip who have not yet provided access.

These wooden stakes may have been used as land anchors for recreational and commercial netting of fish. The commercial set, haul and boat netting of fish in this region started around the third quarter of the nineteenth century (Worsley et al 2012, 334) and was one of the largest estuarine fisheries in Australia (McComb and Lukatelich 1995, 5). McCann has used this technique of a land anchor when assisting commercial fishers in Western Australia.

This method of using land anchors for netting has been used for millennia, a mosaic from the Roman villa of La Vega Baja de Toledo, third-fourth centuries BCE, show a net set onshore and a fishing boat deploying the net in a curve (Lopez 2010, 167 Figure 1). Interviewing the retired commercial fishers who operated in the Djilba (Peel) Estuary may well help confirm if wooden stakes were used in this fashion.

Side Scan Sonar

On later surveys the authors used a Lowrance HDS Carbon 9 with a Totalscan transducer to scan the river and lake beds. This unit has a transducer that is bolted to a boat's hull and was chosen as the river has numerous obstacles, particularly sunken trees, that could snag a towed side scan transducer. Over a period of four years, thirty-three kilometres of side scan sonar survey lines were recorded. These were from the Waangaamaap Bilyas (Serpentine) River junction with the Djilba (Peel) Estuary and upriver for 8500 metres. Scanning was conducted during different seasons as the rainy season allowed the boat to access shallower parts of the river.

There are limitations to using a side scan in shallow water as the effective range of the sonar is quite short, often requiring multiple runs to scan a small area. Also, any remnant wooden stakes or stones from the mungah would be in a line at 90 degrees to the transducer meaning the return signal would show multiple objects as one signal (Blondel 2009, 15 and 37-38). Targets are illuminated from the side, consequently only the surfaces facing the sonar will be seen. Interpretation of the side scan images can be difficult and requires practice. Basically, soft objects, mud, sand and wood, return a weak or dull signal and hard targets, such as rock, a strong or bright signal (Blondel 2009, 78).

The side scan sonar picked up two sections of the riverbed where a bank had formed across the river (Figure 4, A, B and C) In the same areas rocks could be seen at the topmost part of the bank, these are circled in red. These are the only sections of the riverbed where a bank forms across the river.

The side scan screenshots (Figure 4, B and C) are taken at the same location but different times of the year. Note the difference in the signal from the rocks, in B only one rock is visible, in C, three. The position of these rocks were confirmed by wading across the river and seven rocks, in two lines, set at 90 degrees to the riverbank, were detected. The rocks vary in size from approximately 300mm to 800mm in diameter.

These banks and stones seem to fit the description of where the traditional owners say the mungah should be, a narrow section of the river, a shallow bank with a deeper central channel and rocks in a line on the riverbed. The two banks and two lines of rock may indicate two mungahs.

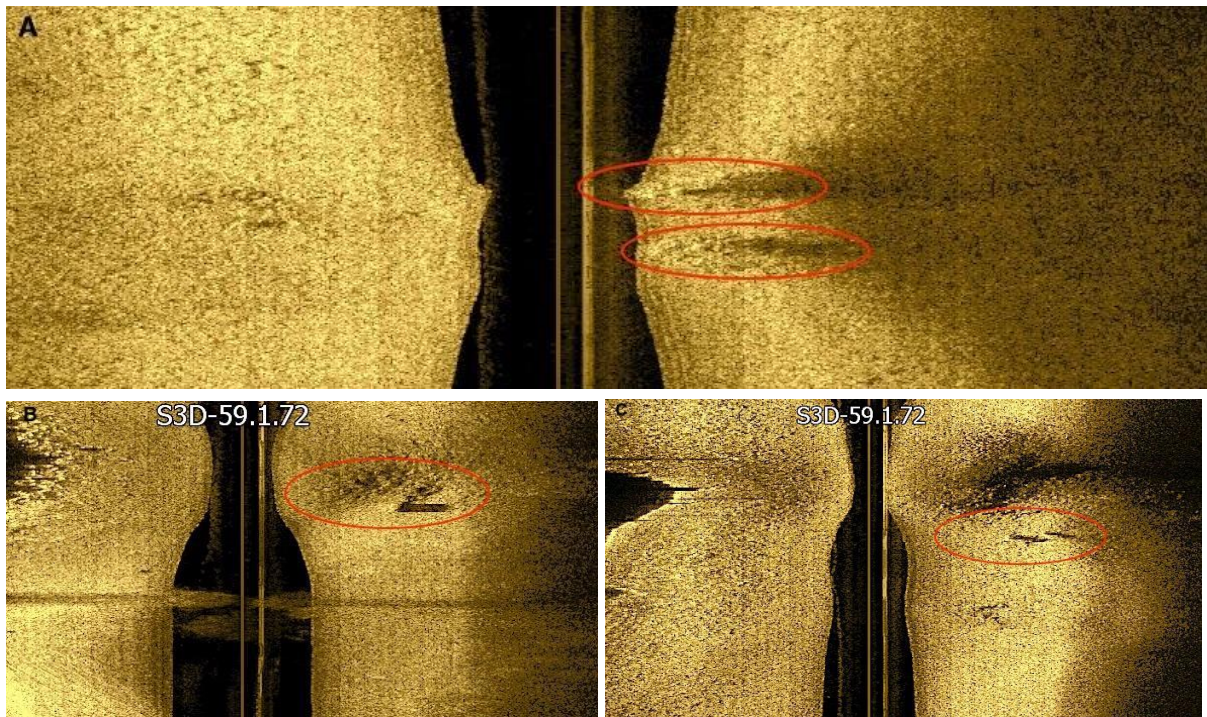


Figure 4. Screen shots of cross riverbanks and lines of stones (circled in red).

CONCLUSIONS

Through a combination of investigative methods, the authors may have relocated the position of the Barragup mungah and suggest that a second mungah may be in the same area. The side scan sonar data clearly show two sand and mud banks that cross the river from bank to bank. These are the only locations on the lower Waangaamaap Bilya (Serpentine) River where this occurs. Each of the banks have stones set in a line on top of the bank, a feature of the mungah mentioned by traditional owners.

These banks and stones were located prior to meeting Charlie Norton. This discovery was not mentioned to Charlie until he indicated where he last saw the mungah sticks. This proved to be in the same spot as one of the banks and line of stones that is at position 3, as shown on Brownes map (Figure 3, right).

The use of side scan sonar may be a viable screening tool for locating wooden or stone barrier fish traps in limited visibility environments. If in position for a long time they can change the deposition of sediment thus altering the topography of a lake or riverbed. This will be evidenced by sedimentation along the length of the structure (Van Denderen et al. 2022, 2), such as the two sandbanks found by the authors.

There is still plenty of research that needs to be done before we can definitively say that the mungah has been relocated. Some of the mungah wooden stakes may have snapped off and could still be implanted under the mud on the riverbed. These could be found with a non-invasive fingertip survey by divers.

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