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Water and water technologies in Indigenous Australia

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1.0 Abstract

This thesis is a review of the ethnographic and historic literature regarding water technologies, knowledge and water sources used and accessed in the arid interior of Australia with the purpose to gain a better understanding of how Aboriginal people managed to locate and transport water in desert regions.

The methodology is an integrated approach that has culminated references, from ethnographic and historical literature, regarding traditional Aborginal ways of procuring, locating and transporting water from historical and ethnographic records, combined with a desktop survey of Aboriginal water technologies held at Queensland Museum, South Australian Museum and the Western Australian Museum. It has also attempted to used ethnoarchaeological theory to understand if water technologies are meaningful in regards to Pleistocene refugia models and human behavioural variability in desert environments during the Last Glacial Maximum.The results of this research has produced a significant new data set reflects the wide variety of water resources avaible to Aborginal people in historical times. These include Native wells, dams, mound springs, root water, skin water bags, coolamons, baskets and buckets.

2.0 Introduction

> 'Almost every Aboriginal person I have spoken to can recall times stuff when they were close to death in attempts to find water during a critical phase of a prolonged dry season' (Bayly 1999:24).

It is now widely acknowledged that Indigenous Australians have occupied the continent for over 59 ka, with the earliest recorded evidence dating to 69 ka (Clarkson et al. 2017: 309). The occupation of Australia's arid interior dates as far back as 40-45 ka, with recent evidence found at Warrayti dating to 49 ka (Hamm et al. 2016).

How Indigenous people continuously occupied the arid interior has been widely discussed in the literature (eg. Veth 1993, Smith 1989 and Gould 1991). Hypothesis regarding the cultural and human ecology of desert societies include, investing time and energy into technology and infrastructure such as harvesting water through deep wells and storing food and water to stabilise returns from the land; the exploitation of seasonal changes in humidity to support long distance transhumance and thus evading aridity over time or by being highly mobile and opportunistic through using rainfall to explore foraging territories and falling back on permanent and semi-permanent water sources as the country dries out (Smith 2013: 11). Water is the key to survival; Indigenous people were able to locate, store and transport it even in the driest conditions.

Australia's deserts form one of the world's major desert regions and include the largest block of arid zone in the southern hemisphere (Macfarlane 2005: 4-6). Deserts are difficult environments for people, not only due to the limited water availability, but also to the inherent patchiness and scarcity of resources such as food and shelter (Macfarlane 2005: 10). In addition, temperature variability where days can exceed 40 degrees Celsius and nights descend to below zero degrees Celsius places limitations on human adaptation to deserts (Trewin 2006).

Water is not only a survival essential, but it also has high spiritual value for Indigenous people in Australia. Water is a common theme in many 'Dreamtime' stories and songlines. The 'Dreamtime' is both a time in the distant past but also an ongoing reality; therefore, the beings that inhabit the Dreaming are also inhabitants of the contemporary world (Jackson and Barber 2013: 441). This strong connection to water is still present today with many Indigenous groups around Australia contributing to the water management practices in their area (e.g. Jackson and Barber 2013). Specific knowledge regarding water, however, is reduced

as significant elders pass away.

In this chapter I will give a brief background of the climate, ecosystems, population and archaeology of Australia's deserts. I will then describe the study area and research question and aims of this study. Finally, I will discuss the significance and limitations of this study.

Background

What is a Desert?

Australia's deserts cover 71% of the continent's current landmass, 5.3 million square kilometres (Smith 2013: 2). Desert regions cover 44% of Australia's landsurface and an additional 37% of Australia is vegetated with semi-arid tussock grassland and shrub communities (Williams 1979:145). These two regions combine to make Australia the driest of the world's inhabited continents (excluding Antarctica). Even with these significant obstacles, Indigenous Australian's managed to not only survive but thrive.

A desert or arid area or is typically defined as receiving region receiving on average less than 250mm of rain per year (Trewin 2006). Australia's deserts can sometimes technically exceed this average due to uneven rainfall distribution. Australia's Bureau of Meteorology (ABS), therefore, uses an adaptation of Wladimir Kopin's climate classification. This method uses precipitation levels instead of rainfall to identify an arid area (see Trewin 2006 for a detailed explanation) and shows that desert climates (or arid areas) occupy most of the western and central interior of the continent of Australia (Trewin 2006). In Australia today, ten regions identify as a desert, these are:

- The Great Victoria Desert (348,750 square kilometres),
- The Great Sandy Desert (267,250 square kilometres),
- The Tanami Desert (184,500 square kilometres),
- The Simpson Desert (176,500 square kilometres),
- The Gibson Desert (156,000 square kilometres),
- The Little Sandy Desert (111,500 square kilometres),
- The Strzelecki Desert (80,250 square kilometres),
- The Sturt Stony Desert (29,750 square kilometres),
- The Tirari Desert (15,250 square kilometres) and
- The Pedirka Desert (1,250 square kilometres) (see Figure 1).

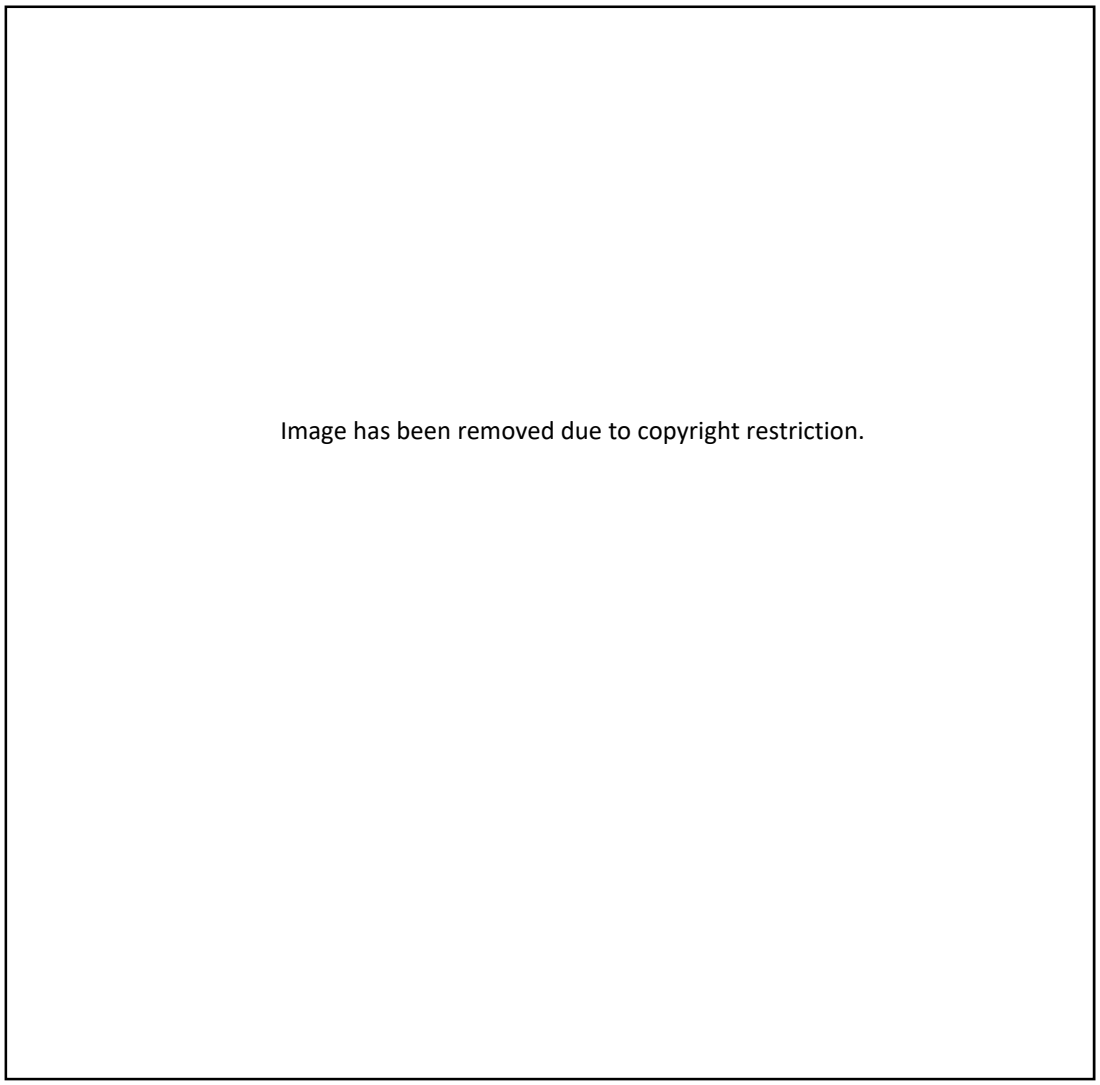

Figure 1 Map of Australia's Modern Deserts (Trewin 2006).

Climate of Australia's Deserts

This study takes data from both Australia's contemporary deserts (via ethnographic and historical records and historical museum items) and late Pleistocene deserts (archaeological data and refugia models). Therefore, it is important to remember that modern climate indices are likely to be a poor guide to the extent of deserts in the past. With this in mind I will detail the climate of both contemporary and Pleistocene deserts of Australia.

Australia's modern deserts cover 70% of the continent's current landmass, 5.3 million square kilometres (Smith 2013: 2). They combine to make Australia the driest of the world's inhabited continents (excluding Antarctica).

In common with most deserts, rainfall in the Australian deserts is highly erratic from year to year. There is only one recorded instance of an Australian station being rainless for a

complete calendar year, and this was at Mulyie, about 100 km east of Port Hedland in Western Australia, in 1924; but years of less than half the long-term average of 250 mm are relatively common everywhere. In contrast, occasionally the annual average will fall in a single month; on rare occasions, it can fall in a single day (Trewin 2006). The driest regions in Australia are around the Lake Eyre Basin in South Australia, where the average rainfall is between 100 mm and 140 mm per year (Trewin 2006).

The climate of Australian late Pleistocene deserts was different to modern climates. Paleoenvironmental data dating from 30-18ka, suggest a significant drying condition across the continent, expanded desert margins beyond the present day desert core and the drying of desert lakes (Fitzsimmons et al. 2013: 90 and Williams et al. 2013: 4612). These climatic changes would have affected the ecological base-line for hunter-gatherer groups.

Most notably the climate during the Last Glacial Maximum (LGM), 23-18ka, saw height of the intense aridity, research suggests people abandoned large parts of the continental interior and fragmented the social and economic world of inland Australia (Smith 2013: 5; Hiscock 2008: 207; Williams et al 2013: 4612). During this time Australian deserts were not only difficult climates to live in due to the scarcity of water, but also because of the inherently patchy and highly variable resources across a range of spatial and time scales (Smith 2013: 6).

Population of Australia prior to European contact

Population estimates for pre-colonisation are difficult to quantify and have been widely debated (eg. Birdsell 1957; Mulvaney and White 1987; Smith 1980 and Lourandos 1983). These earlier studies treated demography as a unidirectional growth through time (Williams 2013). Recent studies suggest a population estimates are better represented as a growth curve over time. These estimates factor in major events, such as the LGM and European contact, that would have directly impacted populations.

Williams (2013) presented a well researched population curve for the whole of Australia dating from 50 ka through to European contact. Williams (2013) used the all published (and extensive unpublished) radiocarbon data from documented archaeological sites within Australia to calculate his estimates. He employed the Peros et al. (2010) equation to turn this radiocarbon data into demographic estimates. Williams (2013) suggests, that if a founding population of 1000-2000 people arrived in Australia around 50 ka this would have resulted in a population of approximately 1.2 million at 0.5 ka. He also suggested, that during the LGM

populations were likely to have decreased by about 60 per cent and again by 8 percent around the time of European contact due to the introduction of disease (Williams 2013). Williams (2013) estimates the population of Australia may have varied between 777,000 and 1,100,000 people prior to colonisation.

Unfortunately, in regards to population estimates of the arid interior, such thorough calculations are unavailable. Smith (2013: 10) compared population estimate research from a number of sources (Berndt 1959, Yengoyan 1968, Strehlow 1965 and O'Connell et al. 1983) and estimated approximately 60,000 to 100,000 people would have occupied Australian deserts pre-colonially. Presently, only three percent of Australia's population resides in the arid interior.

Archaeology of Austalia's Deserts

Smith (2013: 13) describes the archaeology of Australian deserts:

- sites have few artefacts and few categories of remains (usually only chipped stone artefacts, grindstone fragments, red ochre and charcoal);
- archaeological deposits are shallow, often no more than a metre deep, and poorly (or cryptically) stratified;
- research focuses on strategic points such as places near water or small gorges or ranges; and,
- research involves a small rock-shelter or open-site excavations that may include rock-paintings, stone arrangements and engravings.

The depositional landscape of Central Australia means archaeological sites are stratified open-ones, whereas the south-eastern part of the arid zone sites are characterised by scatters of stone artefacts on deflation surfaces (Smith 2013: 13)

Research Questions and Aims of the Study

This thesis will explore the two research questions:

- *What technologies, knowledge and water sources did Aboriginal people use to adapt to water availability in arid Australia?*
- *Are water technologies meaningful concepts in regards to human behavioural variability in desert environments during the Last Glacial Maximum?*

It will achieve this by addressing the following specific research aims:

1. Review the literatre regarding the range and role of water technologies used in Aboriginal Australia.
2. Identify what water sources were employed by Aboriginal people in the arid interior in the ethnographic and historic literature.
3. Identify what objects relating to Indigenous people's water transportation are held in the collections of museums throughout Australia.
4. Determine what the ethnographic information indicates about the distances travelled by Indigenous people between permanent water sources (using water storage/water transport technologies).
5. Map the distribution of water sites and source mentioned in the ethnographic and historic literature, against the 4 desert sub-regions of modern Australia.
6. Map the distribution of water technologies against the 4 desert sub-regions of modern Australia.
7. Identify and map technologies against late Pleistocene refugia models, to determine if barriers, corridors and refugia are meaningful concepts regarding human behavioural variability in desert environments.

Study area

This study has culminated data from ethnographic and historical records which was recorded in contemporary times, therefore the study area encapsulates the landscape known as Australia's modern desert.

Although Figure 1 illustrates the regional boundaries of Australia's known modern deserts (according to the ABS data), in reality, the geographical boundaries for Australia's deserts and drylands are poorly defined.

With this in mind, Morton et al. (2011) has established six desert 'sub-regions'. These regions have been identified using the United Nations Environment Programme (UNEP) aridity index (see Morton et al. 2011 for further detail regarding how the UNEP aridity classification is calculated).

The regions are, the Pilbara, the Western Desert, the Central Australia; the Arid rivers region, the Nullarbor Plain and the Darling– Paroo river system. These sub-regions extend the boundaries of what the ABS data currently considered a 'desert' as they also include semi-arid regions.

Due to the limitations of this study being a master's thesis, this study will focus on four of the six sub-regions; these regions are the area that include all the known deserts listed above (See section what is a desert?). The four sub-regions are:

- The Western Desert (Region 2). This area encapsulates the modern deserts of: the Great Sandy Desert, Little Sandy Desert and the Great Victorian Desert. Most of this area is covered by linear sand ridges less than 15 metres high containing small ranges with rock-holes and gorges that provide focal points for human usage in the region (Smith 2013: 7).
- Central Australia (Region 3). This area encapsulates the MacDonnell Ranges in the north and the Mann-Musgrave ranges in the south. This region also includes the central ranges, positioned 500 metres above sea level and containing the greatest concentration of rare plant species, which highlights the region's importance as a biographical refuge in the desert (Smith 2013: 7).
- The Arid Rivers region (Region 4). This is a large ephemeral riverine system that includes he catchments of the Mulligan and Georgina Rivers and the Diamantina-Warburton and Cooper Creel-Barcoo drainages. This region transfers large flows of floodwaters from desert margins to Lake Eyre (Smith 2013: 7).
- The Nullarbor Plain (Region 5). This is a vast karst plain forming a treeless chenopod steppe. Surface water is absent; however, natural cisterns form in places (Smith 2013: 7).

Figure 2 illustrates the four desert sub-regions as identified by Morton et al. (2011) of this study. These four regions will be used to group and map data in the results chapter.

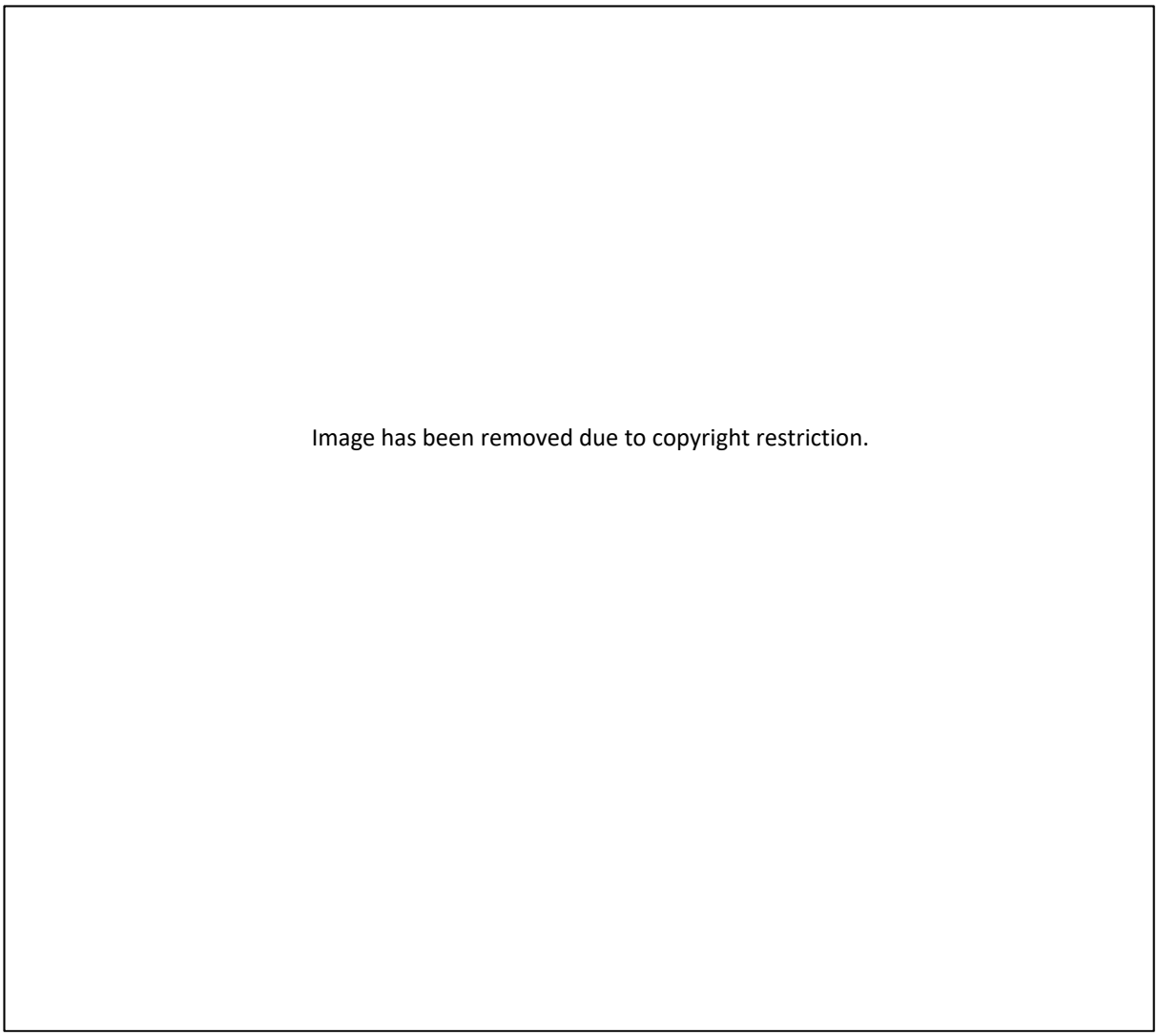

Figure 2 The Australian arid zone's sub-regions as described by Morton et al. (2011), Pilbara (Region 1); Western Desert (Region 2); Central Australia (Region 3); Arid rivers region (Region 4); Nullarbor Plain (Region 5); Darling–Paroo river system (Region 6) Morton et al. (2011)

Significance of the study

Research conducted on Indigenous water technologies is limited, contributing to this topic is significant as it has the potential to provide new information about how Aborginal people managed for water in the arid interior. A study that consolidates both the historical and ethnographic literature regarding water sites in the arid interior and consolidates the objects associated with water technologies available at the South Australian Museum, the Queensland Museum and the Western Australian Museum, is a first of its kind.

Each year, more knowledge and information is lost as knowledgeable Elders pass away (Lassak and McCarthy 2001:14). Pulling this information from the historical and ethnographic literature could possibly assist in the reduction preservation of this knowledge. Additionally,

the culmination of the artefacts held at these museums, into a single dataset, has the potential to enhance the current knowledge about Aboiginal water technologies.

Lastly, comparing water technologies to LGM models of subsistene in the arid interior has the potential to provide new insight into how Aboriginal people managed for water in prehistoric times.

Limitations of the research

Carrying out literature-based studies has many limitations. This research being constrained to a desktop study, presents many issues regarding comprehensive place identification, detailed location data and thorough analysis. A desktop study limits access to location information in comparison to a study undertaken through consultation and site inspection. The data this thesis will use dates from the early 1800s to the early 1900s, and thus relies on the literature for accurate knowledge of the location of permanent water sites, which is risky and in some cases out-dated. However, due to this research being a Master's thesis as opposed to a PhD thesis, there is no capacity to carry out consultation and site inspection.

This study is also constrained to the limited information available regarding the arid-zone, such as registered heritage sites and previous studies on water. Limited specific place information reduces the author's ability to produce reliable information. The literature is inconsistent in the levels of information available about the forms of water availability relating to a particular place (Macfarlane and McConnell 2017: 33). Additionally, there is always risk in relying on another person's research and observations.

Another limitation is the lack of consultation. Due to this study being limited to a Master's thesis, the author could not interview Traditional Owners and Indigenous people about their local knowledge.

Ethnographic literature and museum collections have made a significant contribution to our understanding of Australia's prehistory, including Indigenous water technology. However, these accounts are usually inherently biased. Therefore, information described in the literature may be overembellished or under-represented. Additionally, museum collections are not necessarily representative of Indigenous Australian societies. Colonial collectors inadequately sampled from different temporal and spatial contexts. Objects are therefore representative of the collector's choices and inherently their biases as to what they saw as

valuable and important. These objects represent the sometimes-minimal interactions collectors had with Indigenous people and the influence of institutional policies and practices during that time rather than reflect the material culture of Indigenous people (Peterson et al. 2008). These limitations are further discussed in Chapter 2. Additionally, in regard to the museum collections, physical analysis of items could not be done due to the author living interstate from the most important of the collections. Therefore, limited the information can be derived regarding the how items were manufactured and what materials were used. Also, it limits the researcher's ability to identify the different regional and/or cultural features of an object.

Finally, time depth is another limitation. The information provided in the literature is fairly 'new' compared with the age of Indigenous archaeological sites within the arid-zone that date beyond 45 ka. Therefore, it is difficult to accurately apply the results of this research to dates through the Holocene, LGM and beyond. The results of this study must be used as a guide without archaeological data to support it.

Thesis outline

This thesis comprises seven chapters. Chapter 2 contextualises the research by discussing the post-contact literature and the issues surrounding literature of that time, with the sub-theme of water. It looks at the fields of ethnology, archaeology, ethnohistory, and the Eurocentric, androcentric and geographical biases associated with them. It will also touch on the biases related to museum collections and collectors.

Chapter 3 discusses the methods used while undertaking this project. The methods for locating relevant textual and photographic sources are described.

Chapter 4 presents the results of this study. These are presented in two sections, the first looking at water sites and the technologies identified in the literature; the second at what items associated with water have been identified by Australian museums.

The discussion is detailed in Chapter 5. This chapter includes a detailed look into the distribution of water technologies in terms ofv the Veth (1993) model of refugia.

Finally, Chapter 6 concludes the thesis by addressing the research questions and aims presented in Chapter 1 and by summarising the new information this thesis has contributed

to the field, regarding water technologies within the arid interior of Australia. Potential future research directions will also be considered.

3.0 Literature Review

Indigenous knowledge - ethnographic and ethnohistoric accounts of water technologies

Introduction

Late nineteenth century and early twentieth century sources describing Australian Indigenous people and their culture at the time of initial contact and later settlement periods are often all the evidence that remains of Indigenous technologies. These documents were often written by white male European settlers, explorers and natural scientists, government surveyors and Protectors who were inherently biased and writing with the belief that Aboriginal people were a 'dying race'. Information about traditional technologies often heavily relies on the writing and collections of these individuals, who worked as amateur ethnographers (Izett 2014: iii). For Indigenous peoples, the contact period involved white intrusion, dispossession, violence and disruption (Reynolds 1983). As described by Bell (1983):

> Irreplaceable ritual objects were stolen; water-holes were despoiled; the ecological domain of indigenous flora and fauna was rapidly transformed by intensive grazing; punitive parties massacred groups indiscriminately while rescue 'pacification' parties brought people in from the desert. (Bell 1983:41-2).

Additionally, it must be highlighted that the contact period was not a single event, but instead is better described as the ongoing process of colonialisation. Colonialisation involves institutional and personal relations of power, labour and economic hierarchy, attacks on cultural practices and beliefs, and often, racism, with direct effects on Indigenous people and their strategies or abilities for survival (Silliman 2005: 62). This definition describes a process that still occurs in places where Indigenous populations yet exist. When researching colonial archaeology, an understanding of the context and theories behind the colonial literature must be highlighted in order to understand the implications of the terminology used in the research.

This chapter will discuss ethnographic sources regarding water technologies to understand the diversity of practices that existed during the turbulent period of early European colonisation.

Ethnoarchaeology and analogy

As a way of reducing the potential to make inaccurate assumptions of the past, many archaeologists employed ethnographic studies. Ethnoarchaeology is a research technique in archaeology that uses ethnographic and historic information to inform the static patterns that is the archaeological record. Ethnoarchaeology was first established in the late 19th century, however gained popularity during the 1980s and 1990s during the post-processual boom. Archaeological investigations conducted in the semi-arid and arid regions of Australia often used ethnoarchaeological methods to hypothesise human behaviour (i.e. Gould 1968 and 1969).

There has been an unfortunate failure to recognise the importance of Indigenous knowledge in the exploration and development of Australia (Bayly 1999: 17). Additionally, as mentioned above, due to colonisation, some Aboriginal knowledge has been lost. Along with archaeological records, the use of ethnographic records from the 18th, 19th and 20th centuries to understand life in Australia before colonisation, has become common practice amongst researchers. These studies employ methods such as analogy and the 'direct-historical approach', which use accounts of contemporary practices to understand prehistoric ones.

Gould and Watson (1982) argue there are two major purposes fufiled through the use of ethnoarchaeology. Firsty, to generate explanatory hypotheses or answer questions about specific items or patterns recovered archaeologically, for example to answer the question what was this used for? (Gould and Watson 1982: 356). Secondly, to derive theories and broad lawlike models about relationships between human behaviour and material culture resulting from that human behaviour (Gould and Watson 1982: 356). The next few sections of this literature review will discuss the theories regarding these two purposes.

Theory: Analogy and Inference

Analogy, in a general sense, is the process of examining non-observed behaviour (such as archaeological data) by referring to observed behaviour which is thought to be relevant (in this case ethnographic and historical data) (Ascher 1961: 317). It has become a tool in the attempts to understand the past (Stahl 1993: 235). At the same time, analogical inference is always subject to a degree of uncertainty. Analogy is a form of inductive inference, in which all the premises can be true and yet the conclusions drawn from them can be false (David and Kramer 2001: 44).

Inference draws from two major criticisms of analogy, subject-side and source-side criticisms. Subject-side criticisms focus on how we apply analogical models to archaeological contexts (Stahl 1993: 236). Source-side issues concern how we select and establish the relevant analogues, such as the time of the observation, the author's temporal position and proximity to the event, the cultural context, the author's personal opinions and the ideology of the period (Stahl 1993: 236).

Source-side based interpretations tend to either assume the 'pristine', unchanging nature of societies known ethnographically, or filter information to project only what needs to be perceived (Stahl 1993: 239, David and Kramer 2001: 48, Wobst 1978: 308). Because of this, little attention has been paid to cultural discontinuities occurring during European colonisation in Australia, and the theoretical and methodological implications of that (David and Kramer 2001: 48). These factors, if not addressed, can contribute to major biases in the understanding and application of an ethnographic analogy.

One source-side concern is the use of the direct-historical approach. It involves the idea of cultural continuity through time by assigning ethnic identity to an archaeological phenomenon. For example, Cyrus Thomas, an archaeologist from the early 1900s, used the reasoning of the direct historical approach to demonstrate that various earthworks scattered across the eastern and midwestern portions of America were produced by the direct genetic and cultural ancestors of historically documented ethnic groups. Archaeologists who employed this method frequently identified major differences between the archaeology and present culture (David and Kramer 2001: 49).

The assumption that Indigenous cultures remained static, along with a denial of cultural change, is a major flaw in using analogy to reconstruct past cultures. It must be recognised that cultures underwent major transformations as a result of European contact (Stahl 1983: 243). Stahl (1983) identified the effects of cultural contact on Indigenous people, and his 'salvage' ethnographic studies were motivated by the desire to record dying 'traditions' before they vanished. This method inferred highly selective reporting of contemporary cultures which an emphasised 'traditional practice' (Stahl 1988: 243).

Ethnographic models to describe the past

Ethnographic analogies are by no means without value in archaeology, but they suffer from an inherent limitation as they are unable to inform us about prehistoric behaviour patterns that do not have modern counterparts or analogues. The major difficulty in ethnoarchaeology has been one of ambiguity arising from a failure to distinguish more compelling uniformitarianism explanations from less compelling ones based upon analogy (Gould 1978: 251). Most ethnographic observations in the existing literature are framed in terms of normative behaviour or a normative concept of culture. To minimise the risk of making wrong assumptions, some archaeologists have attempted to explain past human behaviour and events through the application of laws or models.

To discover processes that explain adaptive variation and change, the archaeologist needs a starting point, that is, a model based on both empirical observation and logic derived from general systems theory. From such a model, one may proceed to make predictions about the patterns of artefacts, features, and non-artefact remains that should occur in prehistoric sites.

In regards to hunter-gatherer societies around the world, a number of behavioural models have been hypothesised, especially by ethnoarchaeologists who chose to emerse themselves in the culture they were studying. Binford (1980: 5) conceived this concept as the 'ethnoarchaeology of living systems'. Through recording modern- or present-day subsistence behaviours, archaeologists have attempted to apply these behaviours to the archaeological record of the place.

For example, Binford (1980) spent a number of years living with an Inuit group in the Anaktuvuk Pass region in north-central Alaska. Throughout his time with Eskimo people, Binford attempted to reconstruct an almost extinct way of life. To summarise, Binford (1980) believed there were two types of subsistence settlement systems, foragers and collectors. Foragers were described as having high residential mobility, low-bulk in-puts, and regular daily food-procurement strategies (Binford 1980: 10). Collectors were characterised by their storage of food for at least the start of the year, and their logistically organised food-procurement parties (Binford 1980: 10).

Gould and Watson (1982) suggest one of the primary purpose's of hypothesising models such as Binford's (1980) modern Eskimo model, its use as a baseline for comparison to other

potential hunter-gathers studies. This approach has been termed as the contrastive approach, as opposed to the analogous method of ethnoarchaeology. Ethnographic models such as these can provide hypotheses for testing that are relatively free of ethnocentric bias. Therefore, the contrastive approach to ethnoarchaeology should not replace, but rather, should supplement and extend beyond analogy (Gould 1978: 254). Ethnoarchaeological models of subsistence regarding Australia's deserts will be detailed furter on in the literature review.

Critiques of ethnographic analogy in Australia

Peterson et al. (2008: 8) suggested the way people in Australia collected information was informed by the predominant motivation of each of the five different collecting periods they identified in Australia. First, there was the period of unsystematic collecting, 'first contact' to 1880; second, the period of collecting under the influence of social evolutionary theory, 1880 to 1920; third, collecting under the influence of 'before it is too late', 1920 to 1940; fourth, research adjunct collecting, 1940 to 1980; and fifth, there is a collecting period marked by the dominance of secondary collecting, from 1980 to the present day. Indigenous people were not seen as fellow human beings at first contact, but instead, as subjects to study, with a focus on their formal structures such as kinship systems, religion and social organisation (Bell 1983: 236).

Other source-side concerns include geographical bias. Arguably, in remote areas like the arid and semi-arid zones of Australia, Indigenous people have been able to continue living 'traditional' lives. In these regions, a greater degree of traditional knowledge has been retained (e.g. Blake et al. 1998 and Lindsay et al. 2001). Because of this, the ethnographic literature is biased in favour of desert region Indigenous peoples, as the people recording this information focused on perceived 'traditional' lifeways (Gould 1980: 88).

Gender bias is also a common pattern throughout the Australian historic and ethnographic literature. Many studies have documented the androcentrism and male bias (e.g. Ardner 1975; Schepher-Hugher 1985). To summarise, Aboriginal men (especially in arid areas) were portrayed as hunters providing the community with irregular but highly valuable, large game meat, while women provided the lower value staple foods such as plants and the smaller game (Gould 1969: 260-261). The bias lies in the point of view of the male writers, the lack of documentation of Indigenous women in the literature, and the lack of female authors. Each of these issues will be expanded on in the following paragraphs.

A male point of view

Early researchers were predominantly white male anthropologists who, due to a combination of their own concepts about the status of women, and the fact that Indigenous protocols dictated that they only worked with men, concluded that women's roles in Indigenous societies were inferior to men's and largely irrelevant (Wirf et al. 2008: 505-506). Within Australia, male field workers studied male institutions and subsequently offered analyses which purported to examine the totality of Aboriginal society (Bell 1983: 241). Women were situated as objects and not subjects (Conkey and Gero 1978: 4; Bell 1983: 236).

Previous studies that looked at Indigenous water technologies continued to focus on the male knowledge. Sometimes Men travelled long distances during dry periods with only their knowledge of permanent water sources to keep them hydrated (e.g. Gould 1969; Colliver 1974; Bayly 1999). Colliver's (1974) paper titled 'The Australian Aboriginal and his Water Supply', focused almost solely on the male role in locating water.

Lack of documentation

Due to the prominence of the male authors and their personal research interests, women's activities are poorly represented or even absent within the literature (Levy 2007:199). The early researchers assumed that women did not reflect their interests; hence their views were neither sought nor recorded (Bell 1983: 236). Female labour and associated knowledge have been devalued in archaeological interpretations of Indigenous life (Hastorf 1991:133). Archaeologically, reliable inference about gender relations is impossible for pre-contact Australia due to epistemological problems raised by inference by analogy (Hastorf 1991:133).

The absence of women as a theme throughout the literature on water knowledge and technologies may be the result of early colonial explorers almost exclusively taking with them local Indigenous male guides on their expeditions through arid Australia, to prevent the possibility of running out of water (e.g. Wells 1899 and Basedow 1906).

Women and water

Although women were underrepresented and marginalised, early observers such as Mary Ellen Murray-Prior, Daisy Bates, and Jane Ada Fletcher, made significant contributions to the study of Indigenous Australians (Marcus 1993). They often focused their studies and research on Indigenous women, bringing new insights and perspectives on Indigenous society from a

female perspective (Toussaint 1999: 211). Colonial women represented themselves as sympathetic and knowledgeable observers, speaking on behalf of those who were unable to speak for themselves (McKay 2004: 53). However, this did not necessarily position them as innocent bystanders to the fundamental (masculine) processes of dispossession and the establishment of the colonial order (McKay 2004: 53).

In the modern literature, Bell (1983), a female author, undertook a study of Aboriginal women in Central Australia which explored gender relations within Indigenous society. Bell (1983) discussed how contact settlement damaged the roles, status and power of women compared with men. Before contact, women and their contribution to their group's life gave them authority; and they looked upon their lives as self-contained, known and secure (Bell 1983: 179). Once moved onto settlements and missions, they were no longer independent food producers, and with colonialism, the change in the labour market saw men fare better, and hence rise to power over women (Bell 1983: 180). Bell (1983:132) found that knowledge about water and the maintenance of significant soakage sites were reliant on the Indigenous women's roles. Katej women, who resided in the western part of Central Australia, could proudly name the soaks, water-holes, ridges and foods in their area. The bush-plum dreaming refers to a number of soaks in Katej country, which acted as invisible borders between country, and taking care of these places ensured a domino effect of caring for country, such as 'making the country good so it will grow up well, so it can be green and so the law is upheld forever' (Nungarrayi, a Katej woman, in Bell 1983: 134).

The research of Wirf et al. (2008: 510) focused on the Anmatyerr women from central Australia, elucidating perspectives on their roles in contemporary contexts and the existence of cultural change and continuity about rights to and responsibilities for the 5000-square kilometre aquifer known as the Ti Tree Ground Water Basin. Their study looked into how Anamtyerr men and women's roles differed and how this affected the management of the Ti Tree. The methodology for Wirf et al. (2008) study was informed and dictated by Indigenous knowledge. This involved a collaborative and multidisciplinary approach in which the research participants and researchers were equally involved and the knowledge systems of the participants and researchers were considered equally valid (Wirf et al. 2008: 508). Wirf et al. (2008: 510) found that women saw the country in a different way from men. Men focused on ceremonial associations, whereas the women concentrated on the uses of water and cultural aspects relevant to its use (Wirf et al. 2008: 510). The Amamtyer women organised camping

trips to waterholes so that the women elders, who are also traditional owners and/or managers for that country, could pass on knowledge to the young girls in correct ways (Wirf et al. 2008: 511). Additionally, Wirf et al. (2008) found that Amamtyer women had defined roles and responsibilities regarding traditional water supplies associated with their own extensive cultural realm (Wirf et al. 2008: 510). Their knowledge, roles and ceremonies were inextricably linked to water and water sites, and the Anmatyerr women played a vital role in ensuring a water supply for the whole group on a day to day basis (Wirf et al. 2008: 512). They ensured water supply through the maintenance of water sources both spiritually through ceremonies, and practically through such measures as diverting water into rock holes and clay dams, digging soakages then backfilling and 'closing' after usage, covering rock holes with stone lids to protect them from evaporation and pollution, fencing water points with loose sticks to prevent animals gaining access, and cleaning rock holes of algae (Wirf et al. 2008: 512). Additionally, women made use of a number of features of the environment to locate water, for example, they watched the behaviour of birds, listened to their sounds and observied the greenness of a particular plant that indicated underground water in river beds.

Modern studies that have examined the male and female behaviour of Aboriginal people in desert regions of Australia have been primarily undertaken by male archaeologists. Gould (1968 and 1969) and his wife, Betsy Gould, lived in the Western Desert with the Ngaanyatjarra people for almost two years. Betsy Gould, also an ethno-archaeological enthusiast, formed deep connections with the females of the Ngaanyatjarra people, and as a result, recorded observations from a female perspective. This collaboration gave the couple the opportunity to study Aboriginal men and women at the same time, and particularly contributed to further knowledge about Aboriginal women, which Gould felt was lacking.

Similarly, Ronald Berndt and Catherine Berndt were a married research team. The couple undertook field research at Ooldea, South Australia, after which they co-authored *From Black to White in South Australia* (1951), the first of many such collaborations. Berndt wrote *Women's Changing Ceremonies in Northern Australia* (1950), which demonstrated her increasing interest in, and growing understanding of the beliefs and practices of Aboriginal women, and their relationships with men.

With an understanding of the theoritcal complexities when undertaking ethnographic studies, I will discuss the literature regarding models of susbsitence in the arid interior.

Subsistence models of Australia's deserts

Refugia, barriers and corridors

One of Australian archaeology's greatest debates is the models to explain the occupation of Australia's arid zone during the last glacial maximum (LGM) (Smith 1989, Veth 1993). The debate lies in the constructs of barriers, refuges and corridors and how Aboriginal people travelled between them during the last glacial maximum. Veth (1993) describes these regions as:

- Barriers are considered to be areas without permanent water or coordinated drainage;
- Refuges are areas/regions that are naturally buffered or protected from extreme variation in environmental conditions as they would have had permanent water sources and reliable/semi-reliable food sources.
- Corridors are the areas between the barriers and refuges, these areas would have also acted as temporary barriers during the height of the LGM also.

Seven major regions have been identified as refuges, these areas comprise of uplands and their flanks. Three continuous barriers to humans (that are still in existence today) include the major dune fields of the Great Sandy Desert, Great Victorian and Simpson Deserts (Veth 1993: 106). The large areas between the refuges and barriers are corridors through which people could travel (Veth 1993: 106). Figure 3 details these areas below.

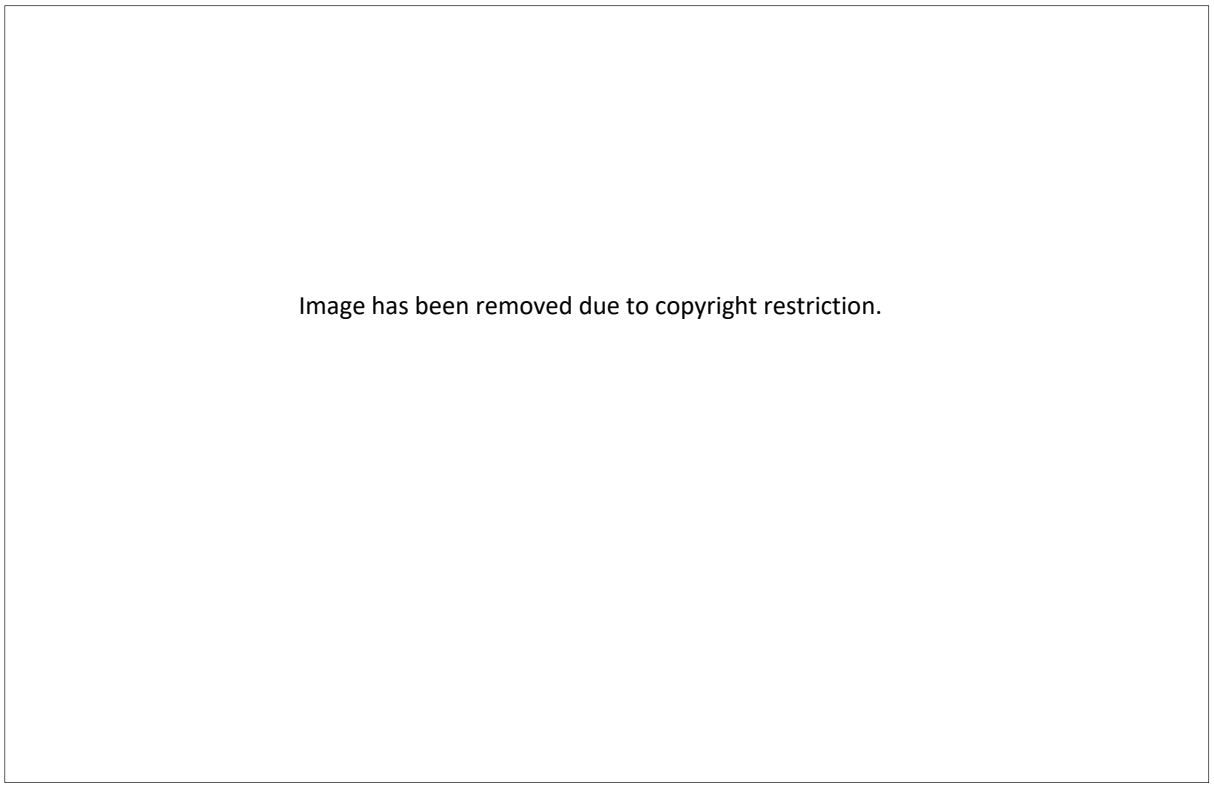

Figure 3 Location of glacial refugia (Veth 1989: 107). In this model the major uplands such as the Central Australian Ranges, Pilbara uplands, Flinders Ranges and the Kimberley's are refugia, the Sandy Deserts are biogeographic barriers, and the intervening areas represent corridors

Smith (1989) and Veth (1993) developed the most substantial evidence-based theories about desert occupation during the LGM. To summarise, Smith's (1989) arguments were based on his excavations at the Puritjarra Rock Shelter in Central Australia. This site has deposits that have been interpreted as representing continuous use through the LGM. Because of this continuous occupation, Smith (1989) suggested that human occupation of Sahul was situated in the geographical centre of the continent (Simmons 2007: 17). Smith argued that at the onset of the LGM, people abandoned the desert for lowlands due to lack of potable water, with environmental data suggesting soaks and other artesian water sources would have been drying during the glacial maximum. There would also have been a decrease in plant resources, again due to the drier conditions, lower winter temperatures and increased frost that would have reduced the extent and diversity of plant resources. As a result, people retreated to permanent water sources such as the Puritjarra Rock Shelter (Simmons 2007: 17). Smith (1989) believed the Sandy Deserts would only have been utilised during good seasons that allowed for surface water availability. Finally, Smith argued that expansion back into the Sandy Deserts did not occur again until the early Holocene, and that corridors would have been re-colonised around the late-Pleistocene.

Veth's (1993) model was titled *Island in the Interior: A model for colonisation of Australia's arid zone.* Veth (1993) built on Smith's theory and was based on his systematic study of the sandy desert areas of Western Australia as well as his other research in the arid and semi-arid regions of the Flinders Ranges, Nullarbor Plain, Simpson Desert, Lawn Hill and lower Cooper Creek. His model suggested people were not fully adapted to survival in the arid core, such as the Great Sandy, Victorian and Simpson Deserts before and during the LGM (Simmons 2007: 18). During these times these deserts acted as barriers to permanent human occupation in the central regions of Australia , and as a result, people during the LGM abandoned most of the arid zone except for those locations where permanent water was available; such nodes are referred to as refuges (Veth 1993:103). This model suggested full adaptation arid culture did not develop until after the LGM.

The models proposed by Smith (1989) and Veth (1993) provide exploratory structures for understanding the nature of adaptive changes of Aboriginal people at the regional level across the arid zone (Simmons 2007: 26). They argue that the arid zone was populated from the Pliestocene through to LGM when it was then abandoned due to increased aridity. These models also suggest, a later intensive re-occupation during the late Holocene (Simmons 2007: 26).

Ethnoarchaeolgoical subsistence models of Australia's Desert's

Gould (1969, 1984, 1991) has also hypothesised subsistence mehods of Desert people. As mentioned above, Gould and his wife spent two years living with the Ngaanyatjarra people in the Western Desert. He focused on communities who still led free lives in the 1950s and collected oral histories from them (Gould 1991, 1969). During this time, he also undertook a number of archaeological excavations at XX. He then integrated the ethnographic information about locating water and archaeological data with climatic models of rainfall in the Western Deserts to find out how people dealt with the stress of living in arid conditions (Gould 1991, 1984).

Gould suggested drought escape and drought evasion as solutions for minimising risk and keeping hydrated during long periods of drought in arid regions (Gould 1991:12). He believed that under certain biogeographical conditions such as drought, mobile hunter-gatherers living under variable marginal conditions would switch between alternative risk-minimising strategies to deal with the stressed conditions and to obtain necessary resources (Gould 1991: 29). Gould (1991) found people relied intensively on well-known water supplies such as 'native wells' and known food staples such as plants and seeds, before risking time or energy

on new or untried resources, resource-procurement technologies, or reorganisation of task-groups involved in subsistence activities (Gould 1991:15-16).

Gould compared these subsistence behaviours with that of th desert people of the Kalari Bushmen in Africa (Gould 1969: 267). Comparitivel, these people would occupy a camp for many weeks and eat their way out of it, whereas the Ngaanyatjarra people would first exploit all the food resources near the surrounding waterholes whenever possible before settling into the food sources at the main waterhole near camp. These people would consume resources within a 15km radius before moving to a new site (Gould 1969: 267).

Socio-cultural subsistence structures

Knowledge of a landscape would have also been supported by important socio-cultural structures and systems. Gould (1980) argues that human adaptation to the stresses imposed by the uncertainty of rainfall in arid interior, most notably in the Western Desert, was not primarily physiological or genetic but cultural (Gould 1980: 65). Additionally, Yengoyan (1976) argues subsistence strategies in central and western Australia would have been supported by complex extensions of social ties through section categories and groupings provided each local group, thus giving groups the ability to expand and contract their movements into adjacent areas during times of hardship (Yengoyan 1976: 124). Extensions of social systems would have been supported via marriage, extending kinship systems and initiation ceremonies (Yengoyan 1976: 125). Yengoyen argues:

> "…the ability of local populations to survive under rigorous environmental conditions requires a certain flexibility in local organisation which allows for maximum mobility of exploiting groups, and for a means of linking vast numbers of individuals and groups into a network that allows small mobile units to spatially expand and contract under varying environmental conditions." (Yengoyan 1976: 125)

For example, male initiation ceremonies such as circumcision, were only able to take place under favourable environmental conditions which permitted local groups to cluster for several days (Yengoyan 1976: 126). Ample surface waters and an abundance of foods would have been critical in holding dispersed populations together whilst the initiation ceremonies occurred (Yengoyan 1976: 126). In gathering these populations together it allowed the opportunity to transfer knowledge such as the location of nearby water and plant and animal foods (Gould 1980: 65). Yengoyen (1976: 127) also suggests strategic inter-tribal marriages would have assisted in the expansion of knowledge and kinship systems

between neighbouring populations.

Having presented a brief understanding of how Aboriginal people moved across the arid landscape, the technology they used to access water so as to be able to move, will now be discussed.

Previous studies of water sources in the arid interior

There is now an extensive literature, based primarily on early historical accounts, describing the ability of Aboriginal people to live in environments, which, through European eyes, were regarded as quite inhospitable and uninhabitable due to the lack of drinking water (Noble and Kimber 1997: 150).

Early Australian 19th-century literature saw European explorers venturing into the arid interior of Australia and recording the harsh conditions they encountered. These early historical accounts detailed the comprehensive knowledge Indigenous people had in regards to locating water on their journeys (e.g. Wells 1899; Eyre 1845; Giles 1889; Forrest 1875; Warburton 1873; Tietkins 1887; Stuart 1860; Gosse 1874; Lindsay 1893; Carnegie 1898; Winneckie 1897; Carr-Boyd 1895; Howitt 1862; Sturt 1833; and Maurice 1902). The dry and challenging climate made the search for water a constant theme throughout these expeditions (Bandler 1995: 102).

Many authors have since discussed the historical accounts of these explorers to make sense of how Aboriginal people accessed water in such harsh climates. The ethnohistoric literature suggests that by the time British invasion occurred, Indigenous people maximised seasonal water access and at the same time made use of technologies such as water bags, wells and rock holes, as well as social mechanisms such as trade and communication networks that included kinship-based 'drought evasion' strategies (Simmons 2007: 191; Gould 1991:14). However, these studies sought to understand the broader context of arid occupation rather than the role of water technologies.

Studies which have consolidated data from the literature regarding water are few and far between. Macfarlane and Connell (2017) conducted a cultural heritage study of 'The Waters of Australian Deserts', a report for the Department of Environment and Energy and the Australian Heritage Council. In 2015-16, the Australia Heritage Council commissioned preliminary research into the indicative cultural (historic and Indigenous) National Heritage values associated with Australian deserts, as limited by the sub-theme of water. The thematic study identified ten Indigenous and historic heritage sites or routes of outstanding value,

priority places that should be considered for heritage listing. These sites, places or routes were: School of the Papunya and the contemporary 'desert art', Puritjarra and the Cleland Hills Deep History Area, 'One Road Many Stories' - Canning Stock Route, Woomera - Maralinga Weapons Testing Facility, 'North – South Transdesert crossings' (OTL and JM Stuart) Route, Dog Fence (aka Dingo Fence), 8 Mikeri Wells Water Route, East Lake Eyre Trade Route and the 'Seven Sisters' Songline route. The study used the Burra Charter to rate levels of significance and the theme of 'National Heritage' guided the scope of the research.

Kavanagh (1984) sought to identify water sources within Australia's arid core. This study constituted an overview of the literature regarding methods of procuring water in arid regions combined with a field study that tested these methods and it also recorded permanent and semi-permanent water sites within the study area. The study was comprehensive and detailed, but heavily focused on non-traditional methods of water procurement, such as solar-stills and water distillation. This was because the book was written for the Australian Defence Force as a how-to guide, or a survival manual to procuring water in the desert.

Ethnographically recorded water sources and technologies

'Native wells'

Native wells are significant resources for Aboriginal people living and travelling throughout arid areas. 'Native wells', according to most colonial historical accounts, are holes dug into sand or soil where a sloping surface or impermeable rock has disappeared beneath a flat plain (Bayly 1999: 20). The size of well varies, with the average depth around 1.5 metres. Gould (1970: 68) recorded a well with a depth of 4.5 metres in the centre of the Gibson Desert near Mount Madley. This particular well had been dug down to reach the water table lying beneath a surficial lake (Gould 1969).

A common theme discussed regarding 'native wells' is the practice of Aboriginal people blocking or filling the wells with sticks, shrubbery or sand to reduce the evaporation of water and to stop wild animals poisoning the water source (Leichardt 1996: 41; Bayly 1999: 21; Rowlands and Rowlands 1965: 231). Fences made from sticks and branches were constructed to prevent walls from falling in, between visits (Leichardt 1996: 41). Due to the vulnerability of these constructions, soaks are difficult to locate in the archaeological records (Leichardt 1996: 41; Moorwood 1982: 45).

Rowlands and Rowlands (1965) visited a number of wells located throughout the Western

Desert in 1963 and again in 1964. Five known wells were visited and studied to understand these constructions. Due to their nature, most of the wells were severely deflated with little to no evidence of their still existing in some cases. Aboriginal occupation was observed within proximity of two of the wells (Rowlands and Rowlands 1965: 233 – 235). Artefacts found included wurlies, a type of small shelter made from branches and leaves, a cylindrical piece of wood used for shaping stone flakes, and other small stone artefacts. East to one of the wells called Inindie, was a 'knife quarry' outcrop of porcellanite and chalcedony.

Wells were constructed on the side of or between sand ridges and sand hills. Many of the wells were historically reported to have incredible depth, of between 6 to 10 metres (Rowlands and Rowlands 1965: 234). However, due to erosion, the sites were maximum two feet deep. Often associated with these wells was a small depression of about three or four metres across and up to 60 centimetres deep around the well (Rowlands and Rowlands 1965: 234). These depressions were a result of the wells caving in (Rowlands and Rowlands 1965: 236). Rowlands mentioned the difficulty of finding the wells:

> "One can walk can walk within a few hundred yards and not even see the shaft. However, all have landmarks which would help guide the Aborigines to them" (Rowlands and Rowlands 1965: 237).

The above is indicative of a common theme that arises among non-Indigenous people reported in the literature, and highlights the knowledge Aboriginal people had of their environments.

Hercus and Clarke (1986) carried out an investigation into nine desert wells located in the Simpson Desert. The pair visited the nine wells described by Mick McLean, a Wangkangurra descendant, born in the Southern Simpson Desert. Mick gave vivid descriptions of his people getting water by digging down into claypans after rain. The study examined the remains of the wells or mikiri, according to Mick, and documented the archaeological evidence of campsites or habitation near the sites. Of the nine wells, all were situated in low-lying depressions; all showed evidence of habitation – some more than others. Four wells had eroding human burials located within 200 metres of them, all four were from the late Holocene, and the stone artefacts had all been worked to their limits. Hercus and Clarke (1986) concluded that after the gradual diminution of the surface water, the Wangkangurru centred their attention on the gypseous flat depressions and followed the water down to the water table by digging wells (Hercus and Clarke 1986: 62; Hercus 1990: 154). Once these

water sources were established, they became prominent habitation centres and facilitated movement for the Aboriginal people of the Simpson Desert (Hercus and Clarke 1986: 62; Hercus 1990: 154).

Ooldea soak is another permanent source of fresh-water located on the southern fringe of the Victorian Desert. Ooldea soak is the name given by European explorers, but Indigenous people referred to it as Youldeh. Historically, water was available at Ooldea Soak even in drought years when other sources failed. Aboriginal people travelled hundreds of kilometres to Ooldea, which was the focus of long trade routes, and an important centre of Aboriginal settlement and ceremony. The lithic assemblages at Ooldea were found to belong to the Holocene, which existed in Australia for 6000 to 7000 years (Brockwell et al. 1989: 19). No dating has occurred at Ooldea.

Ooldea was also popular among European explorers and settlers and for the construction and operation of the Trans-Australian Railway up until 1917, when the construction of the railway concluded (Bates 1944: 212) Daisy Bates camped at the site in 1919 and resided there for some months until she moved her camp north of the railway (Colley et al. 1989: 83). During her time, she recorded the significance of the site:

> …long before the days of the white man Ooldea Water . . . was the gathering place of those tribes and groups which had to temporarily abandon their own localities in times of great drought... They trekked to Ooldea only when their own semi-permanent waters, which held over ordinary seasons, dried up ... Ooldea was known amongst the groups far and wide as a refuge when drought struck their land (Bates 1923)

The well was destroyed accidentally in 1923 by the railway track, which pierced the layer of clay beneath the sand, which let the underground reservoir drain away (Colley et al. 1989: 81).

Gnammas or 'Rock-holes'

Gnammas are a natural occurrence commonly found in outcrops of hard rock such as granite, on isolated, domed inselbergs (Bayly 1999: 18). Gnammas or 'rock holes', are less vulnerable to destruction than soaks (Moorwood 1982:45). Gnamma is an Aboriginal term that was widely used in the Western Desert languages, of the arid parts of Western Australia, South Australia and the Northern Territory. Gnammas were a vital resource for the arid

communities. Aboriginal walking tracks in many regions were established around known gnammas. Similar to soaks, gnammas, were also covered by branches or flat slabs of rock to reduce evaporation and keep out wild animals, that not uncommonly fell in and drowned, and thus polluted a precious supply of water (Bayly 1999: 21; Bayly 2015: 24).

Only a handful of studies have focused specifically on rock-holes. Bandler (1995) conducted a study comparing rock holes from the Sydney area with rock holes in Desert regions. She highlighted the fact that in desert regions, trips were planned around these known water sources due to their rarity. In the Sydney area, water was much more abundant and semi-permanent springs, as well as rock-holes, were located not far from one another.

Probably the most well-known rock hole in Australia is located next to the Puritjarra rock shelter. Countless seasons of excavations and research have been undertaken at this site; however, little has been published specifically on the rock-hole. The rock shelter is located in Central Australia, a very arid area, with an average rainfall of less than 350mm per year. Archaeological excavations between 1986 and 1990 identified the history of the site as spanning over the last 100ka, with the first substantial use of the shelter recorded at between 36-35ka (Smith 2006: 757). Smith suggested that due to the increasing aridity, people chose focal sites near permanent water sources such as the Puritjarra rock-hole, hence making it a refuge during the LGM (Smith 2006: 757; Bandler 2015: 3). This assumption is widely supported by the literature (e.g. Veth 1993; Smith 1989; Gould 1991). The Puritjarra rock shelter occupies a strategic location near the only permanent water in the Cleland Hills (Smith 2006: 756).

Smith and Ross (2008) conducted research at Glen Thirsty and other rock-holes and their archaeological relationship to Aboriginal people during the Late Holocene. Glen Thirsty is situated over 100 kilometres to the south of Puritjarra. The archaeological investigations painted a picture of people using this small modified rock-hole, and found that substantial occupation took place only over the past 1.5ka (Smith and Ross 2008: 57). Tjungkupu, a rock-hole located to the north of Glen Thirsty, had similar occupation with intensive use within only the past 1ka (Smith and Ross 2008: 57).

Modern studies on Gnammas have focused on their cultural meaning for present-day Aboriginal people, and have demonstrated there is still a cultural connection to these sites. Bayly (2015) stated that:

> Although no longer of significant survival value, gnammas still stir the hearts of Indigenous Australians for their spiritual and cultural values, and there are encouraging signs of a revitalised cultural focus on gnammas. (Bayly 2015: 19)

Gnammas and soaks have played an invaluable role in Australia's prehistory. Without these small bodies of water, paired with the exceptional tracking and navigating abilities of Indigenous people, much less of Australia would have been inhabited, and Aboriginal and colonial history would have been very different (Bayly 2015: 25).

Dams

In areas of low rainfall such as Central and Western Australia, where no mountains, streams or flowing water courses occur for several hundred kilometres, Indigenous people constructed large water retaining structures (Moorwood 1965: 235). Studies on dams have focused on the creation of fish and eel basket traps (e.g. Mooroowd 1965; Bandler 1995); however, for the purpose of this literature review, I will only look at dams that retain fresh water.

Rowlands and Rowlands (1969) and Kinstler (1998) undertook a study of an Aboriginal dam in Northern New South Wales. The dam is located just over 70 kilometres east of Tibooburra, near where the New South Wales, South Australian and Queensland borders meet. The dam was constructed on the Bulloo River Overflow, a dry clay flat lakebed, which can be dried up for periods of 10 years at a time (Rowlands and Rowlands 1969: 132; Kinstler 1998: 75). During exceptionally wet seasons, the Bulloo River fills the Bulloo Lake and floodwater enters the overflow area. The dam was constructed to block a small 12-metre gap where the watercourse passes through with an artificial bank made from clay and small stones (Rowlands and Rowlands 1969: 13; Kintsler 1998: 78). The artificial embankment measures up to 6 metres thick and 60 centimetres high; however, this was probably the result of erosion and it was once much higher. Rowlands and Rowlands believed that a structure of this capacity may have taken from tens to hundreds of years to construct (Rowlands and Rowlands 1969: 135). However, the builders would have been rewarded with a waterhole holding over 560,000 litres of water in an area where a reliable water supply was integral to survival (Rowlands and Rowlands 1969: 135). This Aboriginal dam is thought to be the largest of its kind. Other Indigenous dams have not been studied extensively, as the durability of these structures is compromised due to the nature of erosion.

Mound Springs

Mound springs are small yet significant sources of permanent water that extend through northeast South Australia. Several studies have been undertaken on these springs (e.g. Boyd 1990; Harris 2002; Hercus 1990). Mound springs are natural outlets for the pressurised ground water of the Great Artesian Basin, which covers 1.76 million square kilometres and stretches from Cape York in the north of Queensland to Bourke in central NSW, and west to Cooper Pedy in South Australia (Harris 2002: 60).

Boyd (1990) undertook a study of eight mound springs north of William Creek located in South Australia. Of the eight springs, only one failed to provide evidence of large campsites. The material evidence included stone tools such as tulas, Pirri points, microliths and seed grinders, with technology suggesting dates associated with the later Holocene sediments (Boyd 1990: 107).

Harris (2002) looked at the South Australian mound springs as trade and communication routes. They argued that mound springs represented an unfailing reserve of potable water which could be relied on when surface water of the drainage lines or rock-holes had failed (Harris 2002:8). He also discussed the fact that where there was a high desire to communicate and trade goods and ideas with distant people, the mound springs were an important component in a continent-wide network due to their lineal alignment extending over hundreds of kilometres and covering a large area of the continent (Harris 2002: 8). These springs helped facilitate Indigenous trading and communication as they provided points of water for people to hop between

Ah Chee (2004), as an Aboriginal woman from the Southern Arnette region, looked at mound springs from a cultural standpoint. She discussed how the mound springs were central to their Tjukurpa, the spiritual connection, law, culture, heritage and stories associated with the land (Ah Chee 2004: 20). She called the mound springs irrwanyere or 'the healing springs', and they were more than just a water source for Indigenous people, but instead a travel path that connected Aboriginal people within the great Artesian Basin (Ah Chee 2004: 20).

Mallee Root Water

Indigenous knowledge of the ecology of water-bearing plants enabled Aboriginal people to access various sources of drinking water during their periodic journeys in harsh environments. Noble and Kimber (1997) and Bayly (1999) undertook a review of the historical literature of the mallee eucalyptus in arid areas where access to permanent water sources was unreliable

due to extended drought periods. The mallee root comes from the mallee eucalyptus tree, and, when excavated, broken off and held vertically, the root drips a clear, watery and highly potable fluid (Bayly 1999: 22). Mallee species include *Eucalptus Incrassata, E. Oleosa, E. Microtheca, E. Paniculata, E. Populifolia* (Goodhart 1939: 34). The root grows out from the trees 10-20 metres and is positioned only 5-25 centimetres under the sand.

Noble and Kimber (1997) conducted field studies from three regions selected along the northwest-southwest axis of Australia. The study focused on the ecology, anatomy and amount of water extracted from these roots. The Aboriginal groups selected to participate, were a part of Tindale's (1959) distinct ecological group, known for their territory covered by low-growing eucalyptus mallee. In the study, there was equal representation of all types of mallee Eucalyptus communities within the research area.

The study compared the three regions to find the difference between the root-water and other water collected. In some cases, roots that were buried 10–15 millimetres from the surface yielded over 550 millimetres of suitable drinking water (see Figure 13). Noble and Kimber (1999:187) indicated, however, the ability of Aboriginal people to extract free-flowing water is not unique to Australia and that Indigenous peoples of northern Cameroon, Africa have this knowledge also (see Seghieri 1995). Seghieri (1995) found that the *Lannea humilis* shrub, which grows on highly degraded soils, possess lateral roots with specific water storage organs, visible as swollen sections or root bulges that yield free drinking water after cutting.

Water-carrying and storage

Coolamons and water skin bags were referred to by many early explorers. They have subsequently become objects of interest to many collectors. Other than museum catalogue publications, studies on water-carrying devices have been minimal. Wooden bowls or coolamons were also used to transport water over small distances (Bayly 1999: 10) (see Results section for images of these objects). These objects are abundant in museums and are a lot more durable than skin bags.

Skin bags are the skins of kangaroos, wallabies, possums, bandicoots and other small mammals which were used because they are waterproof (see Figures 18-24). After colonisation, rabbits were used. The Australian Museum was the only Australian museum to feature a picture of a skin bag in their online catalogue. The absence of these artefacts may be due to the highly perishable nature of the bags, meaning there are very few left today.

Magarey (1899) made references to Indigenous people using coolamons and skin bags for holding water after extracting water from mallee roots (Bayly 1999: 22).

Cultural knowledge of water

A basic example of the relationship, is indicated by the fact that Aboriginal people in the Western Desert used smoke signals to indicate where water had been found and during times of drought. They then dispersed into smaller and smaller groups, falling back on small but relatively dependable land water sources (Gould 1980: 65).

Johnston (1941) attempted to map significant surface water supplies along the Aboriginal routes on the western side of South Australia. He noted the more important water supplies had totemic significance and played an important part in Aboriginal ceremonial and social life.

Summary

Colonial observers of Aboriginal culture were interested about how Aboriginal people located water in arid regions, as their lives sometime depended on such discoveries. Throughout all the literature previously discussed, the authors mentioned these observers and their struggle to find water (e.g. Bandler 1995; Moorwood 1965; Bayly 1999; Rowlands and Rowlands 1963; Noble and Kimber 1997). Noble and Kimber discussed the frustration of European explorers seeking water in these arid landscapes, summarising Ernest Giles (1875):

> We had wandered amongst such frightful rocks and ungodly places, that I began to think it was useless to search any further for water, but yet the natives were about, burning the grass, and raising fresh fires in all directions; it appeared to me they must get their water from the hollow spouts of some trees, and from the roots of others...I should greatly like to catch a native; I'd walk him off alongside my horse, until he took me to water (Giles 1875).

Derogatory though the statement may have been, it is clear that this knowledge of the environment was a seriously important component of life in arid zones.

When using ethnographic records, it is important that there is the necessary theoretical framework in place to ensure assumptions are not made. When using analogy to describe the past, source-side concerns must be considered in order to ensure data is not unrepresented and that wrong conclusions are not made.

Locating water, however, is knowledge, information that is only available in ethnohistoric literature and from Aboriginal people who still have knowledge of traditional methods for locating water. Rose (2004) quoted Walter Smith, a bushman of the Central Australian Desert, the last cameleer and the last person to have experienced culture inside the Simpson Desert (Noble and Kimber 1997: 187):

> We were taught to look at a particular tree and take their bearing off the branches of the tree to count the sandhills, to navigate by the stars, to know where people had built cairns to mark underground water, to know which water could be stored in a waterbag and which could not, and to sing the songs of the country as they travelled through it along the Dreaming tracks (Rose 2004: 45).

These strategies were essential for arid zone subsistence within the barrier areas (Simmons 2007: 21).

The length of time it would have taken to establish an understanding of soaks and local rock-holes is greatly debated. Veth (1993) suggested that technological developments such as well building would have taken a few millennia to occur. Smith (1989), on the other hand, suggested that these techniques and technologies were not unfamiliar and would have only taken a few generations todevelop.

Soaks, wells, gnammas, dams, and mound springs are some of the many water permanent water sources located in arid regions. However, these are not the only types of water resources that have been mentioned in the ethnographic literature. Details of others, such as lakes and waterholes, will also be included in the Results section of this thesis. This knowledge and a review of the ethnohistoric information available, will be collated and detailed in the Results component of this study.

4.0 Methodology

This section outlines the methodology of the ethnographic literature survey, data collection in Australian museums, and distribution mapping of water technologies against cultural groups and geographical features in arid regions of Australia. The methods used for this study were both quantitative and qualitative, with the majority of the data derived from ethnographic descriptions.

Survey

This study started with a literature survey of ethnographic and ethnohistoric accounts and observations found in journals, books and theses, and unpublished written accounts associated with museum objects and photographs. The survey includes Australia's historic literature, written by the early white explorers and settlers of Australia. A survey of all unpublished ethnographies held in the Australian Institute of Aboriginal and Torres Strait Islander Studies collection was beyond the scope of this thesis. The literature data collection parameters were defined by what is at the present day, considered to be an arid or semi-arid area and included all major deserts in Australia as well as the Nullarbor Plain and the Arid Rivers region.

Textual and Photographic sources

All major frontier explorers' publications from the early 1800s to the early 1900s were used if the explorers had undertaken their explorations within the study area. In chronological order, the explorers identified to have explored within the study area were:

Name	Description	Reference
Edward Eyre	Eyre (1845) completed three expeditions – two in 1839 into the interior of Australia covering Lake Torrens and Mount Hopeless. From 1840-1841 he traversed the coastline of the Great Australian Bight and Nullarbor Plain from Fowlers Bay to Albany.	Eyre, E. 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound in the Years 1840-1841. Project Gutenberg Online. Retrieved 1 November 2017 from < http://gutenberg.net.au/ebooks/e00048.html >.
Charles Sturt	Sturt (1833) explored from South Australian to the centre of Australia in search of an inland sea from 1828-1831.	Sturt, C. 1833 Two expeditions into the interior of southern Australia, during the years 1828, 1829, 1830 and 1831: with observations on the soil, climate and general resources of the Colony of New South Wales. Project Gutenberg Online. Retrieved 1 November 2017 from < http://www.gutenberg.org/ebooks/4330#download >.
John McDouall Stuart	Stuart completed six expeditions. Firstly, he travelled with Sturt to the centre of Australia from 1844-1845. He searched the area west of Lake Torrens, South Australia in 1858. He explored from Lake Eyre to Denial Bay then up to Oodnadatta in South Australia in 1859. He made two transcontinental attempts from Adelaide, South Australia to the Gulf of Carpentaria in 1860 and 1861 until he finally succeeded in 1862.	Stuart, J .M. 1865 Explorations in Australia. Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm >.

Robert O'Hara Burke and William Wills	Burke and Wills, who led the Victorian Exploring expedition from Melbourne, Victoria to the Gulf of Carpentaria from 1860-1861. Both explorers died on the return journey to Victoria. These expeditions were detailed in on of their expedition member's A. Howitts journal.	Howitt A.W. 1862 Howitt's diary [Victorian Exploring Party] 3 July 1862 to 21 August 1862. State Library of Victoria. Retrieved 11 November 2017 from< http://www.burkeandwills.net.au/Journals/Howitt/Howitt_July_1862.htm >.
Colonel Egerton Warburton	Warburton travelled from Alice Springs to the Oakover River, Western Australia from 1872 to 1873.	Warburton, P. E. 1875 *Journey across the Western Interior of Australia*. London: Sampsonlow, Marston, Low and Searle.
John Forrest	Forrest completed three expeditions in 1869, 1870 and 1872, covering the Western Deserts, Central Australia and the Nullarbor Plain.	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html >.
Edward Giles	Giles completed six expeditions in 1872, 1873-1874, 1875 and 1876 in Central Australia.	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874. Project Gutenberg Online. Retrieved 1 November 2017 from < http://www.gutenberg.org/files/4974/4974-h/4974-h.htm >. Giles, E 1889 *Australia Twice Traversed: Vols. I & II*. London: Sampson Low, Marston, Searle & Rivington.
William Henry Gosse	Gosse (1874), who explored Central Australia including the MacDonnell Ranges and Uluru in 1873.	Gosse, W. H. 1874 W.C. Gosse's Explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from < http://gutenberg.net.au/ebooks13/1306451h.html >.
William Harry Tietkins	Tietkins explored with Giles from 1873-1874 and 1875. He investigated the Nullarbor in 1879 and finally explored the western extent of Lake Amadeus in Western Australia in 1889.	Tietkins, W. H. 1887 The Nullarbor Plains and the west boundary of the province. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 2(3): 34-38.
Charles George Winnecke	Winnecke explored the Sandover River in the Northern Territory in 1879-1880 and the eastern Simpson Desert in 1883 and led the Horn Scientific Expedition to Central Australia in 1894.	Winnecke, C. 1883 Mr Winnecke's explorations during 1883. National Library of Australia. Retrieved 1 November 2017 from < http://nla.gov.au/nla.obj-52802100/view?partId=nla.obj-95677862#page/n0/mode/1up >. Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Bundaburg: Corkwood Press.
David Lindsay	Lindsay led the Elder Scientific Exploration Expedition from South Australia to Western Australia from 1891-1892.	Lindsay, D. 1893 *Journal of the Elder Scientific Exploring Expedition 1891-1892.* Sydney: Corkwood Press.
Lawrence Wells	Wells assisted David Lindsay in the Elder Scientific Exploration expedition from South Australia to Western Australia in 1891-1892, and also Led the Calvert Scientific Exploring	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171.

	Expedition from Wiluna to Fitzroy River in Western Australia in 1896-1897.	
David Wynford Carnegie	Carnegie, explored Western Australia's goldfields in 1894 and also led the first northerly and southerly crossings of eastern Western Australia from 1896-1897.	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
William Henry Carr-Boyd	Carr-Boyd explored from Lake Carey, Western Australia to the Warina Railway Station, in Northern South Australia in 1895.	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from < https://trove.nla.gov.au/work/10161239?q&versionId=11812777? >.
Richard Maurice	Maurice explored the region north of the Nullarbor Plain in 1901 and travelled from Fowlers Bay to the Cambridge Gulf in Western Australia in 1902.	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
Alfred Canning	Canning surveyed the Canning Stock Route from Wiluna to Halls creek in Western Australia from 1906-1907 (Grimwade 1998).	Grimwade, G 1998 The Canning Stock Route: Desert stock route to outback tourism. *Australasian Historical Archaeology* 16: 70-79.
Cecil Madigan	Madigan (1946), explored the Simpson Desert in 1939.	Madigan, C. 1946 *Crossing the Dead Heart.* Melbourne: Georgian House.

Modern archaeological studies of sites near water sources and other literature regarding water sources used by Aboriginal people in historical times were also included. These studies were located using databases such as FlindersGo, UqLibrary, Trove and the AIATSIS catalogue. These searches aimed to find places known to have been used for accessing water by Aboriginal people in pre-historic and historic times, water related technologies and the use of plants and animals to access water. Keywords used at the start of this project included: Indigenous water technologies, Aboriginal water technologies, Indigenous water, Aboriginal water, Indigenous arid, Aboriginal arid, Indigenous water desert, Aboriginal water desert, native well, Indigenous wells, Aboriginal wells, rock holes, gnammas, water skin bag, root water Indigenous, root water Aboriginal, and mound springs. These search terms grew as more information was located. These searches aimed at finding information about how Indigenous people managed for water in arid regions.

Summary of the data on Indigenous water sources and water technologies

Excel spreadsheets were created to consolidate the information on water sources and water technologies found in the literature.

Water source spreadsheet headings:

Category	Place name	Location	Evidence of use?	Citation

- Category: the 'type' of water source. These entries include: claypan, creek, dam, glen, lagoon lake rock hole, waterhole, soak well and other (this included water sources called gorges, falls, depot, basin, reservoir or any other descriptions that were too broad to identify as one of the above). These categories were chosen as they were frequently referred to in the literature.
- Place name: the name of the site. If a site did not have a name, it was labelled as the type.
- Location: recorded in decimal co-ordinates. In accordance with the historical ethnographic literature, the site locations were recorded in degrees and minutes.
- Evidence of use?: Information for this heading was recorded if there was evidence of Aboriginal people at the site.
- Citation: the author of the record.

Water technologies spreadsheet headings:

Category	**Area**	**Cultural association**	**Description**	**Citation**

- Category: container, bucket, bag miscellaneous.
- Location: the area in which the object was recorded.
- Cultural association: recorded if an Aboriginal group was mentioned.
- Description: description of the object.
- Citation: the author of the record.

Water obtained from plants and animals, spreadsheet headings:

Plant or animal type	**Place**	**Description**	**Citation**

- Plant type: the type of plant.
- Location: the area where the plant was used.
- Description: description of the water extraction method.
- Citation: the author of the record.

Other information that was extracted included firstly, accounts of water and of Indigenous women that included relevant quotes from explorers describing women in relation to water technologies; and secondly, explorers' accounts of distances travelled, describing how far Aboriginal people travelled between water sources. Other information for each category such as cultural knowledge, was also recorded if it was available.

Museum-based data collection

Three major museums were contacted regarding their collections relating to Indigenous water technologies. These were the South Australian Museum (SAM), Western Australian Museum (WAM) and the Queensland Museum (QM). These museums were chosen as they had the most material of interest due to their associations with the study area, and also because I was unable to personally get in touch with the other major Australian museums to do internal searches of their databases.

SAM holds the largest number of items relevant to this study, with their collections including approximately 30,000 Indigenous ethnographic specimens, including a section in their Australian Aboriginal Cultures Gallery relating to water (Jones 1996: 348; Kean 2001). WAM also has a substantial collection of 10,000 items. Queensland Museum was selected due to its geographic location near the author's residence.

Ethnographic collections managers Alice Beale and Eleanor Adams from the South Australian Museum provided a list of objects identified as relevant to the topic of this research. They conducted a search for items using the keywords used for the author's literature and photography searches of their Aboriginal culture catalogue. This information was compiled into a spread sheet, and where photographs were available, they were provided.

At the WAM, Anneliese Carson provided a list of relevant objects held in their collections. She undertook a similar search of that museum's database as the SAM's managers above. She was unable to provide photographs due to lack of capacity as well as need for specific permissions from the Indigenous groups associated with the object. Also, the description of the items WAM provided were not as detailed as those from SAM.

Finally, at the QM, Brit Asmussen and Jane Skippington undertook a generic search of the museum's Indigenous culture, Archaeology and Social history catalogues using the search terms mentioned above. They were unable to do more detailed search due to the museum being under resourced. Jane provided a spreadsheet with a list of relevant items.

Of these three state museums, the South Australian museum's results will be the subject of focus due to their items being publicly accessible. The information from WAM and QM will be used generally to understand how technologies may differ between regions; however, specific

information such as pictures is not included due to my not having the use permissions from the relevant community an item belongs to. Where items were not provided with a picture, or they weren't directly associated with carrying water, they were not included. This was because the catalogue information did not provide sufficient information to confirm if the item was historical or if it was really associated with carrying water

A catalogue search of all the major Australian museums was also undertaken. These museums included the Australian Museum in Sydney, the National Museum of Australia in Canberra, and the Melbourne Museum. No items were located that were specifically identified as water carriers. The Northern Territory museum and art gallery did not have a publicly available online catalogue.

All the information gathered from the museums was entered into one spreadsheet with the following headings:

Category:	**Description:**	**Site: (Collection Details)**	**Name: (Cultural Associations)**	**Name(s) of Source:**	**Museum**	**Reg No:**	**Photo?**	**Study area?**

These headings record:

- Category: either bag, basket, bucket, container, water, water extractor and water tube
- Description of the object
- Site details: where the item was collected
- Name: person who donated the item
- Cultural Associations: such as language group or Aboriginal group
- Museum: the museum it came from
- Reg no: the museum registration number
- Photo? If there is a photo of the item
- Study area?: if the item is located within the study area
- In many instances, it was difficult to determine the exact location the item came from. In such cases, it was assigned a general area or if no identifying information was recorded, the location was left blank. This was then mapped using Google Earth and Illustrator to understand the distribution of each type of technology.

Spatial analysis

One of the aims of this study is to map the technologies regionally and across refugia models (Veth 1993). Where a water source or technology was recorded as belonging to a particular cultural group, it was recorded. Technologies were also mapped across Australia to find if there were any regional trends among objects. Finally, water sources and technologies were also plotted onto Peter Veth's (1993) map illustrating the refuges and barriers throughout Australia.

5.0 Results

The results are discussed in the following order. The chapter will first look at findings from each desert sub-region, which are:

- Western Desert region:
    - Great Sandy Desert,
    - Little Sandy Desert and the
    - Great Victorian Desert;
- Central Australia region:
    - Tanami Desert through to the Mann-Musgrave ranges in the south;
- Arid Rivers region:
    - The Lake Eyre Basin and
    - The Simpson Desert
- Nullarbor Plain region:
    - The Great Australian Bight up to the edge of central Australia in the north.

For each region I have mapped the findings regarding the permanent and semi-permanent water sources recorded by Australia's early explorers. The results section will then discuss the information about extracting water from plants and animals. This is followed by discussion of items associated with water technologies in museums.

Ethnographic accounts of water

The ethnographic and ethnohistoric accounts of Australia's early explorers on their journeys within the arid zone are generally recorded as a narrative. The author describes each day, the struggles the explorers encountered, any important observations and sometimes the water they encountered. Appendix 1 provides a detailed summary of all the water sources identified in the literature. This next section, however, will look at the types of water sources each explorer used and how they are distributed across the landscape.

To summarise, this research identified a total of 444 water sources within the study area. These included wells, waterholes, springs, rock holes, soaks, claypans, glens, lakes, creeks, dams, lagoons, rivers and 'others' such as ponds and reservoirs and site types labelled by explorers which did not enable specific identification.

Key

The key for each map follows the following format:

-  - The target symbol represents a water source that was recorded to have been used by Aboriginal people.
-  - Circles are other water sources that were recorded and utilised by the explorers.
- The colour of the icon represents the type of water source; this is detailed in the individual key of each map.

Each map description will give a brief outline of the explorer's expedition and a breakdown of the types of Indigenous water sources identified. It must be noted that just because an explorer did not record Aboriginal occupation at a site does not mean it wasn't used by Aboriginal people. Many explorers were not consistent in providing coordinates for the places they visited; because of this, some sites cannot be mapped.

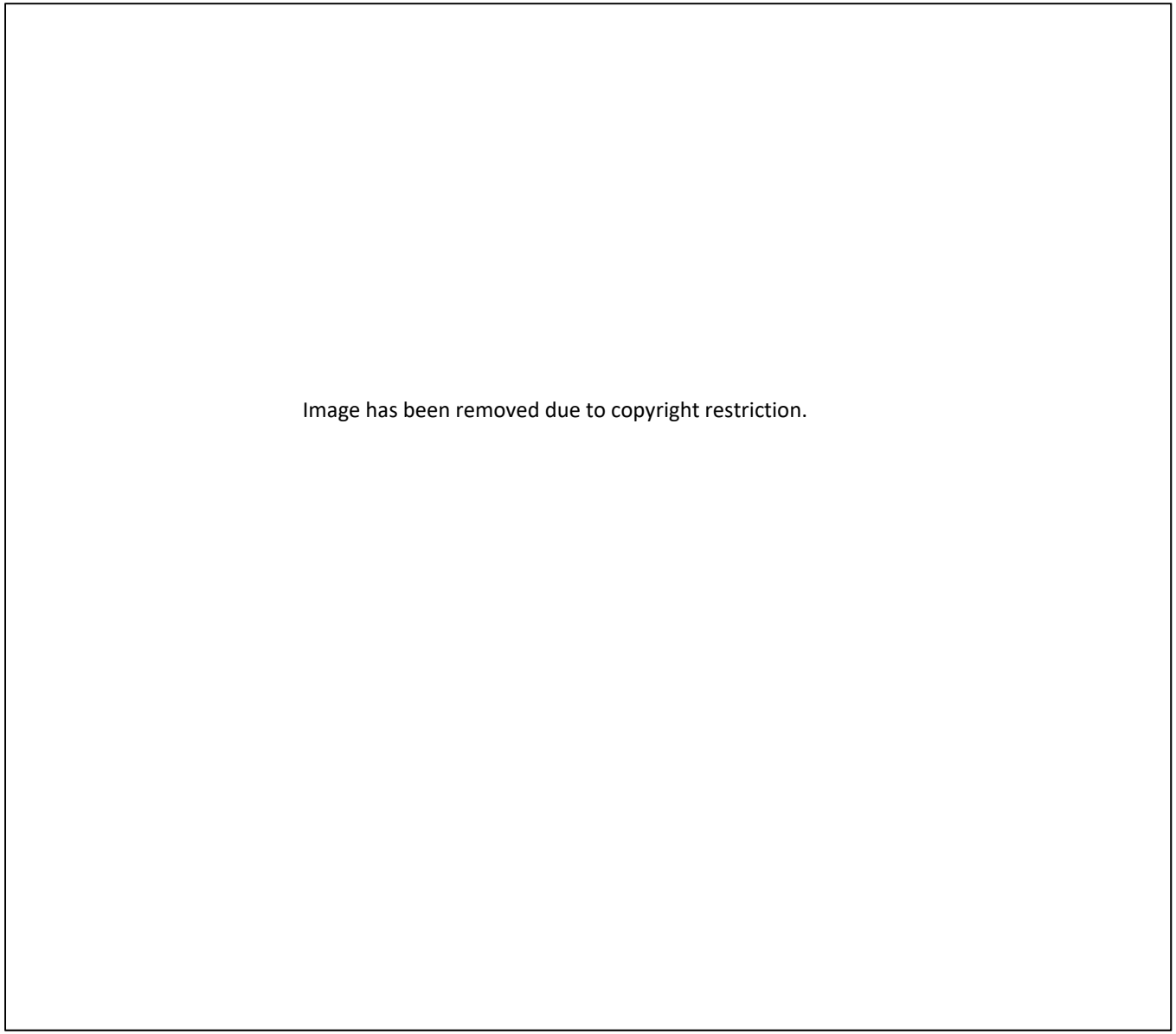

Figure 4 Distribution of water sources identified in the historical, ethnographic and archaeological literature across the arid interior

Regional variation of water sources used by Indigenous people

Western Desert Region

This region consists of the Great Sandy Desert, the Gibson Desert and the western part of the Great Victorian Desert. This area was favoured by explorers due to the mining possibilities of the area. Many expeditions into the interior of this part of Australia had the aim of locating resources to mine, such as gold (Carnegie 1898). The landscape is a part of a continental swirl of dune fields that cover the continent (Smith 2013:6). The dunes are linear sand ridges less than 15 high, and are often stable and vegetated (Smith 2013:6). These sandy deserts contain small range systems with rock holes, gorges and run-on areas that provide focal points for human use of the region (Smith 2013:6).

The Western Desert region was explored by Warburton in 1875, Forrest from 1869 and 1870, Giles from 1873-1874, Wells from 1891-1892, Carnegie from 1896-1897, Lindsay from 1891-1892, Carr-Boyd in 1895 and Canning from 1906-1907. A total of 165 water sources were identified in the literature.

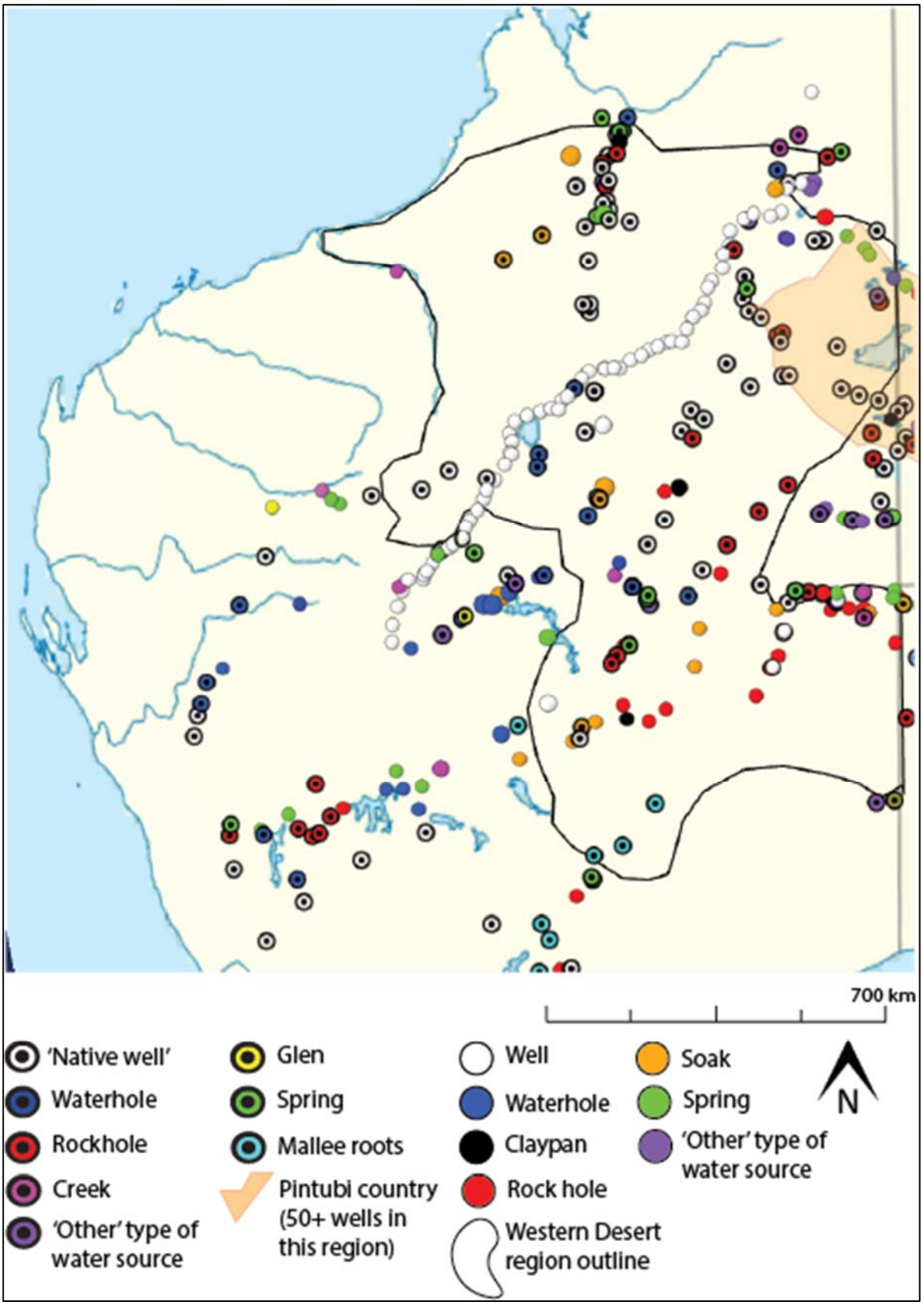

Figure 5 Distribution of water sources identified in the Western Desert region as recorded in the ethnohistoric, historic and archaeological literature.

Table 1 Distribution of the type of sites identified in the literature in the Western Desert region

Type	Indigenous occupation or use recorded at the site	No mention of Indigenous use or occupation	Total
Well	45	43	88
Waterholes	5	2	7
Rockhole	18	15	33
Creeks and rivers	2	1	3
Spring	3	9	12
Soak	7	4	11
Claypan	1	4	5
Other	4	2	6
Total	85	80	165

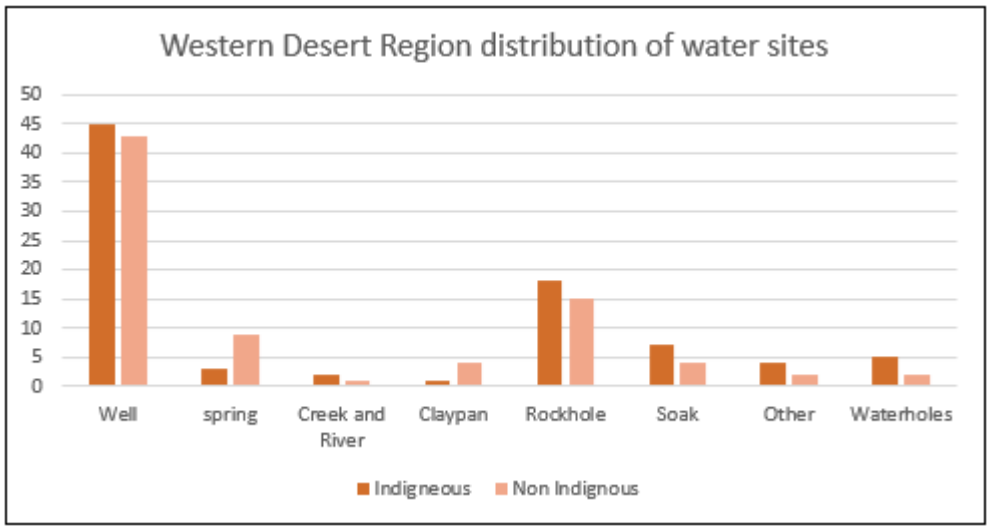

Figure 6 Graph illustrating the distribution of site types identified in the literature in the Western Desert Region

A total of 85 Aboriginal sites were identified in this region. The majority of water sites identified in the region were wells and rock holes. The largest discovery of water sites was by Canning, who identified 60 wells during his journey (the line of white dots crossing the little Sandy Desert and Great Sandy Desert in Figure 5 (Grimwade 1998). These sites were not mapped as 'known' Indigenous sites, as this wasn't specified in the literature; however, it is highly likely these sites were consistently used by Aboriginal people. Canning regularly enslaved and chained Aboriginal people so they would lead him to water (Grimwade 1998).

The Pintubi region of the Mantjiltjara people were the last Aboriginal people to remain on 'their country' living a 'traditional' life up until 1984. Research was unable to identify specific co-ordinates for the water sources they mentioned; however, it is known that 50+ wells exist in this region (Thomson 1962). Because of the lack of coordinates, these wells are not included in the total counts of the graph and table above.

The Eastern Desert - Arid Rivers Region

The Arid Rivers Region consists of the Simpson Desert, the Pedirka Desert, Tirari Desert, Sturts Stony Desert and the Strzelecki Desert, as well as the Lake Eyre Basin. The area is a large ephemeral riverine system that includes the catchments of the Mulligan and Georgina Rivers and the Diamantina-Warburton Rivers and the Cooper Creek-Barcoo drainages. The region intermittently transfers large flows of slow-moving floodwaters from the desert margins towards Lake Eyre, which is the terminus for this drainage system (Smith 2013: 7). The Lake Eyre Basin covers an area of 1 140 000 km^2, or approximately one-seventh of the Australian continent, comprising large parts of Queensland, South Australia and the Northern Territory, and a small section of north-western New South Wales. It is one of the largest internally-draining systems in the world. This region was explored by Sturt from 1828-1831, Burke and Wills in 1860-1861, Stuart in 1859-1860 and Madigan in 1939. A total of 84 sites were identified in this region.

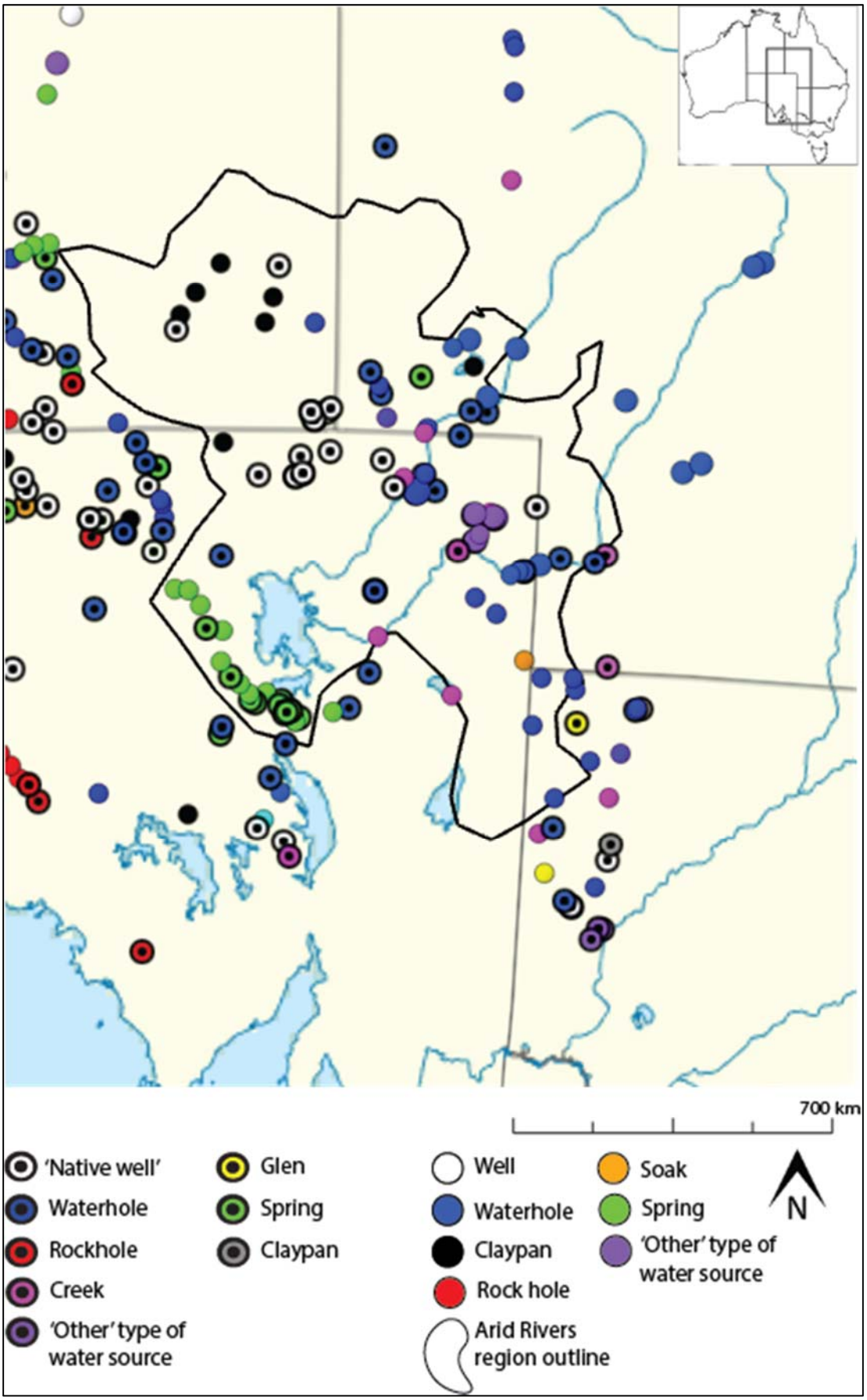

Figure 7 Map of the distribution of water sources identified in the Arid Rivers Region as recorded in the ethnohistoric, historic and archaeological literature.

Table 2 Distribution of the type of sites identified in the literature in the Arid Rivers Region

Type	Indigenous occupation or use recorded at the site	No mention of Indigenous use or occupation	Total
Well	14	0	14
Waterholes	10	19	29
Creeks and Rivers	2	5	7
Spring	12	9	21
Soak	0	1	1
Claypan	0	7	7
Other	4	1	5
Total	42	51	84

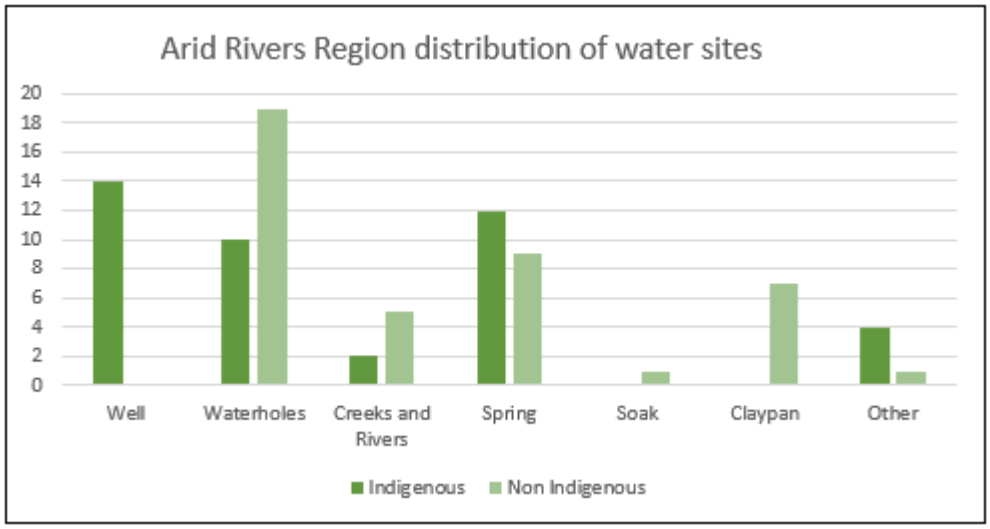

Figure 8 Graph illustrating the distribution of site types in the Arid Rivers Region, identified in the literature

Overall, explorers recorded Aboriginal use of 42 sites. Waterholes were the most prominent site type identified in the literature. This is to be expected as this region is characterised by the drying up of creeks and rivers, which leaves enlarged segments of watercourses, which hold water after flow has ceased. Wells are also very prominent, with 14 being identified. This makes sense, as the water table in this region is quite high, and there are many dried up creeks and rivers, so digging to the depth of the water table would not have been difficult (Bayly 1999: 20). A number of claypans were also identified; however, these did not have recorded evidence of Indigenous use. Claypans generally only exist after heavy rains and are not a type of permanent water source (Bayle 1999: 21).

A total of 21 springs were identified, with 12 recorded as having been used by Aboriginal people; however, it could be assumed all of these sites were regularly visited by Aboriginal people due to the close proximity of the springs to one another. Springs in the southern and

western margins of the Great Artesian Basin are prominent as crystalline basement rocks that abut the water-bearing sands and gravels of the Basin (Hercus and Sutton 1985: 3). These springs are generally marked by rounded domes of sediment which consist of clay and sands (Hercus and Sutton 1985: 3).

Madigan (1946) identified eight Native wells in the southern region of the Simpson Desert. It is likely that these wells were investigated by Hercus and Clarke in 1986.

Nullarbor Plain Region

The Nullarbor Plain region is the southern margin of the continent. Smith (2013: 7) did not include the western part of the Great Victorian desert in his classification of desert regions; however, for the purpose of this study (which covers all areas of Australia's modern deserts) this region will be included. The Nullarbor Plain is a vast plain formed by a treeless chenopod steppe. There is no surface water; however, natural cisterns of water and limestone caves exist in places. To the south of the plain is a vast coastline with little surface water available. This region was explored by Eyre in 1845, Forrest in 1969 and Maurice in 1901. Only 31 sites were identified in this region.

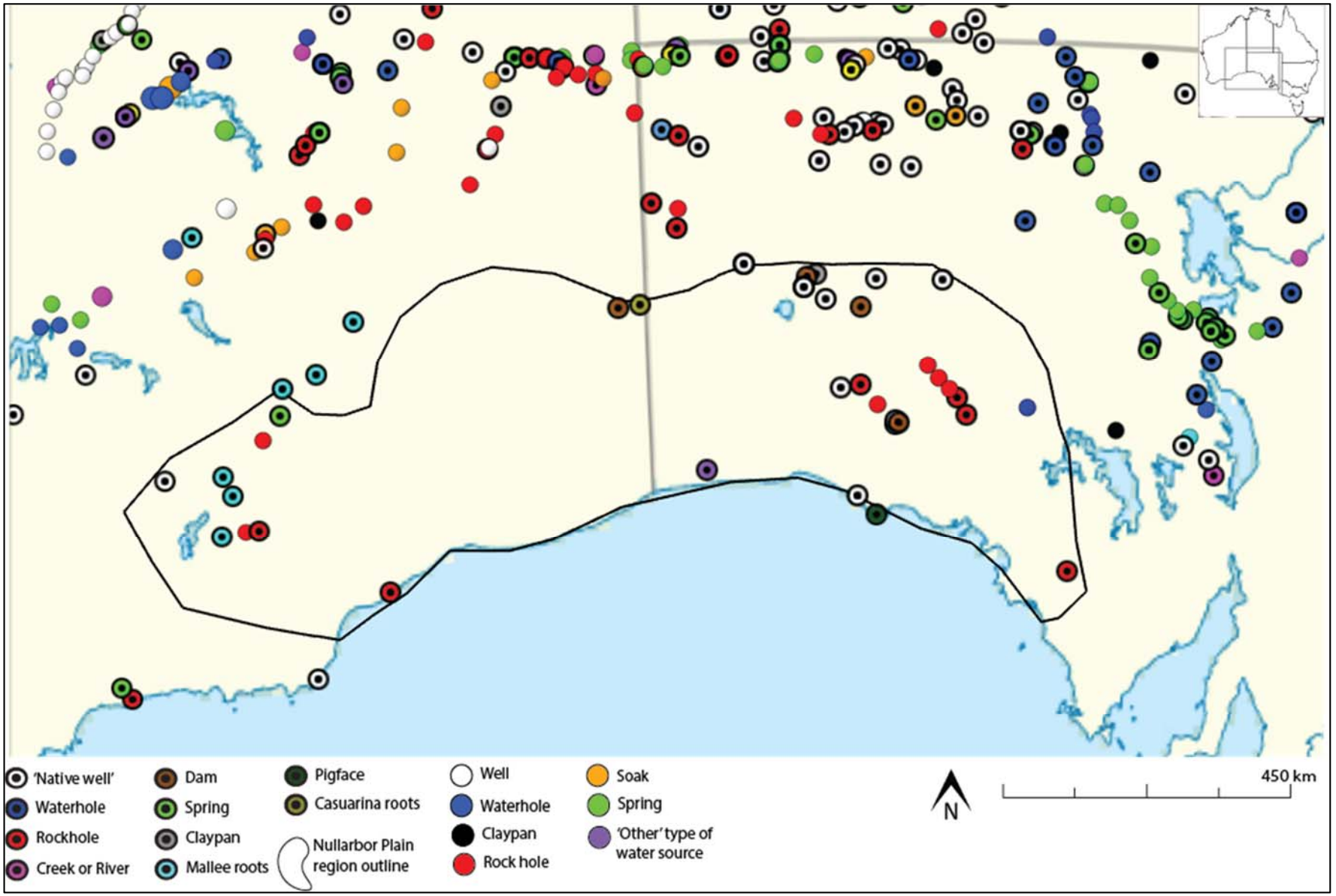

Figure 9 Map of the distribution of water sources identified in the Nullarbor Plain region as recorded in the ethnohistoric, historic and archaeological literature.

Table 3 Distribution of the type of water sites identified in the literature in the Nullarbor Plain region

Type	Indigenous occupation or use recorded at the site	No mention of Indigenous us or occupation	Total
Well	9	0	9
Spring	1	0	1
Claypan	1	0	1
Rockhole	6	6	12
Dam	4	0	4
Other	3	0	3
Waterhole	0	1	1
Total	24	7	31

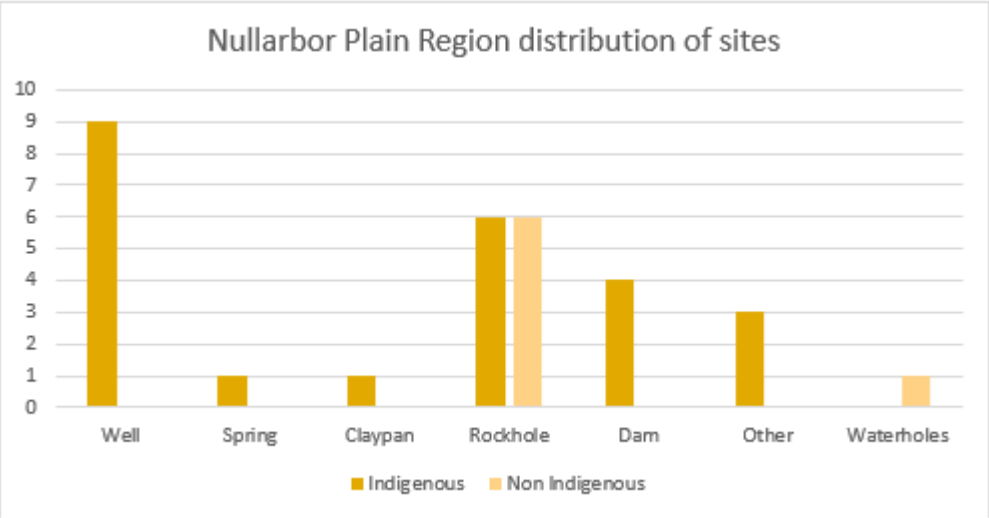

Figure 10 Graph illustrating the distribution of water site types in the Nullarbor Plain region identified in the literature

The literature of this region describes one of the driest areas in the country. Explorers had great difficulty finding water here. When Eyre crossed the Nullarbor from Fowlers Bay to Albany, he went nine days without locating any water (Eyre 1845). Forrest went three days without locating any water (Forrest 1875). Twenty-four sites known to be used by Aboriginal people were identified in the literature. The majority are wells, with seven Indigenous wells identified and seven rock holes known to be used by Aboriginal people. Four Aboriginal dams were identified within this area; this is significant, as this study only identified five dams in total.

Two major sites were visited by the explorers. These were Queen Victoria Spring, which was visited by Carnegie, Lindsay and Giles, and Ooldea soak, which was visited by Giles in 1875 and Maurice in 1903. As mentioned in the literature review, Daisy Bates spent a long period

there in 1919. The other site identified was Koonalda Cave. Hearths at this site returned dates between 13,000 to 22,000 BP (Wright 1971).

This area is also well known for the use of tree roots as a way of accessing water. This will be further discussed in the section below.

Central Australia Region

Central Australia consists of a large block of ranges and desert uplands in the heart of the continent. This includes the MacDonnell Ranges and the Mann-Musgrave Ranges in the south. To cover all the study area however, this region also includes parts of the Great Sandy Desert in the south and the Tanami Desert in the north. This was the most explored area of Australia, as explorers set off into the interior with the hopes of finding an inland sea or pastoral lands. Instead, they found a dry landscape of rocky mountains and gorges. The Central Australia region was explored by Stuart from 1860-1861, Warburton in 1872, Giles in 1876, Gosse in 1872 and Winnecke from 1879 to 1880. A total of 164 water sources were identified.

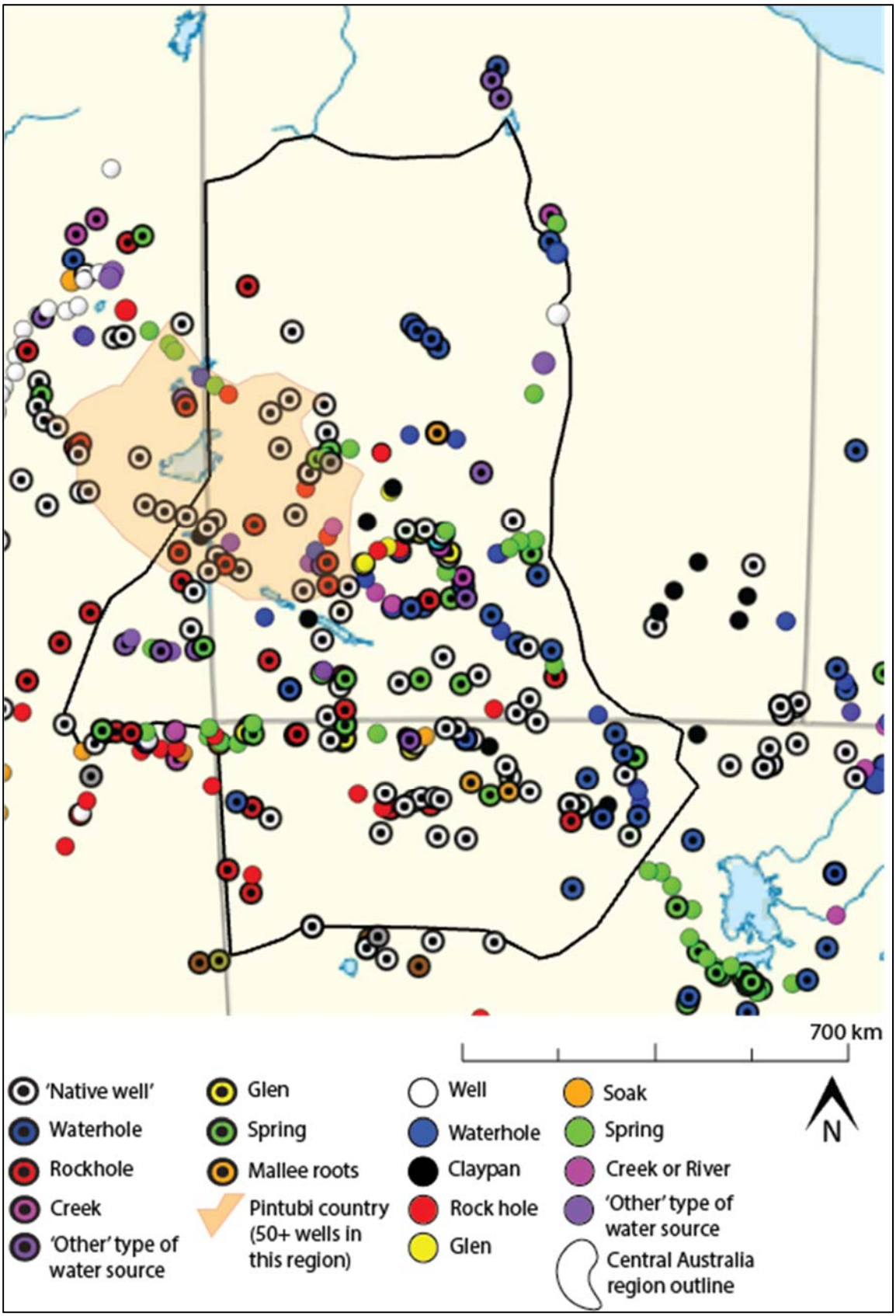

Figure 11 Map of the distribution of water sources identified in the Central Australia region as recorded in the ethnohistoric, historic and archaeological literature.

Table 4 Distribution of the type of water sites identified in the literature in the Central Australia region

Type	Indigenous occupation or use recorded at the site	No mention of Indigenous use or occupation	Total
Well	55	1	56
Spring	10	11	21
Claypan	0	6	6
Rockhole	21	6	27
Creek or Rivers	2	4	6
Waterholes	15	8	23
Soak	4	1	5
Glen	4	4	8
Other	6	6	12
Total	117	47	164

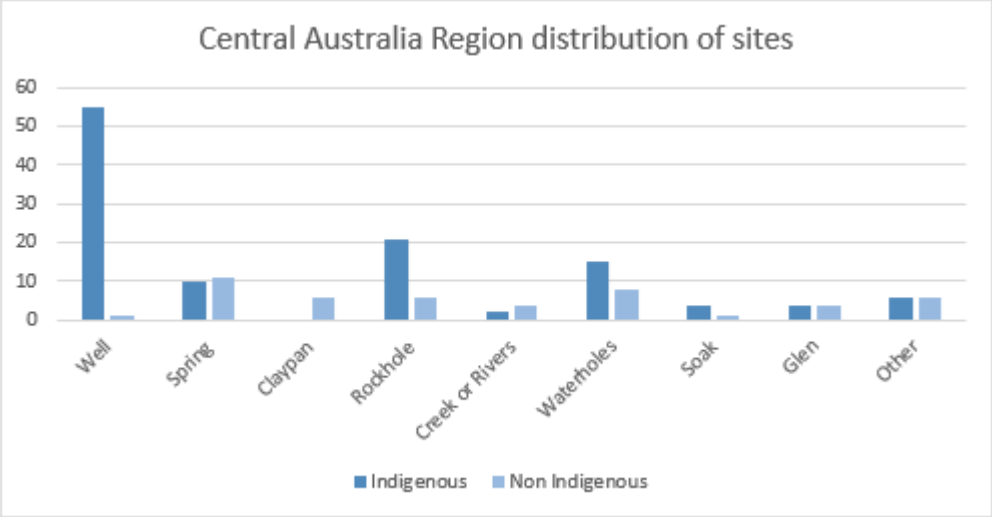

Figure 12 Graph illustrating the distribution of water site types in the Central Australia region, identified in the literature

Water within central Australia was plentiful, if you knew where to look for it. The many gorges and mountains constituted the kind of environment where pockets of water could be found in rock holes throughout the landscape after heavy rains. The largest number of Aboriginal water sites was recorded in this region with 117 identified. Wells were the most prominent water source; fifty-five of these were identified. A large number of rock holes was also recorded, which is to be expected due to the nature of the rocky landscape.

A number of significant sites were visited by the explorers, among them being Uluru, with Gosse the first white male to have visited it, in 1873. Here he described a large spring which

he named Maggies Spring, now known as Mutijutu, an oasis in the desert. This was the first permanent water he found on his journey from Alice Springs (Gosse 1874).

Glens were also frequently mentioned. These sites were described as small ponds of water tucked in between mountains or hills. Many of these glens were revisited by different explorers and became significant depots for them before they continued to harsher, drier environments. Glen Thirsty in the Amadeus Basin, Central Australia was visited by Giles in 1872. Retrieved dates for findings at this site are associated with the early-Holocene, 11,000 BP (Smith and Ross 2008: 45). This site is in close proximity to the famous Pliestocene site Puritjara Rockshelter, and neighbouring permanent water source, Muantji Rockhole. Puritjarra has been occupied from 35 ka through to the recent past.

Water from animals and plants

In the southern parts of Australia, many explorers noted the Aboriginal people's use of tree roots and other plants as a way of accessing water. Table 5 below illustrates what the explorers had to say about extracting water from plants.

Table 5 References made by early white Australian explorers in regard to obtaining water from plants and trees.

#	Place	Explorer	Type	Reference
1	South west, Western Australia -29.271393 124.7469 -29.909607 124.128806 -31.096404 122.552398 -31.353462 ,122.675533	David Lindsay (1893)	Mallee Eucalyptus	In three miles I came to a samphire flat with high banks of gypseous clay and mallee trees, with the roots pulled up by natives for water. They are living on mallee root water, there being no sign of animal life, and they have no dogs with them.
2	South west, Western Australia -30.049821 123.600050 -27.968404 122.390117	David Carnegie (1898)	Mallee Eucalyptus	Here were numerous old native tracks, and we could see where the mallee roots had been dragged up, broken into short pieces, presumably sucked or allowed to drain into some vessel, and stacked in little heaps.
3	Musgrave Ranges, South Australia -26.195958 131.835763	Giles (1889)	Mallee Eucalyptus	The eucalypts of the mallee species thrive in deserts and droughts, but contain water in their roots which only the native inhabitants of the country can discover.
4	Ooldea region	Bates (1929)	Red Malle and white Mallee *Eucalyptus oleosa*	In the arid areas she found moisture in the mallee-roots, and shook the heavy dew-drops into her weera from the small bushes and herbage so that she and her boy throve on the long journey.
5	Nullarbor Plain region	Tindale (1974)	Mallee Eucalyptus	…the Ngalea were able to exploit the mallee scrub along the northern edge of the Nullarbor Plain by obtaining the water they required from mallee roots while the Pindiini further to the east also relied heavily on these trees, shifting their camp every day from one grove to another.
6	Not specified	McCarthy (1957) (in Colliver 1974)	Mallee Eucalyptus	When travelling a man may carry a length of root with the ends plugged up with clay, or his wife may carry short pieces in her coolamon. The liquid is fresh to the taste if used quickly but becomes discoloured in a few hours
7	Near Boundary Dam, South Australia -29.290089 128.954676	Maurice (1897)	Casuarina	They lever up the roots, break them in pieces and suck out all the water they can which makes a very refreshing drink.
8	Bectimah Gaip, South Australia	Stuart (1860)	Pigface	We have been forced to boil the tops of the pig-face, to satisfy the wants of nature. Being short of water we boiled them in their own juice.
9	'Somewhere along the Nullarbor Plain'	Edgar Eyre (1845)	Dew	Leaving the overseer to search for those that had strayed, I took a sponge, and went to try to collect some of the dew which was hanging in spangles upon the grass and shrubs; brushing these with the sponge, I squeezed it, when saturated, into a quart pot, which, in an hour's time, I filled with water. The native boys were occupied in the same way; and by using a handful of fine grass, instead of a sponge, they collected about a quart among them.

Many of the early explorers who traversed the regions of the Great Australian Bight recorded the process of extracting water from plants. The most popular plant used was the Mallee Eucalyptus. Mallee species that exist in this region include *Eucalptus Incrassata, E. Oleosa, E. Microtheca, E. Paniculata, and E. Populifolia (*Goodhart 1939: 7).

Giles described the Mallee water extraction method used by Aboriginal people:

> … while an aboriginal… …will suddenly make an exclamation, look at a tree, go perhaps ten or twelve feet away, and begin to dig. In a foot or so he comes upon a root, which he shakes upwards, gradually getting more and more of it out of the ground, till he comes to the foot of the tree; he then breaks it off, and has a root perhaps fifteen feet long—this, by the way, is an extreme length. He breaks the root into sections about a foot long, ties them into bundles, and stands them up on end in a receptacle, when they drain out a quantity of beautifully sweet, pure water. A very long root such as I have mentioned might give nearly a bucketful of water; but woe to the white man who fancies he can get water out of mallee." (Giles 1875) (see Figure 13).

A similar process of obtaining water from the roots of a Casuarina tree was identified in near Boundary Dam in South Australia. Additionally, McCarthy (MCarthy 1957: 70 in Colliver 1974: 10) recorded traveling with a root plugged with clay, making it easily transportable.

Figure 13 An Aboriginal man pulling up Mallee roots to obtain water, Koonibba Mission Station, South Australia (National Library of Australia, nla.pic/15603/338)

Coolamons were used in conjunction with mallee eucalyptus as a receptacle to store the extracted water (Magarey 1895: 655; Bates 1921). Also, it seems Aboriginal people were cutting roots and plugging them with clay in order for the water to be transportable and last for a longer period of time (McCarthy 1957:70)

A theme that arises in the literature is the management of mallee groves. It seems Aboriginal people managed the mallee groves, giving them time to regenerate their water supplies before returning to use them again. In mallee regions, mobility may have been based around water availability in regard to trees and not actual water sources.

Objects relating to water transportation

References to the use of water carriers identified in the literature were collated. Table 6 summarises these findings.

Table 6 References made by early white Australian explorers in regard to water transportation technologies

#	Type	Group	Area	State	Description	Citation
1	Coolamon	Warramunga	Tennant Creek -19.599991 134.355260	NT	Large canoe-shaped carriers - Flat bottomed with steeply inclined sides coming to a sharp edge at each end. Second is shield-like with its sides standing at about the same level as the open end.	Spencer and Gillen (1912)
2	Coolamon	Kaitish (Kaitidji)	Barrow Creek -21.487366 133.924601	NT		
3	Coolamon	Arunta	Charlotte waters -26.070864 135.099528	NT	Trough type carriers that are medium sized with high sides and ends. Made from the bark of eucalyptus hardened over the fire.	Spencer and Gillen (1912)
4	Coolamon	Aluridja	Musgrave Ranges, South Australia -26.158831 131.869478	SA		
5	Coolamon	Dieri	Cooper Creek, South Australia -27.069875 140.332158	SA	Shield type carriers are flat with more or less open ends. Made from the bark of eucalyptus hardened over the fire.	Spencer and Gillen (1912)
6	Coolamon	Yantowannta (Jandruwanta)	Cooper Creek, South Australia -27.069875 140.332158			
7	Coolamon	Ngameni	Goyder Lagoon -26.817154 139.225571	SA		
8	Coolamon	Arunta	Charlotte waters, South Australia -26.070864 135.099528	SA		
9	Coolamon	Aluridja	Musgrave Ranges, South Australia -26.158831 131.869478	SA		
10	Coolamon	Wongapitcha	Strzelecki Creek	QLD		
11	Skin water-bag		General observation, no particular location	NA	"No doubt these natives carry water in wallaby or other animals' skins during their burning hunts, for they travel great distances in a day"	Giles 1875
12	Coolamon	Not specified	Ularring, Western Australia -29.310015 120.230382	WA	"The advancing party, however, turned out to be only two women coming for water to the well. They had vessels, usually called coolamons—these are small wooden troughs, though sometimes made of bark, and are shaped like miniature canoes—for carrying water to their encampment.	Giles 1875
13	Kangaroo skin bag	Not specified	Termination Hill -30.042828	SA	I then went to their camp and examined the bags and property which had been left, and amongst other things found two kangaroo skins	Eyre (1845)

			138.048000		full of water, each containing from six to eight quarts.	
14	Bark vessel	Not specified	Not specified	NA	During the day, we had passed a rather recent native encampment, where were left some vessels of bark for holding water, or for collecting it from the roots of trees, or the grass.	Eyre (1845)
15	Dew	Not specified	Not specified	NA	The natives make use of a large oblong vessel of bark, which they hold under the branches… …the water thus falls into the trough held for it, and which, in consequence of the surface being so much larger than the orifice of a quart pot, is proportionably sooner filled.	Eyre (1845)
16	Skin bag	Some where along the South coast of Australia	Not specified	NS	Skin for carrying water, made from the skins of opossums, wallaby, or young kangaroo; the fur is turned inside, and the legs, tail, and neck, are tied up; they hold from 1 quart to 3 gallons.	Eyre (1845)
18	Skin Bag	Not specified	East of the Georgina River	NA	Kangaroo skin water bag	Roth 1910

Coolamons were a universal tool used all throughout Australia. In the arid regions evidence from Table 6 suggests there may have been different types of coolamons for different purposes, such as coolamons for water drinking, for storing water and for transporting it. Unfortunately, these distinctions were not evident in the literature.

Spencer and Gillen (1912: 380) recorded that Aboriginal people in central Australia used coolamons for carrying food and water. They also mentioned these objects were very significant and difficult for collectors to obtain due to the time and skill it takes to manufacture them (Spencer and Gillen 1912:380).

Spencer and Gillen described the manufacturing process of coolamons in Central Australia:

> The soft wood pitchis are made with comparative ease, because the wood of the bean tree out of which they are manufactured can be manipulated without much difficulty. A solid block is first of all cut from the tree with a ground stone axe and then chipped down roughly to the required shape. This varies according to the purpose for which it was to be used. (Spencer and Gillen 1912:379)

Skin bags were also briefly mentioned in the literature. Eyre (1845) recorded that the bag he came across held 8 quarts (7 litres) of water, and Giles (1875) also mentioned skin bags made from either possum, wallaby or young kangaroo holding between one to eleven litres of water.

Walter Roth described the manufacturing process of these bags in Western Queensland, east of the Georgina River.

"For the carrying of water over long distances skin bags used to be manufactured… …Made from kangaroo, paddymelon or possum, occasionally from dingo, the is cut all the way round, high up the neck (which ultimately forms the top of the bag), the front paws and tail removed close to their bases and the whole skin pulled away. Inside out from the carcase it is subsequently tanned with 'coolibar' gum moisturised with water. The front paw and tail hole opening are closed by means of a bone or wooden peg pierced through opposite edges, below which some strong twine or tendon is wound. Tears in the skin may be mended with pegs supported by a figure of eight knot, reminding me very much of the fixing of a surgeon's hare lip pin. Finally, the two hind legs are tied together so as to act like a strap which may either be slung over a shoulder or carried in the hand." (Roth 1897)

Museum items

A total of 124 items were identified as water technologies from SAM, WAM, QM (13 items) National Museum of Australia and the Australia Museum. As mentioned in the methodology chapter, only pictures supplied by the South Australian Museum can be presented in this study, due to strict permissions needed from the WAM and QM.

Coolamons

Coolamons was the largest category of items, with 79 items identified within the study area. A detailed summary of these items is available in Appendix 2.

In many instances the museums identified and labelled coolamons as containers. Where photos were provided, identification was amended. Otherwise, without seeing the object it must be assumed the item is a container.

The vast majority of the items supplied by WAM were identified as containers, with a brief description: 'dish, wooden'. The Museum was also unable to provide images of these items due to the consent needed from the community (see Chapter 2 for a detailed explanation). The Museum did, however, confirm these objects as types of water carriers, so it is highly likely these objects are coolamons also.

The QM was also unable to provide photos; however, the description of the object provided sufficient identifying information. The QM did not use the term container, but instead, coolamon.

The table below is an extract of all the containers identified from the data provided by the museums. Where there is a blank in the table is where no information was provided.

Table 7 Containers and coolamons from SAM and QM

Key #	Type	Description	Origin	State	Cultural association	Collector/ donator	Museum	Museum item number
2	Container	Container, wooden, small, water vessel	MacDonnell Ranges	NT	Aranda	Liebler, O.	South Australian Museum	A1196
23	Container	Container, wooden, beantree water vessel	MacDonnell Ranges, west of	NT	Pintubi	Sheard, Harold L.	South Australian Museum	A28312
30	Container	Container, shell, water carrier vessel	Condoolka Station	SA		Mould, Mr Dick; Condoolka Station via Port Augusta	South Australian Museum	A62267
31	Coolamon	Container, wooden, water carrier, coolomon, 'bargunu'; made of beantree wood (which is called Curedti in Walbiri)	Central Australia	NT	Warlpiri	Kellner, Stephen; Sydney	South Australian Museum	A63309
33	Container	Container, wooden, for carrying water, 'mimbu', made by Njunmiti	Ernabella, Musgrave Ranges	SA	Pitjantjatjara	Tindale, N.B.; South Australian Museum employee	South Australian Museum	A67909

41	Container	Container, wooden, steep sided, the whole ochred, interior surface unworked, exterior surface incised (after ochre) with concentric circles and crescents, small water stains on interior surface	North-west S.A.	SA		Duguid, Andrew Melville & Douglas, Rosemary Lillian	South Australian Museum	A70706
94	Coolamon	Coolamon. Bark vessel open at both ends with pokerwork decoration.	Docker River, Central Australia				Queensland Museum	E40668
95	Coolamon	Water container	Hall's Ck., Kimberleys	WA			Queensland Museum	E10403
96	Coolamon	Coolomon /Container, Shallow and red ochred	Sturt Ck., Kimberleys	WA			Queensland Museum	E10470
97	Coolamon	Wooden bowl - coolamon	Western Desert (attrib.)	WA			Queensland Museum	E13248
99	Coolamon	Wooden Container - Coolamon	Central Australia	NT			Queensland Museum	E20331.1
100	Coolamon	Grooves on the outside, ochre on outside.	Camooweal	QLD			Queensland Museum	QE2485
101	Coolamon	Coolamon style, wooden	Glenormiston	QLD			Queensland Museum	QE4251
102	Coolamon	The outside of the coolamon is plain, as is the inside, grooves cut into the outside.	Boulia	QLD			Queensland Museum	QE4252
103	Coolamon	Wood, curved sides, incised pattern inner surface, ochre (red). 3 (nail?) holes.	Glenormiston	QLD			Queensland Museum	QE4255
104	Coolamon	Coolamon style - Hardwood, plain, wavy grain.	Roseburth Stn.- Birdsville.	QLD			Queensland Museum	QE353
105	Container	Hollowed out piece of wood, smooth on back. Wavy pattern from end length to end length.	Roseburth Stn.- Birdsville	QLD			Queensland Museum	QE354
106	Coolamon	Coolamon - the wood inside has been darkened and fine grooves have been cut in, on the outside the wood has grooves that are wider cut into it, the outside is not coloured.	Roseburth Stn.- Birdsville.	QLD			Queensland Museum	QE355

From the descriptions of these items, few features can be identified. Firstly, many of the items had grooves or incised patterns on either the inside or the outside (Items # A70706, E40668, QE4252, QE4255, QE353, QE354, QE355). Analysis of these items would be interesting to find if the grooves are significant to the quality of the product or if it is a cultural feature.

Two of these items were made from the bean tree, *Erythrina vespertilio* (Items # A63309 and A28312). They both come from the Central Australian region in the Northern Territory. The tree is native to the central regions of north and north-east Australia. Again, species identification of the material used to manufacture these containers would be interesting so as to find out what types of wood are suitable for this use.

Figures 15-18 were the only photos provided (within the study area) by the museums. The containers all appear to have been covered by red or yellow ochre, except for that in Figure 16. Of the 79 coolamons identified, nine were covered in ochre (see Appendices: # 41, 96, 100, 103, 117, 118, 119, 120, 121). The shapes of these objects differ, which may be due to regional variation or related to function.

Another interesting feature is that item #QE4255, appears to have nail holes, so analysis on this item would be interesting discover if these holes were made by modern nails or by using 'traditional' methods. One shell water carrier was identified. This item originates from Coodoolka station near the border of Western Australia and the Northern Territory. Specimen identification of this item would be interesting to find where the shell may have come from.

Figure 14 Coolamon belonging to the Pintubi people in the North MacDonnell Ranges. Collected by Harold L. Sheard (SAM A28312) (Key: # 23)

Figure 14 was identified by SAM as a 'container'; however, this item is a coolamon. This coolamon originates from the Pintubi people in north Western Australia.

Figure 15 Coolamon made from beantree belonging to the Warlpiri people in Central Australia. Collected by Stephen Kellner (SAM A63309) (Key: # 31)

Figure 16 Coolamon made by Niumiti from the Pitjantjatjara people in Ernabella Musgrave Ranges, South Australia, collected by N. Tindale (SAM A67090) (key #33)

This object (A67090) was also labelled as a container; however, it appears to be a coolamon.

Figure 17 Coolamon, origin: Australia North West. Collected by A. Duguid and L. Douglas (SAM A70706) (key # 41)

Skin water bag

Eighteen water bags were identified from the museum searches; however only 13 were able to be mapped as the other five had no specific location of origin. Table 8 is a breakdown of the skin bags from museums identified within the study area.

Table 8 Skin water bags from SAM, QM and the Australian museum

#	Category	Material	Site: (Collection Details)	Name: (Cultural Associations)	Item #	Collector/Donator	Museum
1	Bag	Wallaby	Australia, Northern Territory, MacDonnell Ranges	Aranda	A1085	Liebler, O.	SAM
3	Bag	Red kangaroo	Australia, Northern Territory, MacDonnell Ranges		A1471	Strehlow, Rev. Carl	SAM
4	Bag	Possum	Australia, Northern Territory, MacDonnell Ranges	Arrernte, Western	A1472	Strehlow, Rev. Carl	SAM
5	Bag	Wallaby	Australia, Northern Territory, MacDonnell Ranges		A1473	Strehlow, Rev. Carl	SAM
12	Bag	Wild dog	Australia, South Australia, Cooper Creek		A2803	Reuther, J.G.	SAM
13	Bag	Wild dog	Australia, South Australia, Cooper Creek		A2804	Reuther, J.G.	SAM

19	Bag	Rabbit skin-'demonstration'	Australia, South Australia, Nepabunna	Adnyamathanha	A27140	Mountford, Charles P.	SAM
20	Bag	Rabbit skin -'demonstration'	Australia, South Australia, Nepabunna	Adnyamathanha	A27141	Mountford, Charles P.	SAM
21	Bag	Rabbit skin -'demonstration'	Australia, South Australia, Nepabunna		A27142	Mountford, Charles P.	SAM
24	Bag	Not specified	Australia, South Australia, Nepabunna, Flinders Ranges	Wailpi (Adnyamathanha)	A28322	Mountford, Charles P.	SAM
27	Bag	Kangaroo skin	Australia, Northern Territory, MacDonald Downs	Iliaura (Alyewarre)	A44232	Chalmers, C.O.	SAM
109	Bag	Skin Bag	Toko Waterhole, Channel Country, Queensland		E004112		Australian Museum
112	Bag	Not specified	Channel Country, Queensland		E013365		Australian Museum

The South Australian museum held the most skin water bags, with 13 identified. The Queensland Museum contained one and the Australian Museum held four. The bags were made from kangaroo, wallaby or possum. Three rabbit skin bags from Neppabunna were identified; however, they were described as 'demonstration only'. Rabbits were introduced into Australia in 1859. This suggests that after colonisation, rabbits may have been more easily accessible for manufacturing these bags. Nepabunna is a mission town; this is significant as it highlights the issue of colonisation and how Aboriginal people adapted to the changes that came with it. Because it was an introduced species, the rabbit's skin may have been more easily obtained for the 'demonstration' than a kangaroo skin.

Figure 18 Skin water bag made from possum, origin: MacDonnell Ranges (A1472)

Figure 19 Skin water bag made from dog (dingo), origin: Cooper Creek South Australia (A2804)

Figure 20 Skin water bag made from rabbit, origin: Nepabunna, South Australia (A27140)

Figure 21 Skin water bag, material unknown. origin: Flinders Ranges South Australia (A28322)

Figure 22 Skin water bag, kangaroo skin, origin: Iliara people from MacDonald Downs, Northern Territory. Collected by C. O. Chalmers (SAM A44232) (key #27)

Figure 23 Skin water bag, material unknown, origin: Toko waterhole, Channel Country Queensland (Australia Museum: E004112) (key # 109)

Figure 24 Skin water bag made from a wallaby or kangaroo, origin unknown (Cribb, G 1947: PIC/15291)

Figures 18-21 show fur is missing from the skin, whereas Figures 23-24 show the fur intact. Roth does not mention if the skin was removed as a step in the manufacturing process. Therefore, the missing fur may be a result of the object's aging process.

Baskets and Buckets

From the searches conducted by the museum administrators at QM, SAM and WAM, 66 baskets were identified. Unfortunately, they are all associated with the area surrounding the Alligator River in Northern Territory on the coast. Therefore, these items are outside the scope of this thesis. Searches of the databases from other museums listed for this study provided a nil result.

Root water

Twenty objects including roots, water flowers and fruit relating to various water bearing eucalyptus species were identified at SAM (Table 9).

Table 9 Table illustrating the different types of objects relating to 'root water'

#	Category:	Description:	Site: (Collection Details)	State	Name(s) of Source:	Museum	Reg No:
6	Water	Roots, leaves & nuts of Hakea eucoptera	Callabonna	SA	Zietz, Amandus - South Australian Museum	South Australian Museum	A1782
7	Water	Flowers of water bearing tree in vial	Ooldea	SA	Maurice, R.T.	South Australian Museum	A1784
8	Water	Roots of a mallee eucalypt	Ooldea Well	SA	Maurice, R.T.	South Australian Museum	A1786
9	Water	Water, from needle-bush	Cooper Creek	SA	Reuther, J.G.	South Australian Museum	A1789
10	Water	Stems of 'Quieroo' boiled with sugar in vial	Ooldea	SA	Maurice, R.T.	South Australian Museum	A1790
14	Water	Barna roots give principal water supply of Wailpi natives during dry spells.	Mount Serle, North Flinders Ranges	SA	Hale, H.M. & Tindale, N.B.; South Australian Museum Expedition	South Australian Museum	A13042
15	Water	Bundle of water mallee roots; from these sticks nearly 2 pints of water were obtained	Penong,	SA	Tindale, N.B.; South Australian Museum employee	South Australian Museum	A14172
16	Water	Roots, flowers, fruit, water of the red mallee; principal supply of water is from this tree	Penong	SA	Tindale, N.B.; South Australian Museum employee	South Australian Museum	A14173
17	Water	Roots, flowers, fruit of the kong mallee; gives limited supply of water	Penong	SA	Tindale, N.B.; South Australian Museum employee	South Australian Museum	A14174
18	Water	Water mallee roots	Moonabie Range, Eyre Peninsula	SA	Somerville, J.D.	South Australian Museum	A26147
22	Water	Roots of Eucalyptus oleosa	Ooldea	SA	Berndt, R.M.	South Australian Museum	A27259

28	Water	Roots of mallee, Eucalyptus	Ooldea	SA	Cleland, J.B.	South Australian Museum	A48982
29	Water	Water bearing root of Eucalyptus oleosa	Colona Station	SA	Cleland, J.B.	South Australian Museum	A48983
34	Water	Mallee water in jar	Ooldea	SA	Maurice, R.T.	South Australian Museum	A68444
35	Water	Mallee water in jar	Ooldea	SA	Maurice, R.T.	South Australian Museum	A68445
36	Water	Mallee water in jar	Ooldea	SA	Maurice, R.T.	South Australian Museum	A68446
37	Water	Mallee water in jar	Ooldea	SA	Maurice, R.T.	South Australian Museum	A68447
38	Water	Mallee water in jar	Ooldea	SA	Maurice, R.T.	South Australian Museum	A68448
39	Water	Mallee water in jar	Ooldea	SA	Maurice, R.T.	South Australian Museum	A68449
40	Water	Mallee water in jar	Ooldea	SA	Maurice, R.T.	South Australian Museum	A68451

All of the root water species were located within South Australia, which is consistent with the literature observations discussed above. Water bearing species identified at SAM include *Eucalyptus oleosa*, red mallee, needle bush, *Hakea eucoptera*, Barna roots, and 'Quieroo'. Eleven of the objects had no identification of the type of Mallee species used in their making.

Miscellaneous

Four 'other' water technology objects were found at SAM.

Table 10 Other types of water technologies identified at the South Australian Museum

#	Category:	Description:	Site: (Collection Details)	Name: (Cultural Associations)	Name(s) of Source:	Museum	Reg No:
11	Water-tube	Tube, water, 'pillee', for getting water from holes in trees & rocks	Australia, South Australia, Fowlers Bay	NA	No Data	South Australian Museum	1791
25	Water-extractor	Water extraction tube for sucking, wood, 'pillee'; this specimen is mentioned as already in the Museum by 1896, although with little extra data (see Publication Record)	Australia, South Australia, Fowlers Bay	NA	No Data	South Australian Museum	29971
26	Bamboo water carrier	Container, bamboo body, water vessel, looks like a bamboo drone pipe. Looks like a pouring spout for a container.	Australia, Northern Territory, Central Australia	NA	Wood, Mrs Vera; dealer, Adelaide	South Australian Museum	A40617

32	Digging-tool/ Container	Scoop, wooden; used for water	Australia, Northern Territory, Ayaiyayi Creek	Pintubi	Kimber, Mr R.G. (Dick); Alice Springs	South Australian Museum	A67040

From SAM, a bamboo container from Central Australia was identified (A67040). The museum has identified it as a spout for a container. The object has an incised drawing of an animal figure in each panel, and the background has been darkened by a lit flame. Bamboo does grow in this region, implying it was made in more recent times or traded from somewhere else.

Figure 25 Container - bamboo water vessel, belonging to the Warramunga people in Central Australia, Northern Territory, collected by Mrs Vera Wood. (SAM:40617) (key # 26)

Figure 26 Container - bamboo water vessel, belonging to the Warramunga people in Central Australia, Northern Territory, collected by Mrs Vera Wood. (SAM:40617) (key # 26)

Photos of the miscellaneous objects were not provided by the museum. Research, however, found references to the 'pillee' water tubes/extractors (A1791 and AA 29971). These objects were made with rolled thin bark to pierce tree hollows that had filled with water. Tree trunk hollows were another method of water storage and water extraction. During the Elder Scientific Exploring Expedition, Lindsay (1893) described how an Aboriginal woman located water in a tree hollow after she saw a line of ants travelling up and down a tree trunk. She made a series of tubes by removing bark from straight twigs, eventually creating a set of tubes which she used to pierce through to the water pocketed in the tree trunk (Bayly 1999: 22). It is possible item #A40617 was also used for this purpose.

Item #A67040 from SAM sounds similar to objects found near 'native' wells by Giles (1975). These tools were used to dig out a well as well as transport the water out of the well (Colliver 1974: 12).

Summary

This research has identified a vast number of sites where Aboriginal people accessed water from the mid 19th century through to the early 20th century in the arid interior. It has also identified the types

of water technologies used in the arid interior from the literature as well as technologies held in Australian museums. The next section will discuss what this information means in the broader context of Australian archaeology and for subsistence models of Aboriginal people during the LGM.

6.0 Discussion

Water sources within the arid interior

As discussed in Chapter 4, the types of water sources Aboriginal people accessed within the arid interior are directly related to the type of water available in the landscape (for example, the prominence of waterholes and springs in the arid rivers regions directly relates to the geomorphology of the Lake Eyre Basin). Therefore, no analysis of cultural trends without physical investigations of the sites, can be made.

The literature did identify the widespread Indigenous knowledge of digging and constructing material wells. Published archaeological research into the construction of wells is minimal, which may be due to the high degree of deflation these types of sites are affected by. As mentioned in Chapter 2, an archaeological investigation into nine desert wells was undertaken by Hercus and Clarke (1986) in the Simpson Desert. This study found the presence of edge-ground axes, suggesting the occupation of the Simpson Desert may have occurred sometime in the late Holocene (Hercus and Clarke 1986: 62). Hiscock (2016), however, identified a piece of a ground edge axe in a shelter called Carpenters Gap in the Kimberleys, that dated around 44-49 ka (Hiscock *et al*. 2016: 2). Additionally, the discovery of flakes has demonstrated that axes were made in Australia at least 30-35 ka (Hiscock 2016:3).

The highest number of wells were identified in the Western Desert region, especially along the Canning stock route, and 50+ wells are known to exist Pintubi country (Thomson 1962). No locational information exists for the wells in the Pintubi region. Mapping these wells may provide insight into how Aboriginal people moved around that landscape.

Another important finding was the identification of four Aboriginal dams located in the Great Victorian Desert barrier in South Australia. Very few studies provide information about the construction of Aboriginal dams, how much water they held and for how long the water may exist during times of aridity. Research found only one such study which was on the archaeology of an Aboriginal dam at the Bulloo overflow dam in north western New South Wales (see Chapter 2 for detailed overview) (Rowlands and Rowlands 1969). Further research into Dams in the arid interior may contribute to theories of subsistence methods of Aboriginal people in the LGM, such as, if Aboriginal people could store a vast amount of water artificially, maybe this water could provide a refuge during the summer months or extended periods of aridity.

Water technologies

To identify an ethnographic model for the variation of water technologies across the arid interior, further detailed physical analysis of these objects would be necessary. However, from the information identified, a few trends are evident (Figure 27). The manufacturing of skin bags appears to be a skill known on the eastern side of the continent. The Western Australian museums have over 10,000 items in their Australian Aboriginal collection, the vast majority originating from Western Australia, but they did not have any skin bags from in or outside of the study area. We can also assume coolamons and containers were a construction known to most Aboriginal people in the arid interior.

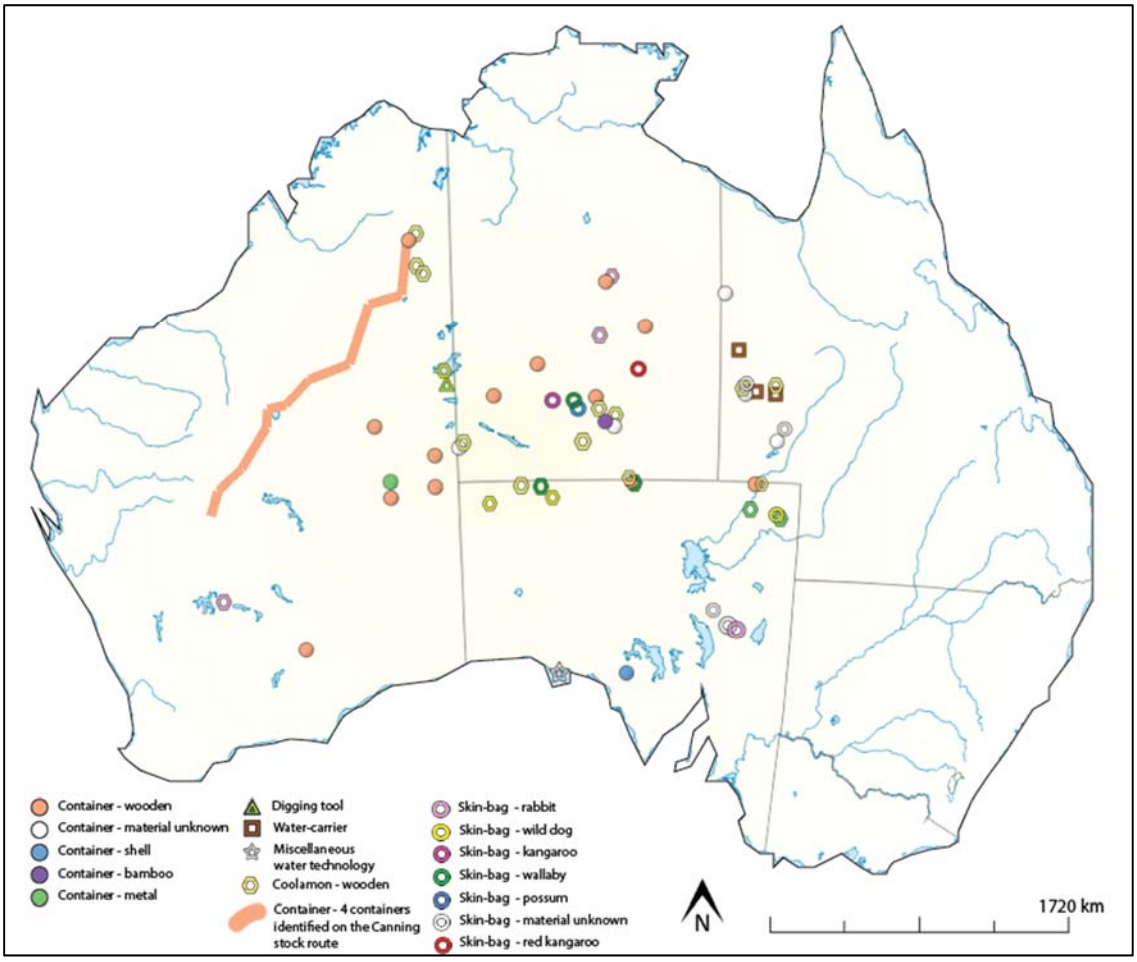

Figure 27 Distribution of the different types of water technologies in arid Australia

Root water

As identified in the results, the use of Mallee eucalyptus as a way of accessing drinking water is common in the south of the continent. Two concentrations are evident in the Ooldea region and south-Western Australia near areas such as Kalgoorlie. Previous studies on the ethnoecology of the use of the mallee root have not examined these regions (Noble and Kimber 1997). Additionally, I was unable to locate paleoecological data for mallee root in the literature to find if mallee root existed in these areas during the LGM. The results in Figure 28 are consistent with the distribution of the water bearing mallee in Australia (Figure 29).

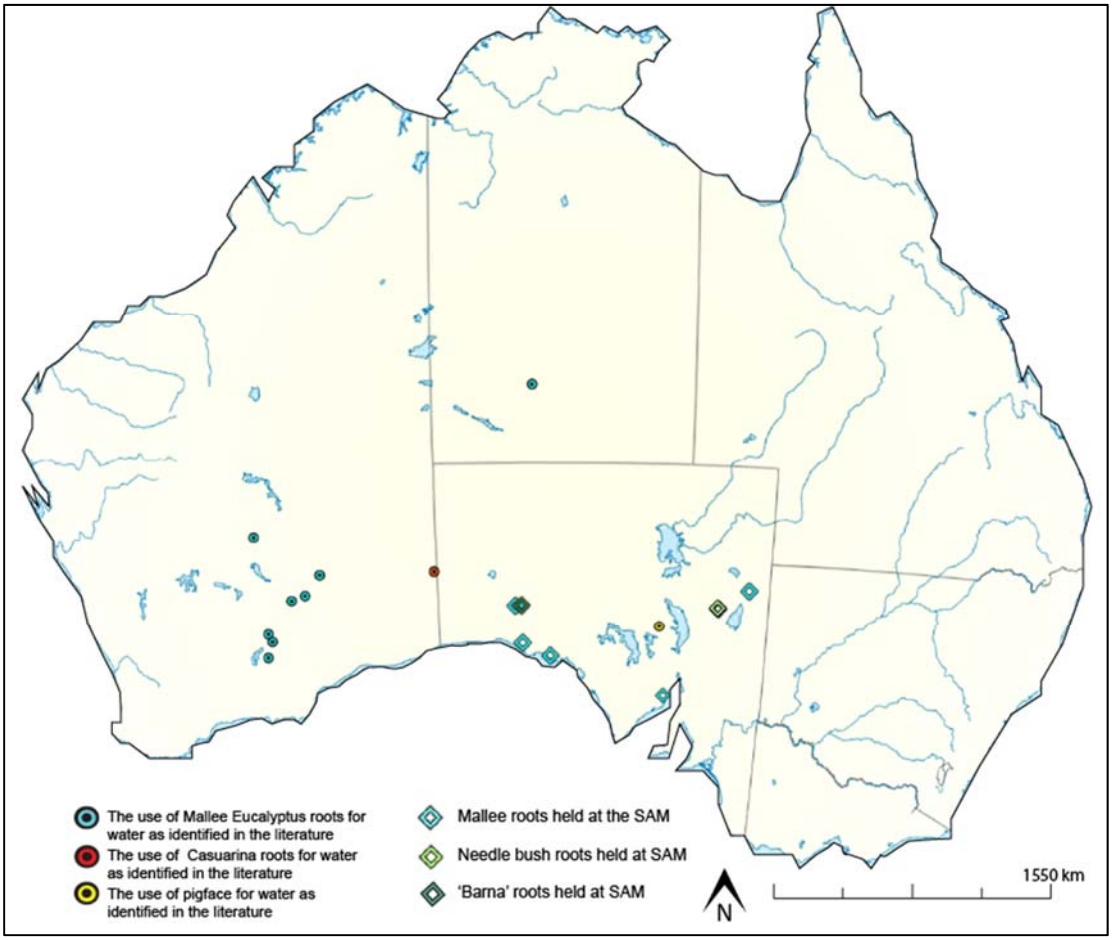

Figure 28 Distribution of water bearing plant species identified in the literature and museums

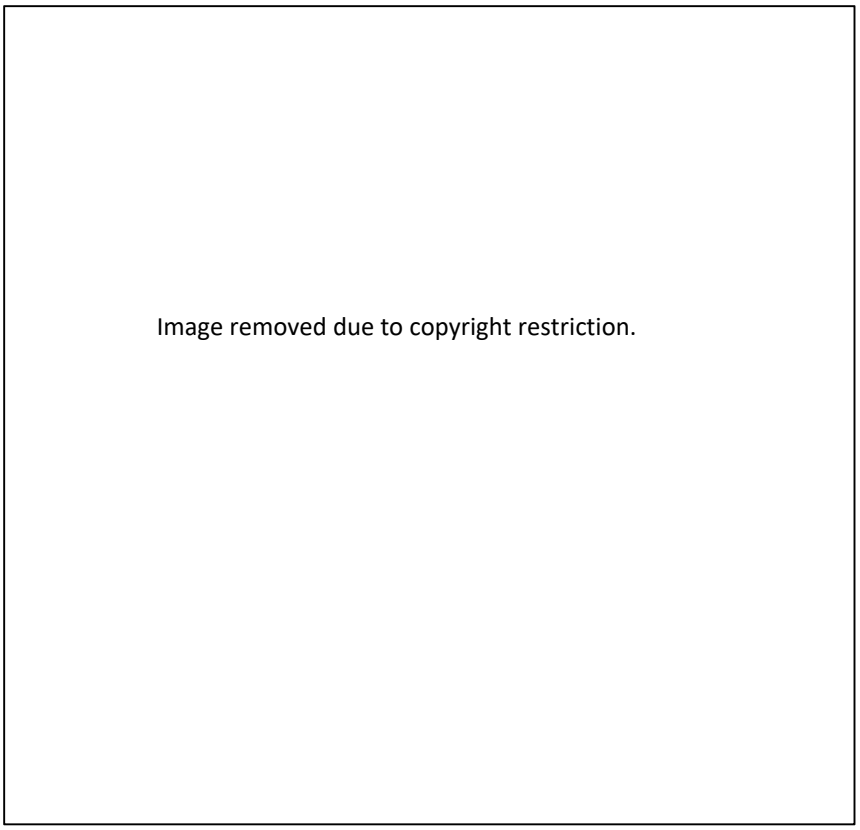

Figure 29 Distribution of water bearing mallee eucalyptus species (Australian National Botanic Gardens 2004)

Refugia, Barriers and Corridors

Water technologies

As discussed in Chapter 2, during the last peak in aridity, access to water affected how Aboriginal people occupied Australia. It is thought large areas in the arid interior became uninhabitable, and formed barriers to human occupation. Regions with permanent water became refuges and the space in between, corridors people could move through (Veth 1993: 106). The three barriers were the major dune fields of the Great Sandy Desert, Great Victorian and Simpson Deserts (Veth 1993: 106).

Without dating the vast number of water sites identified in the literature (known in historical times), it is impossible to suggest that these water sources might have existed during the LGM. However, the water technologies identified may say something about how Indigenous peoples moved throughout the arid interior during the LGM using the through the theoretical practice of analogy and the direct historical approach (see Chapter 2 for definition).

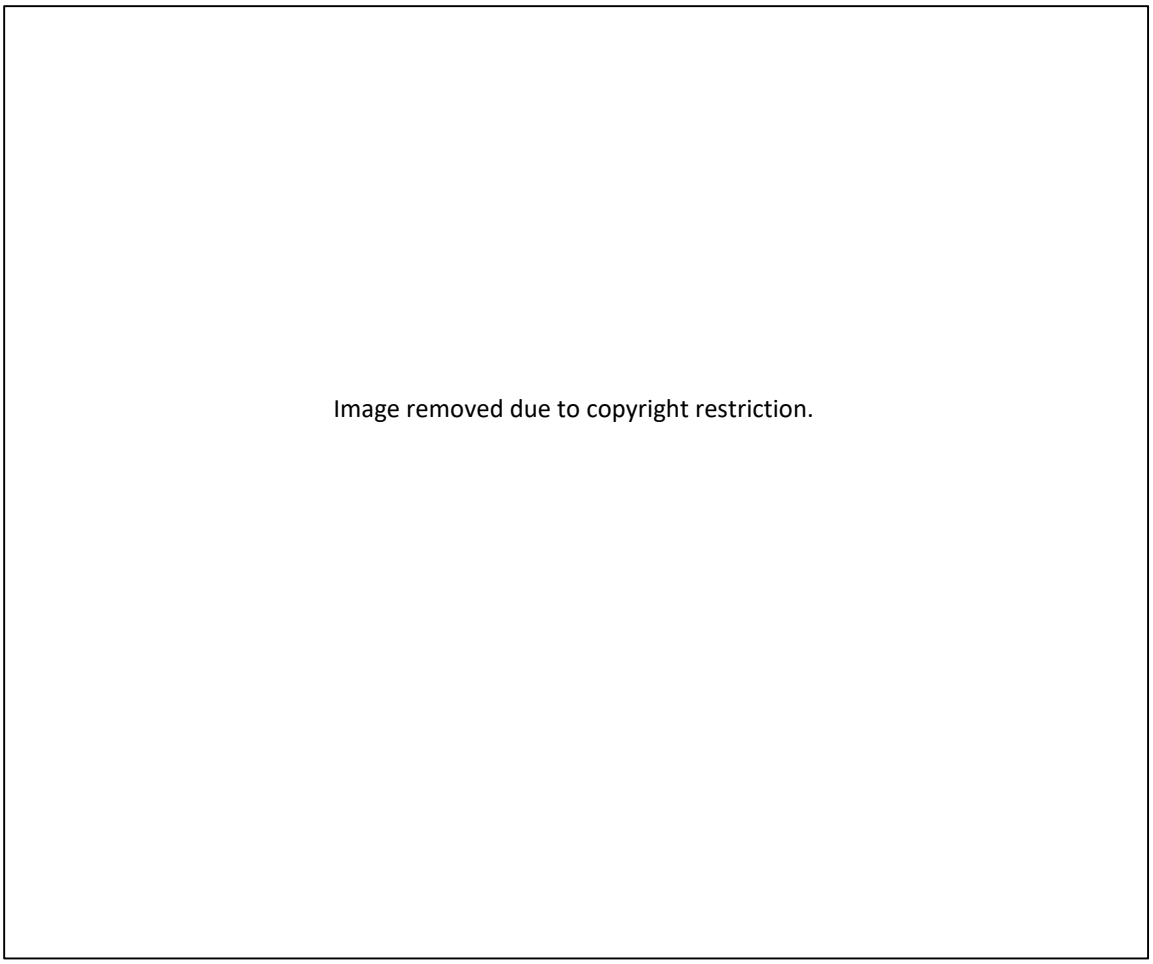

Figure 30 Distribution of water technologies in regard to Veth (1989) refugia, barriers and corridors

For the most part, technologies remain within barriers, except for the Simpson Desert region. In this region, eight different water technologies can be identified. These include five different types of coolamons, three skin water bags and three other types of water carriers without detailed description. If skin bags water bags were used during the LGM, people may have been able travel to within these barriers, suggesting these areas might have been corridors.

Root Water

The ethnographic distribution of the water bearing mallee in regard to Veth's (1993) study, identifies that modern species of mallee grow in the 'barrier' regions (Figure 31). Research was unable to identify if this species was abundant during the LGM. If mallee species did exist during the LGM, it may suggest the mallee regions may have also been corridors, as previously discussed in the results. Aboriginal people were able to derive enough water from the mallee roots for subsistence for significant periods of time.

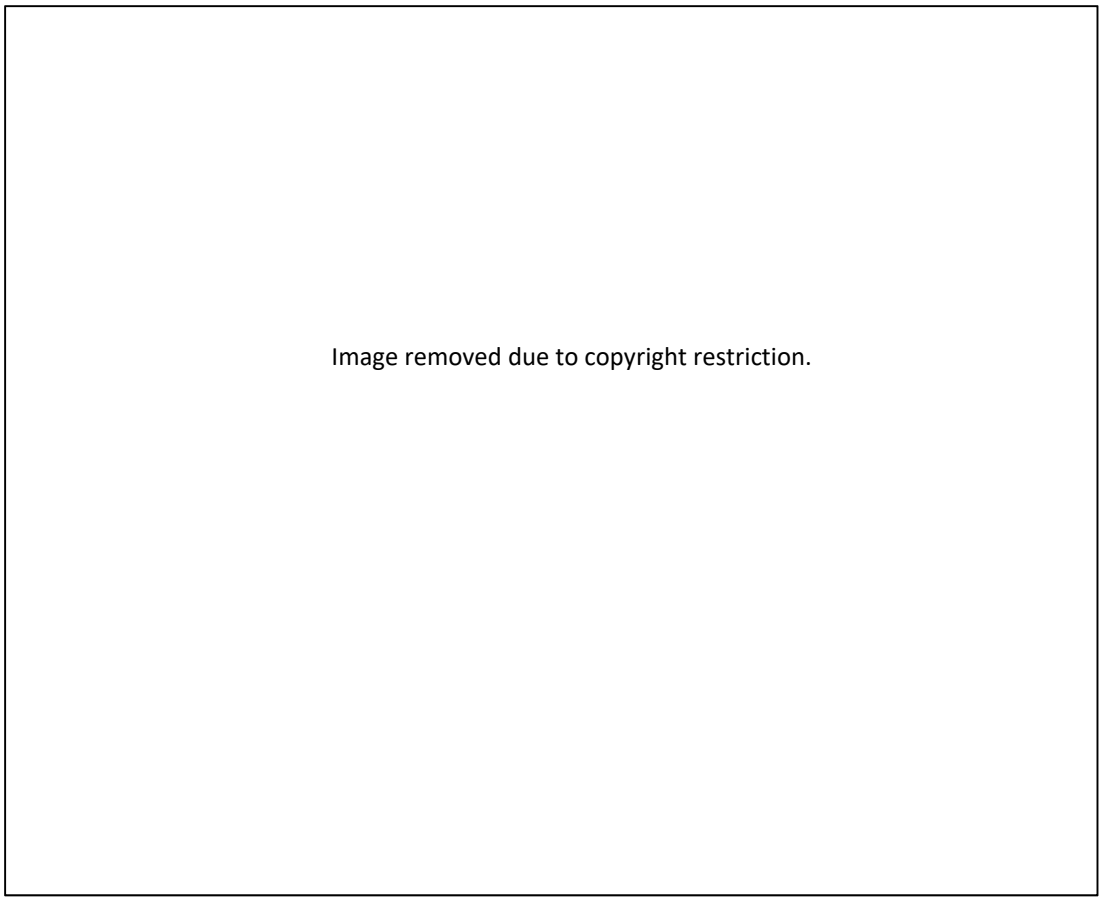

Figure 31 Distribution of water bearing plant species in regards to Veth (1989) refugia barriers and corridors

Are barriers, corridors and refugia meaningful for human behaviour?

One of the aims of this study was to identify what the ethnographic information indicates about the distances travelled between permanent water sources (using water storage/water transport technologies). This information was lacking within the literature. However, Eyre (1845) when exploring the region of the Nullarbor, gave two examples of Aboriginal people traveling within an arid area:

> To our inquiries about water, they still persisted that there was none inland, and that it took them five days, from where we were, to travel to that at the head of the Bight. No other, they said, existed in any direction near us, except a small hole to the north-west, among some sand hills, about two miles off; these they pointed out, and offered to go with me and shew me the place where the water was. (Eyre 1845)

> …before found the least unwillingness on their part to give us information of this kind; but on the contrary, they were ever anxious and ready to conduct us to the waters that they were acquainted with. I could only conclude, therefore, that what they stated was true—that there was no water near us, and that they had probably come out upon a hunting excursion, and carried their own supplies with them in

> skins, occasionally, perhaps, renewing this from the small quantities found in the hollows of the gum scrub, and which is deposited there by the rains, or procuring a drink, as they required it, from the long lateral roots of the same tree. (Eyre 1845)

Magarey (1895) observed that Aboriginal people didn't feel thirst as significantly as white people, only needing a small amount to travel the landscape. The high degree of mobility of Aboriginal people within an arid landscape is highlighted here. If it were possible for Aboriginal people to travel up to five days with only a small water bag holding up to 8 litres of water, making use of small pockets of non-permanent water, barriers may in actual fact be corridors. Similarly, if a group could exist for periods of time in mallee shrublands, surviving off the root water, the Great Victorian Desert barrier may have also been a corridor.

Additionally, Gould's (1991) theory that Aboriginal people switched between alternative risk-minimising strategies to deal with stressed conditions and to obtain necessary resources, could relate to the use of water skin bags and mallee root water as they could be considered risk-minimising strategies for obtaining water (Gould 1991: 29).

Bias in the literature

Through the literature of the Australian explorers, there was little interest in or emphasis on how Aboriginal people existed in the landscape. The majority of explorer interactions with Aboriginal people were for the purpose of locating water, and in instances where Aboriginal people did not comply with explorers' wishes, they were taken hostage as guides. Carnegie chained men and women together and fed them salty meat so that the thirst would force them to guide the party to water.

> So soon as we had proved the supply of our new watering-place, I had intended giving our guide his liberty.
>
> With a chain formed of spare hobbles held together by wire, we tethered him to a tree, scraped out a nest in the sand for him to sleep in, and lit a fire to cheer him.
>
> After a time, I succeeded in securing one end of the chain round the wild man's ankle, and the other round a lower branch. (Carnegie 1898)

Numbers of water sources identified in each region may have been more, even throughout the other arid regions, if Carnegie had not employed these methods of torture to locate water.

Women and water

Comments regarding women and their relationship to water technologies was also observed throughout this study. Spencer and Gillen (1912) did comment on their role regarding the use of coolamons:

> Women carry water upon such occasions. The fluid is contained in bark carriers of different designs which they either skill fully balance upon their heads or carry under their arms. The water is kept from splashing over the sides, in the first place by the naturally graceful gait of the women; but, at the same time an intentional addition of twigs and branchlets further checks any undue movement of the fluid which might be produced in the vessel during the march.

Other than this comment, other references to women were missing or misogynistic. The majority of explorers commented on the physical appearances of women, discussing their beauty or 'lack of' in their eyes. Giles (1975) wrote:

> I was not near enough to distinguish whether the women were beautiful or not; all I could make out was that one was young and fatter than the other. Amongst aborigines of every clime fatness goes a great way towards beauty.

The misogyny of Giles's comment re-iterates the argument in Chapter two, the idea that women were objects and not subjects.

7.0 Conclusion

European settlement and colonialisation had a significant impact on every aspect of Indigenous Australia and as a result, much of the knowledge regarding traditional Indigenous technologies and practice has been lost. This thesis has surveyed the published literature to try to understand more about how Aboriginal people existed in the desert. Even with the inherent limitations due to the nature of the relevant early 19th century literature, this thesis has identified important information regarding water sources and technologies in Australia's deserts. In this final chapter I will look at my original research aims and summarise the findings.

The first research question was:

- *What technologies, knowledge and water sources did Aboriginal people use adapt to water availability in arid Australia?*

This question was adressed by answering aims one to sever. A summary of these findings are below:

Aim 1: Review the literatre regarding the range and role of water technologies used in Aboriginal Australia.

As identified in Chapter 4, the three main categories were identified in the literature in relation to water technologies: coolamons or containers, skin water bags and mallee root water. Coolamons were objects that generally remained at camp; waterbags were designed to be carried when travelling, and for the process of extracting mallee root water in regions where water was minimal but mallee eucalyptus was plentiful.

Aim 2: Identify what water sources were employed by Aboriginal people in the arid interior in the ethnographic and historic literature.

A broad range of water sources was used by Aboriginal people in the arid interior. They included wells, rock holes, waterholes, soaks, claypans, glens, creeks plus others Reviewing the literature and compiling this information has resulted in a fairly comprehensive data set of the types of water sites Aboriginal people used during the contact period and in historical times.

Aim 3: Identify what objects relating to Indigenous people's water transportation are held in the collections of museums throughout Australia.

Two main water transportation devices were identified: coolamon or containers and skin water bags. Additionally, mallee roots could also be considered a water transportation device, through the Aboriginal method of plugging them with clay so the water could be consumed later (Colliver 1974: 5). Culminating all this data together is an extensive new resource that is now available to future researchers.

Aim 4: Determine what the ethnographic information indicates about the distances travelled by Indigenous people between permanent water sources (using water storage/water transport technologies).

Little information was located about the distances travelled between permanent water sources. As discussed in Chapter 6, Eyre (1833) recorded an encounter with Aboriginal people who claimed to have travelled five days to a well in South Australia without stopping at a permanent water source. This gives some indication of the abilities of Aboriginal people to sustain themselves for long periods of time with little amounts of water.

Aim 6: Map the distribution of water sites mentioned in the ethnographic and historic literature.

The historical literature has identified a wide range of water resources that were utilised in historical times. Unfortunately, I don't believe any inferences to prehistoric times can be drawn from this information however this data could be most useful to future historical researchers.

Aim 7: Map the distribution of water technologies in Australia.

Due to the sample size and the writer being unable to physically observe and analyse objects, few trends could be observed. However, it was identified that coolamons were a widespread technology. Also, skin water bags were common in the central and eastern regions of Australia's deserts.

As for the second research question:

- *Are water technologies meaningful concepts in regards to human behavioural variability in desert environments during the Last Glacial Maximum?*

This question was addressed via Aim 8:

Aim 8: Identify and map technologies against late Pleistocene refugia to determine if barriers, corridors and refugia are meaningful concepts regarding human behavioural variability in desert environments.

Chapter 6 identified that technologies were highly prominent in regions considered 'barriers' during the LGM. Using analogy and inference, it can be suggested that if Aboriginal people made use of these technologies, barriers may have in fact been corridors Aboriginal people could travel through. To actually determine if technologies are significant, a comprehensive ethnoarchaeological study would need to occur. This could include dating objects, looking at what archaeological data from the objects origin is available, oral histories of the manufacturing of these objects etc. Further research and information is need to confidently draw these conclusions.

Opportunities for future research

Despite this wealth of information from disparate sources, there has been no attempt to compile an inventory of all permanent and semi-permanent waterbodies across the arid interior. Therefore, one of this thesis's biggest contribution is the opportunities for future research with this new data set. Suggestions of how this data may be used could include: the opportunity to inform new site discovery or it may be useful to historian researching the arid interior.

In regards to new site discovery, there is good published information on selected waterholes and river reaches, and detailed anecdotal/experiential knowledge in local communities, but there is no overall picture of where long-lasting water occurs across Australia's deserts. By compiling all written and oral records of waterbodies used by Aboriginal people historically into a single inventory, it becomes possible to gain a picture of the distribution of potential new sites of interest. This information, together with Australian Archaeological site datasets, could be useful for discovering places that might provide new information regarding the occupation and distribution of Aboriginal people during the LGM.Further physical investigation into the physical attributes of water carrying objects would also provide a wealth of new knowledge about how these items were constructed and what materials were used.

A more aggressive attempt could be made to get in touch with Australia's museums to find what other material is available. Unfortunately, I did not experience much willingness from museum staff around Australia to provide lists of objects, due to the time-consuming task of searching their vast databases. Future research into this topic could include additional data from other museums such as the Australian Institute for Aboriginal and Islander Studies could be included. This additional data may suggest further patterns in the research.

Physical analysis of the artefacts would also be interesting, as it may have the potential to provide information about the cultural differences of artefacts, and thus cultural differences in the way artefacts are manufactured in different regions.

Finally, a joint archaeological and paleoecological studying into mallee root could help inform subsistence models of the mallee regions.

Concluding remarks

Understanding how Aboriginal people managed for water in arid Australia is a major question in the study of Australia's prehistory. This thesis has contributed information in regards to that big question to try and understand how Aboriginal people may have existed within the arid zone. The survey of the published ethnographic and historic literature in conjunction with The survey of museum collections undertaken in this thesis has revealed some new information regarding Indigenous water technologies and the types of water sources used by Aboriginal people in Australia.

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Appendix 1

The following table is a list of all water sourced identified in the literature.

Type	Place name	Location	Evidence of occupation	Citation
Spring	Undulka Spring	-26.083333 131.866667°	Y	Goodhart, D. 1939 Desert water supply. Walkabout 5(10):33-38
Well	Erliwunya wunya rock-hole	771941.51, N: 7081759.48, UTM zon 52J	Y	Goodhart, D. 1939 Desert water supply. Walkabout 5(10):33-39
well	Piltardi rockhole	-25.116636 129.933327°		Goodhart, D. 1939 Desert water supply. Walkabout 5(10):33-40
Well	Arcoona well	-31.117603 136.977784°	Y	Goodhart, D. 1939 Desert water supply. Walkabout 5(10):33-41
Spring	Murra-Churra spring	-25.400000 132.216670°	Y	Goodhart, D. 1939 Desert water supply. Walkabout 5(10):33-43
well	Ewintinna soakage-well	-26.940860 133.555230	Y	Goodhart, D. 1939 Desert water supply. Walkabout 5(10):33-44
well	Moorilyanna soakage-well	-26.819300 132.978890	Y	Goodhart, D. 1939 Desert water supply. Walkabout 5(10):33-45
waterhole	Gosse's waterhole	-26.216667 132.900000°	Y	Goodhart, D. 1939 Desert water supply. Walkabout 5(10):33-46
Spring	Opparinna Spring	-26.0167, E 131.0667	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Spring	Titania Spring	-26.23333, 131.03333	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Spring	Indulkana spring	-27, 133.3	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Spring	Lake Wilson	-26.017700 129.605770	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
waterhole	Murdarinna waterhole	-27.3, E: 135	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
well	Pildappa Rockhole	-32.75 E: 135.2333	Y	Bayly, I. 1999 Review of how Indigenous people managed for water in desert regions of Australia. Journal of the Royal Society of Western Australia 82:17-25

well	Pulykara soak	-24.5167 124.0167	Y	Bayly, I. 1999 Review of how Indigenous people managed for water in desert regions of Australia. Journal of the Royal Society of Western Australia 82:17-26
well	Ngarinarri well	-24.153362 128.811393	Y	Bayly, I. 1999 Review of how Indigenous people managed for water in desert regions of Australia. Journal of the Royal Society of Western Australia 82:17-27
well	Symon's Hil rock-hole	-31.833, E: 123.0315	Y	Bayly, I. 1999 Review of how Indigenous people managed for water in desert regions of Australia. Journal of the Royal Society of Western Australia 82:17-28
Dam	Pylebung Dam	-30.87826, E: 132.62073	Y	Magarey A T 1899 Australian Aborigines' water-quest. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:67-82
Waterhole	Finke Riverine waterhole	-24.144319, 132.872433	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Waterhole	Dingo waterhole - Lander River	-20.629529 132.19754	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Waterhole	Curlew waterhole - Lander River	-20.552108 132.126081	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Waterhole	Boomerang waterhole - Lander River	-20.747785 132.411309	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Waterhole	Long waterhole - Lander River	-20.874275 132.512874	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Spring	Dalhousie Springs	-26.4555, 135.482481	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
well	Urinilla Soak	Ayres Ranges	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
well	Kurrekapinnya soak	Ayres Ranges	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.

Well	Kata Kata well	-24.4853, 123.9797	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Well	Toolinna Rockhole	-32.75, 124.983333	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Waterhole	Pidleeomina waterhole	-30.0616, 137.3944	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Spring	Opparinna Spring	-26.0167, 131.0667	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
Well	Teeta waterhole	-25.966667175, 139.850006103	Y	Basedow H 1906 Sources of central Australian water supply. Proceedings of the Adelaide University Scientific Society 1906:3-11.
well	Glen Thirsty	-24.476361, 131.032000	Y	Smith, M. A. and J. Ross 2008 Glen Thirsty: The History and Archaeology of a Desert Well, *Australian Archaeology.* 66: 45- 59
dam	Balloo River Overflow Dam	- 29.4151, 142.7505	Y	Rowlands, R. J. and Rowlands, J. M. 1969 An Aboriginal in northwestern New South Wales. Mankind 7(2):132- 136
waterhole	Cannilta waterhole	-29.434444, 142.666667	Y	Rowlands, R. J. and Rowlands, J. M. 1969 An Aboriginal in northwestern New South Wales. Mankind 7(2):132- 137
well	Murraburt Well		Y	Hercus, L. and Clarke, P. 1986 Nine Simpson Desert wells. Archaeology of Oceania 21(1):51 – 62
well	Beelpa Well	-26.5594, 137.4694	Y	Hercus, L. and Clarke, P. 1986 Nine Simpson Desert wells. Archaeology of Oceania 21(1):51 – 63
well	Perlanna Well	-25.71667 137.683331	Y	Hercus, L. and Clarke, P. 1986 Nine Simpson Desert wells. Archaeology of Oceania 21(1):51 – 69
well	Poolaburda well	-25.816786 137.733342	Y	Hercus, L. and Clarke, P. 1986 Nine Simpson Desert wells. Archaeology of Oceania 21(1):51 – 70
well	Poolaranna well	-26.51808 137.575071	Y	Hercus, L. and Clarke, P. 1986 Nine Simpson Desert wells. Archaeology of Oceania 21(1):51 – 71
well	Kilpatha Well	-25.72295, 137.89916	Y	Hercus, L. and Clarke, P. 1986 Nine Simpson Desert wells. Archaeology of Oceania 21(1):51 – 72

well	Bungabiddy rockhole	-24.654420, 128.752750	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
spring	Gordon's Spring	-24.876369476 128.764694213	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
rockhole	Umari rock-hole	-23.035882 128.406879	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
welll	Tjituruba well	-23.116667, 128.734722	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
waterhole	Willie Waterhole	-23.258841 129.761011	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
sla	Willbia Well	-25.100000 132.56666	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
well	Likil well	-22.716667, 127.250000	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
well	Wudungu well	-22.718056, 127.134722	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
well	Inindie Well	-23.183333, 129.166667	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
well	Well 4	- 23.684722, 129.184722	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
Other	Hidden Basin	- 21.5, 128.7333	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
well	Inarlkin rockhole	-24.009967 128.633509	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
well	Labbi Labbi rockhole	-21.59222222, 128.76888889	Y	Rowlands, R. J. and Rowlands, J. M. 1965 Some Aboriginal wells in the western desert of Australia. Mankind 6(5):231-237.
well	Liuwiringa	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-278

well	Maiyada-maiyada	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-279
well	Wirrkaldjarra	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-280
well	Luwano	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-281
well	Tjul'tjun'waridji	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-282
well	Tildi	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-283
well	Kuna	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-284
well	Yinindi	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-285
well	Tanda	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-286
well	Palta	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-287

well	Binbiyan	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-288
well	Yirabanda	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-289
well	Yappadarra	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-290
well	Yuldumllo	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-291
well	Mukuhanda	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-292
well	Kurruwildji	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-293
well	Kiribarro	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-294
well	Wangadjarro	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-295
well	Tjimarri	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-296

well	Kiribarro	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-297
well	Wirrarigalong	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-298
well	Miltji-miltji	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-299
well	Lola	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-300
well	Tamanga	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-301
well	Kunnamannera	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-302
well	Wirra-wirra	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-303
well	Kanandibaroo	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-304
well	Kampanbarro	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-305

well	Pinna	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-306
well	Kira	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-307
well	Dandju	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-308
well	Wakilbi	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-309
well	Pintjina	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-310
well	Yalbirrimanno	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-311
well	Kurandal	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-312
well	Kurandal	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-313
well	Tjipallalla	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-314

well	Dangalli	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-315
well	Timbabiddi	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-316
well	Kunagarri	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-317
well	Mari-Mari	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-318
well	Wallabarrarba	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-319
well	Yanna	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-320
well	Wornba	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-321
well	Kumananno	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-322
well	Daneriyono	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-323

well	Papulba	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-324
well	Kimai Well	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-325
rockhole	Nalgulba Rock-hole	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-326
rockhole	Jangamba Rock-hole	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-327
soak	Yaurui soak	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-328
soak	Milijipi soak	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-329
rockhole	Kundjurra rock-hole	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-330
spring	Vaughan spring	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-331
soak	Algunda (Whitington) Soak	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-332

claypan	Wirrarigulong claypan	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-333
rockhole	Bungabiddy rockhole	"valley below Red Cliff pound" (this has been mapped as a region)	Y	Thomson, D.F. 1962 The Bindibu expidtion. Exploration among the Desert and Aborigines of Western Australia: III The Bindibu. *The Geoggraphical Journal* 128(3): 262-334
well	Ernabella well	-26.279722S 32.134167	Y	Cleland J B 1966. The ecology of the Aboriginal in south and central Australia. In: Aboriginal Man in South and Central Australia (ed B C Cotton). Government Printer, Adelaide, 111-158.
well	Muranji Rock-hole (Puritjarra)	-23.7978 130.8417	Y	Smith, M. A. 2006 Characterizing late Pleistocene and Holocene stone artefact assemblages from Puritjarra Rock Shelter: a long sequence from the Australian Desert. Australian Museum 58: 371 - 410
waterhole	Bullah Bullah Waterhole	-27.628117 141.07321	Y	Burke and Wills 1860-1861
waterhole	Mulkonbar waterhole	-27.728494 140.760826	Y	Burke and Wills 1860-1861
waterhole	Minkie Waterhole	-27.77935 140.639900	Y	Burke and Wills 1860-1861
waterhole	Depot Glen Waterhole	-29.642111 141.772385	Y	Burke and Wills 1860-1861
lake	Coongie lakes	-27.263339 140.156533	Y	Burke and Wills 1860-1861
waterhole	Diamantina waterholes	-24.845637 139.691414	Y	Burke and Wills 1860-1861
lake	Lake Hodgkinson	-26.99665 140.07730	Y	McKinlay 1861-2
lake	Lake Lady Blanche,	-27.025265 140.353345	Y	McKinlay 1861-2
lake	Lake Sir Richard,	-27.029169 140.393713	Y	McKinlay 1861-2
lake	Lake Massacre	-27.335860 140.104370	Y	McKinlay 1861-2
lake	Dickerrie Waterhole	-25.461618 138.687074	Y	Hodgkinson 1876
well	Yukurru Soak	-22.043, 132.491	Y	Watts, L. P. 2009 Mer Rrkwer-akert : Brooks soak country / produced by Charles Darwin University, Darwin: Charles Darwin University and Anmatyerr Knowledge centre
well	Jupiter Well	-22.877222, 126.5987	Y	Dunlop, I. 1967 Desert People, (film)
	Patantja claypan			Dunlop, I. 1967 Desert People, (film)

well	Mount Musgrave rock-hole	-25.3689 134.2535	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
other	Basin	-23.33333 130.916667	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
Glen	Glen Thirsty	as above	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	Mount Musgrave rock-hole	-25.3689 134.2536	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
Glen	Glen Edith	-23.833302 131.383301	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
Creek	Ellery Creek	-24.016974 132.870017	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
camp	Camp	-23.66667 132.5166667	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	Mount udor rockhole	-23.463979 130.833041	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
Glen	Glen Ferninand	-26.350756 132.070609	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
Glen	Faries Glen	-26.204030 131.061010	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	Champ de mars rockhole	-26.157578 129.03623	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
spring	Harriet Springs	-26.166667 128.933333	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	Hogarth Well	-26.066668 128.433344	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
	Fort Mueller	-26.199999 127.983333	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne

well	Lightning rocks - native well	-26.066667 127.75000	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
waterhole	Sladen Water	-25.01756 128.27975	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
	camp	-24.96667 127.916667	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
lake	Gorge of Tarn	-24.800220 127.818985	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
other	circus water	-24.7833 127.8000	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
other	Alice Falls	-24.982911 128.41629	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
spring	Edith hull springs	-24.933842 128.11661	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
other	Gill Pinnacle	-24.88390 128.782501	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
spring	Gordon spring	-24.917879 128.933762	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	native well and stevensons peak	-25.519124 130.233766	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
soak	Youldeh or Ooldea soak	-30.412279 131.828538	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
rockhole	Wynbring rockhole	-30.549900 133.538230	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
claypan	Coondambo claypan	-30.96282 135.908394	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
spring	Finniss Springs	-29.748560 137.50399	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne

rockhole	Taloreh	-30.533333 133.500000	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
rockhole	Edoldeh	-30.483333 133.366667	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
rockhole	Cudyeh	-30.320105 133.24775	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
rockhole	Mobing	-30.156352 133.08807	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
rockhole	Bring,	-30.766665 133.666665	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
rockhole	Poothraba	-30.378433 132.118983	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
rockhole	Paring rockhole	-30.350002 131.616697	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
dam	Native dam	-28.999684 131.36862	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
claypan	claypan	-28.967474 131.503121	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	Ooladabinna native well	-29.126135 131.320424	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
rockhole	Chimpering rockhole	-30.647350 132.34460	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
dam	Boundary Dam	-29.288626 128.954676	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
	Camp	-29.25000 128.55278	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
	Camp	-30.117500 124.68361111	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne

spring	Queen Victoria Spring	-30.39002 123.527982	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
	Camp	-30.168055556 122.1183333	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	Ularring native well	-29.199666 120.23579	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	Pingeon rocks well	-29.96777778 119.2508333	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	Cheangwa hill	-27.483333 116.38333	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
waterhole	Cooerminga	-27.300357 116.479562	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
waterhole	Natta waterhole	-26.968311 116.633968	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
waterhole	unamed waterhole	-26.7666667 116.95	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
waterhole	Mount Gould waterholes	-25.77694444 117.4166667	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	Natie Well	-25.05027 117.98326	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
glen	Glen Ross	-24.29154 118.153110	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
other	Grand junction depot	-24.1 119.01	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
spring	nichols spring	-24.250000 119.250000	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
spring	spring	-24.33 119.4	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne

well	native well	-24.2333 120	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	native well	-24.2 120.9	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	native well	-23.9338889 121.4	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	native well	-24.1 122.08	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
rockhole	Rockholes	-24.45 125.1	N	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
rockhole	Frasers well	-25.9 130.8	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	native well	-27.053592 132.507758	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	native well	-27.028431 132.423461	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	native well	-27.57 132.46	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
well	native well	-27.62022 132.899803	Y	Giles, E. 1875 Geographic Travels in Central Australia from 1872 to 1874, McCarren Bird and Co., Melbourne
waterhole	Depot Pool	-30.715780 138.255950	N	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
other	Termintation hill gorge	-30.231241 138.046203	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
other	The Mundy	-30.099016 138.32492	N	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.

waterhole	Baxter range waterhole	-32.646411 137.10079	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
rockhole	Refuge rocks rockhole	-33.187280 136.842130	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
rockhole	Mount hill rockhole	-34.065390 136.19988	N	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
lake	Lake Newland	-33.427684 134.872729	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
well	native well	-32.54337 133.85116	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
well	native well	-32.257198 133.77045	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
well	fowlers bay native well	-31.869357 132.400651	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
well	Point Malcom native well	-33.803016 123.716352	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
well	Cape Pasley Native well	-33.883253 123.483357	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.

well	Eucla Native well	-31.684137 128.874088	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
spring	Barlee Spring	-26.022013 127.296003	Y	Eyre E J 1845 Journals of Expeditions of Discovery into Central Australia and Overland from Adelaide to King George's Sound, in the years 1840-1. Vols. I & II. Boone, London.
well	Naaning well	-31.183356 117.183173	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	Inkanyinning rockhole	-30.75678 117.85906	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
well	Danjinning well	-30.587350845 118.033996582	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
waterhole	Gnaragnunging waterhole	-30.2207 117.9592	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
waterhole	Woodgine waterhole	-29.471800 117.407529	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	Curroning rockhole	-28.716668 118.533331	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	Coorbedar rockhole	-29.41194444 118.1	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>

rockhole	Mingan rockhole	-29.5083333 118.5	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	Earoo rockole	-29.547239 118.360391	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	Croobenyer rockhole	-29.25000000 118.75	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
waterhole	unamed waterhole	-28.883333 119.83333	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
waterhole	unamed bivouc	-28.892773 120.149829	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Two spring bivouc	-28.8625 120.5	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
waterhole	Mount Ida waterhole	-29.22861 120.40250	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	unamed rockhole	9.14638889 118.983333	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Pullagooroo spring	-29.18691 117.917434	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>

spring	Mount singleton spring	-29.466184 117.299643	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Damparwar Springs	-29.2755556 116.783333	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	Murrunggnulgo rockhole	-29.44856 116.732092	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
well	Wandanno well	-29.997106 116.725615	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Jerdacuttup spring	-33.71 120.47	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	Parriup rockhole	-33.869737 120.624879	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
soak	Water at Isralite bay	-33.802643 123.716149	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	unamed rockhole	-31.75 128.03333	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
waterhole	Wilson bluff waterhole	-31.652741 129.076768	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>

well	Wearing well	-31.333333 131.666667	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
waterhole	Beetinggnow waterhole	-27.81083333 116.2697222	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
well	Poondarrie well	-27.81083333 116.2697222	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
waterhole	unamed waterhole	-25.79805556 118.53	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
other	Watershed of the murchison	-26.2866667 119.9	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
other	sweeney creek brook	-25.72805556 120.35	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Windich spring	-25.55000 120.833334	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Pierre Spring	-25.250009 121.09999	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
claypan	claypan	-25.1755556 121.15	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>

spring	Weld Spring	-25.016667 121.583333	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
well	native spring	-25.246921 121.800242	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
	camp	-25.379817 121.949964	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
lake	lake augusta	-25.756274 122.492056	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
	camp	-25.626329 122.366611	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
waterhole	Rock water hole	-25.89027778 124.52	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Alexander Spring	-26.087099 124.764221	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	Rockhole	-25.75 126.01	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
other	Fort Mueller	-26.191944 127.990278	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>

soak	Soak at Gosse's Depot	-26.3911111 128.53333	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Elder Spring	-26.241255 129.122649	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Wilkie Spring	-26.266667 129.383333	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Crowther Spring	-26.124444 129.65000	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
rockhole	Rock water holes	-26.13333 130.33333	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	spring	-26.223611 131.05	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Gosse's Spring	-26.13333 131.2166667	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
spring	Gosse Depot	-26.16388889 131.53333	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
other	Harry Reservoir	-26.238531 132.047720	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>

soak	Fig Tree Gully Soak	-26.203245 132.264664	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
well	Native well	-26.2219444 133.009580	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
	Camp	-26.7386111 133.78333	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
other	Appatinna Pool	-27.125234 134.492256	Y	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
claypan	Claypans	-27.15 135.055556	N	Forrest, J. 1875 Explorations in Australia. Project Gutenberg Online. Retrieved 10 October 2017 from < http://gutenberg.net.au/ebooks/e00051.html>
waterhole	Andamoka waterhole	-30.666110 137.297330	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	William Spring	-28.989913 136.389130	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Milne Spring	-28.263810 136.079970	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Freeling Spring	-28.071468 135.905060	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>

spring	Kekwick Spring	-28.057142 135.705064	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
waterhole	The Frew waterhole	-27.599538 136.40537	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Strangaway spring	-29.160498 136.553541	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
other	Newcastle waters	-17.367002 133.400019	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
other	Brinkly Bluff	-23.716667 133.40000	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
other	Howell Pond	-17.104099273 133.283294677	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
waterhole	Frew Waterhole	-16.927243 133.364525	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
waterhole	King waterhole	-15.786013 133.333275	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
other	Annas Reservoir	-22.585765 133.141185	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>

dam	Bloodwood dam	-19.1667 134.2167	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
other	Kekwick Ponds	-19.163876 134.200701	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Coward Springs	-29.400743 136.81412	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
other	Attack Creek	-19.024916 134.141284	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Hergott Spring	-29.61843 138.062300	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Finniss Springs	-29.749392 137.504142	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Hamilton Spring	-29.490563 136.899296	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Bereford Spring	-29.274812 136.672052	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Oodnadatta Spring	-27.550389 135.420696	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>

spring	Spring of Hope	-28.537990 136.190632	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Louden Springs	-28.589221 136.409046	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
spring	Polly Springs	-25.233333 134.216667	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
waterhole	Hugh River waterhole	-25.008081 134.193365	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
well	Native well	-21.509451 132.42306	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
lagoon	Lagoon	-21.106680 134.031993	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
other	Bonney Creek	-20.433865 134.233278	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
waterhole	Tennant Creek Waterholes	-19.568985 134.219825	N	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
creek	Bishop Creek	-19.394541 134.132583	Y	Stuart, J .M. 1865 *Explorations in Australia.* Project Gutenberg Online. Retrieved 1 October 2017 from < http://www.gutenberg.org/files/8911/8911-h/8911-h.htm>
lake	Cawndilla Lake	-32.484497 142.233301	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.

other	Laidly Ponds	-32.33226 142.334185	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
well	Murnco Murnco well	-32.050807 141.869702	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
well	Curnapaga well	-32.065232 141.883035	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Semi-permanenet waterhole	-30.65 141.48	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
glen	Depot Glen	-29.643073 141.772383	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	unamed waterhole	-29.71666 141.07500	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	unamed waterhole	-29.23333 141.6999	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
other	pond	-27.451427 139.868462	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
well	Native well	-26.322619 138.727101	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Long Waterhole	-31.985184 141.764490	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
glen	Glen of Gorge	-31.650431 141.394303	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
well	Morphette Creek Well	-31.129794 141.264286	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Floods Creek waterhole	-31.024262 141.503007	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Evelyn Creek Waterhole	-30.153256 141.991524	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.

waterhole	Frome waterhole	-29.084014 141.660693	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Fort Grey waterhole	-29.09751 141.17528	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
soak	Soak	-28.880150 140.899999	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Stretetzki creek waterhole	-28.289026 140.463966	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Waterhole	-28.093408 140.125898	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
well	Native Well	-26.672524 138.905135	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
other	Pool of water	-25.819897 138.509662	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
well	Native well	-26.852212 141.007814	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Permanent water at Roans Plains	-27.511032 141.394730	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
other	Pernatta water	-31.486858 137.473250	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
well	Yolticourie well	-31.290506 137.384164	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Andamoka Waterhole	-30.460861 137.165956	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Waterhole near Tarcoola	-30.689741 134.562933	N	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.
waterhole	Eyre Creek waterhole	-25.178932 138.528636	Y	Sturt, C 1969, Narrative of an Expedition into Central Australia. Volumes 1 and 2, Greenwood Press: New York.

spring	Bond Springs	-23.53149 133.917201	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
spring	Painta Springs	-23.55313 133.696431	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
well	Glen Helen	-23.410468 132.238962	Y	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
other	Native camp near water	-23.599910 132.53259	Y	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
rockhole	Mareena Bluff Rockhole	-23.65048 131.90892	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
glen	Glen Farewell	-23.62 131.73	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
glen	Glen Edith	-23.837676 131.398212	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
other	Gills Creek	-23.8236111 130.55	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
well	Native well	-23.876667 129.53	Y	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
other	Laura Vale	-23.52 129.37	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
claypan	Claypans	-23.423210 128.917661	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
rockhole	Native rockhole	-23.886111 129.05	Y	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
waterhole	Sandstone rock waterhole	-24.55067 129.857624	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
claypan	Claypans	-24.588333 130.516667	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.

other	Mount Olga water	-25.291207 130.733651	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
well	Mount Connor native well	-25.450526 131.899861	Y	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
spring	Goyder Spring	-25.468279 132.834059	Y	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
well	Natve well	-25.35 133.1	Y	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
rockhole	Rockhole	-25.830936 133.308336	N	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
well	Native well	-25.969421 133.580937	Y	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
well	Immbunyarra well	-25.983168 133.980000	Y	Tietkens, WH 1889, The Nullabour Plains and the West Boundary of the Province,Geographical Society of Australasia, South Australian Branch.
well	Native Well	-23.240888 133.61048	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
waterhole	Lander waterhole	-22.151164 132.749354	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
waterhole	Native well	-22.043565 132.501876	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
waterhole	Cocatoo creek waterhole	-22.086731 132.066551	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Native well	-22.755625 131.989345	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>

claypan	Claypan	-22.808741 131.810827	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
waterhole	Waterhole	-23.271892 131.42277	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
waterhole	rock waterhole	-23.659160 130.646456	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
glen	Glen Edith	-23.833302 131.38330	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Native well	-24.133779 131.151235	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
waterhole	Kings creek waterholes	-24.421561 131.815551	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
spring	Maggies Spring	-25.383455 131.083203	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Native Well	-25.49 131	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
spring	Felix Spring	-25.307428 130.729328	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>

waterhole	Stevenson peak waterhole	-25.516420 130.234965	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
other	Nilens Gully	-26.100327 129.533452	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
other	Moses Creek	-26.449475 128.450900	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Native well	-26.200403 127.16655	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
waterhole	Waterhole	-26.115566 127.910748	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
rockhole	Piltadi Rockhole	-26.14701 130.301486	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Lungley Gully Native Well	-26.222899 130.836277	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
spring	Spring	-26.234318 131.033431	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
other	Harry's Reservoir	-26.231381 132.048365	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>

claypan	Claypan	-26.199709 131.970123	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Native well	-26.084180 132.777679	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Native well	-26.070090 132.600062	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
waterhole	Gosse's waterhole	-26.216869 132.899722	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
claypan	Claypan	-26.341585 133.233760	N	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Native well	-26.592926 133.515280	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Native well	-26.740404 133.577472	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Native well	-26.943210 133.876490	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Appatinna well	-27.121492 134.492656	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>

well	Olarina well	-27.134043 134.668583	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
waterhole	Murdarinna waterhole	-27.287376 134.980361	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
waterhole	Carpamoongana waterhole	-26.75472 134.755352	Y	Gosse, W. H. 1874 W.C. Gosse's explorations, 1873. Project Gutenberg Online. Retrieved 15 October 2017 from <http://gutenberg.net.au/ebooks13/1306451h.html>
well	Native well	-27.035828 132.216082	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
well	Native well	-27.075688 132.098841	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
well	Native well	-27.150722 131.95519	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-27.183296 131.737307	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-26.989261 131.21761	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-27.196229 131.599682	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
well	Native Well	-26.967246 131.662398	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
well	Native Well	-27.518398 131.583162	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
well	Native Well	-27.299567 129.869100	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-27.149827 129.593501	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.

waterhole	Waterhole	-27.064152 1293556	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-26.853859 128.960907	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-26.320298 128.429671	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-26.320023 128.180547	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-28.108643 129.530358	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-28.337884 129.520451	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-28.008961 129.170087	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-26.341631 127.868739	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Lightning Rock rockhole	-26.078150 127.752221	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Fort mueller Rockhole	-26.209235 127.988915	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
spring	Barlee Spring	-26.022013 127.296003	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-26.044032 127.514495	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
claypan	Native camp with claypans	-26.650073 127.077316	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-27.022365 126.958155	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.

rockhole	Rockhole used by Natives	-27.188016 126.859189	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-27.651533 126.559556	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
spring	Queen Victoria Spring	-30.429866 123.549984	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
rockhole	Rockhole	-30.697301 123.210087	N	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
other	Symons hill water	-31.822817 123.031944	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
well	Hunt Well	-31.073401 121.619642°	Y	Lindsay, D. 1888 *Explorations in the northern territory of South Australia*. H.F. Leader, Government Printer, Adelaide.
dam	Pylebung Native Dam	-30.880886 132.619891	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
well	Waldana well	-28.818009 130.466273	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
well	Ooldabinna well	-29.126135 131.320424	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
well	Punthanna well	-29.284278 131.633087	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
well	Tallaringa Well	-29.050000 133.333333	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.

well	Koonunda well	-29.033300 132.366700	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
dam	Paraminna Dam	-29.389722 132.139722	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
spring	Opparinna Spring	-26.016677 131.066663	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
rockhole	Mindilin Rockhole	-25.809705 131.070339	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
rockhole	Uluru Rockhole	-25.354291 131.035937	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
well	Ardoonderrina Well	-24.851515 130.748900	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
well	Toweerunna Well	-24.178686 130.477803	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
rockhole	Poorkinna Rockhole	-24.110261 130.852120	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
other	Thomas Reservoir	-23.834922 130.764884	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.

well	Native Well	-23.136185 130.379270	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
well	Native Well	-22.568733 130.601873	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
rockhole	Rockhole	-22.796725 130.516133	N	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
spring	Vaughn Spring	-22.308666 130.849138	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
spring	Eva Spring	-22.368451 130.816661	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
claypan	Claypan	-22.359715 130.877409	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
soak	Whitington Soak	-22.018456 130.866840	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
soak	Newland Cave Soak	-21.634940 130.832990	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
well	Native well	-20.615910 130.367090	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.

rockhole	Tanami Rockholes	-19.966667 129.716667	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
spring	Palm Spring	-19.186482 128.156141	Y	Maurice, A. T. 1902. A trip to the western interior of South Australia. *Proceedings of the Royal Geographic Society of Australia South Australian Branch*. 5: 40- 42.
spring	Neil McNeil Spring	-26.049461 128.949613	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
other	Hogarth Well	-26.070652 128.434052	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
spring	Mascotte Spring	-26.080342 127.969619	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
spring	Barlee Spring	-26.017129 127.300080	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.

soak	Dunn Soak	-26.319016 126.945112	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
soak	Lake Flemming Soak	-26.579375 125.620583	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
soak	Wanda Soak	-27.152577 125.516215	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
rockhole	Rockhole	-27.817121 124.986247	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
rockhole	Rockhole	-27.998775 124.682349	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.

soak	Pollard Pools	-27.736477 124.246336	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
soak	Claypan	-27.948234 124.299311	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
soak	Soak	-27.981937 123.747201	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
soak	Marmion's Soak	-28.267844 123.318247	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
soak	Soak	-28.506320 122.357923	N	Carr-Boyd, W. H. 1895 Carr Boyd's route [from Western Australia to Warina, ie. Warrina, S. Aust., showing track from Mount Margaret to the Northern Territory border] [cartographic material]. National Library of Australia. Retrieved 30 October 2017 from <https://trove.nla.gov.au/work/10161239?q&versionId=11812777?>.
spring	Oodnadatta Spring	-27.545312 135.42151	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg

waterhole	Storm Creek Waterhole	-27.279775 135.550024	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Metrillican waterhole	-26.947599 135.520534	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Cundeedna waterhole	-26.899698 135.494015	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
well	Oolarbarrinna Well	-26.694714 135.337781	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
spring	Warrarinna Spring	-26.472375 135.497284	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Opossum Waterhole	-26.393570 135.30159	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
spring	Dalhousie Springs	-26.460342 135.485558	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Indiakata Waterhole	-26.137646 135.172422	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Charlotte Waters	-25.902942 134.884943	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg

well	Coolalie Welll	-25.675180 133.865733	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
well	Oodratoomma well	-24.965553 133.839110	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Waterhole	-24.913612 133.676951	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Waterhole	-24.768072 133.414076	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Chandlers Range Waterhole	-24.530231 133.289465	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
other	Parke's running water	-24.300150 132.909622	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
spring	Illmurta Spring	-24.303709 132.687179	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
rockhole	Illara Rockhole	-24.327641 132.363933	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Waterhole	-24.417053 132.268668	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg

waterhole	Waterhole	-24.435894 132.089663	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
other	Carmichals Craig	-24.237826 131.538440	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Vale of Tempe Waterhole	-24.052104 131.390353	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
glen	Glen Edith	-23.834331 131.382414	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Mereenie Bluff Waterhole	-23.660535 131.932111	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Oondoomoolla Waterhole	-23.409948 132.043641	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
soak	Ana-loorgoon Soak	-23.369797 132.023138	Y	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
rockhole	Rockhole	-23.672918 133.045983	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
glen	Glen Helen	-23.684609 132.673216	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg

other	Finke Gorge	-23.750489 132.650142	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
other	Ellery Creek	-24.02034 132.864963	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
spring	Baggot Spring	-23.966777 132.599545	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Paisly Bluff Waterhole	-23.719609 133.349351	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
spring	Painta Springs	-23.640510 133.540955	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
waterhole	Ooraminna Waterhole	-23.989405 133.982003	N	Winnecke, C. 1897 *Journal of the Horn scientific exploring expedition 1894 together with maps and plans and report of the physical geography of Central Australia.* Corkwood Press: Bundeburg
well	Native well	-25.817674 137.728745	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
well	Native well	-25.719604 137.682185	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
well	Native well	-25.666235 137.964418	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
soak	Allua Soak	-24.665714 135.744410	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
claypan	claypan	-24.196625 135.994418	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
claypan	claypan	-24.493574 135.777809	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
claypan	claypan	-24.621536 136.985389	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
claypan	claypan	-24.250305 137.099967	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
waterhole	Hay River Waterhole	-24.576498 137.698351	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
waterhole	Birdsville waterhole	-25.907046 139.350571	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
waterhole	Annandae waterhole	-25.378929 138.639289	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.

waterhole	Andrewilla Waterhole	-26.500512 139.332528	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
Lagoon	Goyder Lagoon	-26.735575 139.217382	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
well	Murraburt Native Well	-26.547634 136.93678	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
well	Beelpa Native Well	-26.560176 137.469239	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
well	Peelicanna Native Well	-26.297269 137.539394	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
well	Calialumbanna Native Well	-26.227825 137.965992	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
well	Poolarranna Native Well	-26.516059 137.57459	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
claypan	Claypan	-26.150620 136.399163	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
claypan	Claypan	-23.802584 136.348873	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
well	Native well	-23.803578 137.200490	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
other	Koppermanna Bore	-28.635321 138.700643	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
spring	Hergott Spring	-29.61843 138.062300	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
spring	Finniss Springs	-29.749392 137.504142	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
spring	Hamilton Spring	-29.490563 136.899296	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
spring	Bereford Spring	-29.274812 136.672052	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
spring	Oodnadatta Spring	-27.550389 135.420696	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
spring	Spring of Hope	-28.537990 136.190632	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
spring	Louden Springs	-28.589221 136.409046	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
spring	Polly Springs	-25.233333 134.216667	N	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
waterhole	Hugh River waterhole	-25.008081 134.193365	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
well	Native well	-21.509451 132.42306	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
lagoon	Lagoon	-21.106680 134.031993	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
other	Bonney Creek	-20.433865 134.233278	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
waterhole	Tennant Creek Waterholes	-19.568985 134.219825	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
creek	Bishop Creek	-19.394541 134.132583	Y	Madigan, C. *Crossing the Dead Heart.* Melbourne: Georgian House.
spring	Windich Springs	-25.550651 120.833291	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>

well	Well 1	-26.560824 120.170317	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 2	-26.290778 120.200755	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 2a	-26.011808 120.323184	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 3	-25.783662 120.419297	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 3a	-25.658773 120.477866	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 4	-25.608135 120.543839	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 4a	-25.618649 120.818830	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>

well	Well 4b	-25.498537 120.889209	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 5	-25.376348 120.999966°	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Pierre Springs	-25.240691 121.099052	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 7	-25.158810 121.290356	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 8	-25.106691 121.386558	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Weld Spring	-25.019172 121.586338	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Lucky Well	-24.853689 121.648460	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>

well	Goodwin Soak	-24.749129 121.738700	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 12	-24.596023 121.871476	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 13	-24.423489 121.992808	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Dindjimal well	-24.290671 122.051024	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Mandjangga well	-24.142584 122.204116	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Lawulawa well	-23.909218 122.385282	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Durba Spring	-23.756234 122.512775	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>

well	Killagurra Spring	-23.735060 122.485290	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Wanykiyu Well	-23.564191 122.529224	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Kunangurtiti well	-23.431842 122.490504	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Karanyulu well	-23.255336 122.585216	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Tjilkabulka well	-23.174906 122.808413	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Matirlirri well	-23.123939 123.042158	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Kalpya well	-23.084894 123.221254	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>

well	Kartarru well	-23.111194 123.345091	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Warntili well	-22.983345 123.397742	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Tiwa well	-22.915891 123.504087	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Rarrki well	-22.795841 123.645978	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Waranu well	-22.650179 123.752348	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Mamurnarra well	-22.552444 123.877737	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Tjunda Tjuntu well	-22.510470 124.139992	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>

well	Mujingerra pool	-22.522793 124.162406	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Nurgurga Well	-22.513061 124.308018	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Warlawarla well	-22.526996 124.403003	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Nyarruri well	-22.406076 124.584394	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Kunawariji well	-22.340122 124.776413	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Nyipily well	-22.258959 124.903848	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Kinyu well	-22.214345 125.049369	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>

well	Bungabinni Native well	-22.158224 125.195294	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Kirlkirl well	-22.143362 125.284706	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Lipuru well	-22.159723 125.454045	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Wajapurni well	-21.954708 125.545064	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Kokabana well	-21.773259 125.650490	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Nadawulu well	-21.674554 125.785923	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Teiru well	-21.556660 125.845066	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>

well	Guli Tank	-21.316886 125.909764	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Kadatjilkar well	-21.215128 125.971271	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Well 44	-21.018643 126.156538	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Tjinditjinda well	-20.796377 126.172417	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Kotjowari well	-20.649435 126.285013	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Kardalapuru well	-20.43124 126.291389	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Koningara well	-20.247272 126.523690	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>

well	Lambu well	-20.166103 126.680917	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Tjan well	-20.209251 126.962591	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Wirijara well	-20.150373 127.143730	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Chungala well	-19.784530 127.239128	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Bloodwood well	-19.692427 127.480527	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
well	Halls Creek	-18.224670 127.669631	Unknown	Australian Georgraphic Pty. Ltd. Cartographic Division. 1989 the Canning Stock Route [cartographic material]. National Library of Australia. Retrieved 11 November 2017 from < https://trove.nla.gov.au/work/6108492?selectedversion=NBD6921078>
Lake	Menindee lakes	-32.343192 142.402762	Y	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.

waterhole	Totoyna waterhole	-31.810875 142.206143	N	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
well	Kokriega well	-31.426624 142.395270	Y	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
claypan	Botoja Claypans	-31.216601 142.428649	Y	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
creek	Naudtherungee Creek	-30.617307 142.322709	N	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
other	Torowotto Swamp	-30.033196 142.457953	N	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
waterhole	Cannilta Waterhole	-29.430214 142.668054	N	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
other	Bulloo River	-28.893140 142.195027	N	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.

creek	Cooper Creek	-27.437228 142.080075	Y	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
creek	Creek water	-22.572056 140.489707	N	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
waterhole	Unamed waterhole	-21.370232 140.510087	N	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
waterhole	Unamed waterhole	-20.746104 140.515549	N	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
waterhole	Unamed waterhole	-20.643518 140.485894	N	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
river	Diamantina River	-25.970285 139.305447	N	McKinlay, J. 1862, McKinlay's journal of exploration in the interior of Australia (Burke Relief Expedition) with three maps, F.F. Bailliere. Project Gutenberg Online. Retrieved 1 November 2017 from <http://gutenberg.net.au/explorers-journals.html>.
Spring	Unamed Spring	-23.402238 132.598368	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	Native Well	-23.424171 132.566713	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle

well	Native Well	-23.358681 132.308574	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
Spring	Spring	-23.407326 132.240554	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
Spring	Spring	-23.414702 132.017840	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
claypan	Claypan	-23.271892 131.422774	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
glen	Glen Elder and Glend Hughes	-22.856469 131.774151	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
spring	Annie Springs	-22.266503 131.181978	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
spring	Eva Spring	-22.368868 130.816499	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	Native Well	-22.565374 130.586295	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	Native Well	-22.218008 130.163424	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	Waterloo Well	-21.550502 130.316067	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	White well	-21.729268 130.031056	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
rockhole	Rockhole	-21.477069 129.389445	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
spring	Mary Spring	-21.348654 129.183701	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
waterhole	Waterhole	-21.229531 128.984038	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle

Spring	Florence Spring	-20.847665 128.590486	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
Spring	Ada Spring	-20.752670 128.510969	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
Spring	Emily Spring	-20.550794 128.216413	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	Native well	-20.589669 127.851241	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	Native well	-20.602443 127.699650	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
lagoon	Lady Edith lagoon	-20.585903 127.238655	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
lake	Lake Isabella	-20.561058 127.200314	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	Native well	-20.199820 124.649945	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	Nativel well	-20.149785 124.299806	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
Spring	Joanna Spring	-20.086581 124.197301	Y	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	Native well	-20.332474 123.167093	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
well	Native Well	-20.682982 122.500227	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
river	Oakover River	-20.745902 120.595231	N	Warburton, P. E. 1875 *Journey across the Western interior of Australia*, London: Sampsonlow, Marston, Low and Searle
waterhole	Unamed waterhole	-26.679443 120.504459	N	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 117

other	Ballimaore waterfall	- 26.482089 121.119781	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 118
glen	Lorna Glen	-26.215828 121.561384	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 119
waterhole	Unamed waterhole	-26.067954 121.899079	N	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 120
waterhole	Clay waterhole	-26.082042 122.045265	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 121
soak	Soak	-25.965972 122.184693	N	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 122
waterhole	Waterhole	-25.651498 123.000486	N	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 123
waterhole	Hutton Range waterhole	-24.764985 123.803010	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 124
well	Native Well	-24.516389 124.000000	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 125
soak	Soak	-24.350009 124.080101	N	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 126

well	Midway Well	-23.386123 124.096919	N	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 127
well	Surprise Well	-23.466165 123.802650	N	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 128
waterhole	Lady Victoria Group waterhole	-23.769649 122.999059	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 129
waterhole	Helen Hill waterhole	-22.792519 123.645107	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 130
well	Dry native well	-21.613692 123.942417	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 131
well	Sahara Well	-21.480741 123.943979	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 132
well	Adverse Well	-20.793503 123.941036	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 133
well	Discovery well	-20.242874 123.898878	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 134
Spring	Joanna Spring	-20.088482 124.195346	N	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 135

well	Djillill Well	-19.896420 124.305637	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 136
well	Yellingaddjida well	-19.843063 124.261502	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 137
well	Tchundurtu well	-19.884638 124.202434	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 138
well	Rescue Well	-19.582249 123.74950	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 139
rockhole	Yerniakka Rockhole	-19.602723 124.253415	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 140
well	Disaster water	-19.542028 124.207589	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 141
other	Welcome water	-19.517326 124.301113	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 142
rockhole	Tallingurr rockhole	-19.086291 124.450755	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 143
claypan	Claypan	-18.912840 124.473593	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 144

Spring	Nicholson Spring	-18.734908 124.551090	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 145
Spring	Pillmer Spring	-18.737955 124.493102	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 146
waterhole	Kallaida waterhole	-18.522054 124.636060	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 147
well	Karraga Well	-18.787097 124.452086	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 148
Spring	Mt Arthur spring	-18.506664 124.203217	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 149
well	Tanndulla Well	-19.113272 124.302447	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 150
rockhole	Dillawuddi Rockhole	-19.231447 124.202485	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 151
soak	Soak	-19.096194 123.657421	N	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 152
other	Lindsay Gordan Lagoon	-26.250002 121.48442	Y	Wells, L. A. 1899 Abstract of journal of explorations in Western Australia, 1896-7. *Proceedings of the Royal Geographical Society of Australasia (South Australian Branch)* 3:149-171, p. 153
well	Queen Victoria Spring (native well)	-30.416667 123.550000	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.

roakhole	Native Rockhole	-28.212327 123.471644	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
soak	Mount Shenton Soak	-28.036210 123.518488	N	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
rockhole	Mount Grant Rockhole	-28.120443 123.487808	N	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Doyle's Well	-28.597600 120.881051	N	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Wilson Cliff Rockhole	-22.095169 127.065697	N	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Turner Hills Rockhole	-23.61376 128.60963	N	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
waterhole	unamed waterhole	-28.106162 122.059041	N	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
rockhole	rockhole	-27.050012 124.10019	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
rockhole	rockhole	-26.930008 124.202241°	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
rockhole	rockhole	-26.811401 124.332194	N	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Cutmore well	-27.661532 122.926398	N	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
Spring	Empress Spring	-26.783333 124.416667	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
other	Woodhouse Lagoon	-26.172107 124.800460	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
Spring	Alexander Spring	-26.030765 124.779381	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native well	-25.250127 124.802565	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Warri Well	-24.876144°125.104870	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
claypan	claypan	-24.399971 125.347290	N	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Patience Well	-23.511954 125.4335	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
rockhole	Rockhole	-23.632351 125.613653	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native well	-23.341440 125.814634	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native Well	-23.200439 125.600431	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native well	-22.505385 126.211212	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native well	-22.187814 127.114097	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native well	-21.791927 126.600724	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native well	-21.698729 126.600718	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native well	-21.496484 126.504978	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
Spring	Helena Spring	-21.341933 126.571353	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Forkbank Hills native well	-21.155069 126.537636	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.

rockhole	rockhole	-20.714647 126.368715	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
other	Godfrey Tank	-20.255284 126.617719	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
soak	old soak	-19.784770 127.050512		Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Jew Soak	-19.683496 127.283149	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
waterhole	Shiddi pool	-19.461530 127.10561	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
creek	Chrstmas creek	-19.106932 127.15099	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
creek	Halls Creek	-18.910190 127.463179	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
rockhole	Wowaljarrow rockhole	-19.266956° 127.932066	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
other	unamed lagoon	-19.690007 127.676260	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
claypan	Claypan	-19.782291 127.631533	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
tockhole	Rockhole	-20.247001 127.867042	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native Well	-20.456073 128.731465	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Dwarf well	-22.279528 128.049369	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native Well	-22.879734 128.328731	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native Well	-23.283805 129.050934	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
rockhole	Rockhole	-23.792998 129.307674	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
rockhole	Rockhole	-24.325719 128.217992°	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
rockhole	Rockhole	-24.789795 126.701627	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
rockhole	Rockhole	-25.295322 126.148352	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.
well	Native Well	-25.668669 125.720445	Y	Carnegie, D. 1898 *Spinifex and Sand*. Victoria Park: Hesperian Press.

Appendix 2

The following table is a list of all the museum items identified in Australian museums in Australia.

#	Category:	Description:	Site: (Collection Details)	Name: (Cultural Associations)	Name(s) of Source:	Museum	Reg No:	Museum
1	Bag	Bag, skin, wallaby, carrying water	Australia, Northern Territory, MacDonnell Ranges	Aranda	Liebler, O.	South Australian Museum	A1085	South Australian Museum
2	Container	Container, wooden, small, water vessel	Australia, Northern Territory, MacDonnell Ranges	Aranda	Liebler, O.	South Australian Museum	A1196	South Australian Museum
3	Bag	Bag, water, skin of red kangaroo	Australia, Northern Territory, MacDonnell Ranges		Strehlow, Rev. Carl	South Australian Museum	A1471	South Australian Museum
4	Bag	Bag, water, skin of opossum	Australia, Northern Territory, MacDonnell Ranges	Arrernte, Western	Strehlow, Rev. Carl	South Australian Museum	A1472	South Australian Museum
5	Bag	Bag, water, skin of wallaby	Australia, Northern Territory, MacDonnell Ranges		Strehlow, Rev. Carl	South Australian Museum	A1473	South Australian Museum
6	Water	Water source QUERY ; roots, leaves & nuts of Hakea leucoptera	Australia, South Australia, Callabonna		Zietz, Amandus - South Australian Museum	South Australian Museum	A1782	South Australian Museum
7	Water	Water source, flowers of water bearing tree in vial	Australia, South Australia, Ooldea, north of		Maurice, R.T.	South Australian Museum	A1784	South Australian Museum
8	Water	Water source, roots of a mallee eucalypt	Australia, South Australia, Ooldea Well, north of		Maurice, R.T.	South Australian Museum	A1786	South Australian Museum
9	Water	Water, from needle-bush	Australia, South Australia, Cooper Creek		Reuther, J.G.	South Australian Museum	A1789	South Australian Museum
10	Water	Water source, stems of 'Quieroo' boiled with sugar in vial	Australia, South Australia, Ooldea		Maurice, R.T.	South Australian Museum	A1790	South Australian Museum
11	Water-tube	Tube, water, 'pillee', for getting water from holes in trees & rocks	Australia, South Australia, Fowlers Bay		No Data	South Australian Museum	A1791	South Australian Museum
12	Bag	Bag, water, made from skin of wild dog	Australia, South Australia, Cooper Creek		Reuther, J.G.	South Australian Museum	A2803	South Australian Museum
13	Bag	Bag, water, made from skin of wild dog	Australia, South Australia, Cooper Creek		Reuther, J.G.	South Australian Museum	A2804	South Australian Museum
14	Water	Water source, branch of Hakea leucoptera, called 'barna'; label says ' "barna" roots give principal water supply of Wailpi natives during dry spells.'	Australia, South Australia, Mount Serle, North Flinders Ranges	Wailpi	Hale, H.M. & Tindale, N.B.; South Australian Museum Expedition	South Australian Museum	A13042	South Australian Museum

15	Water	Water source, bundle of water mallee roots; from these sticks nearly 2 pints of water were obtained	Australia, South Australia, Penong, 8 miles north of; South Australia		Tindale, N.B.; South Australian Museum employee	South Australian Museum	A14172	South Australian Museum
16	Water	Water source; roots, flowers, fruit, water of the red mallee; principal supply of water is from this tree	Australia, South Australia, Penong, 8 miles north of; South Australia		Tindale, N.B.; South Australian Museum employee	South Australian Museum	A14173	South Australian Museum
17	Water	Water source; roots, flowers, fruit of the kong mallee; gives limited supply of water	Australia, South Australia, Penong, 8 miles north of; South Australia		Tindale, N.B.; South Australian Museum employee	South Australian Museum	A14174	South Australian Museum
18	Water	Water source, water mallee	Australia, South Australia, Moonabie Range, Eyre Peninsula		Somerville, J.D.	South Australian Museum	A26147	South Australian Museum
19	Bag	Water-bag, rabbit skin; Register says 'demonstration'	Australia, South Australia, Nepabunna	Adnyamathanha	Mountford, Charles P.	South Australian Museum	A27140	South Australian Museum
20	Bag	Water-bag, rabbit skin; Register says 'demonstration'	Australia, South Australia, Nepabunna	Adnyamathanha	Mountford, Charles P.	South Australian Museum	A27141	South Australian Museum
21	Bag	Water-bag, rabbit skin; Register says 'demonstration'	Australia, South Australia, Nepabunna		Mountford, Charles P.	South Australian Museum	A27142	South Australian Museum
22	Water	Water source, roots of Eucalyptus oleosa var. transcontinentalis	Australia, South Australia, Ooldea		Berndt, R.M.	South Australian Museum	A27259	South Australian Museum
23	Cooolamon	Container, wooden, beantree water vessel	Australia, Northern Territory, MacDonnell Ranges, west of	Pintubi	Sheard, Harold L.	South Australian Museum	A28312	South Australian Museum
24	Bag	Bag, skin, for water	Australia, South Australia, Nepabunna, Flinders Ranges	Wailpi (Adnyamathanha)	Mountford, Charles P.	South Australian Museum	A28322	South Australian Museum
25	Water-extractor	Water extraction tube for sucking, wood, 'pillee'; this specimen is mentioned as already in the Museum by 1896, although with little extra data (see Publication Record)	Australia, South Australia, Fowlers Bay		No Data	South Australian Museum	A29971	South Australian Museum
26	Bamboo water carrier	Container, bamboo, water vessel. (Container, bamboo body, looks like a bamboo drone pipe. X4 stripped sectional bands. There are X5 unstripped	Australia, Northern Territory, Central Australia	Warramunga	Wood, Mrs Vera; dealer, Adelaide	South Australian Museum	A40617	South Australian Museum

		sections which have incised zig zag designs in the first panel closest to the spout. There is a black texter marking of the number 20. Where the mouth piece would usually be, there is a verticle slit cut which looks like a pouring spout for a container. Incised drawing of an animal figure in each panel, the background has been darkened by a lit flame).						
27	Bag	Water-bag of kangaroo skin, 'arainja'	Australia, Northern Territory, MacDonald Downs	Iliaura (Alyewarre)	Chalmers, C.O.	South Australian Museum	A44232	South Australian Museum
28	Water	Water source, water bearing roots of mallee, Eucalyptus transcontinentalis ; label says 'Held on end, pannikin of water soon fell out of the tubes in the roots.'	Australia, South Australia, Ooldea		Cleland, J.B.	South Australian Museum	A48982	South Australian Museum
29	Water	Water bearing root of Eucalyptus oleosa; label says 'Water-bearing mallee', 'Water gushed out', Colona Station Oct. 54'	Australia, South Australia, Colona Station		Cleland, J.B.	South Australian Museum	A48983	South Australian Museum
30	Container	Container, shell, water carrier vessel	Australia, South Australia, Condoolka Station		Mould, Mr Dick; Condoolka Station via Port Augusta	South Australian Museum	A62267	South Australian Museum
31	Coolamon	Container, wooden, water carrier, coolomon, 'bargunu'; made of beantree wood (which is called Curedti in Walbiri)	Australia, Northern Territory, Central Australia	Warlpiri	Kellner, Stephen; Sydney	South Australian Museum	A63309	South Australian Museum
32	Digging-tool Container	Scoop, wooden; used for water	Australia, Northern Territory, Ayaiyayi Creek	Pintubi	Kimber, Mr R.G. (Dick); Alice Springs	South Australian Museum	A67040	South Australian Museum
33	Coolamon	Container, wooden, for carrying water, 'mimbu', made by Njunmiti	Australia, South Australia, Ernabella, Musgrave Ranges	Pitjantjatjara	Tindale, N.B.; South Australian Museum employee	South Australian Museum	A67909	South Australian Museum

34	Water	Water source, mallee water in jar; found unregistered in the store	Australia, South Australia, Ooldea		Maurice, R.T.	South Australian Museum	A68444	South Australian Museum
35	Water	Water source, mallee water in jar; collected from lateral Eucalyptus roots [PC, 15 Oct. 2008]; found unregistered in the store	Australia, South Australia, Ooldea		Maurice, R.T.	South Australian Museum	A68445	South Australian Museum
36	Water	Water source, mallee water in jar; found unregistered in the store	Australia, South Australia, Ooldea		Maurice, R.T.	South Australian Museum	A68446	South Australian Museum
37	Water	Water source, mallee water in jar; collected from lateral Eucalyptus roots [PC, 15 Oct. 2008]; found unregistered in the store	Australia, South Australia, Ooldea		Maurice, R.T.	South Australian Museum	A68447	South Australian Museum
38	Water	Water source, mallee water in jar; found unregistered in the store	Australia, South Australia, Ooldea		Maurice, R.T.	South Australian Museum	A68448	South Australian Museum
39	Water	Water source, mallee water in jar; found unregistered in the store	Australia, South Australia, Ooldea		Maurice, R.T.	South Australian Museum	A68449	South Australian Museum
40	Water	Water source, mallee water in jar; found unregistered in the store; label says 'no.1, no.2, no.3', 'Mallee water got out of roots of mallee tree'	Australia, South Australia, Ooldea		Maurice, R.T.	South Australian Museum	68451	South Australian Museum
41	Coolamon	Container, wooden, steep sided, the whole ochred, interoir surface unworked, exterior surface incised (after ochre) with concentric circles and crescents, small water (QUERY) stains on interior surface	Australia, North-west S.A.		Duguid, Andrew Melville & Douglas, Rosemary Lillian	South Australian Museum	A70706	South Australian Museum
42	Container	dish, wooden	Blackstone Mining Camp, Western Australia			Western Australia Museum	A16563	Western Australia Museum
43	Container	dish, wooden	Canning Stock Route, north, Western Australia			Western Australia Museum	E09721	Western Australia Museum

44	Container	dish, wooden	Canning Stock Route, north, Western Australia			Western Australia Museum	E09722	Western Australia Museum
45	Container	dish, wooden	Canning Stock Route, north, Western Australia			Western Australia Museum	E09723	Western Australia Museum
46	Container	dish, wooden	Canning Stock Route, north, Western Australia			Western Australia Museum	E09727	Western Australia Museum
47	Container	dish, wooden	Cundeelee, Western Australia			Western Australia Museum	A23350	Western Australia Museum
48	Container	dish, wooden	Cundeelee, Western Australia			Western Australia Museum	A23527	Western Australia Museum
49	Container	dish, wooden	Cundeelee, Western Australia			Western Australia Museum	A23644	Western Australia Museum
50	Container	coolamon	Desert-Southern Kimberley, Western Australia			Western Australia Museum	A26977	Western Australia Museum
51	Container	wooden dish	Djaru (a bore in the Western Desert), Western Australia			Western Australia Museum	A25887	Western Australia Museum
52	Container	dish	Alice Springs, Northern Territory			Western Australia Museum	A23590	Western Australia Museum
53	Container	dish	Docker River, Northern Territory			Western Australia Museum	A25629	Western Australia Museum
54	Container	dish	Central Australia, Northern Terriory			Western Australia Museum	A25936	Western Australia Museum
55	Container	dish	Central Australia, Northern Terriory			Western Australia Museum	A25937	Western Australia Museum
56	Container	dish, wooden	Ehrenberg Range, Northern Territory			Western Australia Museum	A16882	Western Australia Museum
57	Container	dish, wooden	Hall's Creek district, Western Australia			Western Australia Museum	A15836	Western Australia Museum
58	Container	dish, wooden	Yuendumu, Northern Territory			Western Australia Museum	A22972	Western Australia Museum
59	Container	dish, wooden	Elkedra Station, Northern Territory			Western Australia Museum	A23010	Western Australia Museum
60	Container	dish, wooden	Yuendumu, Western Australia			Western Australia Museum	A24659	Western Australia Museum
61	Container	dish, wooden	Mulyangiri/Warburton, Western Australia			Western Australia Museum	A16459	Western Australia Museum
62	Container	dish, wooden	Mulyangiri/Warburton, Western Australia			Western Australia Museum	A16463	Western Australia Museum
63	Container	dish, wooden	Mulyangiri/Warburton, Western Australia			Western Australia Museum	A16464	Western Australia Museum

64	Container	wooden dish	Ngaanyatjarra Communities, Western Australia			Western Australia Museum	A26858i	Western Australia Museum
65	Container	wooden dish	Ngaanyatjarra Communities, Western Australia			Western Australia Museum	A26858z	Western Australia Museum
66	container	dish, metal digging	North Warburton, Western Australia			Western Australia Museum	A15127	Western Australia Museum
67	container	dish, metal	Warburton, Western Australia			Western Australia Museum	A16462	Western Australia Museum
68	Container	dish, wooden	Warburton, Western Australia			Western Australia Museum	A16468	Western Australia Museum
69	Container	dish, wooden	Warburton, Western Australia			Western Australia Museum	A16469	Western Australia Museum
70		wooden dish	Warburton, Western Australia			Western Australia Museum	A26644	Western Australia Museum
71	Container	wooden dish	Warburton, Western Australia			Western Australia Museum	A26645	Western Australia Museum
72	Container	bowl, wooden	Warburton, Western Australia			Western Australia Museum	A26657	Western Australia Museum
73	Container	bowl, wooden	Warburton, Western Australia			Western Australia Museum	A26658	Western Australia Museum
74	Container	bowl, wooden	Warburton, Western Australia			Western Australia Museum	A26659	Western Australia Museum
75	Container	bowl, wooden	Warburton, Western Australia			Western Australia Museum	A26660	Western Australia Museum
76	Container	dish, wooden	Warburton Mission, Western Australia			Western Australia Museum	A14161	Western Australia Museum
77	Container	dish, wooden	Warburton Range, Western Australia			Western Australia Museum	A24094a	Western Australia Museum
78	Container	dish, wooden	Warburton Range, Western Australia			Western Australia Museum	A24094b	Western Australia Museum
79	Container	dish, wooden	Warburton Range, Western Australia			Western Australia Museum	A24094c	Western Australia Museum
80	Container	dish, wooden	Warburton Range, Western Australia			Western Australia Museum	A24094d	Western Australia Museum
81	Container	dish, wooden	Warburton Range, Western Australia			Western Australia Museum	A24094e	Western Australia Museum
82	Container	dish, wooden	Warburton Range, Western Australia			Western Australia Museum	A24094f	Western Australia Museum
83	Container	dish, wooden	Warburton Range, Western Australia			Western Australia Museum	A24094g	Western Australia Museum

84	Container	bowl	Western Desert, Western Australia			Western Australia Museum	A25417	Western Australia Museum
85	Container	dish	Western Desert, Western Australia			Western Australia Museum	A25418	Western Australia Museum
86	Container	wooden dish	Western Desert, Western Australia			Western Australia Museum	A26593	Western Australia Museum
87	Container	wooden dish	Western Desert, Western Australia			Western Australia Museum	A26594	Western Australia Museum
88	Container	wooden Dish	Western Desert, Western Australia			Western Australia Museum	A27203	Western Australia Museum
89	Container	wooden Dish	Western Desert, Western Australia			Western Australia Museum	A27204	Western Australia Museum
90	Container	dish, wooden	Tennant Creek, Northern Territory			Western Australia Museum	A24675	Western Australia Museum
91	Container	dish, wooden	Tennant Creek, Northern Territory			Western Australia Museum	A25036	Western Australia Museum
92	Container	dish, wooden	Yuendumu, Northern Territory			Western Australia Museum	A22972	Western Australia Museum
93	Container	dish, wooden	Yuendumu, Northern Territory			Western Australia Museum	A24659	Western Australia Museum
94	Coolamon	Coolamon. Bark vessel open at both ends with pokerwork decoration.	Docker River, Central Australia			Queensland Museum	E40668	Queensland Museum
95	Container	Register description: Water container	Hall's Ck., Kimberleys			Queensland Museum	E10403	Queensland Museum
96	Coolamon	Coolomon /Container , Shallow and red ochred	Sturt Ck., Kimberleys			Queensland Museum	E10470	Queensland Museum
97	Coolamon	Register description: Wooden bowl - coolamon	Western Desert (attrib.)			Queensland Museum	E13248	Queensland Museum
98	Coolamon	Register description: Pur. $26. Frank Reynold Coll.	Central Australia			Queensland Museum	E20315.1	Queensland Museum
99	Coolamon	Register description: Wooden Container - Coolamon	Central Australia			Queensland Museum	E20331.1	Queensland Museum
100	Container	Grooves on the outside, ochre on outside. and rov	Camooweal			Queensland Museum	QE2485	Queensland Museum
101	Coolamon	Register description: Coolamon style, wooden (QE Register). Koolamon, 556 x 127 (ER Register).	Glenormiston			Queensland Museum	QE4251	Queensland Museum

102	Coolamon	The outside of the coolamon is plain, as is the inside, grooves cut into the outside.	Boulia			Queensland Museum	QE4252	Queensland Museum
103	Container	Wood, curved sides, incised pattern inner surface, ochre (red). 3 (nail?) holes.	Glenormiston			Queensland Museum	QE4255	Queensland Museum
104	Coolamon	Register description: Coolamon style - Hardwood, plain, wavy grain.	Roseburth Stn.-Birdsville.			Queensland Museum	QE353	Queensland Museum
105	Container	Hollowed out piece of wood, smooth on back. Wavy pattern from end length to end length.	Roseburth Stn.-Birdsville			Queensland Museum	QE354	Queensland Museum
106	Coolamon	Coolamon - the wood inside has been darkened and fine grooves have been cut in, on the outside the wood has grooves that are wider cut into it, the outside is not coloured.	Roseburth Stn.-Birdsville.			Queensland Museum	QE355	Queensland Museum
107	Bag	Skin bag	Queensland			Australian Museum	AMS322/V02204	Australian Museum
108	Bag	Skin bag	Queensland			Australian Museum	AMS322/V02153	Australian Museum
109	Bag	Skin Bag	Toko Waterhole, Channel Country, Queensland			Australian Museum	E004112	Australian Museum
110	Container	Water-carrier	Channel Country, Queensland			Australian Museum	E013363	Australian Museum
111	Container	Water-carrier	Channel Country, Queensland			Australian Museum	E013364	Australian Museum
112	Bag	Skin cut all way round. Tears on leg repaired with white cloth & twine. Openings for tail & natural passages closed by wooden peg & twine. Fur attached in patches.	Channel Country, Queensland			Australian Museum	E013365	Australian Museum
113	Water-carrier	water-carrier	Urandangie, Channel Country, Queensland			Australian Museum	E013358	Australian Museum
114	Water-carrier	water-carrier	Glenormiston, Channel Country, Queensland			Australian Museum	E013357	Australian Museum
115	Water-carrier	water-carrier	Boulia, Channel Country, Queensland			Australian Museum	E013353	Australian Museum
116	Water-carrier	water-carrier	Boulia, Channel Country, Queensland			Australian Museum		Australian Museum
117	Coolamon	A wooden container that is an elongated oval	Alice Springs, Northern Territory			National museum of Australia	1985.0101.0238	National museum of Australia

		with ends rounded and incised fluting on the exterior surface. It is pigmented and features a label on one side reading "Water and food container / Coolamon" and another, longer label on the other side.						
118	Coolamon	Coolamon (oval wooden container) with rounded ends, featuring longitudinal fluting on both surfaces. Animal motifs are carved in low relief on the posterior surface; images are pigmented white on red ground. A hole is drilled at one end and a length of wire is threaded and knotted through it	Charlotte Waters, Norhern Territory			National museum of Australia	1985.0060.0686	National museum of Australia
119	Coolamon	Red ochre on carved wood coolamon (water container). Tool marks evident. Made from one piece of wood. Decorated with plain red ochre.	Amata, South, Australia			National museum of Australia	1991.0024.4538	National museum of Australia
120	Container	Wood, deep concave, ends rounded, continuous incised fluting longitudinally both surfaces. Pigmented 'Pitchi' Charlotte Waters NT	Charlotte Waters, Norhern Territory			National museum of Australia	1985.0059.0318	National museum of Australia
121	Coolamon	Coolamon (oval wooden container) with rounded ends, featuring longitudinal fluting on both surfaces. Animal motifs are carved in low relief on the posterior surface; images are pigmented white on red ground. A hole is drilled at one end and a length of	Charlotte Waters, Norhern Territory			National museum of Australia	1985.0060.0687	National museum of Australia

		wire is threaded and knotted through it.						
122	Bag	Bag, water, large	Australia, No Data			South Australian Museum	338	South Australia Museums
123	Bag	Bag, water, small	Australia, No Data			South Australian Museum	339	South Australian Museum