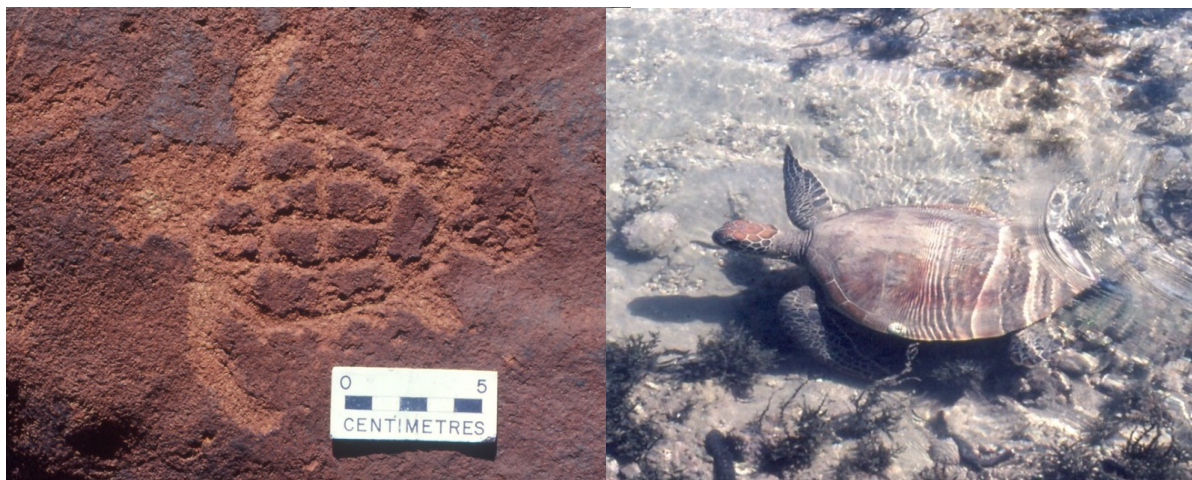


Archaeology and rock art in the Dampier Archipelago



A report prepared for the National Trust of Australia (WA)

Caroline Bird & Sylvia J. Hallam

August 2006

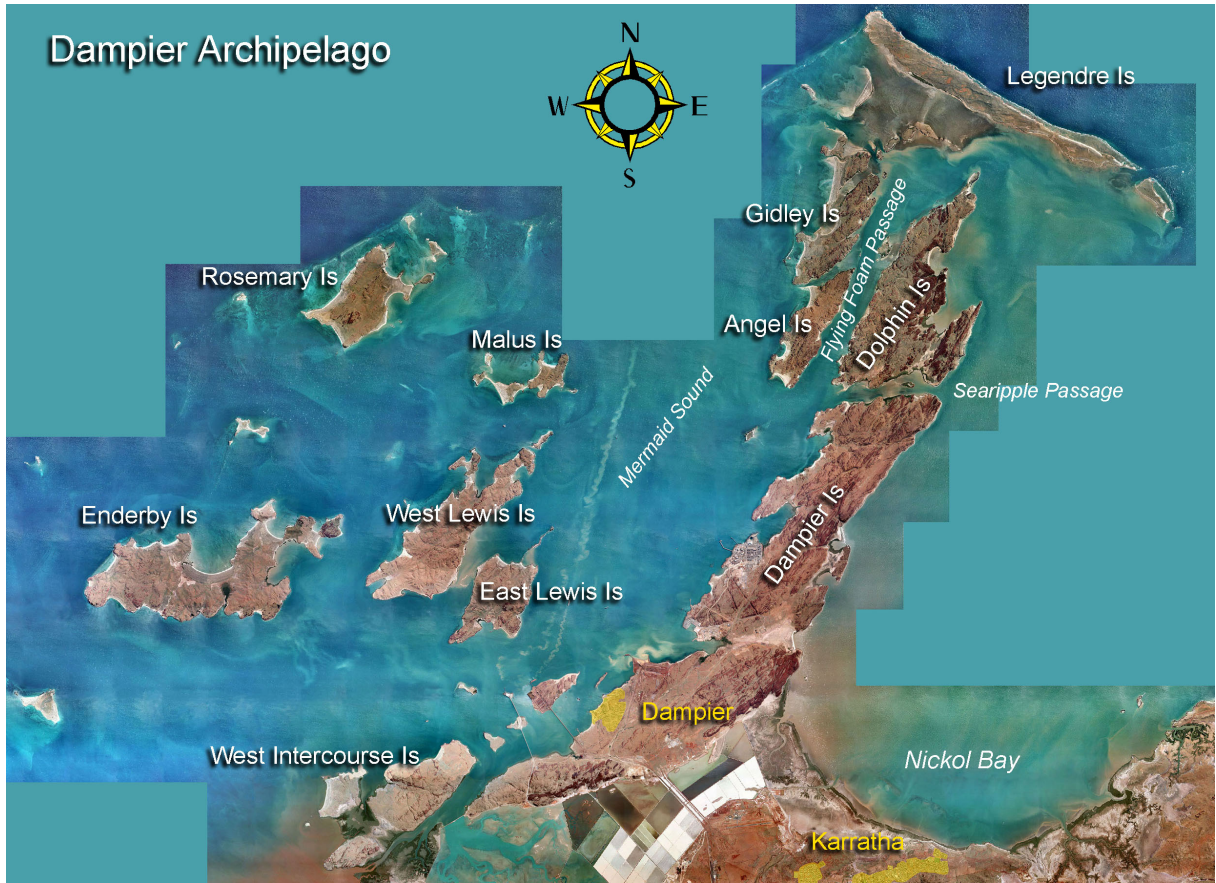
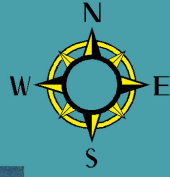


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Dampier Archipelago



The Dampier Archipelago contains the largest concentration of rock art in the world, estimated at perhaps a million petroglyphs. The art is extraordinary in its range and diversity. Associated with the art is a rich archaeological record, including camp sites, quarries, shell middens and stone features. Many motifs and some stone features are connected to the beliefs and ceremonial practices of Aboriginal people in the Pilbara region today. The entire Archipelago is a continuous cultural landscape providing a detailed record of both sacred and secular life reaching from the present back into the past, perhaps to the first settlement of Australia.

The combination of cultural richness and scientific potential of the Dampier Archipelago has been known since the 1960s. Repeated archaeological investigations of the area over the last forty years have reinforced the view that the cultural landscape of the Dampier Archipelago is highly significant by international standards and demands comprehensive study. Nevertheless, the same period has seen the planning and establishment of major industrial and infrastructure developments in the area with little regard for its heritage values. There is still no comprehensive management plan based on sound archaeological research and consultation with local Aboriginal people. Heritage consultants investigate and make recommendations on specific projects in a vacuum without a comprehensive understanding of the values of the area as a whole. As a result, the outstanding heritage values of the area continue to be compromised by short-term industrial imperatives. Sites are physically destroyed by construction, eroded or polluted by industrial emissions, damaged deliberately or accidentally by visitors as population grows and road access develops. Some sites survive, but in a radically transformed and unsympathetic landscape.

The National Trust of Australia (WA) and the Hon. Robin Chapple MLC nominated the Burrup Peninsula to the National Trust Endangered Places List in 2002. In 2003 the World Monuments Fund added it to its list of Most Endangered Places—the first time an Australian place had been included. In 2004, the National Trust, the Native Title Claimants and Robert Bednarik, President of the International Federation of Rock Art Organisations, nominated the Dampier Archipelago to the National Heritage list, under the new Commonwealth heritage legislation.

The Dampier Archipelago is highly significant for Aboriginal people in the Pilbara and beyond. As a unique record of human achievement, it also has significance at the national and international scale. However, there is little information about the archaeology and rock art of the Dampier Archipelago that is readily accessible to the public. Most of the information is in unpublished technical reports. This report describes heritage values and conservation issues in the Dampier Archipelago for a general audience. Its main focus is on the archaeological and scientific importance of the area, while acknowledging its continuing significance to Aboriginal people. It is based on a longer and more technical review of the values of the Dampier Archipelago, commissioned by the National Trust of Australia (WA), which aims to describe what is known and what is not known about the cultural heritage of the area, to outline its significance, and to identify the key issues with respect to its conservation for future generations.

Acknowledgements

Financial support was provided for this study by American Express through the World Monuments Fund. We are grateful for support and assistance from the National Trust of Australia (WA), especially Robin Chapple. Ken Mulvaney, Jim Rhoads and James Rhoads provided helpful comments on a draft of this report.

Photos by Robin Chapple, Sylvia Hallam and Jim Rhoads. Drawings by Caroline Bird.

Landscape setting

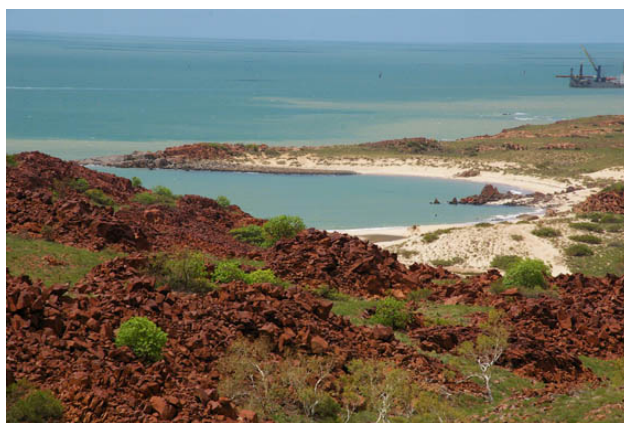
The Dampier Archipelago is on the Indian Ocean coast of the Pilbara Region of Western Australia. It is made up of 42 islands and islets of which Dampier Island is the largest. As a result of industrial development, Dampier Island is now an artificial peninsula known as the 'Burrup Peninsula'. The rugged landscape with its massive boulder-strewn ridges, plateaus and steep-sided valleys contrasts markedly with the broad low-lying plain of the mainland.

A series of ridges and rocky hills made up of massive boulders dominates the landscape of the Archipelago. These result from ancient weathering and erosion of the pre-Cambrian volcanic lava flows. The dominant rock type is granophyre, particularly on the western side, though gabbro, granite and dolerite also occur. Steep-sided valleys provide access corridors through the rugged terrain and are important sources of water and shelter. The coastline offers a complex array of different environments including rocky shores, sandy beaches, tidal mudflats and mangroves.

Soils in the area are generally shallow and plant cover sparse. The dominant vegetation of the area is spinifex grassland. However, the complex topography has created a range of micro-habitats which support a variety of specialised plant and animal communities. These include a high number of plant species normally only found much further north in the Kimberley region. Many of these are edible and provided important food resources for Aboriginal people.

Water is scarce in the Archipelago and there are no permanent surface sources. The climate is characterised by high summer temperatures and erratic rainfall affected both by southern winter rainfall pattern and northern tropical cyclones. The valley systems carry ephemeral creeks with rock pools which act as natural cisterns. Freshwater soaks are also found. These would have been of critical importance to the people of the area.

The first settlement of Australia occurred by about 50,000 years ago during the last major glacial period, or Ice Age, when global climates were generally cooler than today, the polar ice caps were



much larger and sea levels were up to 130m lower. At this period the 'Dampier Ranges' would have been a series of low rocky hills and ridges rising out of a flat plain and the sea would have been more than 100km distant. The Dampier Archipelago in its present form is a drowned landscape. It formed over several thousand years as the polar ice caps

melted and sea levels rose at the end of the last Ice Age. The shoreline stabilised about 6000 years ago, forming rock platforms and boulder beaches with gradual accumulation of sand and silt in more sheltered bays. The complex terrestrial and marine ecosystems of the Archipelago and the resulting abundance and diversity of animals and plants would have provided particularly rich resources for Aboriginal people. However, the sheltered valleys and relatively reliable water sources of the rugged landscape would also have provided an important focus for people at times of lowered sea level.

Aboriginal people of the Dampier Archipelago

Historical contacts

Aboriginal people knew the Burrup as *Murujuga*, meaning ‘hip bone sticking out’. The group inhabiting the Dampier Archipelago and the adjacent mainland are usually called the Yaburara. These people were part of the Ngarluma group in both language and culture. Although William Dampier anchored off one of the islands and saw smoke in 1699, it was Philip Parker King’s mapping expedition that first encountered Aboriginal people in 1818. The first sustained contact was not until 1861 when F.T. Gregory’s ship the *Dolphin* anchored at Hearson Cove for nearly three months and Gregory established a base from which to explore the Pilbara.

European pastoral settlement in the region proceeded rapidly as a result of Gregory’s reports and the Dampier Archipelago became a base for whaling and pearling. Aboriginal people were exploited as indentured labour, and this, together with introduced diseases, had a devastating impact on their society. In 1868, the spearing of a police officer led to reprisal raids by a force of police and settlers, sworn in as special constables. This resulted in the deaths of men, women and children. We do not know the final death toll in what became known as the Flying Foam Massacre—it was certainly more than the five to ten of the official accounts and estimates range from 30 or 40 dead to more than 100. Whatever the number, the impact on the community was undoubtedly catastrophic. As a result, the Yaburara no longer exist as a distinct group, although some Aboriginal people in the region identify as Yaburara descendants. The Yaburara were also closely linked to neighbouring groups through family relationships and ceremonial ties.

Cultural associations

Despite the destruction of Yaburara people, Ngarluma people, living now mainly in Roebourne, retain strong cultural associations with the Dampier Archipelago. The neighbouring coastal Mardudunera also have traditional links with the area, as do the Yindjibarndi whose country is mainly further inland.

There is no doubt that the Dampier Archipelago is part of a living cultural tradition. Aboriginal people believe that the petroglyphs are the work of the *marga*—ancestral creator beings—in the Dreaming. They are a permanent reminder of the Law and retain their spiritual power. Looking after the petroglyphs is an inherited and ongoing responsibility. Pilbara people have songs and mythology for many of the images depicted in petroglyphs on the Dampier Archipelago, as well as on the mainland and Depuch Island. Many of the images have cultural meaning over and above straightforward depictions and would likely have played a role in education and initiation.

Three overlapping Native Title claims in the Pilbara include the Dampier Archipelago. However, the Federal Court determined in 2003 that native title no longer exists over the Dampier Archipelago. The Native Title claimants have been in protracted negotiation with the State Government over industrial development on the Burrup Peninsula and a mediated agreement was reached in January 2003 (Burrup and Maitland Industrial Estates Agreement). This resulted in transfer of part of the Burrup to the Native Title claimants for joint management with the Department of Conservation and Land Management under a lease-back arrangement. Significant resources were also committed for developing a management plan and for management and development of visitor facilities, and for employment and training opportunities for the Aboriginal community.

Art and archaeology of the Dampier Archipelago

The archaeology of the Dampier Archipelago is rich and complex, and includes petroglyphs, various types of stone arrangements, stone quarries, rock shelters, bedrock grinding patches, shell middens and surface shell scatters, and surface scatters of stone artefacts. Some areas also have ceremonial or mythological significance for Aboriginal people today. There are more than 2500 localities registered as ‘sites’ with the Department of Indigenous Affairs, but thousands more certainly exist.

Density of registered sites is generally very high by Australian standards, although it varies in different parts of the Archipelago. Estimates from various surveys range from 17 registered sites per square kilometre to 76 registered sites per square kilometre. Such estimates, however, do not give a truthful picture of the distribution of cultural features within the landscape. The density of individual cultural components is of course much higher. The **minimum** density of rock art in well-surveyed areas can be as high as 1135 individual motifs per square kilometre, and



Petroglyphs on boulder piles

particular localities may have thousands of motifs. There are very few areas where the distribution and relationships of different cultural components have been mapped in adequate detail. The complexity of associations between different aspects of the archaeological record for the area as a whole is therefore poorly understood.

Archaeological investigation in the Dampier Archipelago has mostly been conducted in the context of development and therefore the most detailed information is available for industrial areas on the Burrup. However, because there has never been an inventory of the cultural heritage of the Dampier Archipelago and because there has been hardly any significant research (as distinct from cultural heritage recording programs or surveys associated with development proposals) on any aspect of the heritage of the area, there is no general framework of understanding within which particular locations or individual cultural elements can be assessed. The Dampier Archaeological Project (DAP)—the first large scale archaeological investigation associated with Woodside’s LNG development in the early 1980s—recognised this problem and its impact on the salvage program that the teams were required to undertake. This situation has not



Artefact scatter

changed. Management decisions over the last twenty-five years have not been informed by a broad understanding of regional heritage values on which to base a sound knowledge and understanding of the heritage values of the particular locality. Rather the process of decision making is *ad hoc* and contingent on the immediate circumstances; cultural heritage receives only peripheral attention. Effectively, the requirements of developers drive the destruction of cultural heritage, and archaeological investigation has been merely a prelude to that destruction.

The original report of the DAP stated that: ‘For all intents and purposes, the Dampier Archipelago exhibits a density of archaeological material sufficient to warrant its designation as a single site complex’ (DAS 1984:13). No subsequent archaeological work has modified this conclusion. What is clear is that the distribution of cultural features is effectively continuous across the whole landscape. There is no area which can be confidently stated to be without evidence of past human activity. It follows that the heritage of the Dampier Archipelago should be considered as a continuous cultural landscape.

Distribution and types of cultural features

The distribution of cultural features in the landscape seems to be largely determined by availability of water and food resources. Cultural material is commonly grouped together in extensive complexes. Two basic patterns of habitation have been recognised for large complexes of cultural features. In the first, evidence of specialised activities, such as food preparation or stone tool making, radiates out from habitation campsites located close to water sources. Rock art is found on boulders immediately associated with the campsite and farther away. The second pattern occurs in valley areas. Here, the distribution of cultural features is linear in form, with evidence of activities extending along the valley floor and onto any level areas among the boulders forming the steep valley slopes. Standing stones occur on ridgelines and vantage points. These complexes are undoubtedly camping areas to which people would have returned regularly over a long time span and where they would have performed a wide range of largely domestic activities. They are located in sheltered valleys, along the coast near productive shell beds or fishing areas, or close to sources of fine-grained stone suitable for artefact manufacture. Local granophyre is the most common raw material used for stone artefact manufacture. Finer-grained forms were preferred for tool-making and outcrops of these often have substantial evidence of quarrying. Small numbers of artefacts made of raw materials from sources on the mainland are also found.

Particular cultural components also occur in isolation. Small scatters of shells and stone artefacts are common. Some are just small scatters of stone artefacts or even isolated artefacts; these represent more transient or specialised activities, such as the manufacture or repair of tools by one person, or a short-term camping place, or even tools lost while travelling. Artefacts are also sometimes found cached in crevices between rocks. Small scatters of shells perhaps represent ‘meal-time camps’. Some locations, such as standing stones and some art complexes, are likely to have been places where ceremonial activities took place.



Quarried block of fine-grained granophyre, with waste flakes

Grinding patches provide indirect evidence of the processing of plant foods. A study of the grinding patches recorded during the Dampier Archaeological Project in the early 1980s showed that they were most common in camping areas close to spinifex grasslands, suggesting that they were mainly used for grinding spinifex seeds into flour. Many grinding patches had clearly been used over long periods of time, from the amount of wear and the fact that their surfaces had often been rejuvenated and re-roughened through pecking or incising lines.

Twenty-one excavations have been conducted in the Dampier Archipelago, and subsurface deposits at four further sites have also been sampled by auger. Unfortunately, only the excavated material from shell middens at Skew Valley and Georges Valley has been analysed in any detail. However, most midden sites contain evidence that a range of marine resources were used, including crabs, fish, turtles

and dugong. There is also evidence that land animals were hunted, including euro, wallaby, flying fox and quoll. Bird bones also occur in excavated sites.

A series of enigmatic stone features has been recorded in the Dampier Archipelago. These fall into three broad categories: standing stones, pits, and ‘walls’, or linear features of heaped stones. There is also one example of a complex stone arrangement comprising ten stone circles, a cairn, a linear stone feature and 79 small conical mounds. There are many examples elsewhere in Australia, including the Pilbara, of Aboriginal people building stone structures either for ceremonial purposes or for domestic purposes such as hut bases, fish traps, or hunting hides.

Standing stones are elongated natural stones that have been intentionally placed in an upright position in crevices in the bedrock or in gaps between boulders. They are sometimes wedged in place by other stones. They can occur by themselves or in more complex arrangements of standing stones. They are commonly on ridge crests or other prominent points. Occasionally petroglyphs occur on the stones themselves. Some of these stones are known to be *thalu* sites, associated with increase ceremonies, and are known to contemporary Aboriginal people. Stone pits and stone ‘walls’ are generally much more controversial, because it is difficult to distinguish artificial structures from natural geomorphic features on the boulder slopes. Pits have been interpreted as hunting hides, while many stone ‘walls’ create ‘terraces’ which act as soil traps. However, whether they are natural or artificial, some linear features also have mythological associations for Aboriginal people today. The diversity and density of stone features recorded on the Burrup is much greater than anywhere else in the Pilbara. However, it is difficult to interpret these without knowing which structures are artificial and which are natural features. A comprehensive geomorphological and archaeological study to resolve the issue is long overdue.



Standing stone

Changing adaptations in the Dampier Archipelago

The scarcity of datable sites means that it is difficult to develop a timeline for the occupation of the Dampier Archipelago. Because of development pressures, archaeologists have commonly focussed on the range and distribution of cultural heritage in particular areas rather than looking at change through time. Investigating questions about how long people have lived in the area and how people have interacted with changing environments through time is difficult on the Dampier Archipelago because rockshelters in which sequences of occupation layers can develop are rare and most occupation sites are simply open scatters of stone artefacts and shells.

Most radiocarbon dates in the Archipelago come from shell middens. Shellfish tend to be exploited on the spot and are rarely carried far from where they were collected, so these sites all date to the last few thousand years. This was the most recent period of occupation as the sea levels rose at the end of the last Ice Age and drowned the continental shelf.

Rock art is extremely difficult to date because it is unusual to find it in association with datable occupation deposits. Even rock art that



Striped animal, thought to be a thylacine (Tasmanian tiger), extinct for about 3000 years in the Pilbara

has been covered with datable deposits can only be given a minimum age. For example, the rock art found in the Skew Valley excavation must be more than 3800 years old, but exactly how much older cannot be determined easily. Methods of dating that rely on measuring degrees of weathering or growth of micro organisms remain controversial or experimental. It is, however, possible to propose relative chronological sequences based on differential weathering, differences in style and technique, and superimposition of images. The depiction of animals that are now extinct can also offer dating clues, while many of the marine motifs most probably date to the period of the formation of the Archipelago and after. The fresh and unweathered petroglyphs are clearly very recent indeed. Some images that can be linked to the ceremonial and mythological beliefs of Pilbara people today might also provide clues to dating.



Arc motif superimposed on fully patinated 'archaic face'



Female figure with exaggerated hands superimposed on fully patinated fish

Superimpositions—one motif placed on top of an older one—provide important clues for dating petroglyphs.



Probable emu track superimposed on a fully patinated complex geometric design



Face motif

Australia was settled by about 50,000 years ago during the last Ice Age, at a time of lowered sea level. At this period the Dampier Archipelago would have been an area of rocky hills and ridges rising out of a broad plain, with the coast more than 100 km away. Climatic conditions during the last Ice Age fluctuated markedly, but were generally cooler and drier than today. Between about 50,000 and 35,000 years ago, conditions were cool but reduced evaporation rates generally meant they were also relatively wet. About 35,000 years ago, temperatures and rainfall began falling. The polar ice caps were at their greatest extent at the Last Glacial Maximum (LGM), about 20,000 years ago, and sea levels were at their lowest. The period from about 25,000 to about 13,000 years ago was particularly harsh, with very dry, cold and windy conditions. Like desert dwellers in central

Australia in the recent past, the population would probably have comprised small highly mobile groups and ranged widely between reliable water sources.

There is plenty of archaeological evidence that people were living in the north-west of Western Australia by about 30,000 years ago. Habitation on what is now the Cape Range peninsula dates back more than 30,000 years, while there is evidence for occupation of what are now the Monte Bello Islands from about 27,000 years ago. Several inland Pilbara rock shelters have occupation deposits dated to more than 20,000 years ago.

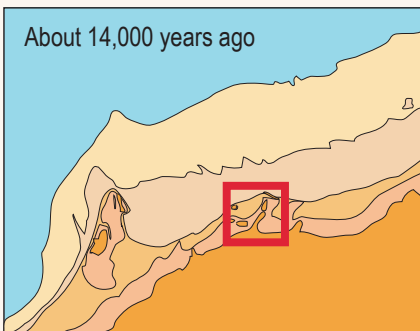
The oldest dated evidence from the Dampier area is a trumpet shell from Gum Tree Valley radiocarbon dated to 18,500 years ago. However, it is reasonable to assume that the ‘Dampier Ranges’ were also visited before this date, perhaps by people who also visited the ancient coastline and inland ranges. The most ancient art probably dates to this period. The famous ‘archaic faces’, which archaeologists believe are among the oldest art in Australia, are found in the Dampier Archipelago and far inland at sites such as Cleland Hills in central Australia. These motifs may represent evidence of cultural connections over very long distances.

Sea levels were at their lowest about 20,000 years ago. As the ice caps melted, the rising sea would have brought the coastline nearer and nearer to the ‘Dampier Ranges’. By 10,000 years ago the sea would have been perhaps 25km away and, by about 9000 years ago, what are now the outer islands would have been close to the coast. Midden deposits at Rosemary Island dated at about 9000 years ago provide the first firmly dated evidence of occupation of the Archipelago. However, it is reasonable to assume from the speed with which people adapted to the changing coastal environment that they had already been in the general area for a long time. The oldest of the marine motifs probably date to this period.



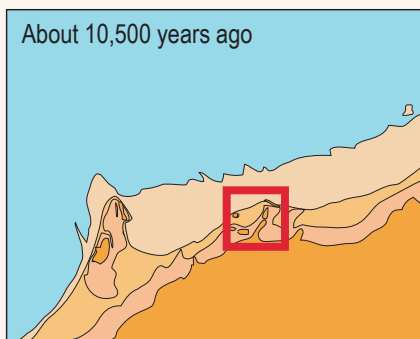
Pecked turtles

Changing adaptations Before 7500 years ago



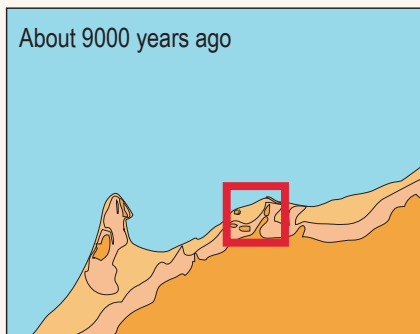
During the last Ice Age, sea levels are up to 130m lower than today. Climate is generally cooler than today and, at the height of the Ice Age, about 20,000 years ago, is very dry as well.

The 'Dampier Ranges' are a series of rocky hills and ridges rising dramatically out of a featureless plain more than 100km from the sea. They would have been an important resource area for small highly mobile groups using both other inland desert ranges and the ancient coastline. The oldest most weathered petroglyphs probably date to before 20,000 years ago.



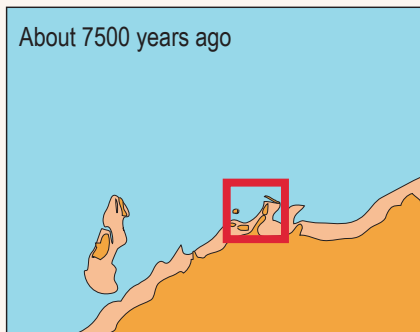
Sea levels begin to rise quickly from about 14,000 years ago. This is a particularly dry period, but by about 10,500 years ago conditions are beginning to improve. The 'Dampier Ranges' continue to be used by small highly mobile groups with links to both the interior and the coast, which is now within 30km.

Petroglyphs which show a wide range of land animals and birds, including extinct species, probably date to this time and reflect land based hunting activities.



About 9000 years ago the rising sea comes close to the 'Dampier Ranges' and the first firmly dated evidence of human occupation can be identified. Marine resources begin to appear in the economy of the inhabitants. Mangroves are an important source of food.

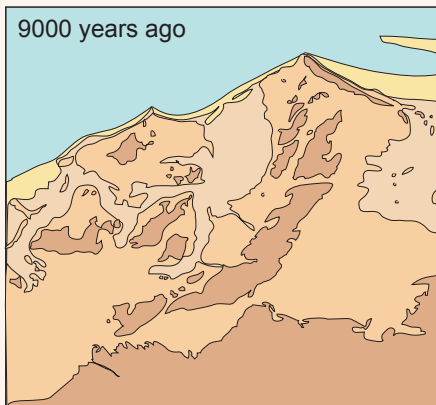
Older petroglyphs which show marine subjects probably date to this time and reflect the growing importance of these resources.



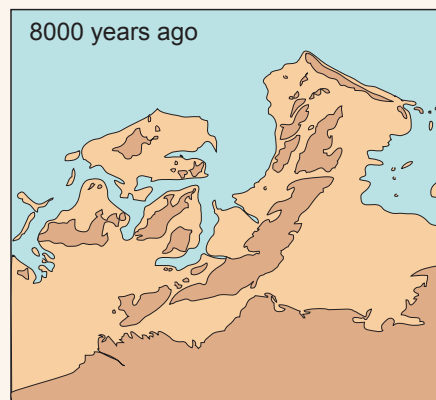
As sea levels continue to rise, large embayments begin to form and the outer islands are cut off from the mainland. Nearby Barrow Island and the Montebello Islands are also cut off and no longer visited. Mangroves are more widespread than today and provide important resources. Several shell middens have evidence that they were occupied at this time.

Changing adaptations 9000-present

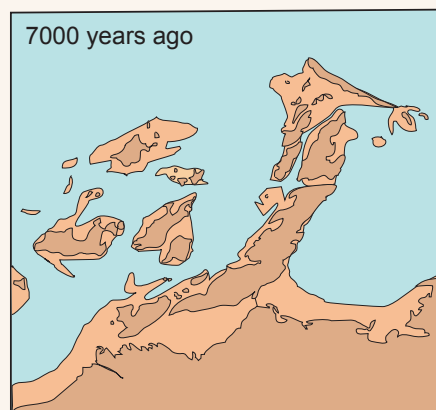
About 9000 years ago, sea level is about 30m lower than today and the 'Dampier Ranges' rise out of a coastal plain. Mangroves are present along the coast and provided important food resources. Some of the older petroglyphs showing marine animals probably date to this time and indicate the growing importance of these resources.



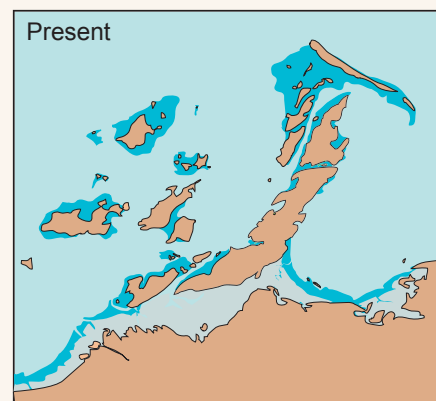
Rising sea level causes rapid changes in the coastal environment. This provides new economic opportunities for human populations. By about 8000 years ago, sea levels are about 10m lower than today. Large embayments have formed between the major ridges and a narrow channel separates Rosemary Island from the mainland.



By about 7000 years ago, the continuing rise in sea level has caused even more dramatic changes to the coastal environment. Sea levels are about 5m lower than today. The Dampier Archipelago is now recognisable, but Dampier and Dolphin Islands form a peninsula, and West, Mid and East Intercourse Islands are part of the mainland. Mangroves are still much more widespread than today. Several dated shell middens close to the new coastline show the importance of mangrove resources.



About 6000 years ago, sea level begins to stabilise and the Archipelago takes on its present form. Mudflats separate Dampier Island from the mainland. Mangroves are more widespread than today, but about 4000 years ago there are significant economic changes. Excavated shell middens show that mangrove shellfish species are replaced by a broader range of shellfish species from rocky shores, sandy beaches or mudflats, or a mixture of all three. The reasons for these changes are unknown. One possibility is that the final rise in sea level caused a collapse of the mangrove ecosystem. Others include climatic change, habitat change caused by human activities and broader regional changes in the socioeconomic system.



As sea levels continued to rise and the Archipelago formed, the environment would have changed quite rapidly. Sea levels are generally assumed to have stabilised at about their present levels at about 6000 years. However, the exact pattern varies from place to place and depends on local factors. It is quite likely that the precise present configuration of coastline only dates from about 4000 years ago. There are several dated sites in the Archipelago which show that people were living in the area between 9000 and 6000 years ago. Mangrove species of shellfish are prominent in all these sites.



Shell scatter

Mangrove ecosystems seem to have been more widespread at this period along much of the north-west coast of Australia. There seem to have been significant changes about 6000 years ago, which may reflect major environmental changes resulting in the disappearance of mangroves from many areas. The mangrove dominated middens disappear and from about 4000 years ago middens show evidence of exploitation of species from more diverse environments. Some recent middens have a range of shellfish species while others are dominated by either rocky shore species or mudflat species. This pattern is also seen in sites on the mainland and several very large mound middens dominated by mudflat species have been recorded which seem to date to between 4000 and 2000 years ago. Some archaeologists believe that these were sites where large groups of people gathered on a seasonal basis. There are similar large middens on West Intercourse Island which have not been excavated. These may well date to the same period.



**Large mound shell midden
West Intercourse Island**

Rock art

Rock art, in the form of petroglyphs, is the most spectacular and visible evidence of past human activity in the Dampier Archipelago. The density of motifs and the diversity of subject matter and techniques make this an extraordinarily significant corpus of art at a national and international scale.

There has been no comprehensive study of the Dampier rock art. It is clear, however, from descriptive accounts, that the sheer quantity and variety of the art makes generalising about the whole area problematic. The few detailed studies of smaller areas all show the complexity of the art and its intimate relationship with other cultural remains.

Petroglyphs are made by removing the outer surface of the rock by one of several different techniques, including pounding, abrading and scoring. The rocks of the Dampier Archipelago are particularly suited to making petroglyphs as removing the dark weathered surface to reveal the pale colour of the interior of the rock creates a sharp colour contrast. Over time, the colour contrast diminishes to nothing as the exposed surfaces weather in their turn. The range of different contrasts in the Dampier rock art indicates that petroglyphs were made over a long period of time. Clearly, making petroglyphs has a long history in the area. However, we do not know precisely how long because rock art is hard to date. It is probable that at least some of the petroglyphs date back more than 10,000 years to the last Ice Age which reached its peak about 20,000 years ago.

Petroglyphs are very common on the rock outcrops and distinctive rock piles and boulder slopes of the Dampier landscape. They are found in a bewildering variety of locations. They can be isolated motifs on inconspicuous individual boulders or low rock outcrops, or galleries of thousands of motifs on ridges or valley slopes of massive boulders. They can occur alone or as part of extensive complexes with other evidence of cultural activity. Petroglyphs are more common in some areas than others, but there is no area in the Archipelago, where they can be confidently pronounced to be absent. Petroglyphs can occur



Petroglyphs are common on rock piles and boulder slopes

wherever suitable rock surfaces or boulders are found. Most individual motifs are relatively small—less than 30cm in size—and some are no more than a few centimetres. Few images are larger than 60cm although occasional ones are more than 150cm.

Several different techniques were used to make the petroglyphs and different types of tools must have been used. Pecking is generally the most common technique and both coarse and fine-grained tools were used. Sometimes the image was outlined with peck marks; sometimes the whole shape was filled in. Scored images were made by dragging a sharp point across the rock surface. Again, sometimes only the outline of the image was scored, while in other cases the image was filled in with parallel or cross-hatched lines. Abraded images were made by rubbing the rock to form a polished surface, either making a grooved outline or a complete shape. Sometimes, but not always, the image was pecked first and then abraded. Pounded images were produced by superficially bruising the rock surface. These images are very shallow and can be easy to overlook. Composite images were also produced using a combination of techniques.

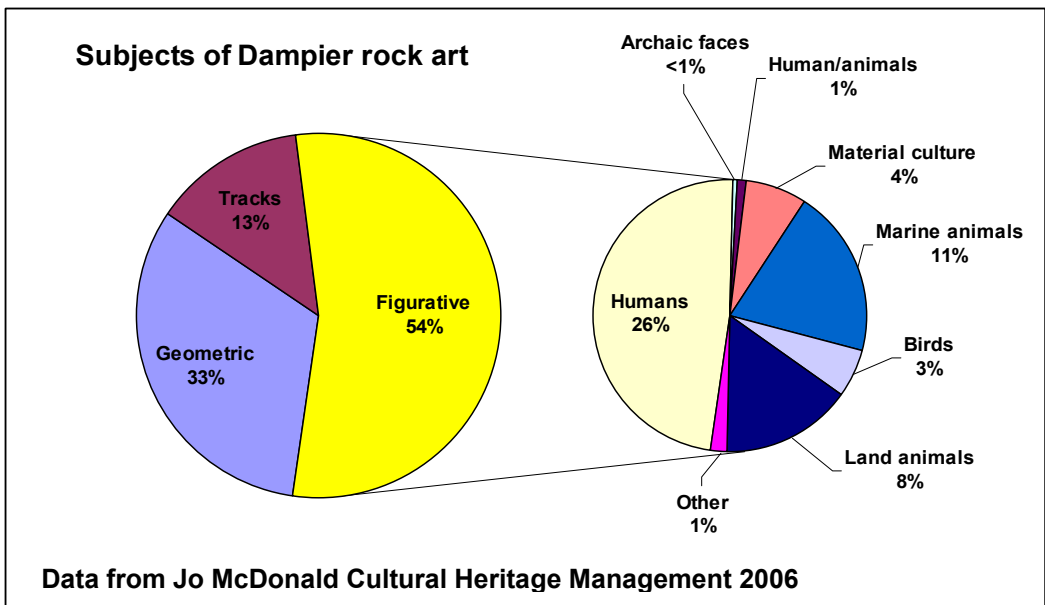
The Dampier rock art is diverse in its subject matter. Subjects include geometric designs, tracks of humans, animals and birds, and naturalistic or figurative representations, including humans, and a wide range of animals and birds—both terrestrial and marine. These include some depictions of thylacines, or Tasmanian tigers, which have been extinct on mainland Australia for about 3000 years. There are also figures with both human and animal features which may represent mythological characters. Animals and humans are shown both as images and as tracks. Human figures are sometimes shown carrying objects such as boomerangs or wearing head dresses. Local Aboriginal Elders have identified some figures as having ceremonial significance and stated that they should not be viewed by uninitiated people.

As well as individual motifs, there are panels which show scenes or composite images. Some of these have been clearly added to over a long time period. The most famous is the so-called ‘Climbing Men’ panel. Other types of scenes show daily activities such as hunting. Tracks can sometimes be followed as trails over a considerable distance and some lead to large images of humans or kangaroos. These may well represent the routes of ancestral beings.

The Dampier rock art is also diverse in terms of style. A number of distinct styles have been noted. Some representations of animals and birds for example can be identified as particular species, while others show the subject in a highly stylised way. There are several different styles of human figures, including various types of stick figures and outlined figures. One distinctive style shows the head as a detached blob. Another style shows human figures with exaggerated hands and feet. Some of these variations are likely to reflect the long time period over which the petroglyphs were produced. Detailed analysis of the relationship between motifs, techniques of production and weathering can show this. For example, human figures with exaggerated hands and feet seem always to be relatively

fresh in appearance. This therefore seems to be a relatively recent style. By contrast, the ‘archaic faces’ with their large owl-like eyes, and complex geometric maze-like designs, are normally weathered and have little or no colour contrast. Both these types of motifs are thought to be among the oldest art in the Archipelago.

Other stylistic differences may reflect regional variation and suggest that the Dampier Archipelago may have been an important meeting place for groups from different parts of the Pilbara. The Pilbara is itself a very important rock art province with several distinct regional styles. These are all represented in the Dampier Archipelago, which in turn has its own distinctive elements.



One distinctive art style shows human figures with detached blobs for heads.



The 'climbing men' panel is an example of a complex composition. Portrayals of human figures apparently climbing or suspended from a line are another distinctive feature of Dampier rock art.



The amount of patination and weathering is a general guide to the age of petroglyphs. Geometric designs (above) and distinctive faces, with large owl-like eyes (right), seem to be the oldest motifs in the Dampier Archipelago. Similar faces are found as far away as the Cleland Hills in central Australia. Many apparently old motifs are deeply pecked.





Unpatinated human-like figure made by scoring

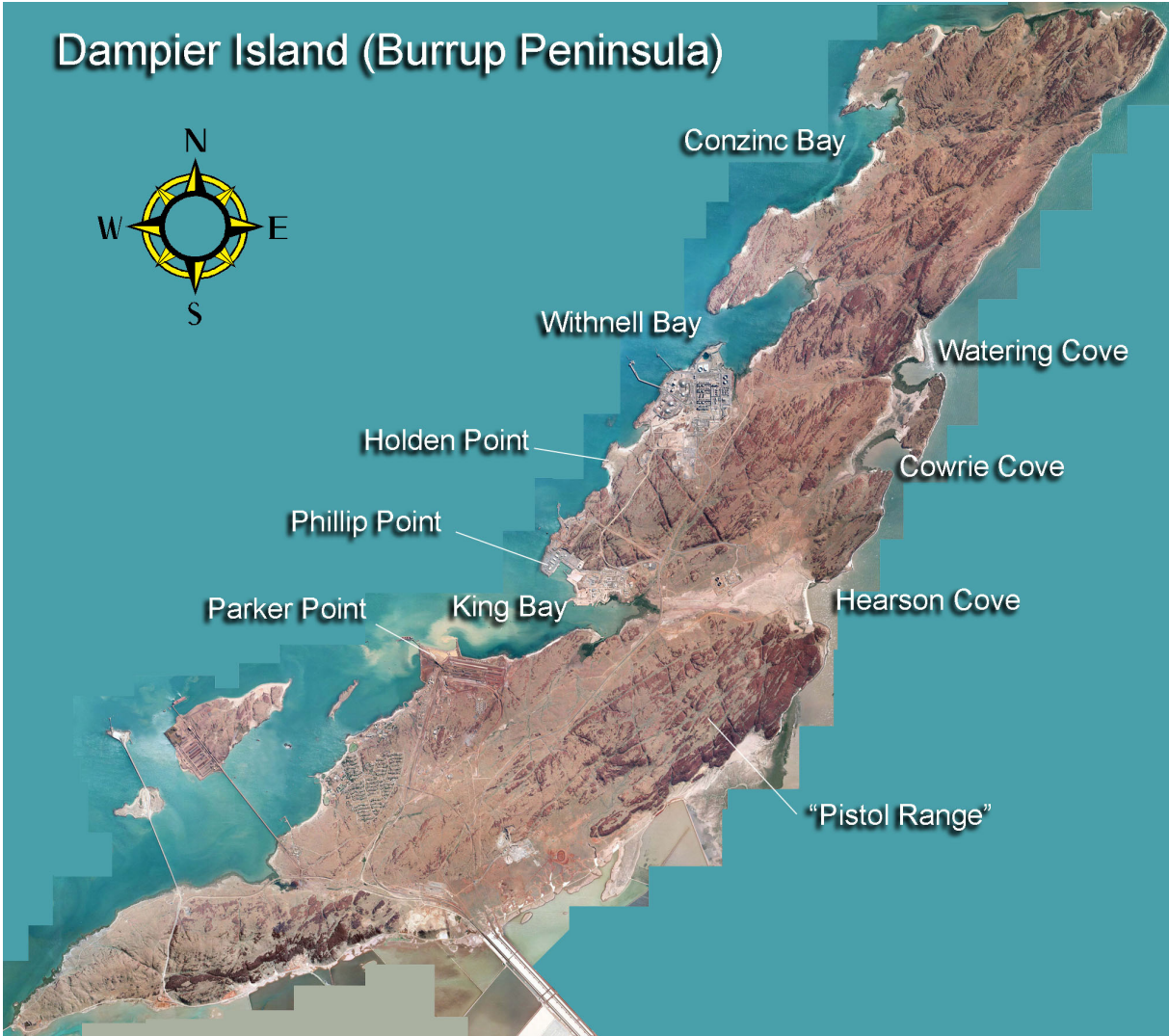


Pecked human figure spearing a macropod.



Recent fish motif and an older human figure

The more recent petroglyphs in the Dampier Archipelago include a wide range of subjects including fish and other marine animals, human figures and representations of economic activities such as hunting.



Industrial development and archaeological investigation

The development of iron ore deposits in the Pilbara in the early 1960s led to the conflict in values between industry and heritage that exists today. Depuch Island, about 100km to the east of the Dampier Archipelago, was considered as the site of a possible port. However, a Western Australian Museum study there in 1962 recorded thousands of engravings and led to the state government abandoning Depuch Island as a port site. Instead, attention turned to the Dampier Archipelago where by contrast the decision to establish facilities was taken without regard to possible heritage values. This set a pattern of regional planning which took little account of what were increasingly recognised as significant heritage values.

In the mid 1960s the township of Dampier was established with the development of port facilities at Parker Point and East Intercourse Island, and later on Mistaken and Mid Intercourse Islands, for exporting iron ore from the Hamersley Ranges. A causeway was built across the tidal mudflats, connecting Dampier Island with the mainland and forming what is now known as the Burrup Peninsula. A salt production industry was also established. No one knows the extent of damage to Aboriginal cultural heritage in the course of these constructions.

Archaeological investigation in the Dampier Archipelago goes back to the late 1960s. Robert Bednarik began recording sites in 1968 while he was working for a mining company based in Dampier. He recorded hundreds of sites, travelling the whole of the Burrup on foot. Most of his work is as yet unpublished. In the early 1970s F.L. Virili, project engineer for Dampier Salt, also recorded rock art in the area. In 1977, he published a description of several significant complexes from Dampier Island and some of the other islands. Some of these have hundreds of petroglyphs and are rich in other cultural remains. Gum Tree Valley and Kangaroo Valley for example form a site complex more than 1km long, including a wide range of petroglyphs, in varying styles and techniques, and all stages of weathering, as well as camp sites with large shell middens and artefacts, stone arrangements and grinding patches.

In 1970, the Department of Aboriginal Sites (DAS) was established within the Western Australian Museum to take responsibility to record and protect Aboriginal sites, and in 1972 the Parliament of Western Australia passed the *Aboriginal Heritage Act*. Members of staff recorded further sites, including several on Gidley Island and also encouraged Virili in his recording efforts. The shell midden at Skew Valley was excavated in 1974 by DAS staff member Robert Bevacqua. Subsequently, French archaeologist Michel Lorblanchet conducted further excavations at the Skew Valley midden and made detailed records of the Gum Tree Valley site complex. Aboriginal beliefs about the petroglyphs of Dampier Archipelago were also recorded at this period by DAS anthropologist Kingsley Palmer.

In 1978, the area became the focus of development of the North-West Shelf natural gas field. There was no planning process that sought to minimise impact on Aboriginal heritage, let alone a comprehensive heritage assessment. Instead, Woodside selected two alternative preferred locations for the onshore gas treatment plant and associated facilities—Searipple Passage and the Withnell Bay/King Bay area. The Western Australian Museum's Department of Aboriginal Sites (DAS) was then involved in survey work to choose between them. As a result of a preliminary reconnaissance, the DAS team recommended the Withnell Bay/King Bay area rather than Searipple Passage. Density of Aboriginal heritage around Searipple Passage was already known to be extremely high and a northern development would have meant an access corridor, with attendant impact on heritage values along the entire length of the Burrup. Aboriginal people were not consulted. Woodside subsequently contracted the WA Museum to undertake salvage archaeological work in the development area. The DAS conducted a series of surveys of proposed development areas as part of the environmental impact assessment. In its evaluation the Environmental Protection Authority recommended that Woodside employ an archaeologist during the construction phase. At the same time, DAS stressed the need for comprehensive survey of the Archipelago. A consultancy agreement was then negotiated between Woodside and the Museum to survey, record and salvage rock art and other archaeological material affected by the development.

The Dampier Archaeological Project began in April 1980 with a three person project team. However, the project was complicated by amendments to the developer's plans, meaning that new areas had to be surveyed, and the discovery that areas scheduled for salvage turned out to be extraordinarily rich in cultural remains. A second field team started work in October 1980. A third team remained in the field until August 1981 at Woodside's request to conduct further survey salvage operations, while the original team returned to archive the salvaged material and prepare reports. In all 14 resident team members were involved over 16 months and surveyed some 15% of the Burrup.

The Dampier Archaeological Project recorded 720 registered sites of which only 315 were preserved in situ. Although the original intention was to produce a full analytical report of the project, this never eventuated. In 1984, a preliminary report and map folio described the results at a general and descriptive level. Finally, in 1987, Pat Vinnicombe drew together the available analyses into a descriptive report. Most of the finds and records were simply archived and very little was ever analysed.

The sheer quantity and richness of sites should have led to a reconsideration of the overall plan for industrial development as the Western Australian Museum survey had earlier for Depuch Island. The Dampier Archaeological Project was not a research project and thus the strategy for collecting data was of necessity biased. It was limited in scope because it was aimed specifically at recording and salvage of areas to be impacted by development. Nevertheless, the scale and quality of data recording, the size of the area examined and the intensity of the survey meant that the results should have served as a baseline for future archaeological work in the Dampier Archipelago and specifically should have guided the development of a comprehensive heritage management plan for the Burrup.

A second major survey was conducted by the Department of Conservation and Land Management (CALM) in the early 1990s. The survey was funded by the National Estate Grants Program and aimed to assess the 'cultural significance of Aboriginal sites' on the section of the Burrup Peninsula north of King Bay and Hearson Cove and nominate significant sites and areas to the Register of the National Estate.

The CALM survey was designed to provide a representative sample of sites to redress the balance of previous surveys which either did not define sampling strategy or, like the DAP, were constrained by the requirements of developers.

The CALM survey recorded 498 'sites' in 87.83km of transect and a total area of 8.78km² (about 8% of the land area of the Burrup). The results differ to some degree from the DAP survey. This is not surprising because the design of the survey strategy meant that the areas surveyed were more representative of the region (that is, not constrained by development requirements) and the results provide a more balanced picture of the region as a whole. Unfortunately the records of these sites are not currently available through the Site Register maintained by Department of Indigenous Affairs.

Since the Dampier Archaeological Project and CALM surveys, development has continued, but management of cultural heritage has received little attention in land use planning. A large number of archaeological and ethnographic surveys have been undertaken for a range of industrial projects, many of them in areas already surveyed by the Dampier Archaeological Project for Woodside's original LNG development. The two largest of these were commissioned by the Department of Resource Development and LandCorp, in 1996, in the King Bay-Hearson Cove area and the proposed Maitland Heavy Industry Estate. Only limited information on these two surveys is available through the DIA register. There were also a number of mapping problems with the King Bay-Hearson Cove survey. The Maitland Survey included the first significant investigation on West Intercourse Island, which was to carry port facilities. Large mound middens had already been reported on West Intercourse Island but not investigated.

As far back as 1980, DAS raised concerns about the impact on petroglyphs of wind borne industrial products. At that time, the physical destruction of rock art through industrial development and incidental impacts through increased visitor access were the primary concerns. However, increasing levels of air pollution have led to concerns about the possible impact of industrial emissions on rock art. In 2002, the Western Australian government established the Burrup Rock Art Monitoring

Management Committee to oversee studies designed to investigate the possible impacts of emissions on rock art. By its nature, this is a long-term project and preliminary results are inconclusive. Of course, it cannot document deterioration that had already occurred prior to 2002.

The most recent review of the heritage of the Dampier Archipelago was a desktop study conducted in early 2005 by Jo McDonald Cultural Heritage Management. The Commonwealth Department of Environment and Heritage commissioned this review to assist in assessing nominations for the Dampier Archipelago to the National Heritage List and the World Heritage List. The desktop study reviewed both published and unpublished major studies of the area. McDonald also conducted a descriptive analysis of rock art using primary records from selected sites to provide an overview of variability across the whole archipelago. The advantage of this exercise was that the motifs analysed were brought into a single frame of reference and biases and inconsistencies introduced by multiple recorders were eliminated. Sample size was also large (8386 motifs from 432 sites) and an attempt was made to achieve reasonable geographic coverage. Unfortunately, an analysis like this is necessarily restricted by the *ad hoc* nature of site recording to date, driven as it has been by industrial development. The state of the official records is also a problem, with much material unavailable or missing. Nevertheless, the Commonwealth desktop study does provide a useful review of archaeological investigation in the Dampier Archipelago and the long history of mismanagement of the cultural heritage values, drawing attention to the lack of a management plan and the inadequate knowledge base for assessing cultural significance. It highlights the richness and outstanding significance of the rock art and reiterates the conclusion of the Dampier Archaeological Project more than twenty years earlier that the entire area should be considered a continuous archaeological landscape. The report's conclusion that the 'entire Archipelago contains archaeological evidence, particularly rock art, which is of arguably extremely high scientific significance' is unambiguous.



Industrial development has a direct impact on cultural features, such as petroglyphs, through construction (right). There are also indirect impacts, such as vandalism (above), as the Dampier Archipelago becomes more accessible and visitor numbers increase.



Heritage Values of the Dampier Rock Art Precinct

There is a general consensus that the Dampier Rock Art Precinct is a place of outstanding heritage significance because of the extraordinary range and density of its archaeological remains and particularly because of the richness of its rock art. The place is significant to contemporary Aboriginal groups in the Pilbara region, particularly the recognised Native Title claimants, for its cultural and spiritual associations. It is clear that the Dampier Rock Art Precinct has been occupied for a long time period. Evidence of occupation can be unequivocally demonstrated archaeologically over the last 9000 years. There are strong grounds for inferring that evidence for occupation goes back much further than this to the earliest colonisation of arid and semi-arid central Australia at least 30,000 years ago.

Specific localities on the Burrup have been declared Protected Places under the *Aboriginal Heritage Act* (1972-1980) and some have also been listed on or nominated for the Register of the National Estate. The heritage values of the Dampier Rock Art Precinct are comparable in terms of richness, complexity and diversity of the archaeological record, and the likely antiquity of occupation, to other Australian places identified as of World Heritage Significance, such as Kakadu, the Willandra Lakes and the South-West Tasmanian Wilderness. The rock art represents a level of artistic achievement comparable to Kakadu, and like Kakadu, the area has strong cultural and spiritual significance for Aboriginal people. The Budj Bim National Heritage landscape in south-west Victoria, comprising the Tyrendarra lava flow and the associated remains of Aboriginal channels, weirs, ponds and traps for harvesting eels and other fish, was the first place inscribed on the Australian National Heritage list. This is one of the few parallels in Australia for the modification of the landscape that may be represented by the stone ‘terraces’, ‘pits’ and alignments in the Dampier Archipelago.

Although the outstanding heritage values of the area have been recognised for more than a quarter of a century, the industrial development that began in the 1960s has continued unabated. It is not known how much of the cultural heritage of the Dampier Archipelago was lost before 1972, when Aboriginal sites received legislative protection under the *Aboriginal Heritage Act* (1972-1980). There have been several attempts to estimate how much of the rock art and archaeology of the Dampier area has been destroyed since 1972. Such attempts are fraught with difficulty for a number of reasons. First, the records in the Site Register have mostly been collected within the context of industrial development and are therefore not necessarily fully representative of the whole area. The results from the CALM survey are not currently available through the Site Register. This is the only systematic site recording program in any part of the Archipelago that has been conducted outside the context of development and designed to provide a statistically valid sample of cultural heritage. Second, the way the data have been collected and stored in the Site Register is dictated by administrative requirements and is of limited analytical use. The complexity and density of cultural heritage in the Dampier Archipelago is such that registered sites often contain several cultural elements in varying combinations. The definition of registered site is also arbitrary. A single registered site may contain one petroglyph or thousands. Therefore, simple counts of registered sites are misleading. Third, nearly all the archaeological investigation in the Archipelago has been directed towards site recording and salvage. There has been almost no analytical research and therefore there is no sound basis for assigning significance or making predictive statements about the nature and distribution of cultural features. Even if the various estimates of the number of sites destroyed are valid, there is no way of knowing the significance of what has been lost.

The results of the Dampier Archaeological Project in the early 1980s should have made it clear that:

- the whole Dampier Archipelago was extraordinarily rich in archaeological heritage,
- documentation of the resource, and development of a comprehensive management plan and a framework within which significance could be assessed was a matter of urgency,
- allowing further industrial development in the absence of such a plan would result in irrevocable damage to the heritage values of the area, and

- the extraordinary density of cultural material in the Dampier Archipelago as a whole showed that the basic units of management should be site complexes or entire landscapes.

The CALM representative survey in 1993 did not modify these results and further reinforced the conclusion that what was required was the assessment and management of site complexes.

Professional archaeologists and other scientists involved in the conservation of cultural heritage increasingly recognise the importance of managing sites in the context of their relationships with other sites and their landscape. A basic prerequisite for effective and meaningful cultural heritage management is a thorough understanding of the values of the place, based on sound information. In Australia, the standards for this are set by the Burra Charter. In the case of the Dampier Archipelago, this would require basic documentation and research in order to characterise the physical record and assess the range of archaeological, ethnographic, historic, aesthetic, scientific and social values. None of this has been done.

The management of Aboriginal heritage in the Dampier Archipelago is locked into crisis mode, responding to individual applications to destroy sites under the *Aboriginal Heritage Act* (1972-1980). There is no way to make meaningful assessments of significance and, consequently sensible decisions about cultural features affected by development proposals, because no one really knows what is there. It is impossible to answer the most basic questions—about the distribution of different types of features, whether particular cultural features are common or rare, how cultural features are related to one another and to their environmental context, and what the differences and similarities are between different parts of the Archipelago, between different islands and even between different valley systems. It is not possible to identify which motifs are old and which are relatively recent, except at the most general level, nor how long the time span was during which they were produced. The little that is known is recorded in the Site Register held by DIA, which is itself riddled with errors, inconsistencies and gaps.



Conclusions

Significance

- The rock art of the Dampier Archipelago is extraordinary in its diversity and density and is probably the largest concentration of petroglyphs in the world. The range of different states of weathering indicates that the petroglyphs were produced over a long time period and the degree of weathering of certain stylistic elements suggests a likely antiquity of tens of thousands of years for at least some of the motifs. This is comparable in age to the Palaeolithic art of Western Europe.
- The petroglyphs are intimately associated with a rich and complex archaeological record with a range of elements including evidence of occupation, bedrock grinding patches, quarries and stone arrangements.
- The Dampier Archipelago has outstanding potential for archaeological research. The archaeological material provides evidence of complex adaptations to a distinctive and unique coastal environment on the margins of the present arid zone over the last 9000 years. The long time span of occupation has the potential to document human adaptations when the 'Dampier Ranges' was part of the Ice Age mainland and then trace adaptation to rising sea levels and long-term climatic changes, in the context of understanding the colonisation of the Australian continent. The complex associations between different cultural elements have the potential to yield insights into the relationships between sacred and secular aspects of life over a long time span.
- The study of the stone structures of the Dampier Archipelago is urgently required to distinguish natural from cultural features and to understand the functions of those structures that are artificial. The transformation of the landscape represented by petroglyphs and by stone arrangements and by other stone features is on a scale that is rare both in Australia and in the context of hunter-gatherer archaeology worldwide.
- The limited analytical research into the distribution in time and space of petroglyphs in particular areas and their relationship to the distribution of other classes of archaeological evidence indicates the research potential of the Dampier Archipelago.
- While this study has focused on the scientific values of the Dampier Archipelago, it is clear that the area is highly significant to Aboriginal people.

Land use planning

- Industrial development has seriously impacted the cultural heritage values of the Dampier Archipelago since the 1960s resulting in the physical destruction of hundreds of cultural features, and thousands of individual petroglyphs.
- The process of decision-making with respect to the destruction of cultural heritage is not based on a sound and comprehensive knowledge of the values and significance. Rather, it is primarily based on the requirements of developers.
- The original decisions to site infrastructure and industrial facilities in the Dampier area did not consider cultural heritage values. The results of these decisions have continued to shape all subsequent land-use planning on the Burrup even though the outstanding heritage significance of the area has been evident since the early 1970s. The most recent agreement perpetuates the arbitrary division between conservation reserve and developed land, based on the original unsound decisions. The entire Dampier Archipelago is of outstanding heritage significance and should be managed as a single unit.
- Past practices of record keeping, site recording standards and survey methodology have failed to develop a reliable and comprehensive data base on which land use planning decisions can be based. Although a large amount of data has been collected relevant to assessing heritage values in the Dampier Archipelago, very little of this has been analysed. The analysis of this substantial amount

of archived data vital to provide an informed basis for assessing significance and making management decisions.

- The density of cultural features in the Dampier Archipelago and the high level of integrity of cultural landscapes over the whole area mean that the appropriate scale of management and planning should be associations of cultural features or cultural landscapes rather than individual registered sites. The present system of approval to disturb individual registered sites under Section 18 of the *Aboriginal Heritage Act* (1972-1980) is disastrous for heritage conservation.
- The development of a comprehensive heritage management plan for the whole of the Dampier Archipelago is a matter of urgency.
- Over the long term, industrial development is incompatible with the cultural heritage values of the Dampier Archipelago.



Large outline-style land animals, like this kangaroo, are believed to be older than the rise in sea level at the end of the last Ice Age, that is, more than 10,000 years old

The Dampier Archipelago: the last 300 years

1699	William Dampier anchors off one of the islands and records signs of burning and smoke in the distance
1801, 1803	French scientific expedition under Nicolas Baudin visits Depuch Island
1818	Phillip Parker King visits the Dampier Archipelago during a survey of the NW coast of Australia
1840s	American whalers active in the Dampier Archipelago
1861	Explorer Francis Gregory establishes a base at Hearson Cove to explore inland as far as the Ashburton and De Gray Rivers
1863	Port established at Tien Tsin (later Cossack). Walter Padbury and John Wellard establish first pastoral runs in the region
1864	John and Emma Withnell establish a station at Mt Welcome
1865	J.P Stow explores Dampier Archipelago
1866	Smallpox epidemic. Overland stock route established from Geraldton to Roebourne. Townsite of Roebourne gazetted
1867	Pearling industry begins, with Aboriginal and Malay divers
1868	Reprisal raids, known as the Flying Foam massacre, kill large numbers of Yaburara people
1870	Another smallpox epidemic. Whaling station established on Malus Island.
1870s on	Dampier Archipelago becomes a major pearling centre and commercial fishery
1872	Malus Island whaling station closes. Townsite of Cossack gazetted.
1873	Copper discovered near Roebourne
1875	John Forrest completes survey of Nickol Bay district
1886	Aboriginal Protection Board established
1888	Gold discovered in the Pilbara
1900	Pearling fleet moves to Broome
1908	Proposal to build a railway from Marble Bar to the coast to service the West Pilbara Goldfields and Depuch Island suggested as the site for a port
1961	Development of iron ore in the Pilbara leads to new proposals for a deep water port at Depuch Island, about 100km to the east of the Dampier Archipelago
1962	Western Australian Museum expedition to Depuch Island. Australian Academy of Science recommends the entire Dampier Archipelago be listed as an A class reserve.
1963	Hamersley Iron and Dampier Salt begin operations on Dampier Island. Causeway constructed connecting Dampier Island to the mainland to form the Burrup Peninsula
1966	Dampier townsite established. First iron ore shipment from Dampier.
1968	Karratha established
1968-70	Robert Bednarik, project manager for an engineering firm based in Dampier. Records archaeological sites throughout the Pilbara, especially rock art on Dampier Island
1970-6	Enzo Virili, Project Engineer for Dampier Salt. Documents major rock art complexes, and reports damage to the Skew Valley midden
1972	Department of Aboriginal Sites established at the Western Australian Museum, with Warwick Dix as the first Registrar of Aboriginal Sites
1972	Aboriginal Heritage Act (WA) passed. Hamersley Iron constructs port facilities at Parker Point and East Intercourse Island. Discovery of natural gas on the North-West Shelf.
1974-5	Michel Lorblanchet excavates Skew Valley midden and makes detailed records of petroglyphs at Skew Valley and Gum Tree Valley complexes
1974	Commonwealth and State governments initiate the Pilbara Study, for planning resource development. Registrar Warwick Dix writes a report on Aboriginal heritage that is not included in the Pilbara Study.
1978	Woodside Petroleum begins environmental assessment for the development of onshore gas treatment plant and facilities on the Burrup. Two alternative preferred sites—King Bay/Withnell Bay and Searipple Passage—identified. DAS conducts preliminary field reconnaissance of the two alternative sites and recommends the southern option, because of the quantity of Aboriginal sites at the northern end of the Burrup and the associated destruction along the entire length of the Burrup if the northern site were chosen. DAS reports on archaeological surveys of areas scheduled for development stress the richness of the cultural heritage and the need for proper management.
1979	Dampier Island officially renamed Burrup Peninsula
1980	Woodside Petroleum contracts the Western Australian Museum to undertake site salvage. Department of Industrial Development commissions a report on land and port planning on the

ARCHAEOLOGY AND ROCK ART IN THE DAMPIER ARCHIPELAGO

	Burrup (Clough/SLAM 1980). The report concludes that there was no serious conflict between industrial development and conservation. Bruce Wright, Registrar of Aboriginal Sites, responds with detailed proposal for recording, salvage, scientific investigation and preservation of sites in the Dampier Archipelago.
1980-1	Dampier Archaeological Project documents 720 registered sites, including nearly 10,000 petroglyphs.
1980	Cabinet adopts Clough/SLAM report as a guide for industrial development of the Burrup
1981	Wright updates his proposal for the investigation of the Burrup. DAS begins a National Estate site recording program and initiates consultation with Aboriginal communities in Onslow and Roebourne. The project was interrupted by urgent site recording work associated with the Harding River development and never resumed.
1984	Two areas on the Burrup declared Protected areas under the Aboriginal Heritage Act—the ‘Climbing Men’ site and an area at the north end of the Burrup. These areas, and the site complexes at Skew Valley and Gum Tree Valley, were also listed on the Register of the National Estate. Watering Cove and the Pistol Range also proposed as protected areas and nominated to the National Estate register. Lorblanchet conducts further rock art recording at Gum Tree Valley with funding from the Australian Institute of Aboriginal Studies
1987	CALM involves Roebourne Aboriginal community in inspection of sites on the Islands. Aboriginal community perform a ceremony for the Aboriginal Cultural Material Committee at Hearson Cove
1990	Dampier Salt applies to increase salt field capacity to 4 million tonnes per annum. CALM completes a management plan for the Dampier Archipelago Nature Reserves, subsequently approved by the Minister for the Environment.
1991	Pilbara Region Economic Development Overview (Pilbara 21) study makes no mention of Aboriginal Heritage
1991-3	CALM conducts a survey of the heritage values of the Burrup Peninsula with funding from the National Estate Grants program. This identifies 498 sites.
1992	State Development Department commissions a discussion paper on land use strategy for the Burrup.
1994	Following the Native Title Act of 1993, representatives of Ngarluma and Yindjibarndi people lodge a native title claim over an area of the West Pilbara including the Burrup. Preliminary studies of Maitland Industrial Estate begin. O’Brien Planning Consultants prepare a draft land use plan and management strategy for the Burrup Peninsula Management Advisory Board. This plan cannot be assessed by the EPA for legal reasons.
1996	Burrup Land Use Plan and Management Strategy released.
1995-2002	Heritage surveys conducted in association with various developments including BHP Methanol Plant, Pilbara Energy Pipeline, Plenty River Ammonia Plant, Withnell East Industrial Estate, Dampier Nitrogen, Burrup Fertilisers, Methanex, and infrastructure corridors.
1997	Department of Resources Development and Landcorp commission heritage surveys of the proposed Maitland Heavy Industry Estate, and island areas affected by the proposals. They also commission a survey of the King Bay-Hearson Cove industrial area.
2001	Woodside begins work on gas plant extension.
2002	National Trust (WA) places Dampier Rock Art Precinct on its Endangered Places List. WA State government establishes Burrup Rock Art Monitoring committee to address concerns about the impact of industrial emissions on the petroglyphs.
2003	National Trust (WA) holds a public forum to promote community consultation and awareness. World Monuments Fund places Dampier Rock Art Precinct on its List of Most Endangered Places. Burrup and Maitland Industrial Estates agreement struck between the WA state government and Native Title claimants. This includes provision for 60% of the Burrup to be conservation reserve, joint management by local indigenous communities and CALM, funding and development of management plan for the non-industrial area and substantial financial compensation for the Native Title claimants. National Native Title recognises claims of Ngarluma and Yindjibarndi but finds that native title no longer exists over the Burrup.
2004	New Commonwealth heritage legislation comes into effect. National Trust (WA) and others request emergency listing to the National Heritage List
2005	Commonwealth Department of Environment and Heritage commissions a report on the significance of the rock art. The minister defers his decision on National Heritage listing.
2006	National Trust (WA) secures World Monuments Fund support and holds a series of forums to raise community awareness.

The place has outstanding heritage value to the nation because of its:	
Importance in the course, or pattern, of Australia's natural or cultural history	Demonstrates long-term Aboriginal occupation of an arid landscape over as much as 30,000 years and adaptation to environmental transformation into an emerging coastal landscape over the last 9000 years
Possession of uncommon, rare or endangered aspects of Australia's natural or cultural history	High density and variety of petroglyphs, the density and complexity of the archaeological record, the density of stone arrangements are all uncommon at the national level. Rare motifs such as depictions of extinct species and 'archaic faces'. The presence of industry on the Burrup and future industrial expansion present both direct and indirect threats to the heritage values of the place.
Potential to yield information that will contribute to an understanding of Australia's natural or cultural history	Research into the archaeology of the Dampier Archipelago has the potential to contribute to a range of research questions; including the nature of early human adaptations to arid environments, how human populations have responded to climatic change and rising sea levels, the sociocultural relationship between inhabitants of the Dampier Archipelago and the broader Pilbara region, establishing a chronological framework for the production of rock art, investigating the changing context of rock art and how it relates to the broader region, the extent to which the environment has been transformed over time through both marking and rearrangement of the rocky landscape
Importance in demonstrating the principal characteristics of: (ii) a class of Australia's natural or cultural environments	The Dampier Archipelago is effectively a continuous cultural landscape, with an extraordinary density and diversity of cultural components over a long time span.
Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group	The extraordinary aesthetic values of the rock art are recognised nationally and internationally, both by specialists and the general community. Aboriginal custodians see much of the art as a production or embodiment of Ancestral Creative Beings and attribute ceremonial or mythological meanings to particular motifs.
Importance in demonstrating a high degree of creative or technical achievement at a particular period	The rock art shows an extraordinary diversity of style, subject matter and technique which spans a time period of about 30,000 years and demonstrates both continuity and change through time.
Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	The strong cultural and spiritual associations of Aboriginal people in the Western Pilbara, particularly the three Native Title claimant groups, with the Dampier Archipelago have been documented and widely recognised.
Importance as part of Indigenous tradition	Long-term continuities in artistic expression testify to the time-depth of Indigenous traditional connections to the Dampier Archipelago. Standing stones and mythological sites testify to Aboriginal traditional associations.

A summary of the national heritage values of the Dampier Rock Art Precinct. Criteria from <http://www.deh.gov.au/heritage/national/criteria.html>

Further reading

There is very little information readily available about the cultural heritage of the Dampier Archipelago. This list includes published articles that can be relatively easily accessed by the general reader, as well as a selection of the more important unpublished reports and some historical references. A comprehensive bibliography can be found in the long report on which this document is based.

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