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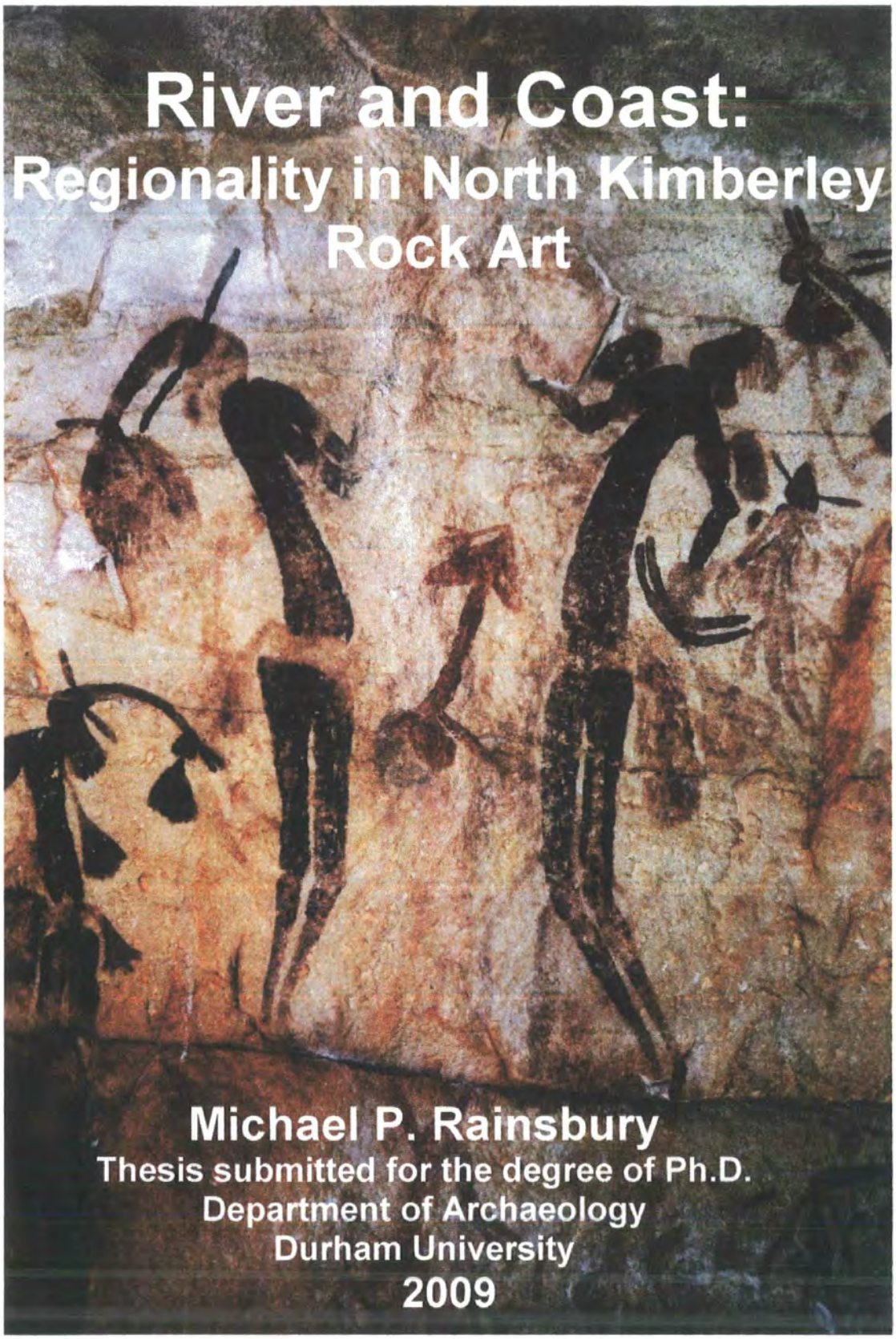
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River and Coast:
Regionality in North Kimberley Rock Art

Michael P. Rainsbury

Thesis submitted for the degree of Ph.D.

Department of Archaeology
Durham University

2009

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Abstract

River and Coast: Regionality in North Kimberley Rock Art

The aim of this thesis is to examine regionality in the rock art of the north Kimberley, Western Australia. The region is renowned for its art of polychrome Wandjina figures, totemic ancestors and creators of the land for modern West Kimberley people. Underlying them are smaller, elegantly painted human figures. These are Bradshaw Figures or the *Gwion Gwion* as they are increasingly being called. The figures are decorated as if for dancing with waist mounted tassels, sashes and elaborately decorated headdresses, and an elaborate stylistic chronology has been prepared for the Kimberley art sequence. What is missing from the literature and what this thesis aims to fulfil, is knowledge of regionality and changes in the distribution of the body of art.

Some the earliest art is from what I term the Early Phase and is thought to date to a time of aridity near the height of the ice age in Australia. Successive art periods may have occurred at times of changing climate as sea levels rose at the end of the ice age and the ensuing flooding of the exposed coastal plain. The sea level and the shoreline only stabilised in its present day position, and the present climate and environment settled to its current conditions, around 6500 years ago. I argue that the different styles of art and different locations selected in which to paint are related to the situation in the period of flux, when the inhabitants of the Kimberley were affected by changes, including the changes in their territory due to rising sea levels.

Two geographically distinct areas were selected which would have been different at the time of painting of the earlier art, one being a river and the other, the coast, as at the time of painting the elegant figures, with retreating shorelines, it would have been inland. My research shows that the painters of Middle Phase art oscillated between permanent water and more transient sources, an effect influenced by their experience of ancient changes in climate.

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Dedication and Acknowledgements

I would like to dedicate this thesis to my late father who always encouraged me in my Australian travel and rock art interests. Thank you Dad. I'm sorry you are not here to read it.

This is also dedicated to my mother who again encouraged me in my interests especially the pursuit of this Ph.D. Thank you Mum.

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All photographs and diagrams by Michael Rainsbury unless otherwise indicated.

Introduction

River and Coast: Regionality in North Kimberley Rock Art

The aim of this thesis is to examine regionality in north Kimberley rock art. The art of north Western Australia is a subject of increasing interest amongst researchers and has been the subject of a number of books (Crawford 1968, Donaldson and Keneally 2007, Mowaljarlai and Malnic 1993, Parker et al. 2007, Walsh 1988, 1994, 2000, Wilson 2006). It is also arousing the interest of the Australian general public through mention in the news media of theories concerning the elegantly painted 'Bradshaw' or *Gwion Gwion* figures of the Kimberley and early waves of people populating the continent. In spite of the publications and research articles the regional distribution of rock art is a subject that has had only brief attention, if any, applied to it in the Kimberley and so is a suitable subject for study in a doctoral thesis. Regionality is a common term in archaeology in general and in rock art studies in particular. However, its meaning is more assumed than discussed and only a few works deal with it explicitly. In Australia regionality has been explored by David (2004), Lewis (1988), Smith (1992) and Taçon (1993), and in other parts of the world by scholars such as Jones (2003), O'Connor (2005) and Ramqvist (2003).

The study of regionality in north Kimberley rock art has as objectives, first, the identification of previous research on regionality; second, the definition of the major periods and styles in the rock art of the Kimberley and their possible relationship with the archaeology of the area and chronology; thirdly, the

detailed elaboration of a database consisting of the rock art sites of two areas in the Kimberley and their comparison in terms of presence or absence of styles; and finally, the contrast of both areas as regards the social use of the spaces where rock art had been produced.

The body of Kimberley rock art has been painted over a long time period. The earliest art discovered, a piece of ochred roof fall at Carpenter's Gap, is over 39,000 years old (O'Connor 1995: 59). For the Kimberley painting tradition in which I am working, some of the earliest art is from what I term the Early Phase and comprises the Irregular Infill Animal Period art. This is dated by analogy with similar art in Arnhem Land, to approximately 20,000 years ago (Chaloupka 1993), a time of aridity near the height of the ice age in Australia. Successive art periods may have occurred at times of changing climate as sea levels rose at the end of the ice age and the ensuing flooding of the coastal plain. The sea level and the shore line only stabilised in its present day position, and the present climate and environment settled to its current conditions between 6 - 7000 years ago (Chappell & Grindrod 1983, Morwood & Hobbs 2000, Taçon & Brockwell 1995). I would argue that the different styles of art and different locations selected in which to paint are related to the situation in the preceding period of flux when the inhabitants of the Kimberley were affected by changes, including the changes in their territory due to rising sea levels.

Defining regionality

The definition of regionality I will be using in this thesis refers to variation in Kimberley rock art, whether in the body of art between one or more areas or stylistically. Style will be addressed later in this thesis. This is a broad brush approach. There are many factors which may influence the observed differences such as ethnicity, memory, gender, language, geology, climate, religion, social practises to name but a few. The subject is becoming of increasing interest in archaeological and rock art studies around the world.

For example Andy Jones, in his comparison between the rock art of Aberdeenshire and Argyll, observes a difference in the context in which art was produced. Whereas in Aberdeenshire the art is restricted to monuments and immediate environs, in Argyll it is found on monuments and on the periphery of ceremonial landscapes. He explains these differences as related to the distinct narratives of identity created in each region. In his view, similarities are repeated by the recurring nature of practice in both regions (Jones 2003, see also Jones 2007). Jones indicates that other elements in the archaeology of the area also show a similar degree of differentiation.

	Argyllshire	Aberdeenshire
Rock art	Found on monuments and on the periphery of ceremonial landscapes	Restricted to monuments and immediate environs.
Monuments	Fluid constructional history.	Pre-ordained.
Artefacts	Food vessel, less conventional depth.	Beakers, conventional depth.
Metal work	Only representation	Moulds, hoards.

Table 1: Scheme of Jones' differences
(from Jones 2003: Table 1)

For petroglyphs in the Irish rock art tradition, Blaze O'Connor presented a paper in 2005 on 'Rock art and regional identity in prehistoric Ireland', which focused on three rock art landscapes: the Inishowen Peninsula (County Donegal), the County Louth/ County Monaghan rock art group and the Dingle Peninsula (County Kerry). Research in these areas suggested that particular sites in the prehistoric landscape might have been carved by people from the wider surrounding region, whereas other places may have been created by people living relatively close by. She found that regional traditions are apparent in both the ways in which rock art panels are situated in the landscape, and the nature of the art itself, suggesting that carving practices may have been a means of expressing regional, as well as social and individual, identity.

Regionality has also been discussed by the Scandinavian archaeologist Per H. Ramqvist. He examined regional concentrations of rock art in an area of approximately 500 x 750 kilometres of central Sweden and plotted the

distribution. First he looked at the ratios of different images by region (Fig. 0.1) and then the different ways of painting elk (Fig 0.2). The figures show the regional distribution of the art.

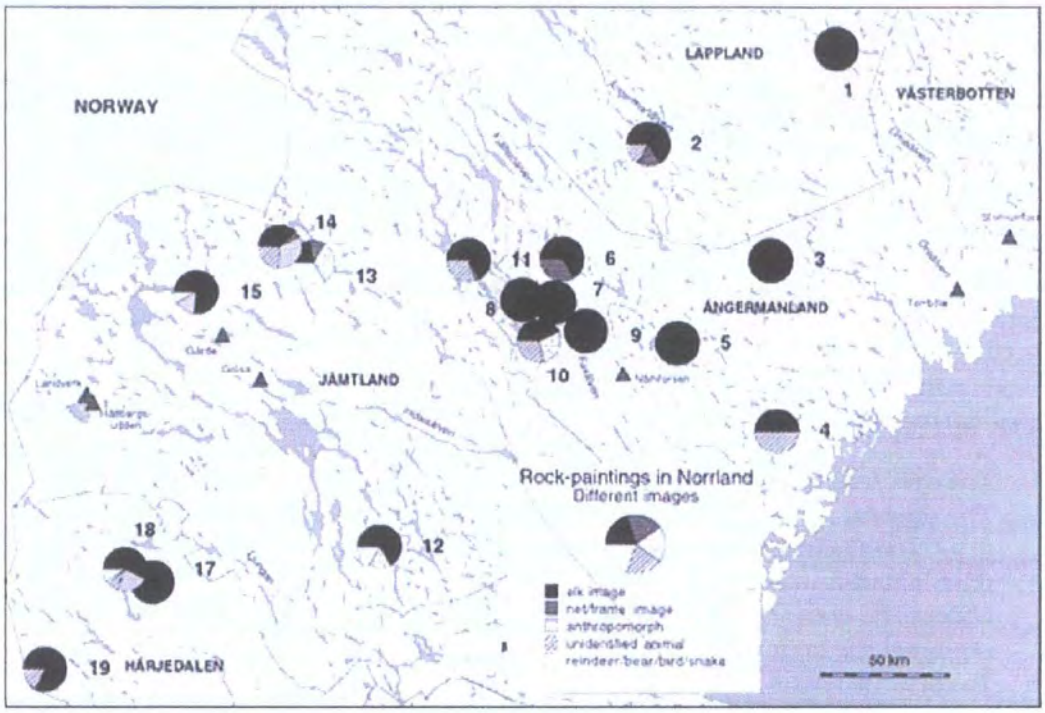


Figure 0.1 Remqvist's distribution of different images in central Norrland.
(from Remqvist 2003: Figure 7.4)

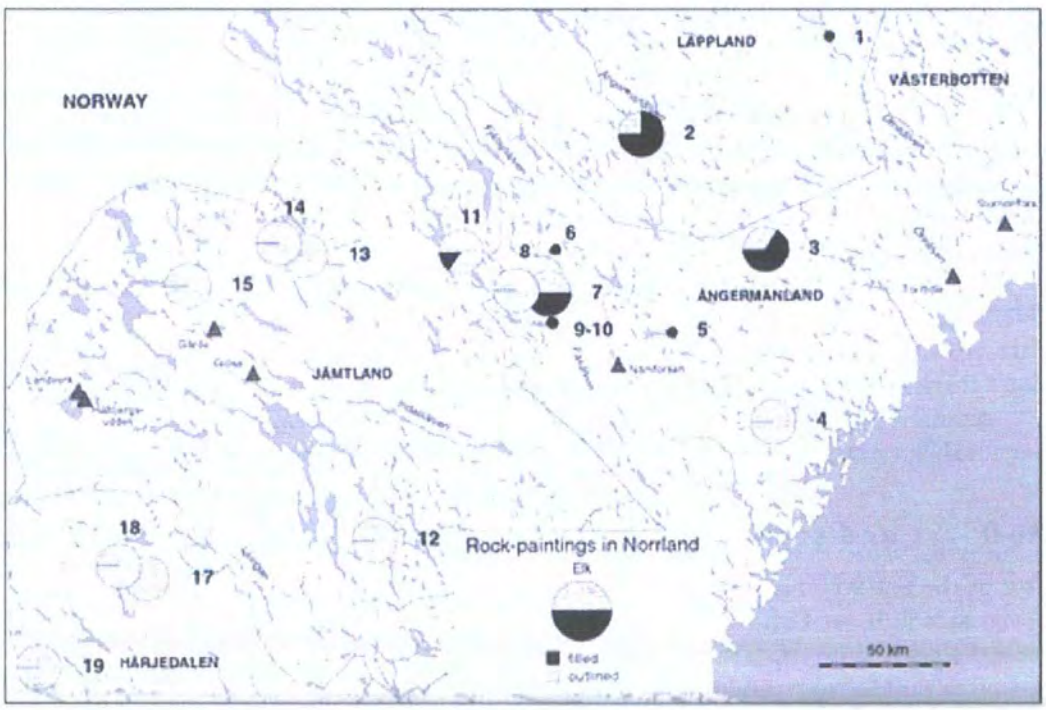


Figure 0.2 Remqvist's distribution of different ways of painting elk.
(from Remqvist 2003: Figure 7.5)

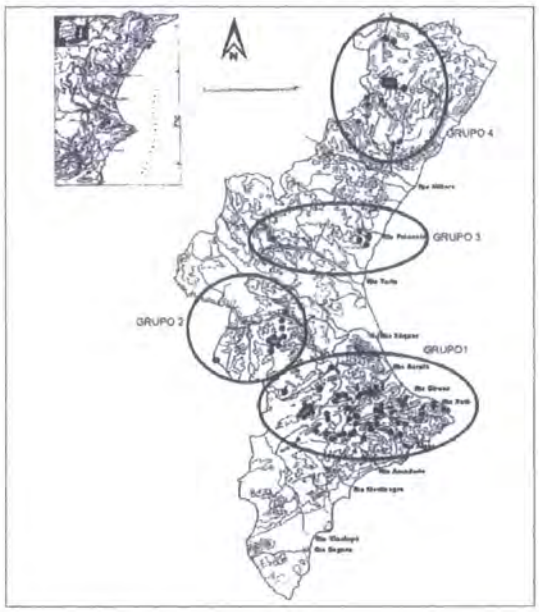


Figure 0.3 Palmira Torregrosa Gimenez's four areas of schematic rock art.

A final example is by Palmira Torregrosa Giménez (2000-1) who distinguished four main areas in the schematic rock art of the Valencian Country in Spain. She undertook a traditional approach and examined the geographical spread of art sites, which she later identified as being the possible areas of ethnic groups, but did not try to differentiate the art on the basis of chronology.

Regionality: a question in Australian rock art

The debate on regionality in rock art literature is connected with changes in social relations and constituent social networks. Morwood (1984: 370) has observed an increase in regionality in the central Queensland highlands in conjunction with archaeological change which he takes to be a restructuring of social relations resulting from the closure of social networks. Paul Taçon observed there is a diversification of style which intensified during the Holocene (2001). Claire Smith (1992: 34) observed that although visual communication bonds people, designs in geometric art showed regional variation back as far as the Pleistocene. Factors leading to regionality can include increasing population density and changes in human dispersal patterns resulting in greater territorial bounding resulting in the closure of social networks (1992: 34). In her comments she says "bounding was visually articulated by relatively heterogeneous art styles that facilitated social differentiation between people" (1992: 34).

Darrell Lewis (1988: 1) took ideas of social networks to analyse the ancient paintings of humans, Dynamic Figures in Arnhem Land, and compared them

with Bradshaw Figures in the Kimberley. He proposed that lowered sea levels resulting from northern hemisphere glaciation would have exposed the coastal plain so forming what he termed the Bonaparte Catchment (1988, 1997). This created a single information network linking what are now two separate areas and enabled the flow of cultural information. In his model there is already a regional difference in art styles at this time though with many similarities. With the flooding of the coastal plain the information networks were disrupted and the art styles began to diverge. He dated the disappearance of boomerangs from the art traditions in both regions from this time (1988: 1). This idea may explain the similarities in style between the earlier Irregular infill Animal Period of the Kimberley and the Large Naturalistic Figures Complex of Arnhem Land as the art may have dated from when the information network was still intact.

In recent art traditions regionality is observed more readily than in older art. In Arnhem Land Taçon has found regionalism in recent freshwater period rock art in his three zones of interest and that sub styles can be isolated corresponding to linguistic territories (1993: 114). These territories are smaller than in the past (1993: 119). In Cape York Bruno David (2004) has observed that over the last 3500 years a highly regionalized artistic tradition has developed. Marine themes are common on the coast to the north. Further south on the Koolburra Plateau terrestrial animals are common with no marine themes. One new design is that of an echidna-human therianthrope which only occurs in a restricted area and accounts for more than a quarter of the area's paintings (2004: 162). Other surrounding regions have their particular ways of paintings. This can be the mode of painting at Laura where, for example, internally decorated designs of parallel lines, dots and crossed lines are used. South of the Palmer River anthropomorphs are usually depicted upside down (2000: 163). There is also a sharp boundary in painting styles, the Mitchell and Walsh Rivers, where there is a sudden change from northern figurative art to non-figurative. From archaeological evidence of ochre deposition, David is able to say that the presence of regional artistic networks occurred at a time of increased activity in painting (2004: 164).

The factors that might influence regionality have been listed earlier and it is worth exploring some of the ideas. For example language groups may have an effect on the art with designs changing on crossing from one group to another (McDonald 2000, Playford 1960). In the Kimberley this is seen with Wandjina figures found in the west Kimberley and snake paintings in the east. The location of art whether at the centre of a group area or at its periphery is of importance as a body of art may illustrate a greater diversity of designs in the centre of a territory than towards it edge. The nature of a group's social boundary has an impact on the art produced. A comparison by Claire Smith (1992) of Western Desert acrylic paintings with Arnhem Land bark paintings found there is more homogeneity in art across the desert than in the more fertile north where territorial boundaries are more maintained. Practices of repainting rock art for religious purposes have the effect of ensuring the longevity of panels especially where the pigment used is unstable. This is true of Wandjina art in the Kimberley which is painted in unstable white pipe clay. Without regular repainting this art would have deteriorated rapidly and is now seen with the ending of traditional ways of life (Crawford 1968, Layton 1992).

Social factors leading to variability in rock art can be as simple as differences in subject matter or style between male and female produced art. This distinction also crosses the physical boundary as sites may be of restricted access for men or women only (Flood 1997, 2004). The issue of gender is of importance as the contribution of women to sacred and secular life has been undervalued in the past. In the late 1930s Phyllis Kaberry was one of the few female anthropologists undertaking field work in Australia. Working in the Kimberley she was able to interview Aboriginal women in a way male anthropologists were unable. Kaberry (in Layton 1992: 47) was informed that the wife of a clan leader accompanied him to painting sites at Wunda and Camera Pool for retouching 'alligator' increase sites. On the Djuri river at Nyirulu women repainted *Brimurer* the Rainbow Serpent. *Brimurer* then took red ochre from his painting to make spirit children, *jilmi*, to replace ones taken for incarnation as the newly born. From this it can be seen that women did have the right to paint at certain sites. Claire Smith has stated that women's ceremonies do concentrate on sex, fertility and procreation but these activities

have a vital impact on Aboriginal society, not just women (Smith 1991: 45). In fact male and female ceremonies benefit society by establishing spiritual and economic security. Smith wonders whether women, having an importance for Aboriginal culture, would have responsibility for a subset of paintings. Vinnecombe (in Smith 1991: 47) states in the Kimberley much painting was performed by people possessing *maban*, a spiritual quality, on behalf of the site's Traditional Owner. Children born with this will not take on the role until after circumcision (men) and puberty (women). These people could be the principal rock art painters (Smith 1991: 48). We must also take into account the gender roles at ceremonies. The painting ceremony might only be spiritually valid if women were present performing their ritual songs. Painting alone would not achieve the desired ends (Smith 1991: 48).

The physical nature of the rock canvas has an effect on the presence and type of art produced. Fine bedded sandstones lend themselves to painting as the nature of the rock leads to smooth rock canvases. Also the pigment applied can permeate into the rock leading to greater longevity of the image. The presence of natural shelters enhances the survivability of painted art protected by them. Paintings outside are subject to the elements and are not expected to last for long. A further aspect of the geological influence on art is that sandstones with their softer material may encourage the creation of petroglyphs whereas harder granites will not. In the southern Kimberley the limestone Oscar Ranges support paintings of Wandjinas and other recent art. The erosional nature of limestone means that any earlier painted art would have been lost by the retreat of the rock surface with time. In the case of Bradshaw Period art there is as little evidence as to whether or not it was actually painted there, though Blundell (1975) reported seeing one figure. Differences in geology have a regional effect. Ancient painted art of elegant human figures is found in both the Kimberley and Arnhem Land, but generally not in the intermediate region of the Victoria River District though there are exceptions (Taçon et al. 1999). There is no reason why this area should be devoid of such art and it seems more likely that the friable nature of the rock surface here, coupled with the lack of suitable surfaces, has removed what was originally painted.

Variation in climate may lead to a change in the ecology of an area with time and an associated change in the art's depicted subject matter. This is seen in northern Arnhem Land where Dynamic figures are painted with boomerangs reflecting their use in a more open woodland environment (Lewis 1988). Boomerangs drop out of use, as depicted in art, with changing climatic conditions and a wetter climate. Again in Arnhem Land the change in ecology with time, post sea level stabilisation and the shift from pre-estuarine, estuarine to freshwater conditions along the rivers of the coastline is reflected in the change in subject matter of the art. Subjects change from terrestrial fauna to marine and then freshwater fish (Chaloupka 1993).

The variability of observed rock art is the result of two competing factors of the social (human interaction), and the physical (geology and climate). The interplay between the two produces the range of art found today. However this is what currently remains through taphonomic survival and may not be representative of what was originally produced or fully illustrate the artists' intentions. This is also true of the geographical spread of the subject matter.

Assessing regionality in north Kimberley rock art

Regionality in Kimberley rock art has been known almost from its earliest discoveries with explorers and surveyors finding the art in particular areas, usually the north or north west. Anthropologist Adolphus Elkin, as the first professional researcher, marked out the boundaries of the west Kimberley Wandjina cult in 1928. Other expeditions documented the distribution of Wandjina art and the earlier Bradshaw art of elegantly painted human figures, but it was not until the work of Father Ernest Worms in 1955 that a distinct regionality in Bradshaw art was recognised.

In the 1980s Grahame Walsh distinguished between two types of elegant figure, the 'classic' Bradshaw and *Kiera-Kirow* of Napier Broome Bay (Walsh 1988). Although in later publications the idea was not elaborated on, a

multitude of other figures sorted by periods, groups and sub groups were introduced. Grahame Walsh's last publication in 2000 provided fifteen types of Bradshaw Figure, and nine types of 'Clothes Peg' Figure but over a third of them turn out to be regional variations predominantly from the area of the northern Gardner Plateau and to a lesser extent the Mitchell Plateau. In one of his early papers David Welch (1993b) briefly commented on a regional variation of figures with a difference in material culture seen on the Mitchell Plateau and a different way of painting, more static, seen near the King George River. While some researchers privately query the range of figures Walsh identified, the question remains as to whether regionality is observable in the earlier periods of Kimberley rock art.

In my research I have attempted to investigate regionality and issues arising from it. My dissertation is divided into three sections: Part 1 introduces the Kimberley through the initial exploration and history of the area before discussing rock art discoveries. In this way the personalities involved and the art discovered are presented before moving on in Chapter 2 to a review of the current state of knowledge concerning the archaeology, rock art and scientific dating of the art. Throughout the analysis regional comparisons to Arnhem Land are indicated, reinforcing that the Kimberley cannot be discussed in isolation. Part 2 of the thesis deals with field work and the ensuing data collection and analysis. In Chapter 3 I describe my research methodology and the selection of two regions to study. In this I was fortunate in being able to settle on Drysdale River National Park and Far Away Bay on the northern coast. In this way my surveys covered two distinctive geographical areas. My surveys resulted in obtaining data from 149 art sites. The analysis of this body of information is the subject of Chapters 4 and 5. In these I investigate evidence of regionality in the two survey areas. First I examine site location in the landscape comparing the different art traditions before looking at panel orientation. Then in Chapter 5 I use the multivariate techniques of correspondence analysis and cluster analysis to see if variations can be observed between the two study regions of river and coast and within the river region looking at differences between river and creek. Finally, part 3 comprises Chapters 6 and 7 where ethnographic information on Aboriginal

groups living in the Kimberley is used to investigate possible ways of living in the past at times of harsher climate. Chapter 6 ends with assessing whether ideas of aggregation are appropriate for the region and what it can tell us. Finally in Chapter 7 the distinctive geology of selected site complexes is analysed using architectural theory and the transition from 'space' to 'place'.

This thesis contains a large appendix in which is placed information relevant to this study. To aid in undertaking field work I prepared site reference cards to enable the identification of motifs (Appendix B) along with a generalised site survey form (Appendix C). The main body of work though is site survey forms of all 149 art panels visited. They are presented in a comprehensive catalogue in Appendix D.

Chapter 1.

Kimberley Exploration and Rock Art Discoveries

In this section I will discuss the initial exploration and history of the Kimberley with particular emphasis on the discovery of rock art, before moving on to the various researchers who have contributed to this study. I will finish with an account of current researchers before addressing future issues arising out of planned industrial development. In this way, the people, places and rock art important in this thesis will be introduced and my own project put in context.

The wealth of rock art to be found in the Kimberley was initially discovered by explorers and missionaries in the nineteenth and early twentieth centuries. By the mid twentieth century the pattern of discovery was the result of active research programmes by professional anthropologists and archaeologists. The initial discoveries were found during the period that Mulvaney has denominated 'proto-historic' for Kimberley Aboriginal people, a time occurring after initial white contact but before permanent European settlement in the region (Mulvaney 1969:14). As regards rock art, mention was made by Grey and Bradshaw in the nineteenth century and by Elkin, Schulz, Lommel and Worms, amongst others, in the mid twentieth century before the work of Crawford, Walsh and Welch in later years. The geography of the Kimberley and routes of the various explorers mentioned in the text is shown in the map below, Figure 1.1.

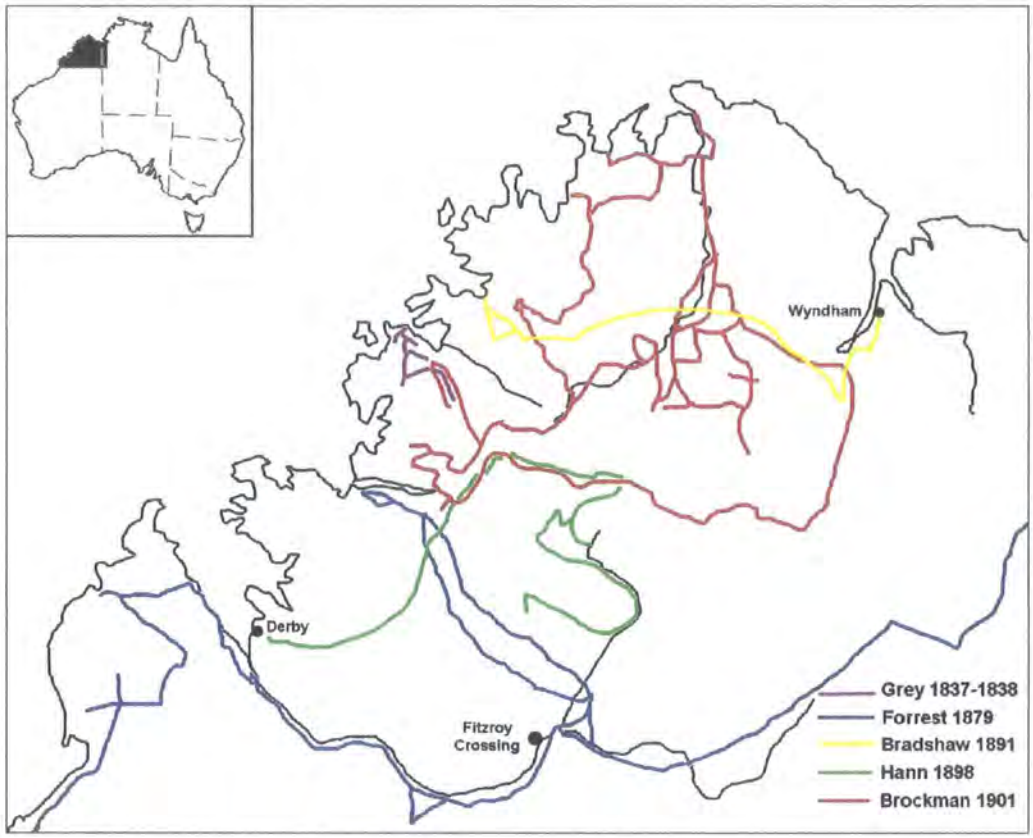


Figure 1.1 The routes of explorers: Grey, Forrest, Bradshaw, Hann and Brockman. (Adapted from the Australian Geographic Map: The Exploration of Australia (Australian Geographic 1995:40))

Initial Contact

The first foreign contact with the Kimberley coast and Aboriginal people there is thought to be by Indonesian fishermen from the South Celebes and Macassar who were fishing for trochus shell and sea-slug, trepang or *beche-de-mere* (Blundell 1975: 32, 33, Crawford 1968: 17). The sea slug was dried and smoked at onshore encampments before being taken back to Indonesia and sold on to Chinese merchants for export to China. The bark of a mangrove tree was used to give the trepang a distinctive red colour, and the tree's Indonesian name, Kaju Jawa, was applied as a name for the Kimberley (Crawford 2001: 76). Macassan trepang camps are present along the Kimberley coast but their use is thought to have had little influence on either the culture of the inhabitants or the rock art of the area, unlike in Arnhem Land (Blundell 1975: 33, Crawford 1968: 17). Macassan fleets were met by European surveyors such as Baudin in 1803, and a fleet sailed into Camden Harbour in 1865 (Crawford 1968: 61).

The Portuguese colonised the island of Timor to the north of Australia in the early sixteenth century. Contemporary maps of the time refer to 'India Meridional' as a name for the Australian continent. The 1536 Dauphin Map shows a landmass named 'Java La Grande' with an inlet on the north west coast possibly resembling King Sound (McGregor and Chester 1992: 25). The first confirmed landing on the West Australian coast was by Dutchman Dirk Hartog in 1616 at Shark Bay. At the time the Dutch were in control of the East Indies and sailed there by heading east from southern Africa, taking advantage of high latitude westerly winds before heading north. Over 200 ships were operated by the Dutch East India Company on the route to Java (Bednarik 2006: 11). The western coast of Australia was skirted on their way north and many ships were wrecked on the shoreline (McGregor and Chester 1992: 25), such as the Batavia in 1629, the Vergulde Draeck in 1656 and the Zuytdorp in 1712 amongst others (Bednarik 2006: 11, Hiddens 1998: 137).

The first recorded European visit to the Kimberley was by Abel Tasman in 1644 who sailed from Java to Cape York in north-east Australia and then westward to the Kimberley before turning south to the Ashburton River, charting the coastline. Forty four years later in 1688, the privateer Cygnet under Captain Read landed on Cape Leveque by King Sound in the west Kimberley.



Figure 1.2 Captain William Dampier: Buccaneer and Naturalist (Thomas Murray in Dampier 1998)

Amongst his crew was buccaneer William Dampier (Fig. 1.2) who published his experiences of the voyage in 1697. Dampier was an amateur naturalist and his book, *A New Voyage Round The World,* provided the first account of the life and customs of the Aborigines of what was then called New Holland. Dampier returned in 1699 in the Roebuck. It was on this second visit that he collected botanical samples, gathering wildflowers, bottlebrush and spinifex, preserving them between sheets of paper. He also described and illustrated

animals such as the "hippopotamus" (dugong) and "racoon" (wallaby) (Amalfi 1999). The Roebuck sank off Ascension Island in 1701 during his return to England. Dampier was able to rescue only a portion of his collection, which is held today at the Sherardian Herbarium in Oxford.

In succeeding years the Dutch were visitors to the coast on their way north to the East Indies, and Willem de Vlamingh in 1696-97 surveyed part of the Western Australia coast producing the most accurate map of that time (Playford 1998). A century later the coast was surveyed by the French explorer Baudin in 1801 and 1803. Matthew Flinders charted the Kimberley coast as part of his survey of Australia in 1803. From 1818 Captain Phillip Parker King made four separate voyages to survey the northern coastline. He sailed to Cambridge Gulf on his second voyage in 1819. Although landing frequently he had few contacts with Aboriginal people. His second encounter in three years unfortunately ended violently (Blundell 1975: 37, McGregor and Chester 1992: 168).

The Nineteenth and Early Twentieth Centuries: the Era of Explorers

The Discovery of Rock Art in the Kimberley: Sir George Grey



Figure 1.3 Sir George Grey (McGregor & Chester 1999:171)

The presence of rock art in the Kimberley was announced in 1841 by Sir George Grey (Fig. 1.3), in an account of his expedition to the Glenelg River in 1837 - 1838 (Grey 1841). Grey was the leader of an expedition of discovery charged with travelling overland from the Kimberley through Western Australia, down to the Swan River Colony, the site of modern day Perth. Initial forays into the country proved difficult with Grey almost perishing through lack of water (McGregor and Chester 1999: 170).

This was a precursor to the difficulties of travel his expedition was to face. His party travelled through harsh country at the height of the Wet Season in high temperatures, high humidity and had tropical downpours to contend with. Relations with the Worora people broke down with skirmishes and fatalities occurring. Grey was wounded during one such encounter. Grey's expedition was a failure, as the group had to be evacuated by sea by HMS Beagle after a short while. However, accounts of the rock art found and the published sketches fired the imagination of the public. Grey found two art sites with paintings of mouthless people (Grey 1841: 201-204, 213-215) (Fig. 1.5 below). These are known today as *Wandjinas*, depictions of totemic ancestors of the local western Kimberley people, and spirits of the wet season. Grey found a rock shelter (Fig. 1.4) with four heads clustered together (Fig. 1.5c, d) facing towards a full length painting of a similar figure on the roof. Another site he found had a full length 'clothed' figure with what appeared to be a turban decorated with writing (Fig. 1.5a). Wild speculation as to the origins of this art and possible translations of the writing on the turban lasted for almost 100 years (see Mathew 1894 for an example of this) until it was finally proved in the 1920s by University of Sydney anthropologist Adolphus P. Elkin (Elkin 1930) that the art was definitely Aboriginal in origin and design.



Figure 1.4 Grey's cave with Wandjinas on the wall and ceiling.
(Grey 1841 in Walsh 1988: Fig 22)



Figure 1.5a Grey's Wandjina as sketched.
(Grey 1841 in Walsh 1988: Fig 26)

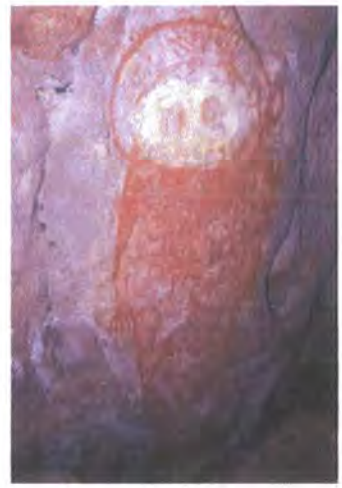


Figure 1.5b Grey's Wandjina in 2002
(Donaldson & Kenneally 2007: 6)



Figure 1.5c Grey's female Wandjinas.
(Grey 1841 in Donaldson&Kenneally 2007:7)



Figure 1.5d Grey's female Wandjinas in 2002
(Donaldson & Kenneally 2007: 7)

Figure 1.5 Grey's sketches of rock art compared with recent photographs.

Grey's two caves were rediscovered in June 1947 by Howard Coate, a missionary working in the northern Kimberley (Elkin 1948). Coate was able to confirm, as had been suspected, that Grey had used artistic licence in his sketches and "exhibited workmanship much better than seen elsewhere" (Elkin 1948: 3). Grey's main painting, the red robed figure of his 29th March cave, was found not to be wearing a robe. The legs are close together with the line separating them indistinct. Further, the width of the painting decreased from the hips to the ankles (Elkin 1948: 4). Coate found the markings on the headdress were difficult to make out due to their being faded and obscured by insect nests. His Aboriginal guides said the markings were zigzags representing lightning which agreed with the mythology of the site (Elkin 1948:14). Western Australia Museum archaeologist Ian Crawford would

find a different cave in the 1960s which he regarded as a contender for Grey's original one. The markings on the headdress of this Wandjina were due to the differential weathering of the multiple paint layers (Crawford 1968: 68).

After Grey: the Settlement of the Kimberley

Twenty six years after Grey's departure, in 1864, settlers arrived in Camden Sound, as part of the Camden Harbour Pastoral Association, with the aim of settling the area. They were encouraged to settle here by glowing accounts of the area, such as those by Lieutenant Stokes on the Beagle during Grey's expedition, and of reports of the importance of Camden Sound to this part of the coast (McGregor & Chester 1999: 173). The prospective settlers soon found that water was scarce and grass for livestock feed had been burnt off. One of the three transportation ships struck a reef with the loss of its captain and other settlers died from the harsh conditions. Relations with the local Wororra people broke down and a guerrilla war ensued. Within a year all the sheep were lost or had died and the remaining settlers abandoned the harbour. The full story is told by archaeologist Ian Crawford (2001).

In the fifty years after Grey's discoveries exploration of the Kimberley moved slowly, with great difficulty being had in crossing the King Leopold Ranges in the south west. In 1879 Alexander Forrest (Fig. 1.6a) travelled into the Kimberley from Beagle Bay. His party explored the Fitzroy River and crossed the Oscar Range. The King Leopold Range, however, was impenetrable. The party arrived at Walcott Inlet but was unable to travel further north and so retreated back to the Fitzroy River. Forrest decided to head east for the Overland Telegraph Line in the Northern Territory. In so doing he crossed the Ord and Victoria Rivers, naming the former after the then governor. Explorer Frank Hann (Fig. 1.6b) made the first successful crossing of the King Leopold Ranges as part of his journey to the Prince Regent River in 1888 to 1889. He named both the Isdell and the Hann Rivers.



Figure 1.6a Alexander Forrest
(McGregor & Chester 1999: 176)



Figure 1.6b Frank Hann with Aboriginal companion and guide.
(McGregor & Chester 1999: 176)

Figure 1.6 The explorers Alexander Forrest and Frank Hann.

The pearling port of Broome was established on the north west coast in 1883 and the town of Derby was surveyed in the same year. Gold was discovered in Halls Creek in 1885 and this led to the arrival of ten thousand prospectors for the short lived, two year boom (McGregor and Chester 1999: 177). The port of Wyndham in the east Kimberley opened in 1887. During this period of exploration a land grab was taking place in the southern Kimberley. In Perth the Commissioner of Crown Lands was receiving applications for land near the Fitzroy River. Alexander Forrest took a lease of 5000 acres at King Sound and in 1880 set himself up as a land agent in Perth (Blundell 1975: 41). Speculators were attracted to the region as a result of Forrest's glowing comments about the area (McGregor and Chester 1999: 176). Herds of cattle were driven in epic journeys of thousands of kilometres overland to the newly established cattle stations. By 1898 a band of station properties stretched from Derby to Wyndham and a "'wild west' frontier situation" had developed (Ryan 1993: 126). The station properties and their introduction of new animals had an almost immediate environmental impact, as in 1905 the Fitzroy River valley reported disastrous soil erosion (Ryan 1993: 126). In only a few years the rapid European encroachment into the Kimberley also had a devastating effect on the traditional way of life of the Aboriginal population. Forrest wrote a Native Commission Report in 1883 where he found that Aboriginal labour provided "nearly all the shepherding, shearing, stock riding and fencing and is

a key factor in pearling industry" (Ryan 1993: 125). The destruction of the traditional way of life is demonstrated in that, in a little over ten years by the 1890s, the Aboriginal population in the southern Kimberley had abandoned their traditional lands for "feeding depots, mission compounds, town reserves or cattle stations" (Ryan 1993: 126).

Bradshaw's Expedition



Figure 1.7 Joseph Bradshaw (Wilson 2006: 18)

The following explorer to make an impact in the study of rock art arrived in the area during the period of expansion and land grab after the Halls Creek gold rush. Joseph Bradshaw (1854-1916) (Fig. 1.7), a pastoralist from Melbourne, departed from Wyndham in March 1891 to search for usable grazing land in the Kimberley. In the Roe River area of the west Kimberley (though at the time he thought he was near the Prince Regent River) he had encounters with groups of Aborigines dressed, apparently, for a ceremony. In a nearby valley Bradshaw found rock shelters decorated with paintings of human figures. They were depicted with tassels hanging from their hair and waist. As Bradshaw put it:

> "We saw numerous caves and recesses in the rocks, the walls of which were adorned with native paintings, coloured in red, black, brown, yellow white and pale blue. Some of the human figures were life-size, the bodies and limbs very attenuated, and represented as having numerous tassel shaped adornments appended to the hair, neck, waist, arms and legs."
> (Bradshaw 1892: 100)

Bradshaw's description of the group of Aborigines he encountered is worth repeating as their decoration, in particular the winged headdress, is also worn by contemporary western New Guinea tribesmen for ceremonies (Walsh 2000: 276), and is seen on painted rock art in the Drysdale River region (Schmiechen 1986, 1993). He described the group as follows:

> "They were all armed with spears and nullis... but none had boomerangs. Most of them were grotesquely painted with stripes of red and white, alternating with the black stripes of their natural hue. Two or three of them had imposing head-gears, made, I imagine, of the pliable bark of the papyrus tree. We noticed one man in particular who had two huge appendages extending upwards and obliquely outwards from the top of his head, about 3 ft. long; but whether they were made from the wings of a large bird, or were pieces of bark we could not ascertain, as he kept in the background far up the range" (1892: 99).

Bradshaw published an account of his expedition in 1892 along with a sketch of the art (Figs. 1.8, 1.10). The panel he drew remained undiscovered for over a century until relocated in 1997. Mike and Wendy Cusack, connected with the Perth based Kimberley Society, had searched for the site on previous bushwalks and identified a possible location, to be confirmed on a forthcoming trek later that year. They discussed their ideas with researcher Grahame Walsh, who, two weeks afterwards, announced he had rediscovered the site by helicopter (Fig. 1.9), just before the Cusack trip was about to commence (Donaldson 2008: 236, McGlashan 2007).



Figure 1.8 Bradshaw's art site sketched in 1891
(Bradshaw 1892)



Figure 1.9 Bradshaw's panel as photographed by Walsh in 1997
(Walsh 2000: Plate 19)



(Mathew 1894:63 Figure 2)



(Mathew 1894: 64 Figure 1)



(Mathew 1894:64 Figure 2)

Figure 1.10 Bradshaw's sketches from other West Kimberley art sites.

Brockman's Survey of the Kimberley

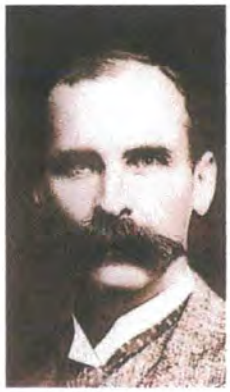


Figure 1.11
Frederick
Brockman
(Kulek 2002: 109)

The rapid pace of development and exploitation of the Kimberley led the Western Australian state government to commission Chief Inspector Surveyor Frederick Brockman in March 1901 to map the Kimberley (Fig. 1.11). Just over two months later he departed from the port of Wyndham with a team of 70 horses, thirteen men and a dog (1902: 12) (Fig. 1.12). Of the horses, eight were required to carry the load of horseshoes needed for the expedition. With the party was naturalist and photographer, Dr F. M. House, two geologists and Aboriginal men released from Rottnest gaol for use as guides. Brockman travelled in a clockwise direction through the

Kimberley, heading south west along the Chamberlain River then westerly across the Durack and Hann Rivers to Mount Elizabeth and the Calder River. A north westerly route led to the Roe and King Edward Rivers (he named the latter). At the former he found evidence of Bradshaw's passing ten years earlier and established that Bradshaw was out in his navigation by fifty or so miles. Brockman reached the northern coast at Napier Broome Bay. He headed east to the Drysdale River and followed it south to the Ashton Range before tending south east and returning to Wyndham. His route is shown in Figure 1.1. Brockman mapped a huge amount of territory. Part of his success in mapping was splitting the party in two when required under the leadership of second in command, Charles Crossland. Through sheer professionalism he achieved his task with the minimum of fuss. None of his party was hurt, relations with the Aboriginal people were cordial and no weapons were used in anger.



Figure 1.12 Some of Brockman's party at Camp 33 on the Charnley River.
(Kulek 2002: 114)

The expedition is of note also for naturalist Dr House and his making of glass plate photographic negatives. The expedition found many examples of rock art and House's photographs in the official report are, to the best of my knowledge, the first to be published in the Kimberley (Figs. 1.13, 1.14a). They are mainly of Wandjina figures, confirming Grey's earlier discoveries and showing that they were not isolated examples made by outsiders. The

photographs (Brockman 1902: Figures 5, 15, 25) are all 'classic' Wandjina figures. Brockman writes:

> "A remarkable custom of the aborigines of the Western part of the district South from Admiralty Gulf is that of painting representations of the human figure, beasts, reptiles, etc., on almost every available smooth, vertical face to be found in the sandstone ranges... Over the area in which these paintings occur, I frequently found the pigments used at the native camps, and invariably have found them in every bundle of household goods abandoned by the natives on our approach. These pigments consist of several colours of oxide of iron, pipeclay, and ground charcoal."
> (Brockman 1902: 12)

Naturalist Dr House wrote about the painted figures the expedition found, in particular the Wandjina figures at Manning Creek, Brockman's Camp FB 25 (Figs. 1.13a, 1.14a) which:

> "consisted of a row of figures... The place was one which had been used evidently for a number of years for depositing the bones of the dead. It will be seen that the figures are clothed, and all in a similar style of garment, with what appears like a necktie just below the throat. Curiously this same style of figure, similarly dressed, occurred wherever paintings of any extent were found. In all there is an absence of the mouth, and what appears to be a halo around the head. These figures agree in these particulars with those found by Grey on the Glenelg in 1837. The colours used are red, yellow, black and white, the black being charcoal, and the other colours argillaceous earth, specimens of which we found carefully wrapped up in paper bark parcels in most of the camps which had been vacated hurriedly owing to our approach... they apparently value them considerably, choosing places, as far as possible, where they will not be injured by the weather. In all the more elaborate drawings the colours appeared to have been simply mixed with water, and could be smudged by rubbing with the finger, but in one or two places on the Glenelg I saw smaller drawings and marks in red, which were made with some other pigment, and were not affected even by the wet."
> (Brockman 1902: 18)



Figure 1.13a Manning Creek – Brockman's Site FB25 in 1901
(Brockman 1902: Plate 5)

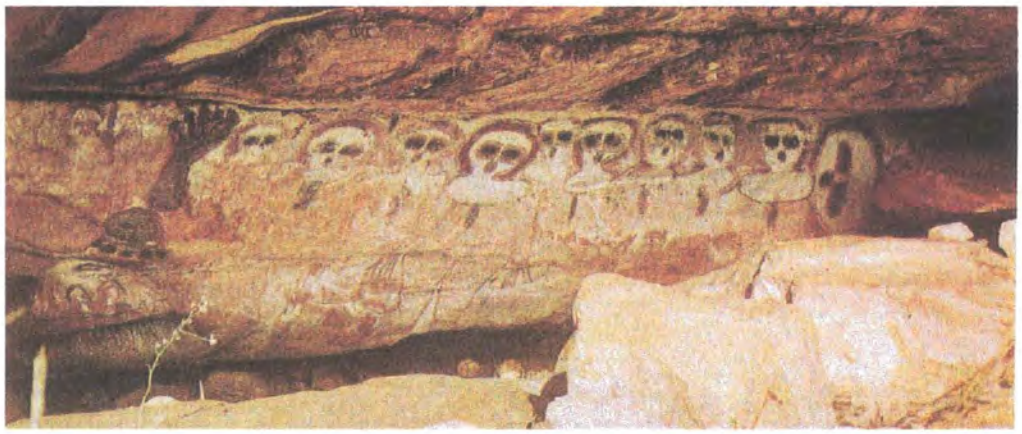


Figure 1.13b The same site at Manning Creek in 1964
(Crawford 1968: Figure 30)



Figure 1.14a Wandjina, near Site FB49
(Brockman 1902: Plate 17)



Figure 1.14b The same figure in the 1980s
(Walsh 1988: Plate218)

Figure 1.14 The Bachsten Creek Wandjina, *Nyandugadali.*

The Conigrave Expedition

Ten years after Brockman's survey, a Western Australian Museum employee, C. Price Conigrave, organised a private expedition, the Kimberley Exploring Expedition Party, to the northern Kimberley. Its main purpose was biological collection. Brockman, by now Acting Surveyor General, advised Conigrave that the area between Admiralty Gulf and Cambridge Gulf was still fairly unknown on account of his 1901 survey being affected by the onset of a heavy wet season. Conigrave's expedition would be eligible for a state subsidy if he were to undertake his survey there rather than his intended area of the King Leopold Ranges (Conigrave 1938: 30). Conigrave and his party of six travelled from Wyndham to Admiralty Gulf on the north east coast via Drysdale River Mission at Pago, naming the Berkeley and King George Rivers on the way.

Between the Pentecost and Forest Rivers, on the edge of a marsh, he came across an Aboriginal ground painting, a type of art not normally associated with the Kimberley. He described its preparation, the artists "pulling up the grass by the roots; then the ground had been burnt clean and the ashes brushed to one side. Furthermore, the bare surface had been hardened by the patting of hands and the stamping of feet. The man with the 'paint pot' had then commenced operations by outlining the forms of crocodiles, snakes, large horseshoe-shaped objects, and other things." (Conigrave 1938: 74).

His written account mentions discovering many art sites as well as taking numerous photographs en route though none of the art is included in his book. In Admiralty Gulf he found:

> "large numbers of ghostly-looking figures at the entrances of huge caverns, where there were many indications that such places had been used as burial grounds for many years. Skulls and skeletons lay scattered about on rocky floor and ledge, and dominating the whole eerie scene were rows of quaintly-coloured figures, four feet or so in height, painted on the overhanging rock-faces. For the most part these represented the human form, but in each case the feature of the mouth was missing, and we speculated on the meaning of this."
> (Conigrave 1938: 124)

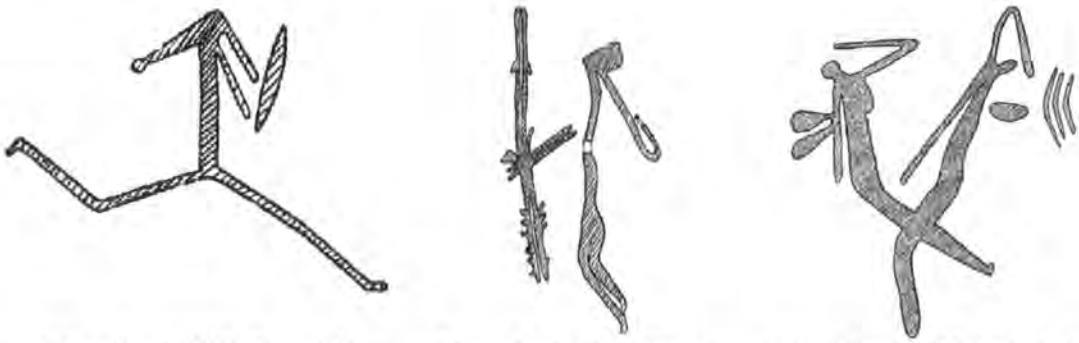
Like Brockman before him Conigrave tried to follow the Drysdale River south on his return. He did not report any rock art sightings in the river gorge, but this is understandable as by now he and his party were having a miserable time travelling at the height of the wet season. It took him five days to find a way out of the gorge and onto the plateau before heading back towards Wyndham (Conigrave 1938: 126).

Missions in the Early Twentieth Century

The early years of the twentieth century also saw the establishment of religious missions. Drysdale River Mission was founded in 1908 by Benedictine monks from New Norcia in Western Australia (McGregor and Chester 1999: 180, Walsh 2000: 12). It was situated east of the mouth of the King Edward River at Pago on Mission Bay. For the first few years of settlement the monks lived in a state of siege, retiring at night to the fortified first floor of the mission. One memorable mission diary entry for the time reads: "we are in the chapel saying our prayers, with the Rosary in one hand, and the revolver in the other" (Perez 1977: 24). One of the founding fathers of the mission, Father Nicholas, found Wandjina paintings close to the mission and made copies in 1911 forwarding them to the Protector of Aborigines. He wrote: "The replicas of native cave paintings... I got in caves about fifteen miles from the mission (Drysdale). To make full cover would need three men (with guns) to remain for two or three days and this I could not obtain" (Walsh 2000: 12 quoting Perez 1977). Peaceful relations with local inhabitants were eventually reached. The mission relocated to the south west on the King Edward River at what is now Kalumburu.

Other missions were established in the Kimberley. In 1890 a mission was founded at Beagle Bay on the Dampier Peninsular which was later transferred to the Pallottine Fathers in 1901. In the east Kimberley the Church of England established a mission at Forrest River in 1897. In 1912 a Presbyterian mission was founded on the west Kimberley coast at Port George IV but relocated a few years later to a southern inlet at Kunmunya. This was the mission in which the missionary Rev. James R. B. Love lived and worked, and his detailed ethnographic records will be mentioned below.

Drysdale Mission saw a succession of visitors after its founding, one being naturalist Gerald Hill of the Department of Economic Entomology in Canberra who visited the mission in 1910. He made watercolour sketches of over forty paintings from Napier Broome Bay along with drawings of petroglyphs from Parry Harbour to the south west. The sketches and relevant information remained unknown until Charles Mountford published them in 1937 (Fig. 1.15) (Mountford 1937).



(Mountford 1937: Figure 2) (Mountford 1937: Figures 32 & 33) (Mountford 1937: Figure 36)

Figure 1.15 Gerald Hill's sketches from Napier Broome Bay.

Drysdale Mission diaries record visits to caves and art sites in 1912, 1914 and 1919 and a copy of a painting is referenced to 'cave number 182' giving an indication of the number of sites visited (Perez 1977: 166). A collection of one hundred copies of paintings prepared by one of the first missionaries was made into an ico-ethnographic album and this later accompanied researchers including Douglas Fox of the Frobenius Expedition in 1938, to art sites (Perez 1977: 166). Paintings depicted in the album include Wandjinas and Bradshaw figures or 'kir-kiro' (Fig. 1.16).



(Perez 1977: 167 Figure 2) (Perez 1977: 167 Figure 4)

Figure 1.16 'Kir-kiro' figures from the Drysdale Mission ico-ethnographic album.

Anthropological Research in the Interwar Years

Adolphus P. Elkin



Figure 1.17
Adolphus P. Elkin
(Walsh 2000: 13)

The first organised study of Kimberley Aborigines occurred in 1928 when University of Sydney anthropologist Adolphus P. Elkin (1891-1979) (Fig. 1.17) undertook a year long survey at the suggestion of Prof. Radcliffe-Brown (Walsh 2000: 13, Wise 1985: 49). Radcliffe-Brown was the head of the newly founded Department of Anthropology at the University of Sydney and had obtained a research fellowship from the Australian National Research Council for this work. With this grant Elkin became one of the few people in the world to be paid for undertaking anthropology. There was an element of urgency in this work as Radcliffe-Brown told Elkin, referring to the wider area of Australia and Melanesia: "the natives are either dying out rapidly or they are losing their customs and traditions. Work can be done now which will be impossible in a few years time" (Wise 1985: 49). As part of his field equipment Elkin bought an Edison phonograph with wax cylinders as well as his characteristic solar topee (Wise 1985: 52). He spent twelve months in the Kimberley, nine weeks of that at Munja, the Government Feeding Station at Walcott Inlett in the west Kimberley. A further ten days were spent at the Presbyterian Mission at Kunmunya (Elkin 1930: 257). He was taken out from Munja to see the Wandjina galleries in the Walcott Inlett area (Fig. 1.18). Elkin recognised the similarities with Grey's paintings. "As the mass of rock which contains the 'gallery' is surrounded by other large residuals, the outer paintings cannot be seen until the traveller is within about fifteen yards of them. The effect is then very startling. It is easy to understand Sir George Grey's amazement when he first saw similar paintings a little further north" (Elkin 1930: 258). Elkin named the characteristic figures as '*Wondjinas*' in the local Ngarinjin language and in his paper discussed something of the mythology and meaning of them to the Ngarinjin people. Elkin discussed the manner of painting and stated that the art was most

certainly Aboriginal in form and execution (Elkin 1930: 274). His paper has a map showing the extent of Wandjina galleries in the Kimberley that is still applicable today.



Figure 1.18 Belguldo Shelter, Walcott Inlet.
(Elkin 1930: Plate 1)

Rev. James R. B. Love at Kunmunya Mission

Whilst in the west Kimberley Elkin also visited Kunmunya Mission. This was run by Rev. James R. B. Love, a Protestant missionary (Fig. 1.19a). Love had a keen interest in the Worora people and wrote four papers and a book about his time there (1917, 1929, 1930, 1935, 1936). In a paper published the same year as Elkin's in 1930, he covered much of the same ground discussing painting technique and similarities to Grey's discoveries. A map of the territory of the Worora tribe (1930: Plate 1) showed art site locations he was aware of. From this Love declared that "It will be seen that a picture cave occurs every five miles or so... the whole purpose of these picture caves can be summed up in one sentence: they are to insure the food supply of the present generation" (Love 1930: 4). Love recorded that repainting was still occurring. During the wet season months of February and March 1929 an old man, Kanaway (Fig. 1.19b), recognised as being a 'doctor' and Inaiiri, or head of

the tribe, left the mission to visit his country. During this time at the mission's boat landing place, a rain washed and by now very faded art site was repainted and Kanaway was held to be responsible (Love 1930: 7). Love established that other paintings "are mainly subject to renewal, or fresh execution, periodically, by Worrora men now living. This execution is done secretly, and the general mass of the tribe are told that the pictures are the work of no man's hand" (Love 1930: 7). Love depicts a Wandjina found near Hall's Point which was made or repainted by two men between January and March 1929 (Love 1930: 15,16, Figure 13). This is the Wandjina Namarali which was repainted by Donny Woolagoodja in 2002 (Woolagoodja 2007).



Figure 1.19a Rev. James R. B. Love
Photo supplied by David Welch



igure 1.19b Kanaway, one of the last of the traditional painters in the 1920s.
(Blundell & Woolagoodja 2005: 87)

Figure 1.19 Rev. Love and Inaiiri Kanaway

The Frobenius Expedition

The publication of Elkin's research led to correspondence with the German anthropologist Prof. Leo Frobenius (1873-1938) (Fig. 1.20a). Frobenius had founded a research institute in Frankfurt on Main and sent out expeditions around the world to copy rock art. His first was to the Congo in 1904 (Walsh 2000: 13) and other expeditions went to North Africa and Spain. He initiated 'Expedition 22' to the Kimberley in 1938 (Walsh 2000: 13) with the aim of finding traditionally living Aboriginals who could explain what the paintings meant to them (Lommel n.d.: 13). The expedition set up headquarters at Munja and Sale River Stations in the west Kimberley. They visited the Walcott Inlet area, Kunmunya Mission and then the northerly region taking in Mount

Hann, the lower King Edward River and finally Kalumburu (Schulz 1956: 7). Led by Dr Helmut Petri (Fig. 1.20b), the expedition included Dr Andreas Lommel, Douglas Fox and two artists, Agnes Schulz and Gerta Kleist who were to make copies of the paintings. They were led to Wandjina galleries by Aboriginal guides, and made copies of the art, as well as recording available mythologies. Bradshaw art was mainly seen at the end of the expedition in the Kalumburu area. The lack of an apparent Aboriginal name for the paintings led them to apply Joseph Bradshaw's name to the art style (Perez 1977: 155, 156, Schulz 1956: 45, 49). This is a curious choice as Douglas Fox's unpublished field journal from the expedition records the names of *Kirakiran* or *Djimi* being applied to the paintings (Walsh 2000: 428) Research in the same area only sixteen years later by Father Worms found the name *'giro giro'* for the figures (Worms 1955: 555). The onset of war and the difficulties of the post war period prevented publication of the report until 1956 (Schulz 1956:7).



Figure 1.20a Leo Frobenius
(Fox 1936: 22)



Figure 1.20b Helmut Petri
(Crawford 2001: 227)

Figure 1.20 Leo Frobenius and Helmut Petri

Post War Rock Art Research

The 1940s and 1950s: Worms, Lommel and Playford

Apart from missionary Howard Coates working in the western Kimberley in the late nineteen forties (Elkin 1948) it was not until after the post war period in the nineteen fifties that researchers returned, with two visits by Ernest Worms and one by Andreas Lommel. The Western Australia Department of Lands

and Surveys organised a party led by J. F. Morgan to survey and build roads from Gibb River Station to Kalumburu. Morgan made tracks through the Mitchell Plateau area and discovered a few art sites which he referred to in his report and marked on his survey map (Morgan 1954).



Figure 1.21 Father E. A. Worms (Wilson 2006:18)

Catholic priest and Pallottine missionary Father Ernest Worms (Fig. 1.21) undertook two expeditions into the Kimberley in 1953 and 1954 (Worms 1955) with the purpose of studying the 'prehistoric rock miniatures' of the region. His first journey was to Gibb River Station, the second to Kalumburu. His Ngarinjin guides on the first journey were interested in Wandjina paintings, the Kwini and Kulari in the north were not, and neither sets of guides were interested in the 'bushman-like miniature rock paintings' (Worms 1955: 547). Worms' Kwini guides, looking at art sites at the mouth of the King Edward River, called the paintings of this style, as well as the painters, '*giro giro*' (Fig. 1.22) (Worms 1955: 555). They recognised and named some of the accoutrements painted with the figures, with the large headdresses, *ngadari,* and depicted cockatoo feathers, *djelimbara*.

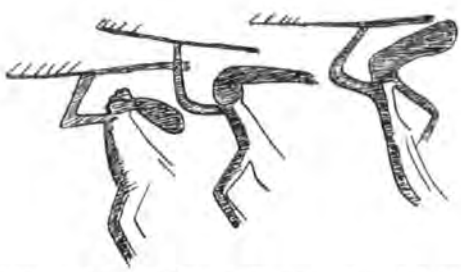


Figure 1.22a "Men with spears (Walula)" (Worms 1955: Figure F1)



Figure 1.22b "Men with boomerangs (Galnauru)" (Worms 1955: Figure F2)

Figure 1.22 Father Worms' *giro-giro* prehistoric rock miniatures.

Worms compared his prehistoric rock miniatures to Bradshaw's 1892 description from the Prince Regent River district and noted differences in colours used and the reported figures' sizes to what he had observed. There were greater similarities to Gerald Hill's paintings (Mountford 1937) from the

general area of the old Drysdale River Mission at Pago, 20-50 miles east of Worms' research area, than to the Prince Regent River. The issue of differences and similarities in the style of the art is the first mention of regionality in the art, a topic which will be discussed in the next chapter.

Andreas Lommel returned to the Kimberley in 1955 to continue the research commenced as part of the 1938 Frobenius Expedition. He brought his wife Katharina (Fig. 1.23b), an artist from the Frobenius Institute (Lommel n.d.).



Figure 1.23a Andreas Lommel
(Walsh 2000: Plate 34)



Figure 1.23b Katharina Lommel
(Walsh 2000: Plate 35)

Figure 1.23 Andreas and Katharina Lommel.

They worked at Gibb River Station for six months, the station selected on account of it being the only one which would allow them access, as the station owner's wife remembered Lommel from 1938 (Lommel n.d.: 15). Aboriginal guides took them out by horse or mule to art sites in the region of the station, and they spent days or weeks there recording and making copies of the art (Lommel n.d.: 15). Among sites visited were Ngungunda, Molcott, Aulen, Wanalirri and Sundron. The majority of art copied by Katharina Lommel was of Wandjina paintings (Fig. 1.24) though at some sites Bradshaw figures were noticed and copied. Figures now assigned to the Sash Bradshaw Group and 'Clothes Peg' Figure Period are found at Aulen on the Hann River (Lommel n.d.: 51, 52). Other 'Clothes Peg' Figures are found in Wanalirri gorge (Lommel n.d.: 64) but successive researchers have been unable to relocate them.



Figure 1.24 Wanalirri Art site, copy by Katharina Lommel
(Lommel n.d.: 30)

In 1956 geologist Dr Phillip Playford worked in the south west Kimberley examining the limestone Devonian reef complexes making up the Napier and Oscar Ranges. A number of caves were decorated with paintings and Playford consulted the local Aboriginal elders over them. This interest led him to correspond with Prof. Elkin and to plot the exact tribal boundaries of the Unggumi, Bunaba and Gooniyandi people, as well as describe the rock art found in their territory (Playford 1960, 2007). Playford found there is a gradual change in the style of paintings on moving south east from Unggumi country to Gooniyandi, where Unggumi art matches that of the neighbouring Worora, Ngarinyin and Wunambel of the west Kimberley and Gooniyandi is quite different (2007: 141). He was fortunate in being able to discuss the art with the older Aborigines and was told he was the first white man who had ever spoken to them about these matters (2007: 129).

The 1960s to the Present Day

Further research in the Kimberley did not occur until the early 1960s when the Western Australian Museum received a five year private grant to study the rock art of the Kimberley (Crawford 2007: 103). Professional archaeologist Dr Ian Crawford was employed by the museum in 1961 and undertook five expeditions into the Kimberley from 1962 to 1966 recording rock art (Crawford 1968, 2007). His motivation was to directly record Aboriginal knowledge of the art as "knowledge of the old people was irreplaceable: knowledge of location... knowledge of the stories and songs about the figures in the art; knowledge about the use of the sites... knowledge about when and how the sites were used" (Crawford 2007: 104). He also investigated Maccassan

contact on the coast leading to his being awarded a PhD in 1969 by the University of London. An important result from the work was the publication in 1968 of *The Art of the Wandjina*. This book, with many of the illustrations in full colour, brought the art traditions of the Kimberley to the public at large. The book expanded knowledge of Wandjina art, as only the year before Fred McCarthy had written that only twenty Wandjina sites were known (McCarthy 1967: 59). Crawford included an important chapter on Bradshaw figures, the examples mainly taken from the Kalumburu area (Fig. 1.25). Crawford also made an estimate of the antiquity of the paintings by comparing implements depicted with existing weapons from north west Australia and Arnhem Land and found they were not similar (1968: 89). Spears with recent leaf-shaped stone spear heads are not shown in Bradshaw paintings and Crawford surmised the art predated the introduction of the technology 2480 years ago, known from radiocarbon dating (1968: 90).



Figure 1.25 Bradshaw Figures from Kalumburu.
(Crawford 1968: Fig 71)

The nineteen sixties marked the end of the 'classic' period of remote exploration and rock art discoveries. The 'beef road', which became the Gibb River Road, was built connecting the port of Derby with cattle stations en route to Gibb River Station. The road was extended east to Wyndham so bisecting the Kimberley, and to the east of Gibb River Station a northern spur headed north to the coast at Kalumburu. This was the start of the removal of isolation from the area. The Kimberley underwent a period of mineral

exploration with various mining companies putting in tracks and building air strips, for example on the Mitchell Plateau.

The 1970s saw professional anthropologists such as Valda Blundell and Robert Layton (Blundell 1975, Blundell and Layton 1978, Layton 1992) researching in the West Kimberley. Rock art researcher Grahame Walsh, whose work I will refer to later in this thesis, commenced his Kimberley fieldwork in 1977. The next two decades saw an expansion of interest in the region. Crawford returned with a Western Australian Museum party cataloguing sites on the Mitchell Plateau with the assistance of traditional owners from Mowanjum and Kalumburu. The impetus for this was a plan for mineral extraction and the construction of a port by the Mitchell Plateau Bauxite Company (Crawford et al. 1981).

From the 1980s onwards many of the advances in Kimberley rock art research have been the domain of amateur or avocational researchers (including Grahame Walsh) working outside of mainstream academia. One example is David Welch, a Darwin based GP, who has published widely on rock art in northern Australia. In the early 1990s Welch published three papers by which he classified Bradshaw figures and placed them into a relative chronology based on his extensive field work (Welch 1990, 1993a, 1993b). Welch was the first to categorize Bradshaw figures into monochrome and bichrome figures and then to describe the different types of monochrome figures. Joc Schmiechen discovered the art region of the Drysdale River through an expedition in 1986 and returned three times to catalogue the art before producing an extensive private report (Schmiechen 1986, 1993). On a personal note, my interest in rock art, which eventually led to this thesis, was kindled by a visit to the Mitchell Plateau in 1990 and seeing art sites on the King Edward River and at Merton Falls.

Over the past twenty years the presence of Grahame Walsh (1944-2007) (Fig. 1.26a) has dominated public perceptions of Kimberley rock art. A former national park employee and professional photographer, from 1977 he dedicated himself to rock art research undertaking three month expeditions

into the Kimberley every year during the dry season. The rest of the year was spent analysing the collected data at his self founded Takkaraka Research Centre on the outskirts of Brisbane. During the course of his research he visited thousands of art sites and generated a collection of over 1.2 million photographic images. An example of the volume of art recorded is indicated by his finding 500 new sites in one field season (Walsh pers. comm. 2005). In 1988 he prepared a book for Australia's bicentennial, *Australia's Greatest Rock Art*. The book illustrates one hundred art panels in full colour from around the country with nine from the Kimberley. Six years later he produced the first book on Bradshaw figures: *Bradshaws. Ancient Rock Paintings of North-West Australia*. The book with ninety-nine full colour plates and a highly detailed chronology of Bradshaw art (Walsh 1994: 18) aroused both critical acclaim and controversy. He implied the art was created by an earlier race of extinct people rather than the ancestors of modern Aboriginal people (Walsh 1994: 57-64). The year 2000 saw the publication of his masterpiece, *Bradshaw Art of the Kimberley*, described as being "a vast unclassifiable book, part photographic essay, part speculative anthropology" (Rothwell 2007: 12). In the seven years before his death from a brain tumour in 2007 he was researching art of the so-called Clawed Hand Period and the Wandjina cult (Walsh pers. comm. 2005).



Figure 1.26a Grahame Walsh at the AURA 2000 conference.



Figure 1.26b Grahame Walsh with his quad bike.

Figure 1.26 Grahame Walsh

Archaeologically, knowledge of the Kimberley is rapidly increasing with thirty seven excavations undertaken, the bulk being along the Ord River (Morwood & Hobbs 2000: 35). Of particular importance is work by Sue O'Connor in the Napier Ranges in the south-west Kimberley (O'Connor 1995). At Carpenter's Gap Shelter 1 a non-basal radiocarbon date of 39,700 years BP indicated the antiquity of occupation at the site. Associated with this layer is a slab of roof fall coated with a red pigment (O'Connor 2007: 70). The painting is unidentifiable but the age of the deposits in which it was found make it the world's oldest dated example of painted rock art.

A major factor in furthering Kimberley research and in Australia as a whole, was the founding in 1983 of the Australian Rock Art Research Association (AURA) by Robert Bednarik. He launched the peer-reviewed journal, Rock Art Research, the following year. The organisation has published numerous publications and organised three major international conferences on rock art in 1988, 1992 and 2000.

Future Developments

In the immediate future the pattern of Kimberley research seems to be advanced by people working outside established academia. The most recent publication on the art of the Kimberley is by the Perth based Kimberley Society, a "diverse group of people sharing a passion for all things Kimberley... its main purpose is to share knowledge about one of the world's last remaining wilderness regions – Western Australia's Kimberley" (Donaldson 2007: ix). Another organisation, Kimberley Foundation Australia, was established in 2002 to support the work of Grahame Walsh. With his death in 2007 its aim now is to fund ongoing research projects, to openly communicate findings through both peer reviewed journals and the popular media and to protect rock art and resources. It has key research questions on the antiquity and continuity of habitation, on palaeoclimate and palaeoecology, regional issues of habitation and finally Macassan and historical sites in the Kimberley (Kimberley Foundation Australia n.d.).

As far as rock art is concerned in recent years there have been two important discoveries. The first of these is the presence of boat paintings near the northern coast. The vessels are painted as either sea-going dug out canoes or, apparently, reed boats (Playford 2007: 52, Walsh 2000: 27-33) (Fig. 1.27). The boats' crew have features such as headdresses suggestive of Bradshaw figures. The importance of the watercraft paintings is that they directly address ideas of migration into Australia and provide pictorial evidence of how such a crossing, from what is now Indonesia, may have been made. Only a handful of boat paintings are known at present and Walsh has published many of his discoveries (2000: 29, 31 – 33).



Figure 1.27 Ancient watercraft from the Mitchell River area.
(photo supplied by Bob Jones)



Figure 1.28 Deer paintings.
(Playford 2007: Figure 4)

The second rock art discovery is a panel of what appear to be paintings of deer, an animal not native to Australia (Playford 2007, Wilson 2006: 5, 104-111, 224) (Fig. 1.28). Playford has described their discovery as "perhaps the most important rock-art discovery made in Australia in recent years" (Playford 2007: 53). The art panel contains twenty five paintings of deer which he identifies as being possibly

Timor deer, *Cervus timorensis*. The panel is located on the Mitchell River near a painting of a high-prowed boat (Wilson 2006: 8). No other deer paintings have as yet been identified but this particular panel is arousing interest from other researchers (Playford pers. comm. 2009).

At the time of writing (2009) a new phase in rock art research seems about to commence in the north Kimberley, but unfortunately this will be salvage archaeology in advance of industrial development. The rise of commodity prices with the industrialisation of both China and India, coupled with the ensuing resources boom in Western Australia, means dormant mining tenancies containing minerals discovered in the 1960s are now economically viable. Bauxite, the ore of aluminium, was discovered in 1966 on the Mitchell Plateau. However the remoteness of the location and lack of cheap energy to extract the alumina meant it was not viable to mine. This is now changing with hydrocarbon discoveries off the north coast. Exploitation of the natural gas will provide the energy required to develop the bauxite deposits. The Browse Basin is a gas field with an estimated 50 trillion cubic feet of reserves, more than a third of Australia's known offshore gas reserves (Conservation WA 2008). The three companies involved in exploiting the gas field, Shell, Woodside and Inpex require large industrial facilities for processing the gas into Liquid Natural Gas (LNG) for transporting worldwide. A report commissioned by the Western Australia government's Department of Industry and Resources, *Northern Development Taskforce Site Evaluation Report Part A August 2008*, identified suitable locations for such a plant. Out of eleven potential sites including offshore islands, four mainland sites were suggested. One is to the south of Broome, two to the north on Dampier Land and a fourth to the north west of Kalumburu on the Anjo Peninsula (2008: 3, 4, 6). The major infrastructure development the exploitation of the Browse Basin will bring to the Kimberley means other industrial proposals are now more viable (Treadgold 2007). These proposals include two bauxite mines, two ports, an aluminium refinery, a zinc mine and smelter and an iron ore mine on an offshore island (Conservation WA 2008). The refinery and smelter will be powered by gas from the LNG hub.

The two planned bauxite mines will have the largest impact on the Kimberley. Reserves of bauxite are some of the largest in the world at an estimated 456 million tonnes. The method of extraction is by strip mining which will have a devastating impact on the natural environment as well as the wealth of rock art. The first mine is to be located on the Mitchell Plateau to the east of Mitchell River National Park. The ore is to be shipped out from Walsh Point or MacGregor Point at Port Warrender and requires the construction of port facilities on the coast (Save The Kimberley 2008). Currently there is a virtually impassable track to the point. The whole area has a wealth of rock art and archaeological remains (Crawford et al. 1981). The second strip mine is to be approximately 22 km south of Kalumburu at Mount Leeming near the junction of the King Edward and Carson Rivers. This is 34 km from the north west boundary of Drysdale River National Park. Development will parallel that of the Mitchell Plateau with the construction of a second port in Deep Bay a Kalumburu with associated wharf facilities (Save The Kimberley 2008). The pattern of development may mirror that of the Burrup Peninsula which is the site of current industrial development for the petro-chemical industry. It is the location of vicious arguments about the survival of the petroglyphs found there and the actual need for industrialisation of that area (Bednarik 2006). The current world economic situation may delay development and the Federal Minister for the Environment, Peter Garrett, said he would look "very closely" at issues of development in the Kimberley (ABC Lateline 4th June 2008).

Discussion

The Kimberley has undergone major changes in the past 130 years. Early European contact had little impact on either the land or the people and was mainly concerned with surveying the coast. This changed in 1879 with Forrest's expedition and the glowing reports he returned with of the region. The land grab that ensued meant that only four years later Aboriginal labour supplied the newly established cattle stations and within ten years a band of settlement stretched in a curve through the southern Kimberley from Derby to Wyndham with the ensuing destitution of the tribes affected. In the northern Kimberley, traditional life continued but with added contact with European explorers and surveyors and on the coast, missionaries, pearlers and beach

combers (Crawford 2001). Religious missions were established and became focal points for Aboriginal people and for European travellers. The rock art of the region was publicised by explorers such as George Grey, Joseph Bradshaw and Frederick Brockman. After the First World War the art was the subject of academic interest from professional anthropologists such as Adolphus Elkin and Helmut Petri. The religious practices of the people were recognised and the art was definitively assigned to their culture rather than being thought the product of foreign visitors to the Kimberley. Aboriginal people were consulted and used as guides in locating major sites and their traditional life studied. The 1950s and 60s saw field investigations by Ernest Worms, Andreas Lommel, Phillip Playford, Ian Crawford and later in the 1970s by anthropologists Valda Blundell and Robert Layton. Ian Crawford was the first professional archaeologist to work in the Kimberley and brought knowledge of the art to the wider public through his book, *The Art of the Wandjina.* From the 1980s onwards advances in Kimberley rock art research have been led by people outside of mainstream academia, in particular David Welch and Grahame Walsh. Recent discoveries of paintings of boats and foreign animals illustrate that there is further work to be undertaken in the region. The future industrial development of the northern Kimberley will have far reaching consequences for the survival of the art as well as future research. If strip mines are developed they could destroy any art and archaeological remains. Salvage archaeology and heritage surveys may, however, reveal important information about rock art and the presence of past inhabitants and early migration into the country. Rock art research and the art of the Kimberley is now firmly established as a subject of interest, both academically, and for the wider public at large.

The variety of rock art to be found in the Kimberley, its chronological depth and the fact that so few people are researching in such an inaccessible district aroused my interest. With the Kimberley selected as the geographical location of my research, there remained to find a suitable subject for investigation. Extensive background reading and discussions with other rock art researchers soon revealed that regionality in the distribution of rock art was a topic worth pursuing, and this is elaborated on in the next chapter.

Chapter 2.
Review of Kimberley Archaeology and Rock Art

The aim of this chapter is to provide an overview of the current state of knowledge of the archaeology and rock art of the Kimberley, and from this to explain the reasons behind the selection of areas to study (Chapter 3) and the analyses undertaken in Chapters 4 to 7. The overview also looks at Arnhem Land, in order to place the Kimberley in a regional perspective. The literature review has four main sections. The first reviews current archaeological knowledge from the north and west Kimberley with an outline of how it compares with Arnhem Land. Secondly, the rock art of the Kimberley is discussed and placed in an Australian context, before the various chronologies are introduced. The third section concerns dating rock art and how the chronologies can be anchored through relative and absolute dating techniques. In the fourth and final section points of interest arising from the literature review are discussed with the aim of placing my research topic, regionality, in the context of Australian rock art studies.

Kimberley Archaeology

The Kimberley is becoming one of the better known regions of Australia, archaeologically speaking, on account of research undertaken there (Morwood & Hobbs 2000: 35). Thirty seven sites have been excavated in north west Australia, thirty one of which are marked on Figure 2.1. Of the others, five are located in the vicinity of Walcott Inlet (Morwood & Hobbs 2000: 36) and one in the Keep River region (Atchison et al. 2005). Of the thirty seven excavated sites twenty one provide initial occupation dates and six

show occupation sequences back to the Last Glacial Maximum (LGM) when sea levels were at their lowest, at around 18,500 BP. These are displayed in Figure 2.2 (but not the excavations at Mimbi Caves and Keep River, Fig. 2.1 Sites 28, 29, 30, 31). Yet not all sites have been published including Drysdale 1, 2 and 3 (sites 14 and 15 on Fig. 2.1), and the Walcott Inlet sites. Most of the research has concentrated on coastal areas, although in a few cases archaeologists have followed major river systems such as the Drysdale River for their research. In the 1970s Valda Blundell made surface collections at forty five sites in the west Kimberley and dug seven test pits, each of a few tens of centimetres in depth, but no radiocarbon dates were taken (Blundell 1975). These sites are not marked on Figures 2.1 and 2.2.

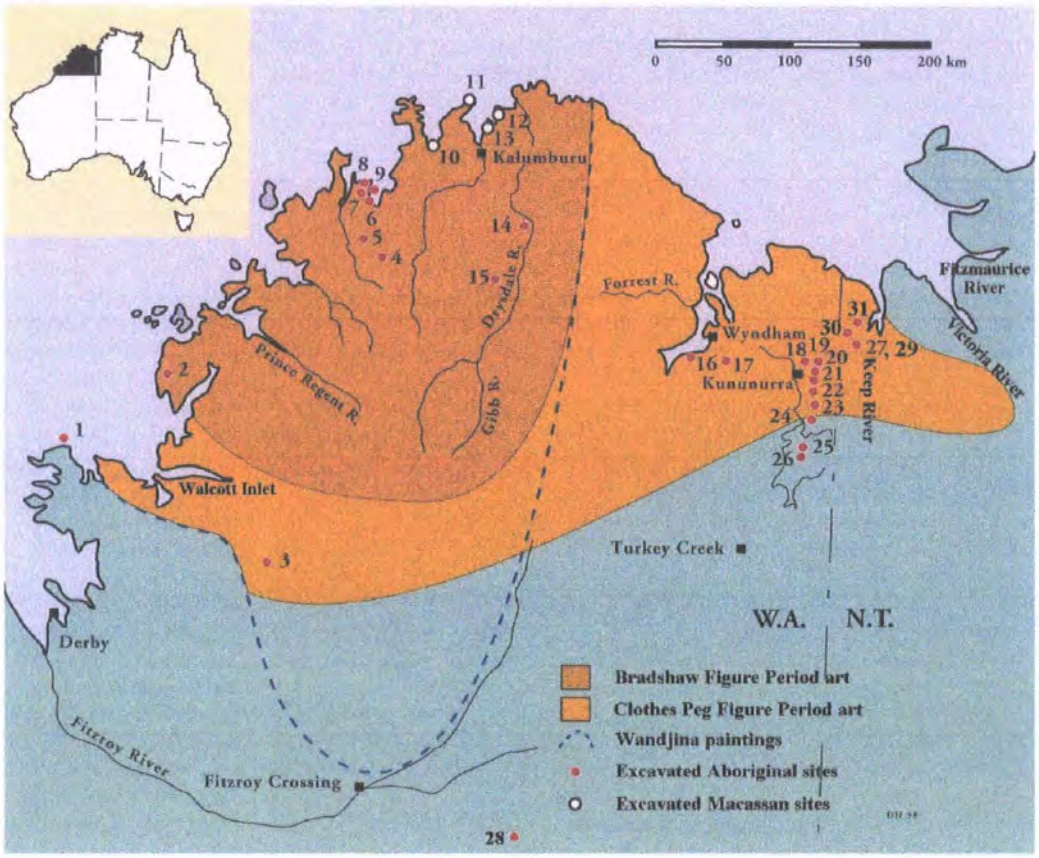


Figure 2.1 Excavated sites in the Kimberley
(adapted from Morwood & Hobbs (2000): Figure 29)

1 – Koolan
2 – Widgingarri
3 - Carpenter's Gap
4 – Ngurini
5 – Bangorono
6 – Wundanjingannari
7 – Wundalal
8 – Goala
9 – Idayu
10 – Wonggarayi
11 – Anjo Point
12 – Lungananna
13 – Tamarinda
14 – Drysdale 1 & 2
15 – Drysdale 3
16 – Moochaleba Dam
17 – The Grotto
18 – Kununurra Shelter
19 – Kununurra Arch
20 – Pincombe Range
21 – Pichowski's Crossing
22 – Thompson's Gate
23 – Canyon
24 – Monsmont
25 – Miriwun
27 – Jinmium
28 – Mimbi Caves
29 – Goorurarmum
30 – Karlinga
31 – Granilpi

Earliest Period

The proximity of the Kimberley coast to what is now Indonesia, and in particular the island of Timor, makes this region the most likely landfall for the first Aboriginal colonists 50 – 60,000 years ago (Morwood & Hobbs 2000, O'Connor 1996, Webb 2006). At this time, with much of the northern hemisphere covered by ice, the resulting fall in world wide sea levels would uncover and extend the northern Australian coastal plain, revealing intermediate islands and reduce the distance of any sea crossing to the order of 200 kilometres. The distance to travel would vary depending on when such a journey was undertaken, as the sea level varied by over 130m in the past 120,000 years (Flood 1997: 6). It also seems likely that the Kimberley would provide an entry point to Australia for other changes such as the arrival of the dingo 4000 years ago (when Australia was more isolated) and perhaps stone point technology during the mid Holocene period. Alternative entry points into Australia would be via Arnhem Land and also the Cape York peninsula in Queensland via the land bridge from New Guinea.

Of relevance to discussions on rock art is the discovery of deposits with ochre remains from the earliest dates. The Kimberley's oldest dated deposit is a piece of "ochred covered roof fall" from Carpenter's Gap dated to to 39,700 years BP (O'Connor 1995: 59). An ochre preparation grindstone with pigment still present and dated to 25850+/-300 BP was found at Drysdale 1 (Morwood and Hobbs 2000: 37). Worn lumps of used ochre have been found in the earliest deposits in Arnhem Land dated at 53,000 BP (Roberts et al. 1990, Roberts et al. 1994). The earliest inhabitants of Australia appear to have used colour in meaningful and symbolic ways, perhaps even being artists, though the nature of the art is unknown (Morwood and Hobbs 2000: 37).

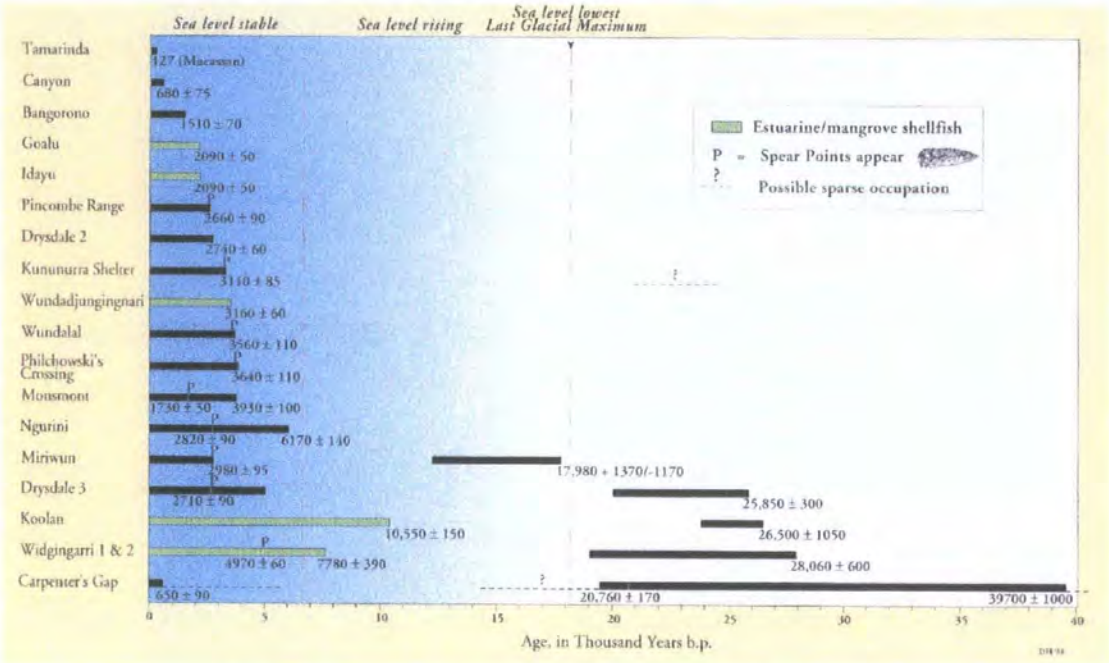


Figure 2.2 Dated archaeological sites in the Kimberley.
(Morwood & Hobbs (2000): Figure 30)

Initial Excavations

The first archaeological excavations in the Kimberley were undertaken by Western Australian Museum archaeologist Ian Crawford in the 1960s. He excavated in the Pincombe Range and at Macassan coastal camps (1968, 1969). At the former site the first date for the use of pressure flaked leaf-shaped spear heads was obtained, with charcoal deposits dated to 2660 +/- 90 years BP. One implication is that Bradshaw Period art, which does not illustrate this type of spear head, but does display other types of weapons, is older than this date (1969: 90). In the East Kimberley Charles Dortch undertook salvage archaeology on the Ord River in the early 1970s, in preparation for the flooding of Lake Argyle. There, Miriwun rockshelter proved to be the first site of Pleistocene age to be recorded in Western Australia's north-west (Dortch & Roberts 1996: 24). Tools of the Australian Small Tool Tradition were found in upper layers and tools were found in the underlying dark brown silty earth (Flood 1992: 87). Thick notched flakes, adze flakes, core scrapers and small blades were found in layers dated between 3000 – 18,000 years BP (Flood 1992: 87). From this division Dortch (1977) proposed a two phase industrial sequence which corresponded to that in Arnhem Land

suggested later by Jones and Johnson (1985). Within the deposit, two flakes manufactured from tektite, a glass thought to result from meterorite impact, were found below the 18,000 year level (Flood 1992: 87). The Miriwum tektite is of the Indochinite group and is the first of its kind to be found in Australia. The presence of two flakes made from one piece of mineral raises the possibility that it was brought to the Kimberley from S. E. Asia (Flood 1992: 88).

Koolan Island and Widgingarri

In the mid 1980s and early 1990s Sue O'Connor excavated a series of sites with long occupation sequences in the West Kimberley examining at what are now island and coastal sites, Koolan Island and Widgingarri (1996, 2007). Yet during the occupation sequence the position of the coastline varied. At 28,000 BP with the first occupation the coast was 70 km west. The distance increased until at the Last Glacial Maximum (LGM) it was 200km away with a corresponding sea level 130m lower. The commencement of the shell horizon at 7780 BP marks the return of the coast to the area of the shelter (O'Connor 1996: 37).

Koolan and Widgingarri shelters were occupied before 28,000 BP and later abandoned at the time of maximum glacial aridity. Widgingarri was abandoned near the LGM when, with the receding coastline, it was 200km inland. The reason for abandonment was "increasingly arid conditions, brought about by climatic deterioration coupled with continentality" (O'Connor 1996: 47). The shelters were reoccupied with the arrival of the sea in its current position. At Koolan Island no formal artefacts were identified in the deposit but there was variability in the ratio of quartz and quartzite. O'Connor interprets this to be due to changes in access to mainland raw materials as rising sea levels cut off the island (O'Connor 1996: 29). Discard rates in the deposit are thought to indicate a changing occupation density with rates higher in Pleistocene occupation than the Holocene.

Two mainland shelters of Widgingarri 1 and 2 (Figure 2.1: site 2) are 80km north east of Koolan Island and 1½ km inland at Collier Bay. The sites are important in Aboriginal mythology and are associated with the coastal Wandjina and the pursuit of a rock cod (Layton 1992: 43). The sites seem to have been base camps and settled at the same time as Koolan 2 with smaller occupation sequences (O'Connor 1996: 33). Recent paintings are located on the walls and European materials are present on the floors. Tool assemblages in Widgingarri consist of two traditions with the early one comprising broken and retouched flakes and fragments. New point technology at 5000 BP marks the beginning of the later tradition (O'Connor 1996: 37). The small number of points and possibility of vertical movement in sandy deposits means that the change in raw material proportions is thought to be a better indicator of the arrival of new technology (O'Connor 1996: 38).

Carpenter's Gap

The site at Carpenter's Gap 1, situated in the Napier Range near Windjana Gorge (Figure 2.1, site 3), was also excavated during the 1990s by Sue O'Connor (1995, 2007). It has the longest occupation sequence and two radiocarbon dates near the base of the deposit provide a minimum occupation age but do not date the base of the site or the lowest stone artefacts. These two dated samples are separated by 20cm and are statistically indistinguishable, being 39700+/-1000 BP, and 39200+/-870 BP (deepest layer) (O'Connor 1995: 39). Of major importance is a piece of ochred roof fall sandwiched between the two dated layers. The site is important as its full stratigraphic sequence bridges the Last Glacial Maximum (LGM), a period of maximum glacial aridity in Australia. The high soil alkalinity has created excellent preservation of organic material throughout the sequence. Small seeds, paperbark, wood shavings are present as well as a pollen sequence (O'Connor 1995: 39).

The sequence is interpreted as showing occupation commencing prior to 39,700 +/-1000BP and lasting up to 20,760+/-170BP. The record of tool debris shows that the site was almost abandoned until its reoccupation in recent times circa 650+/-90BP. Although this hiatus in the record commenced

at around the time of the LGM, when it is thought the Kimberley became too arid to support a population (Morwood and Hobbs 2000: 36), analysis of the organic remains (see below), offers a different interpretation. The hiatus in the archaeological record is seen in other Kimberley sites and is a continent wide phenomenon. Morwood's Drysdale River excavations in north central Kimberley are unpublished but Morwood and Hobbs (2000: 36, 37) refer to them stating that the Drysdale 3 site (Figure 2.1: site 15) was occupied by 25850+/-300BP and abandoned near the LGM before reoccupation again around 500BP (refer to Figure 2.2).

The archaeological sequence at Carpenter's Gap rock shelter spans 40,000 years and organic material is preserved throughout the sequence (McConnell & O'Connor 1997). Lithic weights recovered correlate with botanical remains implying the plant remains are related to human occupation (1997: 24). The plant remains may be food, raw materials for manufacture or incidental remains. One indicator of cultural use of plant material is a selective pattern of burning. In Carpenter's Gap grass seeds are burnt. Ethnographic records indicate that burning of grass seeds by passing a burning branch under them aided in separating the seed from the stem (1997: 25). The majority of plant remains are believed to be culturally deposited and it is thought the plant remains are representative of species available in the landscape and any gaps in the record are due to actual absences and not decay. By comparing the remains with lithic weights the cultural presence and comparative rates of decay can be determined (1997: 25).

At Carpenter's Gap four peaks in the quantity of botanical remains are present which are interpreted as showing four phases of activity. For example, small diameter reed or sedge stems of Cyperaceae are thought to be used in basket making. Plectrachne remains (a type of grass) show the result of processing to extract resin for glue (1997: 27). Of the four phases of botanical remains, the earliest Phase 1 (45 – 30,000 BP, arid climate) and Phase 2 (30 – 25,000 BP, perennial grassland) are thought to be plant material from the local area of the site. Phase 3 (25 – 11,000 BP, arid climate) corresponds to the time of maximum aridity around the LGM. Foraging ranges at this time

would be extensive and water would be less available. Perhaps Carpenter's Gap was used as a transit camp between permanent water at this time (McConnell & O'Connor 1997: 28). The final Phase 4 (10,000 BP – present, deciduous trees and vine forests) is the climate of stabilised sea levels.

McConnell and O'Connor conclude that in contrast to the hiatus in occupation evident from tool debris in the sequence, Carpenter's Gap botanical evidence provides a 40,000 year record of continuous environmental changes and foraging patterns. Environmental changes caused corresponding changes in plant procurement. The continuous record of plant foods present suggests that Carpenter's Gap was not abandoned by Aborigines during the LGM but that they adapted to changing climatic conditions in a way that changed their 'archaeological signature'.

Mitchell Plateau Sites

The Mitchell Plateau lies in north-west Kimberley. Six sites were excavated by Bruce Veitch (1996), comprising three inland rock shelters, Ngurini, Bangorono, Wudanjingannari and three coastal shell middens, Wundalai, Goala and Idayu respectively (sites 4 – 9 in Figure 2.1). The six sites show a commencement in occupation in the area from at least 6160+/1180 BP at Ngurini. Regional site usage increased from 5000 years BP with the exploitation of intertidal shellfish by 3130BP and Kimberley point technology from 2800BP. The point technology is associated with an increased rate of cultural discard and at Ngurini an abrupt increase in ochre usage is noted before the earlier date of 6160 BP (Veitch 1996: 86). The two other inland shelters are younger in age. Three coastal shell middens were excavated, all showing the presence of discarded shells, hearth stones and associated charcoal and ash. Wundadjingangnari provided an age for occupation of 3130BP and sites Goala and Idayu both have earliest dates of 2090BP (Veitch 1996: 82).

Regional Comparisons - Excavations in Arnhem Land

The nearest region to the Kimberley where long excavation sequences dating to before the LGM have been found, is in Arnhem Land. In a series of excavations during the early 1980s in Kakadu National Park, Rhys Jones excavated a number of sites in three different areas (Jones 1985). One site in Deaf Adder Gorge, Nauwalabila 1, has continuous deposits (Jones 1985: 296) and a basal date determined by optical methods of 60,000 BP (Roberts et al. 1994). This is at odds with Carmel Schire's earlier excavations (1982) in the region, where she found an occupation hiatus in her more northerly sites, dated 15 – 18,000 years ago, for which she postulated a dry period at the height of the last ice-age. At two sites, Malangangerr and Nawamoyn, human occupation is present before the arid period but is absent from then up until the early Recent phase. People only returned to the sites when the sea levels stabilised at present levels (Jones 1985: 296). Jones' excavations at Nauwalabila 1 show that the rate of occupation at the site was not affected by climatic effects.

Nauwalabila had a steady accumulation of deposits, allowing Jones to document stone tool use and manufacture with great accuracy (Jones 1985: 296). The earliest tools found are steep edge scrapers, flaked cobbles and horsehoof cores which date to 18,000 – 25-30,000 years BP. They are part of the Australian Core Tool and Scraper Tradition and are contemporary with tools from Schrire's Malangangerr and Nawamoyn sites. Overlying them is a unit of utilised flakes and generalised scrapers which lacks a typological assemblage. This band of tools dates from around 6,000 – 15,000 BP. Of great interest is the lowest levels of occupation contained a ground piece of ochre dated optically to 53,000 BP (Roberts et al. 1994) which agrees a with similar date for the same material at Malakunanja II of 52,000 BP (Roberts et al. 1990).

The steady deposit accumulation allowed Jones to date the arrival of the next technological change, stone spear points, to between 5700 – 6200 BP (Jones 1985: 296). This is illustrated by the production of small thinning flakes.

However adzes and chisels are introduced 1200 – 1700 years later in the sequence at around 3500 BP. This latter addition to the sequence shows that the later industry had elements introduced at different times (Jones 1985: 296).

The Arnhem Land excavations show both similarities and contrasts with the Kimberley. Generally most old sites show an occupation hiatus corresponding to the height of the ice-age during periods of great aridity. However not all sites were abandoned during this period and there was a human presence both in Arnhem Land and the Kimberley during this period. Importantly new tool technologies such as spear points arrive suddenly in the archaeological record in both regions. Where they differ is that spear points generally arrive between 1200 and 1700 years earlier in Arnhem Land than in the Kimberley. For Arnhem Land's Nauwalabila 1 site, adzes arrive later than spear points at around 3500BP showing they were not all part of the same technological and cultural package.

Analysis of Kimberley Radiocarbon Dates

As has been mentioned earlier, the Kimberley is thought to be one of the entry points to Australia with initial settlers arriving by watercraft at times of lower sea levels with a corresponding expansion of the Australian coastline so reducing the distance of the sea crossing from Timor. In eastern Australia at the same time a land route into Queensland was possible with the Torres Straits being exposed as dry land connecting New Guinea to Cape York. Settlers could undertake short crossings between Indonesian islands before landing on the north west coast of New Guinea. As a consequence of this the archaeology of Cape York is of great interest to researchers in providing information on cultural changes occurring in the history of the area. Like the Kimberley, Cape York has a rich rock art tradition. One method of analysing radiocarbon dates in this region used by Bruno David (2004) has proved to reveal information on long term trends in habitation. The success of the procedure in south east Cape York raises the question of what occupation pattern Kimberley radiocarbon dates would reveal.

The excavation of caves and rock shelters provides information on the cultural changes occurring in the history of an area. David (2004: 154) has investigated long term trends in south east Cape York, in particular the increase in regional occupation during the last 5000 years. David's analyses of published radiocarbon dates uses 'Rick's Method' (Rick 1987) first applied to the radiocarbon record of preceramic Peru, where it was proposed that:

> "radiocarbon dates can provide an effective overview of regional trends in non-complex societies when treated in a quantitative manner. In spite of intervening biases, numbers of radiocarbon dates should reflect the patterns of occupation across time... Despite intervening biases, I assume that the number of dates is *related* to the magnitude of occupation, or to the total number of person-years of human existence in a given area... it is possible to assess and compare, in a relative fashion, the occupation histories within and between regions" (Rick 1987: 55).

David applied Rick's Method to 165 radiocarbon dates relating to cultural activity in south east Cape York. The dates were plotted in 1000 year blocks with a 500 year sliding scale to even out fluctuations and enhance general trends (David 2004: 156). The plot clearly showed a major increase in the number of dates around 4000 BP (David 2004: Fig 8.2). This is taken to be "an indication of rising occupational intensities of both sites and regions" (David 2004: 156). David further comments that as archaeologists working in the area have looked for the earliest occupation levels, "the trends cannot be seen simply as a function of research biases" (David 2004: 156).

A total of 116 radiocarbon dates have been obtained from sites in north west Australia (listed in Appendix A). Except for five sites (Jinmium, Granilpi, Karlinga, Goorurarmum and Punipunil) from the Keep River area just over the border in the Northern Territory, all are from the Kimberley. Radiocarbon dates from these sites are included as they are only a few tens of kilometres east of the group of sites lying along the Ord River. Further, the eastern sites lie within the Kimberley's eastern zone of 'Clothes Peg' Figure Period art

which extends into the Keep River area and possibly as far as the Victoria River (Fig. 2.1). The radiocarbon dates are plotted in 1000 year blocks with 500 year overlaps as per David (2004). The plot (Fig. 2.3) clearly shows a major increase in dates around 4500 BP. This mirrors the distribution of radiocarbon dates from Cape York and can be regarded as indicating rising occupation of sites and regions (David 2004: 156, Lorandos and David 1998).

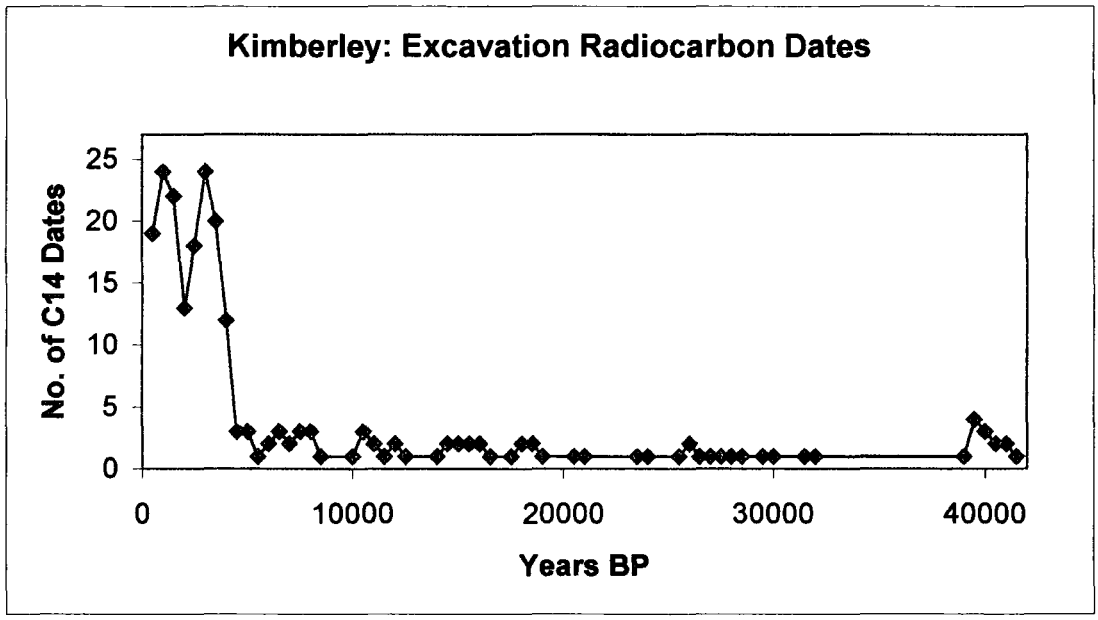


Figure 2.3 Kimberley Radiocarbon dates plotted in 1000 year blocks with 500 year overlaps. (After David (2004) and Rick (1987)).

David states that the same trend is seen in Cape York using other criteria. The rate of site establishment shows a jump around 3500 – 5000 BP (2004: 156). Sedimentation rates in shelters increases and stone artefact deposition rates increase after 4500 BP. Ochre deposition increases in rate after 5400 BP and in particular after 3800 BP (2004: 157). This pattern is seen in the Kimberley at sites on the Mitchell Plateau (Veitch 1996). Point technology arrives around 2800 BP, along with a detectable rate of increase in cultural discard and bone deposition. Observable ochre discard rates increase too from this time (Veitch 1996: 70, 86). Regional site usage has increased in the last 3500 years. Coastal sites show a focus on intertidal shellfish from 3000 BP, with some sites being occupied by 1500 BP (Veitch 1996: 86). This pattern is also reflected in Arnhem Land where in the area of the Alligator Rivers there is an observable increase in the number of sites and a raised

rate of discard again associated with the arrival of point technologies (Veitch 1996: 86). It would seem that the pattern of change in site use from this time, post 5000 years BP, is repeated across northern Australia.

Possible indications of social change

One of the indicators of the arrival of the Australian Small Tool Tradition in a sequence is an increase in stone discard rates in upper layers due to stone tool manufacture at camp sites. This is seen in the Kimberley at Ngurini and Wundalal on the Mitchell Plateau (Veitch 1996: 79) with increasing discard rates commencing at 2800 and 3560 BP respectively. Spear points are present at these dates but at Widgingarri points are found earlier at 5000 BP. The change to base camp tool manufacture is perhaps an indication of stone tool curation (Layton 1997: 377). Conversely the older core tool and scraper tradition (pre 5000BP) is an expedient technology of tools manufactured when and where required. The use of curated and expedient technologies is linked to differing patterns of food acquisition and should be associated with different camping strategies (Layton 1997: 378). Whether this is actually the case for curated technologies in northern Australia is open to question. It has been suggested that the change in technologies may be a stylistic phenomenon relating to "elements of social organisation such as the developments of trade networks and the ritual values associated with stone points" (Layton 1997: 378).

Significantly the arrival of stone points at 5000 BP in the archaeological record (and associated increases in discard rates) coincides with changes to the rock art of northern Australia. New rock art themes such as polychrome Rainbow Serpent figures appear in Arnhem Land as a dominant art form (Taçon et al. 1996) and in the Kimberley, polychrome art which eventually leads to the Wandjina cult, arrives at this time. Totemic heroes, the Wandjinas are painted in rock shelters in human or animal form and are the responsibility of the clan in which the shelter lies (Layton 1997: 379). The art replaces earlier themes

(Lewis 1988: 110). Some Wandjina style art depicts stone tipped spears (Walsh & Morwood 1999: 54) which again ties in the art to the arrival of spear points. Layton brings these various strands together to suggest that at around 5000 BP with the sea level stabilising "a transformation of relationships between people and land" began to occur in which "local territories were more visibly maintained and inter band relationships more highly structured" (Layton 1997: 384).

Discussion of Archaeological Evidence

The majority of excavated Kimberley sites show their initial occupation as commencing after the LGM and the stabilisation of the sea level and the coastline, at 5000 years BP onwards. There is also a proliferation of these sites. The few older sites excavated with longer stratigraphies show occupation commenced by 25,000BP and at 39,000 years in the case of Carpenter's Gap 1 shelter. All these sites show an occupation hiatus based on the lack of artefacts and remains at the time of the Last Glacial Maximum, a time of great aridity.

However Carpenter's Gap shelter provides a window on the changes in botanical remains through the 39,000 years of the shelter's history. A different story emerges from analysis of the remains, one of human adaptation to the changing climate and resulting Kimberley environment. From this it appears that Carpenter's Gap shelter was not abandoned for the 10,000 years or more of the LGM (though the people may have lived elsewhere) and by implication neither was the rest of the Kimberley. This pattern is replicated in Arnhem Land where evidence of a hiatus in occupation is present at some sites but not all. Nauwalabila 1 is the main example of this continuity of occupation through 30,000 years.

After the stabilisation of sea levels at approximately 6500 BP (Morwood and Hobbs 2000) there was a huge increase in the number of occupied sites and a proliferation of discarded artefacts. There is a changing pattern of archaeological remains with the sudden influx of stone debris relating to the Australian Small Tool Tradition at 4500 BP (Bowdler & O'Connor 1991). Rates

of ochre discard increased, implying people were undertaking decoration of some kind, and the presence of shell middens by 3130 BP (Veitch 1996) illustrates people were making use of new food resources with the now stable shoreline. The people occupying the Kimberley used the new technology of the Kimberley point by 2800 BP (Veitch 1996). All the observed changes indicate the commencement of different methods of living.

Kimberley Rock Art in the Australian Context

Rock art is present throughout the whole of Australia, geology permitting, whether in the form of petroglyphs or paintings. The variation in rock art was explored by Lesley Maynard in her three part sequence of development (1979). In this sequence there is a progression from the Panaramitee style of a homogeneous continent-wide body of petroglyphs to heterogeneous regional styles of Simple Figurative and Complex Figurative art. One of the strengths of Maynard's sequence is that it parallels what is observed archaeologically with a change from the Core Tool and Scraper Traditions to the Small Tool Traditions (Flood 1997: 194).

There have been criticisms of Maynard's sequence. One is that the Panaramitee is not as homogeneous as was assumed and that it in fact shows regional variations (Franklin 2004). A second criticism by Layton concerns two of her premises that Aborigines have little useful to say about the art to archaeologists, and that it is prehistoric (Maynard 1979: 85, Layton 1992: 12).

The art of the Kimberley conforms to the latest of Maynard's styles, the Complex Figurative, and some shows the earlier Simple Figurative style. Petroglyphs are rare in the Kimberley apart from pecked cupules and the pan-continental Panaramitee style is generally not present, though further east the Keep River area has large concentrations of carvings (Taçon et al. 2003). They are, however, found in the south-west Kimberley in Carpenter's Gap

rock shelter where cupules, abraided grooves, bird and macropod tracks were found engraved on the rock shelter floor and large boulders (Bednarik pers. comm. in Flood 1997: 199).

Kimberley Rock Art

Northern Australia is renowned for its rock art, its existence having been known since 1803 with Matthew Flinders' discovery of paintings on Chasm Island (NT), and has since been the focus of a number of publications (Chaloupka 1993, Elkin 1930, Grey 1841, Layton 1992, Lewis 1997, Taçon 1987, Trezise 1969, Walsh 1988). The art tradition lies north of the Tropic of Capricorn in a band stretching from the Kimberley in the west to Cape York in the east. The figures present are large and colourful, ranging from multicoloured anthropomorphs, Wandjinas, and snakes in the west and east Kimberley respectively, to the Lightning Brothers designs in the adjacent Victoria River District. Multicoloured fish are painted with a characteristic 'x-ray' design revealing their inner organs in Arnhem Land. In eastern Australia, Cape York is host to the tradition of large anthropomorphs, Quinkans, and large paintings of macropods and ancestral beings. Throughout the Top End, as the tropical part of Australia is known, the art styles portray male and female ancestral figures and the animals and plant foods of the region.

There are two dominant polychrome art forms in the Kimberley. In the east the paintings are of mythological snakes, Rainbow Serpents, *Ungud*. In the west Kimberley the art is of *Wandjinas*, mythological beings and totemic ancestors of the present day west Kimberley people. The dividing line between the two art traditions runs north to south, from the coast near the King George River, bisecting the territory of the Ngarinjin, Worla and part of the Kija language groups, though isolated outliers of Wandjina-like figures are found in the east Kimberley and the Keep River National Park. The polychrome paintings are an important part of the culture of present day Kimberley people and are of the Late Phase art period.

Underlying the Wandjinas and 'x-ray' art of the Kimberly and Arnhem Land are older depictions of elegant human figures. They are usually monochromatic for the oldest styles and now exist as dark red mulberry coloured stains in the rock. Their antiquity is evident by their being covered by thin layers of oxalate crust or silica. In Arnhem Land the old human figures are called Dynamic Figures (labelled by George Chaloupka) on account of their depicted motion and vitality. In the Kimberley the elegant figures are known as Bradshaw figures after their first European discoverer Joseph Bradshaw, or increasingly by the west Kimberley people's name of *Gwion Gwion*. The previous chapter discussed the northern Kimberley names of 'giro giro' or 'Kiera Kirow' applied to the art. The latter name is given to the painter of the art, *Kiera Kirow*, one of the muses of dance, who rubbed his elbow until the bone point was sharp enough to paint finely in blood. In the south west Kimberley the paintings are said to be made by a bird, *Gwion Gwion*, (the sandstone shrike thrush *Colluricincla woodwardi*) who pecked the rock till his beak bled and then used that as a brush (Walsh 2000: 428, 429, also Crawford 1968: 85, Welch 2007: 98). In the Drysdale River area the Walambi people call the elegant art *Eyru-uru* (phonetic spelling) (McPhee pers. comm. 2007). The issue of naming is involved as other authors say that the name *giro giro* is in fact applied to small red stick figures and not the Bradshaw figures themselves (Stubbs 1978: 25, also Scott-Virtue 2006). In view of the different names applied in the Kimberley and with their also being different names in my two areas of interest, I shall follow Welch's lead (2007: 98) and refer to the paintings as Bradshaw figures in this thesis.

The rock art found in the Kimberley cannot be discussed in isolation from other areas in Australia, in particular Arnhem Land. Although the two regions are a few hundred miles apart, and separated by the Victoria River District, they contain much in common. This has been commented on by various authors such as Chaloupka (1993), Chippindale and Taçon (1998) and Lewis (1988, 1997). The early human figures depicted in both regions show parallel changes in technology in the art sequence. Boomerangs are depicted with figures followed by the arrival of a hooked stick (probably a spear thrower) in the art, before the boomerang is lost as a painted artefact. At this stage

Kimberley Bradshaw Figure painting stops, but depictions of humans with a changing set of material culture continue in Arnhem Land until the ethnographic present. Parallel developments across the whole of the art sequence of the two areas include the earliest art forms of pecked cupules and large naturalistically drawn animals. Later styles, post Bradshaw and Dynamic Figures, use polychrome techniques of painting which in the west Kimberley leads to Wandjina spirit figures and in Arnhem Land to depictions of 'x-ray' fish (Taçon 1987). The parallel development of art in the two areas has been the subject of an in depth analysis by Darrell Lewis (1997).

The Kimberley rock art tradition has been described as being "likely to prove one of the longest and most complex anywhere in the world and rivalled only by the rock art of western Arnhem Land" (Morwood, Walsh and Watchman 1994: 79). This could well be because the presence of ancient rock art is often due to factors of taphonomic survival. The central and northern parts of the Kimberley have outcrops of King Leopold and Warton sandstones which have great hardness and stability (Donaldson 2007, Morwood et al. 1994: 79). It is on this that Bradshaw figures and archaic art survives. The southern Kimberley is predominantly limestone and only the recent polychrome Wandjina tradition is present.

It is possible outside cultural contact may have contributed to the complexity of the art (Morwood et al. 1994: 79). Northern Australia was not totally isolated as illustrated in the early historic period by the presence of Macassan and Buginese fishermen. Elements of this cultural contact have been found incorporated in Arnhem Land art and song. Paintings of Sea Wandjinas, *Kaiara*, on the north west coast may even incorporate elements from early European contact, such as pipe smoking (Crawford 1968: 76-80).

Ethnographic Knowledge of Painting

Each Kimberley language group is composed of a number of clans, membership of which is inherited from an individual's father. Each clan in turn

owns a territory, known as a clan estate, and this estate will contain at least one rock art site in which is painted its own named Wandjina (Crawford 1968, Layton 1992). Each of these totemic ancestors has myths and stories relating to it and the clan. The Wandjinas created the natural landscape and founded their respective clan's social order. At the end of their travels the Wandjinas entered the earth, the paintings being their 'shadow' left on the rock wall (Fig. 2.4). The totems of each particular clan are painted in their rock shelters and it is the clan's responsibility to replenish the country with their animal or plant totems through the repainting or refreshing of the art work (Crawford 1968). Species not represented in a clan's particular gallery are expected to be present in other clans' art sites and it is their responsibility to ensure that repainting and hence replenishment occurs (Blundell 1975, Layton 1992).



Figure 2.4 Wanalirri Gallery with Wodjin and followers.

Repainting or retouching occurred at the end of the dry season and was the focal point of the cult, but as to who was entitled to perform the repainting is now unclear (Layton 1992: 38, 40). Valda Blundell states that a senior male clan member who claimed the Wandjina as his own mother's brother had the responsibility for ensuring that repainting took place (1975: 72). The actual

painter though was someone with recognised artistic talents (Crawford 1968: 37). Ngarinjin elder Billy King has described how at the age of 12 or 13 years, he was taken, along with eleven Aboriginal boys, to paint designs on the edge of a cliff face just above the waterline. After a few days of practising the best painters were selected to be artists and the other boys told not to paint or interfere with the main paintings under threat of being killed (Walsh 2000: 51-52).

The method of painting was described to Capell (1972) by an east Ngarinjin informant:

> "First they wash the surface with water, and then they make the drawing: they blow white paint on to it, then they put on the red paint. They put spots on it with white paint. They stamp the spots on, then blow on it, and it (the drawing) sticks." (Capell 1972: 121)

There are few, if any, traditional artists named in the literature apart from Kanaway at Kunmunya Mission, mentioned in the previous chapter, and Indamoi and Wallamurra (Blundell and Woolagoodja 2005, Love 1930). The practice of repainting art sites seems to have died out with the upheavals of the 1940s, 50s and 60s where tribesmen and their families increasingly vacated their traditional estates and congregated around the missions. In the west Kimberley the moving of Kunmunya to Mowanjum near Derby by a series of stages removed people away from their homelands making return visits difficult.

Retouching of art panels occurred occasionally in the period from the 1960s – 80s. Ian Crawford witnessed Ngarinjin elder Charlie Numbulmoore restoring part of the panel at Mamadai by repainting one Wandjina head and refreshing the eyes and noses of the other figures (Fig. 2.5) (Crawford 1968: 25-27). A few years later in 1971, Charlie Numbulmoore acted as a guide for film maker Malcom Douglas to the Wandjina gallery at Wanalirri. Numbulmoore refreshed a figure on the western most panel of Walamut and followers (Fig. 2.6). He retouched the head of Walamut by repainting the headband and forehead. Yellow ochre for the head band was ground down and saliva used to make it

into a paste before applying (Douglas 1978: 188). Analysis of published photographs indicates this was the last time the gallery was retouched.

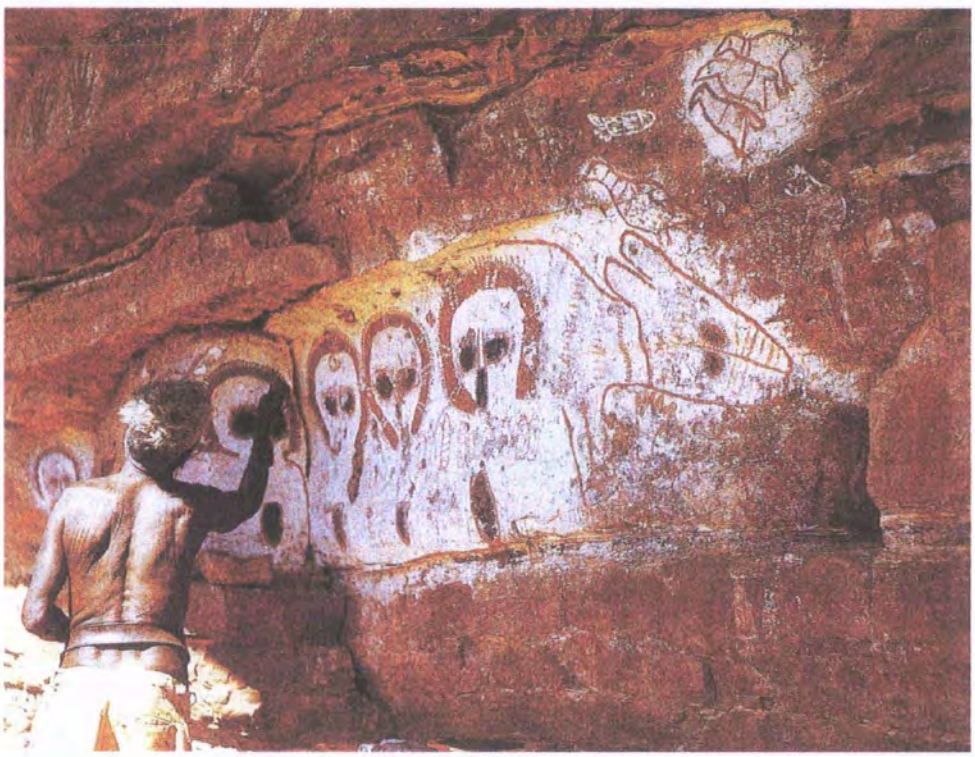


Figure 2.5 Charlie Numbulmoore retouching Mamadai
(Crawford 1968: Figure 16)

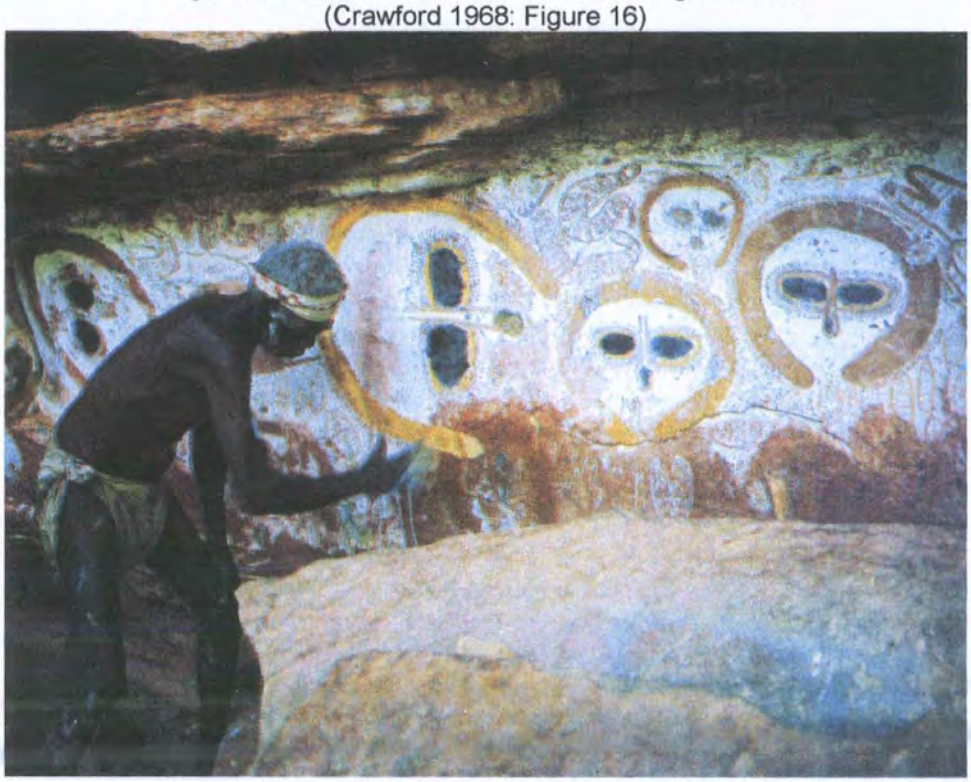


Figure 2.6 Charlie Numbulmoore retouching *Walamut* at Wanalirri.
(Douglas 1978: after page 172)

Walsh reported that a prominent Wandjina on the panel at Donkey Creek's Panda-Goornnya site was repainted by George Djommery in 1985 (1988: 184). On the west coast near Langgi at Karndirrim, the Wandjina Namarali was repainted by Donny Woolagoodja in 2002 (Blundell and Woolagoodja 2005, Woolagoodja 2007). Ten Wandjina sites in the central Kimberley were repainted in 1987 by Ngarinjin elder David Mowaljarlai as part of a project funded by a government grant. It aroused controversy before being suspended amidst legal action for defamation and vociferous debate in the wider community (Morwood 2002: 301-305, Walsh 1992: 46-59).

Although the traditional practice of painting on rock has now effectively ended, painting on canvas is thriving in the Kimberley as part of the wider Aboriginal art movement (Fig. 2.7). Important centres are situated at Warmun (Turkey Creek), Balgo (on the edge of the Tanami Desert) and Mowanjum, and almost all Kimberley towns now have art galleries. At Mowanjum a new, dedicated art centre opened in 2007. Warmun was the home of artist Rover Thomas, and in Kalumburu lives renowned artist, and painter of Wandjinas, Lilly Karadada (Fig. 2.7a) (Ryan 1993).



Figure 2.7a Wandjina by Lilly Karadada



Figure 2.7b Wandjina and Gwions by M. J. Williams

Figure 2.7 Examples of paintings on canvas from the northern Kimberley

The Construction of a Kimberley Rock Art Chronology

The discovery of the wealth of Kimberley rock art has been described in the previous chapter and the personalities involved have been introduced. The presence of two art traditions of elegantly painted human figures and large, more simply painted anthropomorphs has been known since the nineteenth century. This bilateral art sequence was confirmed by the 1938 Frobenius Expedition to the Kimberley (Schulz 1956). Western Australia Museum archaeologist Ian Crawford continued the two-tier chronology of the rock art as Bradshaw and Wandjina figures, with Bradshaw figures being the oldest, painted as small red figures, dancing and hunting (1968). In a later work (1977) he suggested a four-fold chronology with Bradshaw figures being the oldest, then intermediate figures followed by lightning figures and finally Wandjina art (1977: 369) Interestingly, Crawford saw links between the Kimberley and adjacent areas. In his opinion the Bradshaw style had links across northern Australia, intermediate figures link to the south, whereas Wandjina figures are more localised (1977: 369). Crawford also introduced the idea of a "classic form" of Bradshaw figure. The figures are small, about 30cm long, painted red and have associated implements such as boomerangs and barbed spears. The human figures are painted with body features showing shoulders, stomachs and defined muscles such as calf muscles with "curvaceous delineation" (1977: 358). Finally rock art enthusiast and author Dacre Stubbs (1974, 1978) pursued his interest in the elegant figures and completed in 1980 a manuscript of a planned book about them, *Kimberley Mystery Paintings*. This work appears to be of importance in Grahame Walsh's research. The construction of a chronology for Kimberley rock art has been the aim of two researchers who separately built similar chronologies based on stylistic dating, David Welch and Grahame Walsh, and will be discussed in the following pages.

Welch's Kimberley Research

In a series of papers in the early 1990s David Welch first defined and refined a chronology for Bradshaw figures and then the wider Kimberley art tradition

(1990, 1993a, 1993b, 1993c). He provided three chronologies, each more sophisticated than the previous ones. First he divided Bradshaw art into two, monochrome and bichrome art periods, with monochrome art being the 'classic' Bradshaw art in red pigment (Fig. 2.8). The bichrome period is characterised by figures showing gaps or missing pigment in their construction. Using criteria such as superimposition, degree of weathering, exfoliation and chipping of rock, he determined a chronological separation of the two types with bichrome figures being the younger (1990: 112). He then observed certain types of material culture such as differences in body accoutrements, skirts and headdresses (1990: 112) and the presence of a hooked stick (present with bichrome figures) and spear design (bichrome figures depicted with a two part multibarbed spear). From this Welch concluded that bichrome paintings follow on from monochrome art (1990: 121), the progression being monochrome figures, bichrome figures and finally polychrome art. Bichrome figures were later renamed by Welch to be Figures with Straight Parts and Missing Pigment on account of their more angular painting style and fugitive pigments (1993b).

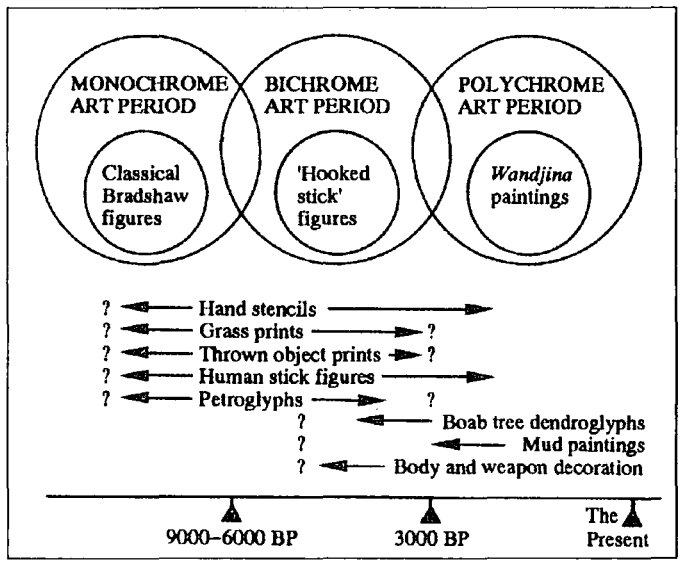


Figure 2.8 Welch's early chronology – Venn diagram
(Welch 1990: Figure 32)

The analysis was taken further with Welch dividing the monochrome figures into two types, Tasselled Figures and Bent Knee Figures (Welch 1993a). Tasselled Figures are straight legged without weapons but portrayed with

headdresses, bracelets, belts and hanging tassels. Bent Knee Figures (the same as Walsh's Sash Bradshaw Figures (1993b: 25)) were painted with legs bent at the knees, headdresses with knobbed ends, boomerangs, arm epaulets and a waist appendage like a skirt (1993a: 13). Welch suspected Tasselled Figures were older than Bent Knee figures and investigated this by looking at chronologies based on weathering, superimposition and the spatial arrangement of the paintings on the rock canvas and content of the paintings. Welch determined that Tassel Figures suffer from a greater degree of exfoliation and weathering than Bent Knee Figures and the latter are found superimposed over Tassel figures. Spatially on the few sites where the two figures occur together, Tassel Figures occupy the centre of the 'canvas' with Bent Knee figures displaced around them. Tassel Figures lack painted boomerangs and spears compared to Bent Knee Figures but this could be interpreted as artistic convention (1993a: 14). From this Welch believes Tassel Figures are the older art style of the two.

Welch has developed a Kimberley rock art chronology of six periods (1993c: 100). The oldest is the Archaic Period characterised by pecked cupules on vertical rock faces. Their position distinguishes them from grinding hollows and food preparation areas which lie on horizontal surfaces. The cupules are covered in a thick, smooth, rock varnish and seem of great antiquity (1993c: 101). The next two periods are the Tasselled Figure then Bent Knee Figure Periods which have already been discussed. After these is the Straight Part Figures Period. This is the renamed bichrome figures period and is characterised by bichrome paintings inicated by missing pigment and the presence of a hooked stick. Within this period Welch also places painted hands with long fingernails though he also suggests this could be a separate period (1993c: 104). A subgroup of figures with parallel lines is present and has headdresses reminiscent of later Wandjina art styles. Plants and animals with a dashed infill design are depicted too. Welch doesn't place them in a particular period but thinks they are old. Walsh (1994) places them in an Irregular Infill Animal Period, and they are seen as a separate period, contemporary with Large Naturalistic Figures in Arnhem Land (Chaloupka

1993: 94). The final two periods are the Wandjina Period comprising polychrome art and Contact Period art (1993c: 111).

Welch is the only Kimberley researcher to list his site analysis statistics and these are discussed in a later chapter. Successive Kimberley rock art traditions have different characteristics. Wandjina sites are associated with occupation deposits and secondary burials. In contrast Bradshaw art (though occasionally overpainted by Wandjina art) has no cultural associations (Morwood et al. 1994:84). From Welch's statistics it seems Bradshaw Period art has little spatial association with other periods and little association with constituent groups. The artists from each period were using different sites at which to paint.

Walsh's Kimberley Research

The second of the Kimberley researchers, Grahame Walsh, has produced a three tier chronology for the rock art of the Kimberley with each tier, or epoch, having separate art periods and sub-groups (1994, 2000) (Fig. 2.9). Each of the epochs is separated by a period of discontinuity. This, Walsh believes, is due to the Kimberley being abandoned during periods of extreme aridity during the glacial period. He argues that there is no continuity of art from one period to the next though other authors such as Crawford (1977) and Welch (1993c) disagree. Walsh's broad chronology has Archaic, Erudite and Aboriginal Epochs within each of which are numerous Periods and sub groups (Walsh 2000: VIII). The Archaic Epoch contains two periods, the first being the Pecked Cupule Period and the second the Irregular Infill Animal Period. A discontinuity separates this last period from the first of the Erudite Epoch. This epoch contains the 'Bradshaw' periods, a Bradshaw Period and Clothes Peg Figure Period (Welch's Straight Part Figure Period). Within the periods are numerous groups and subgroups, the main groups in the Bradshaw Period being the Tassel Bradshaw, Sash Bradshaw (Welch's Bent Knee Figures) and Elegant Action Figure Groups. Finally the last epoch is the Aboriginal Epoch. Two periods exist here, the earlier Clawed Hand Period and the later and recent Wandjina Period. As before, the Periods are divided into numerous

groups and sub groups. The Clawed Hand Period contains art of painted hands with long fingernails as had been identified by David Welch, which he was uncertain about placing into a separate period (Welch 1993c: 104).

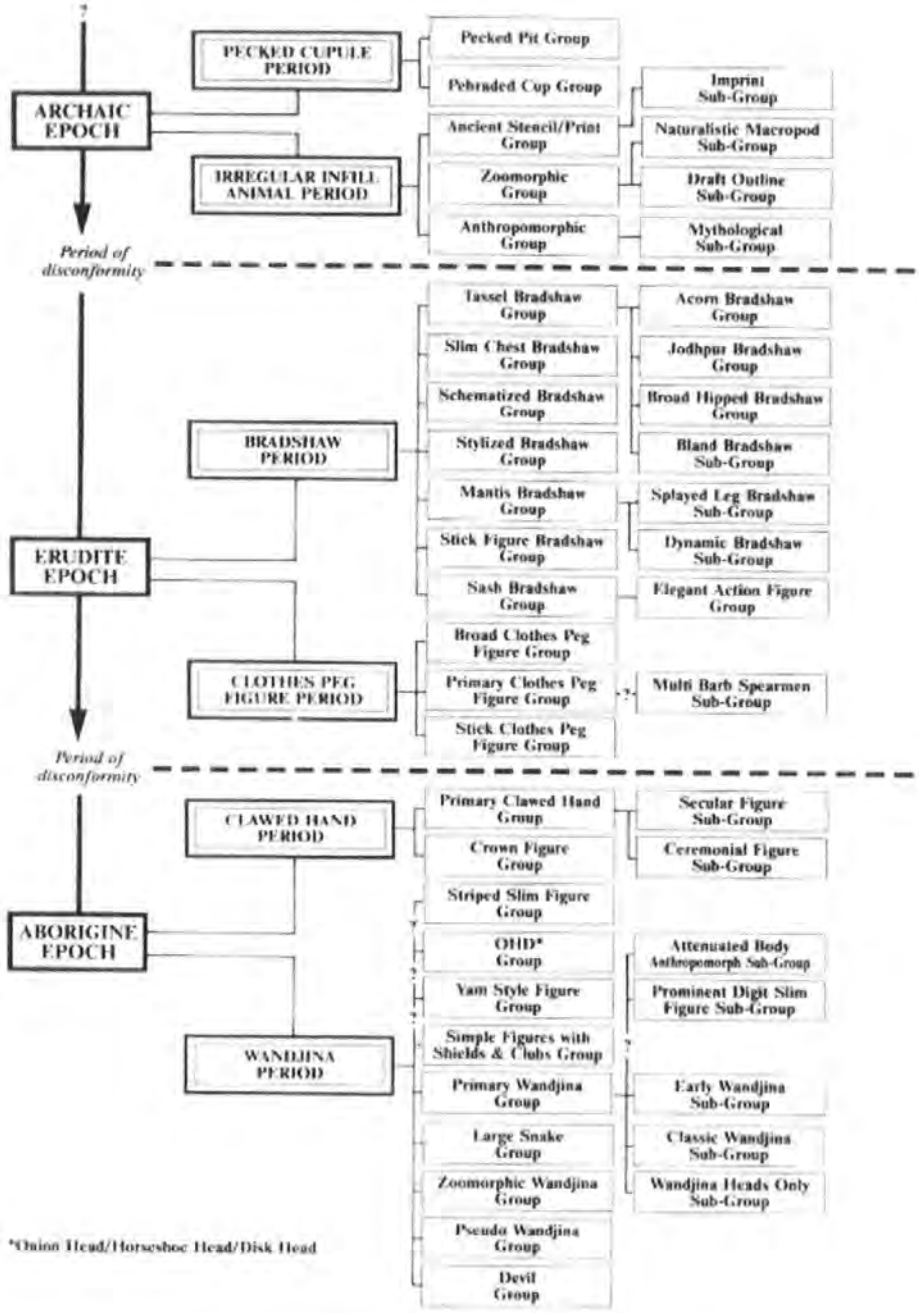


Figure 2.9 Walsh's Kimberley Chronology
(Walsh 1994: Figure 5)

Both chronologies from Welch and Walsh are in broad agreement. There are concerns though about the large number of groups and sub-groups Walsh introduces on account of the lack of evidence of superimposition (Welch pers.

comm. 2002). This is an issue when considering the number of sites Welch analysed and the small number sharing art styles and the even smaller number allowing superimpositions. Only 1.4% of Welch's sites allowed analysis for superimpositions between major art styles such as monochrome and bichrome art styles and 0.6% of sites for distinguishing superimpositions between Tassel and Bent Knee figures (Welch 1990, 1993a).

Other researchers are in agreement with both Welch and Walsh's division of the art into periods. The International Rock Art Research Team (IRART) recognised four major styles, Tassel Figures, Sash Figures, Elegant Action Figures and Polychrome Clothes Peg Figures which are the main periods in Walsh's Erudite Epoch (IRART 2005). The division of the Kimberley rock art styles into periods by both Welch and Walsh is generally accepted as it has parallels with the development of rock art in Arnhem Land (Chaloupka 1993, Lewis 1997).

The division of the Bradshaw Period into recognisable groups such as Tassel and Sash Bradshaw Group figures along with Elegant Action Figures is recognised by all researchers. Implicit is that this is a chronological sequence with Tassel Bradshaw Group figures being the oldest. This view is not accepted by all and rather than being a development in time the three groups may be contemporaneous (Schmiechen pers. comm. 2007, Scott-Virtue pers. comm. 2006). The decoration of Tassel and Sash Bradshaw figures is impractical for every day life and so seems to represent ceremonial wear. Elegant Action Figures are portrayed with little or no decoration, carry spears and boomerangs and also show scenes of every day life. One panel at DR07-14 shows a kangaroo hunt. A figure at DR07-65 clutches his day's kill along with boomerangs and a spear. Tassel and Sash Bradshaw Group figures may in fact represent different ceremonies, one requiring the wearing of tassels, the other a sash, and that Elegant Action Figures show daily life. Certainly occurrences of Tassel and Sash figures at the same site are uncommon. In this thesis I will follow the standard view of a chronological separation of the groups whilst accepting that the evidence of contemporaneity is unproven.

Welch and Walsh both divide Kimberley rock art into constituent periods, the order of which is the same in both cases. There are minor disagreements, such as whether 'clawed hand' art is part of the end of the Clothes Peg Figure or the start of the Wandjina Period, but both recognise its existence. The greatest difference is the number of groups and sub-groups of Bradshaw figure art recognised by Walsh, which would appear to be regional variations found on the northern edges of the Gardner and Mitchell Plateaux.

In this thesis I will use Walsh's nomenclature and a simplified version of his chronology (omitting many of the groups and sub-groups) on account of Walsh's published works (1994, 2000) being filled with photographs, line drawings and silhouettes which I have used extensively. My generalised chronology splits Kimberley rock art into three phases, Early, Middle and Late, and the phases into various Periods which may be composed of groups, as indicated in Table 2.1 and Figure 2.10. This format follows a simplified version of Morwood, Walsh and Watchman (1994) and IRART (2005).

Chronology	Period	Characteristic art period or style
Early Phase	**Pecked Cupule Period**	
	Irregular Infill Animal Period	Irregular Infill Animal Period
Middle Phase	**Bradshaw Period**	Tassel Bradshaw Group Sash Bradshaw Group Elegant Action Figures
	'Clothes Peg' Figure Period	
Late Phase	**Clawed Hand Period**	
	Wandjina Period	Wandjina Period

Table 2.1 Simplified Kimberley chronology used in this dissertation.

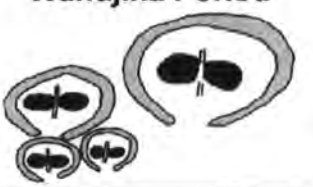
<table>
<tr><th>Phase</th><th colspan="2">Period</th></tr>
<tr><td>Early</td><td>Pecked Cupule Period
  </td><td>Irregular Infill Animal Period
  </td></tr>
<tr><td rowspan="2">Middle</td><td>Bradshaw Period
Tassel Bradshaw Group
 
Elegant Action Figures
  </td><td>Sash Bradshaw Group
  </td></tr>
<tr><td>'Clothes Peg' Figure Period
Bichrome Figures
  </td><td>'Clothes Peg' Figures
  </td></tr>
<tr><td>Late</td><td>Clawed Hand Period
  </td><td>Wandjina Period
  </td></tr>
</table>

Figure 2.10 Kimberley relative stylistic chronology.
(from Walsh 2000 except Wandjina Period)

The construction of a relative stylistic chronology leads on to whether it can be firmly anchored in time through the determination of archaeologically derived dates. The next section will address the issue.

Dating Kimberley Rock Art

Rock art is notoriously difficult to date. Only in some circumstances can the latest techniques of AMS radiocarbon dating and optically stimulated luminescence (OSL) be applied. Absolute dating depends on linking art remains to datable archaeological deposits (through burial) or linking faunal species depicted to datable climatic periods (Franklin 1993: 1). The inherent problems with absolute methods have led to a dependence on relative chronologies determined through variations in the style of art depicted. A range of methods and approaches used in dating Arnhem Land rock art is discussed in Chippindale and Taçon (1998). In the Kimberley there have been few archaeological excavations providing information on the rock art tradition and fewer direct dates on the rock art, though this is changing with work in the adjacent Keep River area (Ward et al. 2006). As a result almost all researchers have used the technique of stylistic dating to catalogue and categorise the body of Kimberley rock art.

Relative dating techniques

Stylistic dating

A working definition of style in an archaeological context is provided by Sackett (1977: 370) where style "a) concerns a highly specific and characteristic manner of doing something and b) the manner is always peculiar to the specific time and place". From this it can be seen that different styles can exist at different sites and regions at the same time or styles from different periods of time can exist in the same place (Franklin 1993: 3). There is a tendency amongst archaeologists to explain stylistic variations in rock art in chronological terms with little or no consideration of functional or regional variation. It is important to realise that different styles may occur at the same time within a culture if they have different functions or are produced on different media, for example contemporary paintings on paper and bark from western Arnhem Land (Chippindale and Taçon 1998: 94).

Association with Dated Archaeological Deposits

For dating rock art with associated archaeological deposits, there are two possible deposition scenarios which may be applicable. The first is that if a rock art panel, or broken fragment of a panel, is found buried in sediments then any datable archaeological remains will provide an indication of the age of the panel's deposition. The age of any art depicted on the panel, however, is not determined as there is no information on the time lag between the act of art production and the deposition of the panels and the art can only be said to be older than the age of deposition. This method of dating has been discussed above for Carpenter's Gap rock shelter and used in Cape York at Sandy Creek 1 shelter (Flood 1997: 247) and Early Man Shelter (Morwood 2002: 262). At the latter the age of flying fox paintings truncated at ground level was estimated based on age depth profiles of the excavation. The second scenario of deposition is that occasionally deposits below an art panel will contain used pieces of pigment or tools used to make the art. This is the case in the Kimberley at Drysdale 1 site (Morwood and Hobbs 2000: 37) and at Keep River sites Karlinga and Goorurarmum (Ward et al. 2006).

In addition to the two scenarios there is a third method, though of less weight, whereby depictions of material culture are compared with artefacts of known age. An indication of the possible age of Bradshaw paintings was provided by Crawford (1968: 89), who recognised depictions of Bradshaw technology as being similar to museum specimens. However, on checking and comparing implements with specimens from Arnhem Land and north west Australia he found unexpectedly for him, that the painted technology did not resemble that used recently by Kimberley Aborigines (Fig. 2.11). To his mind this was further proof that the Bradshaw art style is archaic and represents "artistic achievements of earlier cultural period in the Kimberley" (1968: 89).

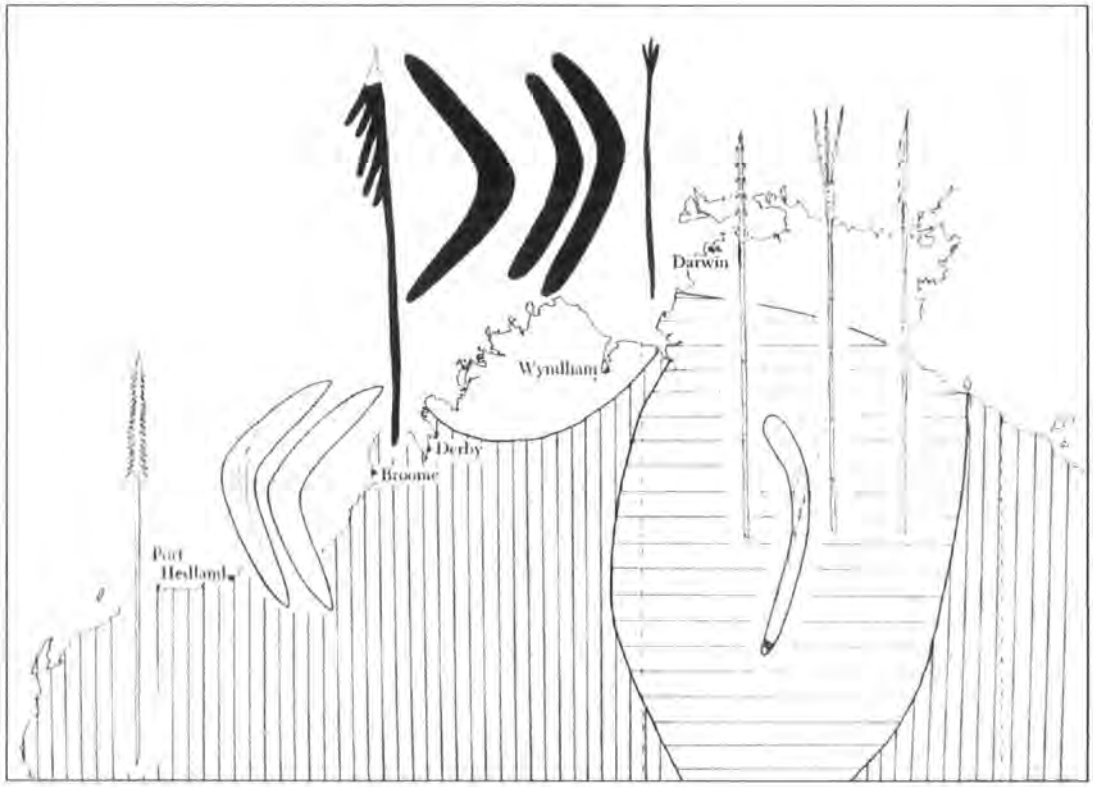


Figure 2.11 Bradshaw Figures' weapons (in black) compared with existing weapons. (from Crawford 1968: Figure 77)

Absolute dating techniques

AMS radiocarbon dating

Conventional radiocarbon dating requires a large amount of carbon (up to 5 grams) to be monitored for the decay of carbon 14 atoms with time. Collecting the carbon would be a destructive process when applied to rock art. Accelerator Mass Spectrometry (AMS) analysis does not count the number of carbon 14 atoms which decay but counts the total number of carbon 14 atoms present in a sample. This is a far larger amount than the number which decay and means the sample size can be reduced by four orders of magnitude or more (Rowe 2001: 143). The small size means that it is now possible to sample paintings for minute quantities of carbon without destroying the art. Of particular relevance is that small organic particles, which have incorporated themselves into the paint or covering skins, are potentially datable by this method.

The arrival of new rock art dating techniques in the 1990s led Morwood, Walsh and Watchman (1994) to advocate the use of these new methods on Kimberley rock art. Dated changes in the art could be compared with technological and economic changes as discovered through excavations (1994: 84). This would lead to information on the cultural and technological changes in Aboriginal society.

In 1997 Watchman, Walsh, Morwood and Tuniz (Watchman et al. 1997) reported on the first acquisition of AMS radiocarbon ages for mineral encrustations associated with Bradshaw Period and earlier Irregular Infill Animal Period art. Twenty sites were examined for dating potential. Amongst the criteria the sites were judged on factors such as the thickness of paint and accretionary layers, the continuity of the paint and accretion layers across the rock surface, the presence of organic material and the degree of weathering (1997: 18). Selected samples were examined in both plan view and cross section by microscope. Paint layers were observed to lie on, and be trapped by, accretionary deposits (1997: 20). One of the first results was that the paint pigment did not appear to contain organic binder and so was not suitable for radiocarbon dating. From this, speculation that blood was used as a binder can be discounted (1997: 24).

To obtain age estimates, organic matter trapped in accretionary layers as close to the paint layer as possible must be AMS radiocarbon dated. Dates from samples in overlying accretion layers will underestimate the age of the paintings. In this manner two similar figures were analysed but large differences were found. Different materials in the laminations were tested for a Tassel Bradshaw and Cane Bradshaw figure. The former used algae and diatom rich laminations for analysis and provided an age of 1490 years BP. The latter figure had carbon in an accreted paint layer and returned an age of 3910 BP. This is interpreted as providing evidence of major time delays in the formation of accretionary layers after painting and slow or intermittent rates for different minerals on adjacent surfaces (1997: 25). From the dates obtained by analysing accretion layers, AMS radiocarbon ages show some Bradshaw Period figures are at least 4000 years old. Irregular Infill Animal Period figures

are more closely related in time to Bradshaw Figures than expected, but are still older (1997: 25).

The Kimberley shares a broadly similar climate with that of Arnhem Land and is thought this was generally the case in the past, though there will be regional differences. Alan Watchman has investigated the skins and crusts associated with Arnhem Land rock art (1985) where some art is painted on quartzite with a thin covering of silica and other art is on thick gypseous crusts (Watchman 1985: 286). Old art is suspected to lie within the crust as opposed to on the surface, or be seen through a thin silica skin. New art will lie on top of silica skins or be painted on the surface of gypseous crusts (Chippindale and Taçon 1993: 32). In their paper, Chippindale and Taçon report unpublished work by Watchman on oxalate layers at Nangaloar near Mount Brockman in Arnhem Land. A layer near the base of the crust returned an age of 12250 +/- 105 BP (1993: 32). Further, Watchman is reported as considering it likely that salt formation commenced at Nangaloar during or before the Last Glacial Maximum around 18500 BP. Chippindale and Taçon interpret these results to mean that old Arnhem Land paintings would date to before 5500 – 6000 BP and before 18500 for those applied directly to rock and covered by a silica skin (1993: 32). Caution is required as the data is fragmentary with there being no confirmation this applies everywhere in Arnhem Land (1993: 32) and the application of radiocarbon dating to rock skins is still developing, though dates of 8000 BP have been given for a multi-layered skin (Chippindale & Taçon 1998: 104). It seems reasonable, therefore, to apply the Arnhem Land data on crust formation to the early art of the Kimberley, and infer that art painted on skins is older than 5500 – 6000 years BP. This agrees with the dates for carbon bearing substances found within the skins such as algae or carbon as the radiocarbon dates imply the paintings are older.

Another avenue for investigation is to examine dates for accretionary layer formation. This will be of use since Watchman et al. (1997) describe a Tassel Bradshaw figure, sample KF1, as having its paint layer sandwiched between layers of laminate (1997: 20) and they report a change in layer composition at this point. Ward (2005) dates the time of oxalate formation at 13000 years ago

so any figures painted on accretionary layers will be younger than this date. With the youngest date for Bradshaw art being 4000 BP from AMS radiocarbon results then the age range for Bradshaw figure painting will be in the band 4000 – 13000 years ago.

Pellets of native beeswax have been used to make figures and designs in the Kimberley and Arnhem Land. If they in turn are painted over, radiocarbon dating of the wax provides a lower age limit for the art. Walsh dated a series of beeswax samples underlying Wandjina art. His results are unpublished but he presented his data at the 1997 Kimberley Society conference and the information from the conference proceedings are presented in Table 2.2.

Figure type	Sample location	Radiocarbon ages
Sea Wandjina – Kiara	Beeswax figure under panel, Wandjinas younger.	1370 +/- 70 yrs.
Wandjina – kangaroo	Beeswax figure on bedrock, Wandjinas younger.	630 +/- 120 yrs.
Simple fig with clubs	Beeswax figure in same style.	1220 +/- 80 yrs.
Argula	Beeswax	1770 +/- 70 yrs.
Brad Wandjina panel	Beeswax figure underlying on bedrock, Wandjina younger.	1440 +/- 120 yrs.

Table 2.2 Radiocarbon dates for beeswax associated with Wandjina art.
(taken from Walsh 1997: 58, 59)

The beeswax dates show that Wandjina figures are less than 1500 years old. Argulas are 'trickster' figures, and part of the same belief system, are a few hundred years older in these examples.

OSL dating of fossilised mud wasp nests

A similar method of dating rock art from associated deposits has been used in the case of fossilised mud wasp nests overlying paintings. The nests, constructed by mud dauber and potter wasps, contain pollen grains and phytoliths which can be dated by AMS radiocarbon techniques. The sand grains in the mud can be dated by Optically Stimulated Luminescence (OSL)

methods (Roberts et al. 1997, Roberts 2000: 47). In this manner seven mud wasp nests built by *Sceliphron laetum* in the Drysdale River and King Edward River were selected for OSL analysis. Four nests overlay Wandjina figures, and elsewhere the stump of one, KERC4, overlay the headdress of a Bradshaw figure. The Bradshaw figure in turn overlay a hand stencil and is itself overlain by a ringtail possum identified as being from Walsh's Clawed Hand Period (Roberts 2000: 48).

Luminescence dating allows the time since minerals such as feldspar or quartz were exposed to sunlight to be determined. In this example sand grains from the margins of streams and pools are exposed to sunlight and their luminescence clock set to zero. Collected by mudwasps, their final exposure occurs as they are transported to the nest site before being incorporated into the structure (Roberts et al 1997: 697). Electrons are trapped in defects in the sand grains' crystal lattices, the number trapped increasing with time and palaeodose from background radiation and cosmic rays. In the laboratory the electron traps can be emptied by shining green light on the grains. The light emitted is converted into a palaeodose and the age of the nest determined by dividing the palaeodose by the annual background radiation. This reading from background radiation and cosmic rays is measured at the nest site (Roberts et al 1997: 697).

Four dates have been obtained from rock art with this method, three of which relate to underlying Bradshaw figures. The largest nest collected overlay an early period Wandjina figure. The nest core was protected from penetrating sunlight and returned an OSL date of 610 +/- 40 years meaning the underlying Wandjina must be older. Of concern is that the outer part which should have been bleached by sunlight gave a non zero age of 110 +/- 20 years.

Applying the technique to the nest complex KERC4 and KERC5 the core of the nest stump KERC4 overlying the headdress of a Bradshaw figure gave an OSL range of 16400 – 23800 years. The nest thickened with distance to become fossilised nest KERC5 which in turn provided an OSL date of 17500 years (Roberts et al 1997: 698, Roberts 2000: 49). In this case the age of the

Bradshaw figure will be older than the superimposed mud wasp nest and the hand stencil underlying the Bradshaw figure will be even older.

Discussion of Chronologies

There is a strong agreement amongst rock art researchers over the chronology of Kimberley art styles based upon relative chronologies through stylistic dating. This is based upon factors such as superimposition of figures, changes in material culture depicted, changes in artistic technique and also environmental factors such as the degree of aging of the rock surfaces on which the art sits. The agreement is of a chronology based on a three part division of the art sequence. Archaic forms of art such as pecked cupules and large naturally drawn animals painted with an irregular infill design are followed by the 'classic' Bradshaw period. Here Tassel and Sash (Bent Knee) Bradshaw Figures are followed in the sequence by bichrome and polychrome Clothes Peg Figures. Recent art is that of the modern Wandjina Period with an art style of hands with long finger nails preceding it.

Chronometric dating seems to be more open to interpretation with three techniques being used. AMS radiocarbon dating of organic matter in accretionary layers and OSL dating of mud wasp nests do not date the art directly, but date associated deposits which under or overlie the painting. The same is true for dating archaeological deposits in excavations such as the appearance of pressure flaked spear heads, depictions of which appear in more recent art.

From archaeological excavations (Crawford 1968) the age of the recent Wandjina polychrome tradition, based on pressure flaked stone spear heads is from 3000 BP to the ethnographic present, though it could be as old as 5500 – 6000 BP if the Arnhem Land data (Jones 1985) is considered applicable. For Bradshaw Period art, the age range, depending on accretionary skin analysis, varies from older than 4000 BP to within the band 4000 – 13000 years BP for art painted on and encapsulated by the skin. If OSL dating of fossilised mud wasp nests is accepted then the Bradshaw

Period is older than 17500 BP. Pecked cupules in the Archaic Period are covered by a thick silica skin and appear of great antiquity. From these dates it seems fair to regard them as being older than 13000 BP.

The more recent polychrome tradition of Wandjina figures and Clawed Hands seems to lie within the age of pressure flaked spear heads determined by excavation. This period commenced at least 3000 BP in the Kimberley and possibly earlier (5500-6000 BP in Arnhem Land). For earlier Bradshaw art there are a range of dates. However the development of Kimberley art styles does parallel what is happening in Arnhem Land (Lewis 1997). To my mind it would be implausible to have Bradshaw art as being vastly older than equivalent Arnhem Land Dynamic Figures. For this reason at the moment I discount the OSL mud wasp nest dates of 17500 years BP, and older, for Bradshaw art. The age range, based upon the formation of accretionary skins, 4000 – 13000 BP, seems preferable, with an early date within that band for the commencement of the Bradshaw Period. On the basis of skin formation Taçon and Brockwell suggest the age of Dynamic Figures is at least 10,000 BP (1995: 684).

The previous three sections have discussed the body of data obtained from excavations, direct sampling of art panels and accepted stylistic chronologies in the Kimberley. Coupled with further information from Arnhem Land (because of the parallels between the two regions) it is now possible to provide a tentative synthesis of dated changes in Kimberley art and use the data to provide anchor points to the various rock art phases. The range of information is shown in Table 2.3 and from this it is possible to create a chronometric model of the Kimberley rock art developments, Table 2.4.

		Kimberley							Arnhem Land		
	Author Ref Method	Crawford 1968 Excavation	Roberts 2000 OSL	Walsh 1997 AMS	Watchman 1997 AMS	Veitch 1996 Excavation	This thesis 2009 C14 trends	Bowdler & O'Connor 1991	Chippindale Taçon 1998 Chaloupka 1993	Lewis 1988	Watchman 1985
Phase	**Period**										
Late	**Wandjina**	2660 BP	610 BP	1770 BP		Kimb. point 2800 BP Ochre deposits 6160 BP	From 4500 BP				
Middle	**'Clothes Peg' Figure Period**							Arrival of small tool tradition 4500 BP		6 - 9000 BP spearthrower	Crusts
	Bradshaw Period		17500 BP		older than 1490/3910 BP					min 9000 max - no megafauna	
Early	**Irregular Infill Animal Period**								Large Nat. Animals 10-30,000 20,000 BP		
	Pecked Cupule										

Table 2.3 Synthesis of direct dates in Kimberley and Arnhem Land archaeology and rock art.

Chronology	Period	Years
Early Phase	Pecked Cupule Period	
	Irregular Infill Animal Period	Unknown – older than 10,000BP
Middle Phase	Bradshaw Period	Maximum – no megafauna Minimum – 9,000 BP
	'Clothes Peg' Figure Period	6,000 – 9,000 BP. Arrival of spearthrowers as part of the Small Tool Tradition.
Late Phase	Clawed Hand Period	Late Phase commences 6,000 BP, increases in ochre deposition on the Mitchell Plateau.
	Wandjina Period	Kimberley points ~ 2,800 BP Wandjina art less than 1,770 BP

Table 2.4 Kimberley rock art chronology with assigned dates.

Table 2.4 is a synthesis of information from the Kimberley and Arnhem Land. The first point of note is the 'short' chronology for Middle Phase art which is in contradiction to Walsh's comments based upon OSL mudwasp nest dating. As indicated earlier I regard those dates as anomalous. I will be using this chronology as the basis for the rest of this dissertation.

Regionality in Kimberley rock art: an unknown factor

The survey of published information on Kimberley rock art shows there are issues that are mentioned in the literature but not sufficiently developed. This provided some leeway to areas of investigation I could develop in my doctoral research. I was struck by how the occurrence, or not, of various rock art styles in different areas of the Kimberley is a subject that has had only brief attention

given to it in rock art literature. Grahame Walsh makes little mention of this in his 2000 book, with only a few comments dispersed in the text, yet he devoted a section to a regional variant of Bradshaw Figures, the Kiera Kirow, in an earlier work (1988: 224). In a similar vein David Welch, in an early article (1993b) mentions a Tassel Figure variant near the King George River and Sash Figures (his Bent Knee Figures) variants on the Mitchell Plateau.

That Kimberley art does occur in broad geographical regions has been known since Elkin's visit in the 1920s when he mapped the extent of Wandjina art. This is illustrated by Morwood and Hobbs (2000) and is shown in Figure 2.12 below. The map shows the boundaries of Middle and Late Phase art which will be discussed in turn.

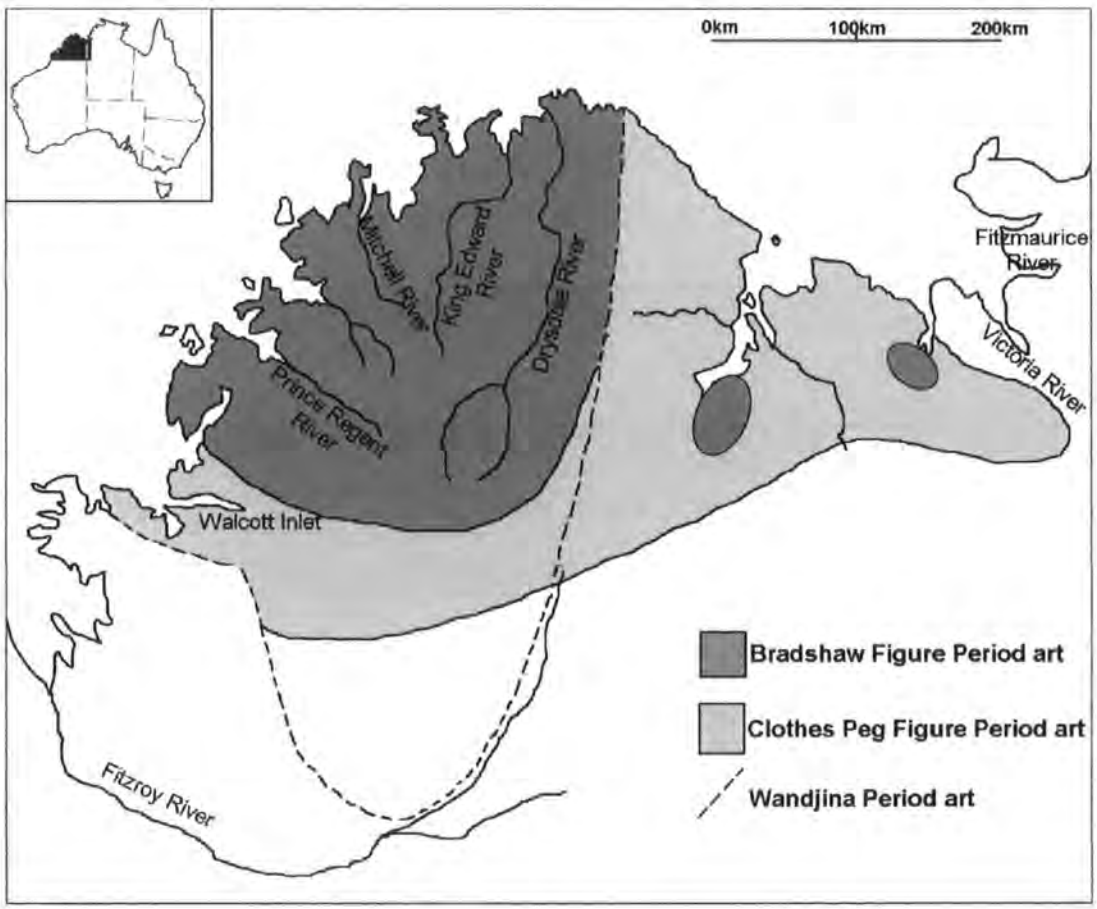


Figure 2.12 The extents of Kimberley painting styles.
(after Morwood & Hobbs 2000: 35 Figure 29)

Turning to Late Phase polychrome art, regionality is immediately apparent with the west Kimberley having paintings of anthropomorphs, *Wandjinas*, who

are regarded as their totemic ancestors by the west Kimberley people. In the east Kimberley the dominant art form is that of snakes, *Ungud*, the Rainbow Serpents, and ancestral creators of the land though there are 'outliers' of the respective art traditions in each other's territory.



Figure 2.13 Rainbow Serpents and a Wandjina at Mundagnaardi. (Walsh 1988: Plate 200)

At Gibb River in the central Kimberley is the Mundagnaardi Rainbow Serpent site where, within the midst of a group of Rainbow Serpents, sits a single Wandjina head (Fig. 2.13). A solitary Wandjina is painted at the foot of the cliffs on the Chamberlain River in the East Kimberley (Fig. 2.14a). The figure has more in common with paintings of anthropomorphs associated with storms, the Lightning Brothers, found further east in Wardaman Country in the Northern Territory (Fig. 2.14b).



Figure 2.14a Wandjina figure from the Chamberlain Gorge, East Kimberley.

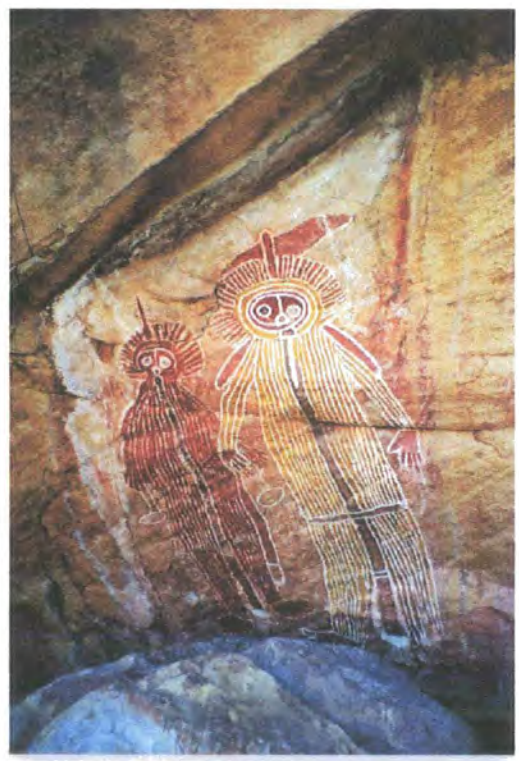


Figure 2.14b The Lightning Brothers from Ingaladi, Wardaman Country.

Figure 2.14 East Kimberley and Wardaman Country anthropomorphs.

Within the Wandjina painting tradition, Walsh briefly mentions that painted wallabies appear to have distinct painted interiors making them identifiable by region, a differentiation that is possibly clan related, but he gives no other details and does not pursue the comment (1997: 57). Mike Donaldson (2007) provides numerous photographs of Wandjina images from the different river systems of the west Kimberley and their style of painting varies from the traditional at Donkey Creek (2007: Figure 1.22) to bizarre square Wandjinas (2007: Figure 1.20) on the King Edward River, illustrating that regionality is present in this art tradition.

Underlying the Late Phase is Middle Phase art of Bradshaw and Clothes Peg Figure Periods, of which the former is the older art style. Figure 2.12 shows their respective extents with the later 'Clothes Peg' Figure Period art covering the whole of the Kimberley and stretching into the Northern Territory and as far east as the Fitzmaurice River. Walsh has documented figures he regards as being transitionary from the Bradshaw Period groups to 'Clothes Peg' Figure Period groups, and these figures show regional variation on the north west, central-north, north east plateaux and the near-coast of the northern plateau (2000: 170-171). In the same way his text categorises Static and Tapering Outline 'Clothes Peg' Figures as regional subgroups, with the former existing on the northern plateau and the latter occurring in three regions, central-northern, north east and north west (2000: 174, 182). Simple Northern Figures to Walsh's mind are found on the far northern coast escarpment and are identifiable in some instances as being maritime crew in boat paintings (2000: 197). Finally the extent of the 'Clothes Peg' Figure Period into the Northern Territory is categorised by the presence of Eastern 'Clothes Peg' Figures, thought to be surviving remnants of another subgroup of paintings (2000: 201).

Amongst Bradshaw Period groups, regional variation was known almost from the start with Worms' discoveries (1955) and later Walsh's research into the presence of Kiera-Kirow figures on the northern coast at Napier-Broome Bay (1988: 224). They are somewhat stockier than other Bradshaw figures and lack detail and accoutrements. These are the figures Douglas Fox called

'kirakiran' (quoted by Walsh 2000: 428) and by Worms' 'giro giro' (1955). Walsh regards the figures as being late Bradshaw variants but does not place them into his detailed chronology (2000: 416).

In Welch's opinion Tassel Figures seem to show regional variations where the figures seem more rigid and there are subgroups too, but no superimpositions to determine a chronological order have been found (1993b: 27). Regional variations are seen amongst Sash Bradshaw Group figures (his Bent Knee Figures), for example on the Mitchell Plateau, where, on some figures, a large feather is portrayed from the front of the headdress and some show evidence of being formerly bichrome where a gap at the waistband is indicative of a now lost pigment (1993b: 29).

Within the range of Walsh's Bradshaw Period groups, Convex Sweep Bradshaws and Dynamic Bradshaws are northern variations with the latter located around the Mitchell Plateau perimeter (2000: 148, 149). The later development of Elegant Action Figure art is in Walsh's opinion centred on the northern edge of the Kimberley plateau (2000: 154).

Walsh briefly identifies the Gardner Plateau as having evidence of regionality in the presence of different groups and sub-groups but his comments are dispersed through the text and he does not elaborate on this. The north of the plateau has Mantis and Stylised Bradshaw Groups, the latter extending to the Timor Sea (2000: 157, 161), and Slim Chest Bradshaw Group centred on the north west extremities (2000: 162).

Eastern Bradshaws is the name Walsh gives to Bradshaw style figures far to the east beyond the west Kimberley region. They are found in the Cockburn Ranges and east into the Northern Territory as far as the Fitzmaurice River (2000: 163, 165). Walsh states their presence so far east is being due to their being found on isolated remnants of hard sandstone implying a large body of work has disappeared with time (2000: 165).

Discussion

The suggestion that different art groups exist in localised regions is a topic worth pursuing. Questions arising from this concern factors such as whether the regionality is dependent on distinctive geographical areas where people lived, or did local environmental conditions, such as the presence of permanent water, play a factor? Late Phase art commenced being painted approximately 5000 years ago in a climate similar to today. If Kimberley Bradshaw art was painted from 13,000 years ago (based on the formation of rock laminates) then it would have been undertaken when environmental conditions were in a state of flux at the end of the Ice Age, with the flooding of low lying areas on the exposed coastal plain as sea levels rose and a changing climate from more arid conditions than today. To investigate these ideas for a research thesis would require a broad survey of at least two different geographically distinct areas, areas which were also distinct during the painting of Middle Phase art. For this, one of the major Kimberley rivers would be suitable with the second location being the coast, on account of it being inland ten thousand or more years ago, with receding shorelines.

Chapter 3.

Surveying Kimberley Rock Art

In this chapter fieldwork undertaken for my research in Kimberley rock art will be described and analysed. Sections included in the following pages will start with a report of the fieldwork sessions carried out in the years 2005 to 2007, followed by an account of previous research in the areas visited, as well as describing the research methodology. The aims of the research undertaken in the Kimberley for this thesis were twofold: to investigate the distribution of rock art in selected survey areas and to assess whether there was evidence of differential selection of painting site depending on the subject matter by art period or style. The objectives in pursuit of this were:

- First, to locate areas suitable for survey.
- Secondly, to establish a database of rock art sites in the two survey areas.
- Thirdly, to compare the presence and absence of art styles for Bradshaw figure paintings which are thought to predate sea level stabilisation.

In this chapter I will address the issues surrounding my choice of areas to survey and the research and fieldwork undertaken to allow me to make those selections. Once the nature of my field survey had been decided, the field techniques to enable the objectives to be attained are then assessed. First the aims and objectives are defined (see above) before, secondly, deciding on the field recording method to allow survey questions to be met. The bulk of the chapter looks at the two survey areas in turn. Each area is described before

investigating previous research. The field surveys undertaken for this doctoral thesis are described in detail before finally noting survey limitations.

The Selection of Survey Areas

The selection of areas to survey (Figures 3.1 and 3.2) was made on the basis of the data obtained, first, in publications and in unpublished reports, the latter only available in Australia. Information provided by Australian researchers and rock art experts was also checked. Finally, some initial surveys were made. As regards the publications surveyed in England the libraries of the Institute of Archaeology and the Royal Geographical Society in London were investigated. In Western Australia research was undertaken in the University of Western Australia library, the State Library (Library and Information Service of Western Australia) and the library of the Department of Indigenous Affairs (DIA). Moreover, some relevant publications were located in the town libraries of Broome and Kununurra. In Darwin in the Northern Territory, the Parliamentary Library was also visited. Unpublished reports read in my search for suitable research areas included Joc Schmiechen's 1993 report, '*Shadows in Stone*' on the art of the Drysdale River. In addition to publications informal discussions with several specialists were of great benefit, including Dr Ian Crawford, Dr George Chaloupka, Dr Mike Donaldson, Dr Philip Playford, Dr Lee Scott-Virtue, Dr David Welch and Dr Grahame Walsh.

Another source of information in Western Australia checked in order to decide on the area to analyse for my doctoral thesis is the documentation available for consultation in the Department of Indigenous Affairs (DIA). This body acts as repository for data on reported Aboriginal sites. Information on new discoveries can be lodged there by depositing site reports and by completing Aboriginal site survey forms. This information is made available to the public in a limited format by means of a web site and interactive map covering the entire state (www.dia.wa.gov.au/AHIS). Sites are indicated on the map and associated meta-data provides relevant information. This lists the DIA site

number and site identification number along with the status of the site report within the system, access (whether open, closed or vulnerable, restrictions on entry ie male or female only or no restrictions), the site name, Aboriginal informants and site type. The latter category indicates the importance of the site such as the presence of a painting, engraving, artefact/scatter, mythological and skeletal material/burial. Additional data are recorded on whether the site is, for example, a rock shelter, a plant resource camp or has archaeological deposits. No further information is presented discussing the nature of the site, such as the type of paintings present. Researchers are directed to reports where the site is discussed held by the DIA in Perth. However, they have a catalogue number indicating restrictions on viewing and reports can be open, although there are exceptions, and some are closed to all.

On the web site of the Department of Indigenous Affairs, sites are marked on the relevant map by a circle or rectangle representing a few hundred metres on the ground, and, for important sites or site complexes, the area represented can be of the order of a kilometre or so. Further, the particular site may not actually lie in the centre of the depicted area. This ambiguity in location provides a good measure of protection for the sites in question. For example I am aware of one important Wandjina site in the central Kimberley, Wanalirri, lying outside the area indicated. The main effect of this for researchers is that relocating sites can be difficult without a guide or satellite navigation (gps) coordinates. The rugged Kimberley landscape means surveying a general area indicated on a map from the DIA website can be time consuming unless the site has a distinctive topographical feature.

The DIA makes a database of site locations available for downloading free of charge off the web to members of the public in a shape file format, sites.shp, suitable for incorporating into geographical information system (GIS) programs such as ArcGIS. This file covers the whole of Western Australia and is updated on a regular basis. The file is large and cumbersome to use, being currently in the order of 92Mb in size but it is straightforward to extract

Kimberley locations into a smaller file of a manageable 3Mb. In doing this I chose the southern boundary of the Kimberley to be 19 degrees south.

Finally, before deciding on the survey area, I undertook visits to art regions to investigate the best locations to carry out a survey. In 2005 I travelled in the northern Kimberley to King Edward River and onto the settlement of Kalumburu. From there an initial attempt to enter Drysdale River National Park was abandoned on account of its remoteness. In 2006 I drove along the Gibb River Road looking at art sites at Manning Gorge and Barnett Gorge in the West Kimberley and El Questro Station in the East Kimberley. These two zones were rejected as possible research areas on account of local access difficulties and the quantity and concentration of rock art present. A journey to the Mitchell Plateau, and art sites around the Mitchell Falls followed, but again were rejected for the same reasons. As a result of contacts arising from my first Kimberley visit I had two meetings with researchers, the first being with Joc Schmiechen who confirmed that Drysdale River National Park contained high concentrations of rock art. My second meeting was with east Kimberley based archaeologist Dr Lee Scott-Virtue of Kimberley Specialists. She introduced me to the idea of the northern Kimberley coast, the Diamond Coast, as a possible region to investigate.

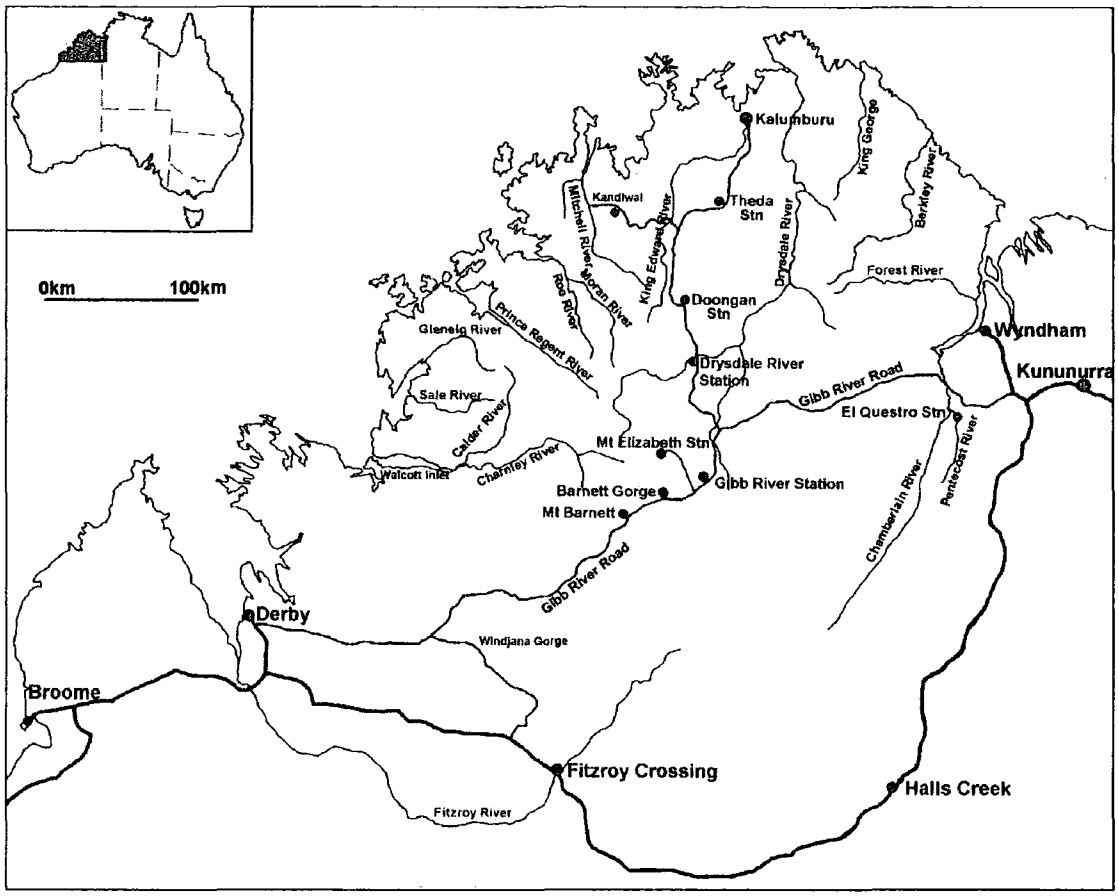


Figure 3.1 Map of the Kimberley showing areas visited and named in the text.

On the basis of all three methods (publications and reports; informed information provided by experts; and my own visits to rock art areas), I was able to make an informed choice of areas to analyse for my doctoral dissertation in 2007. The areas finally selected for my research were Drysdale River National Park (DRNP) in the north Kimberley and Far Away Bay (FAB) on the northern coast (Fig. 3.2). Although access to Drysdale River National Park has been officially closed through Carson River Station, I was informed that bushwalkers still entered the park by this route and that in Darwin a commercial tour operator, Willis's Walkabouts, offered month-long trekking expeditions through the park. With this providing the only vehicle by which I could get access deep into the heart of the national park to pursue my research, I enrolled on the expedition. After this, researcher Joc Schmiechen organised a return to the Drysdale River later in my field season, and I was able to join him for ten days.

The second area of interest chosen to examine for my research is located at Far Away Bay, to the west of the King George River on the northern coast. As mentioned above, this possibility was first suggested to me by Dr Lee Scott-Virtue, of archaeological contractors Kimberley Specialists, as a region rich in rock art. She has been researching there since before 2001 (Kimberley Specialists 2001a, 2001b, 2001c) and recently, the region was brought to a wider audience through the book by the populist historian Ian Wilson (2006) *Lost World of the Kimberley*. My visit to the area was courtesy of both Kimberley Specialists and the owners of the Bush Camp at Far Away Bay, Bruce and Robyn Ellison, who sponsored my research by funding time at the resort. In return for offering support for my PhD research, they asked if I would produce a report on the rock art seen and offer suggestions by which the resort could assist with the conservation and management of art sites. Two important conditions applied to my fieldwork, namely not to publish map coordinates of art sites nor to display maps showing their position in relation to the coast.

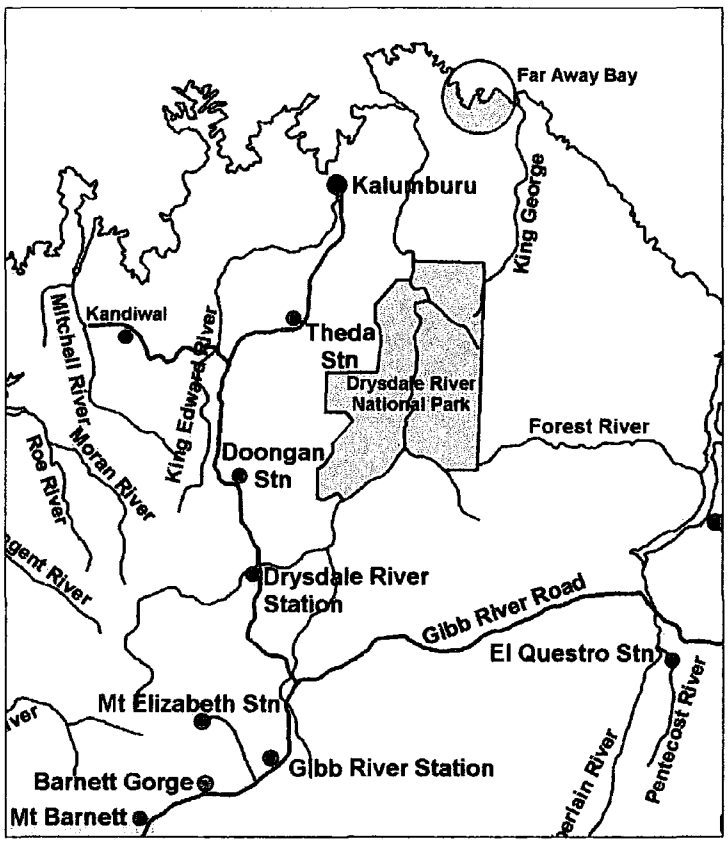


Figure 3.2 Map of the northern Kimberley showing the two fieldwork areas of Drysdale River National Park and Far Away Bay.

Geology

My two research areas lie on a band of exposed Warton Sandstone, a geological formation running approximately south to north through the middle of the Kimberley (Donaldson 2007: 4) (Fig.3.3). It is exposed most clearly in the north – central Kimberley as the Carson Escarpment with a cliff line almost two hundred kilometres long (McGregor & Chester 1999: 44). Warton sandstone is a clean, white quartzite which is hard and resistant to weathering (Donaldson 2007: 5). It provides a good painting surface on a stable rock canvas allowing for the survival of the early art traditions of the Kimberley.

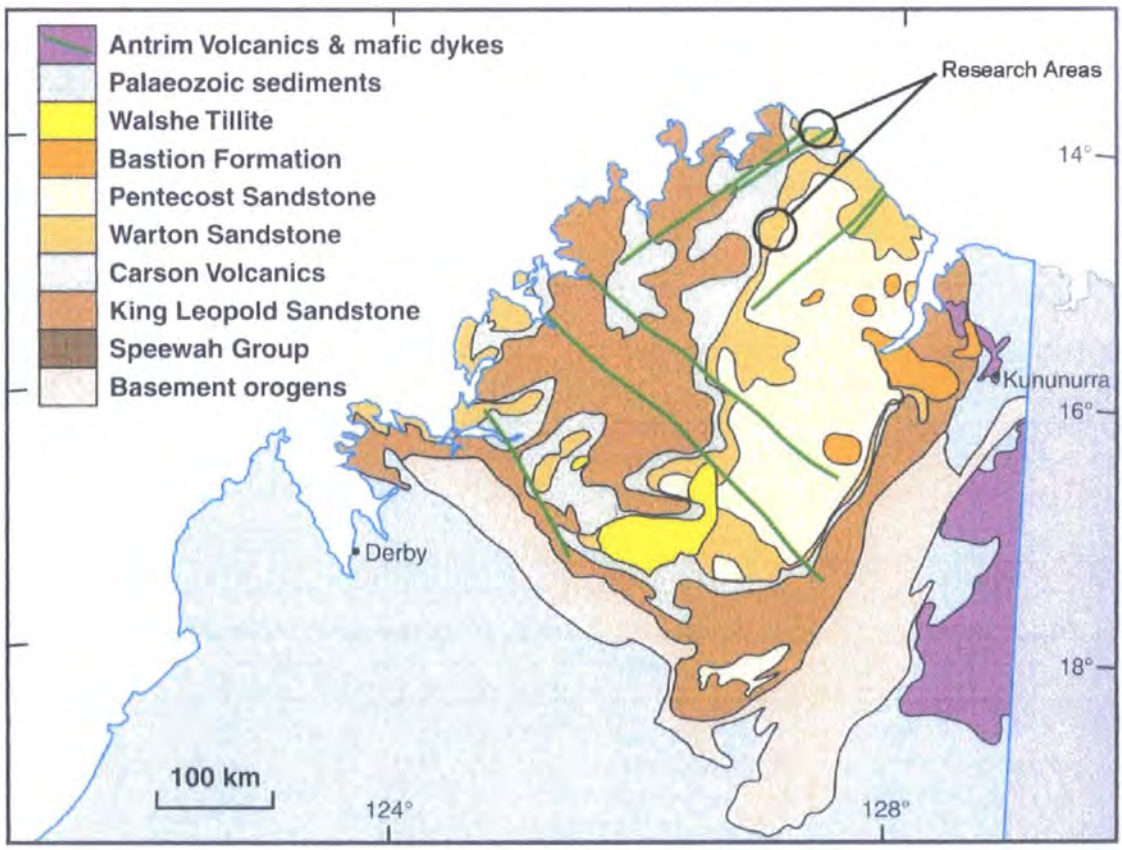


Figure 3.3 Geological map of the Kimberley.
(adapted from Donaldson 2007: 4 Figure 1.4)

For the purpose of my analysis I have divided my research sector of north-west Drysdale River National Park (Figures 3.7, 3.8) into three areas: Lower Drysdale River, Planigale Creek and Palmoondoora Creek. The Lower Drysdale River is the section below Solea Falls where the river flows through a gorge and then along the west side of the continuation of the Carson Escarpment. The river doglegs through the Park below the falls travelling four

kilometres south to north through a gorge, then five kilometres east to west before heading north. In the east to west section the river opens up offering river terraces on either bank. Here rock shelters are formed by outliers, residuals or boulders left behind by the receding cliff face. My second area within Drysdale River National Park is Planigale Creek (which flows along the top of the plateau) bounded on the western edge by the Carson Escarpment. Art sites are to be found in weathered outcrops and boulders following the path of the creek. In a few places the creek cuts shallow gorges providing smooth vertical surfaces for applying art. My final geographical area in the Park is Palmoondoora Creek which flows north to its junction with the Morgan River. The topography is more open plain though the southern end has Morgan Falls and the creek runs through Worriga Gorge. The middle section of the creek passes a low range of hills.

My second research area of Far Away Bay lies on the northern coast and I have divided it into five main areas of interest. Four of the sectors, Lost City, Boab Bay, West Cliffs and Gumboot Bay lie on the coast. A fifth sector, Billabong Area, is fifteen kilometres or so to the south on outcrops lying within an open plain. The coastal sites are situated on cliff tops or promontories set back from the sea shore.

When the respective art site locations of both research areas are plotted on topographic maps, all sites are found to lie on differently coloured or represented zones. On 1:250,000 scale maps this zone is coloured a light purple and described as 'distorted surface' whereas on 1:50,000 maps it is a grey stipple. It seems the 'distorted surface' of my research areas corresponds to outcropping Warton sandstone, and with its good art preservation potential is a suitable place for investigating new rock art areas. Geologists with an interest in rock art consult geological maps when planning bushwalking routes through new areas (Mike Donaldson pers. comm. 2007).

Field Technique

Aims and Objectives

The aim of my fieldwork was systematically to obtain data from a selection of rock art sites in my two regions of interest in order to make possible a comprehensive comparative analysis of the river art of Drysdale River National Park and what is now the coastal art of Far Away Bay. A secondary aim of the fieldwork was to relocate art sites documented by Schmiechen (1993) along the Drysdale River below Solea Falls and to investigate other sites in the heart of the park along Planigale and Palmoondoora Creeks.
At rock art sites my objectives were to obtain data to complete a recording sheet including the following:

- To undertake a photographic record and describe the rock art found there.
- To note the state of preservation of the art.
- To record any cultural deposits found in rock shelters.
- To record the position of art sites and other sites of significance by hand held gps and note the position of the site in the landscape and surrounding geography.

The fieldwork undertaken for this thesis was constrained by the conditions in which the areas of interest were accessed. I was taken to known sites by researcher Joc Schmiechen and by guides from Willis's Walkabouts and Far Away Bay's Bush Camp. The logistics of bushwalking in a remote and harsh environment meant it was not possible to undertake detailed recordings at each site, although a repeat visit to the Drysdale River area in the company of Schmiechen allowed me to augment my original records. The large number of sites located meant that there were time constraints in what it was possible to record and so there was no time for independent exploration.

Recording Form

There are many examples of rock art recording forms in the literature, such as Loendorf (2001: 62-63), Sanger and Meighan (1990: 223-229), Ziolkowski

(1998: 20) and Kolber (n.d.). The forms can vary in complexity from single sheets to detailed six page forms such as used in northern England by the Northumberland and Durham Rock Art Project (http://archaeologydataservice .ac.uk/era). Rock art recording is by its very nature a process of selection and as such total accuracy and comprehensiveness is unobtainable (Rosenfeld 1978: 10). It is also impractical and almost impossible to record every minute detail (Ziolkowski 1998: 18). Clegg (1983: 102) advocates a more realistic approach since "a recording may be said to be adequate if it is capable of answering all of the questions asked of it by the researcher/s for their own purposes".

The recording form devised for my fieldwork was an adaptation of that used by Gunn and Whear (2007: 9 Table 1) for their research in southern Arnhem Land for the Jawoyn Rock Art and Heritage Project. Due to the volume of art sites to be recorded, numbering in the thousands, they required a form that "allowed rapid recording of basic information about each site's location and contents, as ... it would be unpractical to undertake detailed recording of all sites" (2007: 8). The form is designed to provide "basic data for management purposes, to provide a general picture of the site and its contents, which will allow areas of future research interest to be identified" (2007: 8,10). The form required the entry of basic site data such as site name, satellite navigation coordinates and site type before an analysis of artwork present indicated by whether it is recent, contact or Mimi art. The major art styles are those classified by Chaloupka (1984, 1993). Colours, major motifs, deterioration, presence of artefacts and floor deposits are all noted.

The layout of Gunn and Whear's recording form was suitable for my purposes as I required a sheet allowing me to undertake rapid recording whilst trekking along the Drysdale River. My research interests were more concerned with the presence or absence of art periods or styles and connections between sites in the landscape, than in obtaining very detailed recordings at each art panel as the time available for recording would preclude this. The form was readily adaptable to include Kimberley art styles instead of Chaloupka's Arnhem Land art, their nomenclature taken from Walsh (1994, 1995, 2000).

To aid on site identification, laminated reference cards were prepared adapting images of Middle Phase Bradshaw art from Walsh (2000) and Late Phase Wandjina art from Walsh (1995) (Appendix B). Since I was unable to carry separate forms to be completed on site, a generative form was made with details to be recorded in the field notebook (Appendix C). With the recording form divided into lettered columns and numbered rows it was straightforward to record art styles as, for example, A16 (Tassel Bradshaw Group figure), D17 (Elegant Action Figure), D10 (Head Only Wandjina figure) etc. I was also particularly interested in noting the deterioration of figures at sites and recording the presence or absence of any floor deposits. The direction in which the main art panel faced or major subsidiary panels was obtained by hand-held magnetic compass. Site positions were recorded by a hand-held gps, a Garmin 12XL. The data was recorded in WGS84 in UTM coordinates. This allowed direct plotting onto the relevant map. The recording form was complemented by extensive use of digital photography. Art sites were numbered sequentially, prefixed by DR07 for Drysdale River National Park sites or FAB07 for Far Away Bay. A new site number was assigned if art panels were physically separated by a distance of around 25m. If the panels or sites were closer and seemed to be part of the same complex, then the different sites were denoted by a letter as suffix after the site number eg DR07-63b.

Survey Area 1 - Drysdale River National Park

Drysdale River National Park is the largest national park in the Kimberley (Figs. 3.2, 3.5 and 3.7). It is situated 100km south of Kalumburu on the coast and 150km west of Wyndham. It is named after the Drysdale River which bisects the park, flowing through it in a northerly direction for 85km. The park is 435,906 ha in size and is generally bounded to the south west by the unbroken line of the Carson Escarpment (Dept. of Environment and Conservation, n.d.). The north west boundary is provided by a continuous escarpment on the east bank of the Drysdale River. The park is the least

accessible to visitors in the Kimberley, not only due to its remote location but for the fact that no public roads lead to it. The access is by two four-wheel drive private tracks through either Theda or Carson River Stations. Both tracks are now closed to casual visitors but the Kalumburu community, which owns Carson River Station, occasionally allows access. This track goes to Bulldust Yard, a cattle mustering yard on the west bank of the Drysdale River. This is now the access point into the park.

The Drysdale River was named in 1886 by Charles Burrows during exploration on behalf of the Victorian Squatting Company. The river was first explored by Frederick Brockman in 1901, during his successful survey of the Kimberley described in Chapter One (Brockman 1902). He intercepted the river twenty miles from the coast, surveyed to the sea then returned and followed the river south through sandstone gorges before leaving it to travel east to the Durack River. Although Brockman recorded the presence of Aboriginal art on his Kimberley survey his report omitted any mention of art being seen on the Drysdale River (Brockman 1902). Schmiechen explains that the Morgan Expedition of 1955 first recorded art sites in the area and then the Biological Survey in 1975 saw some sites in the vicinity of Solea Falls (Fig. 3.6 below) but omitted to mention them in the final report (Schmiechen 1993). The art of the Drysdale River National Park was brought to the attention of the world at large through the Operation Raleigh Drysdale River Expedition 1986 led by Clive Richardson (1986). This was an adventure expedition with the aim of undertaking the first canoe descent of the Drysdale River. The expedition and the rock art sites discovered made news reports throughout Australia especially because the discovery coincided with the release of the film Crocodile Dundee (Schmiechen 1993: 73).

Previous research in the survey area

Rock art in the Kimberley has been known by the Western world since Grey's expedition of 1837 (Grey 1841). Known areas were the Prince Regent, Roe and Charnley Rivers of the west Kimberley. As discussed previously, the art of

the Drysdale River in the north central Kimberley was completely unknown until 1986. Joc Schmiechen, then a consultant in Aboriginal studies to the South Australian Department of Education, undertook the earliest surveys in 1988 and 1991. Schmiechen had become interested in this area as a result of his role as Scientific Leader on the Operation Raleigh Drysdale River Expedition of 1986. During this expedition he discovered an important number of rock art sites. The art found by Schmiechen was located below Solea Falls (Fig. 3.4) in the gorge (Fig. 3.8) and then along the scarp forming the north west boundary of the park (Schmiechen 1986).



Figure 3.4 Solea Falls.

This discovery led him to organise a survey two years later in 1988. He assembled a group of six people and spent a few weeks in the area recording sites. This was followed by a second season in 1991. Schmiechen's two surveys concentrated on the area below the falls, investigating north (downstream) along the scarp from the park's access point at Bulldust Yard, and upstream to the falls. As a result of the two surveys Schmiechen wrote a

private report that was deposited in several places (Department of Conservation and Land Management, Kununurra, and AIATSIC, Canberra) (Schmiechen 1993).

The north and north west area of the park is rich in art sites. As well as Schmiechen's report on the lower Drysdale River, the Department of Indigenous Affairs' Aboriginal Heritage Inquiry System lists forty seven sites in this region, thirty seven being on the section of the escarpment and the lower Drysdale River, and the remainder being in the Carson River / Palmoondoora Creek area (Fig. 3.5). The latter area contains five sites situated along Swider Creek, though lying outside the park boundary. Figure 3.5 shows my area of interest in the north west section of the park, indicated by the ellipse. Aboriginal sites on the DIA database are represented by shaded and cross-hatched circles and squares.

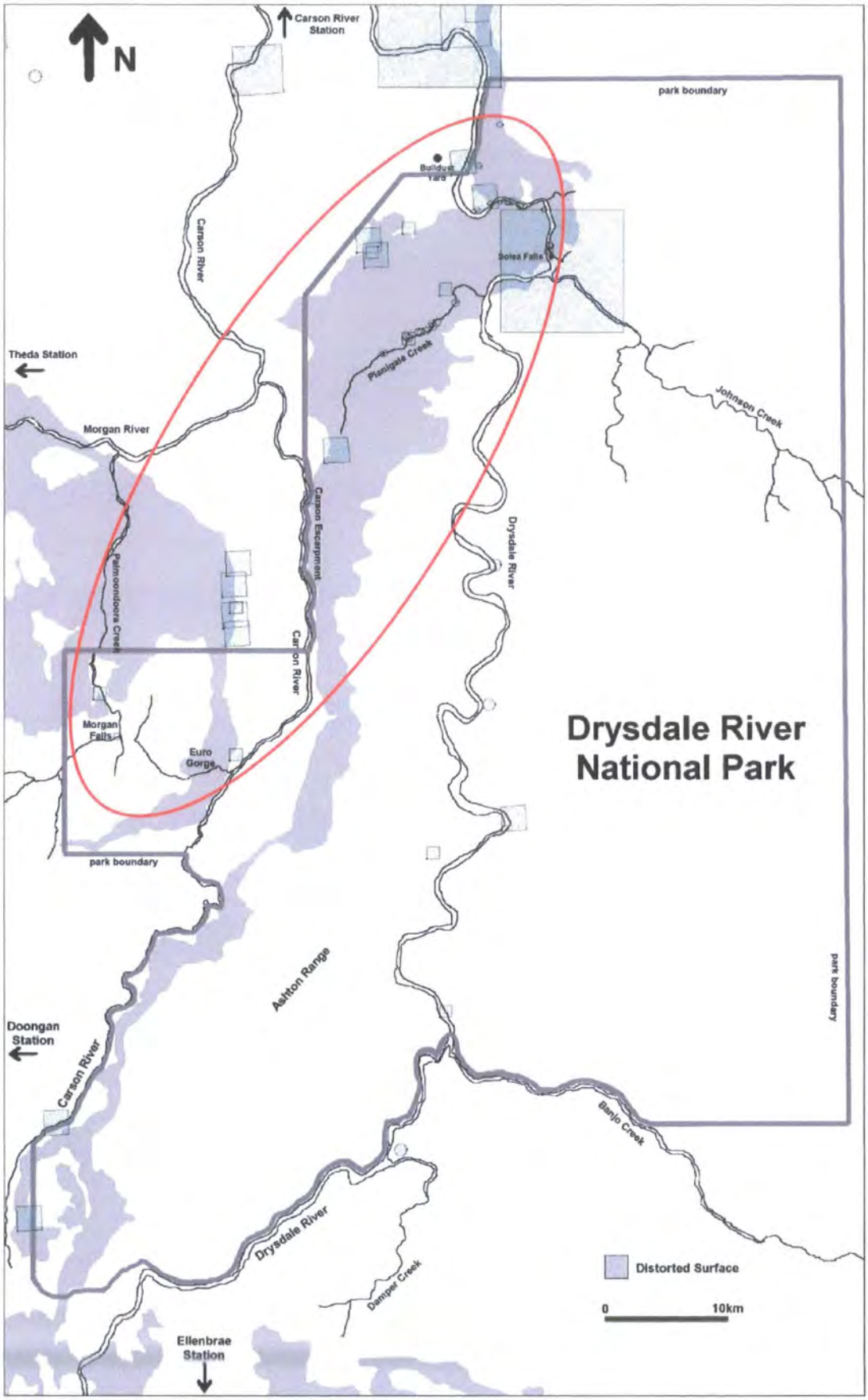


Figure 3.5 Drysdale River National Park showing my area of interest marked by the ellipse, and Aboriginal sites on the DIA database depicted as shaded circles and squares.

The known distribution of Aboriginal sites within the north and north west of the park, and the lack of sites on the eastern park border is, I suggest, a factor of geology, site surveys and exploratory trips. Geology plays an important role as most of the sites are found on rock outcrops located on the map in areas marked as 'distorted surface', which are not present to the east of the park. The two access points into the park have historically been either through Carson River Station to Bulldust Yard, or through Theda Station past Old Theda to the foot of the Carson Escarpment. From here people have undertaken bush treks of a few weeks' duration following the river and creek systems. The eastern and southern sides of the park are too remote for the greater body of trekkers with a corresponding lack of information on Aboriginal sites located. Now that Theda Station is closed for access only the northern route via Bulldust Yard is used, reinforcing the volume of data obtained from this area.

For his rock art survey in 1988 and 1991, Schmiechen divided the area below Solea Falls into survey seven sectors (A-G) (Fig. 3.6) and initially intended to undertake a "saturation search of particular sectors", but as he later explained:

> "Because of the rugged nature of the terrain, the difficulties of movement and the limitation of time, it was apparent that a saturation search of particular sectors would not cover enough ground in the given time... [On] the first day...none of the groups covered their set objectives, either through demands of the terrain or through examining the rock art found."
> (Schmiechen 1993: 7).

The survey covered 500 – 700m on either side of the river and used a field survey of random sampling in each of the main sectors. Locations selected for investigation were notable geographical features such as outcrops and weathered features on terraces.

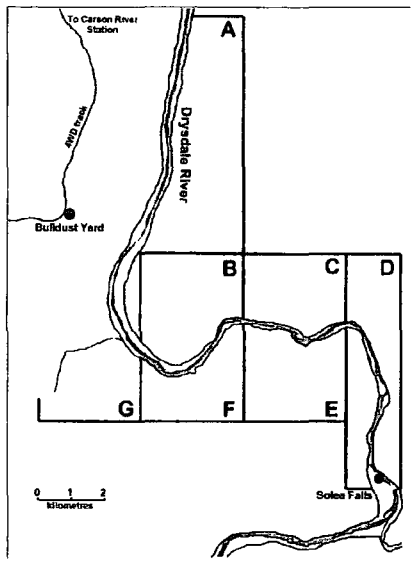


Figure 3.6 The Lower Drysdale River below Solea Falls showing Schmiechen's seven survey sectors.
(adapted from Schmiechen 1993: figure 3).

Schmiechen's seven survey sectors, lettered A-G, are shown in Figure 3.6. Sector A is a seven kilometre stretch of escarpment north of Bulldust Yard. Sectors B, C, E and F are three kilometre lengths of river bank, stretching two to three kilometres inland. Sectors B and C are on the north bank, E and F on the south bank and Sector D covered both banks of the south to north stretch of the river below Solea Falls. Sector G is the western end of the river before it flows north along the escarpment (Fig. 3.6). Schmiechen's survey found fifty four sites in total, of which thirty three were isolated sites and another twenty one sites were grouped in complexes. Schmiechen's survey sectors and the number of rock art sites located are listed in Table 3.1:

Schmiechen Sector	**Number of isolated sites**	**Site complexes**
DP-A-Long Scarp	5	1 with 6 sites
DP-B-Wandjina & Bichrome Rock	2	
DP-C-Amphitheatre	3	
DP-D-Solea Falls	6	1 with 5 sites
DP-E-Bradshaw Alley	10	1 with 7 sites
DP-F-Forrest Creek	6	1 with 3 sites
DP-G-Ebony Falls	1	
	33 isolated sites	21 sites in complexes

Table 3.1 Schmiechen's sectors and art sites.

Schmiechen's 1993 report, *Shadows in Stone,* is an important work on the art to be found in the gorges and along the escarpment below Solea Falls on the Drysdale River and is the first produced investigating Bradshaw figures. It predated Walsh's 1994 book, *Bradshaws: Ancient Rock Paintings of North-West Australia* by a year and was 'cutting edge' research. Much of the art photographed by Walsh (1994) is from the Drysdale River where Schmiechen

guided him to many of the sites he originally found and included in his report (Schmiechen pers. comm. 2007). The report provides a good overview on the types of painting to be found and has a strong input from Traditional Elders living in Kalumburu in the late 1980s and early 1990s.

I found Schmiechen's report of great importance in describing the art and cultural sites to be found along the Drysdale River, but of limited use in answering my particular research questions. This is mainly because the initial location of art sites is only given by the sector in which they are found, which placed them within an area of six or nine square kilometres. I required to place them accurately on a map to see the relationship between sites. However, it must be recognised that it is customary not to publish exact art site positions. The art styles observed, if Bradshaw figures, were assigned to one of David Welch's three categories or just described as 'Bradshaws'. At the time, Welch (1990) was one of the few to have published on this art style. Developments in understanding the art chronology over the last fifteen years or so have meant there are now more categories of figures recognised. This is seen, for example, by an art tradition predating Bradshaw figures, Irregular Infill Animal Period art which have a regional parallel in the Large Naturalistic Animal Period of Arnhem Land. Bradshaw figures themselves can be divided into two periods, 'classic' Bradshaw figures and later 'Clothes Peg' Figures. The distribution of these categories of figures within Drysdale River National Park needed to be investigated but could not be determined from Schmiechen's report.

Field Survey

In order to answer research questions on site location and the distribution of art styles it was decided that a further survey to the Kimberley and Drysdale River National Park was needed. I was first able to enter the park in the company of a Willis's Walkabouts expedition in June and July 2007. This comprised two, two-week treks running consecutively by which I was able to get access into the heart of the national park (see Figure 3.7). The first leg

was guided by Bruce Swain, the second by Amelia Johnson The start and end point was Bulldust Yard in Carson River Station with helicopter resupply and passenger ferry en route after two weeks for those leaving or joining the trek. Our route was to follow the Drysdale River upstream from our entry point at Bulldust Yard to Solea Falls taking the south then western banks (see map Figure 3.7 below). A few kilometres upstream (south) of the falls is where Planigale Creek, a north-easterly flowing creek, enters the river. We followed it upstream to its headwaters on the Carson Escarpment then dropped down to the Carson River and walked upstream for fifteen kilometres to our helicopter resupply point. A period of bad weather necessitated a helicopter evacuation to Kalumburu before we returned for the second leg of the expedition commencing at Morgan Falls. On this part of the trek we walked north from Morgan Falls (after a day trip to Euro Gorge), following Palmoondoora Creek north, to its junction with the Morgan River. From here we turned east to the Carson River and went cross country to our starting point at Bulldust Yard.

My two treks along the lower Drysdale River enabled me to relocate many of Schmiechen's art sites. The route taken on both occasions along the lower Drysdale River was to cross the river to the east bank from Bulldust Yard and head south, visiting the art sites in Schmiechen's Sector B on the north bank of the river (Fig. 3.7). The river was crossed to the south bank near here and followed upstream, east, through Sectors F and E before heading south to the falls in Sector D. The routes of my two visits are shown in Figure 3.7. The red ellipses show the separate geographical sectors of river and creek I visited. The black triangles indicate the location of art sites, and the route taken is shown by solid and dashed grey lines for the first and second visit respectively. As a guide Schmiechen's survey sectors A-G below Solea Falls are also indicated.

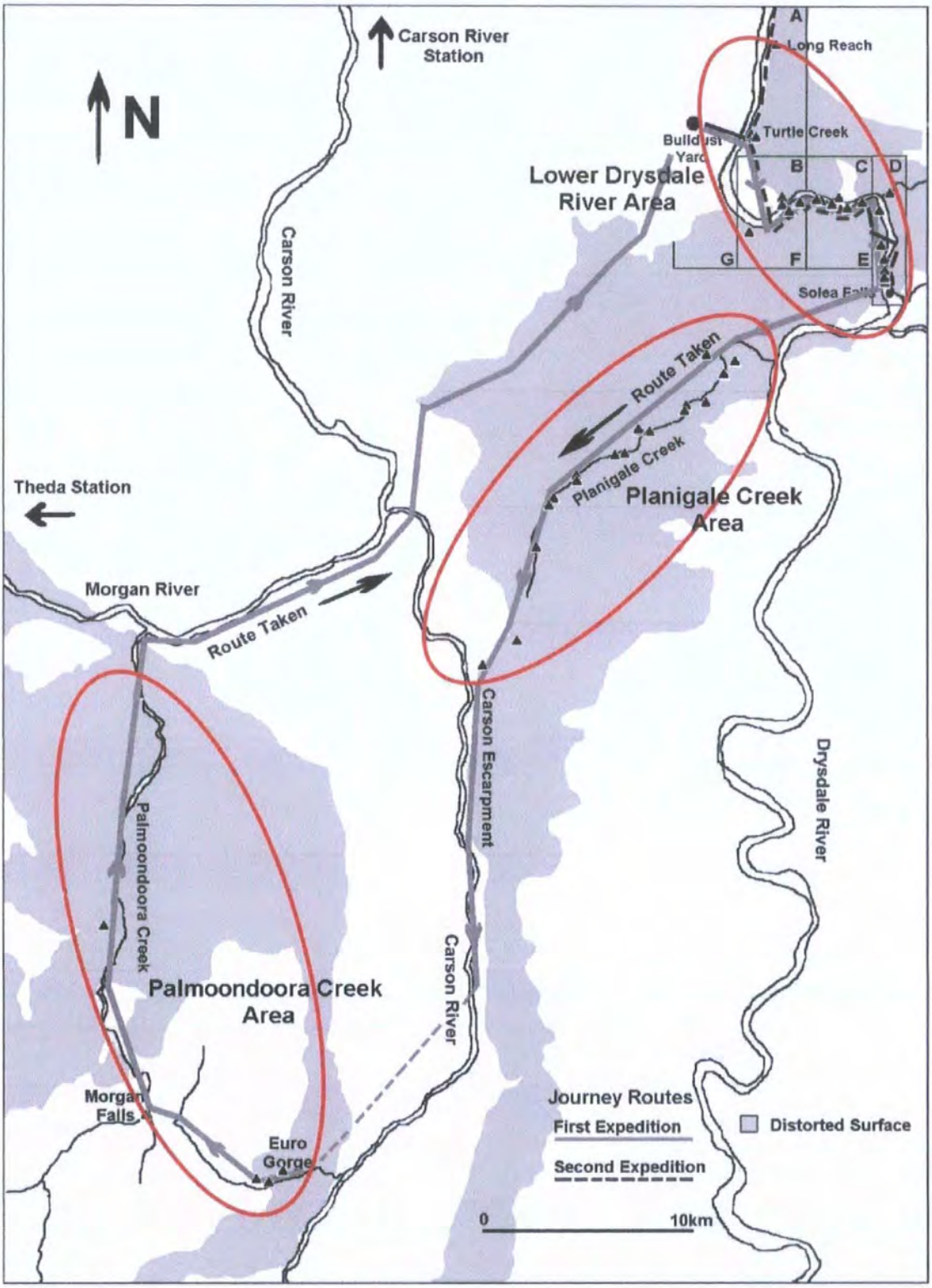


Figure 3.7 The north west part of Drysdale River National Park, showing the route taken and survey areas (red ellipses), along with art sites (triangles) and Schmiechen's Lower Drysdale River survey sectors A-G.

Site numbers from his 1993 report are listed below in Table 3.2 and have also been included in my Site Reports (Appendix D) as 'Other Site ID'.

2007 Site ID	Schmiechen's site id	Name if known
DR07-04	DP-B-01	Wandjina Rock / Borologa
DR07-05	DP-B-02	BiChrome Rock
DR07-06	DP-F-06	Wandjina Cave / Bundarwa
DR07-07	DP-E-05	Goyon / Twin Brolgas Shelter
DR07-08	DP-E-07	Living Shelter
DR07-14	DP-E-01	Nurini or Yuruluru
DR07-17	DP-D-04	Pulpit Rock
DR07-58, 59, 61	DP-A-06	Turtle Creek
DR07-62a	DP-E-03.2	King Bradshaw Site
DR07-62b	DP-E-03.2	King Bradshaw Site
DR07-63b	DP-D-01	Mesa Billabong
DR07-65	DP-D-07.1	Solea East Bank
DR07-68	DP-E-03.4	"Ceremonial Couple"
DR07-72	DP-E-08	Barten
DR07-75	DP-F-07	Laura's Cave

Table 3.2 Schmiechen sites relocated (lower Drysdale River area).

My second visit to Drysdale River National Park was with researcher Joc Schmiechen in late July and early August 2007. Our main purpose was to walk upstream from Bulldust Yard to Solea Falls taking in the art sites of the lower Drysdale River. A secondary aim was to relocate sites downstream of Bulldust Yard in the Long Reach area, Schmiechen's Sector A, a section of west facing escarpment. This was done with the help of Father Anscar McPhee of Kalumburu Mission, and his supply of an aluminium boat with motor. The southern boundary of Schmiechen's Sector A is on the opposite, eastern bank of the Drysdale River from Bulldust Yard. We investigated Turtle Creek directly opposite the campsite and relocated a few sites there. The creek descends from the escarpment and the open area at the top of the cliffs is rich in art sites. This has been advocated by Schmiechen (1995) as an area suitable for sustainable tourism with visitor access from Bulldust Yard. We sailed downstream, i.e. north, using Kalumburu Mission's boat to relocate the Long Reach's Long Gallery (Jerungurre, DP-A-03) situated high up on the scarp. We were unsuccessful in this, but found a new site on top of the escarpment, DR07-60, instead. Our failure to find the intended site indicated one of the problems of Kimberley fieldwork. The terrain is so rugged that even with maps, grid references and the fact that Schmiechen had been there numerous times before, a major site can still be difficult to relocate. It was not

until a year later in August 2008 that Schmiechen was finally able to relocate Long Gallery, the site not being far from DR07-60 (Schmiechen pers. comm. 2008).

Sites Located

On my two expeditions a total of eighty three sites were located and recorded to varying degrees. All site survey reports are listed in Appendix D. It is possible to subdivide the art areas of Drysdale River National Park into two, the Lower Drysdale River (below Solea Falls) which flows through the gorge and a Drysdale creeks area. This latter area can be further subdivided into Planigale and Palmoondoora Creeks (Figure 3.7). For the purposes of this study Euro Gorge is included in the Palmoondoora Creek area.

Region	2007 site id	Number of sites
Drysdale River NP	DR07-01 - DR07-75	84 sites
Lower Drysdale River	DR07-01 - DR07-18b, DR07-58 - DR07-75	43 sites
Drysdale creeks	DR07-19 - DR07-57	41 sites
- Planigale Creek	DR07-19 - DR07-43	26 sites
- Palmoondoora Creek	DR07-44 - DR07-57	15 sites

Table 3.3 Drysdale River National Park site listing by area.

The forty three sites located in the Lower Drysdale River area can be further subdivided into their respective locations within a Schmiechen sector as indicated in the table below.

Schmiechen Sectors		2007 site id
A	DP-A-Long Scarp	DR07-58, DR07-59, DR07-60, DR07-61
B	DP-B-Wandjina & Bichrome Rock	DR07-02, DR07-03, DR07-04, DR07-05
C	DP-C-Amphitheatre	DR07-11, DR07-12, DR07-13
D	DP-D-Solea Falls	DR07-15, DR07-16, DR07-17, DR07-18a, DR07-18b, DR07-63a, DR07-63b, DR07-63c, DR07-63d, DR07-64, DR07-65, DR07-66a, DR07-66b, DR07-67
E	DP-E-Bradshaw Alley	DR07-09, DR07-10, DR07-14, DR07-62a, DR07-62b, DR07-62c, DR07-68, DR07-69, DR07-70
F	DP-F-Forrest Creek	DR07-01, DR07-06, DR07-07, DR07-08, DR07-71, DR07-72, DR07-73, DR07-74, DR07-75
G	DP-G-Ebony Falls	None

Table 3.4 Art sites by sector.

Survey Limitations

With the previous published work by Schmiechen (1993) and the Department of Aboriginal Affairs' Aboriginal Heritage Inquiry System it is possible to determine whether any regions containing art sites were missed during my two expeditions into the Drysdale River National Park. Addressing the DIA's database first, then, two areas were omitted from my survey. The first area is on the northwest edge of the Carson Escarpment (Fig. 3.8), (Table 3.5). Four sites are listed as being here. I walked through this area on the last leg of my month long trip through the park, descending to the plain, down a creek bed. The trek guide searched for the art sites but was unsuccessful due to the rugged nature of the terrain and proximity to the escarpment edge. The sites are:

Site Name	DIA Site No.	DIA Site ID.
Drysdale River 2	K00013	12238
Maiamba	K00338	14713
Kamgadangai	K00339	14714
Yuluru	K00340	14715

Table 3.5 DIA listed sites missed on the north west Carson Escarpment.

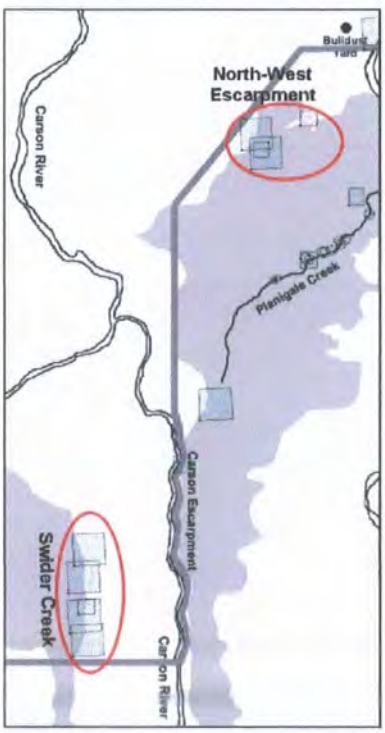


Figure 3.8 Sites missed on the north west escarpment and Swider Creek.

Apart from Maiamba, which is listed as being a mythological, man-made structure and quarry, the sites are described as mythological painting sites. No further explanation as to the meaning of this is available on the DIA database, though the names of site reports referring to this are listed. These sites lie to the west of Schmeichen's Sector G and so are not mentioned by him.

To the west of the Carson River in what I refer to as the Palmoondoora Creek area, seven sites were missed (Fig. 3.8), (Table 3.6). Two of them lie on Worriga Gorge and are part of the Morgan Falls area (not shown in Fig. 3.8).

They were unknown to the guide. The others are in the Swider Creek area (Fig. 3.8) between the Carson River and Palmoondoora Creek, an area I was unable to visit because of the constraints imposed by being part of an organised expedition. The Swider Creek sites lie outside the park. All the sites are painting sites apart from Mangara, listed as being a ceremonial and man-made structure, and Ambameri, an engraving site. The DIA notes provide no indication as to the type of art found.

Site Name	DIA Site No.	DIA Site ID.
Webedo	K00336	14763
Kurega	K00335	14762
Ambameri	K00334	14761
Mangara	K00333	14760
Teren Gi	K00332	14759
Morgan Falls	K00112	14912
Morgan Falls	K00113	14913

Table 3.6 DIA listed sites missed west of the Carson River.

Within the area downstream of Solea Falls numerous art sites discovered by Schmiechen were relocated. However, not all sites were found and some areas have had better coverage than others. Sector A, the Long Scarp, providing the east side of the river north from Bulldust Yard proved difficult. A major attempt to relocate DP-A-03 Long Gallery Jurungurre proved fruitless. Turtle Creek opposite Bulldust Yard on the cliff line, site complex DP-A-06, required three visits to rediscover the art sites. Although contained in a relatively small geographical area, the rugged Kimberley terrain defeated attempts to find the body of artwork. The classic Winged Figure, a Sash Bradshaw Group figure at site DP-A-01 further along the escarpment was not found due to time constraints. The north bank of the river, Sector C was unexplored for logistical reasons and so major gallery DP-C-01 Tony's Gallery, was missed. The gallery has numerous Tassel and Sash Bradshaw Group figures along with associated animals and much superimpositioning (Schmiechen 1993: 19). Two other minor galleries are in this sector. However, three small shelters at the eastern end of Bradshaw Pool were found. Also Sector D (DP-D Solea Gorge) has numerous rock shelters on the east side of the river (Fig. 3.9). The major sites on the west bank were relocated, such as

Mesa Billabong (DP-D-01) and Pulpit Rock (DP-D-04). Schmiechen lists other art sites some of which were relocated on my second entry into the park.



Figure 3.9 Drysdale River gorge below Solea Falls. View west from DR07-65.



Figure 3.10 View of Bradshaw Pool, looking upstream, on the Drysdale River.

The south bank of the river includes Sector E with many fine rock shelters. A narrow creek flowing north into Bradshaw Pool (Fig. 3.10) has been called 'Bradshaw Alley' on account of numerous decorated shelters. This area would repay a dedicated rock art survey. Schmiechen lists seven shelters here only some of which I rediscovered, again due to the constraints of time and topography. Two art sites which seem to be of interest from his notes are DP-E-03.5 Kangaroo Gallery consisting of striped Bradshaw figures and friezes of Bradshaw figures. The other site is DP-E-03.6 where there occur what Schmiechen names 'Keech Figures'. Walsh (2000: 175) calls them Static Figures and assigns them to the Clothes Peg Figure Period. In Sector F (DP-F-Forest Creek) the main sites have been relocated. Recognising minor sites is more problematic based upon descriptions in his report. Finally Sector G (DP-G-Ebony Falls) was not investigated though Schmiechen only reports one area near Ebony Falls with numerous small art sites.

Survey Area 2 - Far Away Bay

My second research area is Far Away Bay on the northern Kimberley coast, an area now increasingly being called the "Diamond Coast" by the tourist industry. This is approximately 85km north east of Drysdale River National Park and 15km to the west of the King George River (see Figs. 3.2 and 3.11).

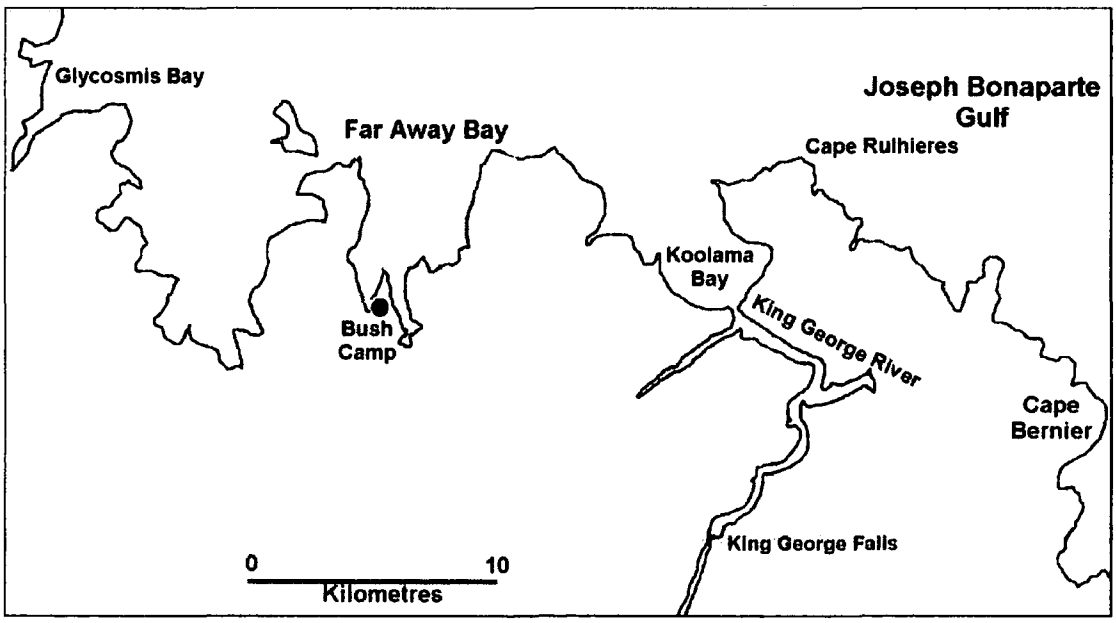


Figure 3.11 The Diamond Coast of the north Kimberley showing Far Away Bay.

Far Away Bay is the name given to the bay on which sits the Bush Camp resort (www.farawaybay.com.au). This is a luxury resort of 28 hectares (including airstrip and access track) sitting amidst unallocated Crown land. It is perched on a ridge top overlooking the bay and has twelve cabins and a central communal area and kitchen dining area, Eagle Lodge, making up the resort. From here it is possible to access nearby remote bays and inviting beaches to see rock art. Access to the resort is by air, light plane, from Kununurra, or by boat. Supplies are brought in by barge which sails from Wyndham to service Kalumburu and other coastal stops. A track from the Kalumburu Road through Carson River Station is marked on the map but is currently impassable. The many bays in the area are popular with yachts sailing from Broome or Darwin. A main tourist attraction popular with luxury cruise boats is the King George River gorge and waterfalls. The surrounding countryside is little known scientifically though this is rapidly changing with cultural heritage surveys and surveys of wildlife undertaken by Kimberley Specialists. The traditional owner of Far Away Bay is Kalumburu-based Dollie Chienmera, an elder and spokeswoman for the Kwini Language Group. She has given Aboriginal elder Judith 'Ju Ju' Wilson permission to 'speak' for the area on account of Wilson's paternal descent from Kwini language speakers and owners of the area (Kimberley Specialists n.d.). The coastline, especially the area of the King George River, is popular with tourists and sailors. It remains to be seen whether the sailing community has a discrete list of shoreline art sites in this area which have not been reported, but at the present time this seems not to be the case. The Kimberley Cruising web site, http://kimberleycruising.com.au, lists accessible art sites along the northern coast. The north east coast has four areas named, Berkeley River – Casuarina Creek, Unnamed Bay North of Cape Bernier, King George River – Eastern Creek and Curran Point. Boats on fishing excursions from Far Away Bay's Bush Camp travel along the coast and would be expected to see moored yachts in bays along with associated evidence of shore visits such as camp sites and litter, but, in fact, this is not the case.

Previous research in the survey area

The northern coast to the east of Kalumburu has few Aboriginal sites listed in the Department of Indigenous Affairs database (www.dia.wa.gov.au/AHIS). Kalumburu has a high concentration but after that, apart from two sites indicated at the mouth of the Drysdale River, nothing is shown until Cape Bernier, past the King George River on the north east coast, a distance of around seventy kilometres. The next concentration is further east on the Berkley River, before reaching the eastern side of Cambridge Gulf. The lack of recorded Aboriginal sites on the north east coast is surprising as there is no reason to think the region was less populated than other areas. The main body of land is contained by Oombulgurri Aboriginal Reserve, for which access requires a permit. The difficulty of entry for the casual visitor is perhaps one reason for the lack of reported sites in addition to the physical problems of access on account of their being few roads or tracks.

Current knowledge of the distribution of art sites along this part of the northern coast is provided by bushwalkers taking advantage of the Far Away Bay airstrip to gain access to the region. The ground between Far Away Bay and the King George River was explored in 2008, by a party of ten bushwalkers, led by Mike Donaldson and Jeff Gresham (Donaldson and Gresham pers. comm. 2008), the two being active members of the Perth-based Kimberley Society. The outward leg of the journey followed the northern coast with their return from the King George River going cross country to the airstrip (Fig. 3.12). Their route, therefore, provided two traverses. Donaldson and Gresham report they found twenty-four art sites, fifteen on the outward coastal route and nine on their cross country return (pers. comm. 2008). The art is almost solely faded Bradshaw figures. My analysis of their photographs reveals that many figures can only be labelled as generalised Bradshaws as distinguishing characteristics are indistinct on the images. Where they can be identified Tassel and Sash Bradshaw Group figures predominate amongst named art with a few Elegant Action Figures and 'Clothes Peg' Figure Period art. One Irregular Infill Animal Period macropod is seen along with a solitary 'Wandjina-

style' painting. All the art sites were found on the exposed fractured terrain of Warton Sandstone marked on the map as 'distorted surface'. None was seen between these areas even though rock outcrops are present.

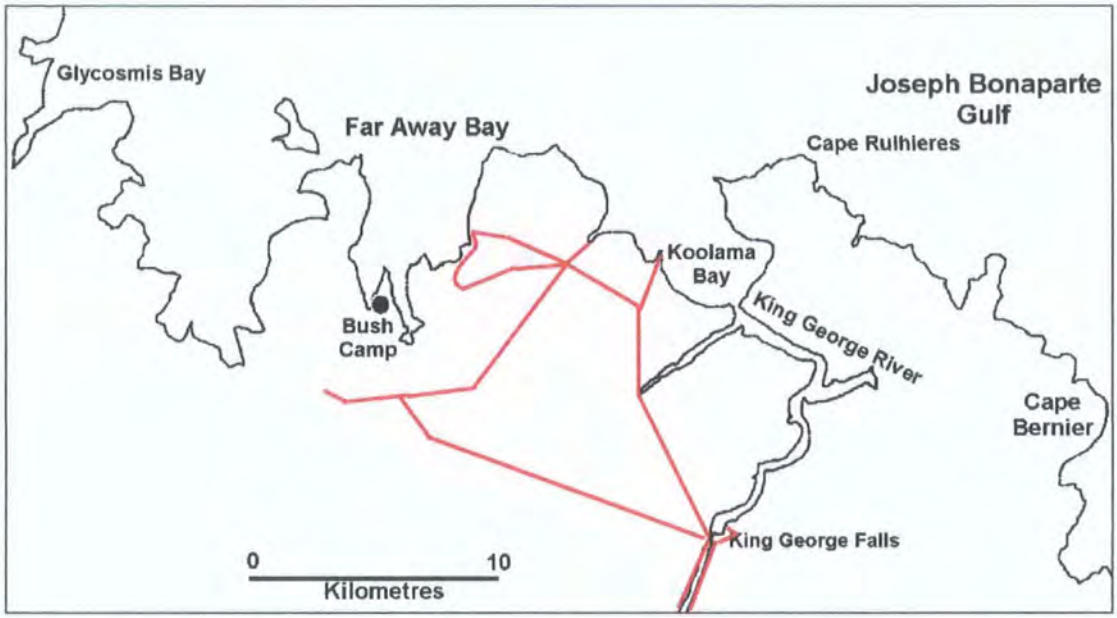


Figure 3.12 The Far Away Bay and King George River area showing the approximate route taken by the Donaldson and Gresham party in 2008.

Commercial tour operator Willis's Walkabouts offer a 'Kimberley Coast' bushtrek along the north east coast commencing east of the Berkeley River and finishing at Kalumburu six weeks later (www.bushwalkingholidays.com.au). Their route, in four sections, takes in the Berkeley River, Casuarina Creek, King George River, Far Away Bay, the lower Drysdale River and finally Kalumburu. The published trip dossier (www.bushwalkingholidays.com.au/html/kim.coast.htm) only lists rock art as being present on sections 2 and 3 i.e. from the King George River to Far Away Bay, and from Far Away Bay to the lower Drysdale River. In fact over the whole of the trek there is not a great deal of rock art to be seen (Russell Willis pers. comm. 2009) reconfirming that this part of the Kimberley is not a productive rock art province.

Currently the only archaeological survey work in the area is that undertaken by Kimberley Specialists (2001a, 2001b) at the behest of the lease holders of Far Away Bay. One project was a cultural and environmental evaluation of the area resulting from a proposal by diamond miner Striker Resources to build a

barge landing site and associated access road to the east of the resort. A second investigation was prompted by concerns of the traditional owners that water for the resort was obtained from a creek which had "significant paintings".

Two areas were investigated by Kimberley Specialists, one looking at Faraway Bay creek supplying water to the resort and the other at Gumboot Bay and environs where the development was proposed. The results of the surveys are as follows (Kimberley Specialists 2001a, and 2001b for points 6 and 7):

1. Bradshaw Period figures were found comprising Tassel Bradshaw Group, Sash Bradshaw Group and later 'dynamic' and stylised Bradshaw figures. Many figures show partial destruction through pecking and abraiding.
2. A single painting was discovered of a quadruped with a 'giraffe' like neck in a painting style and preservation similar to Bradshaw figures. It is wondered if this is a depiction of the extinct species, *Zygomatauras*.
3. Cupules as well as abraided and pecked 'ritual motifs' are present.
4. Red ochre infill and red ochre outline motifs are found with the infill form being apparently older. The outline motifs are paintings of animals and 'maps of country'.
5. One example of an off-white ochre infill motif from the time of European contact.
6. Shell middens containing four types of shells as well as stone tools for use with shell fish were found.
7. Lithic scatters and rock art was found closer to the coast and in the area of the proposed barge landing site.

Field Survey

In July 2007 I stayed eight days at the Bush Camp as a guest sponsored by courtesy of the resort owners Bruce and Robyn Ellison of Far Away Bay and Dr Lee Scott-Virtue of Kimberley Specialists. I was taken out each day by guides Steve McIntosh and Leif Thiele to known art sites discovered

previously by Kimberley Specialists and the guides. We visited six areas and examined sixty five art sites (Fig. 3.13). Note that as explained above I have been requested not to publish coordinates of art sites nor display maps showing their position in relation to the coast.

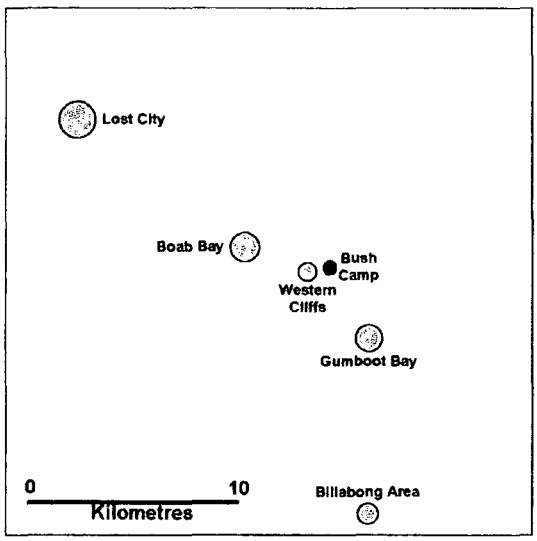


Figure 3.13 Far Away Bay showing the five main survey areas.

The areas are known locally by the names Lost City and Boab Bay (to the west of camp), Gumboot Bay to the east and Billabong Area to the south, as well as West Cliffs and Champagne Rock near the Bush Camp. The spatial relationship between the survey areas is shown in Figure 3.13. West Cliffs is to the west of the Bush Camp near Faraway Bay Creek (sites FAB07-01 – FAB07-04). At Gumboot Bay I looked at two areas. The first is a few hundred metres upstream from the waterfall (sites FAB07-05 – FAB07-12) (Kimberley Specialists 2001b, Wilson 2006: 152-155). The second area is on the coast and was accessed by boat (sites FAB07-32 – FAB07-41). Boab Bay (Fig. 3.14) is another place rich in art sites (sites FAB07-13 – FAB07-23). All the site survey reports are listed in Appendix D.



Figure 3.14 A view of the terrain at Far Away Bay's Boab Bay.

Billabong Area is inland with art sites on a ridge line of broken country (sites FAB07-24a – FAB07-30). A solitary site on top of a ridge above the Bush Camp (FAB07-31) provided an art panel with good views of the bay. Lost City was approached by sea. This region has spectacular geology with weathered sandstone formations creating 'streets' and 'courtyards' with numerous rock art panels (Fig. 3.15) (Kimberley Specialists 2001c, Wilson 2006: 155-169). Nineteen sites were recorded here, FAB07-42 – FAB07-51b.



Figure 3.15 Far Away Bay's Lost City showing sandstone outcrops and open areas.

Sixty-five art sites (plus one dingo burial) from six areas were analysed and recorded at Far Away Bay. They comprise sites FAB07-01 to FAB07-51b (Table 3.7).

Region	2007 Site ID	Number of sites
Far Away Bay	FAB07-01 - FAB07-51b	65 sites
- Western Cliffs	FAB07-01 – FAB07-04	4
- Gumboot Bay	FAB07-05 – FAB07-12 FAB07-32 – FAB07-41	18
- Boab Bay	FAB07-14 – FAB07-23	15
- Billabong Area	FAB07-24a – FAB07-30	9
- Bush Camp	FAB07-31	1
- Lost City	FAB07-42a– FAB07-51b	18

Table 3.7 Far Away Bay site listing by area.
(the dingo burial not listed above is at Boab Bay, site FAB07-13)

Survey Limitations

In the Far Away Bay area I am unable to determine whether or not I have missed important sites during my research on account of there being no site

reports I was able to gain access to. I am aware of an area, Salmon Bay, with numerous art sites that I was unable to visit due to time constraints. At Gumboot Bay I saw sites above the falls. The coastal sites located were part of a reconnaissance visit. At Boab Bay I am aware of one art site I missed which was previously known about. At Billabong Area I was taken to known sites. Finally at Lost City I was guided to known sites and also located two new sites. It is important to note that I was taken to known rock art areas and I have no information regarding the quantity or distribution of art in the hinterland between the areas. The best information I have is that provided by bushwalkers Donaldson and Gresham on the country between Far Away Bay and the King George River. As has been already noted, the country in this intermediate area has relatively little art to be seen, and this is confirmed by information from Willis's Walkabout's Kimberley Coast Explorer bushwalk. Far Away Bay itself seems to be the centre of a rock art province.

Discussion

The surveys undertaken for this doctoral thesis were the result of a long and thoughtful period of research. This included making two investigatory trips to Western Australia in 2005 and 2006 with the purpose of locating suitable research areas in the Kimberley for my doctoral dissertation. I undertook extensive library research, had discussions with other researchers and made reconnaissance visits to rock art areas within the Kimberley along the Gibb River Road and Mitchell Plateau. I settled on two areas of interest, Drysdale River National Park and Far Away Bay. The two regions have differing geographies being now river and coastal areas and would have differed in the past being river (or at least places with permanent water) and escarpment areas when the Middle Phase art was painted.

I returned to the Kimberley in 2007 making two visits to Drysdale River National Park and one to Far Away Bay. My fieldwork aim was to systematically obtain data from a selection of rock art sites in my two regions

of interest so providing a comparison between the two areas. A secondary aim was to relocate Schmiechen's documented art sites. My first visit to the national park was a month long expedition using commercial bushwalkers, Willis's Walkabouts, as a vehicle to get into the heart of the park. My second return visit was in the company of researcher Joc Schmiechen. I made one visit to Far Away Bay on the northern coast. This was as a guest at the Bush Camp resort courtesy of Far Away Bay and Kimberley Specialists. I visited eighty four Drysdale River art sites and sixty five Far Away Bay art sites. Site recordings made use of a recording form adapted from one successfully used in Arnhem Land by Gunn and Whear (2007) and reference cards generated from figures and illustrations by Walsh (2000).

The data collected contains information such as the coordinates of each site, aspect, panel orientation, location, the types of motifs present, extent of deterioration of the panel and the presence of site deposits, along with a brief description of the site. All the site data are presented in the form of site survey forms in Appendix D. The site data were collated and sorted in the form of Excel spreadsheets and it is these which are used for processing and analysis in the rest of the dissertation. The next four chapters are based on information derived from spreadsheets, commencing with data analysis in the next chapter.

Chapter 4.
Data Analysis

The aim of this chapter is to analyse data collected at rock art sites in the two regions of interest described in Chapter 3, with the view to examining evidence of regionality in the distribution of the depicted art. Firstly, the art motifs are assigned to a four-fold chronology. Secondly, the physical geography of the art sites is noted before, in the third place, the regional distribution of motifs and in the sectors comprising the art regions. Panel orientation is the fourth issue to be looked at, examining regions, sectors and art period before finally checking the range of motif distribution by site.

In the first part of the analysis, an art chronology of Early, Middle, Late and Indeterminate Phases is used to catalogue the art periods and groups of interest, effectively sixteen categories of motifs being selected. In the second part, panels are catalogued according to their physical setting in the two regions. The third part of the analysis examines the motif distribution by regional sector, based on the assigned art periods or groups. In the fourth stage, the orientation of art panels is compared for regions and their comprising sectors before finally contrasting art periods and shelters with occupation deposits. The fifth and final section of the chapter briefly looks at motif categories on a site basis, allowing for comparison between sites and regions, and acts as an introduction to the next chapter.

Art Styles Analysed

The rock art of the Kimberley has been categorised on the basis of style and by changes in material culture depicted by many researchers, to provide a

chronology for development of the art (Crawford 1977, Morwood et al. 1994, Walsh 1994, 2000, Welch 1990, 1993). This has been discussed previously in Chapter 2. For the purpose of my research I found Walsh's work the most applicable based upon his written detail and visual information from numerous illustrations and line drawings (1994, 2000), and have used this as the basis for my analysis.

The Kimberley figures are assigned by Walsh to the 'Erudite Epoch' which he split into two periods, the Bradshaw Period and Clothes Peg Figure Period. Within the periods are numerous groups and sub-groups. The number of categories listed has varied with his publications. For example, six Bradshaw Period groups and three Clothes Peg Figure Groups are listed by Morwood, Walsh and Watchman (1994), and seven Bradshaw Period groups by Walsh (1994). It seems in many of these Walsh is in fact referring to regional variations occurring on the Mitchell and Gardner Plateaux. I used Walsh's most recent publication, (2000), where he lists fifteen Bradshaw Period groups (2000: 134-167) and eight Clothes Peg Figure groups (2000: 168-211) for constructing field survey reference cards referred to in the previous chapter. I also added to the cards another art period, the Clawed Hand Period, which is thought to come between the Clothes Peg Figure Period and later Wandjina Period. For describing individual figures Walsh produced a visual guide (2000: 93-96). I adapted and rearranged this as a further set of field reference cards (Appendix B). Although the two survey areas are at the eastern edge of the Wandjina cult area, and it was thought unlikely that examples of this Late Phase art would be encountered, reference cards for this type were still prepared, taken from Walsh's examples (1995).

The groups comprising the three art periods of Bradshaw Period, Clothes Peg Figure Period and Wandjina Period were listed on my field recording form. In this way I was able to cross reference directly from reference cards to recording form. The periods and groups used in my reference cards and recording form are depicted in Appendix B and listed in Table 4.1 below (Walsh 1995, 2000).

Middle Phase		Late Phase
Bradshaw Period	**Clothes Peg Figure Period**	**Wandjina Period**
Tassel Bradshaws	Transitionary Figures	CHP Ceremonial
Sash Bradshaws	Semi-naturalistic Figure	Attenuated Body
Acorn Bradshaws	Static Figures	Early Wandjinas
Bland Bradshaws	Stick Figures	N. Early Wandjinas
Broad Hipped Bradshaws	'Classic' figures	N. Muscly Figures
Schematised Bradshaws		Wandjina Animal
Convex Sweep Bradshaw	*Regional variations*	Bee Hives
Elegant Action Figures	- Static Figures	Wandjina Devils
Stick Bradshaws	- Tapering Outline Figure	Wandjina Bush Spirit
Miniature Bradshaws	- Simple Northern Figures	Pseudo Wandjinas
	- Eastern Figures	Full Body
Regional variations		¾ Body
- Dynamic Bradshaws		Bust Only
- Mantis Bradshaws		Head Only
- Stylised Bradshaws		Horizontal
- Slim Chest Bradshaws		Horizontal & child
- Eastern Bradshaws		Horizontal Head Only

Table 4.1 Middle and Late Phase art Periods and Groups.
(Walsh 1995, 2000)

My analysis is based upon site notes and photographs to determine the presence, or not, of various art periods and on recognising art styles at the sites visited. Although there are many categories of art listed on my reference cards and recording form I found that after my field survey I could divide the art of Drysdale River National Park and Far Away Bay into sixteen categories as listed below and in Table 4.2. Some examples are depicted in Figure 4.1. Style can be open to various interpretations and definitions. An archaeological version has been provided earlier in Chapter 2. Here I use 'style' following Brandl's lead from his work in Arnhem Land (Brandl 1973: 72):

> "'style' is used here in its most general sense. It simply denotes a distinct manner of painting or, in other words, a particular group of paintings with common characteristics that distinguish it from other such groups of paintings. 'Stylised' means that these common characteristics or traits are emphasised."

The art periods and groups follow Walsh's nomenclature (1994, 2000). In spite of the fifteen Bradshaw Period groups and eight Clothes Peg Figure groups listed by Walsh in the Kimberley, I found the elegant art observed would fit into five categories: 1. Tassel Bradshaw Group figures, 2. Sash

Bradshaw Group figures, 3. Elegant Action Figures, 4. Clothes Peg Figures, 5. Clothes Peg Figures (Bichrome). Categories one to four agree with work undertaken by Biro et al. (2001: 257) in the Drysdale River area and north Kimberley. Two other categories I observed include Irregular Infill Animal Period art which is thought to predate the Middle Phase Bradshaw Period and Late Phase Wandjina Period art postdating it. The earliest art period is the Pecked Cupule Period containing vertically placed rock varnish covered cupules. I found only a solitary example and rather than create a new category for it, assigned it to the Other Art category. In the same way the first of the Late Phase periods containing Clawed Hand art was found at one site only and placed in Other Art category. With the exception of a general Bradshaw Figures category which includes figures recognisable as from this period but with exact identification uncertain, the rest of the art categories are from Indeterminate Periods. This includes Stick Figures, Anthropomorphs (human and anthropomorphic figures), Stencils, Macropods (kangaroo-like art unless it is recognisable as belonging to the Irregular Infill Animal Period) and Other Animals for all other animals depicted. Further categories include Geometric Art, Prints and finally Other Art to cater for the presence of horizontally placed pecked cupules, cut marks and engravings. The art categories used in my analysis are listed below in Table 4.2 and shown graphically in Figure 4.1.

Chronology	Period	Characteristic art period or style
Early Phase	**Irregular Infill Animal Period**	Irregular Infill Animal Period
Middle Phase	**Bradshaw Period**	Tassel Bradshaw Group Sash Bradshaw Group Elegant Action Figures
	Clothes Peg Figure Period	Bichrome Art Clothes Peg Figure Period
		General Bradshaw Figures
Late Phase	**Wandjina Period**	Wandjina Period
Indeterminate	**Other Figures**	Stick Figures Anthropomorphs Stencils Macropods Other Animals Geometric Art Prints etc. Other art

Table 4.2 Categories of Kimberley rock art used in my analysis.
(Early Phase Pecked Cupule Period and Late Phase Clawed Hand Period omitted).

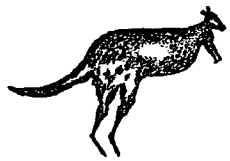
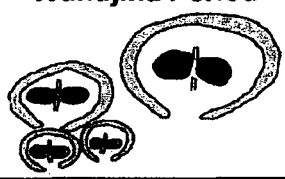
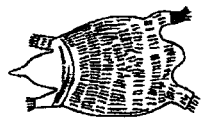
Phase	Period		
Early	Irregular Infill Animal Period 		
Middle	**Bradshaw Period** Tassel Bradshaw Group  Elegant Action Figures 	Sash Bradshaw Group 	
	Clothes Peg Figure Period Bichrome Figures 	Clothes Peg Figures 	
Late	**Wandjina Period** 		
Indeterminate	Stick Figures  Other Animals  Other Art 	Stencils  Prints  Anthropomorphs Macropods Geometric Art	

Figure 4.1 Art Categories used in my analysis (Early Phase Pecked Cupule Period and Late Phase Clawed Hand Period omitted).
(from Walsh 2000 except Wandjina Period).

Art Categories

The art of the two research areas of river and coast has been divided into sixteen categories into which the observed art can be assigned. The Phases and constituent art categories, along with the reasoning for assigning individual paintings to them are discussed below.

Early Phase

Pecked cupules are assigned by Walsh to be one of the earliest art periods of the Early Phase. However, there are doubts about their antiquity on account of cupules being thought to have been created from the very earliest times up to the ethnographic present. Charles Mountford witnessed cupules being created as the by-product of an increase ceremony in the central desert in the 1930s (Mountford 1976). I have followed Welch's lead and only assigned vertically placed cupules covered in rock varnish to this period (Welch 1993:101), other cupules being assigned to Indeterminate - Other Art. However, with only one vertical panel being found as discussed earlier, I have not used this Period and so removed it from list.

The other Early Phase period is the Irregular Infill Animal Period, distinguished by characteristic art painted in a distinctive style of large animals and fish painted in dark often mulberry hued ochre. They seem to be part of an early northern Australian art style which in Arnhem Land is called Large Naturalistic Animals. There is some criticism of this art period, as to whether it is a distinctive, early style (eg Lewis 1997, Taçon and Chippindale 1998, 2008). Welch (2004, pers. comm. 2009) has raised doubts as to the types of figures assigned to the period by Walsh based on their internal decoration. In view of the lack of animals depicted in the later Bradshaw Period compared to Arnhem Land and its contemporary Dynamic Figures (Taçon & Chippindale 2008), I have followed Welch's lead and assigned figures showing dashed infill and outline to the Irregular Infill Animal Period and 'peripheral infill' with a block of pigment around the limbs to Middle Phase art.

Middle Phase

Into this Phase is assigned Bradshaw Period and later Clothes Peg Figure Period paintings. The various Periods and Groups are illustrated in Appendix B. Descriptions of the various Bradshaw figures have been given in an earlier chapter but essentially the main groups are small at around 30cm high (though some are over 1.8m), monochrome and painted in a red or a dark mulberry colour. They show careful detail to body shape with calf muscles, stomach paunch and shoulders. Painted headdresses are often ornate with much decoration hanging off. Tassel Bradshaw Group figures are distinguished by (usually) three point tassels hanging from their waist. They carry boomerangs, sticks and other accoutrements (see Appendix B). Sash Bradshaw Group figures are portrayed with a characteristic three point sash from their waist. The figures have bent knees and downward facing feet giving the impression of floating across the rock face. The knee depiction is what led Welch to term them Bent Knee figures (1993a). In contrast Elegant Action Figures have little or no decoration and are shown with multibarbed spears and boomerangs. They are painted as if ready for the hunt and some scenes do show this. Female figures are painted in this tradition being almost absent in the two other groups. The artistic convention for the first time depicts 'motion', 'impact' or possibly 'sound' with figures by the placing of lines in a manner similar to modern cartoons. Although my working practice is to regard the figures as occurring in chronological succession, as indicated earlier, issues of contemporaneity cannot be wholly ruled out. A few Bradshaw Period figures with acorn heads were found at a handful of sites. Walsh would have them as a late development of Tassel Bradshaw Group figures (2000: 143) and I have placed the figures in that category.

The next Period in Middle Phase art is that of 'Clothes Peg' Figures, distinguished by being bichrome or polychrome, having depictions of more aggressive material culture such as multibarbed composite spears and spearthrowers. The figures are painted facing forward to the viewer in a more angular style (though some paintings seem to follow on in technique from the earlier Period). This has led the art to being called 'Straight Part Figures' by Welch (2007), and 'Static Figures' by Scott-Virtue (pers. comm. 2007). The art

period looks different to the underlying Bradshaw Period art and appears in some shelters to be deliberately placed in a dominant position. However, Walsh has reported scenes of apparent conflict and interaction between them and Elegant Action Figures at sites on Theda Station (pers. comm. 2005) and I have found one example of superimposition where an Elegant Action Figure is painted over a 'Clothes Peg' Figure. The early groups may, in fact, be contemporaneous. A few Tapering Outline figures were found on the north coast and one on the lower Drysdale River. These have been assigned to the Clothes Peg Figure category.

General Bradshaw Figures. Although most of the painted figures can be assigned to the relevant period a few cannot. This may be due to weathering and other deterioration where distinguishing features have been lost. Alternatively, the figures in question may look typically Bradshaw-like but defy exact categorisation. This term then is a catch-all section to accommodate such art.

Late Phase

Within the Late Phase is assigned polychrome art of the Wandjina Period. The Kimberley has an earlier art period, the Clawed Hand Period, on account of paintings of hands with long fingernails, almost like claws, and other crude paintings which may include repainting and adapting earlier Bradshaw Period art. Clawed Hand Period art was observed at one site only and so I have not included it in my analysis categories, placing it in Other Art. The Wandjina Period contains art of the recent period or ethnographically modern. In this period I have included only Wandjina figures and forerunners, their descriptions and nomenclature taken from Walsh (1995). Wandjinas are painted as ghostly white figures, usually on a prepared white background. With round heads they have eyes and a nose but no mouth. The variations of figures painted vary from full length to Head Only forms. The forerunners of Wandjina paintings are called, by Walsh, Northern Muscly Figures, on account of their stocky bodies (1995). Figures of this nature are included in the Wandjina category rather than in Anthropomorths, described below. Animals characteristic of the Wandjina period are included in this category.

Indeterminate

Stick Figures occur throughout the art record and it is difficult to assign them to an art period. Some Stick Bradshaws and Miniature Bradshaw Groups may be allocated here as I place all stick figures in this catch-all category.

Anthropomorphs is a general category to accept anthropomorphic figures which are not assigned to any of the other categories. Human-like figures are also be assigned here.

Stencils: Hand stencils, assigned to this category, are common throughout Australia and the world. In the Kimberley they exist from the earliest times (as seen by their overlying Bradshaw Period figures) to the present. Again due to difficulties in assigning examples to any particular period they are lumped together here.

Macropods: Figures resembling kangaroos are placed in this category with the exception of Irregular Infill Animal Period paintings.

Other Animals: Animals not assigned are placed here. This includes paintings of fish, birds, crocodiles, snakes and other reptiles, fruit bats and any other animals.

Geometric Art: This category is for art which appears to be of a geometric nature, even though that may not be the intention of the original artist.

Prints, etc: This category includes paintings such as hand prints. Some prints can be assigned to earlier periods, for example thrown grass, feather and woven string which are thought by Walsh (2000) to belong to the Irregular Infill Animal Period, as are some hand prints directly associated with IIA Period art.

Other Art: Everything else not assigned is placed in this category. This could be such things as paintings of plants, or petroglyphs such as cupules.

Site Analysis

For my study I visited 149 art sites divided between Drysdale River National Park and Far Away Bay (see Appendix D for site survey reports). The geographical location and siting of art panels was noted and then tabulated in Table 4.1 following the system devised for western Arnhem Land by Paul Taçon (Taçon 1992: 203). I have followed his methodology though adapting it for my particular research areas. The site descriptions vary from a broad geographical, General Situation, to the more specific Site Location and finally Site Type.

The first site description, General Situation, is a geographical overview of the positioning of art panels. This can, for example, be within a gorge or on a plateau or plain. For Drysdale River National Park, sites on the Lower Drysdale River are situated within the gorge below Solea Falls. Planigale Creek sites are categorised as 'plateau', though a few sites are placed in a small gorge cut by the creek. The Palmoondoora Creek area is also classified as 'plateau'. The coastal sites of Far Away Bay have been classed as 'plateau' on account of their being found on top of, or back from, cliff tops in a manner analogous to the Arnhem Land plateau. The inland area of Billabong, however, is assigned to 'plain'. Taçon has a category of interface between plateau and plain (1992: 203, Table 1) but this was not found to be a distinct quality in my research areas.

Site Location is the second category and describes the nature of the art site. There is a choice of six options for this, four taken directly from Taçon i.e. "i) outlier, residual or boulders on plain, ii) top of scree slope / bottom of escarpment, iii) boulders on scree slope iv) outlier, residual or boulders on plateau" (Taçon 1992: 203, table 1). The two other options I have added are: v) outlier or residual on river terrace, and vi) escarpment or cliff face. These cater for the terrain of the Lower Drysdale River gorge.

The third category, Site Type, has four options for the actual placing of art at a site. The criteria are unchanged from Taçon with i) rockshelter, ii) discrete panel or solitary figure, iii) rock wall and iv) cave. The number of caves is small with there being only three examples, two from Far Away Bay and one from Drysdale River National Park.

Analysis of Site Locations

Each art site was categorised on the basis of general situation, site location and then site type. The information was tabulated and listed for both survey areas in Table 4.3. Then for each area in turn the geography of art motifs by phase was tabulated, first for Drysdale River National Park (Table 4.4) and for Far Away Bay (Table 4.5).

	Drysdale River NP		Far Away Bay	
General Situation	No.	%	No.	%
- Plateau or Plain	41	48.8	64	98.5
- Gorge	43	51.2	1	1.5
Total	84	100	65	100
Site Location				
- Outlier, residual, boulders on plain	14	16.7	9	13.8
- Top of scree slope / bottom of escarpment	1	1.2	0	0
- Boulders on scree slope	3	3.6	0	0
- Outlier, residual on terrace	17	20.2	0	0
- Escarpment / cliff face	17	20.2	2	3.1
- Outlier, residual, boulders on plateau	32	38.1	54	83.1
Total	84	100	65	100
Site Type				
- Shelter walls and / or ceiling	44	52.4	17	26.2
- Small panel or single paintings	24	28.6	40	61.5
- Vertical rock wall / face with overhang	15	17.8	6	9.2
- Cave	1	1.2	2	3.1
Total	84	100	65	100

Table 4.3 Analysis of site locations by region.
(after Taçon 1992)

The General Situation of art sites on gorge, plateau or plain is evenly split for Drysdale River National Park on account of the large number of art sites to be

found within the river gorge below Solea Falls. Far Away Bay sites, however, are all, with one exception, located on either plateau or plain. The exception is at Gumboot Bay where the creek flows over a waterfall into a gorge. The Site Location of panels shows preferences with just over forty percent of panels found on river terrace or cliff face (lower Drysdale River gorge) and thirty eight percent being plateau orientated. The northern coast sites have almost fourteen percent found on a plain (Billabong Area sites) and the remainder (bar two examples) are plateau based. The Site Type shows differences between the two research areas for the placing of art with just over half the sites in Drysdale River National Park being in rock shelters compared with a quarter in Far Away Bay. Small panels or single paintings comprise twenty eight percent of the river sites and sixty one percent of coastal sites.

Geographical Distribution – Drysdale River National Park

Phases:	Early	Middle					Late	Indeterminate							
	Irregular Infill Animal Period	Tassel Bradshaw Group	Sash Bradshaw Group	Elegant Action Figures	Bi-Chrome Figures	'Clothes Peg' Figures	Wandjina Period	Stick Figures	Anthropomorphs	Stencils	Macropods	Other Animals	Geometric Figures	Prints	Other Art
General Situation															
- Plateau or Plain	5	12	16	1	1	11	18	4	10	7	9	13	10	3	12
- Gorge	11	19	15	8	7	13	6	10	7	9	6	11	3	4	10
Site Location															
- Outlier, residual, boulders on plain	3	0	6	1	0	2	7	1	5	3	4	4	4	3	4
- Top of scree / bottom escarpment	0	0	0	0	0	0	1	0	3	0	0	0	0	0	1
- Boulders on scree slope	0	0	0	2	1	2	1	0	0	1	0	2	0	0	1
- Outlier, residual on terrace	7	13	6	3	4	7	3	7	0	7	2	5	0	3	6
- Escarpment / cliff face	4	7	7	2	1	3	0	2	3	2	3	4	3	1	2
- Outlier, residual, boulders plateau	2	11	12	1	2	10	12	4	6	3	6	9	6	0	8
Site Type															
- Shelter walls and / or ceiling	11	22	17	7	6	15	18	10	8	13	11	20	9	6	15
- Small panel or single paintings	0	6	9	0	0	6	4	2	5	1	2	2	2	0	3
- Vertical rock wall / face overhang	5	3	5	2	2	3	1	2	4	2	2	2	2	1	3
- Cave	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1

Table 4.4 Analysis of Drysdale River site locations by art phase, period or group.
(after Taçon 1992)

Analysis by Art Phase and Location – Drysdale River National Park

General Situation: Early Phase Irregular Infill Animal Period art is most common along the Drysdale River gorge, a factor also seen with Tassel Bradshaw Group figures. Sash Bradshaw Group figures are split evenly between gorge and plateau. Elegant Action Figures and later Bichrome figures both show a strong preference for the gorge whilst 'Clothes Peg' Figures are fairly evenly split between the two general areas. Late Phase art is predominantly plateau or plain based. An initial impression is that with Early Phase art thought to be created at a time of heightened aridity in Australia then the preference for Irregular Infill Animal Period figures to river areas is of relevance. Later art periods are less closely tied to the river as creeks will be running.

Site Location: Irregular Infill Animal Period art sites are located predominantly on outliers and residual on terrace, a feature seen with Middle Phase Tassel Bradshaw Group art. Sash Bradshaw Group figures show a preference for Outlier, residual and boulder on plateau. Elegant Action Figures and Bichrome Figures are fairly evenly dispersed as Site Location by both groups have a preference for Outlier or residual on terrace. 'Clothes Peg' Figures show a preference for being painted at sites on the plateau then the river terrace. Finally Wandjina Period art is more numerous on the plateau than the plain. As far as Site Type goes, painting on a rock shelter wall and/or ceiling is the preferred location for the art though in this case the result will almost certainly be preferentially distorted by taphonomic survival of the art.

Geographical Distribution – Far Away Bay

Phases:	Early	Middle					Late	Indeterminate							
	Irregular Infill Animal Period	Tassel Bradshaw Group	Sash Bradshaw Group	Elegant Action Figures	Bi-Chrome Figures	'Clothes Peg' Figures	Wandjina Period	Stick Figures	Anthropomorphs	Stencils	Macropods	Other Animals	Geometric Figures	Prints	Other Art
General Situation															
- Plateau or Plain	11	14	17	8	5	12	2	10	12	5	11	12	4	2	16
- Gorge	1	0	1	0	0	0	0	0	0	1	0	0	0	1	0
Site Location															
- Outlier, residual, boulders on plain	0	1	2	0	0	2	1	0	3	1	1	2	1	0	2
- Top of scree / bottom escarpment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Boulders on scree slope	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Outlier, residual on terrace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Escarpment / cliff face	2	0	1	0	0	0	0	0	0	1	0	0	0	1	0
- Outlier, residual, boulders plateau	10	13	15	8	5	10	1	10	9	4	10	10	3	2	14
Site Type															
- Shelter walls and / or ceiling	5	2	4	1	3	5	0	2	6	3	3	5	1	2	5
- Small panel or single paintings	4	10	11	6	1	5	1	7	5	1	5	6	1	0	9
- Vertical rock wall / face overhang	3	2	3	1	0	1	0	0	1	1	2	1	2	1	2
- Cave	0	0	0	0	1	1	1	1	0	1	1	0	0	0	0

Table 4.5 Analysis of Far Away Bay site locations by art phase, period or group.
(after Taçon 1992)

Analysis by Art Phase and Location – Far Away Bay

All the art phases, bar two, have a General Situation of plateau or plain, the two exceptions being the Irregular Infill Animal Period art and Sash Bradshaw Group figures found in the river gorge of Gumboot Bay at site FAB07-12. As for Site Location then almost all the art sites are found to be 'Outlier, residual, boulder on the plateau'. The site type varies with Early Phase art being almost evenly split between shelter walls and ceiling with small panel or single paintings. For Middle Phase art the dominant painting location is as small panel or single paintings. A few panels of Bradshaw Period art are found on 'Vertical rock wall / face overhang'.

Art distribution between regions

Art distribution between Drysdale River National Park sectors

The distribution of art periods and styles between the three sectors of the Drysdale River National Park is provided in Table 4.6 and displayed graphically in Figure 4.2 and Figures 4.3a – 4.3g below.

Art Category	River		Creek					
	Lower Drysdale		Planigale		Palmoon-doora		All DRNP	
	No.	%	No.	%	No.	%	No.	%
Irregular Infill Animal Period	11	7.3	2	2.5	3	5	16	5.5
Tassel Bradshaw Group	22	14.7	4	4.9	5	8.3	31	10.7
Sash Bradshaw Group	14	9.3	11	13.6	6	10	31	10.7
Elegant Action Figures	7	4.6	1	1.2	1	1.7	9	3.1
Bichrome Art	6	4	2	2.5	0	0	8	2.7
'Clothes Peg' Figures	12	8	10	12.3	2	3.3	24	8.2
General Bradshaw Figures	10	6.7	5	6.2	5	8.3	20	6.9
Wandjina Period	4	2.7	12	14.8	8	13.3	24	8.2
Stick Figures	11	7.3	2	2.5	1	1.7	14	4.8
Anthropomorphs	6	4	5	6.2	6	10	17	5.8
Hand Stencils	11	7.3	2	2.5	3	5	16	5.5
Macropods	6	4	5	6.2	4	6.7	15	5.2
Other Animals	11	7.3	8	9.9	5	8.3	24	8.2
Geometric Art	5	3.3	4	4.9	4	6.7	13	4.5
Prints etc.	4	2.7	0	0	3	5	7	2.4
Other Art	10	6.7	8	9.9	4	6.7	22	7.6
Totals	150		81		60		291	

Table 4.6 Occurrences of art categories by sector.

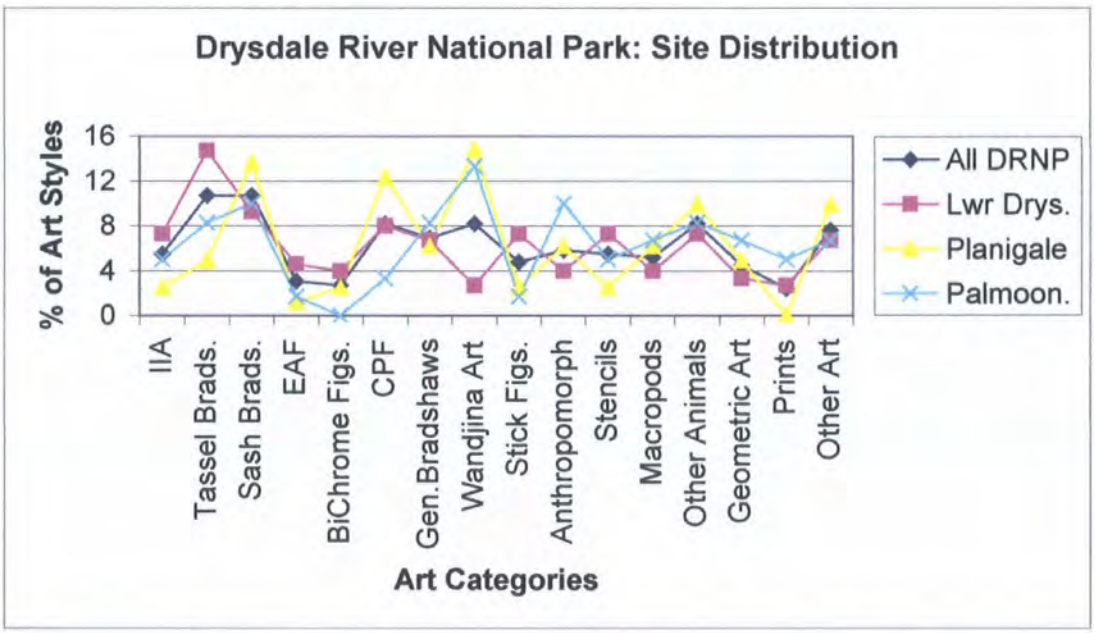


Figure 4.2 Drysdale River National Park: distribution of art styles.

Table 4.3 shows there is a difference in the distribution of art depending on whether the panel location is along the river gorge or plateau creek. This is best expressed visually by mapping the respective site locations for the art categories. The locations of Early Phase (Irregular Infill Animal Period), Middle Phase (Tassel Bradshaw, Sash Bradshaw, Elegant Action Figures, Bichrome Figures and 'Clothes Peg' Figures), Late Phase (Wandjina art) in Drysdale River National Park are shown in Figures 4.3a – 4.3g below, the maps progressing from earlier to later periods. Locations of motifs within the Intermediate category have been examined but are not plotted on account of their generally showing little regional preference and their motifs being composite categories.

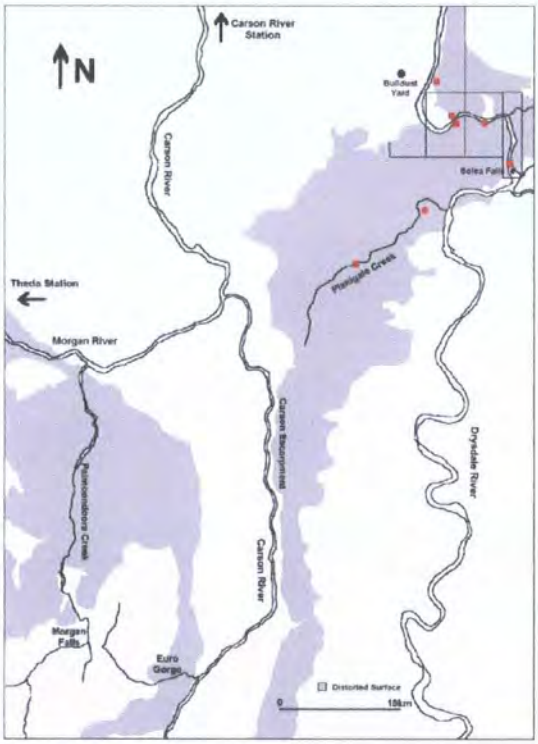


Figure 4.3a Irregular Infill Animal Period panels.

Figure 4.3a illustrates the distribution of sites with Early Phase Irregular Infill Animal Period art and shows a strong preference for locations near the lower Drysdale River as opposed to the plateau areas of Planigale and Palmoondoora Creeks. This art style occurs six times as frequently along the river as it does on Planigale creek, and four times as frequently as on Palmoondoora Creek. Whether this is a preference for permanent water connected to the art being produced during a time of aridity is uncertain but plausible. The art period corresponds to Arnhem Land's Large Naturalistic Figures Complex suggested by Chaloupka to be approximately 20,000 years BP, near the time of the Last Glacial Maximum (Chaloupka 1993).

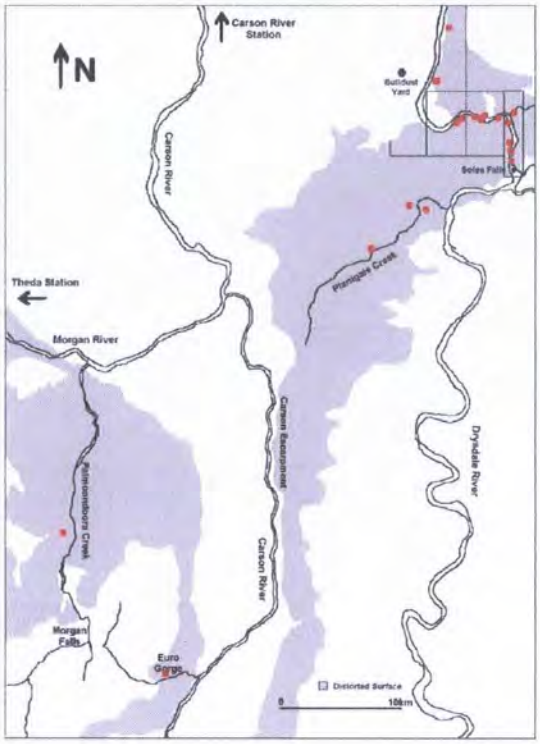


Figure 4.3b Tassel Bradshaw Group panels.

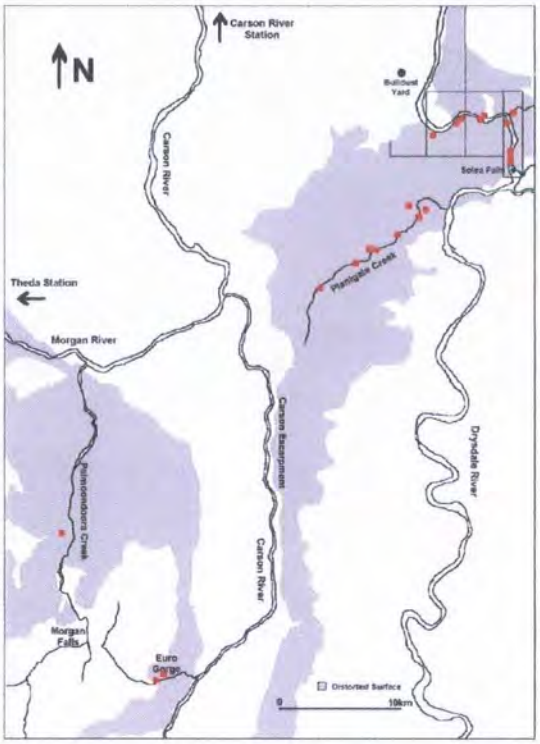


Figure 4.3c Sash Bradshaw Group panels.

Sites with Middle Phase Tassel Bradshaw Group figures (Fig. 4.3b) occur in greater concentrations along the Drysdale River than at creek sites, with approximately four times as many sites containing the art on the river as opposed to either of the creeks. In this case river sites seem to have been of greater importance to the painters. The appearance of the art ties in with Arnhem Land Dynamic Figures between 9 – 10,000 years BP (Lewis 1988, Chippindale and Taçon 1998). For Sash Bradshaw Group figures, the lower Drysdale River painting sites are roughly comparable with Planigale Creek though the river is more favoured, and both areas are more popular than Palmoondoora Creek (Fig. 4.3c).

A comparison of Figs. 4.3b and 4.3c for Tassel and Sash Bradshaw Group figures illustrates the differences in the distribution of sites. There are over a third more sites containing Tassel Bradshaws on the Drysdale River than Sash Bradshaws, and there are almost three times as many Sash Bradshaw sites on Planigale Creek as opposed to Tassel Bradshaw Group sites. In the Palmoondoora Creek area, however, their numbers are somewhat similar. Comparing the two art styles, then there would appear to be strong

preferences for painting sites with Tassel Bradshaw Group figures being more river oriented and Sash Bradshaw Group figures tending towards a split between river and creek. This can be interpreted by either saying that the move to the creeks is a sign of a wetter climate enabling expansion onto the plateau or, if the two periods are contemporaneous, then social factors and choices are at play.

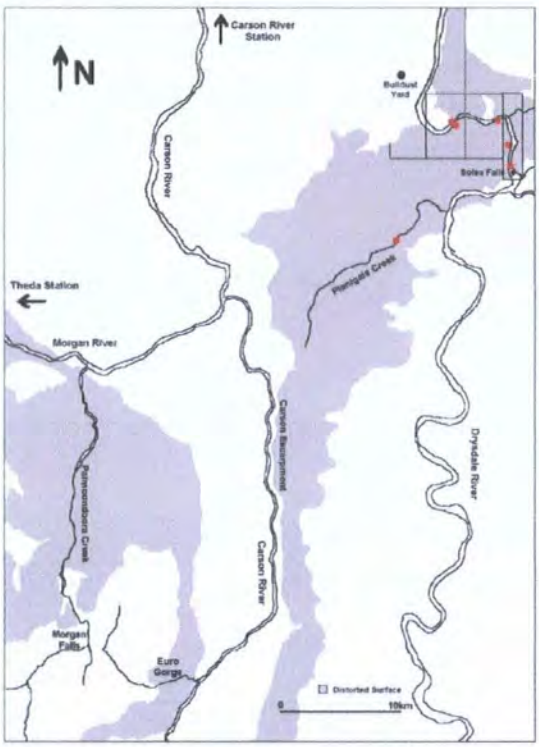


Figure 4.3d Elegant Action Figure Group panels.

The end of the Bradshaw Period within the Middle Phase has art of the Elegant Action Figure Group. The distribution is almost solely concentrated on the river as opposed to the two creeks (Fig. 4.3d). Art from this group is far less represented than the preceding Tassel and Sash Bradshaw Groups or later 'Clothes Peg' Figure Period. The decreased frequency in figures is also seen at coastal sites at Far Away Bay and so appears to be a genuine effect. There are no comments in the literature indicating frequency of occurrence with other art styles so it is not possible to say whether this is localised to the north east Kimberley.

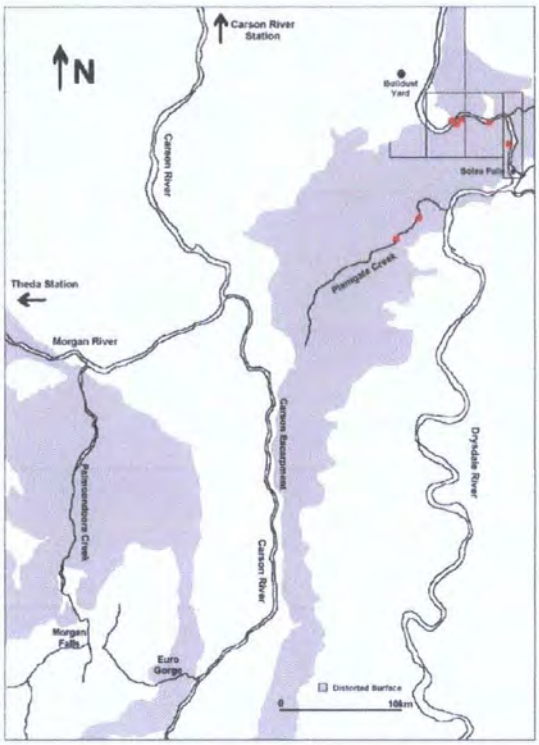


Figure 4.3e Bichrome Figure panels.

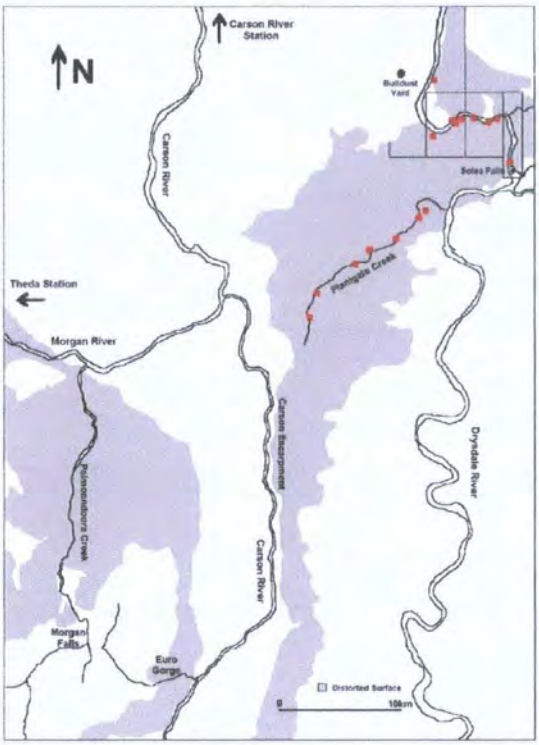


Figure 4.3f 'Clothes Peg' Figure Group panels.

Bichrome Figures occur in the 'Clothes Peg' Figure Period of Middle Phase art. Their distribution is predominantly along the lower Drysdale River, six sites, as opposed to two sites only on Planigale Creek (Fig. 4.3e). 'Clothes Peg' Figure Group art is fairly evenly distributed between river and (Planigale) creek (Fig. 4.3f), their being no strong preference for either location. Both types of figures are part of the same art period yet display differences in their preferred distribution. Sites with Bichrome Figures are fewer in number and concentrated around the lower Drysdale River, whereas 'Clothes Peg' Figure Group art is three times as numerous and is fairly evenly distributed along both river and creek.

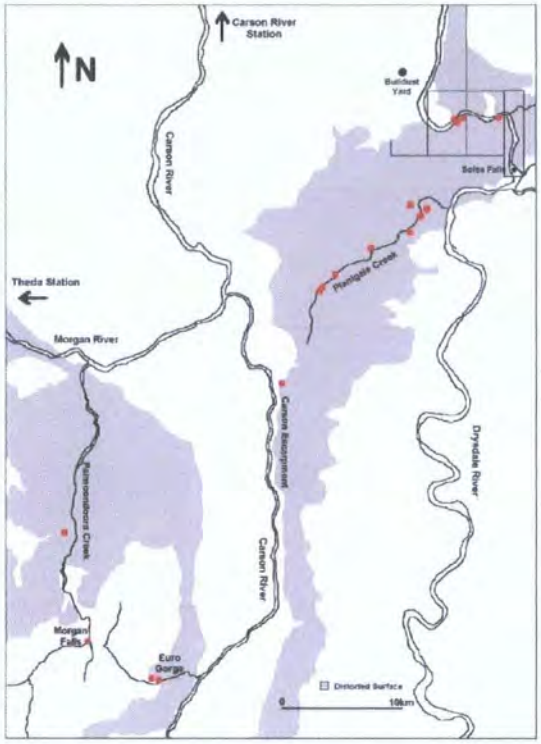


Figure 4.3g Wandjina Period panels.

Late Phase Wandjina Period art is represented across all three areas with a preference for sites located in the two creeks as opposed to the lower Drysdale River. This has been commented on by bushwalkers such as Russell Willis (pers. comm. 2006). Planigale Creek has three times as many sites as the river, and Palmoondoora Creek twice as many. However, even with the distribution of sites preferring the creeks, the two important sites of DR07-04 Borologa and DR07-06 Bundarwa lie on the Drysdale River.

The distribution of Indeterminate Phase art categories is not illustrated on account of their not being placed into a defined chronology and as a whole showing little regional preference as a group. Even so, Stick Figures are predominantly present along the Lower Drysdale River, whereas Anthropomorphs are fairly evenly distributed through the National Park along the river and two creeks. The distribution of Stencils through the National Park, all of which are hand stencils, are mainly located in the Lower Drysdale River. Macropods not assigned to the Early Phase are evenly distributed along both river and creeks. The categories of Other Animals and Geometric Art are also evenly distributed through the National Park, though no Geometric Art was observed in the vicinity of Euro Gorge and Morgan Falls at the southern limit of my research zone. Finally observed Prints are low in number and the category of Other Art is distributed throughout the National Park. Art motifs assigned to the Indeterminate Phase categories are by their nature difficult to place chronologically and the individual categories do act as catch-all groups which may explain why no evidence of regional preferences is observed.

Art distribution between Far Away Bay sectors

The distribution of art periods and styles between the five sectors of Far Away Bay and the area as a whole is provided in Table 4.7 and displayed graphically in Figure 4.4 below.

Art Category	Gumboot Bay	Boab Bay	Billa-bong	Lost City	West Cliffs	All FAB
No. of panels	18	15	9	19	4	65
	No.,%	No.,%	No.,%	No.,%	No.,%	No.,%
Irreg. Infill Animal Period	3 (6.7)	1(2.6)	0	7(12.1)	0	12 (6.9)
Tassel Bradshaw Group	4 (8.9)	5(12.8)	1 (5)	3 (5.2)	1 (10)	14 (8.1)
Sash Bradshaw Group	5 (11.1)	3(7.7)	2 (10)	6(10.3)	2 (20)	18(10.4)
Elegant Action Figures	2 (4.4)	2(5.1)	0	3 (5.2)	1 (10)	8 (4.6)
Bichrome Art	1 (2.2)	0	0	3 (5.2)	1 (10)	5 (2.9)
'Clothes Peg' Figures	5 (11.1)	1(2.6)	2 (10)	4 (6.9)	0	12 (6.9)
Gen. Bradshaw Figures	9 (20)	4(10.3)	4 (20)	9(15.5)	2 (20)	28(16.2)
Wandjina Period	0	0	1 (5)	1 (1.7)	0	2 (1.2)
Stick Figures	4 (8.9)	2(5.1)	0	3 (5.2)	1 (10)	10 (5.8)
Anthropomorphs	3 (6.7)	4(10.3)	3 (15)	2 (3.4)	0	12 (6.9)
Hand Stencils	1 (2.2)	2(5.1)	1 (5)	2 (3.4)	0	6 (3.5)
Macropods	0	4(10.3)	1 (5)	5 (8.6)	1 (10)	11 (6.4)
Other Animals	2 (4.4)	3(7.7)	2 (10)	4 (6.9)	1 (10)	12 (6.9)
Geometric Art	1 (2.2)	2(5.1)	1 (5)	0	0	4 (2.3)
Prints etc.	2 (4.4)	0	0	1 (1.7)	0	3 (1.7)
Other Art	3 (6.7)	6(15.4)	2 (10)	5 (8.6)	0	16 (9.2)
Totals	45	39	20	58	10	173

Table 4.7 Occurrences of art category by sector for Far Away Bay.
Note that Bush Camp with one solitary IIA Period panel is included in the All FAB total.

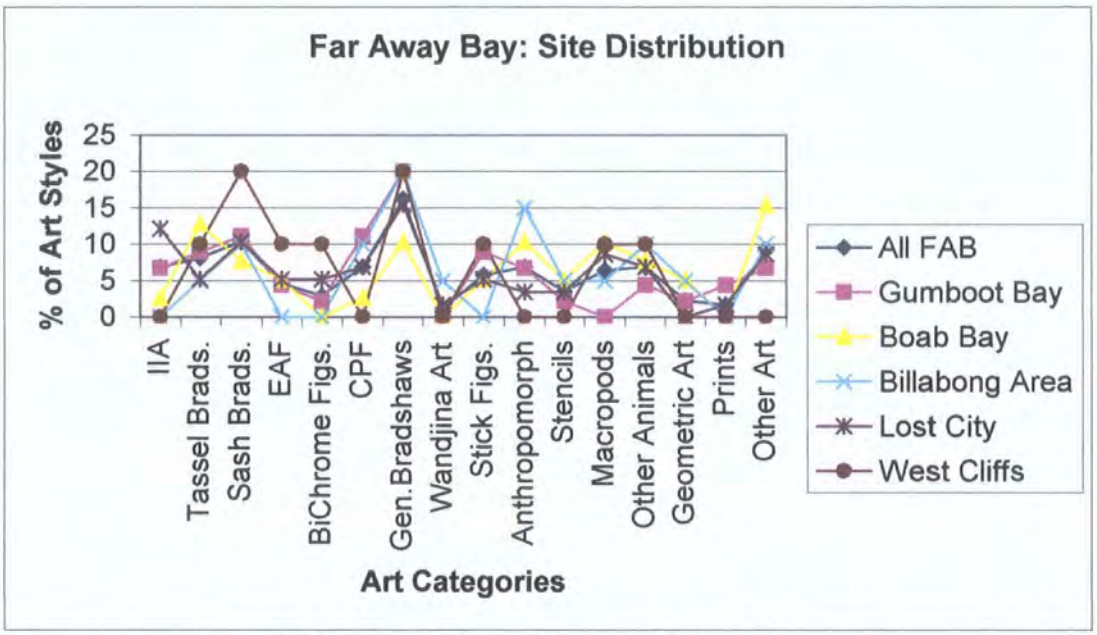


Figure 4.4 Far Away Bay: distribution of art styles by region

In discussing the distribution of art categories amongst the five sectors of Far Away Bay I will refer only in passing to West Cliffs on account of my examining only four panels with a cumulative total of ten categories of art. Similarly Bush Camp (FAB07-31) is not included as I examined only one panel containing Irregular Infill Animal Period animals (six bandicoots).

Table 4.7 (above) illustrates for West Cliffs that some art categories are absent. This is probably due to the low number of sites analysed. Billabong Area shows some absences too but with nine sites and twenty art panels these gaps in the record may also be due to the site situation with the sector being fifteen kilometres or so inland from the coast situated on rocky outcrops, 'disturbed ground', in the surrounding plain.

The location of Early, Middle and Late Phases of art are displayed in Figures 4.5a – 4.5g. Indeterminate art categories have been visually checked but are not presented below on account of their being difficult to place chronologically and the categories acting as catch-all groups. Note that all the art areas, Lost City, Boab Bay and Gumboot Bay are assigned to 'plateau' as they are cliff top, or escarpment top, apart from Billabong Area which is 'plain'.

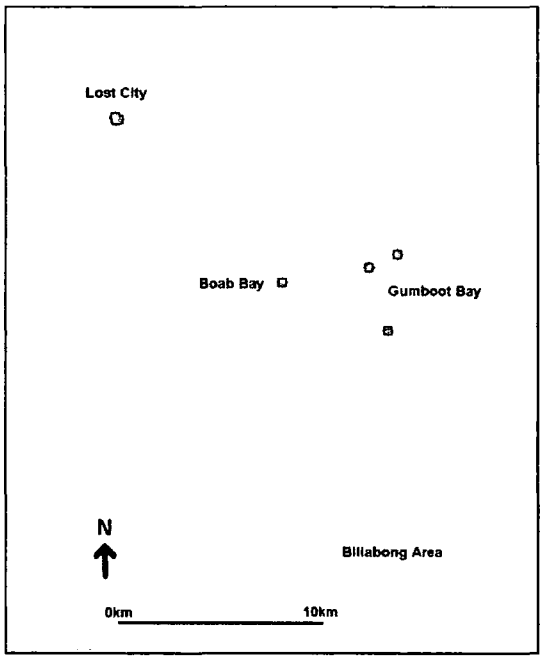


Figure 4.5a Irregular Infill Animal Period panels.

Early Phase art of the Irregular Infill Animal Period is present at the coastal sites of Lost City, Boab Bay and Gumboot Bay, but was not observed at Billabong Area or West Cliffs (Fig. 4.5a). Lost City has the greatest numbers of sites where the art occurred (7) followed by Gumboot Bay (3). From this it is difficult to say whether the preferred place for painting art from this period is on the cliff top / escarpment.

Tassel Bradshaw Group figures occur in almost the same number of sites at Gumboot Bay, Boab Bay and Lost City. They are represented by individual sites only at Billabong Area and West Cliffs. Sash Bradshaw Group figure panels show a preference at Lost City and Gumboot Bay. Boab Bay, Billabong Area and West Cliffs are fairly evenly matched for panel occurrence. The category of General Bradshaw figures may have an impact on the distribution of motifs. The category represents all figures that are unassignable into Middle Phase motifs, on account of style or weathering removing distinguishing features. At Gumboot Bay the category is practically double those assigned to Tassel or Sash Bradshaw Group figures, is similar at Boab Bay, and almost double at Billabong, and one third to twice as large at Lost City.

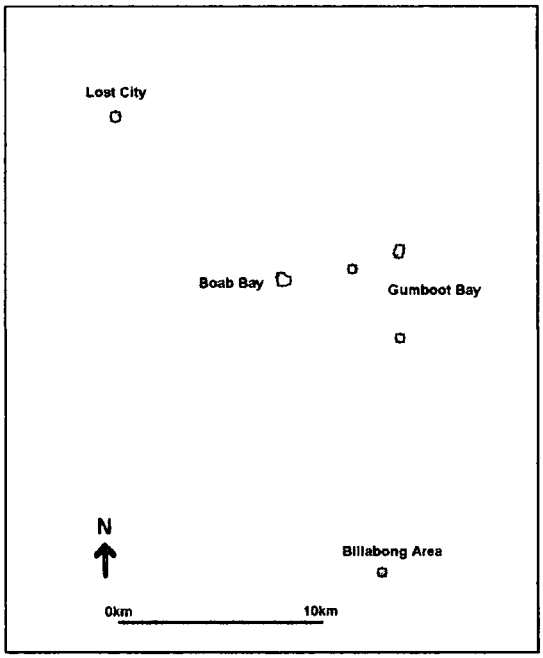


Figure 4.5b Tassel Bradshaw Group panels.

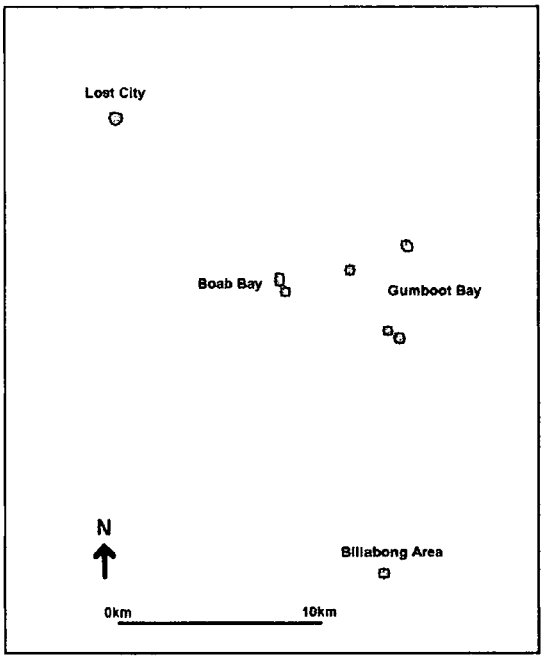


Figure 4.5c Sash Bradshaw Group panels.

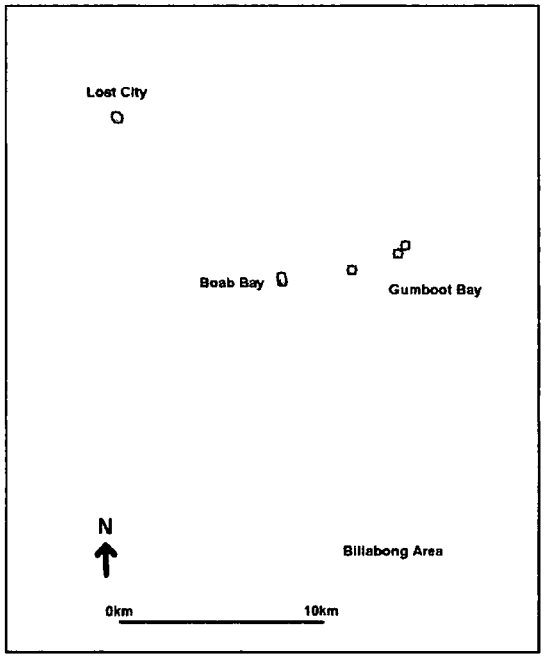


Figure 4.5d Elegant Action Figure Group panels.

Panels with Elegant Action Figures occur a few times at Gumboot Bay, Boab Bay and Lost City but are absent inland at Billabong Area. The issue of unidentifiable figures assigned to the General Bradshaw category may be relevant here as discussed above.

For the later Middle Phase 'Clothes Peg' Figure Period art, the pattern of sites with panels of 'Clothes Peg' Figures exceeding Bichrome panels as found at Drysdale River National Park is repeated. Overall over twice the number of 'Clothes Peg' Figure panels are found compared to Bichrome art, with the largest occurring at Gumboot Bay and Lost City. The Bichrome motif seems to be absent at Boab Bay and Billabong Area.

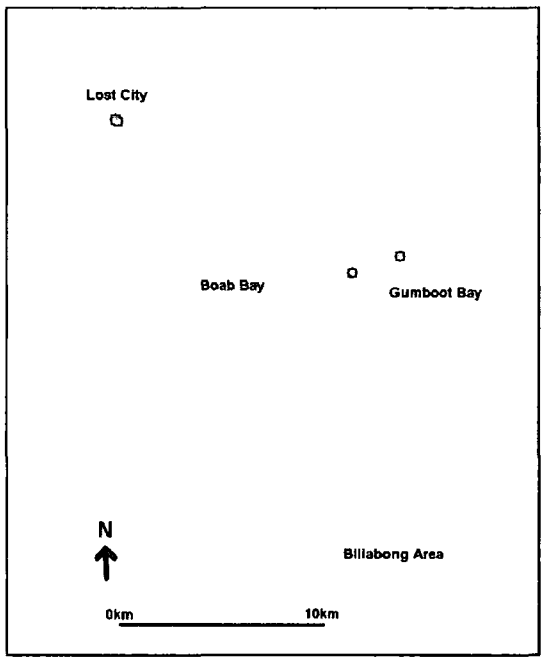


Figure 4.5e BiChrome Figures panel.

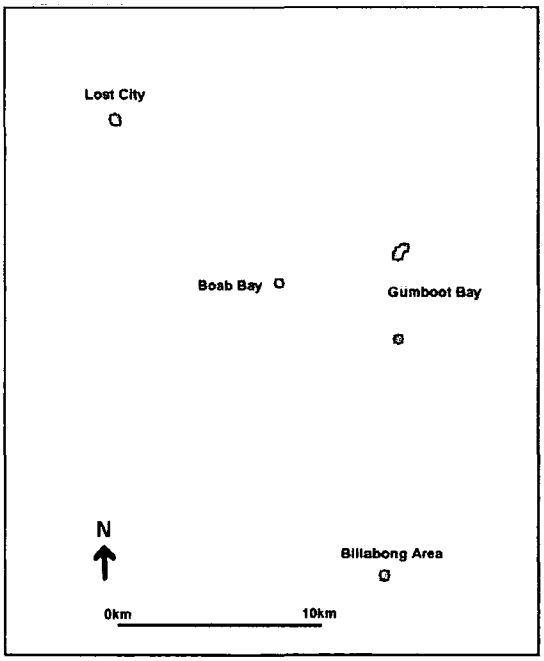


Figure 4.5f 'Clothes Peg' Figure Group panel.

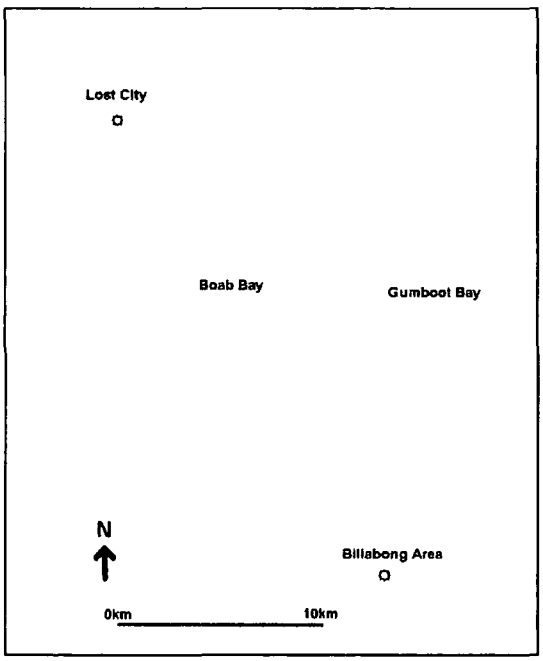


Figure 4.5g Wandjina Period panel.

Late Phase Wandjina figures are found at two locations, Billabong Area (FAB07-26a) and Lost City (FAB07-46a), the latter having a classic full length Wandjina painted in white on a dark ochre background.

The distribution of Indeterminate Phase art, comprising the eight general categories of Stick Figures, Anthropomorphs, Stencils, Macropods, Other Animals, Geometric Art, Prints and Other Art

found within the Far Away Bay region are not illustrated. Stick Figures are absent in the Billabong Area, whereas Anthropomorphs are absent in the West Cliffs area. Stencils are located at the inland part of Gumboot Bay and Macropods in the coastal part of the bay. The category Other Animals is found throughout Far Away Bay whereas Geometric Art seems to be absent at Lost City and West Cliffs. Prints are absent at Boab Bay and Billabong Area and Other Art is spread throughout Far Away Bay.

Statistical Analysis

The data from the two survey areas in Tables 4.6 and 4.7 lend themselves to statistical analysis, the chi-squared test, to see if there is a relationship between Drysdale River National Park and Far Away Bay art or whether the occurrences are random. First all sixteen categories were tested, encompassing all phases of art in the two regions. Then a subset of six categories, Middle Phase art of five defined groups and periods (Tassel, Sash, Elegant Action Figures, Bichrome Figures and 'Clothes Peg' Figures) plus the general Bradshaw Figure category were analysed. The results are tabulated below in Table 4.8:

	Degrees of Freedom	Chi-squared	Match
All sixteen categories	15	27.17	Yes 95%
Middle Phase subset	5	9.46	No

Table 4.8 Chi-Squared test

The analysis shows that for the full data set of sixteen categories there is a statistical relationship between the two areas up to the 95% confidence level (but not up to the 99% confidence level). For the Middle Phase subset however, the null hypothesis is proved and statistically on the data I have collected, no statistical relationship between the two areas has been demonstrated.

A comparison of the two regions looking at the percentages of art styles or periods present, from Tables 4.6 and 4.7, is displayed graphically below in Figure 4.6.

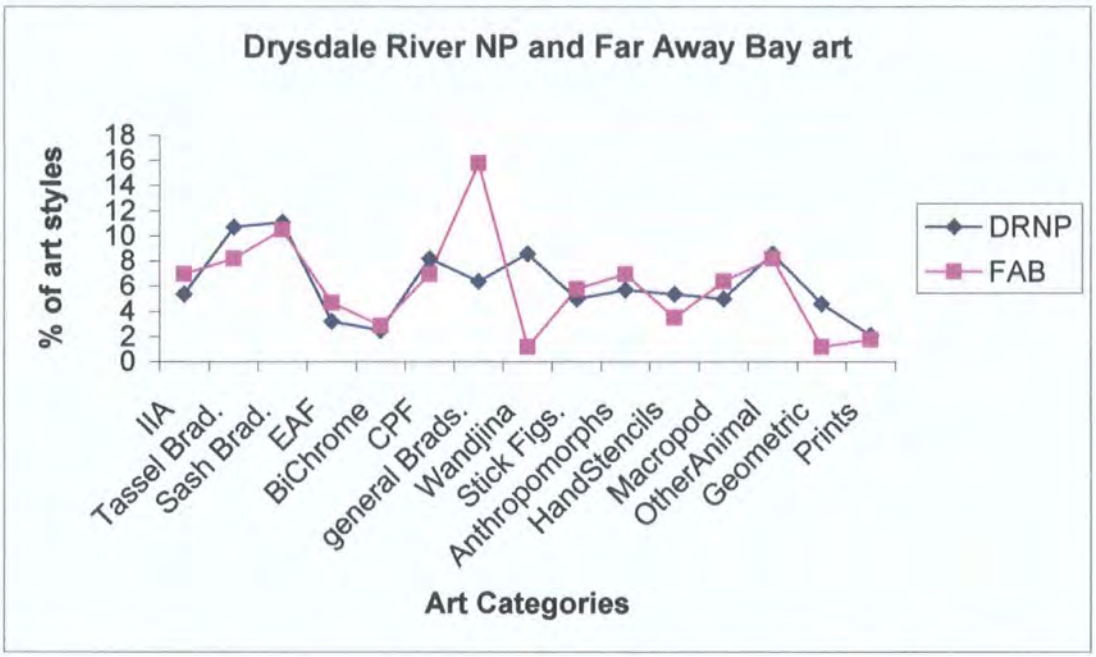


Figure 4.6 Drysdale River National Park and Far Away Bay art.

Figure 4.6 indicates there are three major points of difference between the two areas. First is the percentage of Wandjina figures, but this was to be expected on account of the border of the cult's influence passing near Far Away Bay in the King George River area. The number of unidentified or general Bradshaw Figures is far greater in Far Away Bay than in the Drysdale River area. This may be an initial indication of differences between escarpment and river art. The third difference is the number of geometrical paintings with more being seen in the Drysdale River National Park both in numbers and percentages than Far Away Bay.

Comparison with other authors

It is of interest to compare my data with other researchers. I am only aware of Welch (1990, 1993a) publishing data on Kimberley art style frequency in his development of a rock art chronology.

Welch (1990) looked at 217 sites from a wide area across the Kimberley including Manning Creek Gorge, Barnett River Gorge, Mount Elizabeth, the Mount Hann area, Drysdale River area and Kalumburu. Based on this survey, he concluded that the early rock art could be divided into two distinct periods, an earlier one of monochrome art followed by a later bichrome period. Using the nomenclature followed in this thesis this corresponds to Walsh's Tassel and Sash Bradshaw Group figures followed by bichrome 'Clothes Peg' Group figures.

Out of Welch's 217 sites, 49 sites (22.6%) have monochrome anthropomorphs, (1990: table 1) and 29 sites (13.4%) have bichrome anthropomorphs, (1990: table 2). For my two survey areas, monochrome figures comprise between 20.1% and 24.4% of the art body (the latter figure includes Elegant Action Figures, which Welch does not illustrate or discuss). The figure for bichrome anthropomorphs (Bichrome and 'Clothes Peg' Figures) is 10.4%. From this it is fair to say that the distribution of art in my two survey regions is in general agreement with Welch's broad survey of the Kimberley.

Welch's later paper (1993a) looked at splitting the monochrome art period into two, comprising Tassel Bradshaw figures and Bent Knee figures (Sash Bradshaw Group figures). Of 565 figures from 508 sites, 209 (37%) are Tassel figures, 154 (27.3%) Bent Knee figures (Sash) and 202 (35.8%) 'Other' figures. Further Welch (1990: 112) reports only 17 sites have both monochrome and bichrome figures, 7.8%, and only 3 sites show superimposition of monochrome and bichrome figures. Also only 14 out of the 508 sites (2.8%) had both Tassel and Sash Bradshaw figures present (1993a: 14). I have thirteen sites with both Tassel and Sash Bradshaw Group figures present, all within Drysdale River National Park, none being at Far Away Bay. This is 8.8% for both regions or 15.7% for just the national park. However the number of sites where both types of figures occur on the same panel is far less at 4, but as a percentage of the art body is similar to Welch's survey. From this it can be said that the Middle Phase art of the river and coast is in agreement with Welch's analysis of the Kimberley as a whole.

Discussion of Motif Distribution

The distribution of art motif categories does appear to be influenced by geography i.e. river gorge or plateau, and the presence of permanent water. This is best seen in Drysdale River National Park where panels of Early Phase Irregular Infill Animal Period art (thought to be painted during more arid climatic conditions) are most numerous along the lower Drysdale River which would have been a permanent water source at this time as opposed to the more ephemeral creeks. The 'classic' Bradshaw paintings of Tassel and Sash figures reveal a distinct regionality, with Tassel Bradshaw Group figures being more numerous along the lower Drysdale River, and Sash Bradshaw Group figures more evenly split between river and creek. Elegant Action Figures too show a preference for being painted on river sites. The later Middle Phase 'Clothes Peg' Figure Period shows a split between Bichrome Figure panels tending to congregate on the river and 'Clothes Peg' Figure Group art being split between the river and creek like earlier Sash Bradshaw Group figures. Finally, Late Phase art is most numerous along the creeks although two major sites occur on the Lower Drysdale River.

Far Away Bay sites occur on cliff or plateau locations away from major rivers, the closest being the King George River to the east. Irregular Infill Animal Period art is found close to the present day coast on cliff top sites or what would have been escarpment edge sites at the time of painting. Generally the inland sites at Billabong show fewer panels for all periods compared with other areas. Art from the Indeterminate Phase shows few signs of regionality within both survey areas. One possible reason is that the art phase acts as a catch-all category so concealing any distribution. Distinct motifs such as Stick Figures or Macropods reveal a possible distribution between river and creek in the Drysdale River National Park but this is not seen at Far Away Bay.

Middle Phase art shows an oscillation between river and creeks. Coupled with data from Early Phase art, it is perhaps possible to conclude this effect is climate-based on account of Middle Phase art being painted at a time of

environmental change as sea levels rose and the climate tended to become wetter (Taçon & Brockwell 1995: 680).

Panel Orientation

Panel orientation, the direction in which the main art panel at each site faces, was noted for most of the sites visited. An analysis of the data gathered in both survey areas is undertaken in this section. This will indicate if there is a preferred orientation for art panels and allow for a comparison between coast/escarpment and river sites at Far Away Bay and Drysdale River National Park. However, with geography constraining some sites in the Drysdale River National Park, the Lower Drysdale River and Drysdale creeks will also be examined separately. Finally, the panel direction for some of the art traditions present will be investigated.

The panel orientations were tabulated into compass directions and plotted as rose diagrams (Figure 4.7 below). During the survey some of the panel directions were unrecorded and this is indicated below.

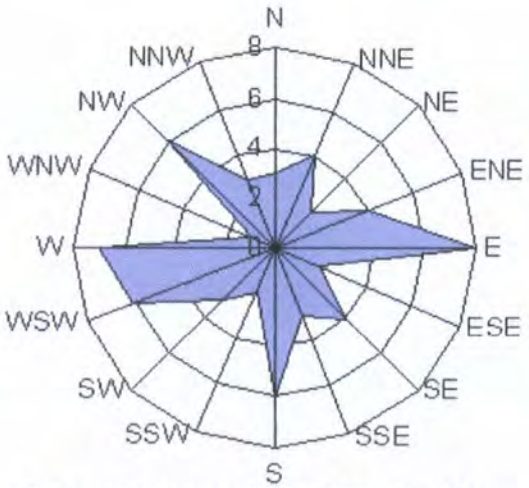


Figure 4.7a Drysdale River National Park panel orientation
Data for 62 out of 83 art sites.

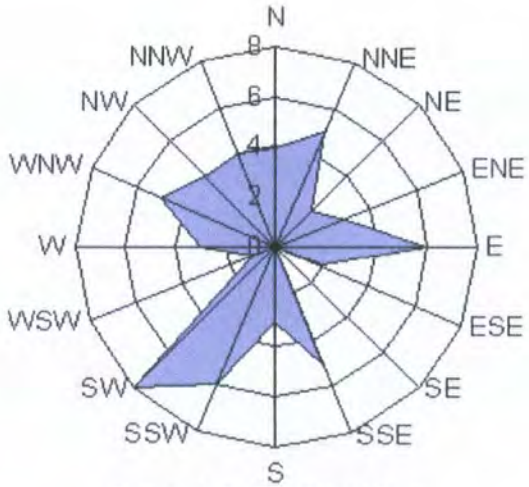


Figure 4.7b Far Away Bay panel orientation
Data for 61 out of 66 art sites.

Figure 4.7 Art panel orientation for the two research areas.

Drysdale River National Park orientation data (Figure 4.7a) show the art panels' aspects are more pronounced along an east-west axis with a southern

spur and a few panels looking to the north and north west. As will be discussed below many sites below Solea Falls are constrained by geography as they are in shelters overlooking the gorge. Far Away Bay art panels (Figure 4.7b) indicate a trend of being orientated around the compass with strong easterly and south westerly preferences along with northern trends.

The two rose diagrams illustrate that visually there seems to be little relationship between the two survey areas. This can be investigated by applying the chi-squared test. As illustrated in Table 4.9 (below) the null hypothesis is proven, and statistically on the data collected, there seems to be a clear difference regarding orientation.

Degrees of Freedom	Chi-squared	Match
17	20.8	No

Table 4.9 Chi-Squared test for panel orientation

Lower Drysdale River and Drysdale creeks panel orientation

Drysdale River National Park panel orientation data have been divided into two zones: Lower Drysdale River (below Solea Falls) and Drysdale creeks, the latter being the creek systems of Planigale and Palmoondoora Creeks to the west of the Drysdale River. The division between river and creek sites was undertaken as the rock shelter panel orientation in the Lower Drysdale River is affected by the geography of the river. Below Solea Falls the river flows in a dogleg through a gorge, south to north then east to west, with rock shelters on the sides of the gorge. Also the majority of sites I visited and recorded in the latter leg are on the south bank with generally northerly facing aspects. In contrast the areas of Planigale and Palmoondoora Creeks show a topography of weathered sandstone outcrops and rock shelters and the aspects of their art panels are not so constrained by geography. The difference in panel orientation for Lower Drysdale River and Drysdale Creeks sites is illustrated in Figure 4.8 below.

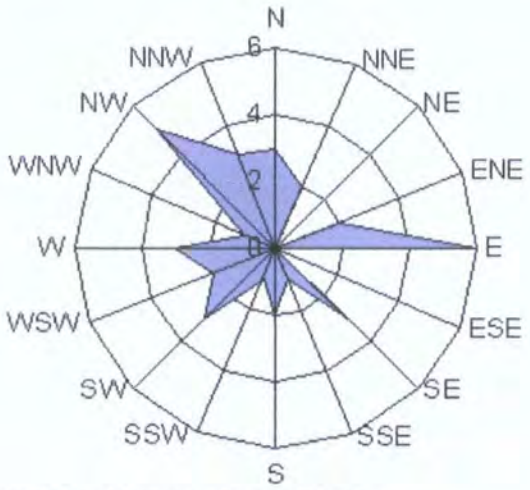


Figure 4.8a Lower Drysdale River panel orientation.

Data for 35 out of 42 art sites.
Note the orientation of the art panels is constrained by the geography of the gorge.

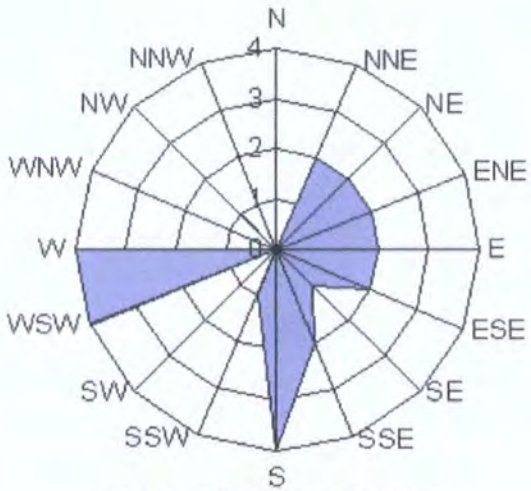


Figure 4.8b Drysdale creeks panel orientation.
(Planigale and Palmoondora Creeks)
Data for 27 out of 41 art sites

Figure 4.8 Lower Drysdale River and Drysdale creeks panel orientation.

Lower Drysdale River art panels (Fig. 4.8a) tend to have a more general westerly aspect varying from south clockwise around to north with an important lobe looking east. For Drysdale creeks (Fig. 4.8b) almost the reverse is true with the trend along the north north east to south axis coupled with a strong western lobe.

On dividing the Drysdale Creeks category into its two constituent parts (Planigale Creek and Palmoondora Creek) the art panels' general aspects show differences with Planigale Creek (Fig. 4.9a) having a general easterly component from north east to south with a strong west-south-west lobe. Palmoondoora Creek (Fig. 4.9b) sites look to the west or south-south-west.

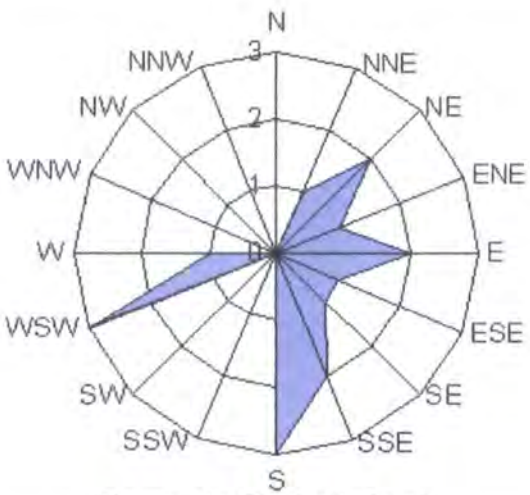


Figure 4.9a Planigale Creek panel orientation
Data for 17 out of 26 art sites.

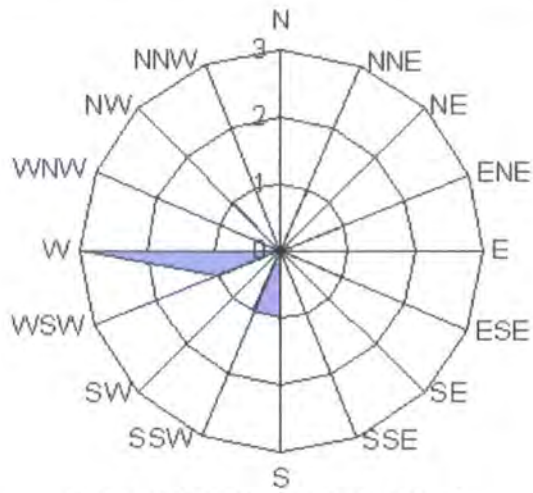


Figure 4.9b Palmoondoora Creek panel orientation
Data for 10 out of 15 art sites.

Figure 4.9 Planigale Creek and Palmoondoora Creek panel orientation.

The effect of prevailing topography on panel orientation is shown in Figure 4.10 below, where art panel rose diagrams for the three areas are overlain on a map of Drysdale River National Park. The ellipses encompass the areas used in the rose diagrams. Certainly for the two creeks, then the preferred orientation of the sites is in opposite directions to each other, a broad easterly trend for Planigale Creek as opposed to a westerly one for Palmoondoora Creek, whereas the prevailing direction of the creeks only differs by 45 degrees. This cannot be explained by differences in the geomorphology of both areas as they are fairly similar.

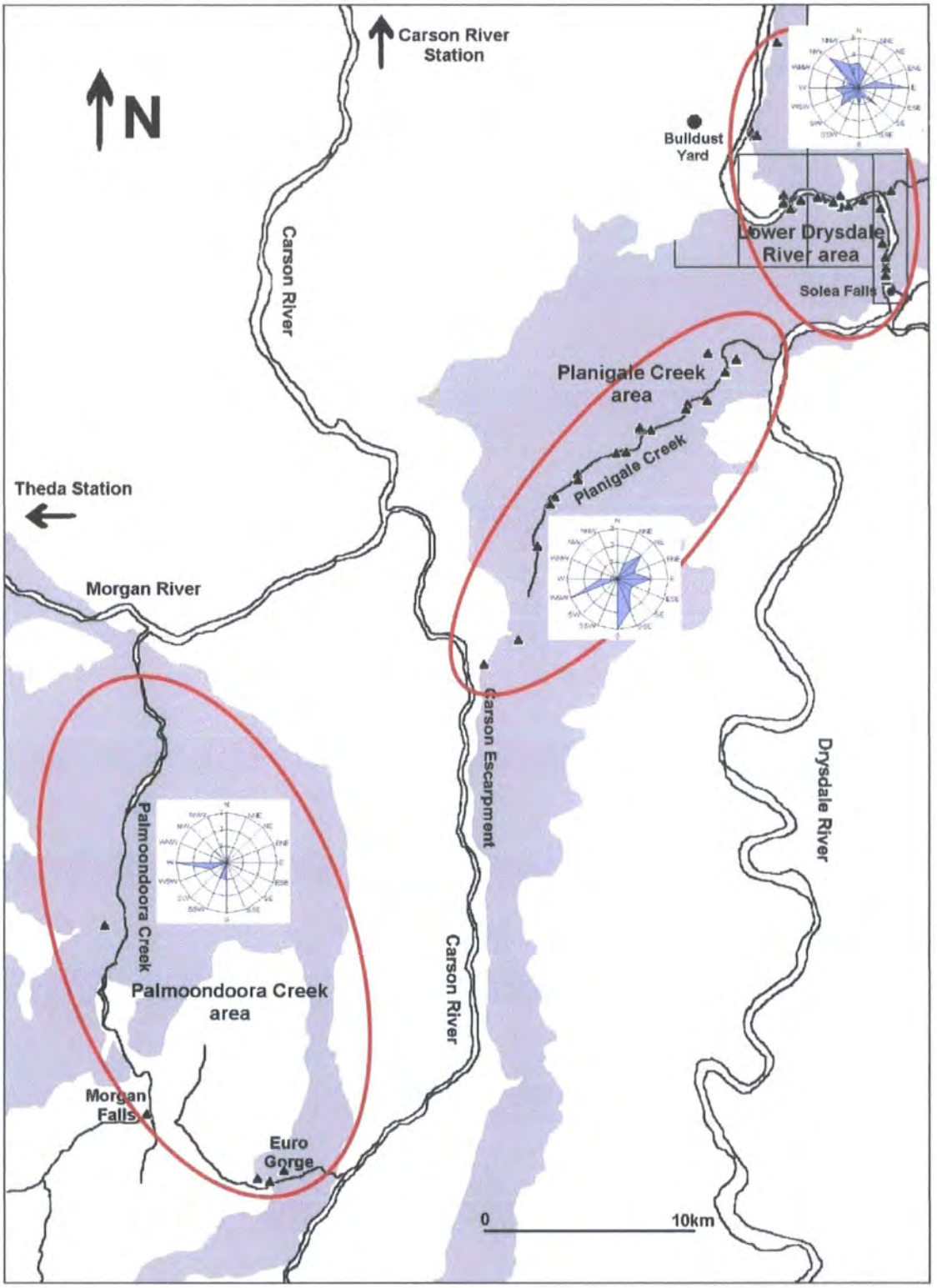


Figure 4.10 Drysdale River NP illustrating art panels' orientation and geographical areas. The red ellipses indicate the band of sites used in the orientation diagrams.

Far Away Bay orientation

The orientation of all sites at Far Away Bay is illustrated previously in Figure 4.7b. The aspects of the panels from the four main sectors comprising the research area are indicated separately below in Figure 4.11. Gumboot Bay panel aspects look towards the four points of the compass. This is to be expected at the inland sites on account of many panels viewing central open areas. This effect is less pronounced on the coastal sites. Boab Bay panels show a pronounced north-easterly and westerly orientation. Billabong Area sites lie along a generally south facing outcrop of Warton sandstone, and this feature seems to be the dominant reason for the south trending aspect of the art panels. At Lost City even though rock shelters and art panels appear to face into central open areas (a feature which will be examined in later chapters) the dominant aspects are northerly, east and south-westerly. In view of the large number of available panels and rock shelters available for painting in this area but which were left untouched perhaps this is evidence of a preferred choice by the artists.

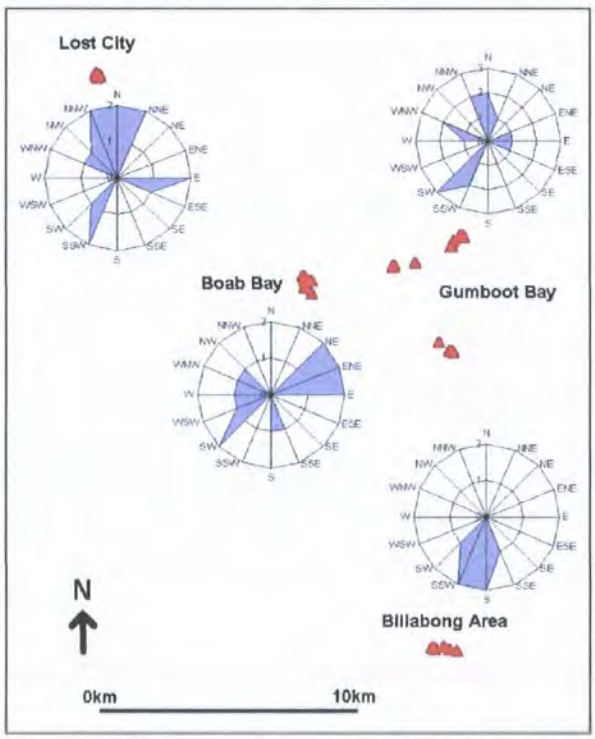


Figure 4.11 Far Away Bay illustrating sites and panel orientation.

The distribution of art sites along with the panel orientation at Far Away Bay is indicated in Figure 4.11. Of interest is that Billabong Area panels look in a southerly direction to the exclusion of all others, and at Boab Bay, north facing sites are conspicuous by their absence. It is not possible at the moment to say whether this is best explained by a lack of site data and will change with further survey work.

Panel Orientation by art style

The following rose diagrams illustrate the panel orientation at sites for six art categories, Irregular Infill Animal Period, Tassel Bradshaw Group and Sash Bradshaw Group figures, Elegant Action Group figures, 'Clothes Peg' Figure group and Wandjina Period.

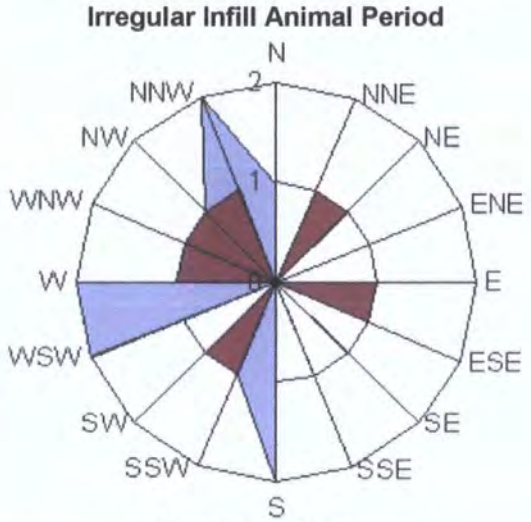


Figure 4.12 Irregular Infill Animal Period

Diagram Key – Drysdale River National Park (DRNP) in blue and Far Away Bay (FAB) in purple:



The rose diagram of panel direction for Irregular Infill Animal Period (IIA) art (Fig. 4.12) shows a difference between the two survey regions. IIA Period art at Far Away Bay looks to the north, east or in a westerly direction. In Drysdale River National Park the art faces in a southerly, south westerly or north westerly direction.

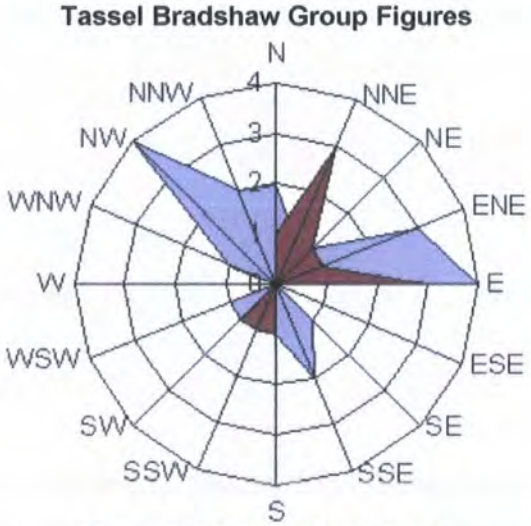


Figure 4.13a Panel Orientation
DRNP 25 sites, FAB 13 sites

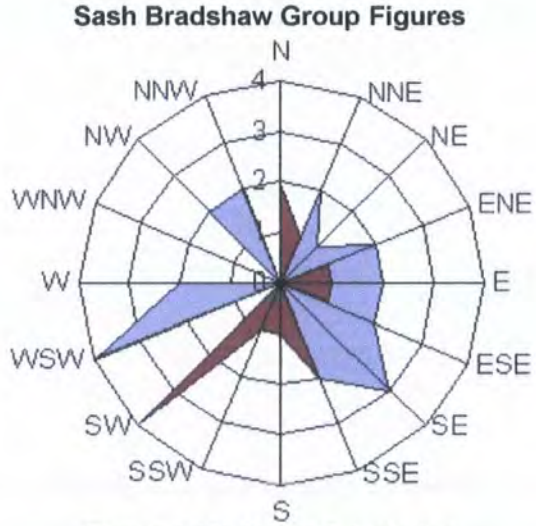


Figure 4.13b Panel Orientation
DRNP 25 sites, FAB 18 sites

Figure 4.13 Tassel Bradshaw and Sash Bradshaw Group figures' panel orientation.

Tassel Bradshaw Group figures (Fig. 4.13a) in both regions face generally in a northerly direction in an arc from north west to north east, with only a few panels looking southerly. Drysdale River National Park art looks to the north west or north easterly. Far Away Bay panels look north-north-east or east-north-east. They do not seem to look to the north west. A few individual sites for both regions are oriented to the south west. The data when examined by geomorphology of shelters (Tables 4.4 and 4.5) reveals differences between the two regions. The site location is split between 'outlier, residual on terrace' and 'outlier, residual, boulders on plateau', and for site type the majority of paintings are found on shelter walls and ceiling within the national park. On the coast the preferred site location is 'outlier, residual on plateau' and 'small panel or single paintings' or the site type.

The orientation of sites containing Sash Bradshaw Group figures (Fig. 4.13b) is split between the two art areas. In Drysdale River National Park the art looks predominantly easterly, south westerly, and with some sites looking to the south east and northerly. In Far Away Bay the trend is south easterly and north easterly with a few looking east. This is quite different to the panel orientation of Tassel Bradshaw Group figures. Comparing the two rose diagrams (Fig. 4.13) it is almost as if the panel orientations of the two groups are chosen to be the opposite of each other.

The difference between Sash Bradshaw Group figure orientation between regions and within regions might be explained by considering the actual site geomorphology as set out in Tables 4.4 and 4.5. National park sites favour 'outlier, residual, boulders on plateau' (Table 4.4), with an equal mix between three other locations. Similarly coast sites concentrate on the 'boulders on plateau'. As for site types, national park sites are in the majority of cases painted on shelter walls and ceilings, whereas coast sites tend by a far greater majority than the park sites to be on small panels or to be single paintings.

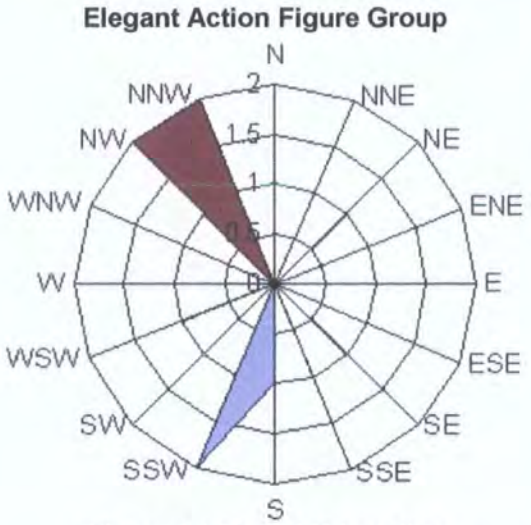


Figure 4.14 Panel Orientation
DRNP 9 sites, FAB 8 sites

Only a few sites contain examples of Elegant Action Figures so the orientations shown in Figure 4.14 may be the result of a lack of data. On this basis however, the art trends westerly, with Drysdale River National Park sites being either south west or north westerly. Far Away Bay sites view to the north west.

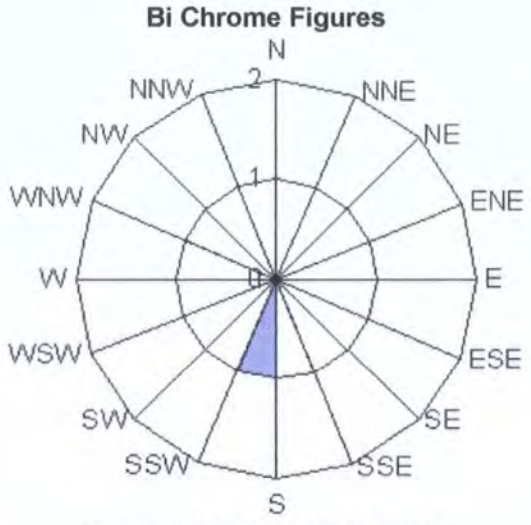


Figure 4.15a Panel Orientation

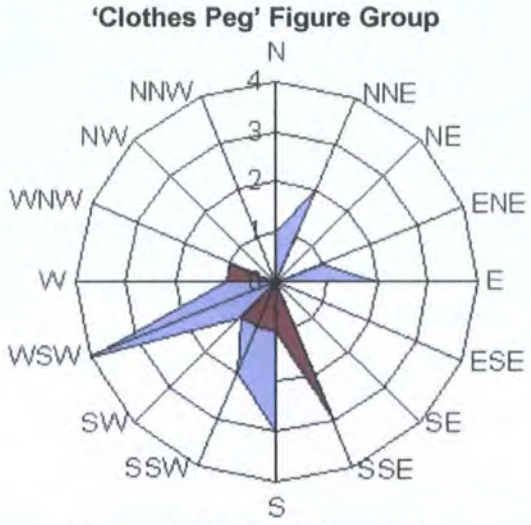


Figure 4.15b Panel Orientation
DRNP 19 sites, FAB 11 sites

Figure 4.15 BiChrome Figures and 'Clothes Peg' Figure Group figures' panel orientation.

Site orientation for 'Clothes Peg' Figure Group art (Fig. 4.15b) is generally southerly facing. Drysdale River National Park sites have a preference for looking to the south west with a few only looking north westerly and north easterly. Far Away Bay sites have an orientation of south easterly with two only looking west. This is different again from the preceding art periods. Bichrome figures have a low number of data points. The difference between the river and coast panel orientations is explained by different choices in the selection of site location and site type.

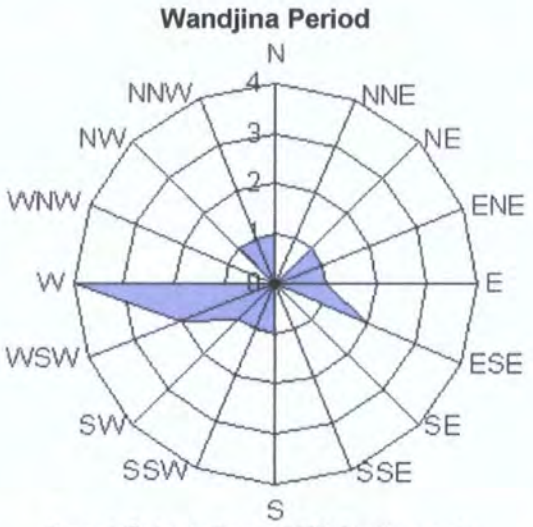


Figure 4.16 Wandjina Period panel orientation

For Wandjina Period art panels (Fig. 4.16) only data from Drysdale River National Park has been used on account of my locating only two examples at Far Away Bay and taking only one panel orientation, 181 degrees. Wandjina period art panels are oriented generally in the south west quadrant with the greatest frequency in a west-south-westerly direction. Six panels look to the east and north-east with two panels only facing the north west. With the predominant west-south-westerly direction of the art panels it seems as if Wandjinas are painted facing towards the setting sun.

The orientation of panels with Indeterminate Phase motifs is shown in Figures 4.17a – 4.17h.

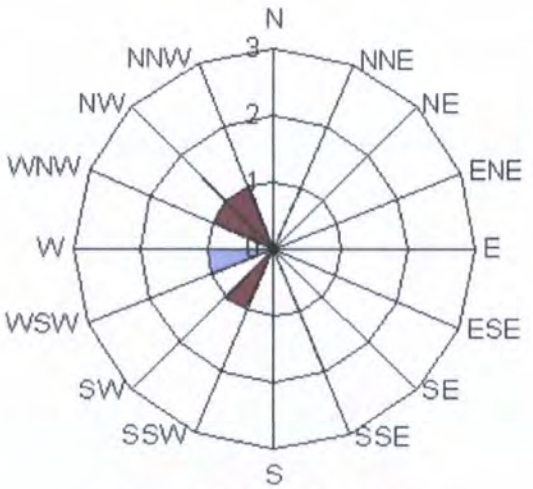


Figure 4.17a Stick Figures

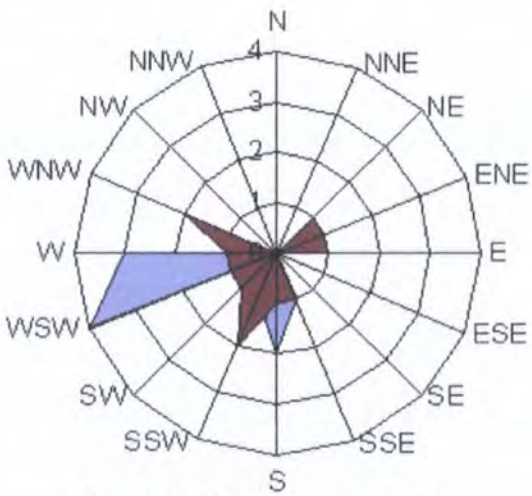


Figure 4.17b Anthropomorphs

Stick Figures (Fig. 4.17a) show a pronounced westerly aspect for both regions whereas Anthropomorphs (Fig. 4.17b) reveal a more south westerly direction. Far Away Bay panels also show a slight preference for a general north easterly direction.

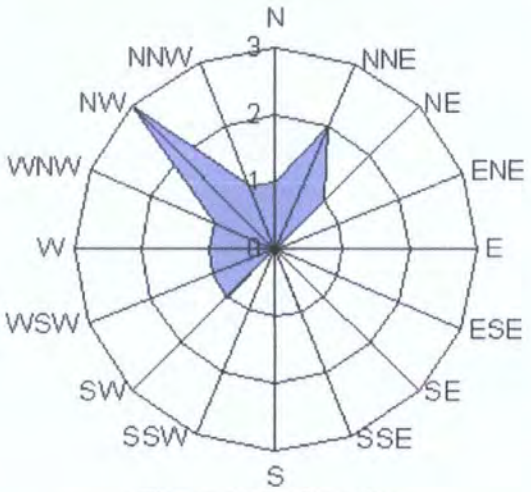


Figure 4.17c Stencils

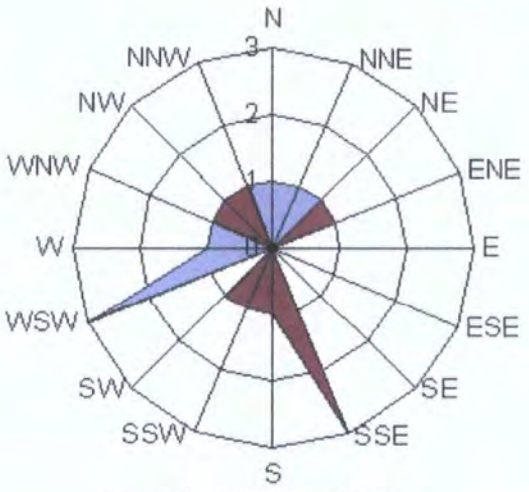


Figure 4.17d Macropods

Stencils face a general north westerly direction from south west to north east (Fig. 4.17c) but for Macropods (Fig. 4.17d) the preferred aspect is different for the two regions. Drysdale River National Park data shows a tendency to both west south west and a north east. This is in contrast to Far Away Bay with strong aspect to south south east and minor views towards the north west and north east.

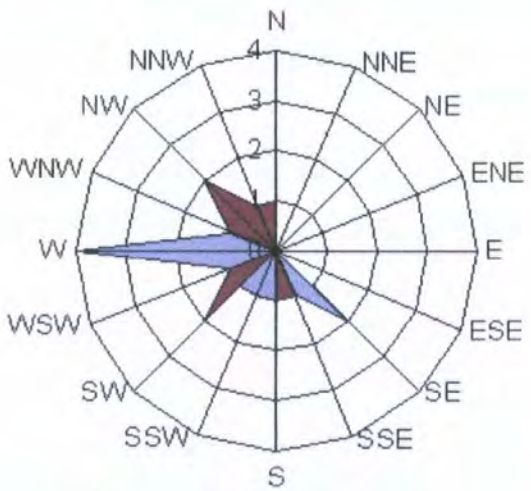


Figure 4.17e Other Animals

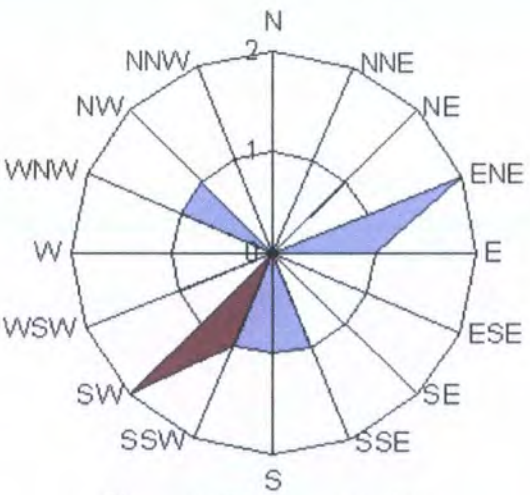


Figure 4.17f Geometric Art

Other Animals (Fig 4.17e) do not show any similarities with the Macropods with almost all panels in both regions viewing a generally westerly direction. Geometric Art (Fig 4.17f) is split between a general southern aspect and views to the east north east and west north west.

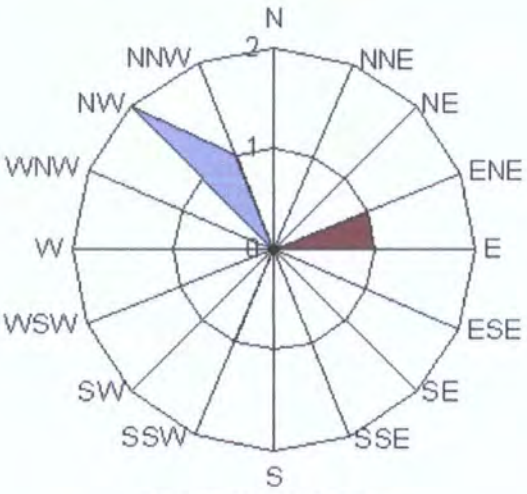


Figure 4.17g Prints

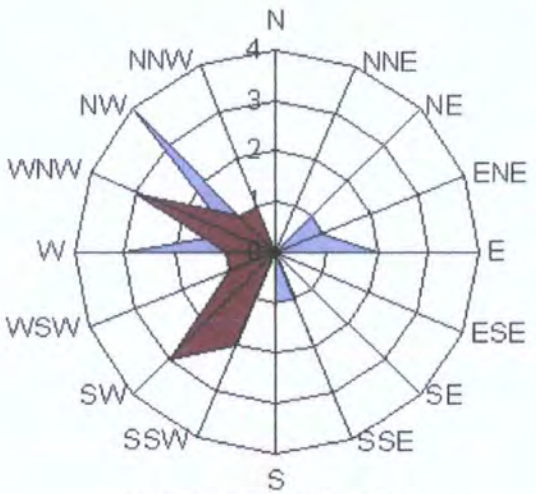


Figure 4.17h Other Art

Prints (Fig. 4.17g) show opposite aspects depending on whether they are river or coast sites. Other Art (Fig 4.17h) shows a tendency to face a general western direction.

Orientation of occupied sites

The analyses of panel orientations for individual art sites has looked at differences between the two survey regions, within individual regions and between the art traditions of the Early, Middle and Late Phases of art to see if there is any evidence of regional differences manifesting themselves through favoured orientations. In this analysis only painted art sites with evidence of occupation are included and this means the sites are all of the Late Phase. Occupation evidence used to select sites includes the remains of recent cultural artefacts, debitage from tool making and shell remnants from the remains of meals. Finally, the presence of dusty, grey floor deposits within shelters has been used where the other criteria (apart from painted art) are missing. Sites with rocky floors, and lacking evidence of occupation, are not included.

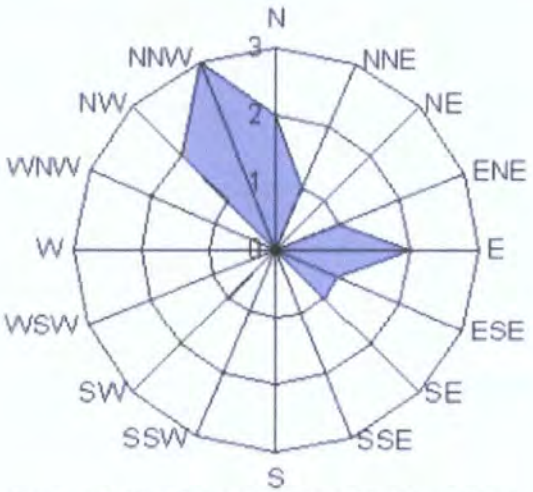


Figure 4.18a Drysdale River National Park
Data for 16 out of 20 occupation sites.

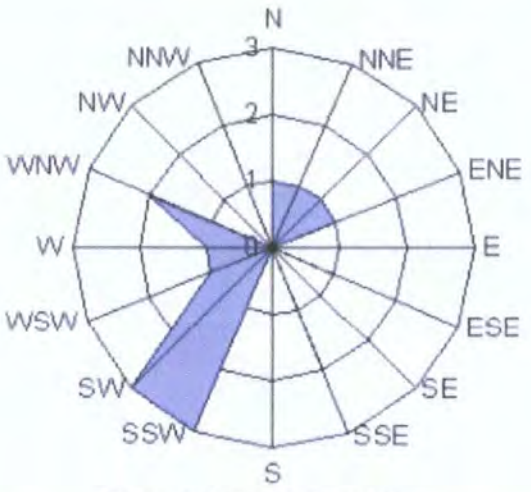


Figure 4.18b Far Away Bay
Data for 17 out of 18 occupation sites.

Figure 4.18 Orientation of occupation sites.

In Drysdale River National Park twenty sites fulfilled the criteria of occupation and eighteen sites at Far Away Bay. The results are shown in Figure 4.18. In Drysdale River National Park sixteen sites had direction data (Fig. 4.18a). The data has an obvious trend of sites viewing either the north west or an easterly direction. The dataset is dominated by twelve sites on the lower Drysdale River facing the river, rather than by the eight creek sites with the four missing site directions. At Far Away Bay (Fig. 4.18b) seventeen out of eighteen living sites were used in the analysis. The trend for occupation sites is to face either towards the south west or to the north east. This seems to suggest that site selection here is on the basis of choice rather than having to make do with what is available, since there are other suitable habitation sites without art or cultural deposits. This is in marked contrast to Drysdale River National Park where geography constrains what habitation sites are available on the river.

Comparison with other art traditions

The orientation of art sites has been discussed in the case of Queensland by Bruno David (1992). He found there was a distinct orientation of sites in a general northerly direction with those sites showing signs of occupation, southerly facing sites did not. There were no differences in motif type

depending on orientation. In view of the availability of rockshelters, David concluded that the preferred direction of sites was a socio-cultural choice.

In the northern hemisphere and the northern European tradition of cup and ring carvings, Richard Bradley (1997) found that for flat lying rocks in the British Isles, motifs with lines were more likely to extend in southerly or easterly directions than any other (1997: 76). In Galicia the emphasis is to the south (1997: 174). Sara Fairen-Jiminez's (2007) analysis of Northumberland rock art found 60% of sites had orientations from east to south.(2007: 288).

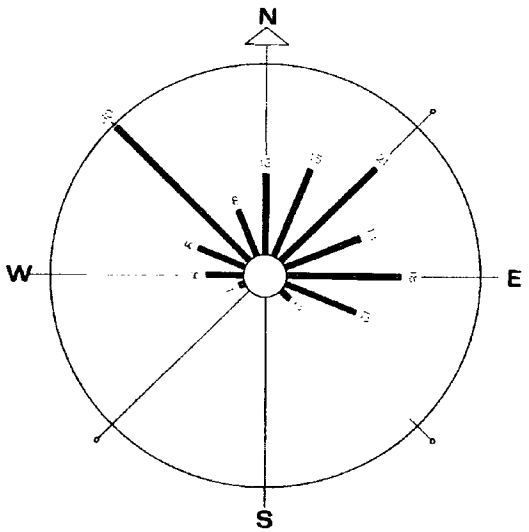


Figure 4.19 Aspects of Drakensberg art sites. (from Pager 1971: Figure 49)

Perhaps more pertinent to the discussion is the aspect of panels in Cathedral Peak and Cathkin Forest Reserves in South Africa's Drakensberg, where San Bushmen painted on rock shelters lining rivers and creeks analogous to the Kimberley's Drysdale River National Park water courses. Harald Pager (1971) found 80% of shelters faced in a northerly direction from north west to east (Fig. 4.19). The shelters had individual micro climates providing protection from the elements, many only providing seasonal protection, but an important factor was the amount of winter sunshine received (1971: 50). Pager believes that the shelters' aspects governed whether they were selected for painting as most lie on the valleys' southern slopes (1971: 48). This criteria though, is not of relevance to the Kimberley.

Discussion

An analysis of site recordings and photographs enabled me to note the occurrence of art periods and styles as recorded by previous researchers such as Schmiechen (1993) and Walsh (1994, 2000). The art observed was

then assigned to one of sixteen categories I developed for use in the Kimberley. Although Walsh lists fifteen Bradshaw Period groups and eight 'Clothes Peg' Figure Period groups (2000: 134-211) throughout the Kimberley, I found that elegant figures from my two research areas could be assigned to one of five categories. This is in agreement with other researchers in Drysdale River National Park and the northern coast of the Kimberley (Biro et al. 2001:257). A further sixth, general, category was created to cater for Bradshaw type figures of indeterminate group.

Basic statistical analysis of the full body of art (three Phases plus the Indeterminate Phase), using the chi-squared method, found that there was a relationship between the two art regions of Drysdale River and Far Away Bay, greater than the 95% confidence level, i.e. overall there is a strong element of similarity between the art traditions of the two regions. However, a similar analysis of the six groups comprising a subset of Middle Phase art found that no relationship between the two areas had been demonstrated based on the data I collected.

Site orientation diagrams comparing Drysdale River National Park and Far Away Bay show differences in their respective painted panels' aspects. River sites tend to lie along an easterly-westerly direction with a south easterly component. Coastal sites show a north, south and easterly aspect with a noticeable westerly one. Removing the lower Drysdale River directions on account of restricted geography affecting shelter aspect, then the two creeks show a strong south easterly and westerly orientation.

Comparing the site aspects for art panels within the Early and Middle Phases, for Irregular Infill Animal Period art, river and coast sites differ with Far Away Bay tending west, north and east and Drysdale River sites are southerly, south west and north west.

In the Bradshaw Period of the Middle Phase, Tassel Bradshaw Group figures face either north west or north east on the river and north and east on the coast. Sash Bradshaw Group figures show a difference with enhanced

easterly and south west aspect on the Drysdale River. At Far Away Bay the trend is south east and north west. However comparing the orientation of some of the figures then both Tassel and Sash Bradshaw Group figures show different aspects between each other and geographically. This is explained by comparing the respective geomorphology of site locations as different site locations and site types are selected by region and art group. Elegant Action Figures only have a few sites but face westerly with Far Away Bay panels concentrated to the north west and Drysdale River sites to north west and south west. 'Clothes Peg' Figure Group sites for both regions show a southerly aspect with Drysdale River panels tending towards the south and south west, and Far Away Bay panels to the south east. This more southerly trend is in contrast to the earlier Bradshaw Period art. The observed differences in panel orientation for the same art motifs and between different regions seem to be due to the differences in geomorphology of site location and site type as presented in Tables 4.4 and 4.5. The different choices of places to paint will have an effect upon the aspect of the panel which cumulatively leads to the observed differences in orientation.

Art category distribution between sites

Art category distribution between Drysdale River National Park sites

The number of art categories per site is depicted in Figures 4.20 – 4.22 for Drysdale River National Park and Figures 4.23 – 4.24 for Far Away Bay below. Figure 4.20 for the Lower Drysdale River is shown with art sites ordered by their Schmiechen Sectors A- F.

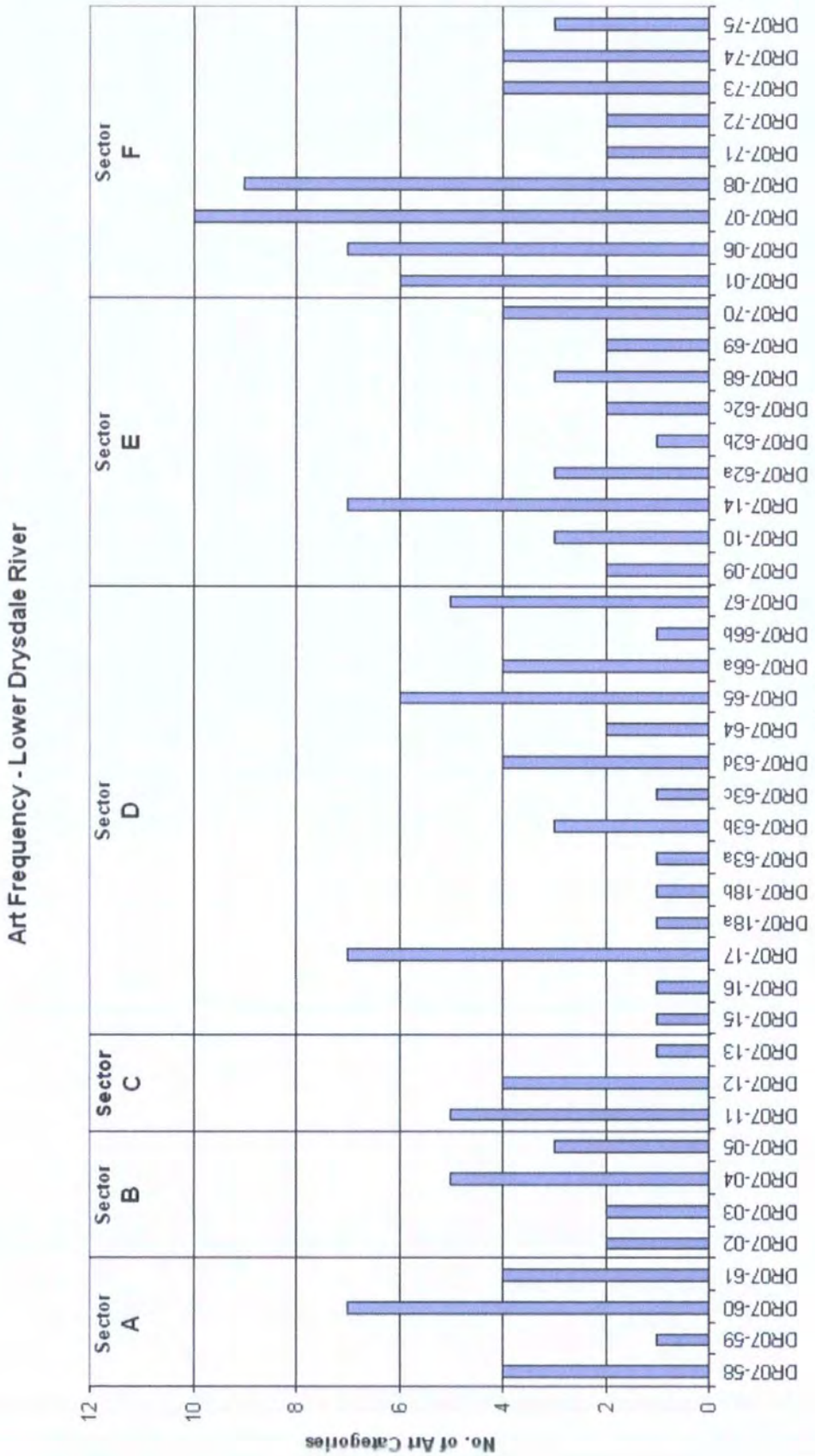


Figure 4.20 Number of art categories by site for the Lower Drysdale River.

From Fig. 4.20 the sites with the greatest number of art categories occur in Sector F at sites DR07-06 Wandjina Cave Bundarwa, DR07-07 Twin Brolgas Goyon and DR07-08 Living Shelter. The former and latter sites are both living shelters. Sector D has DR07-17 and DR07-65 with high numbers of art categories present. DR07-17 Pulpit Rock is a site complex (Schmiechen 1993: 37-39). DR07-65 is a small rock shelter but has six categories painted here, in particular Elegant Action Figure hunters. Site DR07-14 Nurini in Sector E is the location of the Elegant Action Figure kangaroo hunting scene and an adjacent living area with a panel of three Wandjina figures.

In Planigale Creek (Fig. 4.21) I examined twenty six sites. DR07-21, DR07-24 and DR07-25 have the highest number of art categories present with 8, 7 and 8 respectively. The latter site is the most spectacular near the brow of a ridge. The shelter contains a range of art in excellent preservation from Tassel Bradshaw Group figures to a large macropod of the Late Phase Wandjina Period.

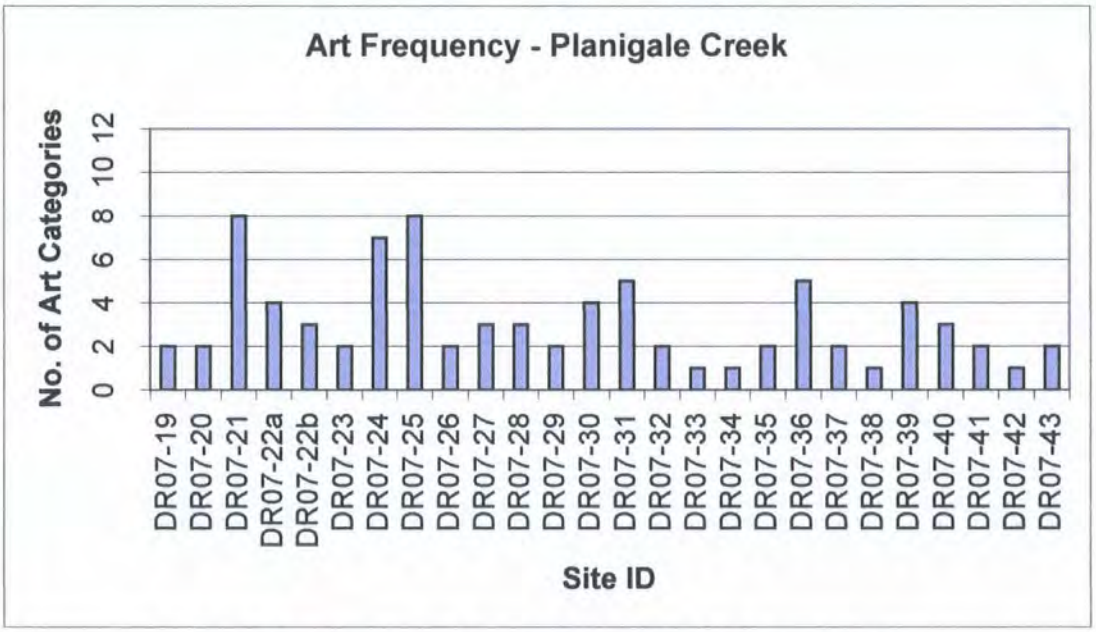


Figure 4.21 Number of art categories by site for Planigale Creek.

The Palmoondoora Creek area is to the west of the Carson Escarpment and I was able to examine fifteen art sites (Fig. 4.22). The greatest range of art is in sites DR07-55a, DR07-56 and DR07-57. The latter site is a rock outcrop near

the creek with eleven categories present. The two former sites are within half a kilometre of each other and are habitation sites. Art categories present range from Early Phase with Irregular Infill Animal Period figures to the Late Phase Wandjina Period art. DR07-55a has eight categories present and DR07-56 eleven.

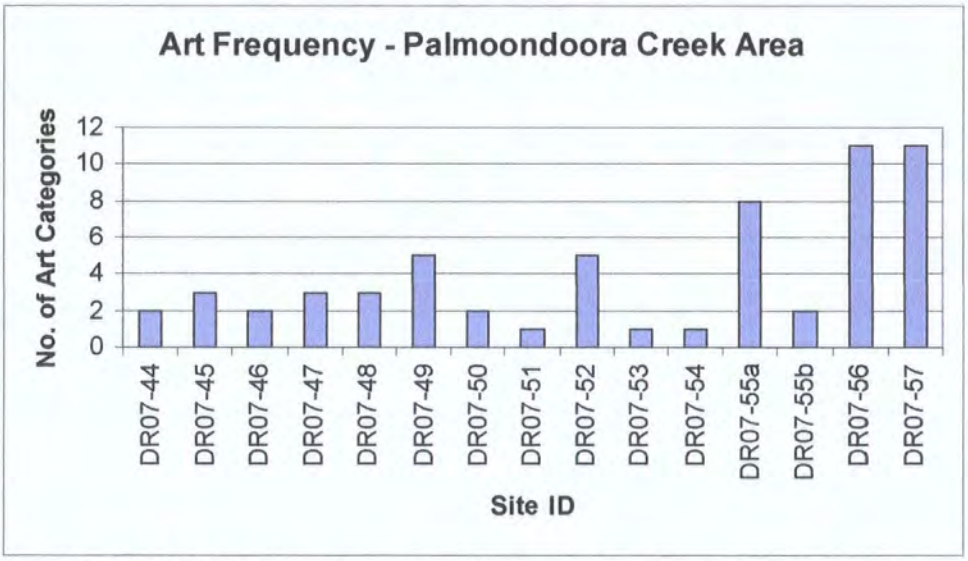


Figure 4.22 Number of art categories by site for Palmoondoora Creek

Art category distribution between Far Away Bay sites

Far Away Bay sites are shown by bar graphs in Figures 4.23 – 4.24 below. Figure 4.23 shows art categories to the west of the Bushcamp at Lost City and Boab Bay.

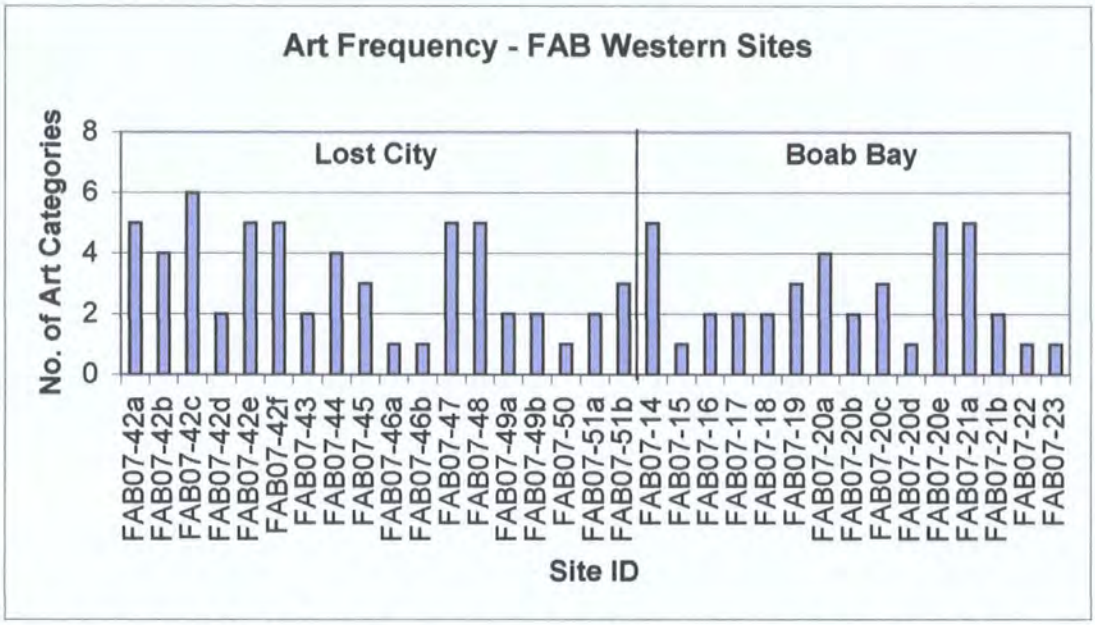


Figure 4.23 Number of art categories by site for Western sites at Far Away Bay.

In Lost City the sites with the greatest range of art are part of the FAB07-42 complex, namely FAB07-42c, FAB07-42e and FAB07-42f, with six, five and five art categories respectively. Sites FAB07-47 and FAB07-48 both have five. Site FAB07-48 is a living shelter with 'Clothes Peg' Figure Period art on the shelter ceiling and more recent art on the back wall.

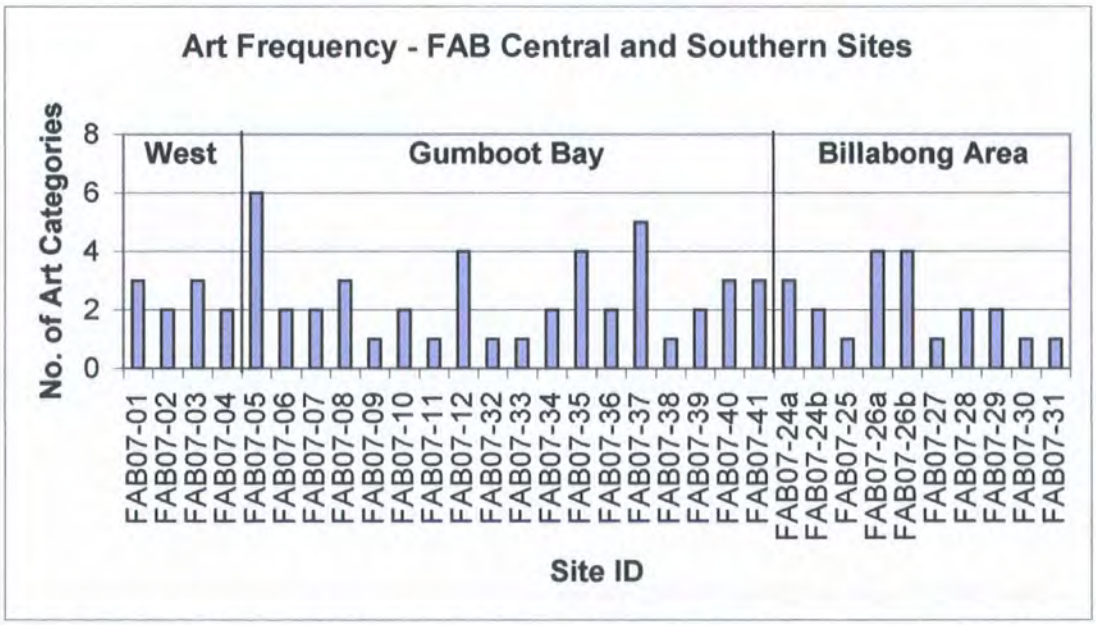


Figure 4.24 Number of art categories by site for central and southern sites at FAB.

The other Far Away Bay sites of West Cliffs, Gumboot Bay, Billabong Area and Bushcamp are shown in Figure 4.24. The range of art categories painted is generally lower. FAB07-05 at Gumboot Bay has six categories of art present. This is a small rock shelter with Sash Bradshaw Group and 'Clothes Peg' Figures amongst other art. Again at Gumboot Bay but in a coastal location is FAB07-37, a boulder filled shelter with five art categories present.

Taking broad averages of the art categories present per site, Drysdale River National Park has the largest average at 3.5 art categories per site as opposed to Far Away Bay at 2.7 art categories per site. Looking at individual sectors the Palmoondoora Creek area has the greatest range of art categories at 4 per site. This figure results from the range of art at DR07-56 and DR07-57 site complexes.

Conclusions

My two rock art survey areas resulted in my obtaining information from 149 art sites. The presence of an art motif was assigned to one of sixteen categories based upon my simplified chronology as defined in this chapter. The motifs fit into periods within the three phases of my simplified chronology, Early, Middle, Late, plus a catch-all phase, Indeterminate. Apart from Indeterminate, the periods or groups correspond to the Kimberley rock art styles.

My initial site analysis followed on from work by Paul Taçon in Arnhem Land (1992) where the geomorphology of the site locations is looked at first, in this case comparing river and coast, Drysdale River National Park and Far Away Bay, and then looking at the categories for the two regions in turn. The geomorphology is divided into general situation, site location and site type. First the split between plateau or gorge is even for national park but almost all, bar one exception, plateau, for Far Away Bay. Site location is fairly evenly split for the park, but highly concentrated on plateau residuals or boulders for the coast. Finally, the national park favours shelter walls and /or ceiling for the

site type but small panel or single paintings for the coast. The distribution by motif category is displayed on a graph and by individual map plots. These show preferences for the national park data for the river or creeks. The coastal sites provided poorer data for interpreting, since each area was visited individually with no indication of the intermediate country.

Within Drysdale River National Park, Early Phase art (Irregular Infill Animal Period) shows a preference for what is assumed to be the permanent water of the Drysdale River as opposed to the more ephemeral creeks. This art period has parallels with Large Naturalistic Figures in Arnhem Land and is dated there to be an unknown age of more than 10,000 BP (Chippindale and Taçon 1998: Table 6.1) or at 20,000 years BP (Chaloupka 1993). The art may have been created around the time of high aridity with the Last Glacial Maximum occurring at 18,500 years BP. This may explain the preference for permanent water.

The first of the Middle Phase Periods, Tassel Bradshaw Group figures, like the earlier Irregular Infill Animal Period art, is concentrated along the river rather the creeks. What are thought to be chronologically later Sash Bradshaw Group figures show less presence along the river and more along the creeks. My interpretation explaining this, though speculative, is that the climate was steadily improving, allowing people to move away from permanent water. Elegant Action Figures are few in number at both river and coastal sites, but are concentrated along the Drysdale River rather than the creeks. Clothes Peg Figure Period art matches the distribution of Sash Bradshaw Group figures with an even preference for the lower Drysdale River and Planigale Creek. There is possibly an overlap, or some contemporaneity, between this Period and Elegant Action Figures based upon a superimposition seen at Gumboot Bay (FAB07-35) and sites within Theda Station (Walsh pers. comm. 2005). Late Phase Wandjina Period art is seen on both river and creeks but with a strong tendency to the creeks, a fact commented on by others (Russell Willis pers. comm. 2006). However the main Wandjina art sites in the region are found along the lower Drysdale River.

The body of data I collected allowed me to make comparisons with the only other researcher to have published data on the Kimberley, David Welch (1990, 1993a). He provided an analysis of data collected throughout the whole of the Kimberley and my areas are in broad agreement with his information. Basic statistics, the chi-squared test, applied to my sixteen categories found that for the full corpus of art there is a statistically significant agreement that Drysdale River National Park and Far Away Bay are similar in the range of art found. A smaller sample examining only Middle Phase art found no agreement between the two areas, revealing a discrepancy in the composition of the art body. One factor may be the larger number of unidentified Bradshaw figures on the coast as opposed to the river.

Panel orientations were noted at sites and these have been displayed in rose diagrams by both region, area and art motif. The results show that there are observable differences between the river and coast both on a broad scale, and when comparing similar art styles. The different orientations between Tassel and Sash Bradshaw Group figures is most noticeable with the coast almost being the opposite of the river. Finally the orientations of recognisable occupation sites for river and coast showed major differences. The sites were selected on the basis of floor deposits and the thick, grey, sandy floor evident of occupation. The national park sites tend to face towards the north-north-west or easterly. Coast sites tend to face south westerly with a few in the opposite direction. For the coastal sites this is a clear preference which I do not believe is determined by the geology of available shelters. The river sites will have a strong component from the northerly facing shelters on the south bank of the lower Drysdale River.

Chapter 5.

Evidence of Regionality between Drysdale River National Park and Far Away Bay

This chapter explores regionality, the spatial variation within the body of Kimberley rock art, on the basis of analysis of stylistic differences both between and within regions. It addresses the question of whether art sites in the northern Kimberley represent a homogenous body of rock art, or whether regionality can be discerned both between and within them. In Chapter 4 I have explored the data sets looking at variations on motif emphasis with physical location and site orientation with geography such as river, creek and coast. The results illustrate that there are differences between the river and coast, and within the general river area, differences in motif frequency between river and creek. Further analysis of the data may provide evidence of regionality between the two regions. In order to answer this question, I will apply a series of multivariate analyses to the data obtained in the fieldwork undertaken in both areas (see chapters 3 and 4). As explained in chapter 3, during my fieldwork I recorded at one hundred and forty nine painting sites located in the two regions under study, the Drysdale River National Park and Far Away Bay, the presence or absence of sixteen different types of art motifs. This type of data only allow the use of one type of multivariate analysis: correspondence analysis.

The analysis to be undertaken in the following pages will have four main objectives:

- To chart geographical changes in the range of motifs present at sites between the two regions of Drysdale River National Park and Far Away Bay i.e. between river and creek.
- To determine if there are any changes in the motif composition within a region, i.e. between the different topographies of river and creek.
- To investigate whether the river acts as a boundary between art traditions.
- To determine if Bradshaw Period figures were subject to spatial variation.

In this chapter multivariate analysis will be introduced as a suitable method of analysing the collected site data. Previous examples of its use in Australian rock art studies will be discussed before the relevant methods of correspondence analysis and cluster analysis are selected. Three major analyses are undertaken examining in turn variations between Drysdale River National Park and Far Away Bay, variation within Drysdale River National Park between river and creeks, and finally variations within the coastal areas of Far Away Bay.

Multivariate Analysis

Multivariate analysis is a well-known technique in archaeology (Baxter 1994). It has been applied successfully to many archaeological problems, from burials (Higham and Thosarat 1994) to specific items of material culture (Peebles 1987) and to site distribution (Cherry 1977). It has also been used for rock art studies (Layton 1992, Taçon, Wilson and Chippindale 1996). In this section I will first review the published information about how multivariate analysis has been so far used for the study of Australian rock art. I will then explain about the two types of multivariate analysis used in this chapter: correspondence and cluster analysis. I will finalise by providing some notes about the processing.

Previous applications to the analysis of Australian rock art

In the case of Australian rock art, multivariate analyses have been employed by at least nine researchers over the past thirty years (Morwood 1980, Layton 1992, Taçon, Wilson and Chippindale 1996, Barry 1999, Barry and White 2004, Rainsbury 2002 and Franklin 2007). In the words of Taçon et al. "It is a thoroughly established technique, applied in the general field of statistics... as well as in archaeology" (Taçon et al. 1996: 106).

The first researcher to make use of multivariate analysis was M.J. Morwood (1980), who used the technique to examine the spatial distribution of art in central western Queensland. He applied the technique of Principal Components Analysis (PCA) to colours and manufacturing techniques from ninety two art sites. His supposition was that that the co-occurrence of particular colours and techniques at sites implied contemporaneity (2002: 214). The results from PCA showed that suites of colours occurred and that their distribution differed between sites. Further, the distribution of pecked engravings is unrelated to the distribution of other techniques. Over a decade later Robert Layton (1992) looked at the geographical distribution of rock art styles throughout Australia. From a range of 112 samples of art from published and unpublished sources, 38 motifs were identified for use in computer analysis. His aim was to plot the geographical distribution of motifs as well as determine whether "certain motifs tend to co-occur as members of a distinctive artistic vocabulary" (1992: 200). He found that silhouettes and geometric motifs occurred at different sites and so could be regarded as distinct stylistic traditions (1992: 201).

In addition to Morwood and Layton, multivariate analysis has also been used by Taçon, Wilson and Chippindale to analyse art in Arnhem Land (Taçon et al. 1996). The authors processed 107 Rainbow Serpent paintings from western Arnhem Land, varying in age from the Dynamic to Modern Periods. Each painting could be categorised through various attributes, a list of 137 being constructed for the whole data set. Each Rainbow Serpent was described in terms of presence or absence of attributes. The binary data was

processed using the multivariate technique of Correspondence Analysis (CA) (1996: 106). Using the technique to explore their data set, they were able to show an increase in variation in Rainbow Serpent depictions with time. Variations in space depending on language group or geographical region were not proven. Neither was a difference found in Rainbow Serpents between two different river systems (1996: 110). However a variation between the two banks of a river system, Twin Falls Creek, was demonstrated and this was found to be independent of the assigned age of the paintings. Further investigation revealed that the data aggregations were dependent on the attributes describing the tail of the Rainbow Serpent. A local informant pointed out that that the different tails represented different sexes of serpent (1996: 112). Finally, in order to test if there was an animal which provided the original inspiration for the Rainbow Serpent, the authors added other species to the data set: pipe fish, sea horse, crocodile, snake and kangaroo (1996: 113). After further correspondence analysis, Taçon, Wilson and Chippindale concluded that initially the Rainbow Serpent was modelled on pipefish and snakes such as the water python. Later, macropod and crocodile elements were added to the composite being (1996: 116).

On the basis of work undertaken by Barry in 1999, Barry and White (2004) employed multivariate analysis to investigate the commonality of features of Bradshaw art with human figures from Africa and the countries surrounding the Indian Ocean. Their aim was to see if there were any foreign links with Bradshaw art. In all 2230 images of figures were processed from the Old World, i.e. southern Europe, Africa, countries surrounding the Indian Ocean and the Far East, from rock art literature. Seventy nine attributes were derived to describe them (2004: 38). The multivariate technique of correspondence analysis was applied using the program MV-NUTSHELL (Wright 1994). Scatter plots of the first two correspondence axes revealed that the full data set clustered "into a three pointed star pattern" (Barry & White 2004: Figure 8) and that "images from the Kimberley fit into the lower right point" and "the images from Arnhem Land are scattered over much of the pattern of all objects and particularly include much of the Kimberley pattern" (2004: 41).

From this Barry and White (2004) concluded that the area with the closest affinity to Bradshaw art is Arnhem Land.

The last three authors to use the technique were M. Rainsbury (2002), J. McDonald and N. Franklin (2007). Rainsbury used Correspondence Analysis as part of his MA dissertation to investigate whether the various groups in Bradshaw Period art defined by Walsh could be distinguished statistically and then to see which of the groups was closest to Dynamic Period art of western Arnhem Land. Three hundred and four images generated a range of 89 attributes. Correspondence analysis showed there was a recognisable difference between human figures of the Kimberley and Arnhem Land (2002: 31). Further, Walsh's Bradshaw art periods did separate into distinct clusters and art of the Elegant Action Figure Group most closely correlated with Arnhem Land Dynamic art (2002: 40, 41).

Cluster analysis as a part of Multivariate Analysis has been applied to Australian rock art usually, but not always, in conjunction with multivariate analysis (Layton 1992, Franklin 2004, 2007, McDonald 2005). McDonald analysed 39 carvings of archaic faces in a band from the Burrup Peninsula to central Australia plus two faces from Wardaman Country in the northern Northern Territory (2005). Nineteen variables were defined of which five were metrical requiring dimensions, the others being denoted by the presence or absence of an attribute, i.e. binary (2005: 130). She performed a cluster analysis using squared Euclidian distance on the binary data finding that six of the variables could classify the faces. The addition of two more variables enhanced the separation (2005: 131). The result of the analysis and the dendrogram produced was to illustrate a developing complexity across the sample area and an ensuing patterning within the sample (2005: 131). Finally, Franklin (2007) explored spatial variation within the Australia wide Panaramittee tradition of petroglyphs. Fifty-one petroglyph sites were processed using correspondence analysis and group average cluster analysis (2007: 85). Her results showed five major groups corresponding to five regions of Australia: Central Region, Central Western Queensland, Tasmania, Cape York and Carpentaria (2007: 88). Franklin summarised the results by

saying that Correspondence Analysis emphasised different or combinations of motifs, where as cluster analysis reflected variations within regions. The whole range of Panaramittee motifs occurred in the centre of the continent and these sites are more heterogenous than those on the periphery and "have a greater range of variation in terms of coefficients of diversity" (2007: 89). She also used group average cluster analysis to create dendrograms from Richard Wright's suite of programs, EUCLID, HIERCL and DENDRO (2007: 85, Wright 1992). Franklin used the generated dendrogram (2007: Fig. 4) to enhance her understanding of the results produced by Correspondence Analysis. The different emphasis between correspondence analysis and cluster analysis is provided in her summary where she says: "1) the correspondence analysis identified regional grouping in terms of the emphasis of different motifs or combinations of motifs... 2) the cluster analysis separated the sites into groups that reflect to a greater extent variation within regions... although a relatively high degree of regionality is still apparent" (2007: 89).

As the examples point out, multivariate analysis is proven to be a suitable technique for the processing of rock art fieldwork data. This chapter, therefore, will apply multivariate analysis to the study of the data collected during fieldwork for this thesis in two areas, the Drysdale River National Park and Far Away Bay. Yet, with any form of statistical analysis there are caveats as to the suitability of the technique. Morwood (2002: 204) cautions against applying sophisticated techniques without first using simpler methods to get a feel for the data. In the analysis of the dataset presented in Chapter 4 and the statistical method of the chi-squared test being applied to the full body of art as well as Bradshaw Period art, it seems appropriate now to move on to more sophisticated methods.

Correspondence Analysis

During the fieldwork phase in the regions of Drysdale River National Park and Far Away Bay, the data were recorded in the form of presence or absence of

an art category and so the multivariate technique of Correspondence Analysis (CA) was chosen as the most suitable method of analysis as it is applicable for multiple choice data (Wright 1992, Taçon et al. 1996).

Correspondence Analysis is "a specially weighted version of Principal Components Analysis" (Wright 1992: 30). The CA algorithm measures the chi-squared distance relationship between objects (in this case rock art sites) and variables (art categories). The data set is reduced to four columns of data, vectors, which can be plotted as XY graphs or scattergrams. As Barry described it: "Correspondence Analysis is a method of reducing a large number of objects having a large number of variables to two XY graphs. One is composed from the object scores, the other from the variable scores" (Barry 1999). Both the object and the variable plots must be examined. The similarity of data, called phenetic similarity, is measured by the distance between points.

The correspondence analyses undertaken in this chapter used the method developed by Richard Wright's program MV-NUTSHELL from the University of Sydney (Wright 1992). By using this programme I made sure that my data could be compared with other previous analysis, given the commonality of processing techniques with other previous work undertaken by Barry (1999), Franklin (2004, 2007), Rainsbury (2002) and Taçon et al. (1996).

The basic data used for the correspondence analysis were initially entered into an Excel spreadsheet. There were visits to 149 painting sites, 84 in Drysdale River National Park and surrounding area, and 65 on the northern coast at Far Away Bay. The presence or absence of art motifs was noted and assigned to one of sixteen categories as described in Chapter 4. For the purpose of correspondence analysis the site data, entered as rows in the spreadsheet, were 'objects', and the columns, art categories, were 'variables'. The sixteen variables (or art categories) corresponding to Early, Middle, Late and Indeterminate Phases are: Irregular Infill Animal Period, Tassel Bradshaw Group, Sash Bradshaw Group, Elegant Action Figure Group, Bichrome art, 'Clothes Peg' Figure Period, general Bradshaw Figures, Wandjina Period,

Stick Figures, Anthropomorphs, Hand Stencils, Macropods, Other Animals, Geometric Art, Prints etc. and Other Art (see chapter 4).

Seven analyses used the whole set of variables of sixteen art motif categories. A major point of investigation concerned the distribution of Middle Phase art amongst the sites and the possibility of variation between and within regions. To this end correspondence analysis was performed on sites containing Middle Phase art, i.e. Bradshaw Period and 'Clothes Peg' Figure Period, using only six variables corresponding to the six groups of elegant figure motifs: Tassel Bradshaw Group figures, Sash Bradshaw Group figures, Elegant Action Figure group, Bichrome Figures and 'Clothes Peg' Figure group. These are illustrated below in Figure 5.1. A sixth catch-all group, general Bradshaw figures, was included in the analysis but is not illustrated below.



Tassel Bradshaw Group | Sash Bradshaw Group | Elegant Action Figure Group | Bichrome Figures | 'Clothes Peg' Figure Group

Figure 5.1 Bradshaw Figure types used as variables in the correspondence analysis. A sixth catch-all group, general Bradshaw figures, is not illustrated. (Images from Walsh 2000).

Wright's MV-NUTSHELL was used for each correspondence analysis and produced two data files, one of object scores, the other variables. Each contains four columns of data, the vectors. These were exported to Excel spreadsheets and then plotted as XY graphs or scatter plots. Various permutations of the data columns were plotted but it was found that the first two produced the most useful plots with column one, Correspondence Axis 1, C Ax1, being the X-axis and column two, Correspondence Axis 2, C Ax2, the Y-axis.

Cluster Analysis

Cluster analysis is a form of multivariate analysis where assemblages of data are arranged in terms of their similarities, grouping or clustering the most similar together. The results are graphically displayed in the form of dendrograms or comb plots. To process Kimberley art site data I used the statistical package SPSS Version 15 available on Durham University's network. This was instead of Wright's MV-NUTSHELL which had been used for correspondence analysis. The choice was made simply on the programs' respective graphical outputs, as although I could produce screen graphics using MV-NUTSHELL, I was unable to to save screen images of the dendrograms or print them out.

SPSS 15 offers a range of options for performing cluster analysis, with a choice of seven clusters to undertake and eight intervals to be applied. Little information on what to use is offered in the literature. I tested the various options available on two data sets, the Lower Drysdale River and Planigale Creek before settling on clustering of 'Between-groups linkage' and an interval of 'Euclidian distance'. This decision is in agreement with Wright (1992: 94) where he says that unsquared Euclidian distance and Group average "is most likely to give a true impression of clustering structure in multivariable space".

Processing

Three major analyses were undertaken, one of them subdivided into five sections, comprising a total of fourteen correspondence analyses and six cluster analyses with the aim of investigating variations in the range of site motifs both between regions and within regions. Regarding the variation between regions, I contrasted the distribution of art motifs of the Drysdale River National Park with that of Far Away Bay (Analysis 1). I then undertook several analyses of the three different areas; between the Lower Drysdale River and Planigale and Palmoondoora Creeks. These analyses aimed to investigate if there were any variations between the different geographies of river and creek and also creek and creek. One analysis looked for any

variations between opposite banks of the river (Analyses 2a to 2e). Finally, I also analysed variation within areas in Far Away Bay (Analysis 3).

For examining north Kimberley art style regional homogeneity, seven analytical comparisons were carried out. To investigate regionality, first the data set as a whole was processed i.e. combining Drysdale River National Park and Far Away Bay. Next the two regions were examined separately in turn. Within Drysdale River National Park the different areas, river gorge and creeks, were compared with each other, then the river and each of the two creeks and finally creek and creek to see if the differing geographies had an observable effect in the art distribution. The role of the Drysdale River as a barrier or boundary was investigated, following on from the work of Taçon, Wilson and Chippindale (1996: 110) and their work on Twin Falls Creek in Arnhem Land. Each of the seven comparative analyses had several steps. Firstly, correspondence analysis was performed on the full data set (using the full range of sixteen art motifs). Secondly, the analysis was undertaken again but only on the basis of Middle Phase art using the six 'Bradshaw variables': Tassel Bradshaw Group figures, Sash Bradshaw Group figures, Elegant Action Figure group, Bichrome Figures, 'Clothes Peg' Figure group and General Bradshaw figures. Selected cluster analyses were also performed and the dendrograms displayed along with the scatter plots from the correspondence analyses.

Results

The following pages will focus on a discussion of the seven analyses undertaken, and refer to the plots of object and variable scores, though only object scores are displayed here. Where appropriate dendrograms of the cluster analyses are presented showing the groupings, or clusterings, of the most similar sites.

Analysis 1: Variation between Drysdale River National Park and Far Away Bay.



Figure 5.2 A comparison between northern Kimberley art sites at Drysdale River National Park and Far Away Bay.

The aim of the first correspondence analysis was to examine similarities and differences between the two regions of Drysdale River National Park and Far Away Bay. A distance of approximately 85 km separates them (Figure 5.2) leading to the question of whether this distance is reflected in the range and composition of motifs at sites.

Two different steps were undertaken in the analysis. The first one, Analysis 1a, considered the whole database and the second one only sites with Bradshaw and 'Clothes Peg' Period figures. The first of them processed 149 art sites spread between the two regions, 84 sites in the Drysdale River area and 65 on the northern coast near Far Away Bay. The correspondence between the two areas is displayed in Figure 5.3.

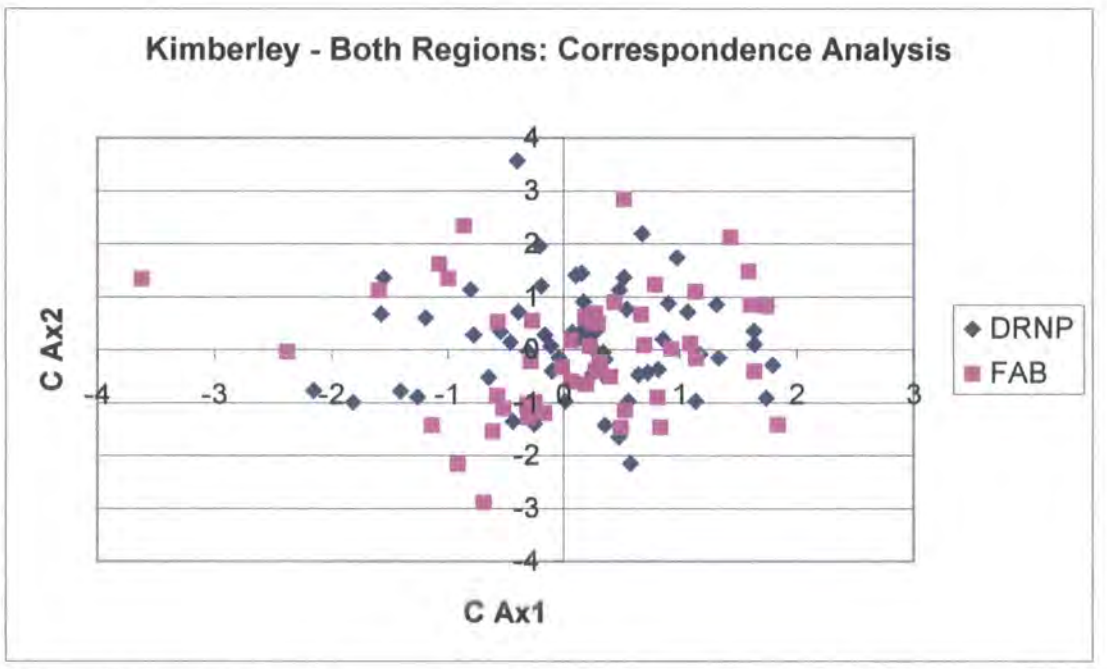


Figure 5.3 Analysis 1a - Correspondence Analysis between Drysdale River National Park (DRNP) and Far Away Bay (FAB).

The correspondence axes do not correlate with region and the homogeneity of the site motifs is apparent. It is not possible to distinguish between the two survey regions of Drysdale River National Park and Far Away Bay on the basis of this Correspondence Analysis.

A data outlier is visible on the left of the scatter plot. An examination of this reveals Tassel Bradshaw Group figures only, this from ten superimposed points corresponding to six sites from Drysdale River National Park (DR07-15, 18a, 33, 59, 62b, 63a) and four sites from Far Away Bay (FAB07-09, 15, 22, 27). In the same way the bottom most point covers the Correspondence Analysis for Sash Bradshaw Group figures only, five sites, namely DR07-16, 18b, 66b and FAB07-23, 33. The top most data point represents the CA from two sites DR07-42, 54, containing geometric art and the bottom right point the solitary site containing Wandjina art only, FAB07-46a.

The next analysis, 1b, only considered sites which included Middle Phase art selected from the two regions. Of the 149 art sites surveyed, 119 contained Bradshaw Period and 'Clothes Peg' Figure Period art, of which 69 were in the area of the Drysdale River National Park and 50 located at Far Away Bay. A correspondence analysis was performed on this subset of data but on a reduced number of six variables, corresponding to the six groups of Middle Phase motifs. The results are shown in Figure 5.4.

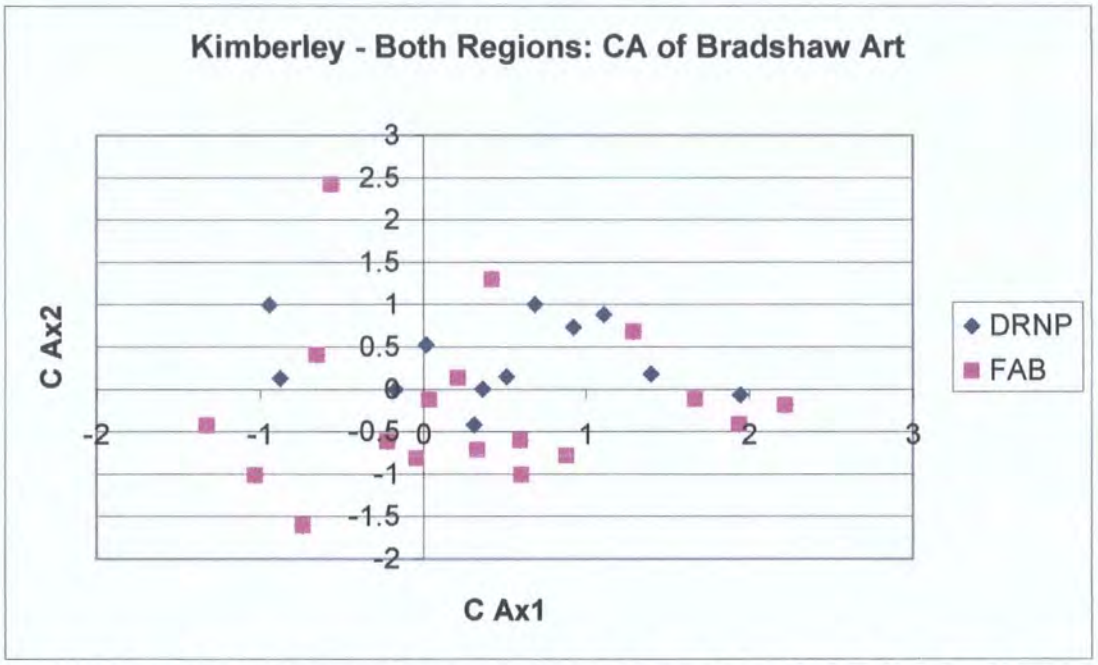


Figure 5.4 Analysis 1b - Correspondence Analysis of Middle Phase figures only from Drysdale River National Park (DRNP) and Far Away Bay (FAB).

The plot shows a slight separation between the two regions in contrast to the first analysis illustrated in Figure 5.3, with the Drysdale River National Park data tending to the upper right and Far Away Bay towards the lower left. It should be noted that there is a great deal of overlap of points, this being most marked at the four points marking the extremities. The top data point represents fifteen sites, nine from Drysdale River and six from the coast, i.e. DR07-15, 18a, 59, 61, 62b, 63a, 66a, 22a, 33, and FAB07-09, 15, 19, 20b, 22 and 27. The point marks the CA position of Tassel Bradshaw Group figures, but unlike the full analysis other art motifs are present. Moving anticlockwise to the left most point, this represents sixteen sites with Sash Bradshaw Group figures as the dominant motif: DR07-16, 18b, 64b, 19, 27, 29, 32, 39, 44 and FAB07-01, 12, 23, 26a, 33, 42c and 44. The bottom data point covers sixteen sites of general Bradshaw figures, seven from the river and nine from the coast: DR07-13, 63c, 24, 26, 35, 53, 55a, FAB07-08, 10, 16, 21b, 25, 38, 39, 47 and 51a. The most extreme point on the right is for three sites with Bichrome and 'Clothes Peg' Figure Period art: DR07-10 and FAB07-42f and FAB07-48.

The results of the two analyses showing no observable differences between Drysdale River National Park and Far Away Bay for the full data set, but seeing regionality within Middle Phase data is in agreement with the chi-squared tests undertaken in the previous chapter. The correspondence analyses use the presence or not of the sixteen categories of art as variables in the calculation. For all art periods then the range of motifs found in shelters must be, on average, not too dissimilar. When Middle Phase art is analysed by this method there will be differences in the average number of motifs present per site. This will lead to the separation in the data sets when plotted.

Analysis 2: variation within the Drysdale River National Park region.

Analysis 2a: variation within three distinct areas: the Lower Drysdale River, Planigale Creek and Palmoondoora Creek.

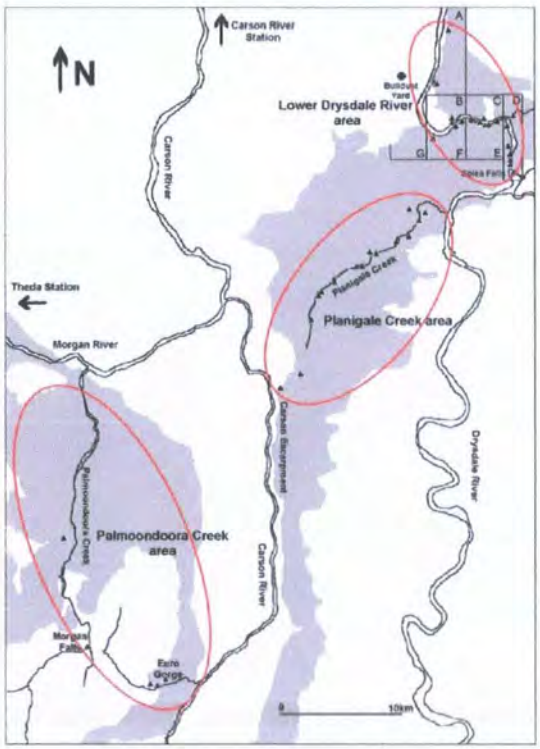


Figure 5.5 Drysdale River National Park showing the three areas of interest.

The second correspondence analysis examined geographical variation within Drysdale River National Park and nearby sites by measuring the correspondence between three areas of interest, one river and two creeks (Figure 5.5).

Analysis 2a was performed on 84 sites comprising 43 from the Lower Drysdale River, 26 on Planigale Creek and 15 on Palmoondoora Creek (Fig. 5.6). The scatter plot resulting from the correspondence analysis displays the range of art motifs present by area within

Drysdale River National Park. It shows that there is a detectable difference between river and creeks. The creeks themselves show a general homogeneity across space. Data from the Lower Drysdale River tends to the upper right whereas the two creeks are below or around the centre.

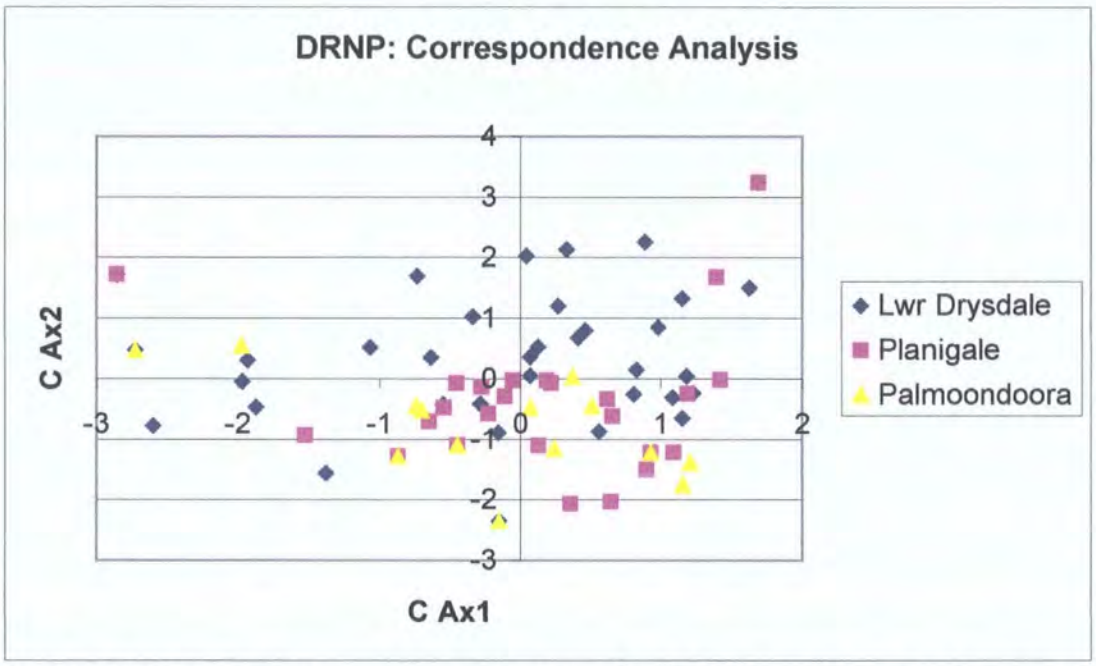


Figure 5.6 Analysis 2a - Correspondence Analysis of Drysdale River National Park comparing the three sectors of Lower Drysdale River, Planigale Creek and Palmoondoora Creek.

The extreme left point covers six sites with Tassel Bradshaw Group figures only: DR07-15, 18a, 59, 62b, 63a, 33. The extreme upper right point represents two sites, DR07-05, 28 which contain art from the Elegant Action Figure Group, Bichrome Figures and 'Clothes Peg' Figure Group. The bottom most data point is for three sites containing figures lumped into the catch-all category of General Bradshaw figures, DR07-13, 63c and 53.

The correspondence analysis of all data for Drysdale River National Park shows regionality between river and creeks. The creeks show similarities between themselves but differ from the river sites. One possible explanation for this is that the latter sites have a greater range of art motifs present at sites, an example of which being sector F sites of DR07-01, 06, 07, 08, as well as sites such as DR07-60, DR07-17, DR07-14 in sectors A, D, and E

respectively. There are fewer art sites along the creeks with a higher number of motifs.

Sites containing Middle Phase figures were processed but again only the six 'Bradshaw variables' used. Sixty nine sites are present containing Bradshaw Period and 'Clothes Peg' Figure Period figures, 39 on the Lower Drysdale River, 21 on Planigale Creek and 9 on Palmoondoora Creek. The results are shown below in Figure 5.7.

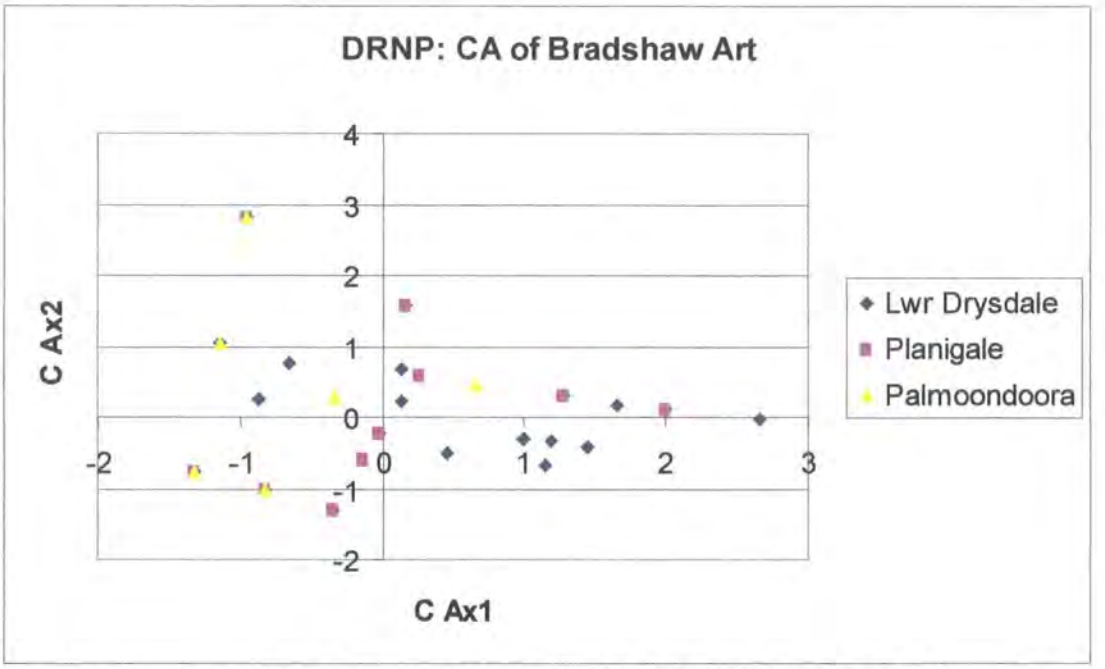


Figure 5.7 Correspondence Analysis of Middle Phase art by sector in Drysdale River National Park.

The scatter plot again shows that differences within the region are evident, with Palmoondoora Creek data tending towards the left of the plot, Planigale Creek in the centre and Lower Drysdale River data towards the right. The far right point covers two sites, DR07-03 and 65 with Elegant Action Group figures along with other art. The top left point covers DR07-13, 63c from the Lower Drysdale River, DR07-24, 26 and 35 from Planigale Creek and a solitary representative from Palmoondoora Creek, DR07-53. All these sites contain motifs assigned to the general Bradshaw figures category along with others.

The scatter plot for Middle Phase art only splits into three with Palmoondoora Creek art on the left, Planigale Creek data in the centre and lower Drysdale River data to the right. The fact there are only 9 sites for Palmoondoora Creek for this phase may of relevance. The range of sites with motifs present along the river will be the reason there is a split between it and Planigale Creek.

Cluster Analysis. The eighty four sites which make up the general area of the Drysdale River National Park were processed by cluster analysis and the results displayed in the form of a dendrogram, Figure 5.8. At the broadest level of the plot, 25, the data splits into three; two blocks of four and three sites respectively, distinguished on the large variety of art motifs present, and the main body of data of 77 sites. There are a few clusters of single motif sites but generally the clusters represent combinations of the motifs present at sites and not geographical variation between the three areas.

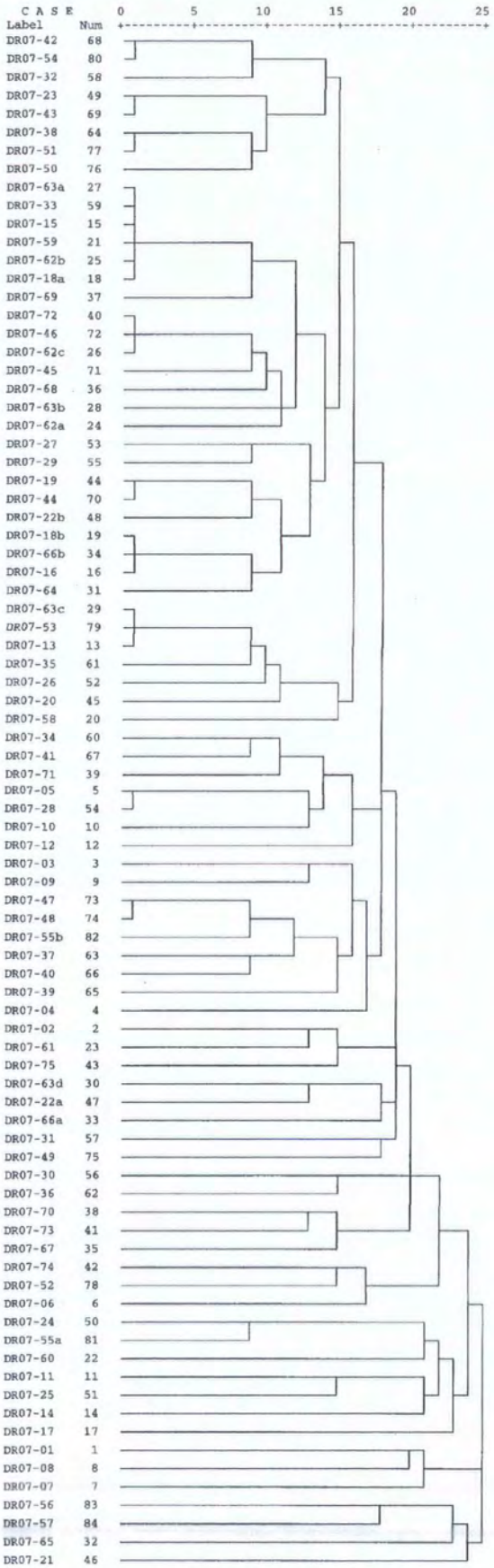


Figure 5.8 Cluster Analysis of DRNP data, all sites.
Cluster Method – Between Groups Linkage / Interval – Euclidian Distance.

The dendrogram of the cluster analysis of sixty nine Middle Phase motifs (Fig. 5.9) is split into three at the broadest level of 25. Four sites at the bottom of the diagram form one group, next up are twenty sites, followed by the remainder of forty five sites. These latter are distinguished by the degree of clustering seen at the lowest, level 1. Sites here are those with individual motifs such as Tassel Bradshaw Group figures, Sash Bradshaw Group figures, then sites with a combination of motifs. The dendrogram does not show clustering based on geographical distinction such as the Lower Drysdale River, Planigale or Palmoondoora Creeks but instead distinguishes itself on motif type i.e. chronology.

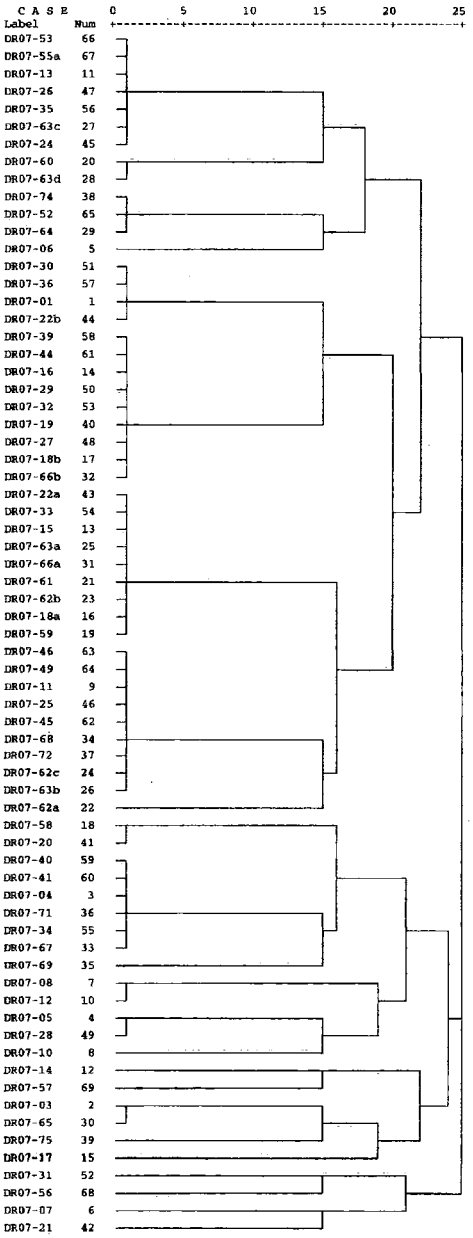


Figure 5.9 Cluster Analysis of Middle Phase art in DRNP.
Cluster Method – Between Groups Linkage / Interval – Euclidian Distance

Analysis 2b: Variation between the Lower Drysdale River and Planigale Creek.

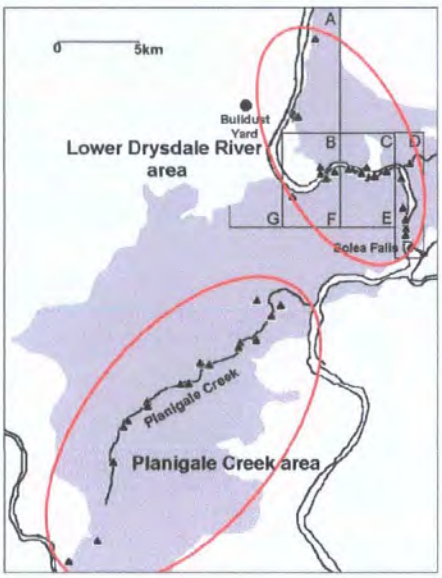


Figure 5.10 Comparison between the lower Drysdale River and Planigale Creek.

The third analysis investigated variation or similarity between the motifs present in two adjacent areas differing in their physical geography, in this case the difference between river gorge and creek. The content of 43 sites in the gorge of the Lower Drysdale River is compared with 26 sites on the plateau of nearby Planigale Creek (Fig. 5.10).

Although there is some overlap between the two areas (Fig. 5.11) generally in the distribution of points on the left and right sides of the plot, there is a horizontal split into two halves, with river data of the Lower Drysdale River tending towards the upper portion of the plot and that from Planigale Creek towards the bottom. This split is also visible in plots of the other correspondence axes which are not illustrated.

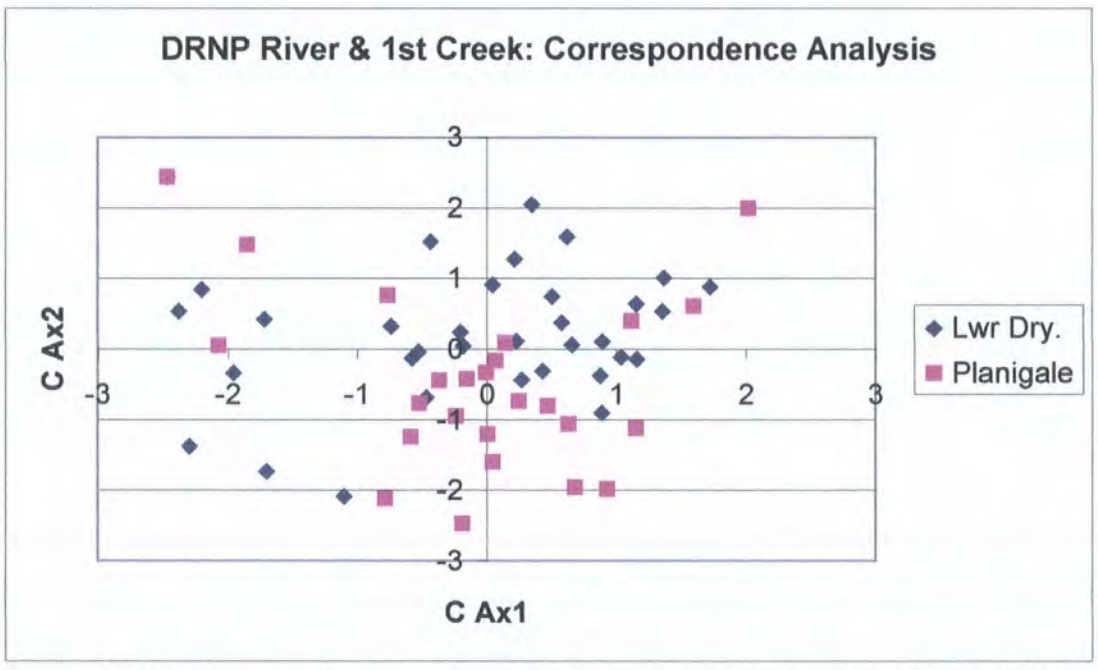


Figure 5.11 Analysis 2b - Correspondence Analysis of data from the Lower Drysdale River and Planigale Creek only.

As has been seen on previous figures, data point extremities represent multiple sites containing sets of motifs, or in some cases single motifs. The top right point covers sites DR07-05 and 28. The motifs present at these sites are Elegant Action Figure group, Bichrome Figures and 'Clothes Peg' Figure group, the three being present at each site. The top left datum is for sites DR07-15, 18a, 59, 62b, 63a, 33 and consists of sites with only Tassel Bradshaw Group figures present. The bottom left datum has three sites containing only Sash Bradshaw Group figures, DR07-16, 18b and 66b. The lowest datum is one site, DR07-26 with Bichrome figures and Wandjina art. Finally the bottom right point is again one site, DR07-37, with Wandjina art and a goanna (Other Animal category).

The split between the lower Drysdale River and Planigale Creek has been illustrated in Figure 5.6, and Figure 5.11 just enhances the difference. The split would seem to be due to the range of motifs present at the sites in the two areas respectively with the river sites having a greater variety of motif which might imply site use over a longer period.

To investigate the distribution of Middle Phase art between the two adjacent areas of the Lower Drysdale River and Planigale Creek, a sub set of sites containing art from this period was selected and processed. The Correspondence Analysis used the six 'Bradshaw variables'. Sixty sites from the two areas were processed, thirty nine from the river and twenty one from the creek. The scatter plot, Figure 5.12, illustrates the distribution of art sites. A slight difference can be detected with Lower Drysdale River sites tending to the right of the plot and Planigale Creek sites towards the left. This also reflects the distribution of the full data set visible on the analysis for the six 'Bradshaw motifs' over sixty nine sites as shown in Figure 5.7.

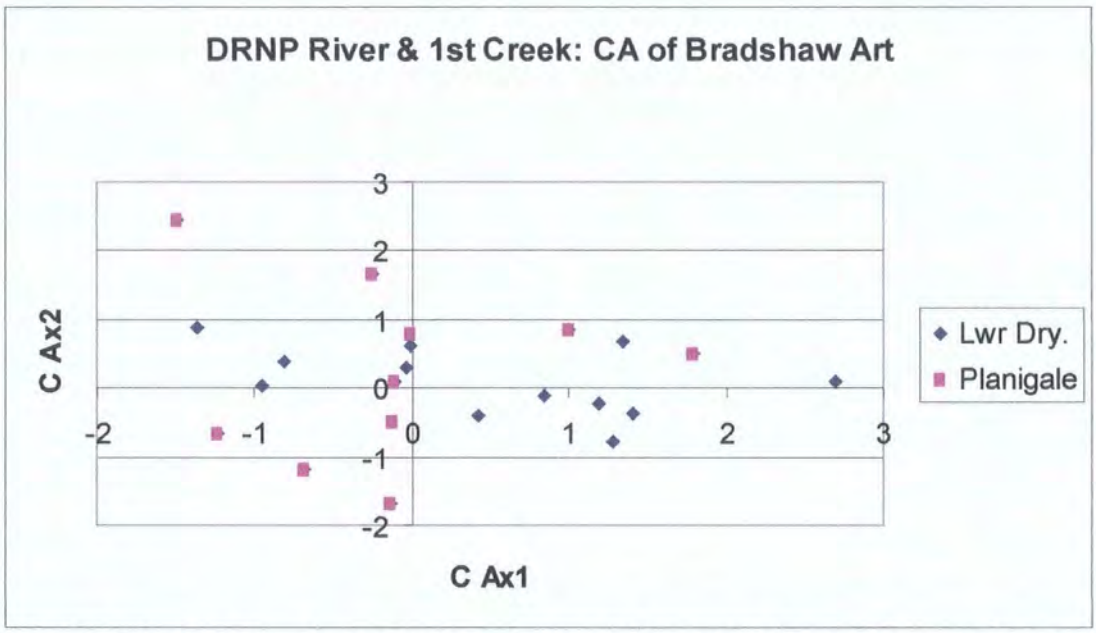


Figure 5.12 Analysis 2b - Correspondence Analysis of Bradshaw Figures comparing river and 1st creek in Drysdale River National Park (DRNP).

The apparent split between river and creek for Middle Phase Bradshaw and 'Clothes Peg' Figure art is reflected in previous correspondence analyses and is the result of the greater range of motifs painted at river sites, even though only the six 'Bradshaw' variables are being examined.

Analysis 2c: variation between two creeks.

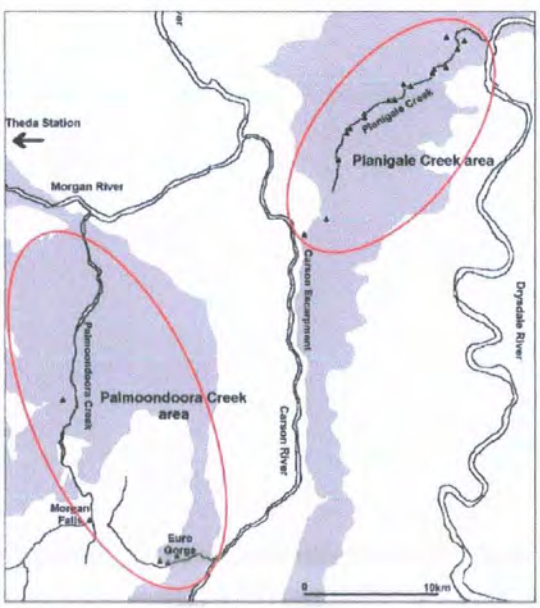


Figure 5.13 Comparison between Planigale and Palmoondoora Creeks, separated by the Carson Escarpment and the Carson River.

The fourth analysis used the data set from the two creeks, Planigale and Palmoondoora to examine whether any differences or similarities exist between the motif compositions in the two areas (Figure 5.13).

Forty one sites were used in the analysis, comprising 26 from Planigale Creek and 15 in the Palmoondoora Creek

area. Geographically the two creeks are separated by both the 200m high Carson Escarpment and the Carson River, as well as a distance of 27km.

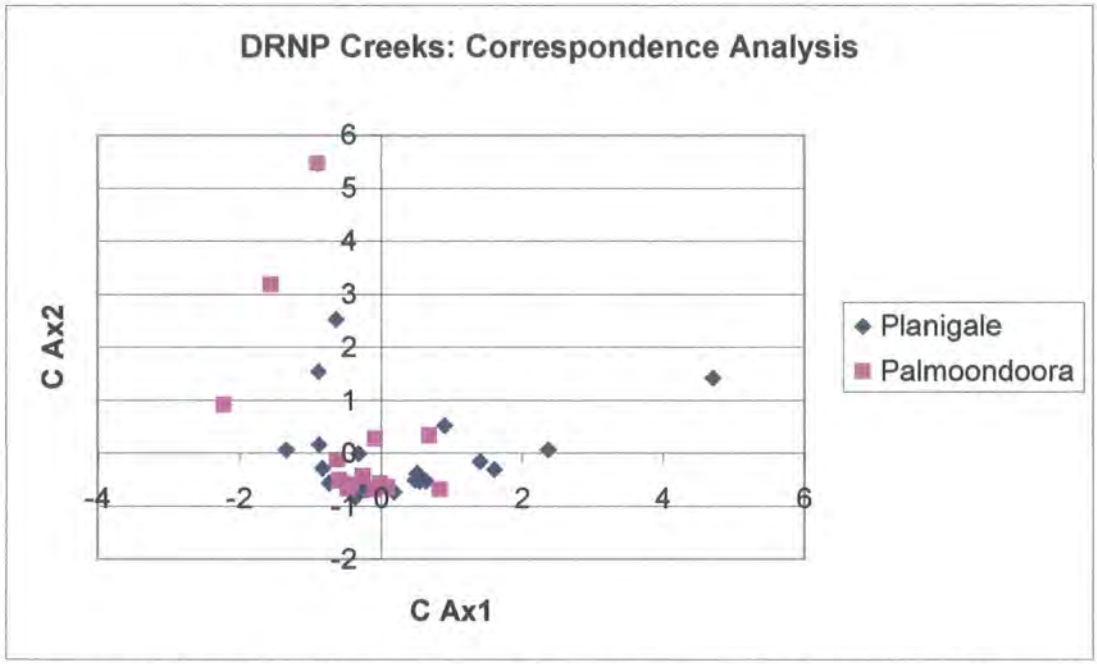


Figure 5.14 Analysis 2c - Correspondence Analysis comparing the two creeks of Planigale and Palmoondoora.

The correspondence analysis (Fig. 5.14) shows there is a high degree of phenetic similarity between the presence of art motifs at the sites as shown by the clustering of data points together. The data appears fairly homogenous apart from a few outliers. However the arrangement of outliers splits with Planigale Creek data to the right of the plot and Palmoondoora Creek to the left. Examination of the data extremities reveals the right most point is site DR07-28 containing Elegant Action Figures, Bichrome figures and 'Clothes Peg' Figures. This is also the site with the therianthrope, the macropod headed figure. The top most point is DR07-42 and 54 both containing geometric art. The two other left most points are DR07-50 and DR07-38, 51 all of which display Geometric or Other Art categories. From this it would seem the two creeks have art sites which are fairly similar in composition.

Thirty sites were subjected to correspondence analysis to determine if there were any recognisable differences in the distribution of Middle Phase Bradshaw and 'Clothes Peg' Figure Period art (Fig. 5.15) between the two

creeks of Planigale and Palmoondoora. Whereas the full data set (Fig. 5.14) shows a degree of similarity between the two areas in the content of motifs at sites, the plot of Middle Phase art shows a difference. Thirty sites were processed, twenty one from Planigale Creek and nine from Palmoondoora. The data points split into two halves, a lower set of Palmoondoora Creek sites and an upper of Planigale Creek along with a degree of overlap in the lower portion. From the Variable plot (not shown) Tassel and Sash Bradshaw Group figures are present in the lower left of the scatterplot where both creeks' data coincides, Elegant Action Group figures, Bichrome figures and 'Clothes Peg' Group figures occur in the upper right predominantly Planigale Creek section. The lower right extremity is for general Bradshaw figures. Note that the difference in the number of sites to process by a factor of over 3:1 may have an effect on the apparent split between the two creeks.

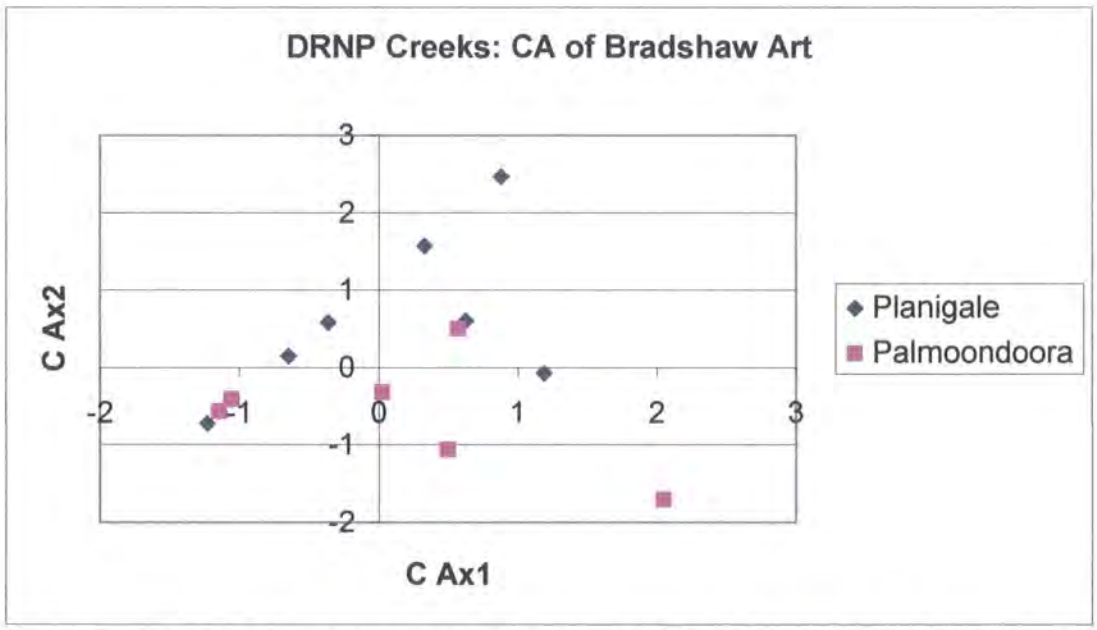


Figure 5.15 Analysis 2c - Correspondence Analysis of Middle Phase art by Planigale and Palmoondora Creeks in Drysdale River National Park.

Analysis 2d: variation between the Lower Drysdale River and Palmoondoora Creek.

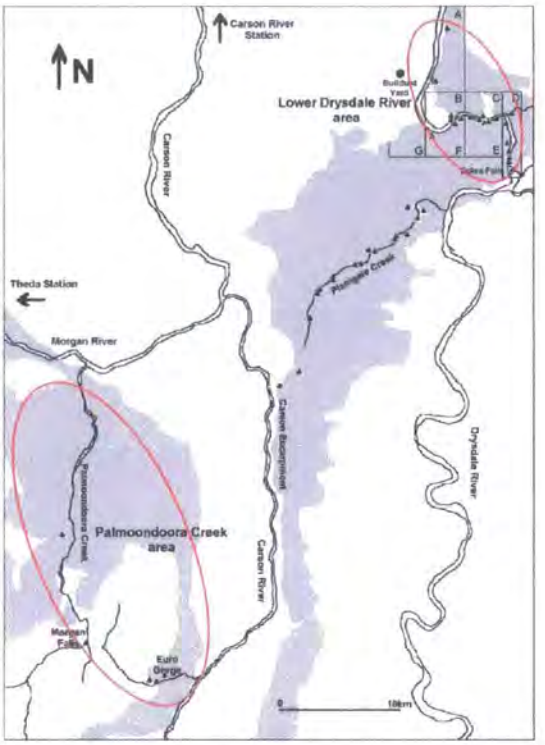


Figure 5.16 Comparison between the lower Drysdale River and Palmoondoora Creek, separated by the Carson Escarpment and the Carson River.

The fifth analysis investigated variation or similarity between the range of motifs present in two areas which differ in their physical geography, in this case the difference between the Lower Drysdale River and Palmoondoora Creek (Fig. 5.16). The two areas are separated by a distance of approximately 48 km. The southern access route from the river to the creek necessitates traversing the Drysdale plateau via the course of Planigale Creek before descending the Carson Escarpment and crossing the Carson River. The northern route covers an open plain before crossing the Carson River.

In the analysis fifty eight sites were processed, 43 on the Lower Drysdale River and 15 in the Palmoondoora Creek area. The distribution illustrated in Figure 5.17 shows there is a distinction between the range of motifs present in the Lower Drysdale River gorge and on Palmoondoora Creek. The data separates into an upper band of river data and a lower band for the creek.

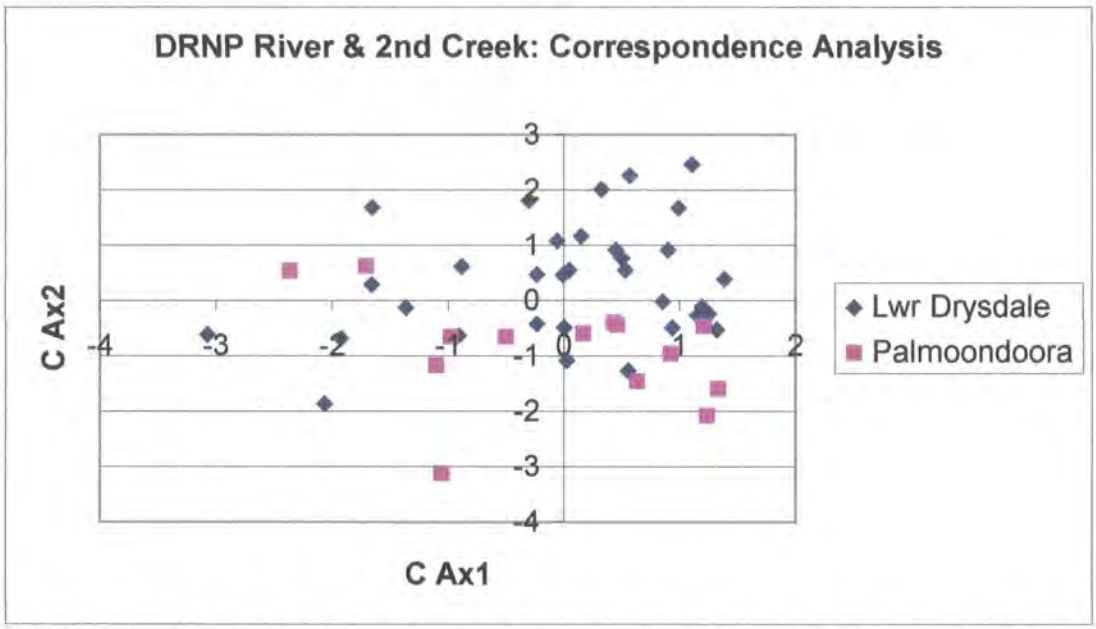


Figure 5.17 Analysis 2d - Correspondence Analysis of data from the Lower Drysdale River and Palmoondoora Creek only. The two areas are separated by topography and distance.

The spread of points is similar to that seen on CA performed on both the river and first creek (Lower Drysdale River and Planigale Creek) and the full Drysdale River National Park data set. It differs though from the analysis on the two creek systems alone. Almost three times as many art sites are included in the analysis from the Lower Drysdale River as from Palmoondoora Creek. Extremities on the scatter plot reveal that the upper right point contains Elegant Action Figures, Bichrome Figures and 'Clothes Peg' Figures from site DR07-05. The left most point contains Sash Bradshaw Group figures at three sites, DR07-16, 18b and 66b. The bottom most point has figures assigned to the general Bradshaw figure category at sites DR07-13, 63c and 53.

The difference between the two areas evident in the scatterplot (Fig. 5.17) is of similar nature to that seen in the previous examples for the division between river and creeks. The greater variety of motifs present at sites along the river compared to the creek is the cause of the difference.

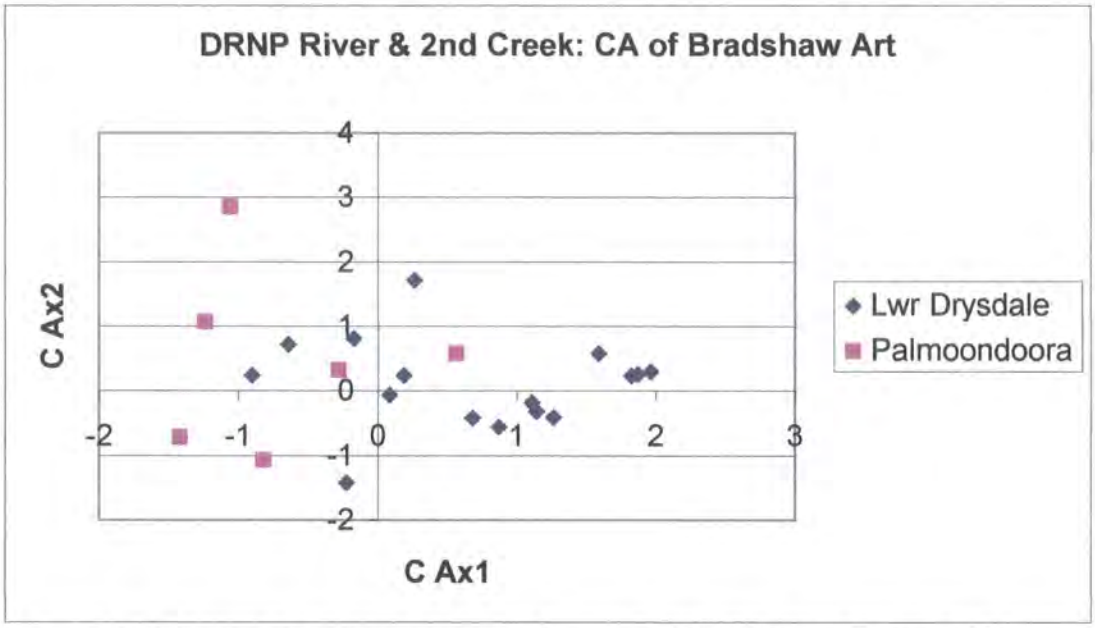


Figure 5.18 Analysis 2d - Correspondence Analysis of Middle Phase art from the Lower Drysdale River and Palmoondoora Creek.

There are thirty nine Middle Phase art sites on the Lower Drysdale River and nine along Palmoondoora Creek. Correspondence Analysis confirms the split between the two regions found from processing the full data set (Fig. 5.18). The scatter plot shows a left and right split with Palmoondoora Creek Bradshaw sites being to the left and the Lower Drysdale sites to the right. This is not exclusive as there is a degree of overlap between the two areas on the left of the plot. Tassel and Sash Bradshaw Group figures are to be found in the lower left sector of the plot, with Elegant Action Group figures, Bichrome figures and 'Clothes Peg' Group figures on the right. The general Bradshaw figures category is located in the top left of the plot. From this the two areas of the Lower Drysdale River and Palmoondoora Creek show similarities in the distribution of Tassel and Sash Bradshaw Group figures (along with general Bradshaws) but the difference between the areas is more marked by the presence of Elegant Action Group, Bichrome and 'Clothes Peg' Group figures.

Analysis 2e: variation between opposite banks of the Lower Drysdale River.

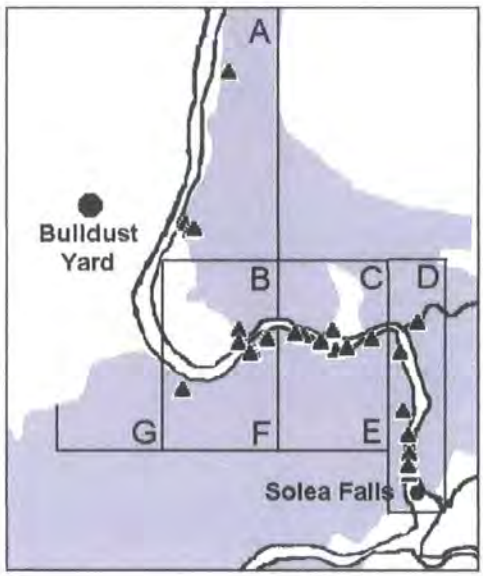


Figure 5.19 Comparison between the two banks of the Lower Drysdale River. Schmiechen Sectors A-C and the east bank of Sector D against Sectors E-G and the west bank of Sector D.

The sixth correspondence analysis compared the range of art motifs between opposite banks of the Lower Drysdale River. As has been discussed in the introduction to this chapter, Taçon, Wilson and Chippindale (1996) undertook a comparison between opposite river banks in their research into the Rainbow Serpent imagery in Arnhem Land and obtained interesting results. With this in mind the site data was arranged into the relevant Schmiechen survey sectors. In this way the north and east banks of the river comprise art sites falling into sectors A, B, C and the east bank of sector D. The opposite southern and west banks lie in sectors E and F and the west bank of sector D (Fig. 5.19). Of the forty three Lower Drysdale River sites investigated, 18 lie on the north and eastern banks, the remaining 25 lie on the southern and western banks. The river may act as a barrier to access depending on the time of year and its flow regime. There is no information as to how it would have behaved in the past during the painting of the earliest art during different climatic conditions. Currently there are six crossing points, two along sandbanks on the shallower part of the river to the west (which no doubt shift with time) and the remainder over rock outcrops.

The scatter plot, Figure 5.20, produces a distribution showing there is a slight distinction in the range of art motifs between the opposite banks of the river. The south and west bank data are more dispersed revealing a greater variation in the range of art motifs present. This is to be expected on account

of the number of occupation sites and large shelters present on the south/west banks and the greater range of art found there.

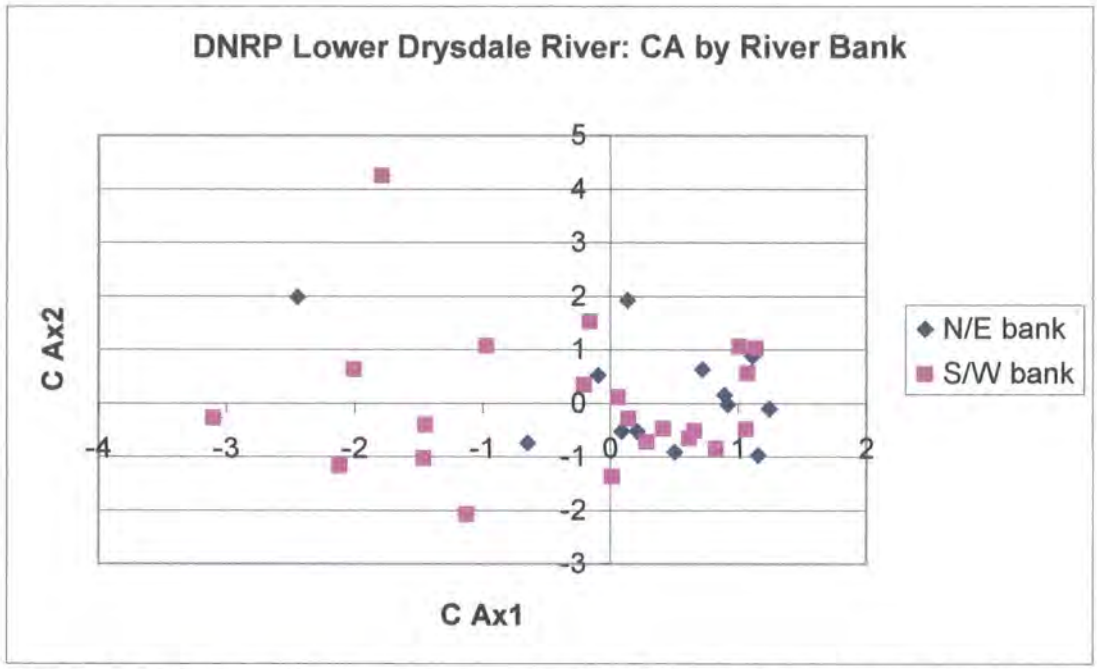


Figure 5.20 Analysis 2e - Correspondence Analysis comparing river banks of the Lower Drysdale River.

The extremities of the scatter plot correspond to general Bradshaw figures for the top data point, Sash Bradshaw Group figures for the left most point and Tassel Bradshaw Group figures for the bottom point. The main site complexes of DR07-06 Bundarwa, DR07-07 Goyon, DR07-08 Living Shelter and DR07-14 Nurini all are located on the south bank of the river and lie close to the central axes of the plot within the main body of data. This is explained by their containing a range of motif categories, 7, 10, 9 and 7 respectively. Similarly east bank site complex DR07-60 Long Reach with seven motif categories is located close to the central axes.

The distribution of Middle Phase art between the opposite banks of the Lower Drysdale River required the processing of thirty nine sites, 17 on the north and eastern banks and 22 on the south and western banks (Figure 5.21). Whereas the distribution for the full data set of all motifs in this area showed a slight difference between opposite banks, the distribution of Middle Phase art seems homogenous with no recognisable differences. Note there is a high

degree of overlap of points giving the impression the data set is mainly from the south and west banks. Interpretation of the correspondence analysis suggests it more than likely that during the time of painting Middle Phase art the Lower Drysdale River did not act as a boundary or barrier.

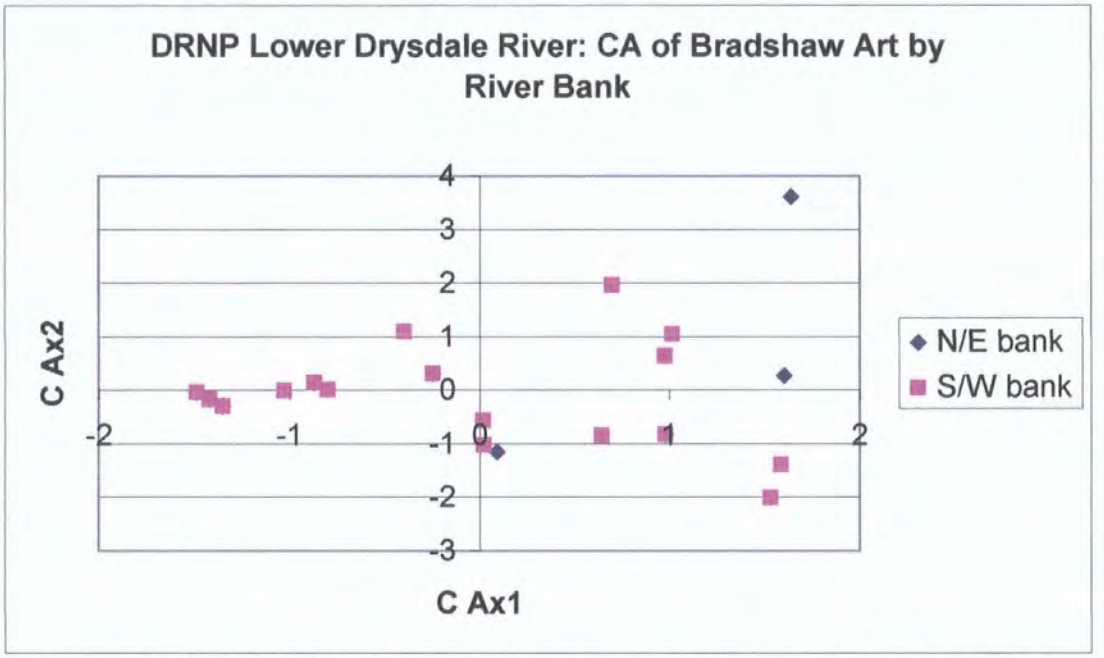


Figure 5.21 Analysis 2e - Correspondence Analysis of Bradshaw Figures by river bank along the Lower Drysdale River.

Cluster analysis. The cluster analysis of forty three sites along the Lower Drysdale River is shown in the dendrogram, Figure 5.22. Clusters are seen at the lowest level for a few sites, these containing motifs of either Tassel or Sash Bradshaw Group figures and general Bradshaw figures. Two sites cluster containing Tassel and Sash Bradshaw Group figures at the same site (DR07-62c, DR07-72) and a further two sites have the same plus other art motifs. At the broadest level of clustering then seven sites located at the bottom of the dendrogram are complexes with a variety of motifs present, varying from five types (DR07-04 Borologa) to a maximum of ten at DR07-07 Goyon. The cluster analysis does not show evidence of a split between opposite banks of the Lower Drysdale River.

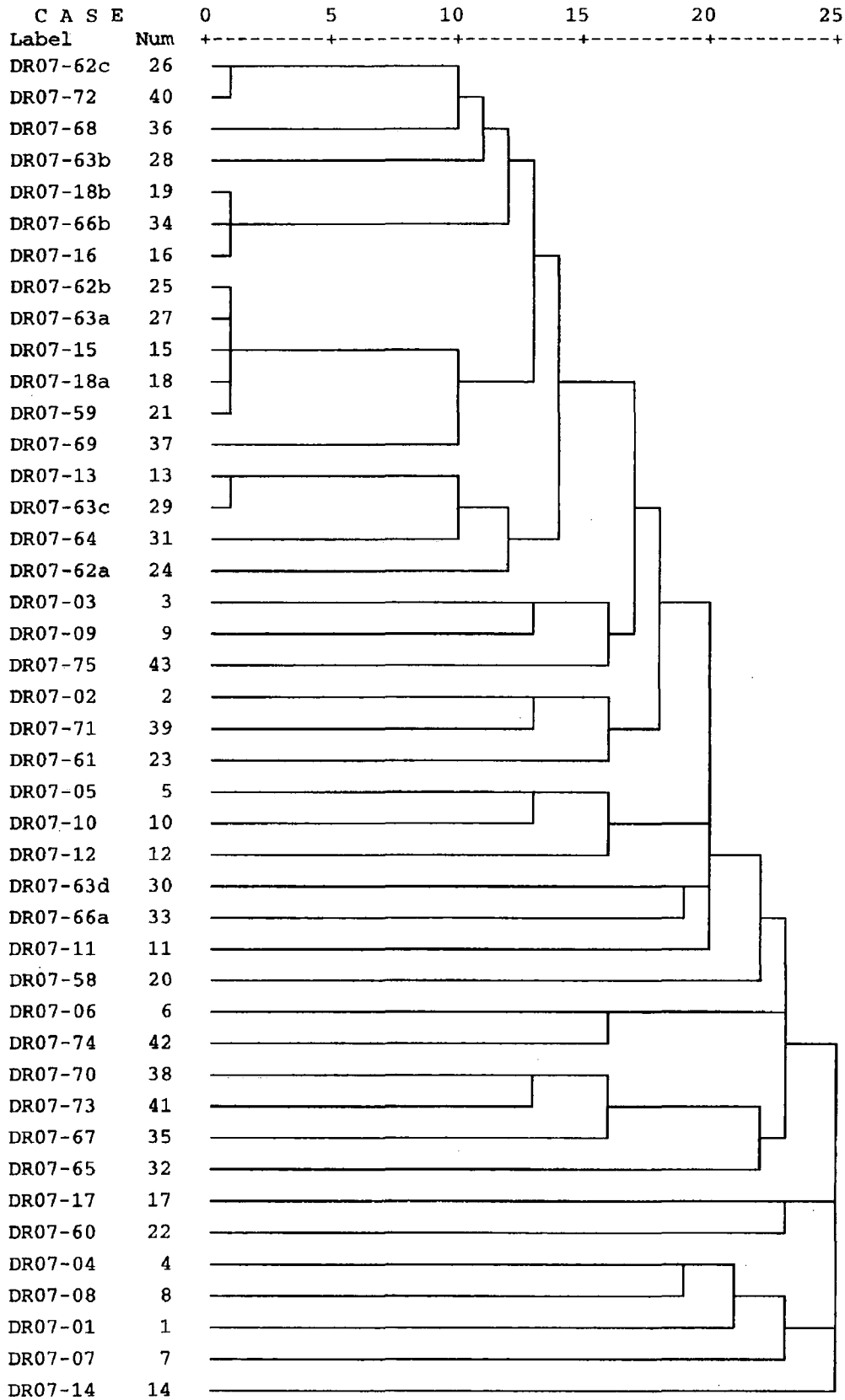


Figure 5.22 Cluster Analysis of Lower Drysdale River data.
Cluster Method – Between Groups Linkage / Interval – Euclidian Distance

Thirty nine sites with Middle Phase art were used to produce the dendrogram below (Fig. 5.23). The plot splits into two, one solitary site, DR07-07 Goyon, and the remaining thirty eight sites. The solitary site contains five of the six art motifs, missing only Elegant Action Group figures. Other than this solitary site, the dendrogram splits at the 23 level into nine sites with 'Clothes Peg' Group figures (the bottom set of data on the plot) and those without. The plot does not distinguish between opposite banks of the river but clusters by motif or groups of motifs. So the clusters shown below at the 1 level comprise sites with Tassel or Sash Bradshaw Group figures, general Bradshaw figures and sites with both Sash and general Bradshaws.

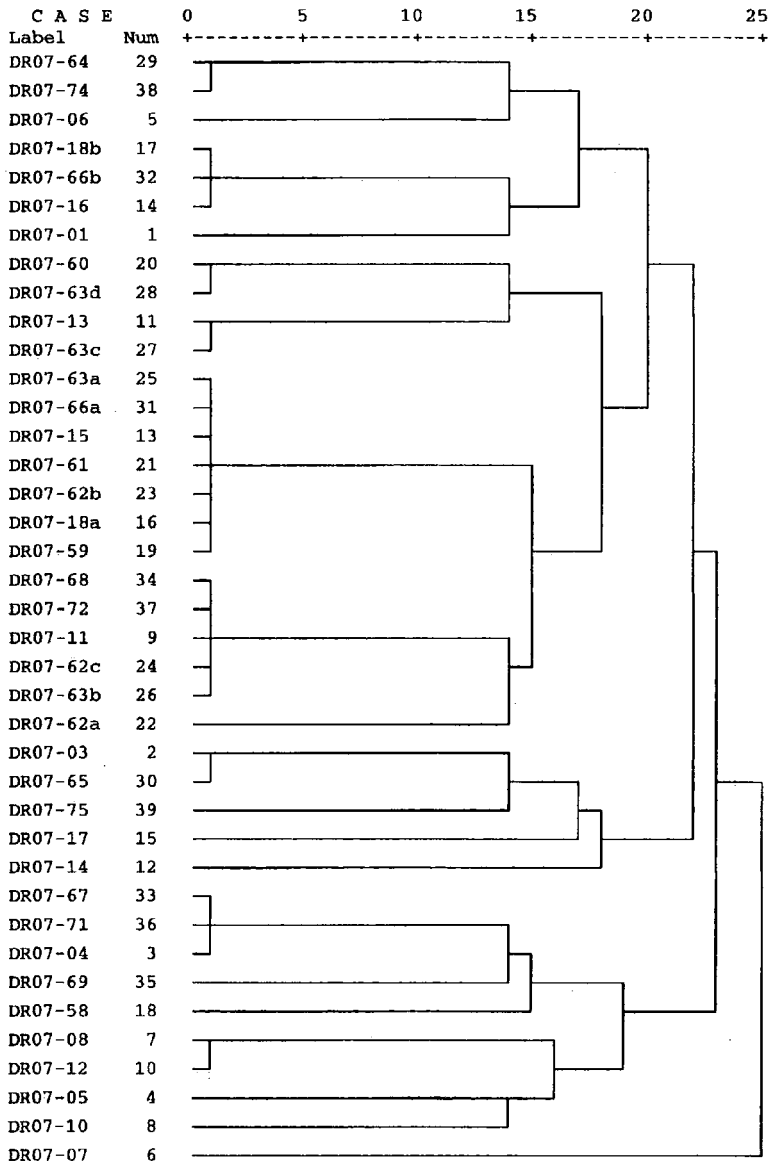


Figure 5.23 Cluster Analysis of Middle Phase art along the Lower Drysdale River. Cluster Method – Between Groups Linkage / Interval – Euclidian Distance

Analysis 3: variation within the Far Away Bay region.



Figure 5.24 Comparison between Far Away Bay areas.

The third main correspondence analysis looked at the northern coastal art of Far Away Bay and searched for any variation or similarity between the three main coastal areas of Lost City, Boab Bay and Gumboot Bay and the inland Billabong Area (Fig. 5.24).

At Far Away Bay 65 art sites were located for use in processing, 18 at Gumboot Bay, 15 at Boab Bay, and 18 Lost City sites. The inland area of Billabong had 9 sites. A further 4 West Cliffs and 1 Bush Camp sites were included in the processing but are not illustrated in the scatter plot (Fig. 5.25).

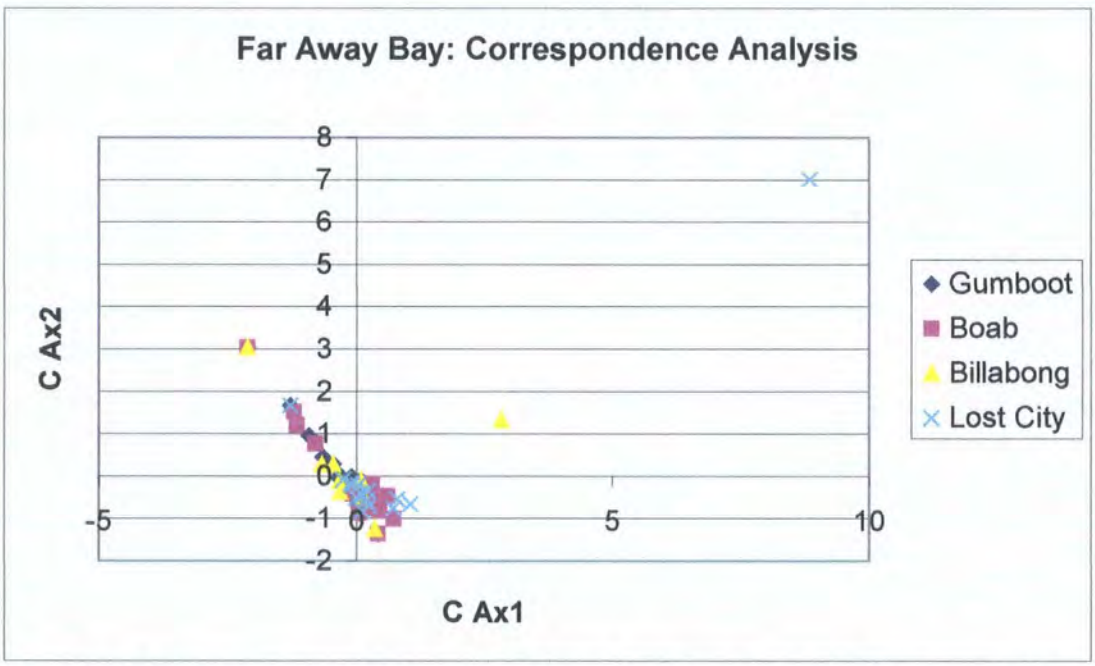


Figure 5.25 Correspondence Analysis of Far Away Bay areas. The main four areas only are illustrated above.

The scatter plot, Figure 5.25, shows the data bunching tightly together indicating a high degree of phenetic similarity. Two outliers on the right of the

plot are from Billabong Area, site FAB07-26a and Lost City's FAB07-46a. Both contain the only located Wandjina art in the area. FAB07-26a also contains Sash Bradshaw Group figures along with a painting of a macropod and this will cause the data to plot closer to the centre. The second site, FAB07-46a, has a solitary full length Wandjina only, painted on the roof of one of the few actual caves present. This explains its extreme position on the plot. The outlier on the left of the plot which follows the general curve of the clustered data points represents four sites, FAB07-09, 15, 22, 27 all of which contain Tassel Bradshaw Group figures only. On the basis of this analysis there is no evidence of regionality between Far Away Bay areas.

On the northern coast 50 art sites contained Middle Phase art. These were analysed using the six Bradshaw motif art categories as has been discussed earlier. The data coverage is four sites at the West Cliffs, 15 at Gumboot Bay, 10 at Boab Bay, 6 located in the Billabong area and 15 in Lost City. The results plot only the main art areas and are shown in Figure 5.26

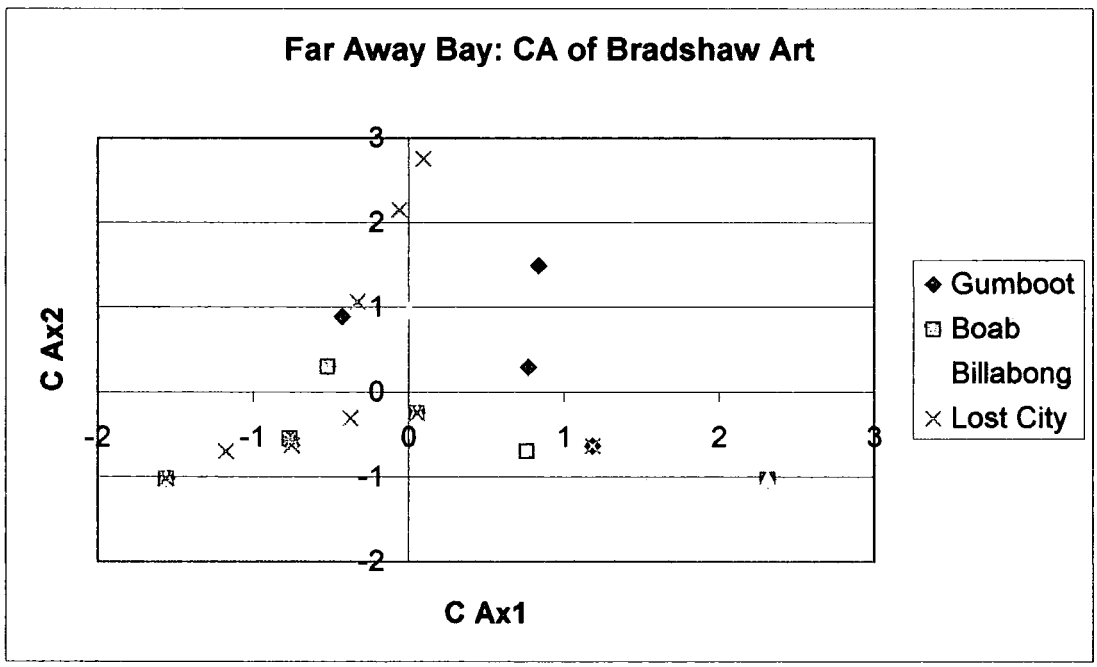


Figure 5.26 Correspondence Analysis of Middle Phase art by area in Far Away Bay.

The scatter plot shows little clustering between the data points and correspondingly little phenetic similarity. This is in contrast to the full data set as illustrated in Figure 5.25. The top most data point covers two Lost City

sites, FAB07-42f and 48. Both contain Bichrome figures and 'Clothes Peg' Group figures as well as a few other motifs. The left most data point represents seven sites from different areas, FAB07-01, 12, 33, 23, 26a, 42c and 44. The dominant motif in each is Sash Bradshaw Group figures. The right most data point has six sites with Tassel Bradshaw Group figures predominant. Four of the sites are located in Boab Bay (FAB07-15, 19, 20b, 22) and one from Gumboot Bay, FAB07-09, and one from Billabong Area (FAB07-27).

Broadly, the dispersion of data can be seen to be rather a mix with sites spread over a broad range - Gumboot Bay data to the upper half of the scatterplot, Boab Bay to the lower, Billabong Area sites sit in the lower half of the graph and Lost City sites to the left, upper and lower. The data is dispersed and really there is no evidence of regionality amongst the data points.

Cluster analysis: Sixty five sites at Far Away Bay were analysed. The dendrogram, Figure 5.27, splits into two at the broadest 25 level with six sites forming the smallest group based on containing a small range of motifs such as 'Clothes Peg' Group figures. The remaining 59 sites are arranged on the basis of site content. Clustering occurs for four sites containing Tassel Bradshaw Group figures only and further clustering for five sites with both Tassel and general Bradshaw figures and three sites with Sash Bradshaw Group figures and general Bradshaw figures. The dendrogram illustrates variation within groups and does not show regional groupings.

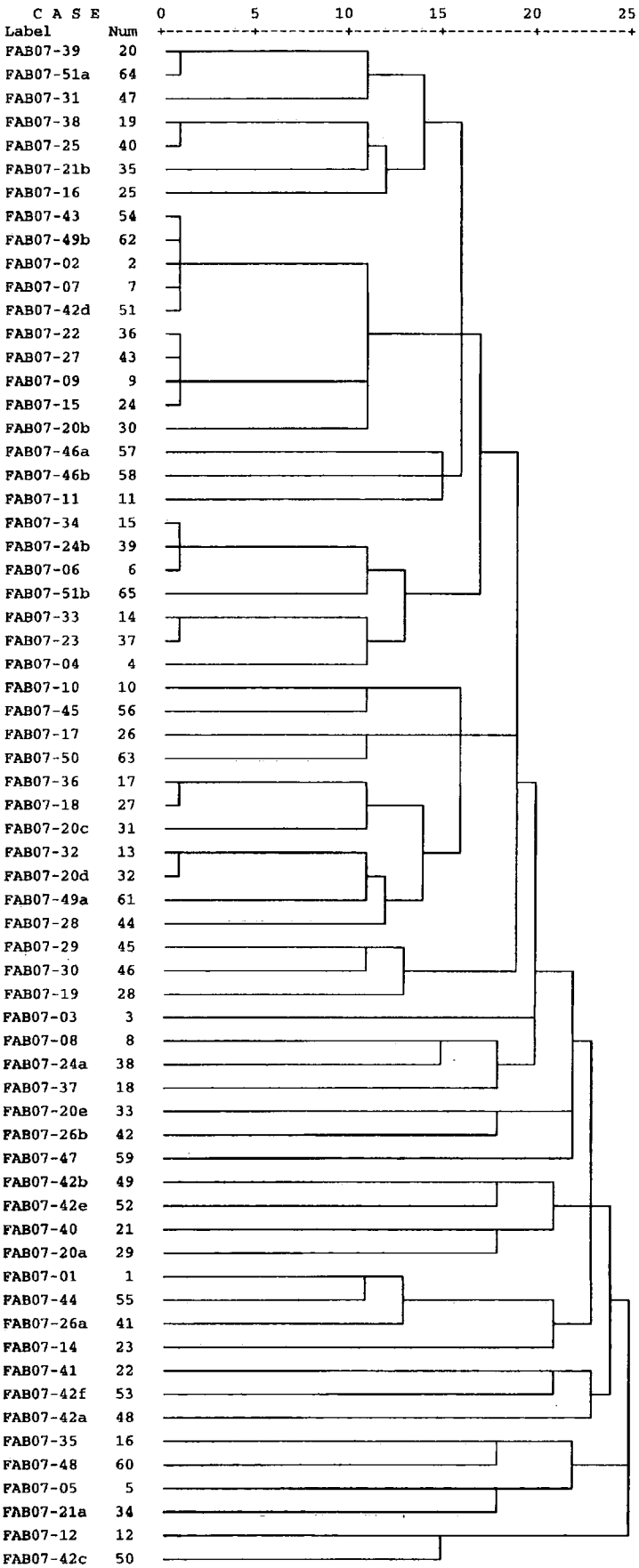


Figure 5.27 Cluster Analysis of Far Away Bay sites, all data.
Cluster Method – Between Groups Linkage / Interval – Euclidian Distance

Fifty sites containing Bradshaw Period and 'Clothes Peg' Figure Period art were surveyed at Far Away Bay. The dendrogram (Fig. 5.28) of the cluster analysis splits the data set into two at the broadest 25 level, a small group of five sites split on the basis of their containing 'Clothes Peg' Group figures amongst a range of other art. The rest of the plot of 45 sites shows clustering on the basis of site content not location. Clustering occurs of sites containing either Tassel or Sash Bradshaw Group figures, as well as general Bradshaw figures.

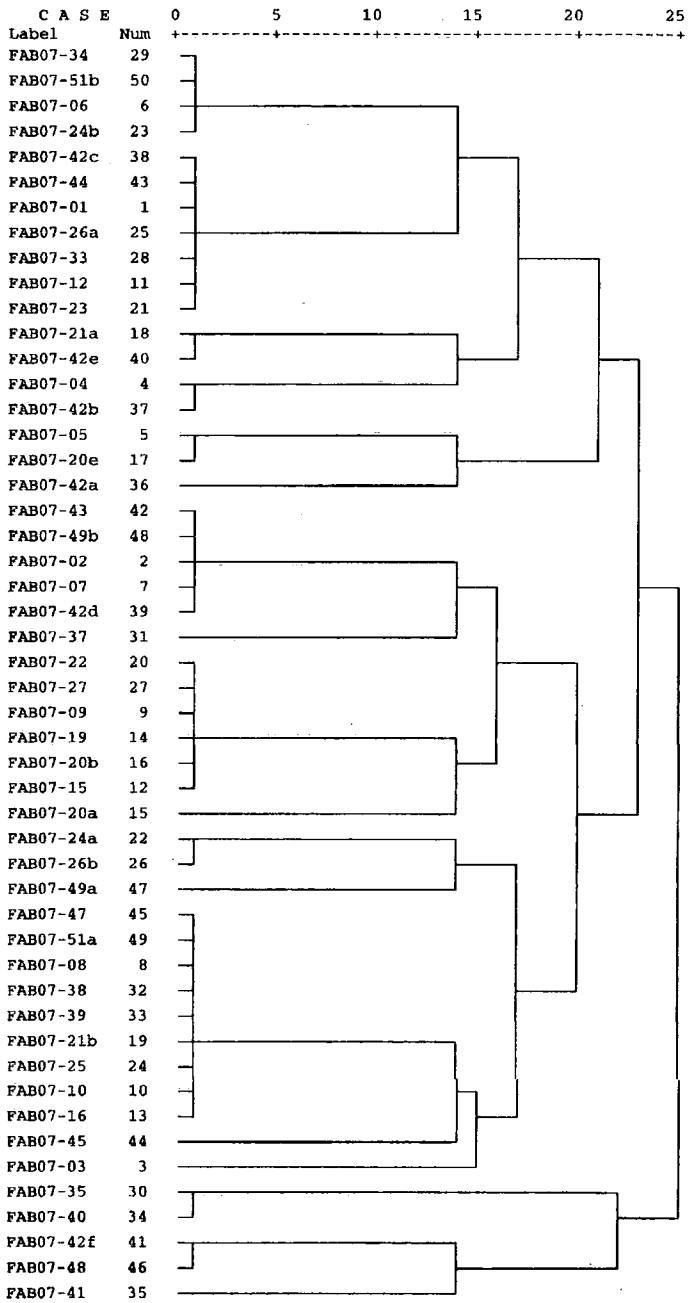


Figure 5.28 Cluster Analysis of Middle Phase art at Far Away Bay.
Cluster Method – Between Groups Linkage / Interval – Euclidian Distance

Discussion

This chapter set out to investigate whether there was any evidence of regionality as regards art styles and motifs between two distinctive regions in the rock art in the northern Kimberley: Drysdale River National Park and Far Away Bay. It also aimed to examine each of these two regions separately and to investigate whether there was variation within separate areas in each of them. As explained in the introduction to this chapter, the analyses undertaken in this chapter had four main objectives; charting geographical changes between regions, determining changes within regions, to investigate whether the Drysdale River acted as a barrier or boundary and finally to see if Middle Phase art was subject to spatial variation. The application of two techniques of multivariate analysis, Correspondence Analysis and Cluster Analysis, has revealed that regionalism does occur but depends on the range of the body of art being examined.

The first analysis (1a) was to determine whether the two regions of river and coast were distinctive. The correspondence analysis revealed there was no correlation between the two regions and that the data was homogenous between the Drysdale River National Park and Far Away Bay. This is in agreement with the chi-squared statistical test undertaken in Chapter 4 which showed there was a close correlation between the two areas. Correspondence analysis of Middle Phase art (1b) (Bradshaw and 'Clothes Peg' Figure Periods) of the two regions revealed, however, that spatial variation can be discerned, in contrast to the full art data set. Again this agrees with earlier statistics from Chapter Four where the chi-squared test showed no correlation for Bradshaw art between the two regions.

The analysis of variation within areas in the Drysdale River National Park was subdivided into five different sections. Firstly, in analysis 2a I examined the differences between the Lower Drysdale River, Planigale Creek and Palmoondoora Creek. However there is a degree of homogeneity between the two creeks. The data set of Middle Phase art shows regionality is more evident across the three areas. The dendrograms for both the full data set and

Bradshaw Period art reveal that the range and types of art motifs are more important than regional distribution.

Analysis 2b compared the gorge of the Lower Drysdale River with adjacent Planigale Creek. Correspondence analysis showed a strong split between the two, both for the data set of all art motifs and the Bradshaw Period subset. This agreed with chapter 3 and the differing percentages of art to be found in the two areas.

The analysis of the two creeks (analysis 2c), Planigale and Palmoondoora showed strong phenetic similarities when undergoing correspondence analysis on their full range of motifs. They seemed homogenous apart from outliers which split the scatter plot into left and right hand sections. When Middle Phase art is analysed regional differences are noticeable. However, it must be noted there was a mismatch in the number of Middle Phase art sites available for use in analysis by a factor of over 2:1 for the two creeks, i.e. 21 sites from Planigale to 9 sites from Palmoondoora. This may be an important factor so caution is recommended for interpreting this data.

Comparison between the Lower Drysdale River and Palmoondora Creek (analysis 2d) reveals a regional variation which is repeated both for the full range of art motifs and the Bradshaw and 'Clothes Peg' Figure Period art subset. However, with there being a ratio of 3:1 in sites (43 Lower Drysdale sites to 15 Palmoondoora Creek sites) for the full range of motifs and 4:1 for the Bradshaw data (39 sites to 9) then again caution is required in interpreting the information.

The fifth and last analysis between different areas within the Drysdale River National Park compared the art in the opposite banks of the Lower Drysdale River. The river may have provided a barrier or represented a boundary in the past and this might be reflected in the range of art motifs at shelters on either bank. Analysis of the full range of motifs revealed a difference in the range of motifs between opposite banks. This may be due to there being a larger number of shelters suitable for painting on the south bank and the larger sites

also showing an increasing range of motifs. In contrast, analysis of Bradshaw Period art shows little differentiation between the two banks, the data is fairly homogeneous. Cluster analyses do not reveal differences between opposite river banks. One possible interpretation of the correspondence analysis is that the river did not act as a barrier or boundary during the time of painting Bradshaw art. Certainly at this time of increased aridity the river would have had generally lower flow regimes, and would have acted as a zone of refuge for people.

The final comparative analysis undertaken in this chapter involved different areas within northern coastal area of Far Away Bay. The results of the analysis show no regionality between the four main areas within the full data set. The tight clustering of the data around the axis shows a strong similarity in the range of art motifs at sites. The outliers are two solitary Wandjina figures. As has been discussed in previous chapters the northern coast here is the easterly border of the Wandjina cult influence. Correspondence analysis of Bradshaw and 'Clothes Peg' Figure Periods' art reveals that in contrast to the tight clustering of the full data set, art of this period is dispersed. A slight regionalism is detected between the areas with the dispersion of data through the scatter plot. The dendrograms of the cluster analysis, as in previous analyses, show inter-group linkages rather than regionalism.

In conclusion, the set of analyses undertaken in this chapter seems to indicate that as regards the art styles and art motifs used, when the full body of art is considered, there are no apparent difference between the two areas of river and coast, i.e. Drysdale River National Park and Far Away Bay. However, differences emerge when only the older forms of art from the Middle Phase are examined. Similarly, within each of these two regions, whilst there may be slight differences visible, variation becomes more pronounced when the earlier art period is analysed. However, there is no evidence that the river acted as a physical barrier in the past. On the basis of the analyses undertaken spatial variation seems more evident at the stage of the Middle Phase art than in the full corpus of art.

Chapter 6.
Art, Territory and Aggregation.

The aim of this chapter is, first, to review the ethnographic information of the Aboriginal groups living in the Kimberley (and to a lesser extent the desert) in order to understand current patterns of territorial distribution of the different language groups. This is done in order to analyse the extent of territory that groups in the past may have had in the two research areas of Drysdale River National Park and Far Away Bay. The second part of this chapter endeavours to examine whether there is any evidence for the aggregation of the population for ceremonies in the two areas under study. As regards the first, I will discuss the geographical extent of known language groups and the distribution of clan estates in the west and north west Kimberley. Coupled with estimates of the population from historical records this will provide a background from which to investigate the extent of territory occupied by the painters of the earlier art styles. After this, rock art territory is analysed by formal methods, first to see if it is possible to detect style changes at language group borders, and then to find what is known about the geographical extent of Kimberley painting styles. The latter point has been debated from the environmental point of view in Arnhem Land, and here I discuss the ideas raised and apply them to the Kimberley. This chapter also discusses whether aggregation may have taken place in rock art sites. The gathering together of groups of people for ceremonies is well documented in Australia (Gill 1968, Lommel 1997, Mountford 1976, Spencer & Gillen 1968) and in the Kimberley this is known for the painting of contemporary Wandjina Period art and other paintings (Crawford 1968, Kaberry 1935). The bulk of the panels found in Drysdale River National Park and Far Away Bay consist of Middle Phase (Bradshaw and 'Clothes Peg' Figure Periods) art rather than Late Phase Wandjina Period art. A question raised is whether the sites or the art panels

themselves provide information on the possible concentration and dispersion of people in the past.

Geographical Extent

In this section the geographical extent of the distribution of art in my two research areas will be discussed. I will compare this with what is known ethnographically about the distribution of clan estates in the west and north-west Kimberley. From this the number of people who would have lived in the area at the time of painting of the earlier Middle Phase (Bradshaw and 'Clothes Peg' Figure Period) art will be estimated. The use of modern ethnography as a model to understand past populations is standard practice in archaeology (Conkey 1980, Hayden 1980, Wobst 1976) though it must be used with care (Layton 1992, 2001).

Area of Modern Day Language Groups

The location of modern day Kimberley language groups is illustrated by Morwood, (2002: Figure 4.9) (Fig. 6.1), and Tindale's geographical area is listed in Table 6.1 below. The largest tribe in terms of area is the Ngarinjin who occupy land in the central north Kimberley. To the west are the Wunambel and Worora language groups and to the south west the Unggumi. The four language groups are linguistically similar in that they all belong to the Wororan Linguistic Family (Oates and Oates 1970: 40-42). The four tribes correspond to the area where contemporary Wandjina art is found. The Worora, Wunambel and northern half of the Ngarinjin coincide with the location of Middle Phase Bradshaw Period art, predating, it is assumed, the present tribal areas.



Figure 6.1 The boundaries of modern Kimberley language groups.
(adapted from Morwood 2002: Figure 4.9)

Language Group	Geographical Extent
Miwa	8,600 sq. km
Gamberre	7,000 sq. km
Wunambel	9,900 sq. km
Worora	10,400 sq. km
Ngarinjin	27,300 sq. km

Table 6.1 Geographical area of Kimberley language groups.
(from Tindale 1974)

The factors defining language groups have been given by Berndt and Berndt (1992: 32-40). Using their criteria, a language group is a related group of people who occupy a recognised area of land and claim to be genealogically related. They exercise foraging and religious rights over that land and have common rules of behaviour. The people acknowledge they share a common language and apply a collective name to themselves. A final point, which is not wholly applicable to the Kimberley (in the opinion of Blundell [1975: 66]), is that a language group must be large enough for marriage to occur within it, i.e. is self perpetuating (1992: 36).

The number of people who lived in their separate language groups before European settlement is a matter of debate. Elkin has suggested for the whole of Australia a figure of 300,000 people (1954: 10-11). For the Kimberley the population of the Ngarinjin is estimated to be of the order of 1000 people (Berndt & Berndt 1992: 25) and the population of the Worora tribe in 1916

was thought by Love to number 300 (1917: 21). University of Sydney anthropologist Adolphus Elkin visited the Kimberley between 1928 and 1929 and estimated the size of Ngarinyin territory to be 8-9000 square miles (21 – 23,300 square kilometres) and the population to be 1000 people (1933: 452). In the 1970s Blundell reported that the Ngarinjin may have numbered 500 people but the number of language speakers may have been as many as 1500 since it was spoken by surrounding tribes (1975: 104). Further, she was able to provide figures for the number of known living members (and known deceased members) of the Worora and Ngarinjin tribes by clan estate as well as other West Kimberley clans. The figures derived from Blundell's work are listed in Table 6.2.

Language Group	Known living members	Known deceased members
Worora	81	38
Ngarinjin	78	34
Umida	-	2
Unggarangi	4	2
Unggumi	-	-

Table 6.2 Numbers of Worora and Ngarinjin in the early 1970s
(derived from Blundell 1975: 83-86)

The Kimberley Aboriginal population shows a large decline in numbers in the forty or so years between Elkin's visit and Blundell's survey. The south western language groups of Umida and Unggumi are now extinct (Blundell 1975: 84-85). A similar decline in population has been observed around Australia and has been credited to the impact of white colonisation. This resulted in the introduction of new diseases, economic suffering through loss of traditional lands and disruption to native animals though farming practices and finally frontier violence (Blundell & Woolagoodja 2005, Crawford 2001, Ryan 1993). These factors are certainly true of the southern Kimberley as discussed in Chapter 1. In the northern Kimberley the Worora, Wunambel and Ngarinjin were spared this disruption, yet their numbers declined dramatically over the same period of time. In Kalumburu the Mission recorded that few children were born in the 1920s and 30s (McPhee pers. com. 2007). This was replicated amongst the Worora, to the west at Kunmunya, where in the 1930s only a tenth of the population was under 20 years of age and the tribe

appeared to be dying out (Lommel 1950). Lommel provides an explanation of sorts by attributing the low birth rate to the mental disruption caused by the impact of European arrival and the knowledge of this amongst Aboriginal people still living a traditional tribal life in the bush (1950). In a similar vein, Crawford quotes Albert Barunga as saying "We were depressed. Depressed people do not have children" (2001: 21).

Clan Territory Size

The size of language groups, or tribes, in the Kimberley, both in terms of the number of constituent people and the geographical area they cover, means they offer limited use for in depth analysis. More applicable is the clan, the unit above the family level. A clan is the basic social unit in which a person is placed at birth, based on descent from the father (patrilineal) (Morwood 2002: 105). This affiliation is fixed, not changing with time. Membership of a clan determines patterns of marriage and settlement. Clans belong to named and defined territories, clan estates, over which members have foraging and religious rights, and of particular note, they have totemic relationships with their estates (Blundell 1975, Layton 1992). In the West Kimberley each clan estate has one or more painted sites which are an integral part of their religious beliefs. The clan estate is called *dambina* by the Worora, and *dambun* by the Ngarinjin (Blundell 1975: 68). It must be emphasised that although they own defined territorial areas, clans are not restricted to that for habitation.

As has been mentioned in previous chapters the painted sites referred to contain Late Phase Wandjina art. Each clan will have its own named Wandjina (Morwood 2002: 106), the painting being the 'shadow' of the mythological ancestor. The wide dispersal of clan members means that a sense of clan solidarity is fostered through the painted galleries on their estate, which also reinforces the clan's identity (Blundell 1975: 574). Ceremonies for repainting or retouching the paintings took place at the end of the dry season with the aim of ensuring fertility and abundance of the depicted

animal or plant species in the coming year (Morwood 2002: 106). This was also the time of year when male clan members returned with their families to their estates. During the dry season the main way of procuring supplies of meat was through cooperative hunting such as organised fire drives where long grass was burnt off. The repainting ceremonies may have acted as mechanisms for bringing men together for cooperative hunting of this kind (Blundell 1975: 612, Morwood 2002: 107).



Figure 6.2 Mitchell Plateau clan estates.
(Veitch 1996: Figure 5.3)

To provide a useful comparison of the size of ground covered in the two research areas it is useful to work in terms of known clan estates. Information on these in the Kimberley is known for the Mitchell Plateau and the West Kimberley. Clan estates in the north west Kimberley on the Mitchell Plateau are illustrated by Veitch (1996: Figure 5.3). The area shown is calculated to be of the order of 3000 square kilometres and with ten clan estates located in the region, the average clan area is therefore 300 square kilometres (Fig. 6.2).

In the West Kimberley clan estates are indicated in Figure 6.3 (Blundell & Layton 1978: Figure 5). The map with marked clan estates covers an area determined to be of the order of 17,700 square kilometres. Twenty eight estates are named, making the average area 632 square kilometres / clan. This area is double of clan estates found on the Mitchell Plateau.



Figure 6.3 West Kimberley clan estates.
(Blundell & Layton 1978: Figure 5)

Band Size

The basic social unit above the family level is the clan (which is also the land owning unit) but it is the band, founded on marriage and descent, which is the actual residential and exploitative group (Blundell 1975). The band is a flexible residential unit based on the family unit of men and unmarried women from one clan plus the men's wives who retain their clan identity. With them may be men from other clans who are visiting. The band is sensitive to ecological conditions and changes (Blundell 1975: 80). It is the band that is the group of people most likely encountered and described in historical accounts.

Determining the geographical size of tribal areas and clan estates is the first step in investigating the size and composition of Aboriginal groups. From this a rough estimate of the number of people living in a geographical area may be found. Historical data on the sizes of groups encountered is provided by the accounts of explorers and the main journeys of exploration are described in Chapter One (also refer to Blundell 1975: 116-117, and McGregor and Chester 1992). One of the first references is that of Captain Phillip King who made contact with a small group of people at Hanover Bay in 1821 during his

voyage of exploration. Unfortunately the encounter resulted in violence (King 1827: 66). Sixteen years later in 1837 George Grey was in the same area on his overland exploration of north west Australia. His party was attacked by two groups of fourteen men (Grey 1841: 106-107, see also Chapter One). During the initial investigation of Camden Sound in 1863 in view of settlement, two groups of twenty Worora attacked the party (Martin 1865: 242).

Pastoralist Joseph Bradshaw encountered Wunambul people in the vicinity of the Roe River in 1891. In a nearby gorge large groups of people were observed along the river. "The natives appeared to carry out extensive fishing operations at each rapid where the shallowness of the water enabled them to spear passing fish" (1892: 97). Bradshaw reported that one estimate his party gave was for a total of 300 people in the gorge (1892: 102). Camping in the vicinity between a lagoon and cliff face, thirty four Wunambul approached the camp. The next morning on departing camp the group had increased to around sixty (1892: 98). Bradshaw's description of the latter group (quoted earlier) is of interest as they are dressed and painted in a manner impractical for hunting and more suitable for a ceremony (1882: 99). Bradshaw's expedition was undertaken towards the end of the wet season in March 1891. If the assembled Wunambul were decorated for a ceremony then the nature of it is unknown as, traditionally, ceremonies for repainting Wandjina art in the respective clan members' galleries would occur at the end of the dry season five or six months later (Blundell 1975: 72).

Chief Inspector Surveyor Frederick Brockman traversed most of the Kimberley in 1901, as has been described in Chapter 1. He reported that there were far fewer Aborigines than he had been led to expect, with there being few in the interior between the Chamberlain River in the east and the Glenelg River in the west and that they were most numerous around Doubtful Bay (1902: 11). On the Chamberlain River in the East Kimberley he met small parties totalling around 70 – 80 people in all (1902: 11) and elsewhere small hunting parties, which from the size of their camps, he thought numbered 40 – 50 of all ages and sexes (1902: 11). Naturalist Dr House reported that the natives seemed to be "very sparely scattered" (1902: 17) and that:

> "it appears to be the custom with these natives to travel in small parties, probably with the idea of more easily obtaining food, assembling at certain times in larger numbers for corroborees and tribal festivals; one or two places which appeared to be used for such purposes being met with" (1902: 17).

Analysing Rock Art Territory with Formal Methods

A question arising from the discussion of the different Kimberley language groups is whether there are changes in the style of art on crossing linguistic boundaries. The answer may be of use in understanding the distribution of Middle Phase art. The art and languages under discussion are from the Late Phase and are part of contemporary Aboriginal culture, where there is ethnographic information available, and is thought to post date sea level stabilisation and the commencement of modern ways of living. Two examples will be used, the first from the southern Kimberley by Phillip Playford (1960, 2007) on the distribution of 'Wandjina-like' art. The second is from the Sydney region comparing the distribution of petroglyphs and painted art by Jo McDonald (McDonald 1998, 1999, 2000, Veth and McDonald 2002).

In the southern Kimberley Phillip Playford (1960, 2007) investigated art sites in the vicinity of the Napier and Oscar Ranges. These are the lands of five language groups and Playford paid particular attention to the Unggumi, Bunaba and Kuniandi (Fig. 6.4). All three groups had paintings of anthropomorphs similar to Wandjina paintings of the Worora, Wunambul and Ngarinjin to the north. Playford was able to report a gradual change in style of paintings on moving south east away from the homeland of Wandjina art (2007: 141). First the Unggumi near the coast bordered the lands of the Worora and Ngarinjin. They painted recognisable Wandjina figures, called the anthropomorphs by that name and, further, stated the function of the art was to bring rain every wet season (1960: 119). In this way they are in full agreement with the bordering tribes to the north. To the south east of the Unggumi lie the Bunaba. Wandjina paintings occur here but have a different name, *Nurunguni-Nowungoo*, translated as meaning 'All-Father'. Unlike the

Unggumo the connection between the painting and rain making has been lost or possibly never existed (1960: 120). Further south east are the Kuniandi. A figure associated with rain making, *Nurunguni-Gnarboo*, is painted or retouched at the end of the dry season to ensure the wet season. In this way it agrees with the practices of the northern tribes. However, the figure painted is different from conventional Wandjina figures, being an anthropomorph with a horseshoe head, a mouth (never painted on Wandjinas) and a chest decorated with cicatrice marks (1960: 121). Wandjina style anthropomorphs are also found further to the east, with a well known painting occurring on the Chamberlain River. This trend extends into the Northern Territory where in Wardaman Country are the Lightning Brothers, figures painted in a similar style to Wandjinas. The figures even have an associated practice of repainting at the end of the dry season to ensure strong rains in the wet season (Arndt 1962, Walsh 1988: 202).

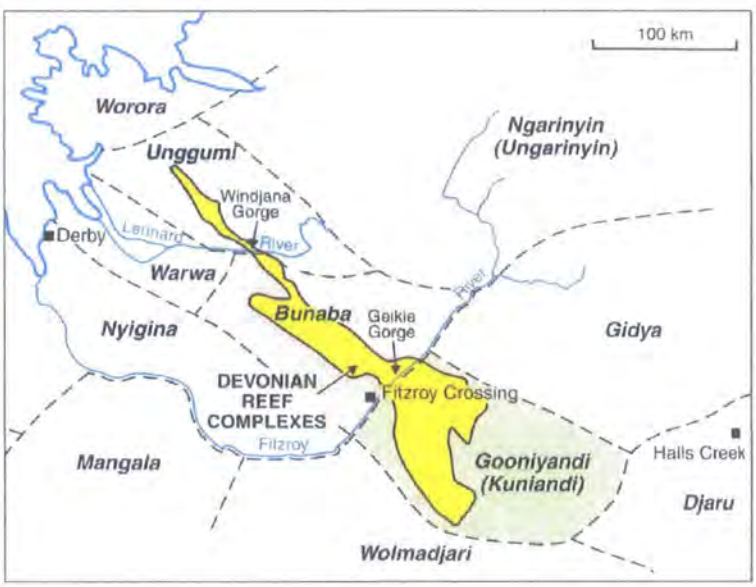


Figure 6.4 South Kimberley language groups.
(from Playford 2007: 128 Figure 8.1)

The variation in style of rock art with location has been discussed by Jo McDonald for the Sydney region in south east Australia (McDonald 1998, 1999, 2000, Veth and McDonald 2002). In the Sydney region 4000 art sites, in an area of which there were four known language groups, were examined. The art sites are divided into sheltered painting and open-air petroglyph sites.

Both forms of art are thought to be contemporaneous and limited AMS radiocarbon dating on charcoal drawings provided maximum ages of 3000 years (Veth & McDonald 2002: 126). Analysis of the art content revealed that amongst painted art stylistic homogeneity was lower than for petroglyphs (2002: 126). McDonald interpreted this as showing different social strategies whereby open air petroglyphs enhance the broad scale bonding of larger groups, and the painted sites enhance the identification of local groups (McDonald 2000: 59, Veth & McDonald 2002: 126). In the region only one style boundary was observed in the art body, between the northern and southern language groups. The examples from the two regions illustrate that art styles do change on crossing language boundaries.

The Geographical Extent of Kimberley Painting Styles

The geographical extent of the Kimberley art traditions is shown in Figure 6.5 with an obvious separation between the two Middle Phases of Bradshaw and 'Clothes Peg' Figure Period art and the Late Phase of Wandjina Period art. As has been discussed in previous chapters a criticism laid at Walsh's chronology and nomenclature is that he rarely indicates whether within his numerous art periods, the groups and sub-groups are in fact regional variations. From Figure 6.5 it is apparent that later 'Clothes Peg' Figure Period art has a larger geographical spread than the earlier Bradshaw Period. However, findings from the Northern Territory also suggest that Bradshaw Period figures may have spread to the Keep River (Taçon et al. 1999, Taçon et al. 2003) and possibly as far east as the Fitzmaurice River (Ward 2005), appreciably extending the range shown. Ethnographically recent Wandjina Period art extends almost as far south as Fitzroy Crossing and east past the Drysdale River. An isolated 'Wandjina-style' figure lies on the Chamberlain River in the East Kimberley. The geographical spread of the art period illustrated above is similar to that shown by Elkin (1930). A comparison with a map of 'Tindale tribes' (Tindale 1974) shows that the geographical extent of Bradshaw Period art covers the modern territory of the Worora, Wunambel, Gamberre, Miwa and part of the Ngarinjin tribes.

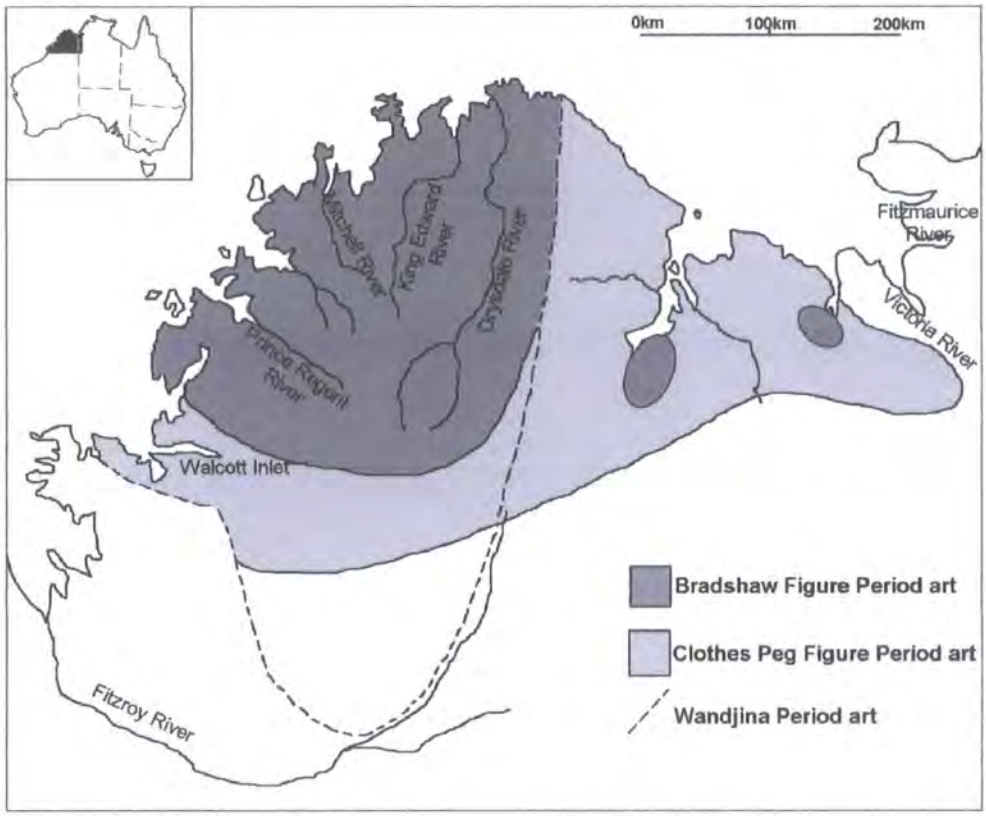


Figure 6.5 The geographical extent of Kimberley painting styles.
(adapted from Morwood & Hobbs 2000: 35 Figure 29)

The geographical area of the art periods was calculated from Figure 6.5 using the area calculation function in OziExplorer mapping software Version 3.95.4k. The results are shown below in Table 6.3. 'Clothes Peg' Figure Period art covers an area twice the size of the preceding Bradshaw Figure Period with recent Wandjina Period art having a geographical extent lying between the two.

Chronology	Art Period	Geographical Extent
Middle 1 Phase	Bradshaw Figure Period	57,000 sq. km.
Middle 2 Phase	'Clothes Peg' Figure Period	120,000 sq. km
Late Phase	Wandjina Period	94,500 sq. km

Table 6.3 Geographical extent of Kimberley art traditions.

Any determination of the extent of the Bradshaw art tradition is likely to be an underestimate since it does not allow for offshore islands and the now submerged land between those islands and the mainland. The extra area covered by offshore islands and the intervening distance to the mainland, is of the order of ten thousand square kilometres. However given the impossibility

of checking the geographical extent of Bradshaw art now submerged, no attempt was made to calculate the wider area of the land lost with rising sea levels. The Kimberley Cruising website catering for coastal sailors, http://kimberleycruising.com, lists and illustrates art sites accessible by boat and so provides an indication of the spread of styles in the coastal areas. Jar Island in Vansittart Bay has both Bradshaw Figure and 'Clothes Peg' Figure Period art. Wollaston Island has Bradshaw Period figures, as does Bigge Island. Montague Sound on the mainland has a rare boat depiction, a high prowed 'canoe' with 'sailors' wearing Simple Northern Figure headdresses. This is illustrated by Walsh (2000: Figure 28). Bigge Island is also known for Wandjina style paintings, that depict Kaiara, cloud spirits who control the wind and rain (Crawford 1968: 69). This art is contemporary and postdates the sea level rise. Rowing boat and ship paintings include pipe smoking Kaiaras, and most likely represent contact art (Crawford 1968: 77).

Past Environmental Comparisons

Regional comparisons between the Kimberley and Arnhem Land may be made with the geographical area covered by Dynamic Figures of Arnhem Land, thought to be contemporaneous with Bradshaw Period art (Lewis 1988: 84). Chaloupka (1984) estimates the range of Dynamic Figure art to be 180 km north to south and 200 km laterally, an area of 36,000 square kilometres. Lewis, on environmental conditions at the time of painting, would have the territory of the Dynamic Figure painters as being similar in size to the modern day Tjingili whose territory lies between Daly Waters and Tennant Creek in the Northern Territory and covers an area of 15,300 square kilometres (Lewis 1988: 82). By both estimates for Arnhem Land, territory covered by the Bradshaw tradition in the Kimberley is larger at 57,000 square kilometres. Lewis sees the later Hooked Stick / Boomerang Period occurring after the Dynamic Figure Period as resulting from improving environmental conditions and the collapse of extended information networks (1988: 86). However, there is no indication by him that the geographical coverage of art from this period is

larger than the preceding one as is the case in the Kimberley for the corresponding 'Clothes Peg' Figure Period.

Lewis' 1988 model can be applied to the Kimberley by examining the displacement in the position of the coastline resulting from sea level change after the Last Glacial Maximum (LGM) at 18,000 years BP, and the ensuing variation in environmental conditions. Three maps by Taçon and Brockwell (1995) illustrate the variation in coastline and vegetation cover in northern Australia at 15,000, 10,000 and 6,000 years BP, the latter date being when sea level change and hence the position of the coastline is thought to have stabilised in its current position.

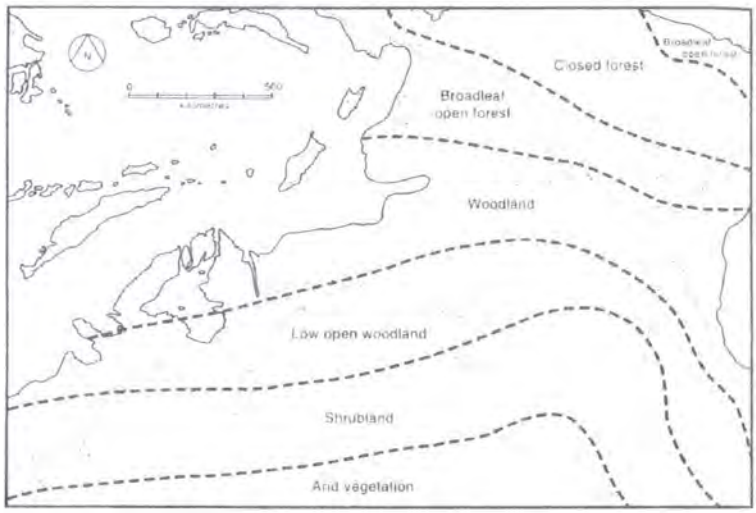


Figure 6.6a Coast line and vegetation cover 15,000 years BP.
(from Taçon & Brockwell 1995: Figure 2a)

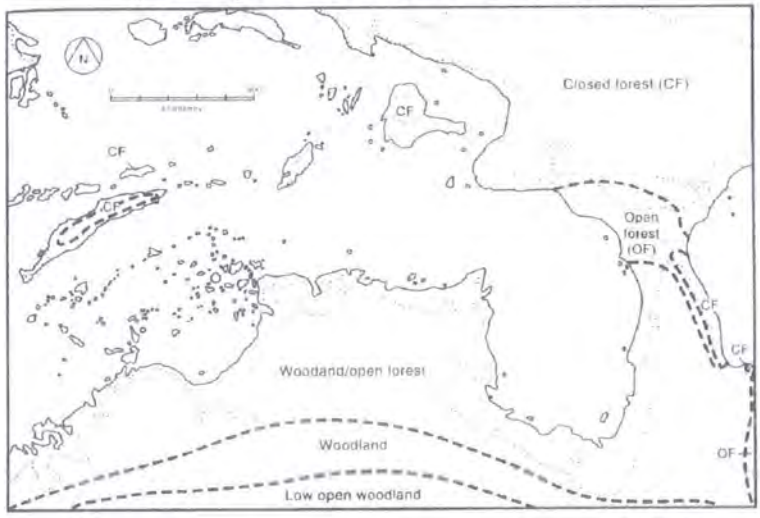


Figure 6.6b Coast line and vegetation cover 10,000 years BP.
(from Taçon & Brockwell 1995: Figure 2b)

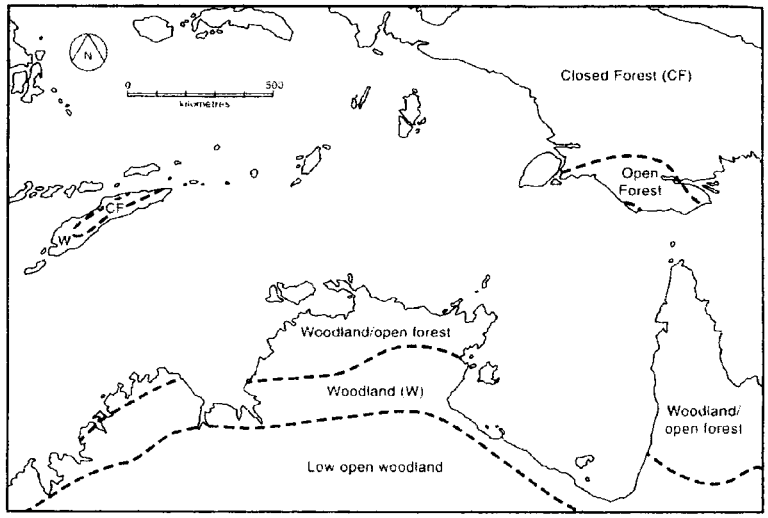


Figure 6.6c Coast line and vegetation cover 6,000 years BP.
(from Taçon & Brockwell 1995: Figure 2c)

If painting was occurring at the time of low sea levels associated with the LGM then the position of the Kimberley coastline was around 250 km further away than today. From Figure 6.6a showing the coastline at 15,000 years BP the climate and hence vegetation cover was one of low open woodland similar to the semi arid zone 500 km south present today. By 10,000 years ago the continental ice sheets had commenced melting with an associated rise in sea level and change in the shoreline position. At this time the sea level was 30-40m below present day levels (Taçon and Brockwell 1995: 679). The Arafura plain connecting Australia to New Guinea was almost flooded and the land bridge cut. In the Kimberley the coastline was within 50-100km of its present position. The main difference from today is the presence of offshore islands to the north of the coast lying between the mainland and Timor. Environmental change associated with the change in coastline and climate meant that vegetation cover had increased to woodland and open forest, perhaps not too dissimilar to today (Figure 6.6b). At this time it is thought precipitation increased and that northern Australia was both warmer and wetter than today though other opinions suggest it might have been cooler (1995: 680).

In view of the parallels between the development and change of art subjects between Arnhem Land and the Kimberley as discussed in previous chapters, then as a working model, the world of the painters of Bradshaw Period art would be that of the coast line of 10,000 years BP in Figure 6.6b. The sea

shore would be further away than today with many offshore islands to the north. The landscape would be of open forest and woodland but a more arid environment. The shore line would take another 3-4000 years to stabilise and environmental conditions improve with increased rainfall.

Applying Lewis' 1988 model of changes in climate and territory size to the Kimberley, then environmental conditions of 15,000 – 10,000 years BP with vegetation of low open woodland would be similar to that currently found 500km south today in the northern part of the Great Sandy Desert. The tribe living there is the Nangatara who occupy 35,900 square kilometres of arid land (Tindale 1974). Adjacent to the east in the Northern Territory is the land of the Walpiri. Their lands in turn stretch for 137,800 square kilometres. The Nangatara territory is smaller in extent than found for Bradshaw Period art but including surrounding tribes may bring that up to the same size. The Walpiri land is larger in extent than that covered by 'Clothes Peg' Figure Period art, 137,800:120,000 square kilometres.

It is difficult to determine the number of people who would have lived in the Kimberley at the time of the Last Glacial Maximum and the successive thousands of years when sea levels rose and the shoreline advanced to its present position. Since analogies have been made previously on environmental grounds to the size of tribal territories south of Arnhem Land and Kimberley, then one approach may be to use ethnographically obtained information. Hayden (1980) has applied this method to the arid environment of Upper Palaeolithic Europe and ideas of aggregation and dispersal of the people there using central desert Aborigines for his analogy (1980: 623). Hayden worked in what has been termed "one of the harshest environments man has successfully inhabited" (1980: 623 quoting Gould 1973). Here the traditional range of a band of 25 individuals is 2,800 square kilometres. To put into context this is approximately the same area of ground as represented by an Australian 1:100,000 map sheet. Applying the analogy to the Kimberley then during the heightened aridity between 18,000 – 10,000 years ago, what is now Drysdale River National Park would have been able to support a group of around 25 people. Since there is no evidence to say the Drysdale and

Carson Rivers ceased flowing at this time, the presence of permanent water would suggest the population was almost certainly higher than this figure.

Ethnographic information reveals that the inhabitants of the Australian desert had a rich ceremonial life and that harsh conditions did not preclude people from aggregating for ceremonies (Mountford 1976, Spencer and Gillen 1968, Tindale 1935). The nature of such possible aggregations and their applicability to Middle Phase art sites is discussed in the next section.

Aggregation of People

This second part of the chapter investigates whether hypotheses about aggregation sites mainly put forward to analyse the distribution of Upper Palaeolithic art sites (Conkey 1980; see also Bahn 1982, Straus 1987 and to a lesser extent Gamble 1982) are applicable to the Kimberley. In the late 1970s Meg Conkey investigated prehistoric hunter gatherer aggregation sites, using the Spanish Palaeolithic site of Altamira as an example (Conkey 1980). Conkey's starting point is that "most of the world's hunter gatherers follow an annual cycle characterised by periods of concentration and dispersion. The aggregation site is an a priori type of hunter gatherer site" (1980: 609). Evidence, both formal and informed, for the assembly of groups of Aborigines is presented below.

Conkey pointed out that much of the work in Upper Palaeolithic sites in south western Europe has concentrated in caves, with little archaeological interest in the front lying deposits. Further, the caves are not large enough to accommodate large groups of people of over 100 persons (1980: 611). Conkey proposed that ecological factors may have promoted aggregation, quoting a paper presented by White (1978) where he shows that larger Upper Magdalenian sites on the Vezere River are closer to fords than smaller sites. The fords would be places where game animals, as well as people, would cross the river. Reindeer herds crossing at these places would encourage

people to congregate near them (1980: 611). In Australia there are no herds of game animals encouraging hunters to congregate, however the relationship of crossing places over the Drysdale River and site location can be investigated especially in view of Bradshaw's report of large groups fishing at rapids (1892: 97).

After Conkey other authors looked into the possibility of aggregation sites. Paul Bahn's work in the Pyrenees on Upper Palaeolithic caves leads him to raise the idea of a series of aggregation sites spaced at around 50km intervals and two 'super-aggregation sites', the location of "bigger, more important and/or less frequent gatherings" (1982: 263). Lawrence Straus examining Vasco-Cantabrian Spain speculated that each cluster of painted caves may correspond to the territory of an Upper Palaeolithic band and the spaces in between clusters, buffer zones (1987: 156).

In the following pages I will examine the likelihood or not of aggregation by looking at, on the one hand, the proximity of river fords, seasonal movement of people, informed and formal evidence of aggregation. On the other hand, I will also introduce the possibility of the existence of site complexes in the two survey regions which I will test against ideas of visibility and site distances.

River Fords

Along the Lower Drysdale River, in the gorge below Solea Falls and towards the westward facing cliffs of the Long Scarp, there are six crossing places, fords, two of which are over sandbanks and the remainder over rocky outcrops (Fig. 6.7). The first sandbank is across from Bulldust Yard directly below Turtle Creek. The second is a few hundred yards downstream of art site DR07-05 Bichrome Rock. The presence of both sandbanks is dependent on the flow regime of the river and their providing convenient crossing places is no guarantee this was the case fifty years ago let alone thousands of years ago.

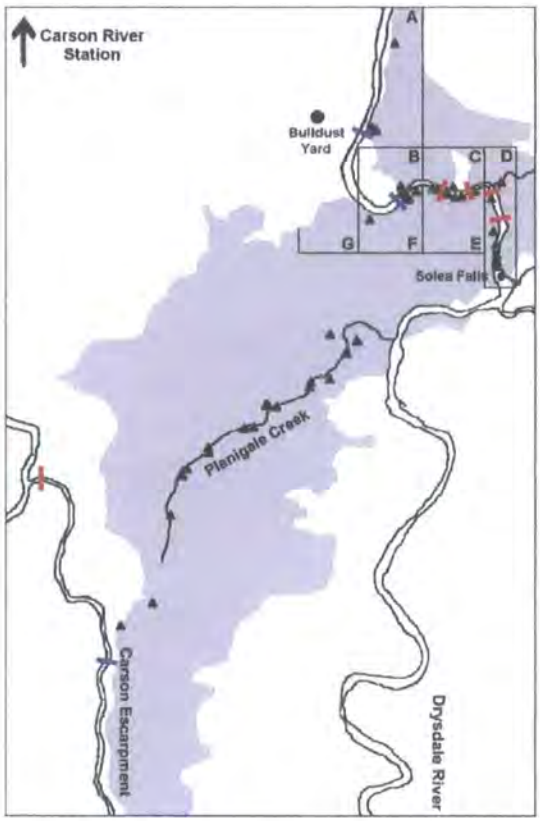


Figure 6.7 Crossing places on the Lower Drysdale and Carson Rivers, illustrating the proximity to art sites (black triangles) with sandbanks in blue and rock bars in red.

Of the four rocky crossing places, travelling upstream, two bound either end of Bradshaw Pool on the east-west leg of the river. The third rocky crossing is just north of DR07-63 Mesa Billabong art complex where the north flowing river turns west. The fourth place is to the north of complex DR07-17 near Walsh Creek. All the crossing places are affected by the height of the river; on my first visit, although it was possible to use the sandbanks to ford the shallower part of the river, the rock outcrops created rapids preventing crossing. Returning seven weeks later it was possible to cross the rocks without getting one's feet wet. In times of past aridity lower water levels would have made crossing easier. As has been discussed previously in Chapter 5, the Lower Drysdale River did not act as a barrier or boundary to the Bradshaw Figure painters. As for the rest of Drysdale River National Park, Planigale Creek does not provide access problems. The Carson River can be forded upstream of DR07-43 Larryoo with a second crossing place downstream near the junction with the Morgan River at Moorello.

On the northern coast the Far Away Bay sites are generally on high areas overlooking the sea. There are no major rivers to cross until the mouth of the King George River is reached twelve kilometres east. The inland sites at Gumboot Bay cluster around a creek. Suitable crossing points are not relevant on the coast as the creeks are fordable, as would be the case in the past, when the coastal plain was exposed at the time of Last Glacial Maximum.

On the Lower Drysdale River a cluster of sites occurs on the south bank within 500m of the second sandbank ford near DR07-05 Bichrome Rock. However, due to the transitory nature of the sandbank, no store should be set by this. DR07-08 Living Shelter, with a full range of art from ancient grass prints to modern Wandjina paintings, lies 750m east from the second sandy ford and 1 ½ km from the first rock ford at the western end of Bradshaw Pool. The range of cultural deposits also makes this an archaeological site. The rock ford is within 100m of Bradshaw Alley, the gully containing numerous shelters with classic Bradshaw Period art.

Midway between the eastern crossing of Bradshaw Pool and the third rock ford where the river turns west is site DR07-14 Nurini/Yuruluru. This site contains the famous kangaroo hunting scene of Elegant Action Figure art. The panel is called Nurini and a dusty living area with three Wandjina paintings on the back wall is called Yuruluru (Schmiechen 1993: 22). This important shelter contains a range of art from ancient to modern. Finally, mid way between Solea Falls and the westward turning of the river lies DR07-17, Pulpit Rock, a major site complex of shelters and panels overlooking a flat rock pavement (Figures 6.8). Schmiechen states this is the most elaborate complex he recorded in the Park (1993: 37). Along with the art is an array of cultural remains.

Seasonal Aggregation of People

The Cantabrian site of Altamira has been identified as a seasonal aggregation site on account of the diversity of decoration on carved bone and its faunal assemblage where two locally available resources were harvested: red deer and shellfish (Conkey 1980: 611). Little archaeological work has been undertaken on the Drysdale River sites, apart from unpublished excavations by Morwood in the mid 1990s (Morwood & Hobbs 2000: 34-37). Exploratory work has proved the deposits are shallow and unproductive (Schmiechen pers comm. 2007). Although the river has a seasonal flow from wet to dry

season there is no indication of the presence of seasonal fauna. The northern coastal area of Far Away Bay has had no archaeological excavations undertaken and again there is no indication of exploitation of season fauna apart from shelters containing Late Phase Wandjina Period art showing evidence of shell fish exploitation in the form of small shell middens, with Boab Bay's FAB07-14 Museum Shelter being the best example.

Evidence for the seasonal aggregation of people for the exploitation of food-stuffs is documented throughout Australia (Layton 1992). In the Victorian Alps and Snowy Mountains of south-east Australia millions of Bogong moths (*Agrotis infusa*) spend the summer months hibernating, or aestivating, in rock crevices on the high peaks (Flood 1983: 212). They cover rock walls like a carpet with up to 14,000 moths per square metre being recorded. The moths are an excellent food source and can be collected by the kilogram before being lightly roasted on hot flat rocks. The abundance of food led to great moth feasts and gatherings of different friendly tribes. "The seasonal congregations were the time for initiation ceremonies, corroborees, trade, marriage arrangements and the settling of disputes, which sometimes involved pitched battles" (1983: 213).

The northern tablelands of New South Wales is a harsh environment and reveals only one occupation site, whereas a few art sites and over twelve bora (dance) grounds and stone arrangements are found (Flood 1983: 212). The high country is thought to be of importance for the eastern Australian sky god *Baiami*. Flood believes that participants at ceremonies would have lived on kangaroos and the daisy yam (*Microseris scapigera*). The yam has daisy like flowers and fat coconut-tasting tubers which are roasted before eating (1983: 212).

Elsewhere in Australia seasonal resources were used to feed large gatherings of people. For example in Lake Condah in Victoria stone structures were built to catch eels (1983: 218). The presence of shell middens of oysters in northern New South Wales are supported by historical accounts which say people used to congregate to exploit the oyster beds. The sexual division of

labour broke down with both men and women collecting and the seasonal abundance allowed large scale social gatherings to take place (1983: 222). In Arnhem Land hundreds of people would gather for weeks or months at a time for ceremonies supported by *Macrozamia* nuts (1983: 211). The nuts are poisonous and preparations to make them safe to eat are lengthy. Their nutritional value is high, making them worthwhile to collect. Techniques to prepare them varied by region from allowing fermentation to take place over several months to soaking and leaching the toxins out before grinding into starchy flour and baking into a bread (1983: 211). With 'firestick farming' the cycad stands improved the nut yield by seven or eight times and were then more than able to support large ceremonial gatherings of people (1983: 211).

Although elsewhere in Australia the seasonal movement of people to take advantage of new resources has been documented (eg north Queensland), sparse information is available for the northern Kimberley. Crawford, Vinnicombe and Troillett (1981) have reported seasonal exploitation of resources on the Mitchell Plateau. Aboriginal people spent wet season months on the coast at Port Warrender making use of maritime resources and short sea trips for dugong, turtles and their eggs. Large shell middens and a high density of campsites show the importance of the area to the people (1981: 36). Further, seasonal access to the coast was a reference point for ceremonies occurring in the early part of the wet season connected with stingrays (1981: 37). In the dry season people moved inland by way of the rivers and their tributaries (1981: 36). Seasonal movement is also a factor of West Kimberley life. Blundell and Layton (1978: 238) describe how men would live away from their own clan estates in those of their wives and mothers. Clan members were free to travel and exploit resources in their own estate. Through affinial links individual men were able to visit the estates of their mother and wives. This expanded the resources available for exploitation. In this way interior Ngarinjin clan members, if they had the relevant female connections, would visit the coastal estates of the Worora. This movement occurred during the wet season as the heavy rains prevented ease of movement and fire drives for hunting were impossible (Blundell 1975: 122).

Ethnographic evidence of aggregation

In South Australia Tindale reported the assembly of 270 Pitjantjatjara for the initiation of two boys (1935: 199). With the aggregation of so many people in an arid environment, food collection by the women rapidly became a major problem. Although abundant at first in the vicinity of the gathering, shortages of vegetables and small mammals led the women to travel up to five miles to collect food. Their complaints over this effort led to the ceremonies being rapidly concluded. Tindale regarded food provision as a major economic factor limiting the duration of Pitjantjatjara initiation ceremonies to periods of less than a week (1935: 224). The documented assembly of large numbers of people for a ceremony shows that low population numbers and a harsh arid environment are not insurmountable obstacles.

Anthropologist Andreas Lommel visited the West Kimberley in 1938 as part of the Frobenius Expedition, described in Chapter 1. Whilst in Wunambel country he was invited to see a large ceremonial gathering (1997: 70). Although the gathering was not connected with the production of rock art, the details of people aggregating together are worth investigating on account of the understanding it may provide. The ceremony was an annual event of the three west Kimberley tribes, Worora, Wunambel and Ngarinjin, and performed by members of those tribes. Ceremonies of this nature were traditionally held at the end of the wet season when bush food was most abundant. However, the impact of white cattle ranching and the employment of local people in the industry meant that gatherings were now held at the end of the dry season after work had finished (1997: 70). The ceremony was held in a border zone where the boundaries of the three tribes met so as to be easily reached by member of all the groups (1997: 70). The assembly ground, Lumburry, was on the upper reaches of the Glenelg River in a large tree covered valley. The purpose of the gathering on this occasion was to undertake the new performance of Worora poet Allan Balbunga and to teach this to the other tribes (1997: vii). Lommel recounts that about a hundred people met here from the three tribes and camped along the length of a creek for a distance of a kilometre, each family choosing to stay under a shady tree (1997: 71).

Further, the groups camped in the direction from which they had come dividing the valley into Worora, Wunambel and Ngarinjin sectors (1997: 71). The dance ground itself lay in the middle of the tribes' camping area. A large flat sandy area was cleared of vegetation and stones and a wall of bushes was built on the northern edge as a backdrop behind which the dancers could conceal themselves before performing.

Lommel states the performance comprised thirty eight verses taking five days and nights to perform (1997: 73). Two fixed points in the daily ritual were sunset and sunrise. The ceremony would start at sunset with a short performance before people dispersed to eat. It recommenced afterwards and lasted to midnight when people retired for the night. The dance restarted at dawn with the climax occurring with the rising sun (1997: 75). With this the dancers and audience dispersed to their camps before going out hunting and foraging. Food collection took a few hours with hunters returning to camp in the early afternoon. Body decoration for the evening's events would be applied while preparing for the ceremony (1997: 75).

The performance took five days to complete and after two or three days rest recommenced for another five day cycle and so on for a few more weeks. Initially only Worora men had performed in the dance with other men present learning songs and dances. After a few weeks they were fully conversant and in turn were able to spread the dance to other people in the bush months later (1997: 75). Lommel makes one observation contrasting the populated bush as described by Grey a century earlier with the one hundred people assembled for the ceremony, the main body of people from three tribes (1997: 75).

Information on the actual painting of art sites and the gathering together of people for ceremonies conducted there is rare. Blundell has stated that in the clans of the southern Worora, men and their wives travelled the country encouraging people to retouch the paintings to refresh them (Blundell 1975: 72). One of the few people to present evidence of this is Crawford, as he describes below:

> "Aborigines say that, when the cave paintings were restored, large numbers of men used to congregate and during such an occasion various ceremonies were performed. The custodian of the site, who is one of the men whose child spirit had come from this particular site, had the duty of arranging the meeting and of organising an adequate supply of food for the occasion. The custodian would not necessarily be chosen to repaint the pictures, for such an honour would be delegated to an individual whose artistic abilities were widely known." (Crawford 1968: 37).

Survey Regions

Turning to Drysdale River National Park and the distribution of art sites, it is fair to say that the Carson Escarpment and Carson River provides a western boundary to the art of Planigale Creek, with the Drysdale River itself forming the eastern boundary on account of the lack of art sites reported immediately beyond these extremities. The north-south extent of sites is taken here as extending from site DR07-42 in the south at Dulcis Falls on the Carson Escarpment, to DR07-60 in the Long Reach area north of Bulldust Yard (Fig. 6.8a). The geographical range of sites agrees too with data published on the Department of Indigenous Affairs (DIA) database and discussed in Chapter Three. Other art sites are located downstream of the Long Reach as discussed by Schmiechen (1986) and shown on the DIA database but are outside the range of this study. The size of the Lower Drysdale River / Planigale Creek region is of the order of twenty by thirty kilometres, an area of 600 square kilometres.

Palmoondoora Creek lies to the west of the Carson Escarpment with the cliff and river providing an eastern border. Art sites are indicated on the DIA database at Swider Creek, midway between the escarpment and Palmoondoora Creek, but these were not visited. The southern extent of the zone is the gorge at Woorakin Creek with sites DR07-44 – DR07-47, the northern boundary being DR07-57 just south of the junction of the creek with the Morgan River. The size of the zone is approximately thirty kilometres north to south and twenty kilometres east to west, making an area of 600 square kilometres (Fig. 6.8a). It should be borne in mind that I have taken the western

border as Palmoondoora Creek on account of the art located here and the lack of data presented on the DIA database. However, sixteen kilometres or so to the west of the creek is an area of stone country reputed to have concentrations of art (Schmiechen pers. comm. 2007). This occurs on Theda Station where Grahame Walsh has undertaken much of his research and which has a reputation for being rich in art areas. However, as no information is published in the DIA database it is not possible to estimate the number of sites or the extent of this area.

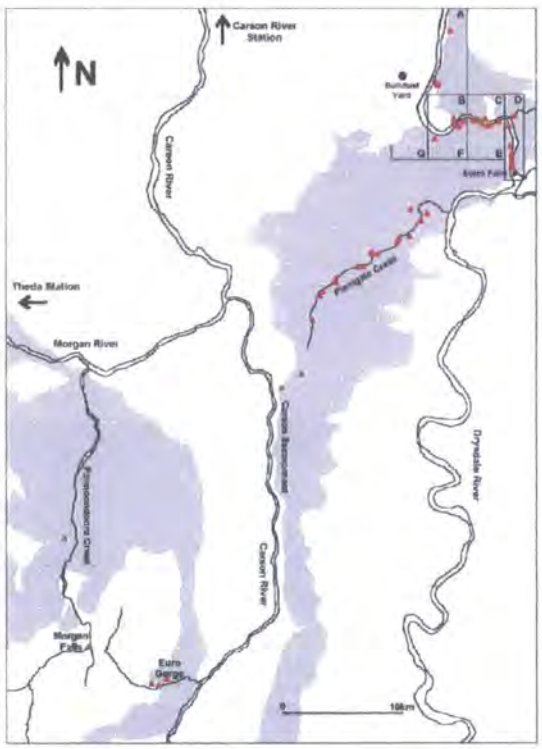


Figure 6.8a Site distribution along Drysdale River and Planigale and Palmoondoora Creeks.



Figure 6.8b Site distribution at the coastal sites of Far Away Bay.

My second research area consists of coastal sites at Far Away Bay, though it must be emphasised again that at the time of painting the coastline was almost certainly hundreds of kilometres distant due to the effect of lower sea levels at the time of northern hemisphere glaciation. The lateral extent of my research area, west to east, from Lost City to the Gumboot Bay sites is fifteen kilometres. The northern extent is from Billabong Area in the south to Lost City, a distance of twenty two kilometres (Fig. 6.8b). The area of ground covered is 330 square kilometres. A few art sites have been found between

Far Away Bay and the King George River but not in the concentrations located in the vicinity of Far Away Bay, as has been discussed in Chapter 3 (Mike Donaldson and Jeff Gresham pers. comm. 2008). As such, it seems fair to maintain the 15 x 22 km extent for the Far Away Bay art body.

The extent of the area covered by art sites in the Lower Drysdale River / Planigale Creek area and Palmoondoora Creek is of the same order as the average contemporary clan territory for the West Kimberley at around 600 square kilometres. In the same way Far Away Bay sites have a spread corresponding to the average clan territory of the Mitchell Plateau at approximately three hundred square kilometres. It should be noted that in both Palmoondoora Creek and Far Away Bay full surveys have not been undertaken and the number of art sites is almost certainly a lot greater.

Investigating Site Complexes

During visits to the Lower Drysdale River it was noticeable that some of the larger art sites were in close proximity to open areas. Along the east to west axis of the Lower Drysdale River, wide river terraces of sandstone pavement are common on the south bank of the river. Currently some areas are covered in elephant ear wattle preventing ease of movement, but a bushfire would easily clear them. In the gorge below Solea Falls beaches on the eastern bank would be suitable for groups of people to meet. The main site in the gorge is DR07-17 Pulpit Rock (Fig. 6.9), above the escarpment on the west bank. It is a complex of weathered rock shelters, heavily decorated, with a wide rocky flat terrace to the front. A low rock mushroom lies in front of the terrace with egg shaped river bed rocks placed on top (Schmiechen 1993: 37, Figure 4).



Figure 6.9 DR07-17 Pulpit Rock site

Along Planigale Creek some of the complexes view central areas, for example DR07-23, 24 and the art complex comprising sites DR07-31/32/33. The latter consists of low weathered shelters containing art panels surrounding an open area of football pitch size. The impressive ridge top site of DR07-25, known as Large Macropod looks down to a scrub covered plain. Finally over to the west on Palmoondoora Creek, complex DR07-56 sits on the second level of an eroded sandstone hill overlooking the plain below. The first level and the plain have space for people to assemble.

The same link between art complex and open area is seen at Far Away Bay and will be discussed at length in the next chapter. The best example is at Lost City where the sandstone outcrop has fractured and weathered into house sized blocks separated by gullys of varying widths. Sites FAB07-42a – FAB07-42f (Fig. 6.10a) are a series of low shelters or art panels surrounding a central flat area. From this area most of the panels and art are visible, although with two exceptions. One panel, FAB07-42b, is sited to the rear of one of the sandstone blocks. The other site, FAB07-42f, is a cave on the

northern side of the square and contains a variety of art such as Bichrome and 'Clothes Peg' Figure art. The location of art panels apparently around central open areas is seen elsewhere in Lost City such as at FAB07-45, FAB07-48 and FAB07-51b and at Boab Bay at FAB07-15, FAB07-20a – FAB07-20e (Fig. 6.10b), FAB07-21a. Although the presence of panels and their arrangement is the work of geology, apparently suitable sites looking away from the natural courtyards or on the rear of blocks were unused. During data collection I discovered that locating a central open area meant the discovery of art was more likely.

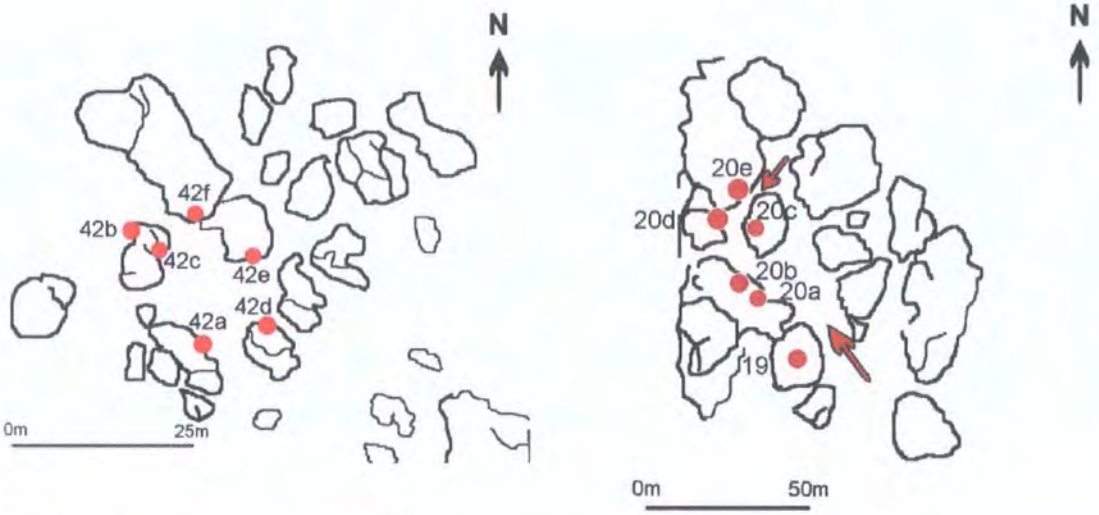


Figure 6.10a Lost City FAB07-42 complex Figure 6.10b Boab Bay FAB07-20 complex
Figure 6.10 Far Away Bay's Lost City and Boab Bay art complexes.

The analysis of site locations as presented in Chapter Four, Table 4.1, shows that 52.4% of sites are shelters in Drysdale River National Park and 26.2% for Far Away Bay, and 28.6% and 61.5% respectively are small panels and single paintings. However, sites clustered together may be grouped into site complexes depending on the proximity of panels and the nature of the geography forming rock shelters. A list of site complexes is provided below in Table 6.4 with site identification number, name (if known) and the number of art categories present. Although the larger sites will be expected to have a greater number of art periods or styles present this is not always the case as indicated. Many of the complexes exhibit open areas by them and this too is noted in the table. In the case of the two Far Away Bay site complexes,

FAB07-20 and FAB07-42, also with the largest number of art categories, the weathering of the Warton Sandstone has created outcrops with rock canvases visible from a central, open area. This was more apparent on account of a bushfire which burnt out the area the previous year, removing vegetation that would otherwise obscure the view of panels from the central area.

				Motifs present by art phase and type																	
				Early	Middle							Late	Indeterminate								
Site ID	Name	No of Art Categories	Type of Open Area	Irregular Infill Animal Period	Tassel Bradshaw Figures	Sash Bradshaw Figures	Elegant Action Figures	Bi-Chrome Figures	Clothes Peg Figures	General Bradshaw Figures		Wandjina Period	Stick Figures	Anthropomorphs	Stencils	Macropods	Other Animals	Geometric Figures	Prints	Other Art
Lwr Drysdale River																				
DR07-04/5	Wandjina Rock	8	Beach				X	X	X			X			X		X		X	X
DR07-06	Wandjina Cave	7	Terrace	X		X	X			X		X			X				X	
DR07-17	Pulpit Rock	8	Terrace		X		X	X					X			X	X	X		X
DR07-62a	King Bradshaw	3			X	X				X										
DR07-66/67		9	Terrace	X	X	X			X					X	X		X		X	X
Planigale Creek																				
DR07-21		8				X		X	X	X		X				X	X	X		
DR07-23/24		7		X						X		X	X			X	X			X
DR07-25	Large Macropod	8	Plain		X	X						X	X		X	X	X			X
DR07-31 complex		6			X	X			X			X		X	X			X		X
Palmoondoora Ck																				
DR07-56		11	Plain	X	X	X			X	X		X		X			X	X	X	X
Far Away Bay																				
FAB07-05/07		7			X	X			X	X			X				X	X		
FAB07-20		12	Courtyard	X	X	X	X		X	X			X	X		X	X	X		X
FAB07-21		6				X	X			X			X		X		X			
FAB07-24		4				X			X	X				X						
FAB07-26		7				X			X	X		X				X	X			X
FAB07-42		14	Courtyard	X	X	X	X	X	X	X			X	X	X	X	X		X	X
FAB07-48		5						X	X				X	X			X			
FAB07-49		4			X				X	X										X
FAB07-51		3		X		X				X										

Table 6.4 Site Complexes in Drysdale River National Park and Far Away Bay.

The distribution of art categories by site shows that, as expected, some sites contain a wider variety of art than others. In some cases these sites are part

of complexes or can be clustered together into complexes. Some, but not all complexes, have distinctive open areas either in front or are bounded by shelters and panels. The latter is the case in Far Away Bay sites (Fig. 6.11b) where the Warton sandstone is eroded away along blocky fault lines. 'Streets' and alleys are created amidst the blocks as well as central 'courtyards'. Along the Lower Drysdale River the open areas are often river terraces. The distribution of site complexes is illustrated in Figure 6.11a.

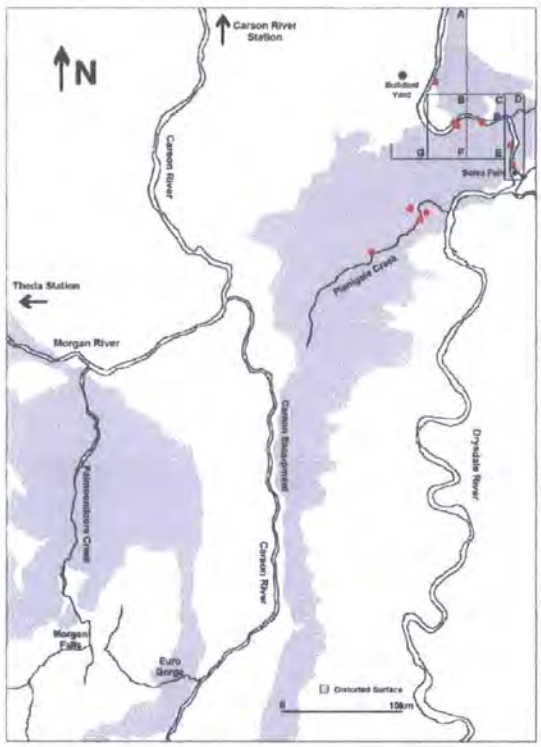


Figure 6.11a The location of visited site complexes in Drysdale River National Park.

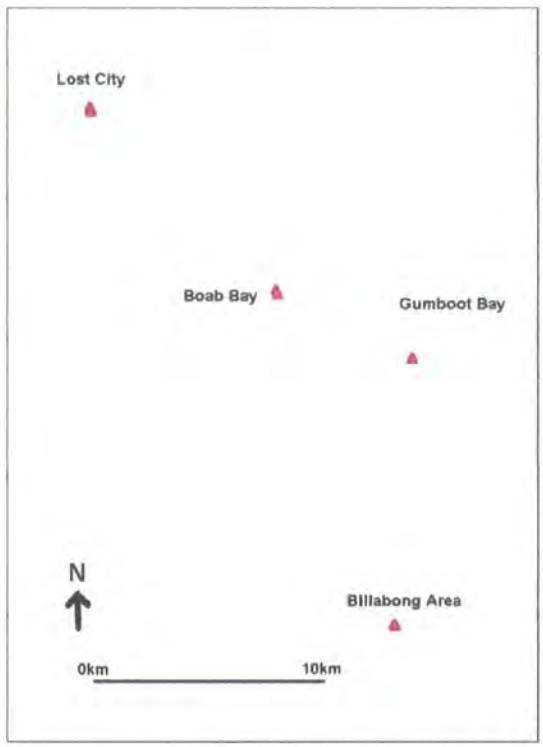


Figure 6.11b The location of visited site complexes at Far Away Bay.

Figure 6.11 Visited site complexes: Drysdale River National Park and Far Away Bay.

Visibility

The intervisibility of art sites in the landscape is a topic of increasing interest in rock art studies throughout the world (Bradley 1997, Fairen-Jiminez 2007). The availability of digital elevation models (DEM) and an appropriate GIS package means that locations and their inter-site visibility can be readily computer modelled. A major caveat though is the issue of tree and vegetation cover in the past. This is unknown and in actuality may have restricted viewing. In the same way the sample interval of the DEM may conceal small

scale topographical features such as small hillocks, which again may restrict visibility (Phil Howard pers. comm.). In the Kimberley the DEM available for use is from the NASA Shuttle Radar Topographic Mission (SRTM) data with a 90m pixel and 8 – 10m contour intervals. In view of the large data interval, the rocky nature of the country both along the Lower Drysdale River and the creeks of Drysdale River National Park as well as the nature of the weathered landscape at Far Away Bay, issues of visibility were not pursued. In Far Away Bay inter-site visibility is restricted to those panels looking into central open areas. The weathering of Warton sandstone into gulleys and blocks prevents inter-complex views. This is particularly true for the areas of Boab Bay and Lost City.

On the Lower Drysdale River the narrowness and length of the river gorge prevents sites being easily spotted until they are approached. This is the case to a lesser extent for sites on opposite banks. On the east to west section of the river, sites on opposite banks are visible from a few hundred metres away, but again not on the same bank until they are approached. Some sites are distinctive on account of where they are located. DR07-07 Goyon / Twin Brolgas is a large tilted slab on the south bank with art painted on the undercut. This distinctive slab acts as a reference point to the high rock shelter 100m to the west, DR07-06 Wandjina Cave / Bundarwa. In the river gorge, DR07-17 Pulpit Rock is on the ridge line of the west bank and obscured from view below. On Woorakin Creek between Morgan Falls and Carson River lies DR07-45 (Fig. 6.12). The art site is an eroded rocky outcrop isolated on a flat plain, rising above it like a mediaeval castle (Fig. 6.12a). The southerly facing art panel is itself visible from a hundred metres away on the plain. It is one of the few sites in Drysdale River National Park where both Tassel and Sash Bradshaw Group figures occur together on the same panel (Fig. 6.12b).



Figure 6.12a View of DR07-45 on approach from the plain.



Figure 6.12b DR07-45 Main art panel showing Sash Bradshaw Group figures.

Figure 6.12 Site DR07-45 on Woorakin Creek.

Further north along Palmoondoora Creek a major site complex DR07-56 is situated on an eroded sandstone hill rising above a plain. The occupation area is on the second level of the outcrop with commanding views of the scrub and tree covered plain below. Art panels within the complex are not linked by line of sight, nor is the hill visible from other sites in the area.

The separation of sites along the Lower Drysdale River and Planigale Creek was investigated by Nearest Neighbour Analysis (Fig. 6.13a), and the generation of Thiessen polygons (Fig. 6.13b), as an aid to investigating networks centred on sites. The polygons are produced by drawing perpendicular lines from the mid points between art sites, in this case using geographical coordinates input into a software package, University of Siena Spatial Analyses Utilities v1.0.f. The assumptions in this method are that the polygons define the area 'served' or influenced by the site, that ease of access is uniform and that minimizing movement was an important factor. One problem is that they give equal weight to centres of different size and so larger centres are not associated with larger areas. The role of the Drysdale River as a potential boundary is not taken account of in the analysis. The boundaries revealed encompass areas of only a few square kilometres and are of little use in analysis.

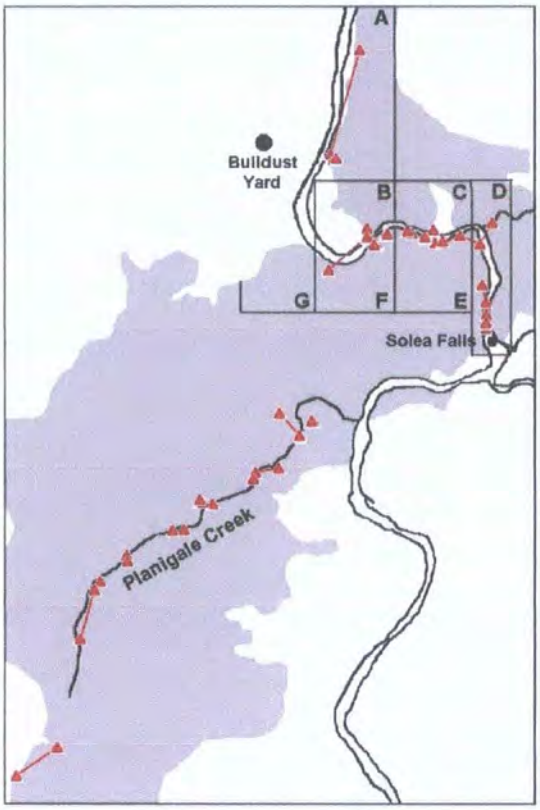


Figure 6.13a Nearest Neighbour Analysis for all sites, Lower Drysdale River and Planigale Creek

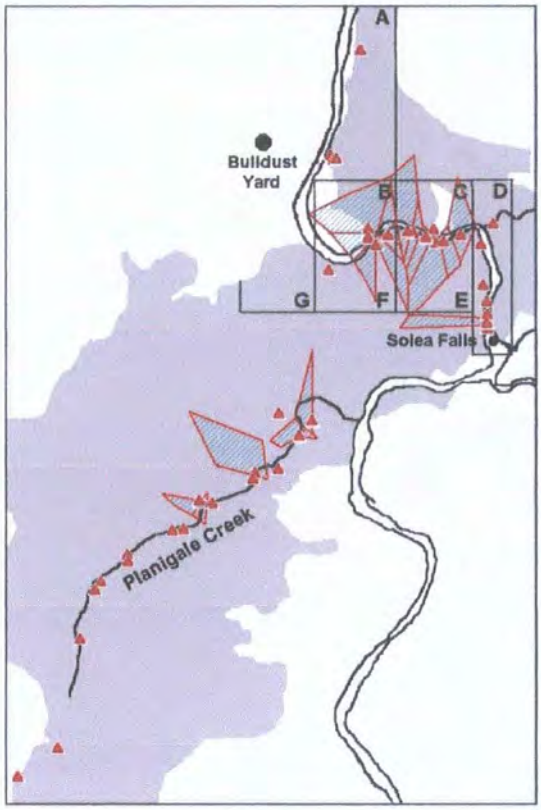


Figure 6.13b Thiessen Polygons for all sites, Lower Drysdale River and Planigale Creek

Figure 6.13 Nearest neighbour and Thiessen polygon analyses on the Lower Drysdale River and Planigale Creek.

Aggregation Site Distances

In view of the nature of the site complexes listed, with their proximity to open areas and higher proportions of motifs present, can they be thought of as aggregation sites in the classic Conkey mould? All the sites contain motifs from the Middle Phase ie Bradshaw and 'Clothes Peg' Figure Period art, and so were in use approximately 10,000 years ago. This was during an arid climatic period on the cusp of further environmental change resulting from a shifting coastline with the rise in sea levels. As has been discussed previously, present day ethnographic analogy would suggest that a band of 25 people roamed what is now Drysdale River National Park at this time, and that up to 200 – 300 people from surrounding areas could aggregate and live there for a few weeks for various purposes such as initiation ceremonies (Hayden 1980, Lommel 1997, Tindale 1935).

Anthropologist Martin Wobst introduced the idea of mating networks as a behavioural concept (1974, 1976). The application of his hexagonal model where "hunter-gatherer societies... are on the average surrounded by 6 neighbours" (1976: 50), coupled with a 'minimal band' range of 2,800 square kilometres (60 km diameter), when applied to the harsh arid environment of the western desert of Australia suggests aggregation sites should occur every 300 – 780 km (Hayden 1980: 623). This distance will be reduced in more temperate environments. Conkey's Upper Palaeolithic data indicated two aggregation sites in northern Spain 60km apart (Altamira and Cueto de la Mina) which perhaps "represent focal points for two maximal bands, self perpetuating and endogamous, situated in relatively rich environments" (1980: 623).

The main site complexes in Drysdale River National Park and Far Away Bay are listed in Table 6.4. Originally the Lower Drysdale and Planigale Creek sites were treated as separate aggregation sites. However this is not tenable on account of the proximity of the sites to each other, approximately 1-2km apart. The Palmoondoora Creek site complex DR07-56 is 50km from the Lower Drysdale sites. The coastal sites of Far Away Bay are approximately 85km from Drysdale River National Park and cluster together tightly in their respective areas. Lost City is 11km from Boab Bay and the latter is 15km from the Billabong area.

Rather than regarding each large site complex along the Lower Drysdale or Planigale Creek as an individual aggregation site a more apt approach would be to regard the whole area as an aggregation region with a focus on the south bank of the east-west section of the Drysdale River. This methodology is in agreement with work by Gunn (1997) in central Australia where clusters of rock art sites are coupled with archaeological, mythological and ceremonial sites. Here in Gunn's view the 'site complex' is more appropriate for study and management than traditional individual sites (1997: 124). The sizes of the complexes illustrated by him vary from a few hundred metres to 1 ½ km (1997: Figure 2), and stretch along gorges and follow the courses of streams.

This is of the same order as the distribution of art sites and complexes along the Lower Drysdale River and the clustering of sites seen at Far Away Bay.

Aggregation sites have been located and discussed in the Western Desert, in particular sites in the Calvert Range situated 30km to the south east of the better known Durba Hills (McDonald & Veth 2006, Veth, Smith & Haley 2001). The Calvert Range has a set of spring fed gorges in which are petroglyphs and paintings and rock shelters showing evidence of occupation. The carvings are thought to be older than the paintings with their dating back to the Pleistocene and late Holocene respectively (McDonald & Veth 2006: 106). Analysis of both the content of the rock art and spatial patterning leads Veth, Smith and Haley (2001) to conclude that it reflects changing aggregation strategies with time. The earlier petroglyphs represent an open system for a highly mobile population existing in a harsher landscape than at present, where both broad scale and local group identity had to be reinforced. The later paintings are part of an open or closed system where although broad scale identity is maintained there is an increasing emphasis on local group cohesion (McDonald & Veth 2006: 110, Veth et al. 2001: 14, 15).

It is tempting to apply the idea of aggregation regions to areas of known concentrations of Middle Phase art, both Bradshaw and 'Clothes Peg' Figure Period paintings, across the northern Kimberley. Other researchers also see concentrations of art from these periods occurring on Kimberley river systems, almost as regional cultural 'hubs' (Scott-Virtue pers. comm. 2006). Moving in an anti clockwise manner from the Lower Drysdale River, the approximate distances to known art areas (including the Palmoondoora Creek site complex DR07-56) are listed in Table 6.5. The spacing between art regions may also be displayed graphically as illustrated in Figure 6.14.

Art Region	Approx. Distance
Lower Drysdale River – Far Away Bay	85km
Far Away Bay – Longini (Kalumburu)	70km
Longini (Kalumburu) – Kimberley Coastal Camp	80km
Kimberley Coastal Camp – Mitchell Falls	40km
Mitchell Falls – Roe River	50km
Roe River – Prince Regent River	50km
Mitchell Falls – King Edward River	50km
King Edward River – Palmoondoora Creek	50km
Palmoondoora Creek - Lower Drysdale River	50km

Table 6.5 Approximate distances between Middle Phase art regions.

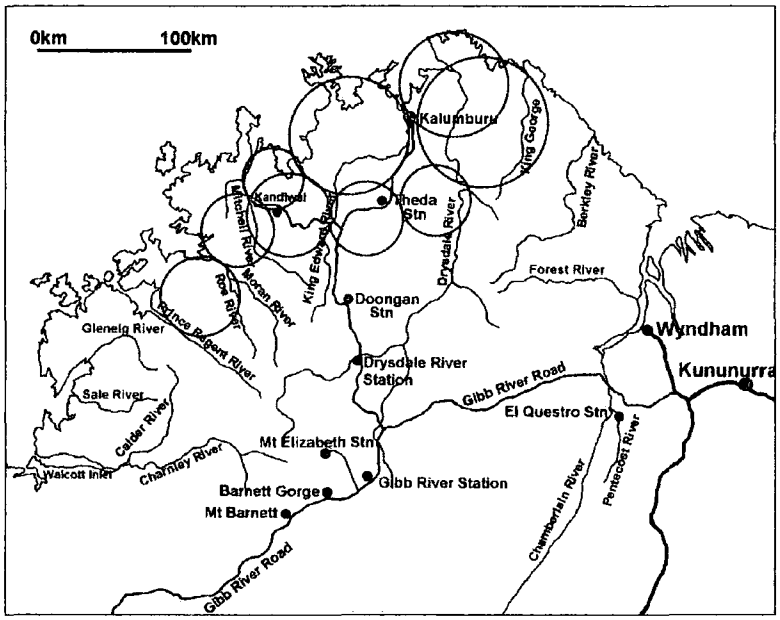


Figure 6.14 The spacing between concentrations of Middle Phase art listed in Table 6.5.

The inter-regional distances in Table 6.5 of approximately 50km are shorter than predicted from Wobst's model as applied by Hayden, ie 300 – 780km (1980: 623), and are more similar to Conkey's distances for the Upper Palaeolithic of northern Spain. If applicable to the Kimberley, then the shorter distances suggest a richer environment at the time of painting, which would have been the case as many of the art regions lie along river systems, which would be expected to have provided permanent water during more arid periods. Another explanation for the difference between inter-regional distances and Wobst's model is suggested by Bahn (1982) for his Pyrenean sites. The shorter distances (as applied by Hayden) make his sites clan aggregation sites. If Wobst is correct then the sites are band base camps and

the clan aggregation sites are elsewhere, in Bahn's example, at his 'supersites' (1982: 263). Applying this to the north Kimberley the shorter distances of 50km or so may represent the inter-clan distance at the time of painting Middle Phase art.

Conclusions

In this chapter I have explored the area covered by the different Kimberley language groups and have seen how the size of clan estates, which make up their respective language groups, varies. Clan estates are found to be on average larger in the north Kimberley than in the west, and the respective sizes of my two regions of interest match well with the areas of current clan estates. However, different climatic conditions at the time of painting Middle Phase art would have reduced the number of people the land could support and increased the area over which they had to forage (Lewis 1988). As I have argued, in more arid times the area of Drysdale River National Park would support a small group of approximately twenty five people.

The geographical extent of Kimberley painting styles is known for Middle and Late Phase art, with Wandjina art belonging to the latter coinciding with the boundaries of known language groups. Bradshaw Period art is concentrated in the central and northern Kimberley (with outliers found to the east in the Keep River area and Fitzmaurice River (Taçon et al. 2003, Ward 2005)) but 'Clothes Peg' Figure Period art stretches into the southern Kimberley and out to the Northern Territory. For art less than 3000 years old, analysis of rock art territory in the southern Kimberley and the Sydney region shows that the style in some areas changes with language groups (McDonald 2000, Playford 1960).

The geographical extent of painting traditions may be dependent on past climatic conditions. This probability has been raised by Lewis (1988) for Dynamic art of Arnhem Land where the extent of the tradition is of the same

area as occupied by the Tjingili language group in a more arid climate hundreds of kilometres to the south. If applied to the Kimberley, then the painters of Middle Phase art may have experienced conditions similar to that current on the northern edge of the Great Sandy Desert today. However, the harsh climatic conditions existing then would not have prevented language groups aggregating for ceremonies, as there are ethnographic records of groups of almost three hundred people gathering in the arid desert landscape of South Australia.

The presence of many painted rock shelters along the Drysdale River and nearby creeks raises the question of whether they were, in fact, aggregation sites. This is an idea which has been explored for Upper Palaeolithic sites in Cantabria (Conkey 1980) and the Pyrenees (Bahn 1982). There is plenty of ethnographic evidence to show that people not only aggregated to exploit seasonal food stuffs in Australia, but also gathered to undertake ceremonies (Lommel 1997, Tindale 1935), so the idea cannot necessarily be rejected.

The larger art sites and complexes are distinguished by the variety of art painted and their distinctive locations, many associated with open areas suggestive of gathering places. The number of art sites and site complexes, and their separation distances of only a few hundred metres to a few kilometres, supposes that rather than the complexes being thought of as separate aggregation sites where ceremonies were held, they are perhaps best though of as aggregation regions, following Gunn's (1997) approach.

Finally, in the north Kimberley, concentrations of Middle Phase art are found approximately every 50kms or so, distances in line with those seen between Upper Palaeolithic aggregation sites in the Pyrenees and Cantabria. By applying Wobst's ideas of mating networks (1974, 1976) as advocated by Hayden (1980) and Bahn (1982), the spacing between concentrations of Middle Phase art may in fact represent the inter-clan distance existing at the time of painting.

Chapter 7.
Architectural Space

In this chapter I will expand on two of the points raised in the previous chapter: firstly the presence of art complexes or aggregation sites next to terraces or enclosed spaces and secondly to expand upon the discussion concerning population size in my area of interest. As regards the first point I will examine the situation of painted art within a complex and apply ideas of architectural theory and the transition from 'space' to 'place' as first demonstrated at petroglyph sites in North America. The applicability of this work to the Kimberley will be discussed before I examine three areas on the northern coast at Far Away Bay. The analysis will continue with sites within Drysdale River National Park selected for the presence of terraces or open areas. Evidence for changes in the use of space and ideas on the sense of place through the introduction and location of style motifs are investigated for two complexes. The second point to enhance from the previous chapter is the idea of population size. The presence of habitation sites in rock shelters illustrates that people lived within the complexes in more recent times and may have done so in the past. A determination of the ground area bounded by the complexes or the associated terraces enables estimates of the size of the group of people who would have been able to camp there in the past.

Architectural approaches to site complexes

Important sites in the landscape have been described in North America where naturally enclosed areas with petroglyphs sit on hillsides of decorated boulders forming 'cathedral effect' or 'major religion' rock art sites (Steinbring

1987, Swartz and Hurlbutt 1994: 17). Four site components have been identified generating a 'cathedral effect' or 'major religion' rock art site: "(1) a compelling sacred aspect, (2) selection is based on dramatic character, (3) the setting is structured and 'architecturally coordinated', and (4) is remote from major river systems" (1994: 17). The American examples discussed by Swartz and Hurlbutt have entry to the site through a narrow access and the dominant rock has a single commanding figure visible from within the enclosed area (1994: 18).

The theoretical context in which Swartz and Hurlbutt work, is phenomenology. The North American examples provide evidence of what the authors' describe as the transformation of space into place (1994: 19). It is user interaction which facilitates this transformation through the presence of rock art (Rapoport 1975). In the opinion of Tilley (1994) space is an abstract construct in that it provides a context for place, for there is no space without place (1994: 15). Further, personal and cultural identity is bound up with places causing them to have values and meanings for people. Places are more than the sum of their points and locations. As Tilley writes "geographical experience begins in places, reaches out to others through space, and creates landscapes or regions for human existence" (1994: 15). Tilley distinguishes between five types of phenomenological space: somatic, perceptual, existential, architectural and cognitive. Of these only the middle three are of relevance to this discussion, as perceptual space is linked to existential space, and architectural space is best understood in relation to them both. To discuss them briefly in turn, perceptual space is experienced during an individual's everyday life where daily routines cause places to be remembered (1994: 16). Following on from this is existential space, consisting of the experiences of individual people within a group. Through this mechanism, places of "attachment and involvement" are created by the group and applied to local geography, objects and buildings. Boundaries are created providing a structure and generating distinctions between place and region, and social and cultural differences (1994: 17). Tilley's description of architectural space follows, and is directly applicable to the rock art complexes under discussion in this chapter. This phenomenological space is the attempt

to create and define boundaries where there is an inside and an outside, a path for moving and also bypassing (1994: 17). From this point of view architecture is the tangible and visual expression of space (1994: 17). In essence it is the relation between places and the natural or cultural objects which create space, but once generated space affects the way they relate (1994: 17).

The transformation of space into place through rock art is seen through the examples provided by Swartz and Hurlbutt (1994) in North America where naturally enclosed areas of decorated boulders on hillsides form a 'cathedral effect' or 'major religion' rock art sites. Petroglyphs mark the entry point and panels of carvings delineate the outside boundary of the site. Inside the area, petroglyphs differ in size and configuration from those on the outside (1994: 19). Swartz and Hurlbutt interpret this arrangement through architectural theory whereby large general designs on the outside of the space serve to mark a place and indicate this from a distance, whereas interior art with detailed designs is to be seen close up and perhaps read for story telling or 'providing instruction' (1994: 19). Further their sites have dominant figures placed in commanding positions on the focal point of the interior area. The authors discuss how a site can become humanised, the process leading from 'space' to 'place'. The procedure is described in a series of steps ranging from the site existing to being communal territory defended from outside threats (1994: 13). The authors outline an architectural definition of space through 'entry, enclosure and focus' where 'entry' is the passage or way to a place, 'enclosure' is that which shuts in or provides a boundary and finally 'focus' is a central point of attention. (1994: 14). The definitions provide a checklist for applying an architectural framework to analysing site complexes which will be followed in this chapter.

The North American site examples presented by the authors share some similarities with art complexes in Far Away Bay. In this chapter the architectural definitions are applied to sites and site complexes at Lost City, Boab Bay and Gumboot Bay on the north coast. Within Drysdale River National Park the ideas have been tested against complexes on the Lower

Drysdale River and Planigale Creek. However, here the geology provides open terraces or vaguely bounded spaces rather than distinct enclosed areas. This means that, as will be explained later in this chapter, the architectural themes of Swartz and Hurlbutt have been applied, but with less satisfactory results than on the coast. Site complexes on the coastal area of Far Away Bay will be examined first before turning to the river sites of Drysadale River National Park. Two areas, Billabong on the coast and Palmoondoora Creek in Drysdale River National Park are not analysed on account of the lack of bounded spaces or associated terraces at the sites located there. The attributes of the sites and site complexes selected for analysis in this chapter have been tabulated in Table 7.1. This shows the factors comprising the 'cathedral effect' or 'major religion' rock art site for each complex, along with a composite listing of the painted motifs present at each panel.

	Architectural Site Components				Motifs present by art phase and type															
					Early	Middle						Late	Indeterminate							
	1	2	3	4	Irregular Infill Animal Figures	Tassel Bradshaw Figures	Sash Bradshaw Figures	Elegant Action Figures	Bi-Chrome Figures	Clothes Peg Figures	General Bradshaw Figures	Wandjina Period	Stick Figures	Anthropomorphs	Stencils	Macropods	Other Animals	Geometric Figures	Prints	Other Art
Far Away Bay																				
Lost City																				
FAB07-42 complex	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X
FAB07-48			X	X					X	X			X	X			X			
FAB07-51				X	X		X				X									
Boab Bay																				
FAB07-20 complex			X	X	X	X	X	X		X	X		X	X		X	X	X		X
Gumboot Bay complex																				
FAB07-05 – FAB07- 09				X		X	X			X	X		X	X			X	X		
FAB07-12	X	X	X	X	X		X													
Drysdale River National Park																				
Drysdale River																				
DR07-17	X	X	X			X		X	X				X			X	X	X		X
DR07-62 complex						X	X				X									
Planigale Creek																				
DR07-31 complex	X	X				X	X			X		X		X	X			X		X
DR07-23/24					X						X	X	X			X	X			X

Architectural site components: 1. sacred aspect. 2. dramatic character. 3. coordinated setting. 4. remote from major rivers. (Swartz & Hurlbutt 1994)

Table 7.1 Selected site complexes with architectural components and art motifs present.

Far Away Bay

The similarities of the description of North American art complexes with Far Away Bay sites, in particular those at Lost City, suggest that the architectural approach advocated by Swartz and Hurlbutt (1994) for site analysis may be applicable to Kimberley data. This section will examine two complexes and a shelter comprised from nine panels in Lost City, one site complex of five panels from Boab Bay and six panels for Gumboot Bay.

Lost City

On the northern coast to the west of Far Away Bay's Bush Camp lies the area named by the resort 'Lost City'. This is an area of heavily eroded Warton sandstone sitting on cliffs above the sea. The sandstone has weathered leaving house sized blocks separated by gullys of varying widths and is reminiscent of an abandoned urban area (Fig. 7.1). The name is now widely accepted through travel brochures to Far Away Bay, the work of Kimberley Specialists (2001c) and Ian Wilson (2006). As has been mentioned in Chapter 6, in some instances a central open area has formed surrounded by large sandstone blocks with rock shelters and flat surfaces suitable for painting.

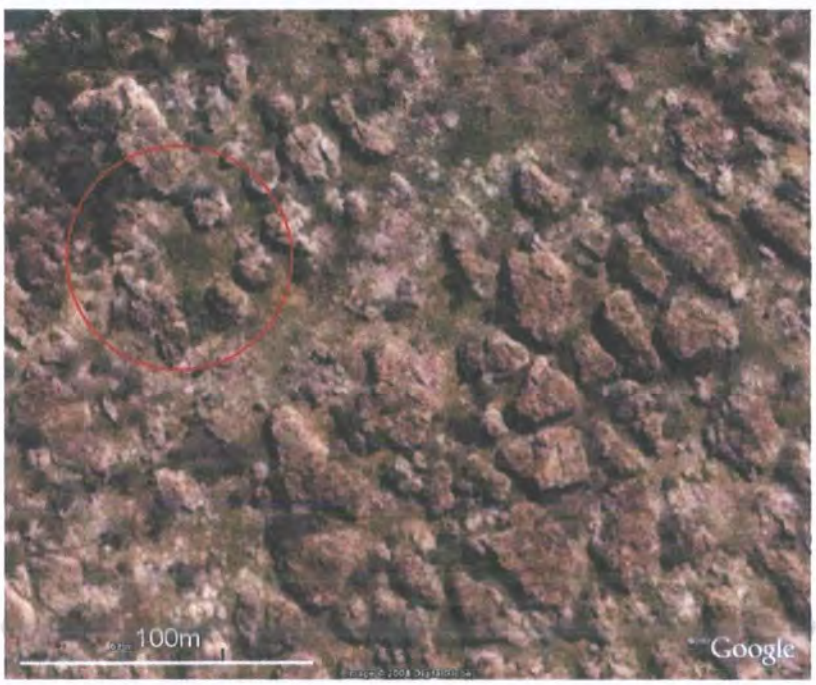


Figure 7.1 Google Earth satellite photograph of the northern coast area of Lost City. The red circle indicates site complex FAB07-42.

In the following paragraphs an analysis of two site complexes and one rock shelter is undertaken: FAB07-42, FAB07-48, FAB07-51. The first of them, FAB07-42, is composed of six separate panels, four of which, FAB07-42a, 42c, 42d, 42e, view the open area and are in turn visible from it. A fifth art site on the north east side is in fact a cave with a painted roof, FAB07-42f. On the block behind the main rock shelter, and invisible from the open area, is the sixth panel, FAB07-42b (Fig. 7.2). A full description of the sites is provided in Appendix D. Site FAB07-48 is a rock shelter with a painted roof and back wall. FAB07-51 comprises two sites, FAB07-51a and 51b.

The open area is surrounded by either sandstone blocks or, on the north and west side, by a boulder filled gully. There is a strong sense of boundary to the site. Access is from the east or the south. The latter route descends from higher ground and the open area and complex is displayed below (Fig 7.2). The eastern route links up with the rest of Lost City and winds between blocks before entering the open area. Immediately on arrival rockshelter FAB07-42c is observed on the opposite north west wall. A third, but concealed, avenue of access to the complex, is through the cave itself via a narrow cleft on the east wall (indicated by the small arrow in Figure 7.2).

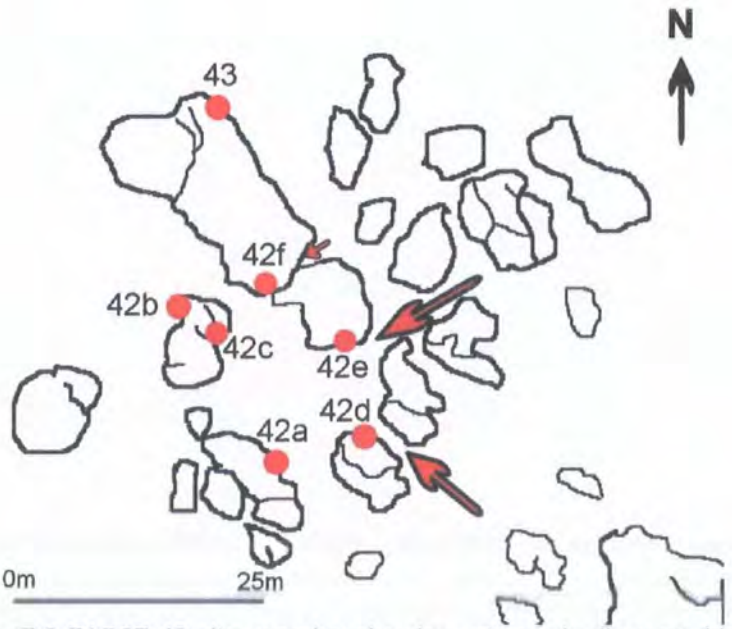


Figure 7.2 FAB07-42 site complex showing art panels discussed in the text and avenues of access to the site. Note that vegetation and boulders fill in gaps around the complex. Arrows denote access routes into the complex.

Within the complex the art depicted is old, consisting of Early and Middle Phase periods, there being little art of the Late Phase. The motifs depicted are various types of Middle Phase art, i.e. Bradshaw Period and Clothes Peg Figure Periods, older Irregular Infill Animal Period designs and hand stencils and hand prints. The main rock shelter, FAB07-42c, displays a hand stencil with the three middle fingers (3MF) closed together. The 3MF convention is normally found in Arnhem Land occurring in the Dynamic Figures Period (Chaloupka 1993: 89). Its presence on the northern Kimberley coast provides an indication of the cultural links between the two regions as well as reinforcing ideas of the contemporaneity between Bradshaw and Dynamic Period art. It should be pointed out that art from more recent periods is rare in Lost City although the second cave in the region has a full length Wandjina on the ceiling (FAB07-46a). It is 86cm long and painted in white on a prepared red ochre background. An adjacent rock shelter (FAB07-46b) displays a large painted turtle.

Lost City's FAB07-42 site complex shares similarities with the American examples presented by Swartz and Hurlbutt (1994), but also many differences. In contrast to the American examples where the site complexes are distinctly isolated groups of rocks, the FAB07-42 complex is part of a weathered and fractured landscape, movement through which is by alleys and clefts of varying widths. The rock formation comprising the complex is indistinguishable from others in the area. It is a place one comes across rather than an obvious geographical feature one is drawn to. The outside of the complex is free of art and there are no panels on the two access paths into the site. The southern approach is approximately 3.8m wide and the eastern path 4.2m. The oval centre is a clearly bounded space of approximately 29m x 25m. The boundary rock formations are of the order of 3 – 5 m in height. The enclosed area has a sandy floor and is suitable for camping and can contain a sizable body of people. Therefore the site only meets two of the four 'cathedral components' and a third one partially (1994: 17). The complex is 'structured and architecturally coordinated' and is remote from major river systems. In the case of the latter point it is equidistant from both the King George and Drysdale Rivers. The site does not have a 'dramatic character' so

failing point two above. As for a 'compelling sacred aspect' this is not evident to the modern observer and this is a factor which would be difficult to objectively measure. However, the cave in the north east section with a private exit and an apparent 'seat' may fulfil this criteria.

The entrance to the cave (FAB07-42f) is visible throughout the open area and is situated on the north east wall opposite FAB07-42c. The thick grey dusty floor has deposits of mud mussel and other shell fragments as well as rock chippings. The art painted is of a different nature to elsewhere in the complex being sparser in quantity and content. A Bichrome figure and an elongated Clothes Peg Figure are painted on the roof.

In Lost City's FAB07-42, the focal point of the complex is the rockshelter on the north west wall, FAB07-42c. An art panel is shielded by the roof which also provides effective shelter from the sun. A rock floor has a small 'table-like' boulder on the outer edge. The secondary focal point is FAB07-42a. Weathering of the Warton sandstone has produced two painting surfaces on the wall and ceiling of the shallow shelter. The wall has a visible horizontal Bichrome Figure, 87cm long, with yellow interior, mulberry coloured outline and evidence of fugitive pigment at the waist. On approaching closer the roof is more visible and a large Clothes Peg Period figure dominates the scene. It is painted in red and at 189cm, is well over 6 feet in length. The figure shows exfoliation and an extensive pounding out of the interior.

It is possible to see changes through time, in both the use of space, and ideas of the sense of place, through mapping where and when different motifs were painted in the complex. Painters of later art will be aware of earlier work and it is almost all visible from the central open area.

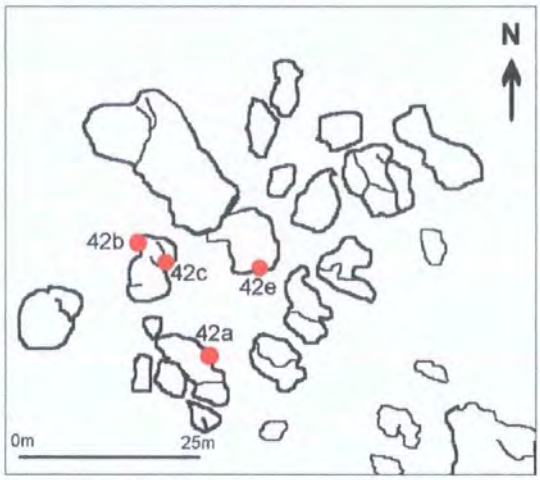


Figure 7.2a Panels with Early Phase Irregular Infill Animal Figures.

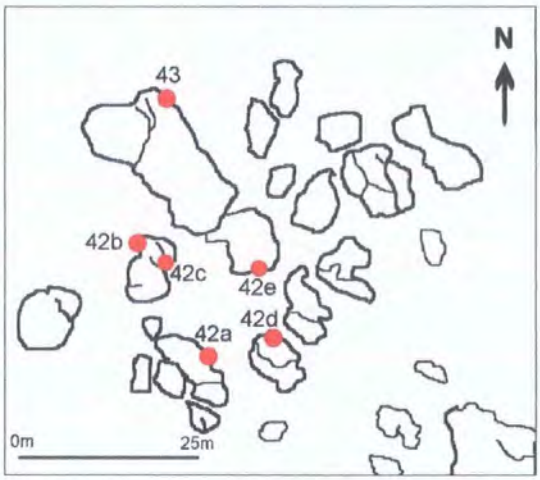


Figure 7.2b Panels with Middle Phase Bradshaw Period figures.

First of all, Early Phase art of the Irregular Infill Animal Period is painted at four panels: FAB07-42a, 42b, 42c and 42e (Fig. 7.2a). Apart from FAB07-42b, the panels are visible from the open central area. Middle Phase art commences with the painting of a new panel, FAB07-42d, of Tassel Bradshaw Group figures (Fig. 7.2b), on the south east part of the complex adjacent to one of the main entry points to the area. Outside the complex and on top of cliffs to the north is painted panel FAB07-43, isolated by both location and access. With the painting of FAB07-42d the main blocks comprising the complex are now decorated. Following on from this is the painting of Sash Bradshaw Group figures entailing the reuse of already painted panels. Panels FAB07-42a, 42b, 42c and 42e all now have figures from this period (Fig. 7.2b). However, the solitary Tassel Bradshaw panel (FAB07-42d) within the complex is left alone. Further Bradshaw Period painting occurs with the addition of Elegant Action Figures to panels FAB07-42a and 42e.

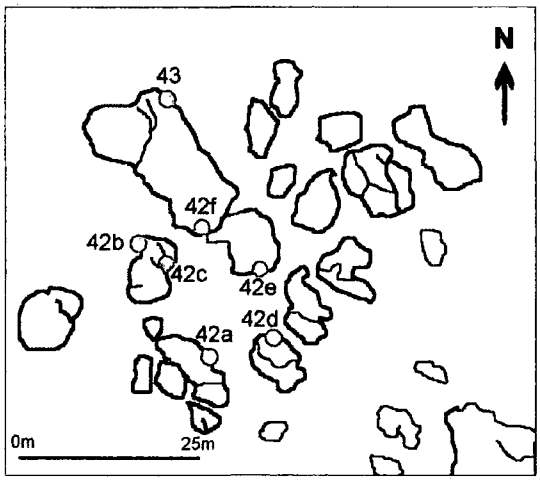


Figure 7.2c Panels with Middle Phase Clothes Peg Figure Period art.

The next phase of painting is that of Middle Phase Clothes Peg Figure Period art, and two sites are painted (Fig. 7.2c). The first is FAB07-42a where two large, horizontal, figures are painted, a bichrome figure and an even longer Clothes Peg Figure. The panels are visible from all the central area and, when new, the figures would have dominated the complex, providing a major focal point and shifting attention away from the earlier art and the other dominant panel FAB07-42c. The other Clothes Peg Figure Period art site is FAB07-42f, the cave on the northern part of the complex. This appears to be the first time the cave was used for painting as there are no remains of previous art periods here. The cave is visible from the Clothes Peg Figures at FAB07-42a but not the other way around, as from inside the cave sight lines view south easterly to the Tassel Bradshaw panel at FAB07-42d. The art painted on the roof is of Bichrome and Clothes Peg Figures. One of the major figures I have assigned to the Clothes Peg Figure Period is an elongated figure with strange 'Y' shaped shoulders. This figure is unique in the complex and I have not seen similar ones in Lost City. The first apparent use of the cave in the Clothes Peg Figure Period and the painting of stylistically different figures implies a new use of space and a new sense of place within the complex. Finally, Indeterminate Phase art is found in the complex with a red macropod located within the cave (FAB07-42f) and flying foxes at FAB07-42c. Hand stencils and hand prints along with faded figures are located at the latter panel.

Outside the complex, the north east outcrop runs to the cliff tops above the sea. Small shelters here face in an easterly direction. The north east extremity on the cliff top has a small alcove with two Tassel Bradshaw figures, FAB07-43 (Fig. 7.3). It should be emphasised that, although the rock is part of the outer wall of the complex, the location of the panel is quite separate, with

there being one way of approach via a ledge. The paintings are distinctive with "fern-like" headdresses unlike anything seen within the site complex.



Figure 7.3a FAB07-43 art site on the cliff top.



Figure 7.3b FAB07-43 art panel.

Figure 7.3 Cliff top site FAB07-43.

Swartz and Hurlbutt (1994) interpret the positioning and configuration of petroglyphs in their examples through architectural theory where designs mark the outside boundary and the more detailed ones reflect the requirements of interior art (1994: 19). Lost City complex (FAB07-42) differs, however, from their arrangement in that the two entrances to the site are not highlighted by art panels and neither is the outside boundary. Within, the main focal point of rock shelter FAB07-42c has a panel of superimposed art. The secondary focal point FAB07-42a does have large dominating figures of a different style (Bichrome and Clothes Peg Figures) and different sizes (87 – 189 cm) to the other panels in the complex. The north east cave provides an alternative discrete entrance or exit to the complex from the outside. The creation of art within the cave points to the transformation of a geographical feature into something more personal. However, it should be borne in mind that the different motifs painted in the complex are chronologically distinct and so the different panels painted may reflect a changing emphasis within the enclosed complex itself with time.

In addition to FAB07-42 two other sites are found in Lost City, FAB07-48 and FAB07-51. Concerning the first, FAB07-48 is one of the more impressive shelters in Lost City, and is 150m south east of the previous site. This shelter is found within a bounded area like the FAB07-42 complex, but differs in that

there is no art on the surrounding walls, all efforts being concentrated on the shelter. The site fulfils Swartz and Hurlbutts (1994: 14) definition of architectural space with entry via a narrow winding path, the enclosure being shut in by the surrounding rock walls and the focus being the rock shelter itself (Fig. 7.4a). There are three main paintings here, of which two yellow Clothes Peg Figures are painted on the roof of the shelter and on the upper back wall. The shelter roof also has Bichrome figures holding spearthrowers with mounted multibarbed spears (Fig. 7.4b). The third painting is of a recent style rounded human figure with disembodied arms and legs. It is heavily pecked and pounded out. The rock shelter is an occupation site as illustrated by the thick dusty floor deposits.



Figure 7.4a FAB07-48 shelter

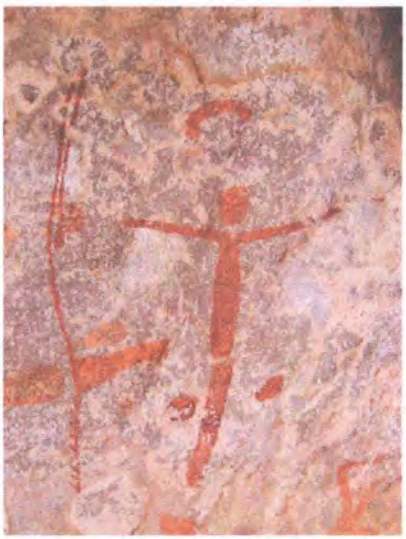


Figure 7.4b Bichrome figure with woomera and mounted spear.

Figure 7.4 Lost City site FAB07-48.

Again the idea of 'architectural space' is shown at FAB07-51 where two nearby sites, FAB07-51a and 51b, look into a small, almost enclosed, cleft or alleyway. Access is through a narrow gully, the site being surrounded by 4m high walls and the focus being the art sites. FAB07-51a is an elevated panel above a ledge, FAB07-51b a rockshelter at ground level. Both contain Irregular Infill Animal Period art, but the latter shelter has two panels, one to the left with Sash Bradshaw Group figures and the right panel having Irregular Infill Animal Period macropds.

Boab Bay

My second area of study is at Boab Bay on the northern coast, eleven kilometres south east of Lost City. The area consists of weathered and fractured Warton Sandstone and is described as being a 'distorted surface' on the relevant mapsheet. Although the nature of the terrain is similar to that at Lost City it does not have the feel of an abandoned cityscape (Fig. 7.5).

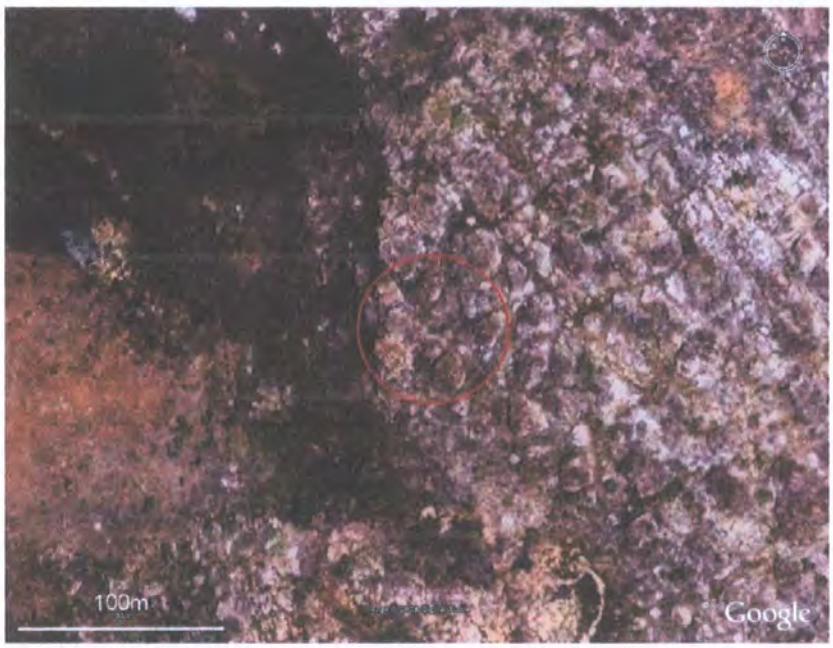


Figure 7.5 Google Earth satellite photograph of the northern coast area of Boab Bay. The red circle indicates site complex FAB07-20.

The site complex to be examined is FAB07-20, comprising four panels and one shelter, FAB07-20a – FAB07-20e, which are located around a central open area. Unlike my previous examples in Lost City, this 'courtyard' is roughly bottle-shaped along a north-west, south-east axis and is far more closed in by the walls of the surrounding sandstone (Fig. 7.6). Access is via a wide path from the south to the base of the 'bottle' and skirts a painted rockshelter, FAB07-19. An alternative entry is at the top through a narrow cleft from the north-east. There is a view of the sea from the north west corner of the area. The solitary occupation site, FAB07-20c, has a characteristic grey, dusty floor and deposits of mud mussels and pearl shells. A few faded, more recent figures, are painted on the back wall.

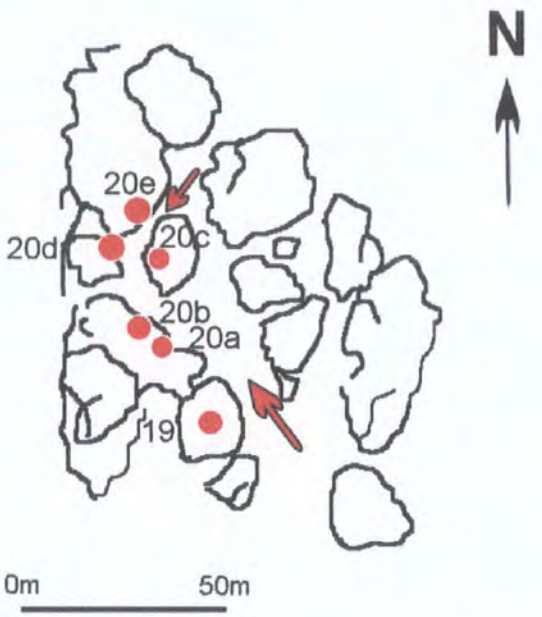


Figure 7.6 FAB07-20 site complex showing art panels discussed in the text and avenues of access to the site. Note that vegetation and boulders fill in gaps around the complex. Arrows denote access routes into the complex.

The main panel of the complex is the first one encountered on approaching from the south. FAB07-20a on the south west wall faces into the widest part of the open area. The panel is dominated by a dark red macropod of the Irregular Infill Animal Period. Two Bradshaw Period figures are painted, a Tassel Bradshaw and an Elegant Action Figure. Further along the wall a cleft in the rock has been painted within a Tassel Bradshaw Group figure (FAB07-20b). The complex's secondary panel is situated on the 'bottle neck' of the open area by the north-easterly access point. Site FAB07-20e contains three Sash Bradshaw Group figures in all their finery with sashes, epaulettes, headdress wings and are holding dilly bags and boomerangs.

Outside the complex a few tens of metres to the south lies FAB07-19. This shelter, in a house sized block, lies on the access path to the complex. Eroded walls and ledges provide painting surfaces and living areas. An upper ledge gives access to a painted panel. A living area at the base has a thick grey dusty floor illustrating former occupation with scattered mud mussel and pearl shells. The art panel has Tassel Bradshaw Group figures along with a faded but more recent red painted anthropomorph, an 'ulu' or spirit figure.

Changes in the use of space and the sense of place with time have been discussed for the Lost City complex FAB07-42. This analysis is also possible at Boab Bay's FAB07-20 complex where there is a development from Early to Late Phases. First of all a macropod, from the Early Phase Irregular Infill Animal Figures Period, is painted at one panel, FAB07-20a (Fig. 7.6a). The panel is adjacent to the southern access route into the complex.

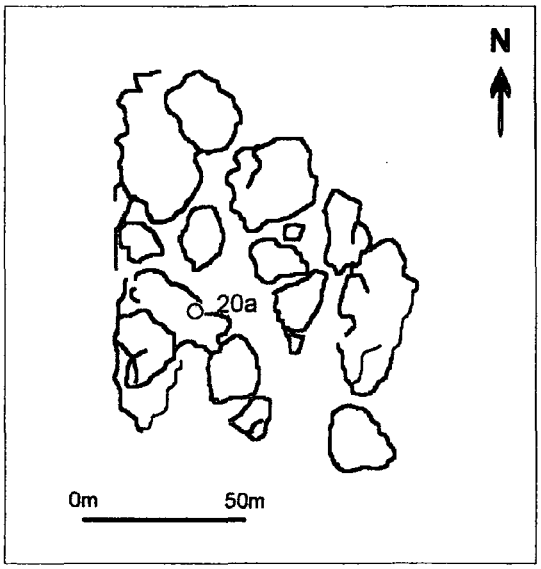


Figure 7.6a Panels with Early Phase Irregular Infill Animal figures.

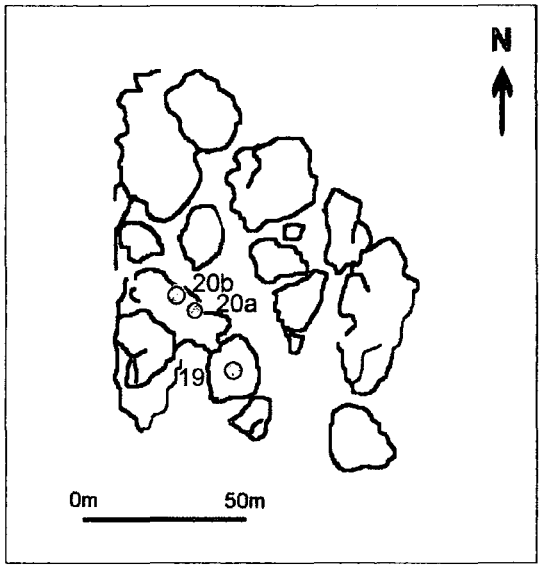


Figure 7.6b Panels with Middle Phase Tassel Bradshaw Group figures.

Next, Middle Phase Tassel Bradshaw Group figures are painted with the previous site reused and two new panels created, FAB07-20b near the previous panel, and FAB07-19 lying outside the complex (Fig. 7.6b). The latter has Tassel Bradshaw Group figures painted on an upper ledge and the site is adjacent to the access route. Sash Bradshaw Group figures occur next, painted at a separate solitary panel to the north of the complex at FAB07-20e (Fig. 7.6c) on the north easterly access point into the complex. The panel also contains a macropod and plant tubers but their age is indeterminate. Elegant Action Figure art appears with them being added to the first panel in the complex, FAB07-20a. Clothes Peg Figure Period art is absent from the complex though a solitary stick figure with a 'plant-like' headdress thought to be from this period is found to the rear of FAB07-20e.

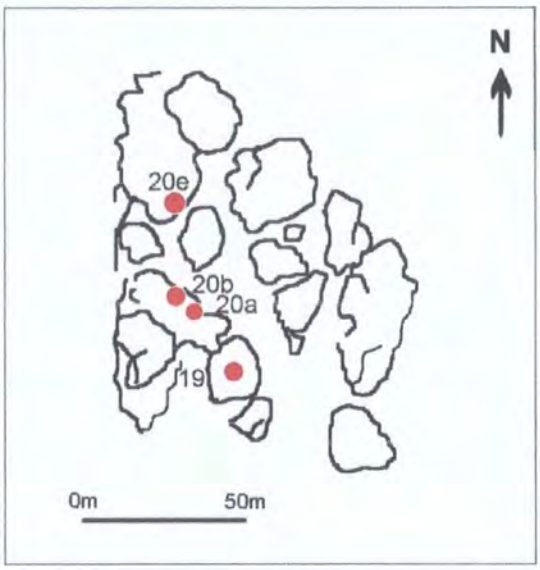


Figure 7.6c Panels with Middle Phase Sash Bradshaw Group figures.

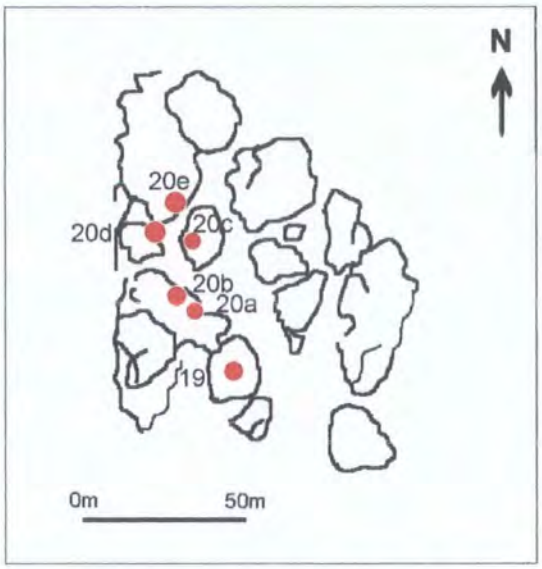


Figure 7.6d Panels with Late Phase figures.

Finally, Late Phase art (Fig. 7.6d) is painted on the wall of a small rock shelter, FAB07-20c, consisting of a lizard, a yellow figure and an unknown figure. The shelter floor has deposits of mud mussels and a few pearl shells. Opposite is a small panel with an indeterminate 'bottle' painting. The southern site outside the complex, FAB07-19, has evidence of occupation through the thick grey, dusty, sandy floor and the presence of mud mussel and pearl shells. The upper 'art' area has a painted 'star' design and a large red anthropomorph.

The complex shows the changing use of panel location with time, but it is noticeable that Sash Bradshaw Group figures are found in a distinct location, and here there is a lack of the Clothes Peg Figure art which is characteristic of other locations.

Boab Bay's FAB07-20 complex defines space in a similar way, but 'architecturally' is more defined than the examples at Lost City. Again this site is not visible from a distance and only meets points three and four of the site components producing a 'cathedral effect'. It does not illustrate a compelling sacred aspect nor has a dramatic character. It lacks a focal point too unlike the previous example though the art panel on the south western wall (FAB07-20a) makes up for this. The opening out of the central courtyard amidst

narrow alleyways is the most distinctive characteristic of the site. Boab Bay's FAB07-20 is similar to the previous Lost City example where art is present on the inside only, not marking the outside boundary. Nor for that matter are the two entrance paths highlighted.

Gumboot Bay

A less distinct enclosure is to be found to the east of the Bush Camp at Gumboot Bay. In this area, near a stream flowing to the coast, there is a small concentration of art sites (Wilson 2006: 152-155). Above the creek on a ridge line a series of low weathered outcrops 2–3m high surround a small open area a few tens of metres in diameter. Three panels facing towards the area (FAB07-05 – 07) contain paintings, mainly Tassel or Sash Bradshaw Group figures. FAB07-09 is to the rear of FAB07-07 and faces away from the site towards the creek, but is still part of the complex. The open space is not as enclosed as in the previous examples nor is access dictated by topography as the weathered blocks do not interconnect forming a physical boundary. The first site encountered when coming up from the creek, is FAB07-05, where a panel contains four Sash Bradshaw Group figures and a Clothes Peg Figure holding a 'hooked stick' woomera. Nearby is FAB07-06 with five Sash Bradshaw figures. On the opposite side of the area panel FAB07-07 has two distinct mulberry hued Tassel Bradshaw Group figures. The panel is adjacent to a shelter with a sandy floor. To the rear is FAB07-09, with five Tassel Bradshaw Group figures painted on a boulder under an overhang. This panel faces towards the creek. Finally, in the area on top of the ridge, FAB07-08 has stick figures with boomerangs facing the creek below. Although the proximity of rock shelters and art panels around a central area gives a harmonious feel to the site, it does not meet any of the criteria for a 'cathedral effect' or 'major religion' rock art site.

There is one further site which is worth discussing at Gumboot Bay. In the gorge below the waterfall, on the eastern wall, lies an art panel, FAB07-12, painted under an overhang (Fig. 7.7). Access is by descending into the gorge a hundred metres north of the panel and then backtracking upstream. Closer

initial access is prevented by the gorge cliffs. In this way access to the panel is by an enclosed path, i.e. the walls of the gorge. The three definitions of architectural space can be applied here with 'entry' being along the creek bed, 'enclosure' is provided by the gorge walls as well as the angular walls of the overhang. The 'focus' though is split for the modern visitor with the art panel secondary to the waterfall and the high cliffs over which the water tumbles. The art panel and its location also fulfils the four components of a 'cathedral effect' or 'major religion' rock art site (Steinbring 1987, Swartz and Hurlbutt 1994: 17). The presence of a waterfall gives it a sacred aspect, the creek gorge and high cliffs provide a 'dramatic character' (Fig. 7.7). The setting is certainly structured fulfilling point three and finally it is distant from major river systems, in this case the King George River. The art painted is split into Irregular Infill Animal Period art on the roof of the overhang and Sash Bradshaw Group figures high up on the back wall. Again two different art periods are present at the same site but are physically separate.



Figure 7.7 Waterfall and gorge viewed from FAB07-12, Gumboot Bay.

Drysdale River National Park

In this section I move from coastal sites of Far Away Bay to the river and creeks of Drysdale River National Park, looking at the Lower Drysdale River and Planigale Creek. Palmoondoora Creek is not included in these examples since the sites located do not have the distinctive boundaries of the northern coast nor the associated open terraces of the Drysdale River area. Although the terrain here is described on map sheets in the same way as on the coast as 'distorted surface', the land is different. Rock shelters are not situated within dense fractured areas of Warton Sandstone. Neither are the sites enclosed by defined boundaries. Site complexes do, however, show open terraces to the front of the shelters or are in close proximity to open land. For selected sites with associated terraces or open spaces the methodology of Steinbring (1987) and Swartz and Hurlbutt (1994) may be applied, leading to a better understanding of site construction.

Lower Drysdale River

The site complexes in Drysdale River National Park are not naturally enclosed areas but have been selected for analysis on account of the open areas in front of several painted rock shelters. On the west bank of the Drysdale River below Solea Falls lies site complex Pulpit Rock (DR07-17, Schmiechen's DP-D-04). It is found on cliffs above the river and is described by Schmiechen (1993: 37-39). The site is characterised by a wide, open terrace in front of the complex. The eastern edge, before the drop down to the river, has a low rock mushroom on which are found five carefully placed rocks, three being smooth river boulders brought up from the below, and placed in the centre of the table top (Fig. 7.9b). The western edge of the terrace is bounded by the complex. Rockshelters and painted panels are found in rock outliers viewing the terrace (see Figs. 7.8 and 7.9).

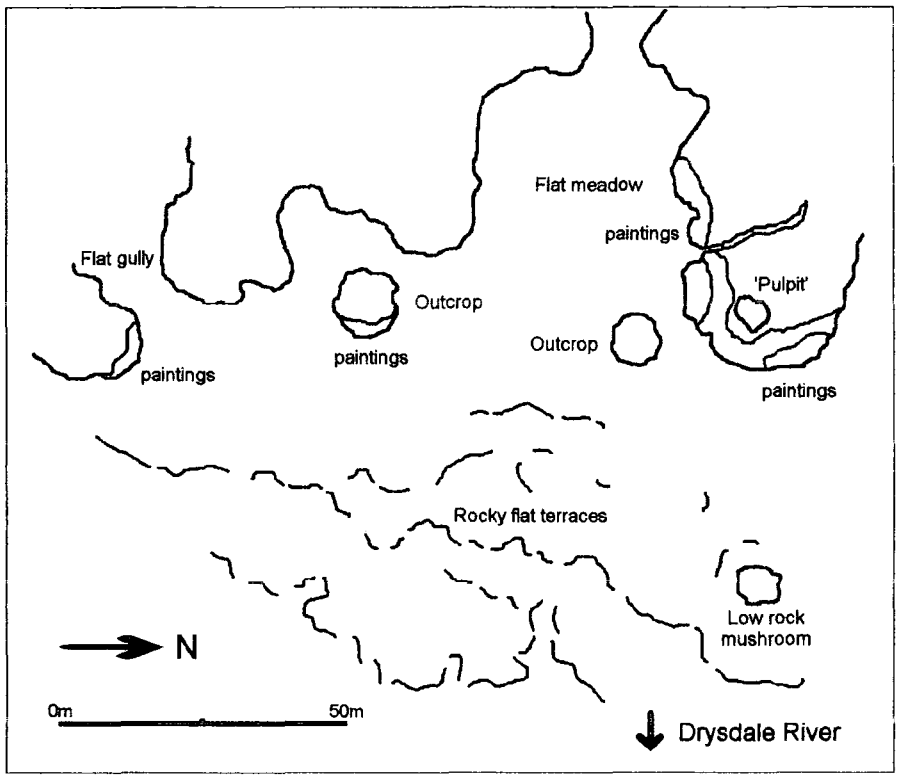


Figure 7.8 Plan of DR07-17 Pulpit Rock.
(adapted from Alasdair McGregor's plan view in Schmiechen 1993: Figure 4)

Figures present in the main shelter include Tassel Bradshaw Group and Elegant Action Group Figures. The site was heavily occupied with evidence of grinding holes and cut groove marks. Schmiechen reports finding red ochre pigment on a lower grinding stone (1993: 39).

Pulpit Rock (DR07-17) fulfils points two and three of the 'major site' components described by Swartz and Hurlbutt (1994: 17) i.e. dramatic character and being 'architecturally coordinated'. The criteria of remoteness from major river systems fails with the Drysdale River being of the order of 200m distant. The compelling sacred aspect fails at first sight too. However it cannot be dismissed totally out of hand. Firstly, the range of shelters overlooking the front terrace are heavily painted with a range of motifs but predominately Tassel Bradshaw Group figures and Elegant Action Figures. Groove or 'cicatrice' marks are present in their hundreds (Schmiechen 1993: 39). Secondly, the site is dominated by a 'pulpit-like' rock pillar on top of the northern shelter (Fig. 7.9a).



Figure 7.9a DR07-17 Pulpit Rock. Shelter with 'pulpit-like' rock formation.



Figure 7.9b Low rock mushroom with placed rounded river boulders (hat for scale).

Figure 7.9 DR07-17 Pulpit Rock.

Pulpit Rock (DR07-17) is approached via a steep ascent from the river with entry onto the open terrace being near the low rock mushroom with emplaced boulders. This feature may fall within the category of highlighting an entry point. There is no art below the complex on the gorge sides. There will be other ways of accessing the site from on top of the plateau but these were not determined during the site investigation and Schmiechen (1993) makes no mention. The site is notable too for the presence of numerous grooves or cut marks on rock again evidence of "user interaction that transforms these spaces... into... places" (Swartz and Hurlbutt 1994: 19).

In Bradshaw Alley near Bradshaw Pool two sites, DR07-62a and DR07-62b (Fig. 7.10), line the west and south ends of a flat, roughly square shaped open terrace of approximately 10m by 10m in size. DR07-62a contains a range of Tassel and Sash Bradshaw Group figures (Figs. 7.10a and 7.11). The terrace appears to be an integral part of the complex though with its stone surface this cannot be a living area. Behind the sites the sandstone is fractured into narrow alleys and gullies with painted rock shelters. Here the land form is reminiscent of terrain at Boab Bay on the northern coast.



Figure 7.10a DR07-62a



Figure 7.10b DR07-62b

Figure 7.10 Bradshaw Alley sites DR07-62, which bound a small open area.



Figure 7.11 The main art panel at DR07-62a showing Tassel Bradshaw Group figures.

Planigale Creek

The next case study is an art complex on Planigale Creek. A large area is bounded on three sides by weathered sandstone outcrops, some of which contain painted rock shelters. The main shelter is DR07-31, a major occupation site with painted walls and ceiling (Fig. 7.12a). There is a range of art, from cupules to Tassel and Sash Bradshaw Group figures and ethnographically recent Wandjina figures (Fig. 7.12b). The site is notable too

for being one of the few places where both Tassel and Sash Bradshaw Group figures are painted together in the same place. The site looks into a large open area. A small adjacent rockshelter (DR07-32) contains Sash Bradshaw Group figures and again views the central space. On the opposite side of the area is a small alcove with good views of the other sites. One of these is DR07-33, consisting of a panel with Tassel Bradshaw Group figures with associated 'vine leaf' decoration. Behind the main shelter on the same body of sandstone lie small rockshelters and alcoves. Only one is painted, DR07-30, with three Sash Bradshaw Group figures, a Clothes Peg Figure and a hand stencil. The size of the central area and the open nature of access to it precludes any comment on possible preferred ways of entry. The approach to complex DR07-31 skirts the outer edge of the horseshoe shaped boundary outcrop. One site, DR07-30, on this outer edge contains a small panel with a few paintings. Other rock shelters or suitable panels on the route are left unpainted. Once inside the open area the rock shelters and panels are more numerous though the nature of the art is the same as elsewhere.



Figure 7.12a Site DR07-31.



Figure 7.12b Art panels inside DR07-31.

Figure 7.12 Planigale Creek site complex DR07-31.

The complex, DR07-31, fails all Swartz and Hurlbutt's (1994) criteria for a 'major religion' rock art site. It has no apparent sacred aspect, no dramatic character and the open nature of the site prevents it being 'structured and architecturally coordinated'. It is not remote from major river systems, being a few hundred metres only from Planigale Creek and six kilometres from Drysdale River. Perhaps, though, the sacred or dramatic character may be applicable on account of its proximity to Planigale Creek. At this spot the

creek nestles by high rock walls forming a picturesque sheltered billabong during the dry season and a waterfall in the wet season (Fig. 7.13).



Figure 7.13 The pool and waterfall on Planigale Creek near site DR07-31.

Elsewhere on Planigale Creek, sites DR07-23 and DR07-24 are located in the same horseshoe shaped outcrop 30m apart. In front is a wide flat open area leading to Planigale Creek a kilometre distant. The art present varies from pecked cupules and Irregular Infill Animal Period figures, to ethnographically recent Wandjina Period, Northern Muscly Figures and Head Only Wandjinas. Bradshaw Period art is absent here, but is found at another outcrop 80m away on the other side of the open plain, at sites DR07-22a and DR07-22b. Tassel Bradshaw Group figures, amongst others, are to be found at DR07-22a, with Sash Bradshaw Group and Clothes Peg Group figures and a Wandjina figure at DR07-22b. Most activities would have been performed on the plain. DR07-24 though, is of interest, in that the rock shelter contains a variety of art. The focal point is a rock column in the shelter with multiple pecked cupules, again

evidence of the transformation of space into place (Fig. 7.14). The cupules on the column would fall into the category of Welch's earliest periods.



Figure 7.14 Site DR07-24 illustrating the focal point, a pillar decorated with cup marks.

Discussion – Architectural Approaches

In the two research areas of the north Kimberley, some rock art site complexes are geographically distinct either through their being physically bounded by rock outcrops (Far Away Bay) or by the presence of a terrace in front of them (Drysdale River and Planigale Creek). The nature of the use of space at these sites and the transformation into 'place' through the humanisation of the rock fabric by the creation of rock art can be investigated by the application of Swartz and Hurlbutt's (1994) architectural theory. This definition of space through entry, enclosure and focus provides a strong tool for analysing other site complexes. In this way sites at Lost City and Boab Bay in particular, on account of their bounded nature, as well as at Gumboot Bay repay this type of analysis. Sites with terraces as found in Drysdale River

National Park, conform less to this approach. These sites are open and lack focus compared to the bounded sites. The strength of Swartz and Hurlbutt's ideas is by providing a frame work by which site complexes can be examined. In this way the Lost City complex of FAB07-42 fulfils both the architectural criteria and those of a 'cathedral effect' site. Boab Bay's FAB07-20 illustrates similar themes to those above but to a lesser extent. The check list provided by this methodology allows other sites to be seen in this way, an example being Gumboot Bay's FAB07-12 situated in a creek gorge below a waterfall. This is a solitary site, not a complex, but its striking position fulfils all the criteria of a 'major religion' site. The sequence of art styles on different panels in complexes allows for seeing changes through time, providing information not only on the use of space, but the sense of place. This is most noticeable at the FAB07-42 complex with the introduction of Clothes Peg Figure Period art and the selection of a highly visible site for large polychrome paintings. In contrast, a small cave with restricted access and viewing is sparsely decorated for the first time with the same period's art.

Sites along the waterways of Drysdale River and Planigale Creek which are not bounded, but have open terraces to the front, do not fit the authors' model so well. The one river site, DR07-17 Pulpit Rock, meets some of the criteria as it has a dramatic setting and is 'architecturally coordinated'. Planigale Creek site, DR07-31, fails all Swartz and Hurlbutt's (1994) criteria for a 'major religion' rock art site. However, the site is close to a permanent pool and waterfall providing a dramatic aspect. The authors' approach to site complexes provides a means by which the sacred nature of an area can be investigated and then recognised. In my two research areas the success of the architectural theory is dependent on the geology found there through weathering of Warton Sandstone.

Estimating site complex population from floor area

In this section I wish to explore ideas over whether the size of open areas by art complexes reflects the number of people who may have camped or lived

there. This is speculation but it is an idea worth pursuing. No hard evidence through archaeological excavations is available as none have been undertaken at Far Away Bay and within Drysdale River National Park none at the site complexes under discussion. A frequent comment in rock art literature is that sites with Bradshaw art are not habitation sites and that art panels were selected for their property as suitable rock canvases rather than as habitable shelters (Walsh 1994, 2000). Rock shelters with signs of habitation are present but appear to be connected to the Late Phase Wandjina Period on account of their decorated walls and ceilings. In Far Away Bay habitation sites are found at Lost City, Boab Bay and Billabong Area (the latter area not included in my analysis).

The exception to this rule is Lost City cave FAB07-42f, part of the FAB07-42 complex. It has a thick grey dusty floor with deposits of shell fragments, mud mussels and rock chippings. Paintings present include Bichrome and Clothes Peg Figures. Other art panels in the complex are situated in open shelters with rocky floors. It is far more comfortable to sleep in the open on sandy ground. Site FAB07-48 is a rock shelter with habitation deposits, a dirty grey floor with mussel shells. The site contains Bichrome and Clothes Peg Figure art as well as recent art (an apparently dismembered body). A final habitation site not included in the discussion in site complexes and enclosed areas is FAB07-46b. As well as the characteristic ashy ground, shells and rock chippings are present. The ceiling has a painting of a large Wandjina Period turtle. To the rear of the site is FA07-46a, the second cave found in Far Away Bay, with a full length Wandjina painted on the ceiling.

At Boab Bay, FAB07-20c has signs of habitation on account of the thick, grey, dusty floor and deposits of shells with Late Phase figures painted. There are two other living sites. The first, FAB07-19, is near the southern access into the complex. The shelter, in two tiers, has occupation deposits at ground level and the separate, upper 'floor' has a panel of painted Tassel Bradshaw Group figures. A few hundred metres south is FAB07-14 Museum Shelter. The site is richly painted with Late Phase polychrome art. The floor is practically a shell midden with deposits of mud mussels, pearlshells and baler shells. The range

of deposits varies from tool making debitage to tin billy cans. A listing of material is provided in the site description in the appendix. No old art is observed on the shelter walls though it is possible the recent paintings have covered it over. The shell middens providing the outside wall of the shelter, coupled with the recent art, implies occupation at the site might be of the order of a few thousand years. In the absence of excavation it is impossible to say. However, on the coast near the Mitchell River, excavations by Bruce Veitch (1996) provided initial occupation dates of 2-3000 years BP for shell middens (1996: 82). With absence of definitive dates at FAB07-14 it is fair to apply this model of initial occupation.

Within the site complexes selected for analysis on the Drysdale River and Planigale Creeks almost all have at least one living shelter. This is most noticeable at DR07-17 Pulpit rock and DR07-31. The former site has rock shelters offering habitable space on the northern edge of the complex. Paintings are found at suitable spots around the whole complex. By the living area is a fallen slab with groove and 'cut' marks. The latter site, DR07-31, is a living shelter within a complex and has a sandy floor. Other than the art which ranges from Early to recent Phases, grinding hollows for food preparation are present.

In all the examples given above for the two regions, the rockshelters present would not accommodate more than a few individuals. It seems more likely that people would camp outside. In Wardaman Country to the east of the Kimberley in the Northern Territory, Josephine Flood reports that the main use of rock shelters was as a shelter from the summer sun and tropical rain (Flood 2004: 193).

In the previous chapter estimates of the geographical extent of rock art regions in the Kimberley led to the calculation of the possible numbers of people who would have inhabited the differing localities, both presently and in the past. The latter determination is dependent on climatic conditions at the time of painting. In this section, the scale of analysis will move from the large scale, of areas of thousands of square kilometres (chapter 6), to the smaller

scale of areas a few hundred square metres. The new emphasis is suitable for investigating rock art complexes themselves. The previous section discussed the fact that some site complexes had associated open terraces or were bounded by rock formations creating central open areas. Art sites look out to the terraces or are present on the rock walls enclosing the central spaces and are visible from the centre. By using satellite photographs, the size of open spaces at art complexes discussed previously in this chapter will be calculated. Then determinations of the number of people who could inhabit this area will be estimated using Weissner's method (1974). These figures will reflect the number of people who might have camped at the art complexes, if they were living areas in the past.

The ground area marked by an open terrace or enclosed by rock walls may provide an estimate of the size of the population that could have lived there. Weissner's (1974) work on the population of !Kung Bushman camps in southern Africa, relative to the ground area they occupy, led her to adapt an allotropic growth model to fit hunter-gatherer societies. I will apply this model speculatively to sites in the north Kimberley. There are a few caveats to be borne in mind, however. Weissner notes it is necessary to assume that "all hunter-gatherer camps have the same form (shape) of population distribution" (1974: 344) and so she only included habitation sites, not butchering stations or temporary gatherings. The latter is a point of concern for the sites selected in the Kimberley as we have no way of knowing whether people lived in the open area or only gathered for ceremonies or other purposes. The !Kung data has camps of huts arranged in a circular pattern, each family having a hut and hearth area. Although the use of shelters has been reported in the Kimberley (e.g. by Worms 1955: 562) and is known elsewhere in Australia (Rapoport 1975: 39-41) the working hypothesis is that people in this area did not make use of them but families had defined hearth areas. As for the use of rock shelters as habitation sites, within the Lost City area only sites FAB07-46b and FAB07-48 show signs of occupation through the accumulation of dirty grey dusty floor deposits (as well as cave FAB07-42f). Weissner's measurement of the area covered by a Bushman camp includes all within the circumference encircling huts and occupation debris. She points out this

includes the voids between concentrations of material (1974: 349). Weissner's data on Bushman camps is only for groups of twenty five people and she questions whether the allotropic relationship holds for larger groups and whether it is applicable for other hunter-gatherer peoples (1974: 349).

For the following speculative analysis, the ground areas of site complexes in Lost City, Boab Bay and Gumboot Bay on the northern coast and one site near the Drysdale River, were obtained from satellite photographs as described below. Weissner's method was then applied to the measurements to provide an indication of the possible population that could be present at each complex.

Application of Satellite Images

Aerial views of site complexes were obtained over the internet using Google Earth satellite photographs. Data coverage is provided by satellites with differing image resolutions and by varying vintages of photographs. It was immediately apparent that coverage of the northern coast sites was excellent with a possible image resolution equivalent to a map scale of 1:12,500, but visually 1:25,000 is preferred. Individual outcrops as well as vegetation were observable, the best example being at Lost City. The open areas and connecting alleys and gullies are very noticeable. The images of Boab Bay are a little less clear. The fractured nature of the sandstone and narrower gullies meant it is less easy to discern the individual blocks comprising a site complex. Again a map scale of 1:12,500 is possible but the smaller 1:25,000 is clearer. Coverage over Gumboot Bay was good but the higher image resolution is not as crisp as the previous examples, as the site complex by the creek is only just recognisable.

Views over the Drysdale River were not as good as the coast, with poorer image resolution from the SPOT satellite. Only vague outlines of areas could be discerned, with Pulpit Rock, DR07-17, not observable. The same is generally true for DR07-31 but there is a colour contrast between the lighter

coloured rock outcrops and the dark green open area allowing measurements to be made.

Estimates of Site Complex Population

Measurements taken from Google Earth images made it possible to calculate the ground area of the bounded site complexes at Lost City, Boab Bay and Gumboot Bay. For the Planigale Creek site complex, DR07-31, the satellite image revealed a roughly circular colour contrast of 90m in diameter. This is taken to be the open area to the front of sites DR07-31, 32 and 33. The ground area covered by the terrace to the front of Pulpit Rock, DR07-17, was found from the diagram provided in Schmiechen (1993: Figure 4) (Fig. 7.8). The area of the site complexes and corresponding estimated Weissner population is listed below in Table 7.2.

Location	Site Complex Area	Estimated Population
Lost City		
- FAB07-42 complex	553 sq. metres	25 - 30
Boab Bay		
- FAB07-20 complex	515 sq. metres	25 - 30
Gumboot Bay		
- FAB07-05 – 07, 09	95 sq. metres	12
Drysdale River		
- DR07-17	6,875 sq. metres	Exceeds parameters
Planigale Creek		
- DR07-31	6,300 sq. metres	Exceed parameters

Table 7.2 Site complex area and estimated population. Note the last two examples have areas greater than allowed for in Weissner's model and so the estimated populations exceed her defined parameters.

The results of the area calculations show that both the Lost City and Boab Bay complexes are similar in size and so, if they were habitation sites in the past, would have accommodated similar populations of around 25 –30 people, i.e. one band. Gumboot Bay would have held in the order of twelve people. The large areas of DR07-17 and DR07-31 exceed the area parameters outlined by Weissner and any estimate as to the number of people who could have lived there is just speculation. Certainly large groupings of people would have been able to assemble in the space available making them likely candidates for aggregation sites. The population of 25-30 has been identified

previously in Chapter 6 as the same as the number of people in a band who would have roamed around an arid landscape of 2,800 square kilometres at the time of painting of Middle Phase art. If this number is applicable then the whole band would be able to assemble and live at the coastal site complexes. For the sites along the Drysdale River and Planigale Creek, DR07-17 and DR07-31, with their ground area exceeding Weissner's parameters then the number of people who could camp there is unknown. The calculated area, at ten times that of the Lost City and Boab Bay examples, implies that, perhaps, ten times as many people could aggregate there. If applicable then the number of people temporarily living there (if there were food resources to support them) would be of the same order as those known from ethnographic data i.e. 270 – 300 people who assembled for ceremonies (Bradshaw 1892: 102, Tindale 1935: 199).

Discussion – Estimating Population Size

This section is speculative and concerns calculating the size of the group of people who could inhabit the open areas by art complexes. Work by Weissner (1974) on !Kung Bushmen indicates that the area of ground dictates the number of people who could camp there. Many art sites in the two research areas have an associated open area either in front, in the form of a terrace as seen in the Drysdale River National Park, or a central open space or 'courtyard' bounded by the site complex at Far Away Bay. From Google Earth satellite photographs it has been possible to calculate the size in square metres of the areas and by referring to Weissner's graph estimate the population of the camp. There are caveats to estimates of this type, the main one being the figure applies to habitation sites not butchering stations or temporary gatherings. Accepting that the figures produced will provide only rough estimates and are by necessity speculative, then the three Far Away Bay site complexes would possibly hold the number of people comprising an arid climate band, i.e. 25 – 30 people maximum. The two Drysdale River National Park complexes would be able to accommodate in the order of ten times that number, a group of people of a size known ethnographically as

capable of assembling for initiation ceremonies and living in a particular region for a few weeks, depending on food resources (Tindale 1935).

Conclusions

In this chapter I have presented examples of site complexes with associated open areas, the natural structures being interpreted through ideas of architectural theory first applied at petroglyph sites in North America (Steinbring 1987, Swartz and Hurlbutt 1994). The presence of living shelters in these complexes indicates that the sites were indeed inhabited during recent times, as indicated by ground deposits and Late Phase art. Other Middle Phase art is predominant on panels at the complexes under discussion. The length of occupation remains unknown without undertaking excavations. Speculative ideas concerning the number of people who could have lived in the complexes, based on ground area at these sites, have been investigated using Weissner's (1974) method.

The investigation of site complexes and the positioning of rock art in the two survey regions has followed the work of Steinbring (1987) and Swartz and Hurlbutt (1994). First, the general 'feel' of the site is found by applying four site components to determine if it generates a 'cathedral effect' or is a 'major religion' rock art site. The components in turn are whether the site has a sacred aspect, is of dramatic character, has a structured setting and finally is remote from major river systems (1994: 17). At each complex in turn, architectural definitions of space through "entry, enclosure and focus" (1994: 14) provide further tools for analysing the site.

In the two areas of interest the architectural theories are most applicable to the northern coast sites of Lost City and Boab Bay. This is on account of the geology and the weathering of Warton Sandstone to form distinctive bounded areas. The southern river sites of Drysdale River and Planigale Creek do not form bounded areas.

Ideas concerning the sense of place and use of space are found from two coastal complexes, FAB07-42 and FAB07-20, where at different times panels were selected for painting. The change in location with art style and the dominance the paintings had on the surroundings is noticeable, as is a change in emphasis at the former site for Clothes Peg Figure Period art. Here one freshly painted panel would have dominated the complex yet other paintings from the same period were concealed and of restricted access in a cave.

Speculative determinations of the number of people who may have camped at the complexes is again most applicable to Lost City and Boab Bay. This is due to the smaller ground area which falls within the boundaries of data used in Weissner's (1974) work. That people did in fact live there in recent times is known from archaeological deposits in rock shelters at the sites. The population of 25-30 people calculated by this method matches ethnographic evidence of Australian arid region band size. The methodology is inapplicable to river complexes as the ground area exceeds parameters.

Chapter 8.
Conclusions

Looking at regionality in north Kimberley rock art

Regionality in the Kimberley art tradition of elegantly painted figures was not recognised until the nineteen fifties with Worms' survey (1955). He compared Napier Broome Bay art to Bradshaw's published discoveries from the south west and Gerald Hill's work to the east (Mountford 1937) and saw differences in the size of figures and colours used, evidence of regionality in the art. Regionality within Late Phase Wandjina art was found by geologist Phillip Playford (1960) in the southern Kimberley, where he observed a change in style and associated mythology with these figures on crossing language group boundaries.

The review of knowledge about Kimberley archaeology, rock art and scientific dating provided a framework by which to compare it with regional developments across northern Australia. The general trend of occupation in the Kimberley has been determined following the example of David (2004) who used radiocarbon dates in Cape York to examine regional trends. I applied his methodology to 116 radiocarbon dates from excavations in the Kimberley (including Jinmium, Granilpi, Karlinga, Goorurarmum and Punipunil just over the border into the NT). The resulting plot matched David's work with a similar, major increase in the number of sites at around 4500 BP, a trend also seen in changes in deposition in the Mitchell Plateau excavations.

Using established stylistic chronologies developed by Welch (1993b) and Walsh (1994, 2000) I produced a simplified chronolgy as an aid to my field work. This has three phases, Early, Middle and Late, and within each phase are some of the established art periods and groups, for example Irregular Infill Animal Period and Tassel Bradshaw Group. A review of scientific dating methods applied to rock art both in the Kimberley and Arnhem Land, coupled with archaeological evidence allowed me to fit tentative dates to the art phases and periods of my chronology. This produced a 'short' chronology as opposed to a longer one advocated by Walsh (2000).

To investigate regionality for a research thesis required my undertaking a broad survey of at least two geographically distinct areas in the Kimberley, areas which were also distinct during the painting of Middle Phase art. One choice was to select a suitable river, the other a coastal area, as ten thousand years or so ago, with a receding shore line the latter would be, in fact, inland.

I was introduced to my two areas of interest by first, Mr Joc Schmiechen and secondly, Dr Lee Scott-Virtue, of Kimberley Specialists. Mr Schmiechen discussed at length his research fifteen years earlier in Drysdale River National Park and provided me with a copy of his report, *Shadows in Stone*. Dr Scott-Virtue told me of her interests in the rock art at the coastal resort of Far Away Bay. I was able to gain access to the river area through bushwalking into the heart of the national park. For the coastal areas, Kimberley Specialists in conjunction with lease holders Far Away Bay sponsored my visit to the Bush Camp resort through providing transport, food and lodgings. My field technique was one adapted from site surveys by Gunn and Whear (2007) in southern Arnhem Land.

Within Drysdale River National Park I was able to visit three distinct areas, the river gorge area of the lower Drysdale River below Solea Falls, and the two creek areas of Planigale and Palmoondoora Creeks. The two latter are plateau areas. On the coast at Far Away Bay I visited Lost City, Boab Bay and Gumboot Bay, all being near cliff tops or escarpments in the past, and Billabong Area on the inland plain. With my working in different geographical

areas I was able to compare the art motifs found on river, creek and escarpment/cliff.

The creek sites provided a comparison to the river sites and their contents. Coastal sites at Far Away Bay gave another measure by which to investigate the distribution of art motifs. Currently they are by the sea and have been since sea levels and hence the shore line stabilised over 6500 years ago. Before that, during the more arid glacial times, they would have been inland by up to 200km (at the Last Glacial Maximum) and the cliffs would have been an escarpment in a manner analogous to the current Arnhem Land Escarpment. Bushwalkers trekking to the east of my survey areas provided information on the little art they discovered so confirming that the Far Away Bay area is a rich art area amidst little surrounding it.

My two rock art survey areas provided information from 149 art sites. This has been collated and is available in Appendix D. Each art motif listed was then assigned to one of sixteen categories based upon the simplified chronology developed earlier. The motifs fitted into periods within the three phases of my simplified chronology, Early, Middle, Late, plus a catch-all phase, Indeterminate. Apart from the latter, the periods or groups correspond to the Kimberley rock art styles.

My initial analysis compared the geomorphology of site locations (Taçon 1992) of river and coast, i.e. Drysdale River National Park and Far Away Bay, and then looked at the categories for the two regions in turn. Distribution by motif category was displayed graphically and by individual map plots. These illustrate the site preferences best for national park data of river and creeks. The coastal sites, since each area was visited in isolation with no indication of the intermediate country, provided poorer data for interpreting.

Within Drysdale River National Park, Early Phase art (Irregular Infill Animal Period) shows a preference for what is assumed to be the permanent water of the Drysdale River as opposed to the more ephemeral creeks. This art period has parallels with Large Naturalistic Figures in Arnhem Land and is believed

to be from 30,000 – 10,000 years BP (Chippindale and Taçon 1998) or at 20,000 years BP (Chaloupka 1993). This was a period of high aridity which may explain the preference for permanent water.

The first of the Middle Phase Periods, Tassel Bradshaw Group figures, like earlier Irregular Infill Animal Period art, is concentrated along the river rather the creeks. What are thought to be chronologically later Sash Bradshaw Group figures show less presence along the river and more along the creeks. My interpretation explaining this, though speculative, is that the climate was steadily improving allowing people to more easily move away from permanent water. Elegant Action Figures are few in number at both river and coastal sites, but are concentrated along the Drysdale River rather than the creeks. Clothes Peg Figure Period art matches the distribution of Sash Bradshaw Group figures with an even preference for the lower Drysdale River and Planigale Creek. There is possibly an overlap, or some contemporanity, between this Period and Elegant Action Figures based upon a superimposition seen at Gumboot Bay (FAB07-35) and reported sites on Theda Station showing interaction between the two art styles (Walsh pers. comm. 2005). Late Phase Wandjina Period art is seen on both river and creeks but with a strong tendency to the creeks, a fact commented on by others (Russell Willis pers. comm. 2006). However, the main Wandjina art sites in the region are found along the lower Drysdale River.

The panel orientations at sites were noted and these have been displayed in rose diagrams by both region, area and art motif. The results show that there are observable differences between the river and coast both on a broad scale, and when comparing similar art styles. The different orientations between Tassel and Sash Bradshaw Group figures is most noticeable with the coast almost being the opposite of the river. Finally, the orientations of recognisable occupation sites (thought to be from the recent period) for river and coast showed major differences. The sites were selected on the basis of floor deposits and the thick, grey, sandy floor evident of occupation. The national park sites tended to face towards the north-north-west or easterly (Fig. 4.18a). Coast sites tended south westerly with a few in the opposite direction (Fig.

4.18b). The river sites will have a strong component from the northerly facing shelters on the south bank of the lower Drysdale River but the orientation of coastal sites is, to my mind, evidence of a clear choice, as I do not believe it is determined by the geology and hence orientation of available shelters.

The format of presence or absence of art motif at a site is suitable for further processing through the technique of multivariate analysis, particularly correspondence analysis. The use of this and another multivariate technique, cluster analysis, formed the body of Chapter 5. The aim was to chart regional differences in the range of motifs between Drysdale River National Park and Far Away Bay, determine any differences within a region, i.e. between river and creek, and finally to see if the Drysdale River itself acted as a boundary between art traditions. The processing was also repeated on Middle Phase art to see if any variations occurred in the six Bradshaw and 'Clothes Peg' Figure categories making up this phase.

The correspondence analysis of all data for both regions did not show any differences between the river and coast. This was also the result indicated by the chi-squared test. Performing the same analysis on Middle Phase art only revealed a slight separation between the two regions with most of the scatter plot overlapping. For Middle Phase art there is a slight difference and this too was indicated by the chi-squared test performed previously. When the two different areas within the national park were analysed it was found that there were visible differences between the two creeks and the river. One explanation for this is that the group of river sites contain a few large sites with a wider range of art than is found elsewhere in the park, and Palmoondoora Creek differs in this respect from Planigale Creek. The effect is seen to a lesser extent when Middle Phase art is examined. The analysis examining the different banks of the lower Drysdale River was of interest as this followed work undertaken by Taçon, Wilson and Chippindale (1996) on Rainbow Serpent imagery on opposite banks of Twin Falls Creek in Arnhem Land. My analysis involved the grouping of data into the relevant Schmiechen sectors before processing. The resulting scatter plot showed a slight distinction between opposite banks with the south and west banks more dispersed as a

result of the greater variation of motifs present at the larger rock shelters. An examination of Middle Phase processed data saw no recognisable differences. From this it would appear that the Drysdale River did not act as a barrier or boundary at the time of painting Bradshaw and 'Clothes Peg' Figure art. Coastal sites at Far Away Bay showed a high degree of phenetic similarity with the data bunching tightly together. Two anomalous outliers were found to be the two sites with solitary examples of Wandjina art. This is understandable as Far Away Bay is at the eastern edge of the Wandjina cult's influence. Analysis of Middle Phase art revealed that the degree of similarity was still there with multiple superimposed data points but there was a wider spread so that areal differences could be seen at extremities. The various cluster analyses performed found the data clustered on the basis of groups of motif and did not have a geographical component. Chapter 5 revealed that there are differences between regions and areas based upon the corpus of rock art painted there.

Evidence of regionality, through differences in the composition in the art body in the two regions, led in Chapter 6 to investigating the size of territory that might have been occupied in the past by the painters of Middle Phase art. The size of modern day language groups and clan estates was determined and compared with what is known of the geographical distribution of Kimberley rock art periods. One important factor is that increasing aridity would increase the territory a band would have to forage over. Based on contemporary ethnographic data, the area of Drysdale River National Park would have been able to support a small group of approximately twenty five people at this time. The geographical extent of painting traditions may be dependent on climatic conditions, a hypothesis that has been raised by Lewis (1988) for Dynamic Figure art in Arnhem Land. His analogy of comparing the extent of Dynamic art with that of the territory occupied by modern day Jjingili a few hundred kilometres to the south, would, if applied to the Kimberley, suggest that Middle Phase art was painted at a time of aridity corresponding to the modern day northern edge of the Great Sandy Desert. This view though conflicts with assumed improving climatic conditions as inferred from the time scale of my short rock art chronology. However, a harsh environment does not prevent

cultural activity as is known from accounts by Spencer and Gillen (1968) and Tindale (1935) and nor does it prevent the aggregation of large groups of people.

The chapter explores ideas of whether the presence of large art sites are examples of aggregation sites as put forward by Meg Conkey. This idea has been explored for Upper Palaeolithic sites in Europe by Conkey (1980) and Bahn (1982) using Australian hunter gatherer data. The Australian evidence of people gathering to exploit food stuffs (Flood 1983) and aggregating to undertake ceremonies (Lommel 1997, Tindale 1935) means the idea cannot be rejected immediately out of hand. Along the lower Drysdale River and at Far Away Bay the number of art sites and complexes means that they cannot individually be thought of as aggregation sites. Rather the sectors are perhaps best thought of (following Gunn's 1997 approach) as aggregation regions. The chapter ends with a speculative survey of known concentrations of Middle Phase art through the north Kimberley and finds that art provinces are found very roughly every 50km or so. This average distance is in line with the distribution of Upper Palaeolithic aggregation sites discussed earlier. Further, applying interpretations by Hayden (1980) and Bahn (1982) the distances between Middle Phase art bodies may represent inter-clan or inter-band distance depending on the climatic model used. This speculative analysis suggests that art concentrations on the lower Drysdale River and Far Away Bay perhaps are evidence of different clans existing at this time.

Chapter 7 continues a theme first mentioned in the previous chapter, that some of the larger aggregation sites lie in close proximity to open areas. On the river this consists of open terraces. At the coastal sites the geology leads to the weathering out of central open areas from which surrounding painted shelters can be viewed. The transformation from 'space' to 'place' through manipulation of the rock face by the creation of art is explored using theories from phenomenology and architecture as applied to petroglyph sites in North America by Swartz and Hurlbutt (1994). The effect is best seen on the coast, and sites at Lost City (FAB07-42 complex), Boab Bay (FAB07-20) and Gumboot Bay (FAB07-05-09) are examined in detail. In the national park the

river sites are DR07-17 Pulpit Rock and the DR07-31 complex. One part of the analysis, as offered by the authors, is to apply criteria for finding the 'feel' of a site and whether it is a 'major religion' art site or generates a 'cathedral effect' (1994: 17). Architectural ideas of entry, enclosure and focus provide a tool for examining other site complexes. The model does not fit the waterways of Drysdale River or Planigale Creek as the sites are not bounded but are open to the front.

The enclosed nature of the Lost City and Boab Bay complexes, with individual panels mapped out, means it is possible to see how the use of space and the sense of place varied through time. The visible nature of art from the central open areas means later painters will be aware of earlier work. It is noticeable that at the FAB07-42 complex, Tassel Bradshaw Group figures are painted on a panel by an entrance route but Sash Bradshaw Group figures, when painted, are added elsewhere. The next stage occurs when 'Clothes Peg' Figure Period art is added to the complex. A panel at the south west of the complex is selected for huge figures, one over six feet long, which would have totally dominated the complex when freshly painted. Another development at this time is the first use of the cave as a painting site. The cave is visible from the new large panel, but not the other way around from inside. The shifting of the site's focal point to the large panel and the use of the cave indicates a major new use of space and a change in the sense of place.

The changes in space and sense of place are seen to a lesser extent at Boab Bay's FAB07-20 complex. First, a single panel with Early Phase art is painted, followed by Middle Phase Tassel Bradshaw Group figures making use of the previous panel and adding two others. Then Sash Bradshaw Group figures are painted at the north of the complex on a new panel. Late Phase art arrives and the use of a shallow shelter as an occupation site. At this complex it is the Sash Bradshaw Group figures which have a distinct location on a solitary panel whereas at the previous site this 'role' was taken by Tassel Bradshaw Group figures.

The final section of Chapter 7 follows a lead from the previous chapter on population size and tries to speculatively calculate that if the art complexes are in fact aggregation sites how many people would be able to camp there? That the complexes have been occupied in more recent times is evident from floor deposits in rock shelters present at the sites. The method used is that by Weissner (1974), to calculate the population of !Kung Bushman camps from the area of ground occupied by all their shelters and hearths. Weissner's model was created for camps with up to twenty five people. For my coastal complexes the size of the ground area related to an estimated camp size of 25-30 people at FAB07-42 and FAB07-20 and around 12 at Gumboot Bay FAB07-05-09. The former figure is the same as an arid climate band. At river and creek sites the larger ground area exceeded the parameters of Weissner's model by a factor of ten. As such the estimated camp population may have been of the order of ten times that of the coastal sites i.e. in the region of 250 – 300 people, if food resources were available to support such a population.

The chronology of regionality in north Kimberley rock art

The survey undertaken for this thesis examined 149 art sites (see Appendix D) in two geographically distinct regions of river and coast, approximately 85 kilometres apart, and found evidence of regionality in the body of rock art. The thesis has distinguished three major phases: early, middle and late. My discussion, therefore, will be related to each of them.

In the Early Phase a petroglyph tradition, the Pecked Cupule Period, has not been considered due to the lack of sites containing this art (only one example was found, DR07-24), though it is known sites of this type do exist in the national park (e.g. Drysdale 3 Shelter). The main painting style comprises the Irregular Infill Animal Period. This manner of painting is seen across the Kimberley and into Arnhem Land where a corresponding style is called the

Large Naturalistic Figures Complex. I believe it is appropriate to say the Kimberley art is related to the similar body in Arnhem Land and therefore was also created at the time of heightened aridity. In Drysdale River National Park, Irregular Infill Animal Period art shows a preference for being located near river sites along the lower Drysdale River as opposed to Planigale and Palmoondoora Creeks (Fig. 4.3a). At the time of painting, during a time of aridity, the river would be a source of permanent water as opposed to the more ephemeral creeks which may explain the observed regionality. For coastal sites the data is not so clear cut with examples of the art being found in escarpment top sites (Fig. 4.5a). Regionality is seen in the geomorphological distribution of art panels. Within the national park the river gorge is the preferred general situation of the art (Table 4.5), but it is plateau on the coast (Table 4.6). The main site location is the river terrace in the park compared with outlier, residual and boulders on the plateau for Far Away Bay. There is an observable difference concerning panel orientation with coastal sites being present in almost the four cardinal points whereas national park sites face generally westerly from south, west-south-west and north-north-west (Fig. 4.7).

The Middle Phase is characterised by two art periods, the Bradshaw (most likely 9-10,000 years BP in my chronology) and 'Clothes Peg' Figure Periods. A characteristic of the latter period is the depiction of spearthrowers in the art for the first time. Their use has been dated to the arrival of the Small Tool Tradition. In Arnhem Land this is from 6000 years ago, in the Kimberley it may be as recent as 4500 BP, though this date seems rather late for applying to the appearance of spearthrowers in the art. In my simplified chronology I placed three groups in the Bradshaw Period: Tassel and Sash Bradshaw Group figures, and Elegant Action Figures. Tassel Bradshaw Group figures show a greater preference for river sites as opposed to creeks in a similar pattern to the Early Phase (Fig. 4.3b). Later Sash Bradshaw Group figure art moves out from the lower Drysdale River and along Planigale and Palmoondoora Creeks (Fig. 4.3c). It is not possible to tell this distribution at the coastal sites of Far Away Bay due to the areas being isolated art complexes with little knowledge of the intervening country, and data provided

by bushwalkers is over to the east from my area of interest. Elegant Action Figures, the 'Bradshaw' group depicting scenes of every day life is less common than the other Bradshaw groups in both regions. However, sites showing this art are concentrated along the river (Fig. 4.3d). The pattern of distribution of Bradshaw Period art therefore shows first expansion and then contraction to the river. The geomorphology of site locations illustrates differences between the placing of Tassel and Sash Bradshaw Group figures (Table 4.4). The former have a strong presence on the river terrace, the latter spread amongst the other categories. Shelter walls and ceilings are the dominant site type for Tassel Bradshaw Group figures, this is less so for Sash Bradshaw Group figures with small panels and single paintings also being important. Panel orientation shows strong differences between the same art group and different locations. Tassel figures face towards the north east and easterly on the Drysdale River National Park sites, and north-north-east for Far Away Bay (Fig. 4.13a). Sash Bradshaw Group figures face east and south east in the national park and south west on the coast (Fig. 4.13b). The two art groups face opposite directions to each other.

The next Middle Phase period, 'Clothes Peg' Figure Period, has sites with Bichrome figures clustered around the lower Drysdale River (Fig. 4.3e) and 'Clothes Peg' Figure Group art moving out to the creeks (Fig. 4.3f). The pattern of expansion is shown at coastal sites where Bichrome art occurs at three areas whereas 'Clothes Peg' Figure Period expands to fill more panels and is present in all areas (Figs. 4.5e, 4.5f). 'Clothes Peg' Figures' panels are oriented south and south west within the national park and south-south-east on the coast (Fig. 4.13). Whereas park sites locate the paintings on shelter walls and ceilings (Table 4.4), coast sites are split between 'shelter walls and/or ceiling' and 'small panel or single paintings' (Table 4.5).

Taken together, the two periods comprising the Middle Phase show a period of expansion, contraction and expansion again from permanently watered areas. Reasons for this are speculative and could vary from cultural practices to changing environmental conditions with fluctuating aridity. Certainly the time from 10,000BP is one of environmental change with rising sea levels and

loss of exposed coastal plain. The shoreline reached its current position around 6500 BP.

The Late Phase is dominated by Wandjina art. The characteristic style of painting dates to later than 1500 years BP, though the culture of clan totemism is thought to post date sea level stabilisation and be a few thousand years old, perhaps commencing around 4500 BP on radiocarbon trends as discussed earlier. Wandjina art shows a strong preference for sites along the creeks even though the main Wandjina panels are found on the lower Drysdale River (Fig. 4.3g). The plateau areas would be more productive for the hunting and gathering lifestyle than the narrow corridor provided by the Drysdale River.

Regionality within the national park between river and creek is noticeable. For investigating between the two areas I used the multivariate method of correspondence analysis. For the full body of art no differences between the two regions were noticeable, with there being a strong degree of homogeneity. Analysis of Middle Phase art showed that there was a difference between the two regions. Differences were found between river and creek for all data and for Middle Phase art. When opposite banks of the Drysdale River were observed then a slight difference accountable to the larger painted shelters on the south bank resulted in regionality being discerned. Middle Phase art saw no such differences proving the river did not act as a barrier or boundary during this phase.

The distribution of painted rock shelters between the two regions is in agreement with ideas on the aggregation of people for ceremonies. In this case the shelters lining the lower Drysdale River cannot be thought of as individual aggregation sites but the sector must be regarded as a whole aggregation region. The concentrations of Middle Phase art on river systems through the north Kimberley are on average around 50 kilometres apart. This may represent either the inter-clan or inter-horde distance depending on the climatic and environmental model used. With the climate improving through

the time span of Middle Phase art then perhaps the distance between river and coast represents the distance between north Kimberley clans at this time.

Finally, the composition of art complexes can be described using architectural theories though the coastal sites fit the model better than the river sites. If the complexes are in fact aggregation sites then the number of people who could assemble there can be calculated from their ground area. Although this analysis is speculative this would number 25-30 people at coastal sites, the size of a band. The larger ground areas of inland river and creek sites would fit in the order of three hundred people, a body of people reported ethnographically to have aggregated for ceremonies.

In conclusion, regionality is apparent in the rock art of the Kimberley and has been demonstrated between the two regions of river and creek. The presence of other bodies of art on rivers elsewhere in the Kimberley will, I believe, reinforce this premise. The distribution of individual art styles in comparison with earlier and later ones may also provide information of how people adapted to changing climatic conditions.

Interpreting regionality

The term, as used in this thesis, refers to variation in Kimberley rock art, this being either stylistic or a variation in the corpus of art between two or more areas. Regionality is not the only cause of variability in rock art as I will now discuss.

In the introduction an overview of the work of several authors that had looked at regionality was provided. It was mentioned that many authors in parts of the world such as Europe have looked at regionality as a result of ethnicity. A more recent perspective is offered by Andy Jones who mentions memory. In Australia, archaeologists have interpreted regional differences in the

distribution of rock art styles or elements within style as a consequence of them having been produced by distinct language groups.

Analysis of trends in rock art development by other researchers indicate that regionality has been increasing during the Holocene. Reasons for this include increasing populations, changes in dispersal patterns and greater territorial bounding and increasingly fertile areas. In Arnhem Land Taçon (2001) sees this cumulating in focused and confined areas at the individual and clan level rather than by linguistic group (2001: 544). The same is seen in Cape York with the fixed boundaries of small style regions (David 2004: 164). They also coincide with evidence of increased painting activity known from ochre deposition.

Depictions of gender are uncommon in my two research areas and apart from one female figure (an Elegant Action Figure identified by breasts at DR07-75) effectively not portrayed at all. This may be an indicator of regionality as elsewhere in the Kimberley female figures are portrayed in Late Phase art. There are rock art sites known to be men or women's sites described in the literature in other regions. Flood describes one such place in Wardaman Country, *Murdu-ya*, at Ingaladdi, where a rock shelter associated with women has sexually explicit art (1997: 313). The site was chosen for an adjacent sandy area used for dancing. Even so out of 200 art sites it is one of the few associated with women. The presence of stone spear points on the floor, the manufacture of which is an exclusively male activity, illustrates that men were not barred from it. Women had sacred sites which may or may not contain art and men were banned from one as pregnancy was guaranteed (Flood 2004: 196).

Amongst Early Phase art there is only one painting of a person, an individual on all-fours with no sexual detail portrayed at DR07-06 Bundarwa. I have not investigated whether it is possible to identify the sex of the animal species portrayed. Middle Phase art depicts the 'classic' Bradshaw art of the Kimberley. The figures are sexless and almost always described as male. Walsh believes there is too great an emphasis on genitals as the identification

key to gender and thinks iconographic elements within the composition would be obvious to contemporary viewers (2000: 229). He found only one depiction of male genitals in the Bradshaw Period. Jeff Doring interviewed four Traditional Owners at a Bradshaw art site who stated that women are portrayed with a fuller figure and best distinguished through differences in apparel such as a triangular waist girdle of possum or kangaroo hide, the *mambi* (Doring 2000: 66). Walsh has estimated the ratio of female to male figures in Sash Bradshaw Group figures is 1:5000 and 1:10,000 for Clothes Peg Figure Period art (2000: 231). Dynamic Figures of Arnhem Land are said to be 72% male and 5% female, though only 0.8% of the former are actually depicted with a penis (Chaloupka 1993: 112). The figures are categorized on the basis of associated weapons and activity, not physical attributes. In Walsh's opinion the society which painted Bradshaw figures is overwhelmingly male dominated. A contrasting view put forward by the IRART (2002) is that Bradshaw figures are genderless, reflecting a more equal society. Explicit depictions of gender are not relevant to the art styles. Late Phase art in the Drysdale River National Park and Far Away Bay shows few paintings of women. This is in contrast to western Arnhem Land (Grove 2003, Roberts and Parker 2003, Taçon 1993) where polychrome art depicting them is very common. As for regionality in the Kimberley, paintings of women are present to the south west of the research areas in Wren Gorge on Bachsten Creek. The site has a panel of female figures by the side of a waterfall (Doring 2000). In Wandjina art, paintings of female figures are rare but not unknown. None though are shown in Drysdale River National Park.

Climate has an impact on the subject matter of rock art as a changing ecology resulting from changes in climate may be depicted in the body of art, as is the case in Arnhem Land. A harsher climate may also prompt different mechanisms for managing information exchange with other groups. Resulting resource scarcity may foster open social networks with homogeneous art serving the function of providing group unity. An improving climate may lead to groups emphasising group differences through heterogeneous art. This has been illustrated in the Calvert Ranges of Western Australia where early petroglyphs represent an open system for a highly mobile population, and

later paintings result from a closed system where local group cohesion is emphasised (Veth et al. 2001).

On a broad regional scale over a few hundred kilometres, geology is of relevance to the location of rock art and will have a strong impact on regionality. For example there is a general lack of old art in the Victoria River District compared to the Kimberley and Arnhem Land. This is attributed to the softer and more friable rocks making up the geology weathering away more readily, taking the art with it. Within the Kimberley the southern Napier and Oscar Ranges are limestone, a softer rock which erodes and chemically dissolves. Only the more recent Late Phase art of Wandjina type figures are present in this area. However, Blundell does record the rare presence of a Bradshaw figure in the Napier Range at site LR-9 (1975: 221) which illustrates how this art body has eroded from here. The north Kimberley has the harder King Leopold and Warton Sandstones which are excellent 'canvases' for painting rock art. They are stable surfaces, resistant to weathering and so provide the majority of rock art sites (Donaldson 2007: 5). Naturally forming rock skins and crusts can provide a painting surface and also a sealant covering painted art and so preserve it. Finally on a local scale within Drysdale River National Park and Far Away Bay, art is found on topography marked on maps as 'distorted surface' and not generally on the surrounding terrain. Early, Middle and Late Phase art will be found on the harder rock surfaces of the two sandstones in the Kimberley, Late Phase art only is found on the softer limestones of the southern Kimberley.

There is no information concerning the distribution of early languages in the Kimberley and their connection with the distribution of rock art. The studies that have been made, for example by Playford (1960) in the south Kimberley and McDonald (2000) in the Sydney region, concern art and languages of the last three thousand years. For Early Phase Kimberley art there is no information. However, the homogeneity of the art, the wide distances it covers (as far over as Arnhem Land) and the time of painting in a harsh arid climate implies that speculatively the similarities within it may cross over to language. Within the Kimberley at this time there may be no language differences, or

none that have manifested themselves through Irregular Infill Animal Period art in the research areas. Middle Phase art, as demonstrated throughout this thesis, does show regionality between river and coast and with river regions. The distributions of art concentrations at approximately 50 kilometre intervals and a climate more arid than today suggests that the distribution represents different clan territories (Bahn 1982, Conkey 1980). If this is the case then perhaps differences in language or dialects may have existed, and that this might be the case between the river and coast art of my surveys. For Late Phase art there is ethnographic information on the different language groups within the Kimberley as discussed in Chapter 6. The area of what is now Drysdale River National Park is the land of the Walambi, and Far Away Bay is that of the Miwa. Wandjina art is found in the national park and generally not on the coast as the survey area is close to the cult's eastern boundary. Walsh has mentioned evidence of different internal decoration of Wandjina Period animals, which may be clan related (1997), but provides no other information. Photographs published by Donaldson (2007) of Wandjina figures from the north, central and west Kimberley show observable variations. The figures are painted in different language group areas and within different clan estates and confirm to my mind that regionality is observed in Late Phase art.

It has been demonstrated that regionality in the body of north Kimberley rock art occurred between river and coast, between what is now Drysdale River National Park and Far Away Bay. Also, it is seen that within a region different geographical areas may be of importance, i.e. river or creek, and that this emphasis will shift with time on the broad chronology of painting styles. Further, the mechanism causing the occupation of new areas may be driven in part by changes in climate and periods of aridity and humidity in the past, causing oscillations away from and back to permanent water. Regionality manifests itself in the chosen direction of rock shelters and painted panels, both between art periods and within regions. One factor in occupying a harsher environment is that of aggregation for a multitude of purposes. This may explain the wealth of painted art in rockshelters on the lower Drysdale River. It may also go on to elaborate on the regionality apparent in the Far Away Bay and Drysdale River body of art, and the separation in distance

between them and with other centres of Middle Phase art. In short, investigating regionality may help in the understanding all of the Kimberley's art.

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Appendix A

Published Kimberley radiocarbon dates

Location	C14 Dates Yrs BP
Bowdler & O'Connor (1991)	
Widgingarri 1	330
Widgingarri 1	1,300
Widgingarri 1	18,450
Widgingarri 1	27,610
Widgingarri 2	1,100
Widgingarri 2	4,660
Widgingarri 2	7,560
O'Connor, S. (1995)	
Carpenter's Gap	650
Carpenter's Gap	20,760
Carpenter's Gap	18,940
Carpenter's Gap	39,700
Carpenter's Gap	39,220
Veth, P. (1995)	
High Cliffy rock shelter	2,620
High Cliffy rock shelter	2,740
High Cliffy rock shelter	3,210
High Cliffy midden	650
High Cliffy open midden	6,690
South Broome middens	1,390
South Broome middens	3,060
North Broome middens	1,220
North Broome middens	3,640
Kununurra shelter	1,030
Kununurra shelter	1,940
Kununurra shelter	3,110
Pincombe shelter	2,660
Pincombe. shelter	3,560
Pilchowski Crossing	3,640
Canyon shelter	680
Dortch & Roberts (1996)	
Miriwun	1,675
Miriwun	11,930
Miriwun	14,530
Miriwun	17,980
Miriwun	2,980
Miriwun	320
Miriwun	4,900
Miriwun	7,600
Monsmont	1,730
Monsmont	1,420
Monsmont	1,480
Monsmont	3,190
Monsmont	965
Monsmont	1,610
Monsmont	3,930
Monsmont	12,030
Monsmont	10,100
Monsmont	7,280
Monsmont	10,860
O'Connor, S. (1996)	
Koolan Shelter 2	630
Koolan Shelter 2	3,710
Koolan Shelter 2	10,550
Koolan Shelter 2	23,900
Koolan Shelter 2	26,500
Koolan Shelter 2	14,400
Koolan Shelter 2	15,850
Koolan Shelter 2	15,220
Veitch, B. (1996)	
Ngurini	2,820
Ngurini	6,170
Bangorono	1,510
Wundalal	3,560
Wundadjingangnari	3,130
Wundadjingangnari	640
Goala	2,090
Goala	1,170
Idayu	2,010
Idayu	2,090
McConnell&O'Connor (1997)	
Carpenter's Gap 1	3,300
Carpenter's Gap 1	16,050
Carpenter's Gap 1	39,700
Roberts et al. (1998)	
Jinmium	1,790
Jinmium	370
Jinmium	2,100
Jinmium	950
Jinmium	80
Jinmium	1,860
Jinmium	2,800
Jinmium	860
Jinmium	3,870
Jinmium	1,080
Jinmium	1,130
Jinmium	1,020

Jinmium	1,760
Jinmium	2,890
Jinmium	3,330
Jinmium	1,100
Balme, J., (2000)	
Mimbi Caves Japi	340
Mimbi Caves Riwi	5290
Mimbi Caves Riwi	29,550
Mimbi Caves Riwi	31,860
Mimbi Caves Riwi	41,300
Mimbi Caves Riwi	>40,000
Mimbi Caves Riwi	40,700
Morwood & Hobbs (2000)	
Drysdale 2	2,740
Drysdale 3	2,710
Drysdale 3	25,850
Atchison et al. (2005)	
Granilpi	200
Granilpi	2,620
Granilpi	2,970

Granilpi	1,780
Granilpi	6,170
Granilpi	3,202
Granilpi	8,400
Punipunil	3,330
Punipunil	3,500
Punipunil	3,540
Ward et al. (2006)	
Goorurarmum	2,536
Goorurarmum	2,780
Goorurarmum	3,680
Goorurarmum	286
Karlinga	484
Karlinga	917
Karlinga	4,080
Karlinga	628
Karlinga	1,119
Karlinga	708
Karlinga	3,619
Karlinga	2,810

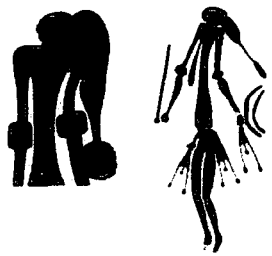
Appendix B

Bradshaw Art of the Kimberley

Adapted from Walsh, G.L., (2000) *Bradshaw Art of the Kimberley* Toowong Queensland: Takarakka Nowan Kas Publications. Pages 134-211.

Bradshaw Period Figures

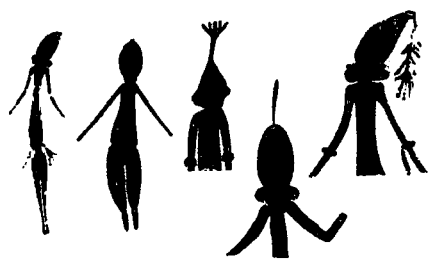
Tassel Bradshaw Group Figures
Figs 124, 125.



Sash Bradshaw Group Figures
Figs 130, 128, 129.



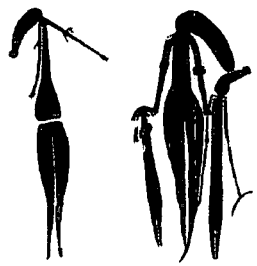
Acorn Bradshaw Group Figures
Fig 139.



Bland Bradshaw Group Figures
Fig 138.



Broad Hipped Bradshaw Group Figures
Fig 142.



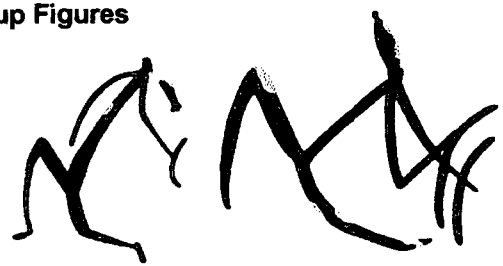
Schematised Bradshaw Group Figures
Fig 147



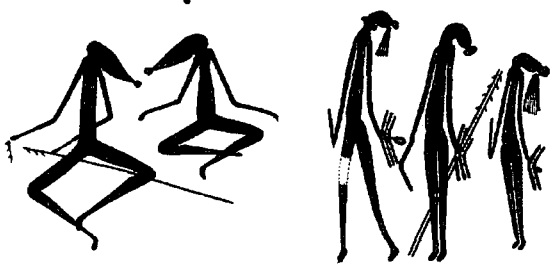
Convex Sweep Bradshaw Group Figures
Figs 151, 150.



Dynamic Bradshaw Sub-Group Figures
Figs 153, 154.



Elegant Action Figures
Figs 169, 158.



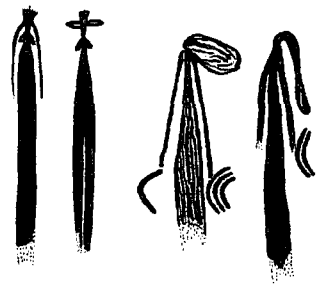
Mantis Bradshaw Group Figures
Figs 176, 175, 174.



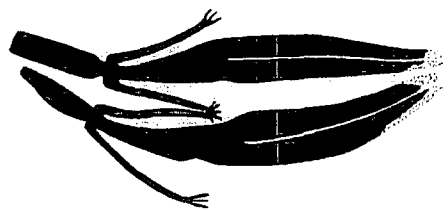
Stylised Bradshaw Group Figures
Figs 188, 190.



Slim Chest Bradshaw Group Figures
Figs 195, 194.



Eastern Bradshaw Group Figures
Fig 197.



Stick Bradshaw Group Figures
Fig 203.

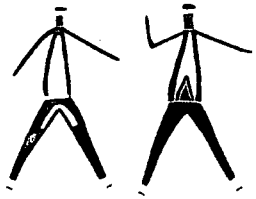


Miniature Bradshaw Group Figures
Figs 207, 208.



Clothes Peg Figure Period

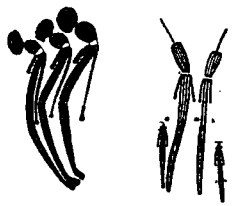
Transitionary Figures
Figs. 212, 211.



Semi-naturalistic Figures
Fig 209.



Static Figures Sub-Group
Figs 223, 222.



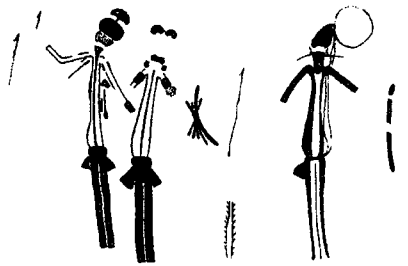
Stick Figures
Figs 230, 232.



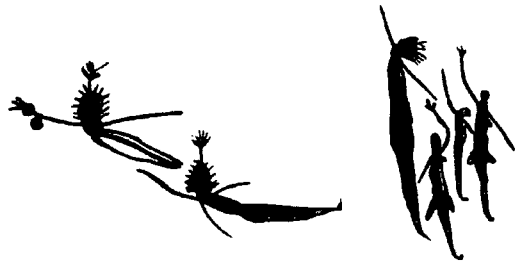
'Classic' Figures
Fig 239



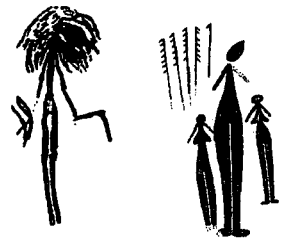
Tapering Outline Figures
Figs 243, 249.



Simple Northern Figures

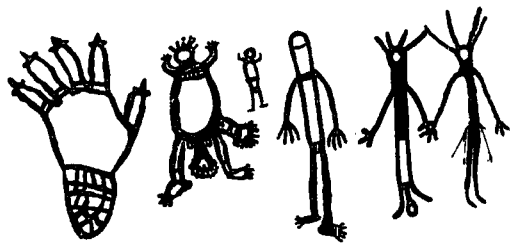


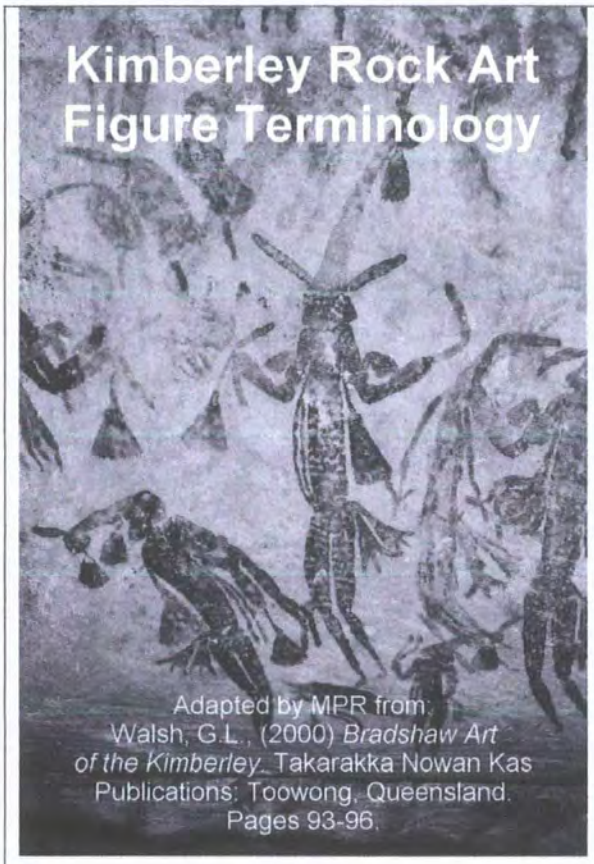
Eastern Figures
Fig 287, 285



Clawed Hand Period

Examples of Clawed Hand Period figures
Figs 293, 296, 299.





SPECIFIC FIGURES

String Print / Imprint
Pecked Cupule
Irregular Infill
Tassel Bradshaw
Ceremonial Figure
Sash Bradshaw
Elegant Action Figure
Bland Bradshaw
Acorn Bradshaw
Dynamic Bradshaw
Mantis Bradshaw
Millepede Figure
Schematised Bradshaw
Stylised Bradshaw
Clothes Peg Figure
Stick Clothes Peg Figure
CHP Devil Figure
Simple Northern Figure
Northern Muscly Figure
Sitting Side Penis Figure

SPECIFIC FIGURES

Horseshoe Head Figure
Onion Head Figure
Disc Head Figure
Stone Axe Figure
Rainbow Serpent

ARRANGEMENTS

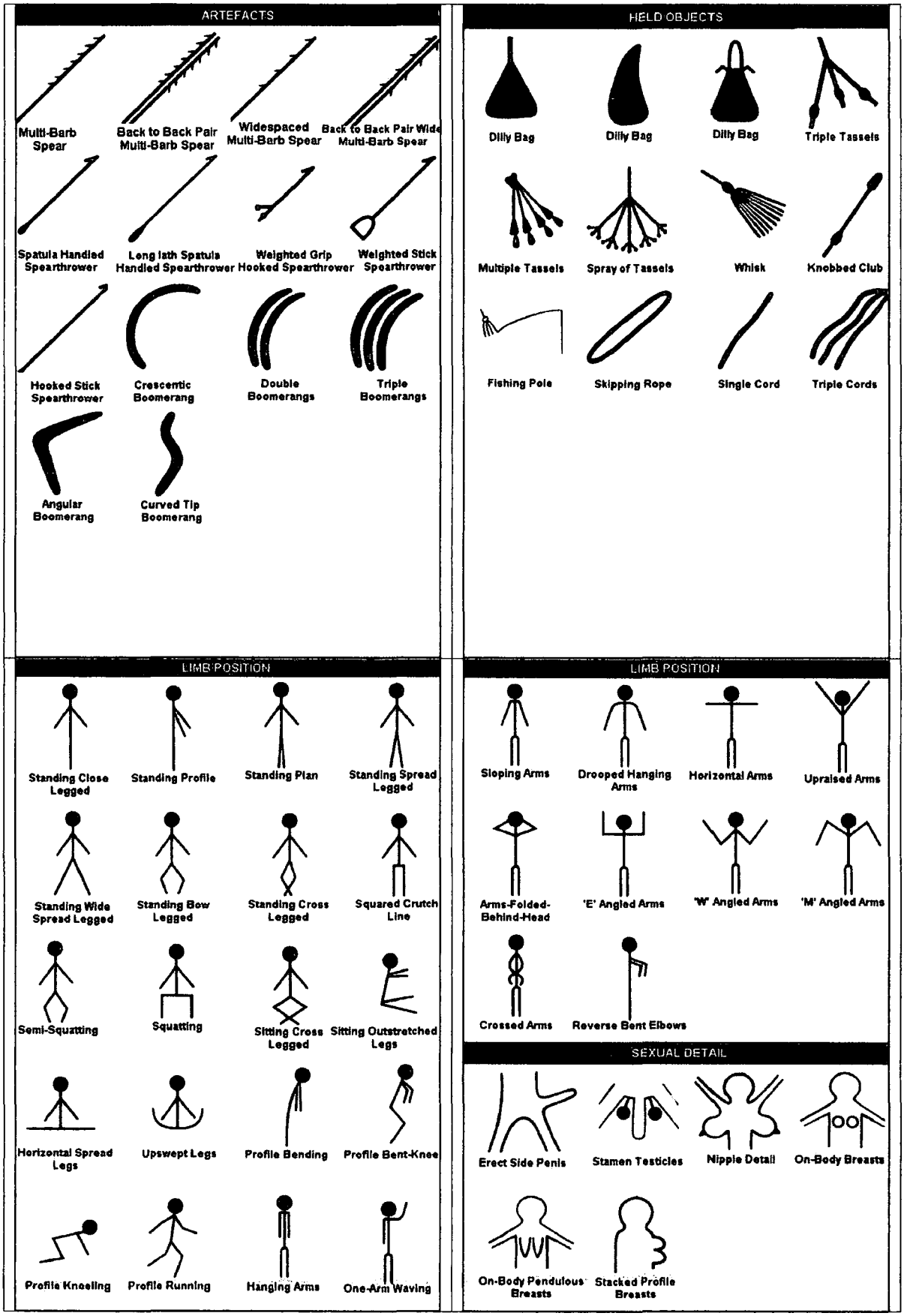
Side by Side Pairs
Face to Face Pairs
Back to Back Pairs
Large and Small
Track Story Panel
Story Panel
Subservient Scene
Overlapping Pairs
End to End Sex Scenes

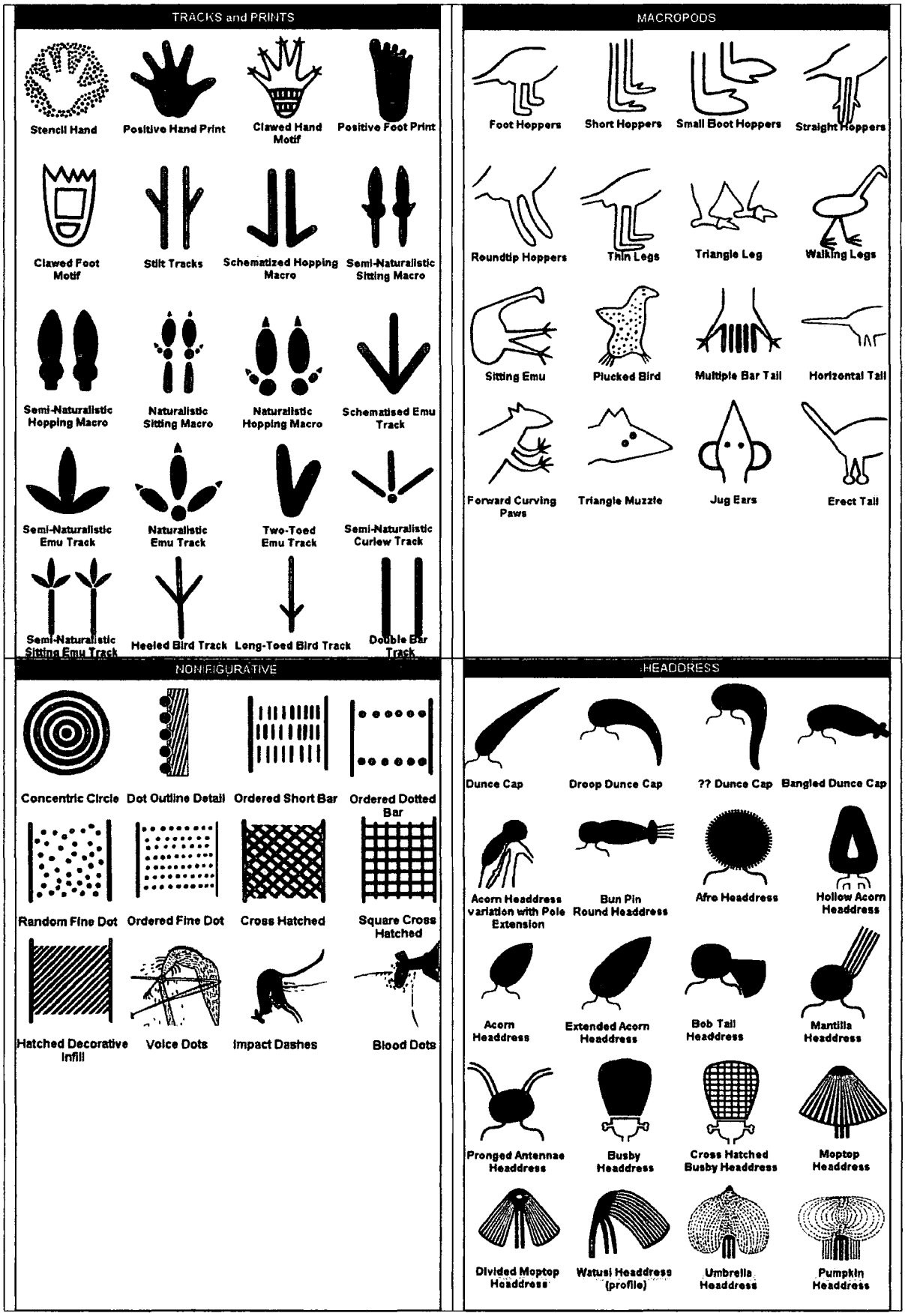
LIMB DETAIL

Ankle Ribbons
Ankle Wings
Topboot Feet
Riding Boot Feet
Feet Facing Same Direction
Feet Facing Opposite Direction
Toed Feet
Tick Feet
Slipper Feet
Downfacing Feet
One Only Bichrome Arm
Stick Arm

HAND DETAIL

Triangular Hands
Comb Hands
Conventional Hands
Spade Hands
Bar Fingers
Fine Fingered Hands
Extended Fingers
Round Hands


ARTEFACTS
Multi-Barb Spear
Back to Back Pair Multi-Barb Spear
Widespaced Multi-Barb Spear
Back to Back Pair Wide Multi-Barb Spear
Spatula Handled Spearthrower
Long lath Spatula Handled Spearthrower
Weighted Grip Hooked Spearthrower
Weighted Stick Spearthrower
Hooked Stick Spearthrower
Crescentic Boomerang
Double Boomerangs
Triple Boomerangs
Angular Boomerang
Curved Tip Boomerang
HELD OBJECTS
Dilly Bag
Dilly Bag
Dilly Bag
Triple Tassels
Multiple Tassels
Spray of Tassels
Whisk
Knobbed Club
Fishing Pole
Skipping Rope
Single Cord
Triple Cords
LIMB POSITION
Standing Close Legged
Standing Profile
Standing Plan
Standing Spread Legged
Standing Wide Spread Legged
Standing Bow Legged
Standing Cross Legged
Squared Crutch Line
Semi-Squatting
Squatting
Sitting Cross Legged
Sitting Outstretched Legs
Horizontal Spread Legs
Upswept Legs
Profile Bending
Profile Bent-Knee
Profile Kneeling
Profile Running
Hanging Arms
One-Arm Waving
LIMB POSITION
Sloping Arms
Drooped Hanging Arms
Horizontal Arms
Upraised Arms
Arms-Folded-Behind-Head
'E' Angled Arms
'W' Angled Arms
'M' Angled Arms
Crossed Arms
Reverse Bent Elbows
SEXUAL DETAIL
Erect Side Penis
Stamen Testicles
Nipple Detail
On-Body Breasts
On-Body Pendulous Breasts
Stacked Profile Breasts


TRACKS and PRINTS
Stencil Hand
Positive Hand Print
Clawed Hand Motif
Positive Foot Print
Clawed Foot Motif
Stilt Tracks
Schematized Hopping Macro
Semi-Naturalistic Sitting Macro
Semi-Naturalistic Hopping Macro
Naturalistic Sitting Macro
Naturalistic Hopping Macro
Schematised Emu Track
Semi-Naturalistic Emu Track
Naturalistic Emu Track
Two-Toed Emu Track
Semi-Naturalistic Curlew Track
Semi-Naturalistic Sitting Emu Track
Heeled Bird Track
Long-Toed Bird Track
Double Bar Track
MACROPODS
Foot Hoppers
Short Hoppers
Small Boot Hoppers
Straight Hoppers
Roundtip Hoppers
Thin Legs
Triangle Leg
Walking Legs
Sitting Emu
Plucked Bird
Multiple Bar Tail
Horizontal Tail
Forward Curving Paws
Triangle Muzzle
Jug Ears
Erect Tail
NON-FIGURATIVE
Concentric Circle
Dot Outline Detail
Ordered Short Bar
Ordered Dotted Bar
Random Fine Dot
Ordered Fine Dot
Cross Hatched
Square Cross Hatched
Hatched Decorative Infill
Voice Dots
Impact Dashes
Blood Dots
HEADDRESS
Dunce Cap
Droop Dunce Cap
?? Dunce Cap
Bangled Dunce Cap
Acorn Headdress variation with Pole Extension
Bun Pin Round Headdress
Afro Headdress
Hollow Acorn Headdress
Acorn Headdress
Extended Acorn Headdress
Bob Tail Headdress
Mantilla Headdress
Pronged Antennae Headdress
Busby Headdress
Cross Hatched Busby Headdress
Moptop Headdress
Divided Moptop Headdress
Watusi Headdress (profile)
Umbrella Headdress
Pumpkin Headdress

HEADDRESS


Hanging Mango Headdress

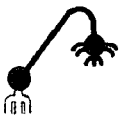

Blunt Cone Headdress


Blunt Stovepipe Headdress


Stovepipe Headdress

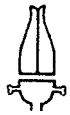

Melon Headdress


Balloon Tip Headdress


Drooped Bar Headdress


Drooped Barbed Bar Headdress


Skull Cap Headdress


Mitre Headdress


Concentric Circle Headdress


Rayed Fan Headdress


Rayed Headdress


Broad Plume Fan Headdress


Dumbell Headdress


Exclamation Mark Headdress

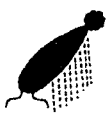

Wheat Ear Headdress


Barred Ray Additions


Pin Ray Additions

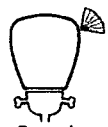

Turban Additions

HEADDRESS DETAIL


Dot Decorated Beehive


Twin Feather Dot Decorated Beehive


Barbed Tip Dunce Cap with Tassels


Tussock (Busby)


Broad Tussock (Busby)

BODY DECORATION


Centre Bar


Centre Line


Waist Band


Chest Band


Arm Band


Elbow Band


Wrist Band


Neck Band


Yolk Line

HEADDRESS


Cashew Headdress

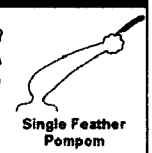

Double Pendulum Headdress

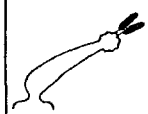
HEADDRESS DETAIL


Pompom


Tassel Pompom


Tiered Tassel


Single Feather Pompom


Double Feather Pompom


Double Pendulum Feather Pompom


Single Feather Body


Double Feather Body


Double Pendulum Tassel Pompom


Dotted Pendulum


Head Tassels


Triple Tassels Dunce Cap


Feather (feature)


Bird Wing (feature)


Prong (feature)


Barred Window Beehive

BODY STYLE


Paunch Detail


Elliptical Body


Elliptical Centre Line Body


Tapering Elliptical Body

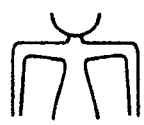

Barbed Body


Lattice Body


Broad Shoulders


Narrow Shoulders

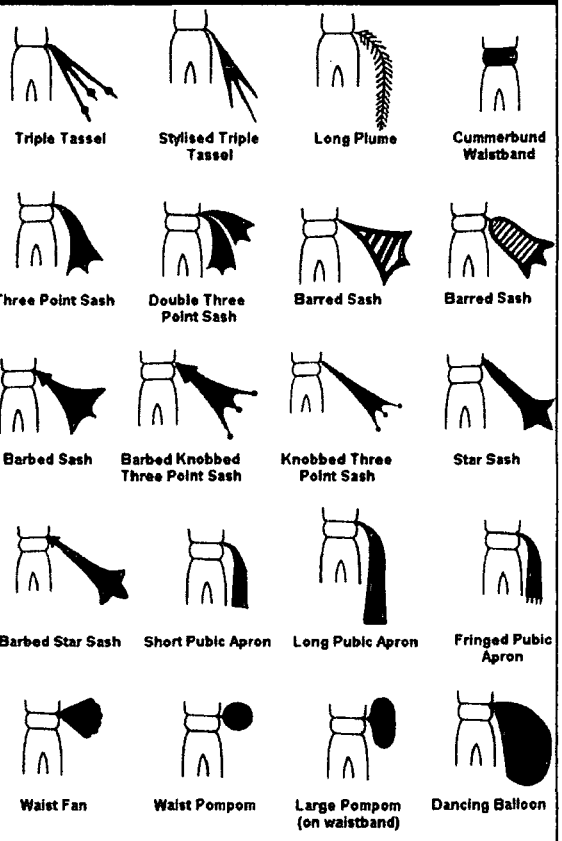

Hunched Shoulders


'T' Shoulders

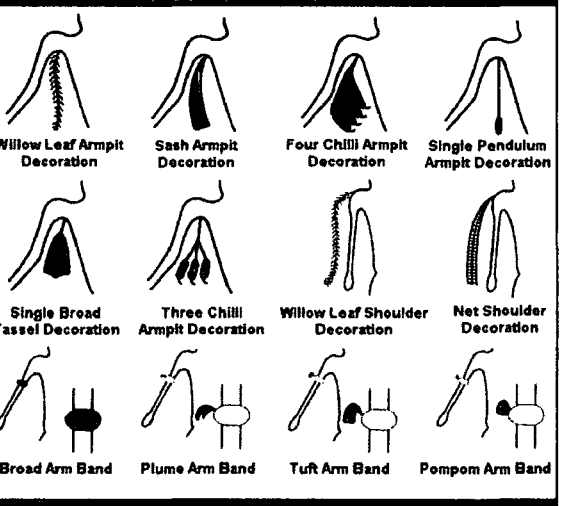

Sinuous Body


Two Line Body

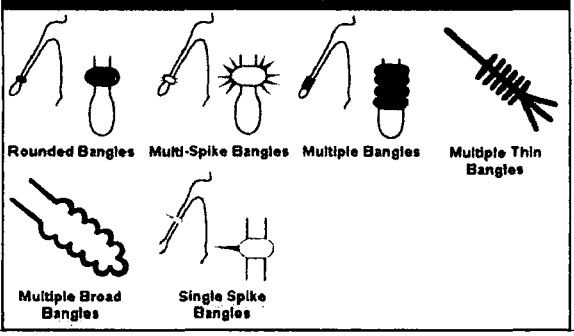
DRESS DECORATIONS



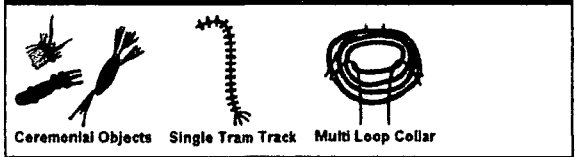
ELBOW AND ARM DECORATIONS



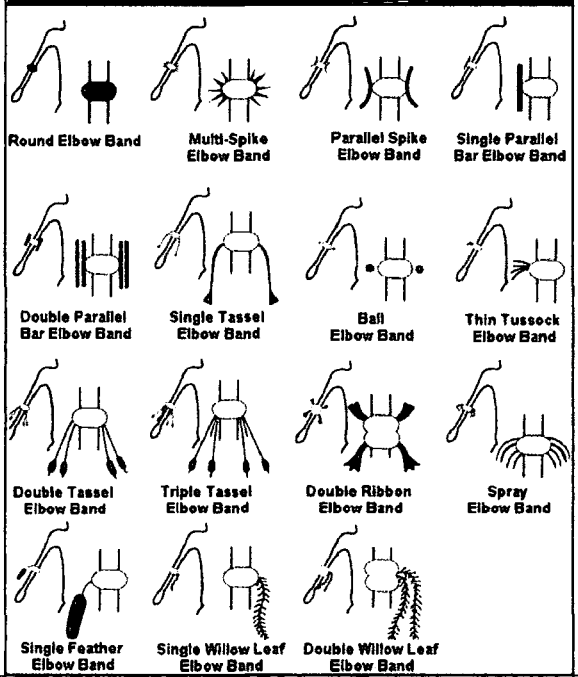
BANGLES



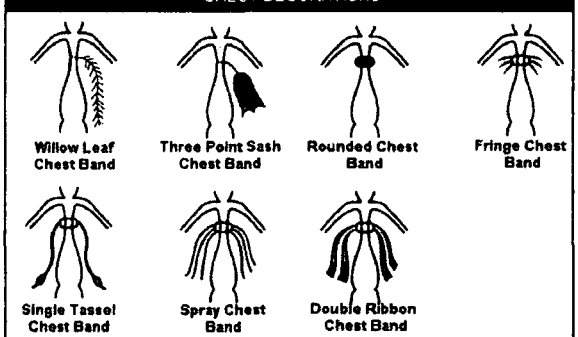
DRESS DECORATIONS



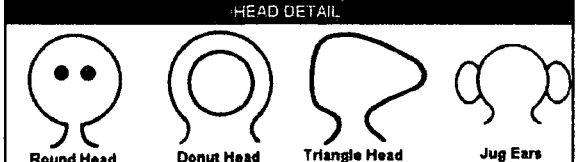
ELBOW AND ARM DECORATIONS



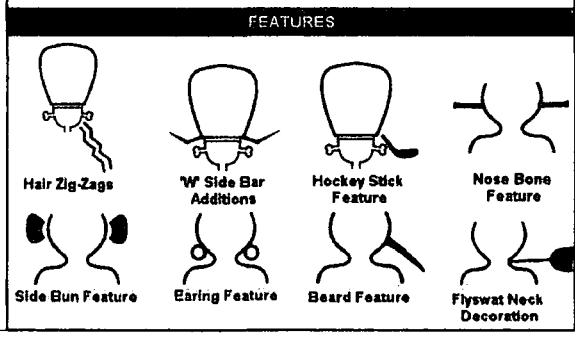
CHEST DECORATIONS



HEAD DETAIL



FEATURES



Appendix C

Site Recording Form

Adapted from Gunn R.G. & Whear, R.L., (2007) The Jawoyn Rock Art and Heritage Project. *Rock Art Research* 24(1):5-20.

Site No.						
Site Name				**Recorder**		
GPS WGS84				**Date**		
Situation		Plateau	Escarpment	Tablelands		
Site Type		Open	Shelter	Cliff wall		
Size		L x d x h				
		Orientation				
		Painting		Abraiding		
Approx Nos.		Drawing		Pecking		
		Stencil		Scratching		
		Print		Other		
		A	**B**	**C**	**D**	**E**
Recent	**1**	Monochrome	Stick figs	Fish	Human like	Beeswax
	2	Macropod	Large birds	Hand stencil	Hand prints	Spirit Figs
	3	Flying Fox	Fragments	Other poly	Turtle	Crocodile
	4					
Contact	**5**	People	Objects	Animals	Ships	Other
	6					
Wandjina	**7**	CHP Ceremonial	Attenuated Body	Early Wands	N. Early Wands	N. Muscly Figs
Period	**8**	Wandjina Animal	Bee Hives	Wand Devils	W. Bush Spirit	Pseudo Wands.
	9					
	10	Full Body	¾ Body	Bust only	Head Only	Horizontal
	11	Horizontal + child	Horiz. Head only			
	12					
Clothes Peg	**13**	Transitionary	Semi Natural	Static	Stick	Classic
Fig. Period	**14**	Tapering Outline	SNF	Eastern Figs	Clawed Hand	
	15					
Bradshaw	**16**	Tassel	Sash	Acorn	Bland	Broad Hipped
Fig. Period	**17**	Schematized	Convex Sweep	Dynamic	EAF	Mantis Brads
	18	Stylised Brad	Slim Chest	Eastern Brad	Stick	Miniature
	19					
Early Art	**20**	String print	Pecked cupule	Irregular Infill		
	21					
Colours	**22**	Red	White	Yellow	Black	Orange
	23	R+W	R+Y	Monochrome	Polychrome	Mulberry
	24	Other				
Major motifs	**25**	Thylacine	Human like	Animal like	Snake	Macropod
	26	Emu/Jabiru	Crocodile	Fish	Other	
	27					
Greater than 1m						
Abraided	**28**	Emu tracks	Macropod tracks	Grooves	Other	
Pecked	**29**	Emu tracks	Macropod tracks	Grooves	Other	
	30					
Deterioration	**31**	Animal	Insect	Salts	Exfoliation	Dust
	32	Water	Vandalism	Other		
	33					
Deposits	**34**	Stone arr.	Ochred bone	Hairstring	Flaked stone	Points/blades
	35	Axe heads	Grindstone	Grinding patch	Ground pits	Dillybag hook
	36	Burial	Wall flaking	Spearpoints	Metalcut mark	
	37					
Floor Dep.	**38**	Large	Small	Nil		
Comments Interpretations						

Appendix D

Site Survey Forms - description

An example site survey form is given below along with a description of the terms used.

Site Number:		**Site Name:**	
		Date:	
GPS: (WGS84)		**1:100k map sheet**	
Other site ID:		**Region:**	
		Area:	
Size:		**Orientation:**	
Location:		**Aspect:**	
Motifs:			
Deterioration:			
Deposits:			
References:			
Description:			

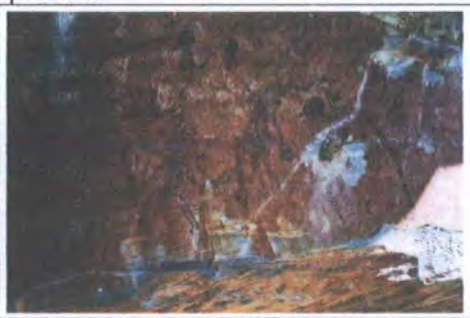
Site Number	A sequential number applied to the site in the order of visit eg DR07-01. The first set of letters indicates the area. DR for Drysdale River, FAB for Far Away Bay. This is followed by the year, 07, then the sequential number of the site. Lastly a letter may be used for separate panels in site complexes.
Site Name	The local name of the site, where known.
Date	Dates of my visit.
GPS (WGS84) / Grid Ref	GPS coordinate of the site or a grid reference taken off a map where no gps reading exists.
Other site ID	Site identification number from previous researchers where known. For the Drysdale River National Park this will be from Schmiechen 1993.
1:100k map sheet	The 100:000 scale map sheet where the site lies. For the Drysdale River National Park this may be 4268 Carson or 4267 Ashton. For Far Away Bay the sheets are 4370 Rulhieres and 4369 King George.
Region	General area where the art occurs eg Drysdale River National Park.
Area	A more exact geographical area in the region eg Planigale Creek.
Size	Size of the shelter with art, generally approximate to nearest half metre. A size given in centimetres will

	indicate the panel dimensions themselves have been recorded.
Orientation	The direction in which the main art panel faces. This is a rough reading rounded up or down to Grid North allowing for general trends to be determined.
Location	A general description of the site's location.
Aspect	The view from the art site.
Motifs	The art styles or art periods present at a site. Nomenclature taken from Walsh (1994, 1995, 2000).
Deterioration	Description of deterioration observed of the art panels.
Deposits	Floor deposit description.
References	Work by other researchers at the site in question.
Description	General site description.

Where a line has been left blank this indicates that no information is known or in the case of gps or grid reference data, has been removed from the recording form.

Drysdale River National Park: Site Survey Information.

Lower Drysdale River Area

Site Number: DR07-01		**Site Name:**	
		Date:	12 June 2007
Grid Ref:	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	8m x 5m x 6m approx	**Orientation:**	93 deg. Grid North.
Location:	A cliff line shelter on the south bank bend of the river where it turns north.	**Aspect:**	Good views of the river with an open terrace area below the shelter.
Motifs:	String prints, Sash Bradshaw Group figures, hand stencil, Clothes Peg Figure (variant), 'dog', stick figures.		
Deterioration:	Exfoliation, vandalism - ancient pounding.		
Deposits:	No floor deposits but some cultural remains.		
References:			
Description:	Paintings of Sash Bradshaw Group figures with long headdresses and multiple boomerangs along with string prints. Superimposed over Bradshaw figures are line outline figures, a Clothes Peg Figure variant. Some evidence of pounding of the figures. A dog like faded red painting is to the right of the shelter. A hint of stripes on its haunches perhaps indicates a thylacine. Colours: red and mulberry. Cultural remains of contact ie tin mugs present.		
Images:	 		

Site Number: DR07-02		**Site Name:**	
		Date:	12 June 2007
Grid Ref:	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	Southerly
Location:	North bank, above sites DR07-03 to 05, sheltered	**Aspect:**	Sheltered in a cleft.

	cliff wall near the top of the ridgeline.		
Motifs:	Irregular Infill Animal crocodile, stick figures		
Deterioration:			
Deposits:			
References:			
Description:	A large vertical Irregular Infill Animal crocodile, approx 1.8m long and stick figures present.		
Images:	 		

Site Number: DR07-03		**Site Name:**	
		Date:	12 June 2007
GPS: (WGS84)		**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	8m x 3m x 1.25m est.	**Orientation:**	138 deg. Grid North.
Location:	The site is on the north bank of the river, to the east of Wandjina Rock / Barologa.	**Aspect:**	Low shelter overlooking the river a few tens of metres east of DR07-04.
Motifs:	Elegant Action Figures, 'eel'.		
Deterioration:			
Deposits:	None.		
References:			
Description:	Three Elegant Action Figures in red on the left of the shelter, a long 'eel' on the rear wall.		
Images:			

Site Number: DR07-04		**Site Name:**	**Wandjina Rock / Borologa**
		Date:	12 June, 31 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-B-01	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	6m x 2m x 3m	**Orientation:**	221 deg. Grid North (main Clothes Peg Figure panel).
Location:	North bank of the river. Approx 50m west of DR07-03 and east of Bichrome Rock, approx 50m.	**Aspect:**	Low shelter overlooking the river
Motifs:	Clothes Peg Figures, Wandjinas, bird, 'slug', hand stencil, grass prints, dots.		
Deterioration:			
Deposits:			
References:	Schmiechen 1993:18-19		
Description:	A shallow cave at the east end has a series of eight ceiling painted Wandjinas figures, upper torsos painted and some in Head Only form. A 'chicken-like' bird and a 'slug' also painted. The western edge of the outcrop has a vertical panel of classic Clothes Peg Figures. The Clothes Peg Figures are mainly red outline with missing pigment. The third figure from the left seems to show a white interior. Fig 1: 67cm, Fig 2: 68cm, Fig 3 (white) 52cm. Main figure, tallest, 76cm long. Hand stencils are under the panel on the back wall, grass prints and rows of dots. The Clothes Peg Figures are exquisitely painted and preserved. They show woven string bags and paperbark bags. A great barred sash is on the lower right figure. The figures have hooked stick woomeras, very recognisable. Spears too are bichrome with only the multibarbed ends painted red remaining. Remains of 'recent' Wandjina period art present but faded revealing the underlying Clothes Peg Figures.		
Images:	 		

Site Number: DR07-05		**Site Name:**	**BiChrome Rock**
		Date:	12 June, 31 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-B-02	**Region:**	Drysdale River National Park

		Area:	Below Solea Falls
Size:		**Orientation:**	201 deg. Grid North
Location:	North bank of the river. Shelter 30m west of DR07-04.	**Aspect:**	View of river from art, though panel perpendicular to river looking downstream.
Motifs:	Elegant Action Figure type, Bichrome figures, Clothes Peg Figures.		
Deterioration:	Exfoliation.		
Deposits:			
References:	Schmiechen 1993:19		
Description:	A panel of Bichrome / Clothes Peg Figures on the western face of the outcrop. Bichromes vary from Bradshaw-like with stomach paunch, missing pigment and an associated hooked stick woomera to classic Clothes Peg Figures with Clothes Peg 'trousers', centre line down the chest and hair tufts like hats. Fig 1: 71cm, Fig 2: 69cm - classic Clothes Peg Figure. Bichrome figs (left panel) Bichrome 1: 36cm, Bichrome 2: 33cm. The tallest figure in yellow/orange: 79cm. Colours: mulberry, red, orange, yellow.		
Images:			

Site Number: DR07-06		**Site Name:**	**Wandjina Cave / Bundarwa**
		Date:	13 June, 4 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-F-06	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	22m x 5m x 2-8m	**Orientation:**	343 deg. Grid North
Location:	South side of the river. This is a big rockshelter sw up the slope from Goyon/Twin Brolga site.	**Aspect:**	The site has a nice view of the river and terrace below.
Motifs:	Irregular Infill Animal - macropod, echidna, human, fish, Sash Bradshaw Group figures, Elegant Action Figure, Wandjinas, hand stencil, grass prints, gen. Bradshaw figures.		
Deterioration:	Exfoliation, mudwasp nests, mineralisation.		
Deposits:	Charcoal deposits, chippings and flakes.		
References:	Schmiechen 1993:26, 46-48, McGregor 1999:30.		

Description:	The Shelter has a large roof protecting the living area below. Three Wandjinas are painted on the sloping roof with figures 1 and 2 being head only and figure 3 having a three quarter length body. White background and showing a 'cloud' spray on the headdress. The latter figure over paints a round head Bradshaw figure. Elegant Action Figure figures and their remains are in various places. The left of the shelter (east) has three Sash Bradshaw Group figures on the roof facing right with their arms out. They hold boomerangs and dilly bags and are painted in mulberry hue. The figures superimpose hand stencils, hands showing missing joints. Is this a style of art with bent fingers portrayed or a fact of hard hunter-gatherer life? To the left and above the Sash Bradshaw Group figures is Irregular Infill Animal art. Three fish and a dismembered limb. Above is a macropod with an echidna painted nestling between the neck forearms. A ledge by the macropod shows more fish and what appears to be a human figure on all fours. The hand stencils with missing digits are in mulberry. The roof shows multiple grass prints. Over the main Wandjina the roof shows a large Sash Bradshaw Group figure. The site is called Bundarwa by Schmiechen but Mulcutinari by McGregor.
Images:	 

Site Number: DR07-07		**Site Name:**	**Goyon / Twin Brolgas Shelter**
		Date:	13 June, 4 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-E-05	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	12m x 4m x 2m (est)	**Orientation:**	305 deg. Grid North
Location:	On the south bank of the river on the slope, 100m n.e. of DR07-06 Bundarwa. This is a tilted slab undercut.	**Aspect:**	Below the site is a terrace area and then the river.
Motifs:	Irregular Infill Animal macropod, hand stencil, Tassel Bradshaw Group figures, Sash Bradshaw Group figures, Clothes Peg Figure, Bichrome figures, undefined Bradshaw figures, birds (Brolgas), stick figures, crocodile, turtle, animal tracks.		
Deterioration:	Exfoliation, mineralisation, mudwasp nests.		
Deposits:	Rocky floor but dusty in places.		
References:	Schmiechen 1993:24, 42-44, McGregor 1999:134		
Description:	The site is shady but rocks fill it making lots of sitting benches but not a living site. The main art is to the left (east) twin with Tassel Bradshaw Group figures		

	and to the right (west) twin brolgas. The main figures are a pair of westward (downstream) facing Tassel Bradshaw Group figures painted in red ochre on the ceiling. They are glorious figures and are pictured in McGregor's book. The main figure has a long droopy headdress with a small end bun with two sticks projecting. Upper arm bands, along with elbow decoration of double ribbon elbow bands. Wristlets and fingers are painted. A four point tassel with a sash to the front and a tassel between the legs. The right figure shows exfoliation on the thigh area. Mud wasp damage evident too. Fig 1: 99cm, Fig 2: 86cm. The other figures for which the site gets its name are two brolgas painted towards the west of the shelter. The birds, one painted white, the other mulberry, face west. White Brolga: 69cm, Mulberry Brolga: 68cm. The art from right to left (west to east) is: Right third: Irregular Infill Animal macropod, Irregular Infill Animal oval, hand stencil, white Bradshaw figure with arms forward (possibly a Sash figure). Remains of an Irregular Infill Animal leg and foot. The back wall shows a Tassel Bradshaw Group figure with 2 boomerang, facing right. Possibly a macropod (Irregular Infill Animal), brolga. The bird is painted in mulberry hue with a white outline. An Irregular Infill Animal macropod is to the left Centre Third Bird foot (brolga by association), crude 'Bradshaw-esque' figure, hand stencil with overlying kangaroo track, stick figure, Irregular Infill Animal oval and red outline crocodile and turtle. Left Third Dark red Bradshaw figures, rather crude with no ornamentation apart from elbow tassels. The left of the group has a longer crudely done figure with a bent arm throwing a spear. To his left a shorter figure has a round head with antennae. On the underhang are Clothes Peg Figure/ Bichrome figures portrayed with waist appendages and hook stick. The first two figures are dark red then yellow. The far left has classic twin Tassel Bradshaw Group figures. Adjacent to their left is a whole series of stick figures. Painted with round heads, stick bodies and some holding hands. To my mind the site is odd in that most of the art is either poor or crude and then world class twin Tassel Bradshaw Group figures are painted at the far end.
Images:	 

Site Number: DR07-08		**Site Name:**	**Living Shelter**
		Date:	13 June, 3 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-E-07	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	15m x 5m 7m	**Orientation:**	323 deg. Grid North
Location:	This is a large, cool overhang, on a bearing 200 deg from last shelter. A big shelter near top of the slope, protected by a natural front wall.	**Aspect:**	View north towards the river.
Motifs:	Grass prints, string prints, Tassel Bradshaw Group figure, Bichrome figures, Clothes Peg Figure, stick figures, hand stencil, hand prints, fish, Wandjina, boomerang stencil, 'basket' painting.		
Deterioration:	Mudwasp nests, mineralisation, exfoliation.		
Deposits:	Contact deposits – enamel mugs, blades, metal spear points, crow bars, baler shells, grindstones, small floor deposits. Sandy grey floor. Morwood visited and found little sediment to excavate.		
References:	Schmiechen 1993:24, 44-45.		
Description:	This is a large, cool overhang containing cultural material from the Contact Period. The material consists of metal tools, enamel mugs, tin can, iron spear blades and crow bars, a bamboo spear shaft and a paperbark covering. Grinding stones such as pestle and mortar and small floor deposits. Also have blades, spear points and baler shells. There is art here of all periods. The ceiling shows grass prints and possibly (coiled) string prints. The right upper wall has grass prints. The Lower Wall has a half body Wandjina in red outline. Bichrome figures of a more Clothes Peg Figure type. Tassel Bradshaw Group figures, 'basket' motif. Other art includes stick figures, fish, hand stencil, hand prints, 3/4 body Wandjina, multiple Tassel Bradshaw Group figures, string prints. A cool shady spot with rock ledges with a little bit of sand for sleeping. A baler shell under a sheet of paperbark looks like a burial package. Schmiechen has an inventory of the cultural material and found little lost in the past ten years.		
Images:			

Site Number: DR07-09		**Site Name:**	
		Date:	13 June 2007
Grid Ref:	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	
Location:	South bank, just upstream from a little inlet by western cascades at Bradshaw Pool.	**Aspect:**	Huge overhang by the river.
Motifs:	Irregular Infill Animal marsupial, goanna.		
Deterioration:			
Deposits:			
References:	Walsh 2000:399		
Description:	On the ceiling is an Irregular Infill Animal marsupial. Drawing in Walsh 2000. A little further on is a goanna on a white background (no photograph).		

Site Number: DR07-10		**Site Name:**	
		Date:	14 June 2007
Grid Ref:	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	10m x 5m 2.5m	**Orientation:**	13 deg. Grid North
Location:	Shelter south behind the eastern end cascade of Bradshaw Pool.	**Aspect:**	A small shelter half way up the hillside from the river.
Motifs:	Hand stencils, Bichrome figures, Clothes Peg Figures.		
Deterioration:			
Deposits:	No floor deposits.		
References:			
Description:	Bichrome and Clothes Peg Figures on ceiling, not a living area. Hand stencils. 7 paintings, 3 handstencils. Semi natural Clothes Peg Figure. Colour red. The Clothes Peg Figure has a 'busby' headdress, yellow painted torso and arms, but dark red legs, carries a multibarbed spear.		

Images:	 

Site Number: DR07-11		**Site Name:**	
		Date:	14 June2007
Grid Ref:	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	
Location:	North bank of Bradshaw Pool from the eastern cascade.	**Aspect:**	
Motifs:	Tassel Bradshaw Group figures, Sash Bradshaw Group figures, stick figures, hand stencils, macropod.		
Deterioration:	Pecking, scratching, exfoliation.		
Deposits:			
References:			
Description:	Some Tassel but mainly Sash Bradshaw Group figure Group figures on rear wall. Hand stencils and a row of stick figures holding hands. Sash Bradshaw Group figure's very heavily pecked. A macropod is painted too.		
Images:			

Site Number: DR07-12		**Site Name:**	
		Date:	14 June 2007
Grid Ref:	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls

Size:		**Orientation:**	
Location:	North bank of Bradshaw Pool from the eastern cascade. Shelter 7m or so to the west of DR07-11	**Aspect:**	
Motifs:	Tassel Bradshaw Group figures, Clothes Peg Figure, Bichrome Figs.		
Deterioration:	Mudwasp nests, salt, water seepage.		
Deposits:	Paperbark burial package.		
References:			
Description:	Rockshelter with possibly Tassel Bradshaw Group figures and white infilled Clothes Peg Figures. 'Skirt' clad figures, polychrome. Irregular Infill Animal echidna painted in a shelter to the east.		
Images:			

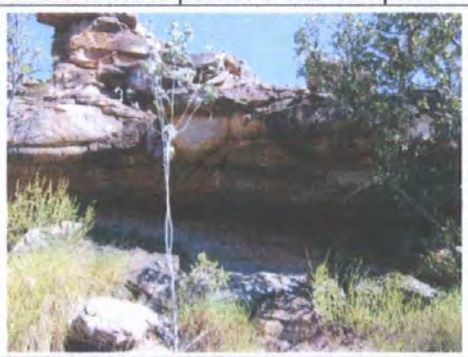
Site Number: DR07-13		**Site Name:**	
		Date:	14 June 2007
Grid Ref:	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	218 deg. Grid North
Location:	North bank of Bradshaw Pool from the eastern cascade. Isolated platform shelter.	**Aspect:**	
Motifs:	Bradshaw (unknown type).		
Deterioration:	Mudwasp, termite line.		
Deposits:	Dusty floor.		
References:			
Description:	Solitary horizontal Bradshaw figure with dreadlocks.		

Images:	

Site Number: DR07-14		**Site Name:**	**Nurini or Yuruluru**
		Date:	14 June, 2 August 2007.
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-E-01	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	10m x 3m x 2.5m main part	**Orientation:**	351 deg. Grid North, Main panel. 38 deg. Grid North Wandjina panel.
Location:	South bank of the Drysdale River. Close to the ridge line.	**Aspect:**	View of the river to the north.
Motifs:	Tassel Bradshaw Group figures, Elegant Action Figures, Clothes Peg Figures, Wandjinas. Animals - Macropods, lizard, Stick figures.		
Deterioration:	Exfoliation, dust.		
Deposits:	None seen.		
References:	Schmiechen 1993:22, McGregor 1999:122, Walsh 1994:252,253, 2000:153.		
Description:	This is Schmiechen and Walsh's famous site with the Elegant Action Figure kangaroo hunting scene. Front of shelter, north facing, is rocky, not a living area. Tassel Bradshaw Group figures and Elegant Action Figures. Left of shelter (east) is a living site with charcoal on the floor. Three horizontal Wandjinas on back wall, two of which are joined body to body. Over 50+ paintings. Above the kangaroo panel, on the front 'lintel' to the site, is a row of 13 stick figures, with Bradshaw feet, holding hands. Two yellow infill Clothes Peg Figures. The site has a famous scene of a speared kangaroo showing 'impact' dashes. The Wandjina gallery is called Yuruluru and the kangaroo hunting scene is called Nurini.		
Images:	 		

Site Number: DR07-15		**Site Name:**	
		Date:	14 June 2007
Grid Ref:	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	North westerly
Location:	Side creek to the north east of the rapids where the river turns westerly.	**Aspect:**	Panel on south eastern wall facing the creek.
Motifs:	Tassel Bradshaw Group figures		
Deterioration:			
Deposits:			
References:			
Description:	Two Tassel Bradshaw Group figures.		

Site Number: DR07-16		**Site Name:**	
		Date:	14 June 2007
Grid Ref:	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	North westerly
Location:	Side creek to the north east of the rapids where the river turns westerly. Panel a few tens of metres upstream of DR07-15.	**Aspect:**	Panel on south eastern wall facing the creek.
Motifs:	Sash Bradshaw Group figures		
Deterioration:	Water wash.		
Deposits:			
References:			
Description:	Six Sash Bradshaw Group figures on a rock overhang, difficult to access. Upper row of three figures face left (upstream), bottom row face right (to Drysdale River). They are long, 'stretched' figures and elegantly painted. They clutch nested boomerangs (up to three), have v. long headdresses and shoulder epaulettes.		
Images:			

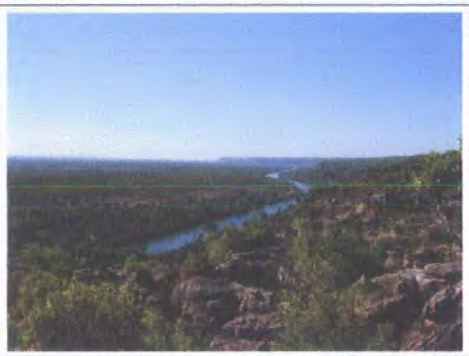
Site Number: DR07-17		**Site Name:**	**Pulpit Rock**
		Date:	15 June 2007
Grid Ref:	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-D-04	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	Easterly.
Location:	West bank rock shelter by open plain area, high up on the ridge line.	**Aspect:**	Views open terrace area.
Motifs:	Tassel Bradshaw Group figures, Elegant Action Figures, Bichrome figures, stick figures, macropods, fish, snake, turtle, birds, geometric art.		
Deterioration:	Exfoliation, mudwasp, salt.		
Deposits:			
References:	Schmiechen 1993:37-39		
Description:	A flat-topped rock mushroom in front of the open area has five waterworn stones placed on top. The site has Tassel Bradshaw Group figures, Elegant Action Figures, Bichrome figures. Stick figures, macropods, fish, snake, turtle, birds and geometric art. Grinding holes, groove marks – 'rain cut marks'. The shelter is part of a site complex.		
Images:	 		

Site Number: DR07-18a		**Site Name:**	
		Date:	15 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	Easterly
Location:	West bank, small panels past a tunnel, midway up the cliff face.	**Aspect:**	Views the river.
Motifs:	Tassel Bradshaw Group figures.		
Deterioration:			
Deposits:	None – swept away by floods.		
References:			
Description:	The panel has only a few figures and must be submerged during wet season		

	floods. The first panel has Tassel Bradshaw Group figure Group figures and the second panel further along, DR07-18b, Sash Bradshaw Group figures.

Site Number: DR07-18b		**Site Name:**	
		Date:	15 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	Easterly
Location:	West bank, small panels past a tunnel, midway up the cliff face.	**Aspect:**	Views the river.
Motifs:	Sash Bradshaw Group figures.		
Deterioration:			
Deposits:	None – swept away by floods.		
References:			
Description:	The panel has only a few figures and must be submerged during Wet season floods. Sash Bradshaw Group figure Group figures painted only but the previous panel, DR07-18a, had Tassel Bradshaw Group figures.		

Site Number: DR07-58		**Site Name:**	**Turtle Creek complex**
		Date:	6 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-A-06	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	4m x 6m x 1.5m	**Orientation:**	183 deg. Grid North
Location:	Shelter on the escarpment above the river and opposite Bulldust Yard at Turtle Creek.	**Aspect:**	Outstanding views to the north, of both the escarpment and Drysdale River.
Motifs:	Bland Bradshaw figures, Clothes Peg Figure, 'chilli' body figures, red circles.		
Deterioration:	Exfoliation.		
Deposits:	none		
References:	Schmiechen 1993:31		
Description:	Clothes Peg Figures, Bland Bradshaw figures, 'chilli' bodied figures. A polychrome Clothes Peg Figure with a possible 'jackal's head' as per Schmiechen, but really the effect of missing pigment. It has a dark red body, yellow centre line, missing pigment waist and head detail. Chilli body figures in dark red and carry multiple boomerangs. Red circles present. Colours – dark red, orange, mulberry.		

Images:	 

Site Number: DR07-59		**Site Name:**	**Turtle Creek complex**
		Date:	29 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-A-06	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	235 deg. Grid North
Location:	Turtle Creek area on the south side of the creek on the upper shoulder.	**Aspect:**	
Motifs:	Tassel Bradshaw Group figures.		
Deterioration:	Exfoliation, salt mineralisation.		
Deposits:			
References:	Schmiechen 1993: plate 2.8.		
Description:	Great shelters around but little art apart from here. Two plus one Tassel Bradshaw Group figures, two on the wall and one on the ceiling. The latter is complete but with an odd bent back pose. Fig 1: 32cm, Fig 2: 29cm, Fig 3: 28cm.		
Images:	 		

Site Number: DR07-60		**Site Name:**	**Long Reach**
		Date:	29 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park

		Area:	Below Solea Falls
Size:	25m x 4m x 2m est.	**Orientation:**	293 deg. Grid North
Location:	Ridge top on the Long Reach area of the scarp, downstream (north) of Bulldust Yard.	**Aspect:**	View of the river below.
Motifs:	Tassel Bradshaw Group figure, hand stencil, foot stencil, fish, macropod, 'geometric' design, other Bradshaw figures.		
Deterioration:	Mudwasp nests.		
Deposits:			
References:			
Description:	The shelter is near the ridge top and with superb view of the river. It catches the afternoon sun and has no shade. A panel of Bradshaw figures with many types, such as acorn headdress variants and mantis types. 'Plant' haired pair of Bradshaws such as at Far Away Bay's Lost City, but the figures' are wearing 'skirts'. Fish painted such as Long Tom and catfish. Handstencils of adults and children and an adult foot stencil.		
Images:			

Site Number: DR07-61		**Site Name:**	**Turtle Creek complex**
		Date:	30 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	22m x 3.5m x 2m	**Orientation:**	355 deg. Grid North
Location:	Situated in a maze of weathered blocks. A big rockshelter with a good overhang.	**Aspect:**	Views other blocks.
Motifs:	Irregular Infill Animal figure joined legs, Tassel Bradshaw Group figure, hand stencils, stick figures with boomerangs.		
Deterioration:			
Deposits:	Sandy floor		
References:	Schmiechen 1993		
Description:	Four elongated Tassel Bradshaw Group figures on the roof.		

	'Pyjama legs' or lower torso of an Irregular Infill Animal creature. Hand stencils. Stick figures with boomerangs. The back wall has old looking, very dark Tassel Bradshaw Group figures.
Images:	

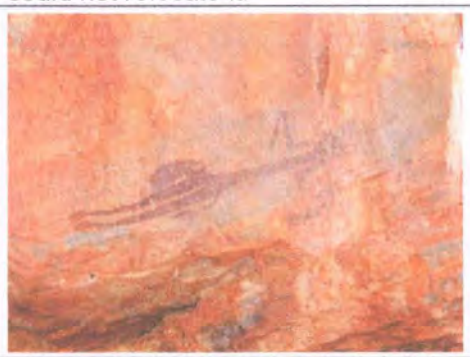
Site Number: DR07-62a		**Site Name:**	**'King Bradshaw' Site**
		Date:	1 August, 3 August 2007.
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-E-03.2	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls – Bradshaw Alley
Size:	5m x 2m x 2m (est).	**Orientation:**	165 deg. Grid North
Location:	A creek runs north down into Bradshaw Pool with art on either side. About 100m up on the west side is the site, a rock shelter on the ridge line.	**Aspect:**	The front of the panel has an open area.
Motifs:	Tassel Bradshaw Group figures, Sash Bradshaw Group figures, squatting figures, other Bradshaws		
Deterioration:	Exfoliation, mudwasp nests.		
Deposits:			
References:	Schmiechen 1993:23,40-42, Walsh 1994: Plate 30, Walsh 2000:38.		
Description:	Bradshaw Alley is the name given by Schmiechen to the stream running north out of the plateau into Bradshaw Pool. The site has the twin 'broom' Bradshaw figures on the ceiling and the bent 'blob' figure Walsh (1994:30) used for illustrating his calligraphy of Bradshaw art. Also present is the figure with outstretched arms and small figure posed in its armpit. The 'King Bradshaw' is in red ochre, exfoliating in various places. Pigment shows through here illustrating depth of paint penetration. A smallish headdress with a knot towards the rear, it wears a 'skirt', wristlets, elbow decoration, upper arm decoration and two single armpit tassels, one per armpit. A parallel dashed line is on right and a 'half tramtrack' over head. To the right, is a smaller red ochre figure, less ornate. It has a big "wizard's" headdress, armpit dillybag and waist tassels either side. The right one has end points looking like macropod paws. A little figure is to the right. A mulberry coloured Bradshaw figure. A large Tassel Bradshaw Group figure on the left of the composition, ornate. From sash left, right tassel, wristlets, elbow decoration, single tassels left, 3x 3 point tassels on right elbow. Upper arm band with sticks or tassels. Nestling under left armpit is a small mulberry figure, 'sash' from waist but vertical headdress with parallel rows of dots		

	descending. To the left of the 'King Bradshaw's' head is a small stick-like figure. Crude long sash, horizontal arms holding stick on left. Left tassel seems to stretch way downwards to other small tasselled figure, curved holding up arms to clutch other end. South (bottom) end of the ceiling has two red skirted figures reaching up to clutch a 'broom'. Figures in Walsh (1994: plate 30). Around them are very faded red figures. Near them faded dread locked / medusa headdress figure similar to Long Reach DR07-60 and Far Away Bay's Lost City figures. The back wall panel stretches the shelter length but is around 50cm deep. Left to Right A set of Tassel Bradshaw Group figures, mulberry hue. Three have 'squid' headdresses. One with dots down the back of the headdress and front from the mouth area. Remains of three pairs of legs, otherwise 8 figures present. Faint faded remnants before a faded red squatting figure with a ball or genitalia between legs. It holds sticks in its hand. To the right is the 'blob' man Walsh uses to illustrate calligraphy. Walsh would categorise him as a Stylised Bradshaw (1994:28) Seven Tassel Bradshaw Group figures with the last three being very thin. A figure with full decoration and outstretched arms. A short baton is held in each hand. Wristlets, elbow decoration, tall, slightly inclined headdress. Nine dotted streamers come off. Dashed armpit decoration, two long 3 point tassels from waist. A small figure is found positioned under the right armpit. It too is tasselled with armpit decoration. Four figures in varying presentation to the right. A faded section of art is before lower bodies in a dark panel of Tasselled Bradshaws. They seem to be wearing slippers. Faded art for most of the panel. The right side again is very faded but shows 13 Bradshaw figures with long 'wizard' headdresses facing left, seemingly (where part remains), holding hands. Four dark mulberry figures superimpose. These have twin prongs from their headdresses. The site was sampled by Watchman in 1995 for radiocarbon AMS dating (Walsh 2000:38). Sample KB1 is taken from the small dark figure next to the head of the main ceiling figure.
Images:	 

Site Number: DR07-62b		**Site Name:**	**'King Bradshaw' Site**
		Date:	1, 3 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
	DP-E-03.2	**Area:**	Below Solea Falls – Bradshaw Alley
Size:		**Orientation:**	67 deg. Grid North
Location:	Eroded mushroom rock 20m SE of DR07-62a.	**Aspect:**	Open to the side and a view of the river.
Motifs:	Tassel Bradshaw Group figures.		
Deterioration:	Salt mineralisation.		
Deposits:	None.		
References:	Schmiechen 1993:23, Walsh 1994:166.		
Description:	Adjacent to the south is another panel with a figure with dots around it on the ceiling. Tassel Bradshaw Group figures on a small panel to the front and on the overhang, mulberry in colour but characterised by a row of dots from the headdress like beads. Tallest central figure shows this as well as 3x 3 point tassels, one on each hip and between the legs. Fig 1: 35cm, foot curves under the rock. On the overhang a small Tassel Bradshaw figure, (25cm long) faces left. Rows of dots from end of headdress bun, mouth area, nape of neck, elbows and waist tassels. The figure is in Walsh 1994:166.		
Images:			

Site Number: DR07-62c		**Site Name:**	
		Date:	3 August 2007
GPS: (WGS84)		**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls – Bradshaw Alley
Size:	15m x 2m x 3m	**Orientation:**	19 deg. Grid North
Location:	Site to the rear of DR07-62a.	**Aspect:**	

Motifs:	Tassel Bradshaw Group figures, Sash Bradshaw Group figures.
Deterioration:	Exfoliation.
Deposits:	
References:	
Description:	A large rock shelter containing Tassel Bradshaw Group figures on the ceiling painted in a mulberry hue. Over ten figures painted including one Sash Bradshaw Group figure.

Site Number: DR07-63a		**Site Name:**	**Mesa Billabong**
		Date:	1 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	89 deg. Grid North
Location:	West bank of the river, a huge rock overhang, by the billabong just south of the rapids where the river flows west.	**Aspect:**	Site near the cliff top, great views.
Motifs:	Tassel Bradshaw Group figure.		
Deterioration:			
Deposits:	None		
References:	Schmiechen 1993:20, 35-37		
Description:	One horizontal Tassel Bradshaw Group figure in mulberry. The figure has a front dancing balloon, thickly painted tassel. A round head with an antennae, it holds something in the left hand. Over its feet is a very faint Bradshaw (possibly Tassel) with acorn headdress in profile to the left. Schmiechen (pers. comm.) reports an 'insect bradshaw' in the area but we could not relocate it.		
Images:			

Site Number: DR07-63b		**Site Name:**	**Mesa Billabong – shield gallery**
		Date:	1 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-D-01	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls

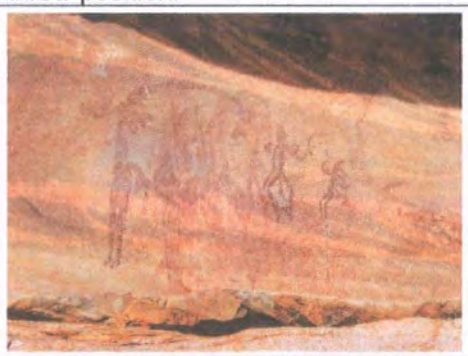
Size:		**Orientation:**	75 deg. Grid North
Location:	On a few metres further south from DR07-63a is another large roof.	**Aspect:**	A high site with a view east and the river below.
Motifs:	Tassel Bradshaw Group figure, Sash Bradshaw Group figure, shield (geometric).		
Deterioration:	Exfoliation, mineral skin		
Deposits:			
References:	Schmiechen 1993:20, 35-37		
Description:	On white mineralisation are four figures. The first (left) pair are Tassel Bradshaw Group figures in full finery. Fig 1: faces right. Two waist tassels, elbow decoration, long horizontal headdress, holds a tassel in left hand, in right hand two boomerangs plus dilly bags. Fig 2: faces left towards Fig 1. Two waist tassels, 3 point tassels from each elbow. Holds two nested boomerangs with a third, the longest, sticking out in the left hand. To the panel's right a plain Sash Bradshaw Group figure and a Tassel Bradshaw Group figure face each other with an oval shield design between them, in the same hue and same overall 'style'. Schmiechen uses this site to question whether there actually was a time difference between Tassel and Sash Groups and perhaps they were contemporaneous (pers comm. 2007). Fig1: 60cm, Fig 2: 61cm, Fig 3: 46cm, Fig 4: 37cm. Shield: 53cm long x 20cm wide.		
Images:			

Site Number: DR07-63c		**Site Name:**	**Mesa Billabong**
		Date:	1 August 2007
GPS: (WGS84)		**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	
Location:	A raised site with a rock tunnel to the left (south) of DR07-63b leading out onto the cliff line.	**Aspect:**	View east towards the river.
Motifs:	Dynamic Bradshaw figure, rectangular figures.		
Deterioration:			
Deposits:	None.		
References:			

Description:	Climbing up onto a forward ledge leads to a panel with a dynamic running man and two adjacent rather stiff rectangular figures with ellipse heads. Dynamic figure: 22cm (foot to foot).
Images:	

Site Number: DR07-63d		**Site Name:**	**Mesa Billabong**
		Date:	1 August 2007
GPS: (WGS84)		**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	79 deg. Grid North
Location:	Descend to a level below the tunnel from DR07-63c and there is a slight rock undercut with a panel of Tassel Bradshaw Group figures on white mineral skin, painted in pale red ochre.	**Aspect:**	View of the river below.
Motifs:	Tassel Bradshaw Group figure, other Bradshaw figures, anthropomorph, ceremonial object.		
Deterioration:	Erosion, mud wasp nests, mineralisation.		
Deposits:			
References:	Walsh 1994:128		
Description:	The main composition is an 'insect' headed figure, facing right, with both arms out. A series of parallel lozenges, three lines, come from the head both sides. Brush work is thicker than normal. The figure has two people on either side. To the left a pair of figures with big almost horseshoe headdress with pairs of pompom tassels to either side. To the right is a very fine brush stoke Tassel Bradshaw Group figure. Elongated with multiple tassels on the left arm, 3 points on the right. 3 point tassel from waist. Round head, 3 point tassel off the head, parallel dots around the head. Holds 3 point tassel and boomerang in right hand. The figure is accompanied by a 'bagpipe' figure (Walsh's 'ceremonial object') with tassels painted on it, and a 'child' with a stick on the right. The body is paler with a red outline - bichrome. Thin Bradshaw: 47cm, Bagpipe- Ceremonial Object: 9cm, 'child': 12cm. 'Insect Man': 38cm till erosion.		

Images:	

Site Number: DR07-64		**Site Name:**	
		Date:	1 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	Westerly
Location:	East bank of the river.	**Aspect:**	Face west.
Motifs:	Sash Bradshaw Group figures, squatting figures.		
Deterioration:	Exfoliation.		
Deposits:			
References:			
Description:	A small panel of Sash Bradshaw Group figures on the eastern side of the river on the way upstream to Solea Falls. The site must get immersed every wet season. The figures face left, downstream. They have shoulder epaulettes. Figure 2nd from right faces the front and is in a squatting leg position with a centrally placed dangling sash. Boomerangs are clutched in the 'aggressive' ready to throw position.		
Images:			

Site Number: DR07-65		**Site Name:**	
		Date:	2 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-D-07.1	**Region:**	Drysdale River National Park

		Area:	Below Solea Falls
Size:	5m x 1.5m x 1m	**Orientation:**	243 deg. Grid North
Location:	East bank of Drysdale River gorge. A little rock overhang up on the cliff forming a balcony with figures on the roof. Art can be seen from the river.	**Aspect:**	The site has a great view of the river below and to the north. To the south can just see, and certainly hear, Solea Falls.
Motifs:	Irregular Infill Animal macropod, Elegant Action Figures, other human figs, lizard, geometric designs, macropod.		
Deterioration:	Exfoliation.		
Deposits:	None.		
References:	Schmiechen 1993:21		
Description:	Three red Elegant Action Figures, spearmen, on the south part of the roof. The northern part has an Irregular Infill Animal macropod and remains of another figure. Right to Left. Fig 1: a plain figure. Wide legs, walking with a short baton in left hand and a package under arm in right. Round head. Fig 2: long, elongated, left facing spearman with a long headdress. Holds 2 spears in left hand, elbow tufts on both arms. Fig 3: elongated spearman. Long spear in left hand and clutches 2 boomerangs. Right arm has boomerang held down. Also seems to be clutching an animal by the tail, perhaps his day's kill - a lizard or a crocodile. The figures don't have all the Bradshaw paraphernalia. They are plain figures going hunting. Fig 1: 27cm, Fig 2: 34cm, Fig 3: 30cm (40cm to spear tip). The south part of the ledge has a macropod now rather faded. Geometric designs of swirling lines to the other side. Also present are some red figures with bent knees and outstretched arms. Two face each other. Schmiechen calls this a trampoline scene (pers. comm.) though I think it looks like a birthing scene. The right figure seems to have breasts. Fig 1: 11cm, Fig 2(right): 9.5cm Colour red.		
Images:	 		

Site Number: DR07-66a		**Site Name:**	
		Date:	2 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	9m x 2m x 2m	**Orientation:**	305 deg. Grid North
Location:	East bank rockshelter at ground level, 100m or so downstream of DR07-65.	**Aspect:**	Facing the river, westerly view.
Motifs:	Grass prints, Tassel Bradshaw Group figures, hand stencil, foot stencil.		
Deterioration:	Exfoliation.		
Deposits:	None, presumably swept clean by the yearly flood.		
References:			
Description:	The rockshelter at ground level has Tassel Bradshaw Group figures on the ceiling. Grassprints, handstencils, foot stencil and lots of Tassel Bradshaw Group figures with acorn heads. Above the shelter is a balcony, DR07-66b, which on the backwall has a panel of Sash Bradshaw Group figure figures. This is a clear split between the two styles.		
Images:			

Site Number: DR07-66b		**Site Name:**	
		Date:	2 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	3m x 2.5m x 1.5m	**Orientation:**	267 deg. Grid North
Location:	East bank rockshelter, upper balcony level of DR07-66a.	**Aspect:**	Facing the river, south - westerly view.
Motifs:	Sash Bradshaw Group figures		
Deterioration:	Exfoliation, mineralisation.		
Deposits:	None.		

References:	
Description:	The art site is a balcony above DR07-66a. The lower site had Tassel Bradshaw Group figures, showing a clear locational split between the two styles. A panel of Sash Bradshaw Group figures on the back wall. Bradshaws in full regalia such as epaulettes like axes, dancing balloons, boomerangs and lots of attachments to headdresses. Possibly a barred painting style in arms of dominant central figure. Size 57cm to exfoliation. The panel is probably at the height of the Wet's flood level.
Images:	 

Site Number: DR07-67		**Site Name:**	
		Date:	2 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	277 deg. Grid North
Location:	East bank, a few metres downstream (north) of DR07-66.	**Aspect:**	Good view of the river
Motifs:	Irregular Infill Animal man, Clothes Peg Figure, fish, argulas, 'recent' art, Yam men.		
Deterioration:	Mudwasp nests.		
Deposits:			
References:	Donaldson & Kenneally 2007: 18.		
Description:	More recent Wandjina period art with red outline figures. Some symmetrical, painted as splayed out bodies with vertical bar interiors. 'Fish' with lines of horizontal dots and four 'yam' men with 'electric' hair. Irregular Infill Animal 'man' below, long. Remains of faded Clothes Peg Figure. Crudely painted argulas. Good view of the river. Site at ground level, boulders fill it.		

Images:	 

Site Number: DR07-68		**Site Name:**	**'Ceremonial Couple' Site**
		Date:	3 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-E-03.4	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls – Bradshaw Alley
Size:	10m x 3m x 2m	**Orientation:**	343 deg. Grid North
Location:	Found amidst the gullys behind DR07-62a. A large rock shelter with Tassel Bradshaw Group figures on the ceiling.	**Aspect:**	The shelter is in an uninspiring location facing a boulder with no open courtyard or views. However it does provide good shelter.
Motifs:	Tassel Bradshaw Group figures, Sash Bradshaw Group figure, macropod.		
Deterioration:	Exfoliation, mineralisation, mudwasp nests, water (proximity of drip line).		
Deposits:	Sandy floor but nothing seen		
References:	Schmiechen 1993, Walsh 1994		
Description:	The ceremonial couple of the name are two Tassel Bradshaw Group figures painted on the roof, one being smaller in size. Side profile to the left, the larger one has a front sash, rear tassel, 'vine fronds' hanging from the shoulders and armpits. Wrist and elbow bangles have sticks projecting through. The smaller figure is similar to the larger but with two sashes from the waist. Adjacent to the right is a similarly large figure but curved with a skirt and a three point tassel. Fig 1: 99cm, Fig 2: 80cm, Fig 3: 78cm. The centre of the shelter has long thin Tassel Bradshaw Group figure figures on the roof. Twin vines hang from each elbow with four wrist bangles on the right arm and the hand clutches a dilly bag. The body infill is by parallel lines not a paint wash. Long tassels hang from the waist. The adjacent figure to the right is long, thin, and curved with arm decoration only. Underlying these large mulberry figures are faded red ochre Tassel Bradshaw Group figures, the best example being to the right of the shelter. This one has 1x 3 point and 1x 5 point tassel. Adjacent though is a mulberry Sash Bradshaw Group figure. It has a big 3 point sash shoulder bags, arms out to the left. The upper holds 1 boomerang, the lower three nested boomerangs and a dilly bag and fan. Forearm epaulettes. Long horizontal headdress with end pompom and a dangling dilly bag or fan, plus two feathers. A macropod is painted too.		

Images:	 

Site Number: DR07-69		**Site Name:**	
		Date:	3 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	
Location:	South bank, a good but low shelter providing a large living area with little art.	**Aspect:**	
Motifs:	Tassel Bradshaw Group figures, Clothes Peg Figure.		
Deterioration:			
Deposits:			
References:			
Description:	Clothes Peg Figure and Tassel Bradshaw Group figures present. No photographs.		

Site Number: DR07-70		**Site Name:**	
		Date:	3 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	Northerly, facing the river.
Location:	South bank.	**Aspect:**	
Motifs:	Stick figures, turtle, 'fat man'.		
Deterioration:			
Deposits:			
References:			
Description:	The site contains modern Wandjina period art such as stick figures, a turtle and a 'fat man'. No photographs taken.		

Site Number: DR07-71		**Site Name:**	
		Date:	3 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	243 deg. Grid North
Location:	Prominent outcrop on hillside. View to the west	**Aspect:**	. View to the western side. Pavement below, river view.
Motifs:	Squatting stick figures, Clothes Peg Figure – semi naturalistic.		
Deterioration:			
Deposits:			
References:			
Description:	Little art here. Site is an orientation point for finding Living Shelter DR07-08 which is further south over the ridge brow. Semi naturalistic Clothes Peg Figure and a row of front facing squatting stick figures.		
Images:			

Site Number: DR07-72		**Site Name:**	**Barten**
		Date:	3 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-E-08	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	8m x 1m x 2m (panel size)	**Orientation:**	129 deg. Grid North
Location:	The panel is to the east, diagonally opposite Living Shelter DR07-08.	**Aspect:**	The site faces rearwards, away from the river and towards boulders.
Motifs:	Tassel Bradshaw Group figures, Sash Bradshaw Group figures.		
Deterioration:	Mineralisation, pecking, exfoliation		
Deposits:			
References:	Schmiechen 1993:25, 45-46, Walsh 1994: 108.		
Description:	The site has a panel of Tassel Bradshaw Group figures facing left (west). Painted in red and mulberry colours, they show a high degree of decoration. Elbow tufts with sticks, vine fronds. Of note is that the central figure and small adjacent one have associated animals figures by their headdresses. This is		

	similar to that seen at Far Away Bay. Eleven large figures and two small. One of the latter has 'medusa' type dreadlocks.
Images:	 

Site Number: DR07-73		**Site Name:**	
		Date:	4 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:		**Orientation:**	
Location:	Diagonally to the west 10m uphill, from Goyon / Twin Brolgas Shelter DR07-07.	**Aspect:**	
Motifs:	Irregular Infill Animal macropod, 'Blob' men, stick figures, tridents or bird tracks.		
Deterioration:			
Deposits:			
References:			
Description:	Diagonally to the west, behind Goyon / Twin Brolgas Shelter, 10m uphill, is an undercut in an outcrop. The front face has a panel of stick figures and 'blob' men. This panel is described as a battle scene but no weapons are seen, nor wounded. More likely this is a ceremonial dance. The right of the panel has Irregular Infill Animal figure remains, perhaps a macropod, plus lots of bird tracks. To the right a small cave had the long skin and bones of a python laid out on an adjacent boulder.		
Images:			

Site Number: DR07-74		**Site Name:**	**Wandjina Shelter rear.**
		Date:	4 August 2007
GPS: (WGS84)		**1:100k map sheet**	4268 Carson
Other site ID:	DP-F-06B	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	10m x 2.5m x 3m (est)	**Orientation:**	141 deg. Grid North
Location:	Rear of Wandjina Shelter DR07-06.	**Aspect:**	The site faces into an inner narrow courtyard between boulders.
Motifs:	Irregular Infill Animal macropod, echidna, hand stencil, fish, Sash Bradshaw Group figure, other Bradshaw figure.		
Deterioration:	Exfoliation, mudwasp nests.		
Deposits:	Mix of rock slabs and grey sand. No surface deposits seen.		
References:	Schmiechen 1993:27.		
Description:	A wide cleft behind the block holding Wandjina Shelter is the site of a long gallery of Irregular Infill Animal figures. The figures are fish, possible 'sea cucumbers' or 'slugs' and macropods. Painted in heavy lines they show no finesse. The art is exfoliating. Hand and hand and arm stencils present as are two Bradshaw figures, one of which has a sash. A dark painted vertical echidna on the right wall has a long nose and may be an extinct one and now only found in New Guinea. If correct then this is further evidence of antiquity. The Sash Bradshaw Group figure is thin with a very elongated headdress. Facing right with a dancing balloon and one boomerang in the top hand and a pair nested held in the bottom.		
Images:	 		

Site Number: DR07-75		**Site Name:**	**Laura's Cave**
		Date:	4 August 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:	DP-F-07	**Region:**	Drysdale River National Park
		Area:	Below Solea Falls
Size:	6m x 2m x 1.5m	**Orientation:**	339 deg. Grid North
Location:	A small rock shelter, the site is a few tens of yards down to the west from Wandjina Shelter.	**Aspect:**	A slope in front of the shelter down to the river below.

Motifs:	Irregular Infill Animal macropod, Tassel Bradshaw Group figure, Elegant Action Figures
Deterioration:	Mineralisation, termite line.
Deposits:	
References:	Schmiechen 1993:27.
Description:	The front upper wall shows an Elegant Action Figure kangaroo hunt. An orange coloured figure pursues a macropod. Hunter: 24cm tall. Below is a rare portrayal of a woman, Elegant Action Figure, with arms upraised. Breasts painted. Woman: 20cm tall. The inner roof has an Irregular Infill Animal macropod and the inner back wall another orange Elegant Action Figure. A Tassel Bradshaw Group figure is painted with 1x 3 point and 1x 4 point tassel. It holds 2 boomerangs in its left hand.
Images:	 

Planigale Creek Area

Site Number: DR07-19		**Site Name:**	
		Date:	17 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	6m x 2.5m x 1.5m	**Orientation:**	113 deg. Grid North
Location:	Low shelter, art site adjacent to a billabong on Planigale Creek.	**Aspect:**	Faces away from the creek, shelter looks towards a weathered outcrop.
Motifs:	Sash Bradshaw Group figure, Wandjina figures.		
Deterioration:			
Deposits:			
References:			
Description:	Faded Wandjina heads, horizontal, on the rear wall. The roof/ceiling has an orange outline early Wandjina. Depicted with spiky 'punk' hair, muscular calves and five finger clawed hands. To the right a small alcove has a set of 17 faded Sash Bradshaw Group figures. The panel seems chosen for its canvas. Panel faces 10 deg.		

Site Number: DR07-20		**Site Name:**	
		Date:	17 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	1m x 2.5m	**Orientation:**	33 deg. Grid North
Location:		**Aspect:**	
Motifs:	Bradshaw figure, Clothes Peg Figure		
Deterioration:			
Deposits:			
References:			
Description:	Front of outcrop has a small panel with faint eroded Bradshaws of unknown type, and the remnant inverted 'Y' of a Clothes Peg Figure.		

Site Number: DR07-21		**Site Name:**	
		Date:	17 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	8m x 2.5m x 2.5m	**Orientation:**	
Location:	Main shelter overlooking the waterhole.	**Aspect:**	View of the creek.
Motifs:	Sash Bradshaw Group figure, Bichrome, Clothes Peg Figure, Wandjina, snake, fish, geometrical figure, macropod, unknown Bradshaw figures.		
Deterioration:	Pounding of figures, mudwasp nests.		
Deposits:	Nil.		
References:			
Description:	Covered in art. Faded red Bradshaw figures (unknown type). Mulberry Sash Bradshaw Group figures, long snake like design with barred body 2m long. Fish outline with dotted interior and bars on ceiling, mulberry colour. Strange geometrical design on the ceiling of two interlocking ellipses at right angles. Faded red Wandjina head low down. Wandjina headdress in white at top of panel. No deposits, no grinding etc. Not a habitation site. Adjacent to the right is a rock separated from panel by a narrow fissure, 4m long red 'snake' with a barred interior. Dark coloured overpaint on top. To the right a panel of figures divided by the bedding plane. Top section has Clothes Peg Figures, dark, one painted with 'Mickey Mouse' ears. Other bichrome overlies joint with ceiling. Remnants of other Clothes Peg Figure's lower parts. Bottom section has Sash Bradshaw Group figures heavily pounded out especially the central figures, at least nine of various stages of clarity.		

Images:	 

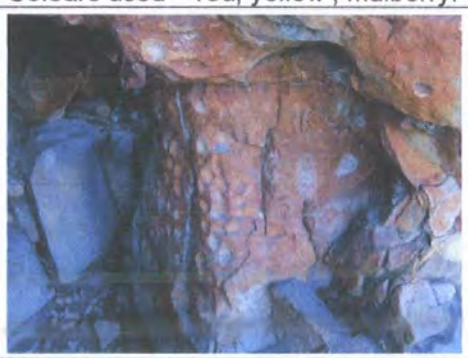
Site Number: DR07-22a		**Site Name:**	
		Date:	17 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	8m x 1.5m 4m	**Orientation:**	163 deg. Grid North
Location:	Eroded block with art on the main wall of a cleft.	**Aspect:**	Looks out from the complex towards an open area.
Motifs:	Tassel Bradshaw Group figure, geometric figures, 'plant' figure, 'chilli' design, Anthropomorphs.		
Deterioration:	Mudwasp nests, mineralisation.		
Deposits:	Nil – rock floor.		
References:			
Description:	Art heavily overpainted on inside walls of a cleft in an eroded block. Great mass of superimpositions of mulberry hues over red ochre, Tassel Bradshaw Group figures. Also present an odd row of hanging orange 'chillis'. Paintings present, 30+. Mulberry coloured Tassel Bradshaw Group figures, Anthropomorphs. Colours red, orange, mulberry.		
Images:	 		

Site Number: DR07-22b		**Site Name:**	
		Date:	17 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson

Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	1.5m x 2m x 1m	**Orientation:**	243 deg. Grid North
Location:	Small art panel to the left of the main site ~ 3m.	**Aspect:**	
Motifs:	Sash Bradshaw Group figure, Clothes Peg Figure, Wandjina.		
Deterioration:	Pecking		
Deposits:	Nil – rocky floor		
References:			
Description:	Two Sash Bradshaw Group figures facing each other, boomerangs raised for action, other Sash Bradshaw Group figures either side. Above strange 'tram track' bodied figure in orange with dotted head like a heart. Holds three nested boomerangs in each hand – possible Clothes Peg Figure? On top of all a faded orange Wandjina figure.		
Images:			

Site Number: DR07-23		**Site Name:**	
		Date:	
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:		**Orientation:**	
Location:	Rock shelter approx 30m away from site DR07-22a.	**Aspect:**	
Motifs:	Northern Muscly Figure, 'berry'		
Deterioration:	Mudwasp nests.		
Deposits:	Nil – rock floor.		
References:			
Description:	Small rock shelter with art on the back wall. Main figure is a front facing Northern Muscly Figure with Propeller headdress. Red outline, faded white interior, five fingers painted. Lower extremities faded. Adjacent is a horizontal 'berry' design with red interior and dotted white outline.		

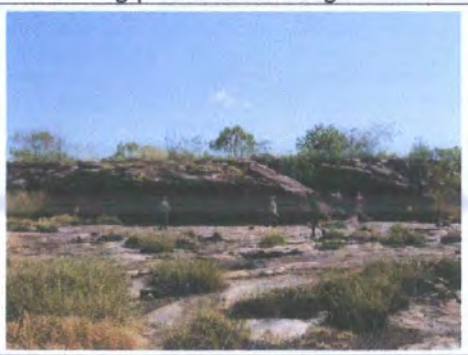
Images:	

Site Number: DR07-24		**Site Name:**	
		Date:	17 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	10m x 4m x 2m.	**Orientation:**	173 deg. Grid North
Location:	Rock shelter scalloped out, not a living area.	**Aspect:**	
Motifs:	Pecked cupules, Irregular Infill Animal macropod, macropod, Stick Figures, unknown Bradshaw figs, Head Only Wandjina, owl, flying foxes.		
Deterioration:	Mudwasp, exfoliation.		
Deposits:	Nil.		
References:			
Description:	Site - small overhang, macropods on the ceiling. Stick figures with associated v. crude Bradshaw figures. Macropods and flying foxes on the wall. Three Head Only Wandjinas, two in yellow, one red. Irregular Infill Animal macropod. The shelter has a vertical rock column to the right with multiple pecked cupules. All ages of cupule from old where interior patina matches external, to recent. Only example seen like this. Yellow owl figures. Seven paintings and multiple peckings (cupules). Colours used – red, yellow , mulberry.		
Images:			

Site Number: DR07-25		**Site Name:**	
		Date:	17 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	16m x 5m x 2m	**Orientation:**	47 deg. Grid North
Location:	A major art site, half an hours walk from complex, DR07-24. Site along a tributary stream.	**Aspect:**	The large shelter is carved out near the top of the ridge line and requires quite a scramble to get up. A good view is had of the area below.
Motifs:	Tassel Bradshaw Group figure, Sash Bradshaw Group figure, Stick Figures, Wandjinas, hand stencils, boomerang stencils, 'tally' marks, flying foxes, plant motifs, large macropod.		
Deterioration:	Insect, salts, water, pecking.		
Deposits:	Nil.		
References:	Wilson 2006:177-182		
Description:	This is a huge rock shelter with art covering the rear wall. Fallen slabs in the shelter prevent it from being a living site and a veneer of desert varnish make the slabs very slippery. Both paintings and stencils present. The site is dominated by a large painting of a right facing Wandjina Period macropod. Painted in a red checked design it has a blue/grey interior colour. To the right are the remains of an unfinished macropod head. The macropod superimposes Bradshaw Period art of Tassel and Sash Groups. The art is well preserved. However many of the figures are the victims of repeated pounding with most of the damage affecting Sash Bradshaw Group figures with a row of them pounded or pecked off the wall. Hand stencils seem to underlie the Bradshaw art. Stick Figures, boomerang stencils, 'tally' marks, flying foxes, plant motifs present. Although the art is from ancient to modern this is not a living shelter on account of it being filled with angled slabs.		
Images:	 		

Site Number: DR07-26		**Site Name:**	
		Date:	18 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson

Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:		**Orientation:**	
Location:	Small rock mushroom.	**Aspect:**	
Motifs:	Bichrome Bradshaws, Wandjina.		
Deterioration:	Mudwasp nests, exfoliation		
Deposits:			
References:			
Description:	Horizontal Wandjina Period figure in red. Adjacent are two small bichrome Bradshaw figures painted with acorn heads. They are shown with multibarbed spears and boomerangs.		
Images:			

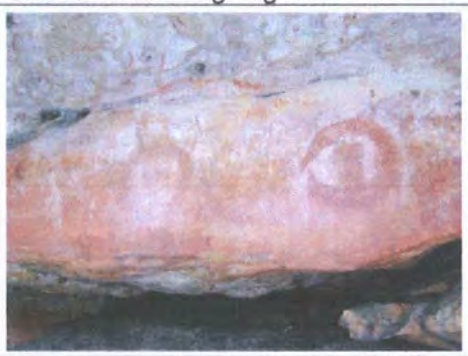
Site Number: DR07-27		**Site Name:**	
		Date:	18 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	6m x 2m x 2m	**Orientation:**	125 deg. Grid North
Location:	Low overhang by a rock platform.	**Aspect:**	Views rock courtyard.
Motifs:	Sash Bradshaw Group figure, macropod, 'dog'.		
Deterioration:			
Deposits:	Nil – rock platform.		
References:			
Description:	Shelter provides shade from the sun. Faded Sash Bradshaw Group figure on the rear wall. Outline macropod on the ceiling plus a small 'dog'.		
Images:			

Site Number: DR07-28		**Site Name:**	**Therianthrope Site**
		Date:	18 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	8m x 2m 4m	**Orientation:**	183 deg. Grid North
Location:	Rock ledge in a small gorge. Water still in pools.	**Aspect:**	A nice and shady site, viewing pools. Not a living area but contains a flat ledge to sit and paint from.
Motifs:	Elegant Action Figure, Bichrome figures, Clothes Peg Figures.		
Deterioration:	Mudwasp nests, mineralisation.		
Deposits:	Nil.		
References:	Walsh 2000:264		
Description:	The rock shelter wall contains many types of Clothes Peg Figuresand a few Bichrome figures. The main figure of note is a therianthrope, a macropod headed figure, holding a stone axe. It has an Elegant Action Figure body with a macropod head. A waist appendage faces forward and down. This figure is the only distinctive therianthrope I've seen in the Kimberley. Walsh describes the waist appendage as a (later) modification of a pubic apron and the stone axe a later addition.Colours red and polychrome. I would have thought the site was at risk of flooding every wet season.		
Images:	 		

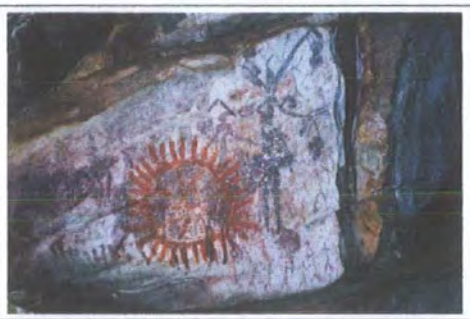
Site Number: DR07-29		**Site Name:**	
		Date:	18 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:		**Orientation:**	161 deg. Grid North
Location:	Low shelter by the river.	**Aspect:**	
Motifs:	Sash Bradshaw Group figures, 'dog'.		

Deterioration:	Exfoliation.
Deposits:	
References:	
Description:	Two groups of Bradshaw figures, both apparently Sash Bradshaw Group figure but one group is painted with almost no ornament. The second group is depicted with skirts of huge bustles and thick elaborate headdresses. A 'dog' is painted on the back wall. A black line over its hips may indicate it is a thylacine.
Images:	

Site Number: DR07-30		**Site Name:**	
		Date:	19 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	3m x 1.5m 2m	**Orientation:**	253 deg. Grid North
Location:	Over the ridge line from the creek.	**Aspect:**	Escarpment shelter overlooking a central open area.
Motifs:	Sash Bradshaw Group figures, hand stencil, Clothes Peg Figures, other art.		
Deterioration:			
Deposits:			
References:			
Description:	Three Sash Bradshaw Group figures, one hand stencil. Remains of the feet of other figures. A large overpainted but now weathered 'ghost' figure. 59cm wide x 60cm high. Possible Clothes Peg Figures.		
Images:	 		

Site Number: DR07-31		**Site Name:**	
		Date:	19 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	9m x 3m x 5m	**Orientation:**	65 deg. Grid North
Location:	Major site complex, living area, away from the creek.	**Aspect:**	Views a central courtyard.
Motifs:	Cup marks, grinding holes, Tassel Bradshaw Group figures, Sash Bradshaw Group figures, Clothes Peg Figures, Wandjina, other art.		
Deterioration:	Mud wasp nests.		
Deposits:	Thick grey sandy floor.		
References:			
Description:	Cup marks, grinding holes, Tassel Bradshaw Group figures, Sash Bradshaw Group figures, Clothes Peg Figures (semi naturalistic), Head Only Wandjina. Colours – red, yellow, mulberry. Lots of recent Wandjina period art including figures with breasts holding nested boomerangs. The ceiling has a 4m early Wandjina type reminiscent of the east Kimberley Chamberlain Gorge figure.		
Images:	 		

Site Number: DR07-32		**Site Name:**	
		Date:	19 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:		**Orientation:**	
Location:	Adjacent to the left of DR07-31.	**Aspect:**	
Motifs:	Sash Bradshaw Group figures, sun sign.		
Deterioration:			
Deposits:			
References:			
Description:	Sash Bradshaw Group figures, small 'sun' sign (geometric art).		

Images:	

Site Number: DR07-33		**Site Name:**	
		Date:	19 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	2m x 1m x 1m	**Orientation:**	
Location:	Small alcove.	**Aspect:**	Views DR07-31, 32, across the central open area.
Motifs:	Tassel Bradshaw Group figures.		
Deterioration:			
Deposits:	None.		
References:			
Description:	Tassel Brashaw Group figures painted in mulberry colour. Two other Tassel Bradshaws associated with a 'feather boa' design, like a leaf/vine decoration. Painted in red ochre.		
Images:			

Site Number: DR07-34		**Site Name:**	
		Date:	19 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	3m x 2m x 1.5m	**Orientation:**	85 deg. Grid North

Location:	Small shelter.	**Aspect:**	
Motifs:	Clothes Peg Figures.		
Deterioration:			
Deposits:			
References:			
Description:	Clothes Peg Figures on the ceiling.		

Site Number: DR07-35		**Site Name:**	
		Date:	19 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	2m x 2m x 1m	**Orientation:**	47 deg. Grid North
Location:		**Aspect:**	
Motifs:	Unknown Bradshaw figures, red figures.		
Deterioration:			
Deposits:			
References:			
Description:	Two red figures on the ceiling, Bradshaw figures on the back wall.		

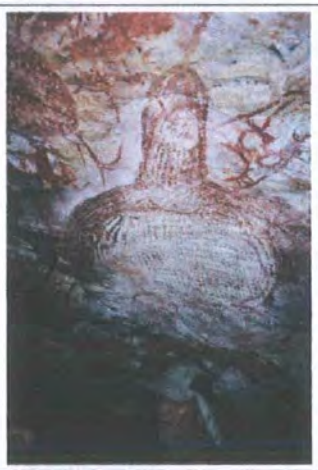
Site Number: DR07-36		**Site Name:**	
		Date:	19 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	3.5m x 2m 4m	**Orientation:**	248 deg. Grid North
Location:	Weathered out cliff with a series of rock ledge platforms on the banks of the creek.	**Aspect:**	Lovely view of the water.
Motifs:	Irregular Infill Animal, Sash Bradshaw Group figures, Clothes Peg Figures (Classic), macropod, 'blob' figures		
Deterioration:	Mudwasp nests.		
Deposits:	None.		
References:			
Description:	Multiple Sash Bradshaw Group figures present. Multiple Clothes Peg Figures with centre line present and long barred sashes. Wandjina Period figures. The very high overhang has a full bodied Irregular Infill Animal anthropomorph painted on the ceiling. A good place to sit out an unseasonally wet night.		

Images:	 

Site Number: DR07-37		**Site Name:**	
		Date:	20 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	10m x 4m x 1.4m	**Orientation:**	79 deg. Grid North
Location:	Low rock shelter.	**Aspect:**	
Motifs:	Wandjinas figures, goanna.		
Deterioration:			
Deposits:	None – rock floor.		
References:			
Description:	Two Wandjinas on the ceiling and a red goanna. A Wandjina bust in the latest horse shoe style.		

Site Number: DR07-38		**Site Name:**	
		Date:	20 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:		**Orientation:**	
Location:		**Aspect:**	
Motifs:	Macropod tracks.		
Deterioration:			
Deposits:			
References:			
Description:	Pair of macropod tracks.		

Images:	 

Site Number: DR07-39		**Site Name:**	
		Date:	20 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:		**Orientation:**	
Location:	Large rock mushroom.	**Aspect:**	
Motifs:	Cup marks, Sash Bradshaw Group figures, goanna, Wandjina/flower		
Deterioration:	Mudwasp nests, exfoliation.		
Deposits:	Stone floor in the shelter but debitage to the rear.		
References:			
Description:	A large goanna or crocodile painted on the ceiling adjacent to a Wandjina variant or wild flower, painted in red with yellow dotted interior. The goanna has a white prepared background with the figure painted in red on top. Red dots make up the interior detailing. Sash Bradshaw Group figures on the back wall along with some cupules. Deposits: debitage area around the back. A suitable lunch spot to hold twelve people sheltering from unseasonal rain.		
Images:	 		

Site Number: DR07-40		**Site Name:**	
		Date:	20 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson

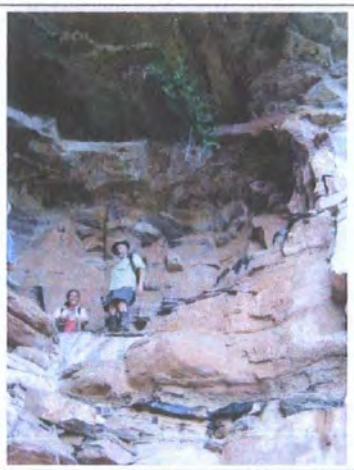
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	7m x 3m 2m	**Orientation:**	
Location:	A large shelter in a shaped rock.	**Aspect:**	
Motifs:	Clothes Peg Figures, Wandjina, bird, snake.		
Deterioration:	Exfoliation.		
Deposits:	Nil. However thick grey dusty sand present.		
References:			
Description:	Large birds painted, bush turkey (recent Wandjina Period). Full body Wandjina and three Head Only Wandjinas. Clothes Peg Figures, snake. A good shelter from wet weather.		
Images:	 		

Site Number: DR07-41		**Site Name:**	
		Date:	21 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:	6m x 8m x 2m variable height.	**Orientation:**	173 deg. Grid North
Location:	Rock mushroom with an angled ceiling.	**Aspect:**	
Motifs:	Clothes Peg Figures, Anthropomorph.		
Deterioration:	Weathering.		
Deposits:	Small floor deposits.		
References:			
Description:	Four paintings. One human like anthropomorph, the others being three Clothes Peg Figures of which two have barred sashes.		

Images:	 

Site Number: DR07-42		**Site Name:**	
		Date:	21 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Planigale Creek
Size:		**Orientation:**	
Location:	Small outcrop overlooking Dulcis Falls at Glider Gorge on top of the Carson Escarpment.	**Aspect:**	View of the top of the falls.
Motifs:	Twin concentric circular motifs.		
Deterioration:			
Deposits:			
References:			
Description:	Two circular 'fried egg' designs painted.		
Images:			

Site Number: DR07-43		**Site Name:**	**Larryoo**
		Date:	22 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Carson Escarpment
Size:		**Orientation:**	westerly
Location:	Cave high up in the Carson Escarpment wall.	**Aspect:**	Overlooks the Carson River.

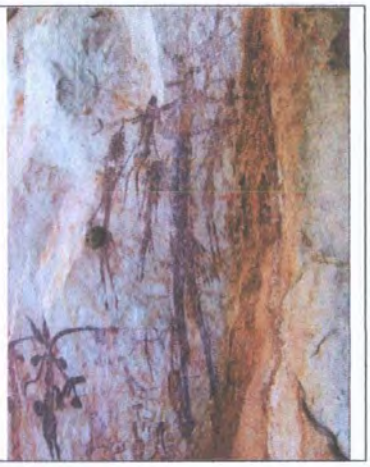
Motifs:	Wandjina, macropod tracks.
Deterioration:	
Deposits:	
References:	
Description:	The site is unusual in that it is a cave high up on the escarpment wall. The rock is horizontally bedded and rather friable. The little art present here is a scratched Wandjina and macropod tracks. The rock surface prevents the survival of any paintings.
Images:	

Palmoondoora Creek Area

Site Number: DR07-44		**Site Name:**	
		Date:	27 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4267 Ashton
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Woorakin Creek, Euro Gorge, nr Carson River.
Size:	4m x 2m x 2m	**Orientation:**	112 deg. Grid North
Location:	Low and shallow rock shelter in an eroded outcrop with a rock floor.	**Aspect:**	Faces towards an open rock pavement.
Motifs:	Sash Bradshaw Group figure, Wandjinas figures..		
Deterioration:	Mudwasp nests, fading.		
Deposits:	None. Rock floor.		
References:			
Description:	A mix of waist length and Head Only faded Wandjinas on the rear shelter wall and on a boulder. Red cross hatching on ceiling, perhaps another Wandjina. The rear of outcrop has a rock canvas with faded Sash Bradshaw Group figures. This is an example showing the difference in placing of the figures.		

Images:	 

Site Number: DR07-45		**Site Name:**	
		Date:	27 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4267 Ashton
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Woorakin Creek, Euro Gorge, nr Carson River.
Size:		**Orientation:**	172 deg. Grid North
Location:	Very prominent outcrop rising above the plain like a mediaeval castle.	**Aspect:**	Dominant view of the plain below.
Motifs:	Tassel Bradshaw Group figures, Sash Bradshaw Group figures, hand stencils		
Deterioration:	Insect (mud wasp nests), dust, pounding.		
Deposits:	Nil – rock floor.		
References:			
Description:	On approach Bradshaw figures seen painted on the side wall of a cleft in the castle 'keep'. Climb up to the first level to find a world class art site. Highly ornate Tassel and Sash Bradshaw Group figures in excellent preservation overlie hand stencils. Lots of accoutrements painted on the figures such as pom poms, 'fox' tails, half tram track decoration. Over 30+ paintings. Colours – red, mulberry. The main art site overlooks a flat expanse on the plane below. The art is very visible, with Tassel figures to the right of the panel and Sash Bradshaw Group figures occupying the centre. Hand stencils present with one on the left underlying a Bradshaw. Many sets of figures show varying sizes with some associated figures quite small. Some figures show evidence of pounding. Two colours used, red ochre and the more traditional mulberry hue. Definitely not an occupation site as boulders lie on the floor. There are better places to live in the surrounding area.		

Images:	 

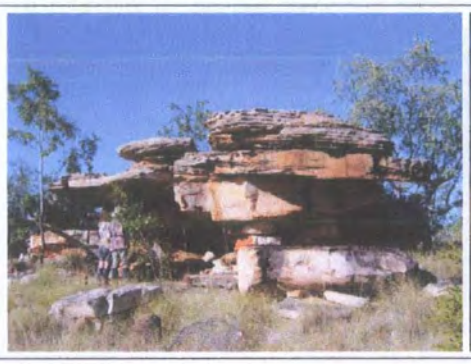
Site Number: DR07-46		**Site Name:**	
		Date:	27 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4267 Ashton
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Woorakin Creek, Euro Gorge, nr Carson River.
Size:		**Orientation:**	
Location:	To the rear of the main outcrop DR07-45.	**Aspect:**	
Motifs:	Tassel Bradshaw Group figures, Sash Bradshaw Group figures.		
Deterioration:	Exfoliation, rock fracture, pounding.		
Deposits:	None – rock floor.		
References:			
Description:	The site is to the rear of DR07-45 and can be considered part of the same site complex. The site consists of large boulders with protected concave painting surfaces. The main panel is on the concave surface of the main boulder with figures painted in red or mulberry colour. The dominant figure is a tall and thin red Tassel Bradshaw Group figure. It is highly decorated with an outline of dots around the figure. Of interest is a small animal painted in close proximity to the figure's headdress. An adjacent rock canvas has Sash Bradshaw Group figures painted, again in dark mulberry hue illustrating the separation of art styles.		

Images:	

Site Number: DR07-47		**Site Name:**	
		Date:	27 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4267 Ashton
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Woorakin Creek, Euro Gorge, nr Carson River.
Size:	4m x 3m x 1.5m	**Orientation:**	272 deg. Grid North
Location:	An isolated boulder resembling a crocodile's head with a low shelter at its base.	**Aspect:**	Views the general scrub.
Motifs:	Wandjinas, snake, argulas, crocodile, turtle.		
Deterioration:	Little seen.		
Deposits:	Stone floor, no deposits.		
References:			
Description:	The ceiling of the shelter is painted with modern red figures. Two Head Only Wandjinas are present. Numerous 'argulas', little red figures, but lacking the characteristic big ears, are painted in red. One large goanna and a smaller crocodile along with snake forms.The snake curves around the Wandjina heads. Bright red argulas have been overpainted on one of the heads.		
Images:	 		

Site Number: DR07-48		**Site Name:**	**Morgan Falls**
		Date:	27 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4267 Ashton
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Morgan Falls, Palmoondoora Creek
Size:	3m x 1m x 1.5m	**Orientation:**	278 deg.
Location:	Wandjina site at the top of Morgan Falls.	**Aspect:**	View towards the top of the falls.
Motifs:	Wandjinas, snake, birds, large figure.		
Deterioration:	Age, exfoliation of applied paint.		
Deposits:	Rock floor, no deposits.		
References:			
Description:	Prepared white panel on the rock wall above the falls on the left hand (north) side. Head Only Wandjina forms peeping out from behind a rock with a view of the falls. Over the head is a snake. To the left is a large orange outline figure, reclining, with a Wandjina type head carrying a stone axe. The figure overpaints a row of five birds. Colours – orange, dark red.		
Images:	 		

Site Number: DR07-49		**Site Name:**	
		Date:	28 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Palmoondoora Creek
Size:		**Orientation:**	247 deg. Grid North
Location:	Isolated eroded outcrop near the top of a waterfall.	**Aspect:**	
Motifs:	Tassel Bradshaw Group figure, Sash Bradshaw Group figure, macropod, Northern Muscly Figure, anthropomorph.		
Deterioration:	Mudwasp nests, exfoliation, pounding.		
Deposits:			
References:			
Description:	Three outline figures: macropod, Northern Muscly Figure (propeller head), "bald' person' anthropomorph. All in red ochre.		

	To the left side a small exquisite Tassel Bradshaw Group figure. Further left a larger Bradshaw, probably Sash, shows pounding on the painting. Little either side, missed strokes most likely, illustrating deliberate pounding. Flat area to front of outcrop.
Images:	 

Site Number: DR07-50		**Site Name:**	
		Date:	29 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Palmoondoora Creek
Size:	10m x 3m x 3m	**Orientation:**	310 deg. Grid North
Location:	Large overhang with boulders filling up the space.	**Aspect:**	
Motifs:	Macropod feet, geometric designs, outline drawings.		
Deterioration:			
Deposits:			
References:			
Description:	Outline drawings in black. Macropod feet, geometric designs. Plateau location.		

Site Number: DR07-51		**Site Name:**	
		Date:	29 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Palmoondoora Creek
Size:		**Orientation:**	
Location:		**Aspect:**	
Motifs:	Yam designs.		
Deterioration:			
Deposits:			
References:			
Description:	Small shelter with 'yam' designs on the ceiling.		

Site Number: DR07-52		**Site Name:**	
		Date:	29 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Palmoondoora Creek
Size:	10m x 6m x 4m.	**Orientation:**	15 deg. Grid North
Location:	Major overhang on the hillside above the plain below.	**Aspect:**	Great view of the valley below.
Motifs:	Sash Bradshaw Group figures, squatting figures, hand stencils, hand prints, macropod.		
Deterioration:	Pounding of macropod.		
Deposits:			
References:			
Description:	Paintings, hand prints (8), hand stencils. Three groups of Sash Bradshaw Group figures present, on the back wall and a side boulder. The back wall group has a macropod to the left. This has been pecked out and hammered at with some ferocity as many strikes miss the figure. The Sash Bradshaw Group figures though have been left alone. A group of five squatting figures with pubic aprons hanging between their legs. Only one figure has a long headdress, but it and another hold a boomerang each. To their left are some hand prints in the same shade of paint. The main group of Sash Bradshaw Group figures has a now very faded macropod painted on top.		

Site Number: DR07-53		**Site Name:**	
		Date:	29 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Palmoondoora Creek
Size:		**Orientation:**	
Location:	Small cleft at the base of a rock wall.	**Aspect:**	View into alleyway between outcrops.
Motifs:	Bradshaw Group figures.		
Deterioration:	Exfoliation.		
Deposits:			
References:			
Description:	Bradshaw figures with lower identifying parts eroded, but have characteristic Tassel Bradshaw Group figure shoulders.		

Site Number: DR07-54		**Site Name:**	
		Date:	29 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Palmoondoora Creek
Size:		**Orientation:**	75 deg. Grid North
Location:	A great eroded site on the ridge line.	**Aspect:**	
Motifs:	Geometric art.		
Deterioration:			
Deposits:			
References:			
Description:	Some geometric art. No photographs taken.		

Site Number: DR07-55a		**Site Name:**	
		Date:	29 June 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Palmoondoora Creek
Size:	12m x 2m x 3m Site curves around.	**Orientation:**	263 deg. Grid North
Location:	Major site, living shelter. Situated in an 'alleyway' between eroded blocks.	**Aspect:**	Looks into an alleyway between blocks.
Motifs:	Irregular Infill Animal, Yam Bradshaw figures, Wandjina, bee hive, macropods, goanna, hand stencils, Stick Figures.		
Deterioration:			
Deposits:	Fine grey dusty floor.		
References:			
Description:	The shelter is a big living site and part of a site complex. A high roof is painted, as is the back wall. The back wall is a mass of superimpositions and stained from eroded ochres. A Wandjina variant on a prepared white background is the dominant figure. The wall cuts away to the right and a large 'beehive' outline with eight yellow hand stencils is painted. On the ceiling is a 'yam' with boomerangs and waist sashes, one being three pointed. Another 'yam' figure has boomerangs only and associated red stick figures. Bradshaw figures, goanna, two 'hairy' macropods painted with their interior made up of dashed lines. This style of painting is reminiscent of Irregular Infill Animal Period art.		

Site Number: DR07-55b		**Site Name:**	
		Date:	29 June 2007
GPS:	Undisclosed	**1:100k map**	4268 Carson

(WGS84)		**sheet**	
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Palmoondoora Creek
Size:		**Orientation:**	
Location:	A low shelter directly opposite DR07-55a.	**Aspect:**	Views DR07-55a across the gulley.
Motifs:	Early Wandjinas, anthropomorph.		
Deterioration:			
Deposits:	Fine grey dusty floor.		
References:			
Description:	Directly opposite DR07-55a is a low shelter with brightly painted red, early Wandjinas on the ceiling. Figures have 'lollipop' headdresses. Human figures (anthropomorphs) overpainting them in places, in red with white parallel lines on the chest. These are perhaps cicatrice marks. The shelters face each other amidst eroded sandstone gulleys. Plenty of suitable sites here but few have occupation remains or art.		

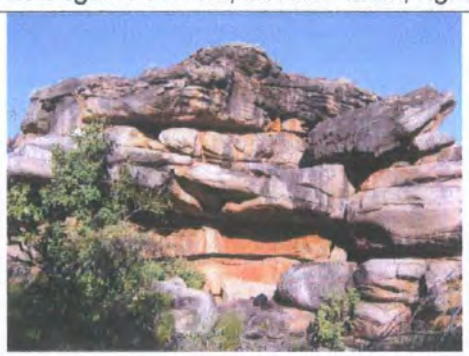
Site Number: DR07-56		**Site Name:**	
		Date:	29 June 2006
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Palmoondoora Creek
Size:	16m x 6m 3m	**Orientation:**	
Location:	Major site complex. On the second level of an eroded sandstone hill. A tough scramble to get up to the first level.	**Aspect:**	Overlooks the plain.
Motifs:	Irregular Infill Animal catfish and macropod, hand prints, Tassel Bradshaw Group figures, Sash Bradshaw Group figures, Clothes Peg Figures, Clawed Hand Period hands, Early Wandjinas, Wandjina period fish, ovals, full length Wandjina, argulas.		
Deterioration:	Exfoliation, mudwasp nests, water wash, termite lines.		
Deposits:	Thick dusty floor containing a quartz crystal. Debitage on rock surface.		
References:	Walsh 2000: 113 Plate 137.		
Description:	This is a major occupation area. All art periods present from Irregular Infill Animal figures to Tassel Bradshaw Group figures, Wandjinas and recent art. Stone tools, debitage, spear heads. Very faded Bradshaw figures with ellipse bodies. A horizontal Wandjina to the left of the shelter has a faded tulip headdress. Many connected linked ovals or white circles with interior red dots. Horseshoe shaped designs – red with white dots. Perhaps this is the headdress remnant of a long faded body from Clothes Peg Figure period. Giant footprint painted. Clawed Hand period hands. Wandjina period fish – red body, yellow and red dot detailing. Red outline argulas. Adjacent is a shelter with a grey dusty floor, evidence of occupation. A full-bodied Wandjina on the ceiling, 5 paces long ~ 4.5m. Repainted many times.		

	Outlined first in black line then in a yellow line. Eyes originally brick red ellipses and repainted to be smaller yellow circles. No obvious deposits but I did find two quartz crystal prisms in the dirt. Another deposit was the leg of a photographer's tripod. Does this belong to Walsh? Yellow boomerang painted with red dot interior. Opposite this shelter in the eroded gulley is another smaller one with Irregular Infill Animal catfish and nine hand prints with designs on the palm. Remains of Irregular Infill Animal macropod to right and a partial snake too. The art sites seem clustered around streams which flow to Palmoondoora Creek 1 – 1.5km away.

Site Number: DR07-57		**Site Name:**	
		Date:	2 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4268 Carson
Other site ID:		**Region:**	Drysdale River National Park
		Area:	Palmoondoora Creek
Size:	5m x 3m x 4m . open site.	**Orientation:**	209 deg. Grid North
Location:	Isolated rocky outcrop near creek.	**Aspect:**	Close to rapids and permanent water.
Motifs:	Irregular Infill Animal fish, Tassel Bradshaw Group figure, Elegant Action Figures, Clothes Peg Figures, fish, macropod, bird, hand print, bird foot print, Wandjina, ovals, echidna, anthropomorphs, general Bradshaw figs..		
Deterioration:	Animal, bird nests, mudwasp nests.		
Deposits:	No		
References:	Walsh 2000: 112, 113.		
Description:	Clothes Peg Figures and Elegant Action Figures present. Rows of Clothes Peg Figures with multibarbed spears. Fish with an 'alligator head'. Large macropod design to the upper right. Vertical parallel line infill. Bird design with a big hooded beak. Mass of superimposition of red figures, hard to distinguish. One hand print, one bird foot print. Little rock shelter to left of site ~ 5m x 2m x 2m. Faded white Wandjina figure with some yellow detailing. Faded Bradshaw figures with huge hips and ellipse heads. Round yellow faded ovals on rear shelter wall. Around to the left under a boulder overhang are two fish, possibly Irregular Infill Animal Period, but the paint has been pecked away. By their side is a tall Tassel Bradshaw Group figure. To the right of the main panel is a small boulder with red painted figures on narrow edge – two blob men, striped macropod, echidna in plan and coloured in. Seem to be children's paintings. Surprisingly they haven't been washed away during the Wet.		

Far Away Bay: Site Survey Information.

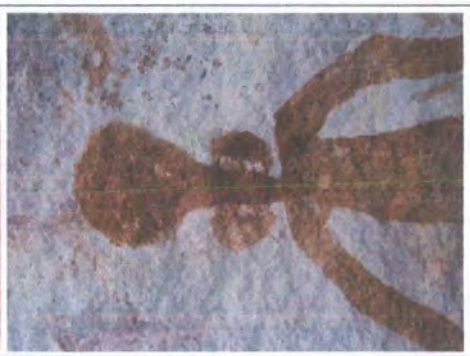
West Cliffs

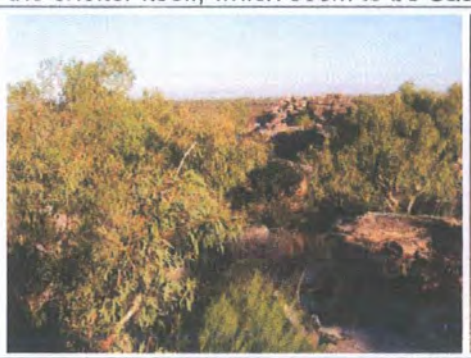
Site Number: FAB07-01		**Site Name:**	
		Date:	17 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	West cliffs
Size:	5m x 2m x 2m	**Orientation:**	319 deg. Grid North
Location:	Small overhang in the stone country above the cliff tops to the west of Far Away Bay Bush Camp.	**Aspect:**	The panel looks out to a central 'courtyard' in the eroded area.
Motifs:	Sash Bradshaw Group figures, macropod, thylacine.		
Deterioration:	Water and vandalism (pecking).		
Deposits:	Nil - rocky floor.		
References:	Kimberley Specialists 2001a, 2001b.		
Description:	Small group of three Sash Bradshaw Group figures. Of note the lower left figure shows a 'dog' like creature facing downwards. I couldn't see if the penis is portrayed, as backwards would indicates the animal is a marsupial and hence the 'dog' is probably a thylacine. The upper right of the panel has a faded red macropod painting but it is heavily pecked out whereas adjacent Bradshaw figures are left alone. Left figure: 35.5cm, middle: 42cm, right: 27cm.		
Images:	 		

Site Number: FAB07-02		**Site Name:**	
		Date:	17 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	West Cliffs.
Size:	4m x 2.5m x 3m	**Orientation:**	15 deg. Grid North
Location:	Approximately 21m away	**Aspect:**	The site has a view of the

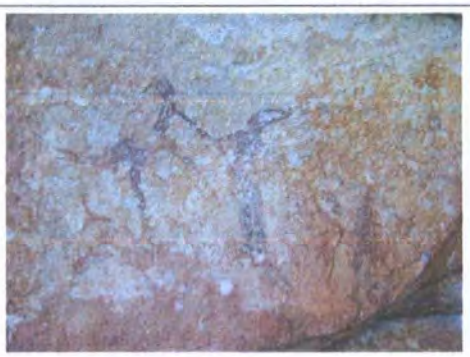
	from FAB07-01 on a bearing of 220 deg.		central 'courtyard'.
Motifs:	Tassel Bradshaw Group figures, unidentified Bradshaw figures		
Deterioration:			
Deposits:			
References:	Kimberley Specialists 2001a, 2001b.		
Description:	A small panel of Tassel Bradshaw figures. Two main mulberry Tassel Bradshaw Group figures. Each has a 'squid' headdress with the right figure's more pronounced. Other eroded red ochre Bradshaw figures are adjacent. They show no accoutrements to enable identification. Left figure: 61cm, Right figure: 66cm A wall directly opposite the panel has a single exfoliating Bradshaw figure. The upper torso, shoulders and head suggest a probable Tassel Bradshaw.		
Images:	 		

Site Number: FAB07-03		**Site Name:**	
		Date:	17 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	West Cliffs.
Size:	2m x 1m x 1.5m	**Orientation:**	19 deg. Grid North
Location:	Part of the same complex being around the corner from FAB07-02.	**Aspect:**	The site views the courtyard area.
Motifs:	Bichrome Figure, Stick figure, unidentified Bradshaw figure.		
Deterioration:	Insect damage from mudwasp nests, salt damage from mineralisation.		
Deposits:	None.		
References:	Kimberley Specialists 2001a, 2001b.		
Description:	The site is a small panel, narrow, under a low overhang. Painted is a horizontal, long, bichrome Bradshaw figure. Of interest is that the figure's elongated neck has twin neck lobes, symmetrical on either side. The figure is in dark red. A small stick figure is horizontal over the top arm and a vertical Bradshaw figure is below the main figure's legs. Main figure: 80cm long.		

Images:	 

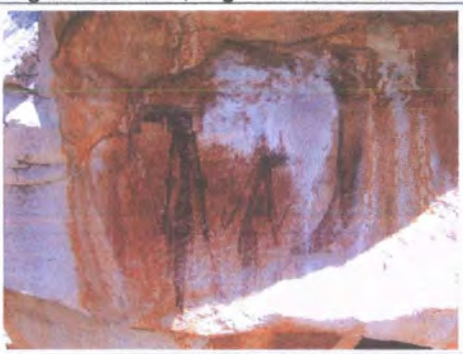
Site Number: FAB07-04		**Site Name:**	
		Date:	17 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	West Cliffs.
Size:		**Orientation:**	221 deg. Grid North
Location:	A large rockshelter with a big overhang further around to the left from FAB07-03.Little art in the shelter but the panel is to the left of the shelter.	**Aspect:**	The shelter overlooks a gully leading down to the bay.
Motifs:	Sash Bradshaw Group figures, Elegant Action Figures		
Deterioration:	Mineralisation		
Deposits:	Nil, rocky floor.		
References:	Kimberley Specialists 2001a, 2001b.		
Description:	Three Elegant Action Figure hunters with spears, the centre figure holding a boomerang. The heads look rounded and they are dynamic in pose. L-R: Fig 1: 39cm, Fig 2: 19cm, Fig 3: 26cm Other faded figures are on the wall with a small panel of very faded figures in the shelter itself, which seem to be Sash Bradshaw Group figures.		
Images:	 		

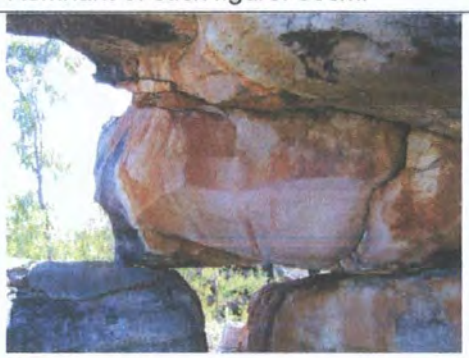
Gumboot Bay

Site Number: FAB07-05		**Site Name:**	
		Date:	18 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, inland.
Size:	6m x 2m x 2m	**Orientation:**	171 deg. Grid North
Location:	An eroded outcrop on the ridge line above the creek. The shelter receives a cooling breeze. Tumbled boulders fill the site so not a living area.	**Aspect:**	Faces other eroded blocks.
Motifs:	Sash Bradshaw Group figures, Clothes Peg Figure, Stick Figure, fish, geometrical figures, general Bradshaw figures.		
Deterioration:	Insect damage (mudwasp nest), water seepage, exfoliation and 'vandalism' due to the deliberate pounding of Figure 2 (with three boomerangs).		
Deposits:	None seen.		
References:	Kimberley Specialists 2001a, 2001b, Wilson 2006:152-155.		
Description:	The art consists of a bichrome Clothes Peg Figure with horseshoe headdress and distinctive hooked stick woomera. Horseshoe Head Clothes Peg Figure: 63cm long. Four distinct, mulberry hued, bent knee Bradshaws ie Sash Bradshaw Group. Figure 2 holds three nested boomerangs, Figure 4 holds two sets of two boomerangs and has a dancing pompom on the waist. A small red stick figure of Bradshaw type is to the left. To the right of Figure 4 is a series of faint parallel lines. L-R: Fig 1: 18cm, Fig 2: 44.5cm, Fig 3: 31cm, Fig 4: 32cm. The right of the shelter has three outline fish in very faded red/orange ochre. A Bradshaw figure is to the left of the fish in faded mulberry. All the fish are of the order of 22cm long. Ten paintings present.		
Images:	 		

Site Number: FAB07-06		Site Name:	
		Date:	18 July 2007
GPS: (WGS84)	Undisclosed	1:100k map sheet	4370 Rulhieres
Other site ID:		Region:	Far Away Bay
		Area:	Gumboot Bay, inland.
Size:	Panel dimensions: 127cm l. x 54cm h.	Orientation:	195 deg. Grid North
Location:	An eroded rock mushroom a few metres SE of FAB07-05	Aspect:	Faces in towards the open area.
Motifs:	Sash Bradshaw Group figures, general Bradshaw figures.		
Deterioration:	Exfoliation		
Deposits:			
References:	Kimberley Specialists 2001a, 2001b, Wilson 2006:152-155.		
Description:	Five possible Sash Bradshaw Group figures present with another five indistinct figures on a right angle to the right of the panel. L-R: Fig 3: 34cm, Fig 4: 39cm, Fig 5: 33cm (of main five figures).		
Images:			

Site Number: FAB07-07		Site Name:	
		Date:	18 July 2007
GPS: (WGS84)	Undisclosed	1:100k map sheet	4370 Rulhieres
Other site ID:		Region:	Far Away Bay
		Area:	Gumboot Bay, inland.
Size:	panel 90cm l x 75cm h.	Orientation:	25 deg. Grid North
Location:	A Bradshaw art panel in a small niche adjacent to a small rockshelter.	Aspect:	The panel looks into a 'courtyard' area.
Motifs:	Tassel Bradshaw Group figures, general Bradshaw figures.		
Deterioration:	Salt mineralisation, water.		
Deposits:	None as on a rocky floor. The adjacent shelter has a sandy floor.		
References:	Kimberley Specialists 2001a, 2001b, Wilson 2006:152-155.		
Description:	Two distinct Tassel Bradshaw Group figures in mulberry hue with other undefined Bradshaw figures in red, underlying. Main figure 1 holds a cane in its left hand. The headdress has two little tassels near the shoulder.		

	Figure 2 holds a cane in its left hand, a dilly bag in the right hand and also carries an armpit bag. Figure 1: 61cm, Figure 2: 40cm.
Images:	

Site Number: FAB07-08		**Site Name:**	
		Date:	18 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, inland.
Size:	Panel ~ 90cm l x 75 cm h.	**Orientation:**	163 deg. Grid North
Location:	A small panel on the ridge line boulders.	**Aspect:**	View down towards the small creek.
Motifs:	Stick Figures, Bradshaw figure, other figures.		
Deterioration:	Water.		
Deposits:	None, rock floor.		
References:	Kimberley Specialists 2001a, 2001b, Wilson 2006:152-155.		
Description:	Long stick figures carrying boomerangs. The main figure has two boomerangs in each hand. Four stick figures, one a very faded Bradshaw figure, one mulberry and one red figure carrying boomerangs. Remnant of stick figure: 50cm.		
Images:	 		

Site Number: FAB07-09		**Site Name:**	
		Date:	18 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, inland.
Size:	Panel 60cm l. x 60cm h.	**Orientation:**	201 deg. Grid North
Location:	Painted on a boulder 'canvas' under an overhang. The site is to the rear of FAB07-07.	**Aspect:**	View from here to the creek below.
Motifs:	Tassel Bradshaw Group figures.		
Deterioration:	Water and mudwasp damage.		
Deposits:	None. Rock floor.		
References:	Kimberley Specialists 2001a, 2001b, Wilson 2006:152-155.		
Description:	Five Tassel Bradshaw Group figures of varying sizes. The panel is water worn and stained. Figure 4 has a knobbed spine from the top of its headdress. A lateral spine from the neck area. It holds a looped cord in the left hand. Figure 2 holds a baton in the right hand, as does faded Figure 5. L-R: Fig 1: 12cm, Fig 2: 25cm, Fig 3: 178cm, Fig 4: 26cm, Fig 5: 43cm.		
Images:			

Site Number: FAB07-10		**Site Name:**	
		Date:	18 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, inland.
Size:		**Orientation:**	283 deg. Grid North
Location:	A large eroded isolated, mushroom-shaped boulder, near the creek.	**Aspect:**	Faces down to the creek.
Motifs:	General Bradshaw figures, finger dots / tally marks.		
Deterioration:	Exfoliation.		
Deposits:	None seen.		

References:	Kimberley Specialists 2001a, 2001b, Wilson 2006:152-155.
Description:	The painting surface is available around the boulder for 360 degrees but only the portion viewing the creek is painted. Very faded Bradshaw figures, type undetermined, present. Finger dots / tally marks coloured in mulberry.
Images:	 

Site Number: FAB07-11		**Site Name:**	
		Date:	18 July 2007
GPS: (WGS84)	None.	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, inland.
Size:		**Orientation:**	99 deg. Grid North
Location:	Small shelter about 20m from FAB07-10.	**Aspect:**	
Motifs:	Stick Figures.		
Deterioration:			
Deposits:			
References:	Kimberley Specialists 2001a, 2001b, Wilson 2006:152-155.		
Description:	The back wall has stick figures, painted towards an open area away from creek. No photographs taken.		

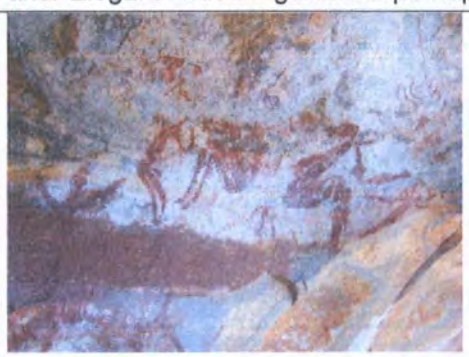
Site Number: FAB07-12		**Site Name:**	
		Date:	18 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, inland.
Size:	Ceiling panel ~3m lx1.5m d	**Orientation:**	223 deg. Grid North facing into gorge.
Location:	Below the waterfall on the visible rock overhang on the right hand (east) side of the gorge.	**Aspect:**	Art on the roof of the overhang or high up on the back wall.
Motifs:	Irregular Infill Animal figures, Sash Bradshaw Group figures, hand stencils, hand prints.		
Deterioration:			
Deposits:	None.		

References:	Kimberley Specialists 2001a, 2001b, Wilson 2006:152-155.
Description:	The site is visible as an overhang from the top of the falls. Access is by walking down the cliff line on the east side downstream for around 100m or so before descending via a route of fallen boulders. The overhang roof is around 4m high. Painted in red on it are Irregular Infill Animal Period figures. The main figure is that of a bird with no head just a long neck. Remnants of other faded figures are present such as 'macropod' legs, hand stencils and hand prints. The wall to the left high up shows Bradshaw figures. No accoutrements seen but their bent knees suggest Sash Bradshaw Group figures. The site being at the foot of the falls and by a permanent pool makes this a liminal place. The site has Irregular Infill Animal figures on the ceiling and Sash Bradshaw Group figures on the rear wall. Both are very high up so were they painted from long lost ledges or from wooden platforms?
Images:	

Site Number: FAB07-32		**Site Name:**	
		Date:	22 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, eastern coast.
Size:		**Orientation:**	223 deg. Grid North
Location:	A large, eroded, house size block with shelter around the base	**Aspect:**	
Motifs:	'Sun' sign.		
Deterioration:	Wind, mudwasp nests.		
Deposits:	Grey dusty soil.		
References:			
Description:	Some evidence of occupation with grey, dusty soil. On an upper ledge the faded remains of a 'sun burst' figure, coloured red. No photos.		

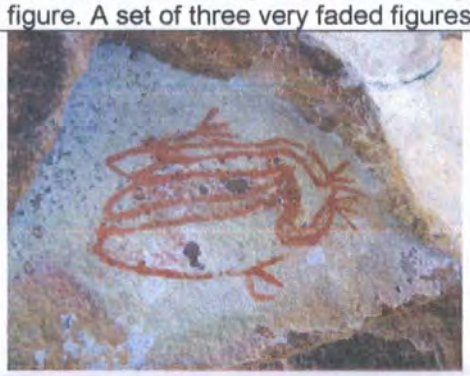
Site Number: FAB07-33		**Site Name:**	
		Date:	22 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, eastern coast.
Size:		**Orientation:**	07 deg. Grid North
Location:	A big block with slight shelter from the sun	**Aspect:**	
Motifs:	Sash Bradshaw Group figure.		
Deterioration:			
Deposits:			
References:			
Description:	Under a deep ledge is a solitary Sash Bradshaw Group figure. It shows a fine sash, epaulettes and a long headdress to the left. It faces at an angle to the prevailing wind so how long has it remained here? Figure 33cm long axis of headdress tip to feet. No photographs.		

Site Number: FAB07-34		**Site Name:**	
		Date:	22 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, eastern coast.
Size:	4m x 2m x 1.5m	**Orientation:**	359 deg. Grid North
Location:	Outcrop, weathered platform	**Aspect:**	A view of the sea from here.
Motifs:	Sash Bradshaw Group figures, general Bradshaw figures.		
Deterioration:			
Deposits:			
References:			
Description:	A few faint figures, mulberry Sash Bradshaw Group figures and red ochre, even fainter, Bradshaw figures (undetermined).		
Images:	 		

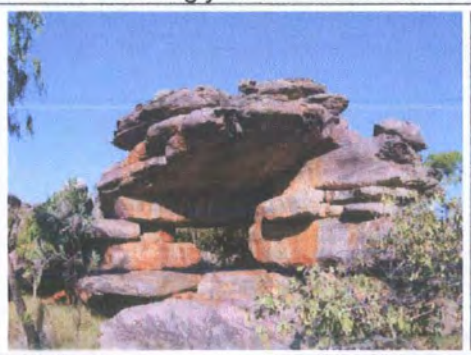
Site Number: FAB07-35		**Site Name:**	
		Date:	22 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, eastern coast.
Size:	Panel 117cm x 85cm approx	**Orientation:**	333 deg. Grid North
Location:	West side of an outcrop with a distinctive raised angled slab on its northern end.	**Aspect:**	The panel faces the entrance to the bay and the headland opposite.
Motifs:	Elegant Action Figures, Stick Figures, Clothes Peg Figure, emu		
Deterioration:	Mineralisation, exfoliation, weathering.		
Deposits:	Nil.		
References:			
Description:	A little eroded alcove has an Elegant Action Figure scene. Figures in red appear to overlie one classic static Clothes Peg Figure in red outline, yellow interior with red detailing. The alcove shows multibarbed spears, boomerangs and an emu (with a 'brush' head). Crude stick figures with raised arms are below. Four definite Elegant Action Figures are present along with three stick figures. Fragments of paint indicate many other now eroded figures were once present. Elegant Action Figures L-R: Fig 1: 17cm, Fig 2: 18cm diag, Fig 3: 29cm. Detailing on the Clothes Peg Figure in red showing a 'Mickey Mouse' ear on the right, with two vertical red spines from it, an armpit dilly bag and a hooked stick woomera to the right. From the superimpositions it seems that Clothes Peg Figures may not come after Elegant Action Figures but perhaps are contemporaneous.		
Images:	 		

Site Number: FAB07-36		**Site Name:**	
		Date:	22 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, eastern coast.

Size:		**Orientation:**	285 deg. Grid North
Location:		**Aspect:**	
Motifs:	Anthropomorphs, 'butterfly' or blob.		
Deterioration:	Weathering.		
Deposits:	Dusty grey floor, shell fragments		
References:			
Description:	Faded red ochre art, four paintings, three anthropomorphs and the fourth a blob, perhaps a butterfly. The rear of the outcrop has a low shelter ~ 1.5m tall. The back wall has very faded figures, almost indistinguishable. Floor grey dust and sand with mud mussel shell fragments. Faces a direction of 98 deg.		

Site Number: FAB07-37		**Site Name:**	
		Date:	22 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, eastern coast.
Size:	5m x 2.5m x 1.75m	**Orientation:**	61 deg. Grid North
Location:	Boulder filled shelter on same block as FAB07-36, eastern end.	**Aspect:**	
Motifs:	Tassel Bradshaw Group figure, Bradshaws, Clothes Peg Figure, hand print, red figures.		
Deterioration:	Spalling and exfoliation.		
Deposits:	Grey ashy sand.		
References:			
Description:	The back wall has a Tassel Bradshaw Group figure plainly dressed but holding multiple tassels in its left hand. Main figure: 52cm long. To the left of the panel are figures in a similar hue but not Bradshaws. Seem to be more Clothes Peg Figure variants. Figures have rounded headdresses. Below the main figure is a lot of rock spalling and exfoliation on top of that. Small Bradshaw figures here are exfoliating, type of figure indistinguishable. Other red ochre marks on the wall. The roof has a handprint, faded red figures and a more recent headless red figure. A set of three very faded figures to the far left. Outline headless figure.		
Images:	 		

Site Number: FAB07-38		**Site Name:**	
		Date:	22 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, eastern coast.
Size:		**Orientation:**	103 deg. Grid North
Location:	Hollowed out block with a small shelter inside	**Aspect:**	
Motifs:	Bradshaw figure.		
Deterioration:			
Deposits:			
References:			
Description:	Solitary faded unknown type of Bradshaw on the rock face.		

Site Number: FAB07-39		**Site Name:**	
		Date:	22 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, eastern coast.
Size:	2.5m x 2.5m x 1.5m	**Orientation:**	341 deg. Grid North
Location:	Shelter under a rock bridge with the top slab suspended at two points.	**Aspect:**	View of the bay.
Motifs:	Irregular Infill Animal fish, general Bradshaw figures.		
Deterioration:	Insect – termite lines.		
Deposits:			
References:			
Description:	A mulberry coloured figure with big hair and a spear. Indistinct figures are near by, plus a fish in Irregular Infill Animal style. Other partial figures dot the roof all seemingly of Bradshaw Period era.		
Images:	 		

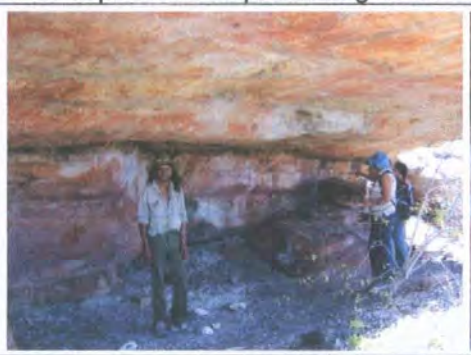
Site Number: FAB07-40		**Site Name:**	
		Date:	22 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, eastern coast.
Size:	6m x 2m 1.75m	**Orientation:**	273 deg. Grid North
Location:	Shelter under a rock bridge roof, situated on the first level of the rock.	**Aspect:**	Facing the bay.
Motifs:	Irregular Infill Animal macropod, Elegant Action Figures, Clothes Peg Figure.		
Deterioration:			
Deposits:	Mud mussel shells and fragments, as well as pieces of wood, in channels between the rock floor.		
References:			
Description:	Ceiling art shows an Irregular Infill Animal macropod and Elegant Action Figures. Also present is a Clothes Peg Figure variant.		
Images:			

Site Number: FAB07-41		**Site Name:**	
		Date:	22 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Gumboot Bay, eastern coast.
Size:		**Orientation:**	
Location:	This is a courtyard area surrounded by other well weathered blocks with shelters.	**Aspect:**	
Motifs:	Tassel Bradshaw Group figures, Bichrome figures, Clothes Peg Figures.		
Deterioration:	Exfoliation, weathering.		
Deposits:			
References:			
Description:	A major art complex but time prevented recording. Weathered shelters contain Tassel Bradshaw Group figures, Bichrome figures and Clothes Peg Figure variants.		

Images:	 

Boab Bay

Site Number: FAB07-13		**Site Name:**	
		Date:	19 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay.
Size:		**Orientation:**	
Location:	A weathered rock stack with an upper ledge/cleft.	**Aspect:**	
Motifs:	None.		
Deterioration:			
Deposits:	Paperbark coffin.		
References:			
Description:	Not an art site but it is of importance as the site of a dingo burial. On the upper ledge is a paperbark burial package fastened with two types of twine, a thicker plant bark and a thinner string. The right of the package has come open revealing three dingo skulls and associated bones. A small leg bone with a broken end sticks out. This also shows signs of cut marks on the bone. Was this for food or ritual defleshing? The question over the deliberate burial of dingoes is whether they were favourite animals or does this have some sort of totemic significance?		
Images:	 		

Site Number: FAB07-14		**Site Name:**	**Museum Shelter**
		Date:	19 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:	12m x 5.5m x 2m	**Orientation:**	39 deg. Grid North
Location:	An occupation shelter to the south east of the bay, over the river bed.	**Aspect:**	View of the bay from the side of the shelter.
Motifs:	Recent Wandjina Period art – axe, emu, swordfish, argula, macropod, human figures. Hand stencils.		
Deterioration:	Dust, animal, visitors.		
Deposits:	Large, with a shell midden of mud mussels, pearlshells, baler shells. Recent cultural deposits present with evidence of debitage, tool making, around the area including glass flakes.		
References:			
Description:	This is a large shelter with the wall and roof covered in 'recent' art. The floor is grey and dusty and thick with shells. Two shell middens of mud mussels line the shelter with one midden by the back wall and the other bounding the front. Cultural deposits are present such as six baler shells as water carriers, an old tin billy, a large enamel tea pot (missing a spout), five metal laths for spear tips, spoon, comb, three 'boot polish' tins, a steel axe and finally three, one metre rods of wood, as spear shafts. No Bradshaw Period art is seen but polychrome recent art is painted everywhere. The polychrome art has figures including a dugong, emu, swordfish, Wandjina-like argula figures with upraised arms. Of particular note is a contact period painting of the bust of a European painted in side profile (facing left) complete with pipe and hat. The figure is coloured in with a red check which seems rather like a Scottish tartan. The site is in urgent need of a plan for management and conservation. The floor deposits need preserving as for example whole shells are present.		
Images:	 		

Site Number: FAB07-15		**Site Name:**	
		Date:	19 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay

Size:	Panel 150cm x 62cm x 83cm.	**Orientation:**	183 deg. Grid North
Location:	A small alcove, not a living area, but space from the sun.	**Aspect:**	Faces into a small courtyard.
Motifs:	Tassel Bradshaw Group figures with associated animals		
Deterioration:	Animal.		
Deposits:	Nil.		
References:			
Description:	Eight Tassel Bradshaw Group figures forming a composition. The figures are of note for their exquisite fine detailing, such as dilly bag handles being portrayed as two strings, fingers painted and elbow tassels. Of interest are the associated figures on Figure 1 and Figure 6, animals, thought to be ring tailed possums. Figure 7's vertical headdress feathers curl over the rock overhang and Figure 1's tassel pendent seems to resemble a kangaroo paw. This main panel seems to be the centre of an art complex with other shelters and overhangs having faded art. L-R: Fig 1: 66cm, Fig 2: 34cm, Fig 3: 71cm, Fig 4: 77cm, Fig 5: 35cm, Fig 6: 69cm, Fig 7: 82cm, Fig 8: 29cm. Colours: mulberry and orange. Figures 4 and 6 are painted a mulberry hue which is turning orange at the bottom. Directly opposite on an outcrop is a horizontal Tassel Bradshaw figure with three parallel lines of dots from the mouth and two parallel lines of dots from the back of the neck. The rear of the main outcrop has a low overhang shelter. No art here, but lots of mussel shells on the floor.		
Images:	 		

Site Number: FAB07-16		**Site Name:**	
		Date:	19 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:	175cm x 90cm x 66cm	**Orientation:**	73 deg. Grid North
Location:	A small sheltered spot with a rocky floor.	**Aspect:**	Faces an open courtyard.

Motifs:	General Bradshaw figures, macropods.
Deterioration:	Water damage, pecking.
Deposits:	
References:	
Description:	The back panel has the remains of mulberry Bradshaw figures (torso and legs only). Two red macropods present, with the left in outline only. The right figure is lying on its backside and painted in a more solid infill but pecked out afterwards. Colours: red, mulberry.

Site Number: FAB07-17		**Site Name:**	
		Date:	19 July 2007
GPS: (WGS84)		**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:		**Orientation:**	301 deg. Grid North
Location:		**Aspect:**	Faces an open space and with views of the bay.
Motifs:	Macropod, 'ball'.		
Deterioration:			
Deposits:	Mussel shells litter the floor but it is rocky, no sand.		
References:			
Description:	Red outline macropod, 108cm l x 23cm h, body only, no legs seen. Adjacent is a painted spiked 'ball'.		
Images:			

Site Number: FAB07-18		**Site Name:**	
		Date:	19 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:		**Orientation:**	271 deg. Grid North
Location:	Shallow overhang facing a small rocky courtyard.	**Aspect:**	A view of the bay.
Motifs:	Tally marks, red human figures.		
Deterioration:			

Deposits:	
References:	
Description:	A series of tallymarks, 33, of finger print size, on the back wall of an overhang. To the right are three indistinct red figures of people, not Bradshaw figures. No photographs taken.

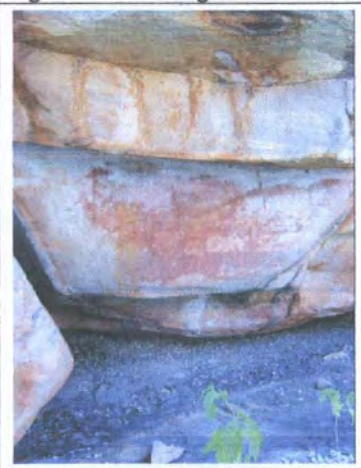
Site Number: FAB07-19		**Site Name:**	
		Date:	20 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:	10m x 3m x 3m	**Orientation:**	231 deg. Grid North
Location:	Eroded block of house size with upper ledges and clefts. The upper level has an approx. 1.25m wide cleft with a back wall of Tassel Bradshaw Group figures.	**Aspect:**	Views towards the bay.
Motifs:	Tassel Bradshaw Group figures, 'star' design, modern ulu figure, anthropomorphs.		
Deterioration:			
Deposits:	Dark, dusty sand of occupation covered in mud mussel and pearl shells.		
References:			
Description:	Many superimposed figures are present on this panel. Mulberry coloured figures, faded faint red ochre Tassel Bradshaw Group figures. Over the top a very faded 'modern' ulu figure and human type figures (anthropomorphs) superimposed. Main mulberry figures: Fig 1- 75cm, Fig 2- 79cm. The bottom of the panel has a little kneeling figure. The two mulberry figures have 'acorn' headdresses but with a vertical spine with attached star. The ulu figure has a blocky painted left foot filled with vertical bars. Tassel Bradshaw Group figure to the right of the panel has an acorn variation headdress with pole extension, as also seen at Manning Falls, central Kimberley. Other figures like this present as superimpositions and seem to be over the more distinctive mulberry. Figure 2 seems to have a knee length skirt and tassels. There is a portrayal of a dilly bag at the bottom centre of the panel. Although modern occupation present I can't see any recent art apart form the ulu figure. The 'ground floor' below this first floor panel has dark dusty sand of occupation and is covered in mud mussel and pearl shells.		

Images:	

Site Number: FAB07-20a		**Site Name:**	
		Date:	20 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:	2m x 1.5m high	**Orientation:**	35 deg. Grid North
Location:	This is an art complex in an eroded 'city block' leaving a central courtyard. Suitable surfaces around it have Bradshaw art.	**Aspect:**	Panel faces into the courtyard.
Motifs:	Irregular Infill Animal macropod, Tassel Bradshaw Group figure, Elegant Action Figure, 'star burst'.		
Deterioration:	Water erosion, exfoliation and possible pounding.		
Deposits:	None.		
References:			
Description:	Dominated by a large, waterworn Irregular Infill Animal Period macropod painting, dark red colour, facing right with infill of long lines. On its haunches is a star burst of other art. Under the belly is a distinctive mulberry Tassel Bradshaw Group figure with an acorn headdress. The left of the panel has a small red dynamic figure (Elegant Action Figure) running to the left clutching/dragging a multibarbed spear. Macropod: 138cm to water erosion. Dynamic Elegant Action Figure: 25cm Tassel Bradshaw Group figure: 51cm.		

Images:	 

Site Number: FAB07-20b		**Site Name:**	
		Date:	20 July 2007
GPS: (WGS84)		**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:		**Orientation:**	79 deg. Grid North
Location:	This is an art complex in an eroded 'city block' leaving a central courtyard. A cleft in the rock face 5m or so to the right of FAB07-20a.	**Aspect:**	Faces into the courtyard.
Motifs:	Tassel Bradshaw Group figure, Stick Figures.		
Deterioration:	Mud wasp nests.		
Deposits:	None.		
References:			
Description:	A faded panel is present on the outer right edge of the cleft. In the cleft the left side has a small panel of dynamic stick figures. To their right further into the cleft is an exquisite tall acorn headdress Tassel Bradshaw Group figure. Tassel Bradshaw figure: 86cm.		
Images:			

Site Number: FAB07-20c		**Site Name:**	
		Date:	20 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:	Panel 240cm x 93cm x 80cm	**Orientation:**	243 deg. Grid North
Location:	An occupation site, a rockshelter with a grey, dusty, sandy floor.	**Aspect:**	The site faces away from the courtyard at a slight angle.
Motifs:	Lizard, yellow figure, unknown figure.		
Deterioration:	Faded art.		
Deposits:	Mud mussels and a few pearl shells.		
References:			
Description:	The back wall has faded figures. On the left is a yellow figure with big feet and upraised arms. Above it a series of dots and dashes, infill for an undetermined figure. To the right is a crude lizard motif in red.		
Images:			

Site Number: FAB07-20d		**Site Name:**	
		Date:	20 July 2007
GPS: (WGS84)	No gps reading.	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:		**Orientation:**	
Location:	Diagonally opposite, to the right, of FAB07-20c.	**Aspect:**	
Motifs:	'Bottle' painting.		
Deterioration:			
Deposits:	Debitage from tool making.		
References:			
Description:	One faded red 'bottle' painting. Of main interest is the debitage from tool making.		

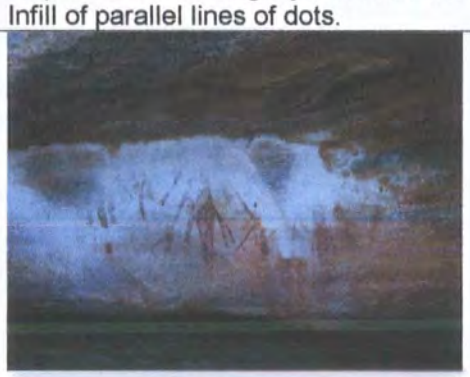
Site Number: FAB07-20e		**Site Name:**	
		Date:	20 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:	2m x 1.15m x 1.35m approx.	**Orientation:**	147 deg. Grid North
Location:	A small shelter around to the left from FAB07-20c.	**Aspect:**	Faces in towards the courtyard.
Motifs:	Sash Bradshaw Group figures, unknown Bradshaw figures, macropod, plant tubers, stick Clothes Peg Figure.		
Deterioration:	Water seepage, pounding.		
Deposits:	None.		
References:			
Description:	The wall contains a panel of Sash Bradshaw Group figures with an elongated, rodent-like, macropod and three possible plant tubers, painted as vertical ellipses with vegetation coming off. The Sash Bradshaw Group figures are faint and show signs of pounding as do the other figures. The figures are shown in all their finery - sashes, epaulettes, dillybags, boomerangs, wings, pom poms and sashes off the end of long headdresses. Other faint eroded figures are here. Bradshaw figures at the far right are affected by water wash. Three distinct Sash Bradshaw Group figures located here now but remnants of long gone ones can be seen. Figure 3 by the macropod has a shorter headdress with two 'horns' angled upwards. Figure 2: 72cm tall. Macropod: 55cm long. The rear of FAB07-20e on a block 1/2 way up the face is a stick Clothes Peg Figure with a big plant like headdress. Good views of the bay. 238 deg.		
Images:	 		

Site Number: FAB07-21a		**Site Name:**	
		Date:	20 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:	4m x 2m x 1m shelter size	**Orientation:**	321 deg. Grid North
Location:	Raised art panel. Near the	**Aspect:**	Panel facing into an open

	rear of Dingo Burial Site FAB07-13.		'courtyard'.
Motifs:	Squatting figures, Sash Bradshaw Group figures, Elegant Action Figures, Stick Figure, Ring Tail Possums.		
Deterioration:	Pecking, waterwash.		
Deposits:	None.		
References:			
Description:	Five 'dancers' painted in red ochre, squatting with slightly bowed legs, wearing long, vertical or inclined to the left, 'dunce cap' headdresses, seem to be of Bradshaw figure type. Fig 4 to lean to the right. A crudely done red Sash Bradshaw Group figure is on the right. The main design is of two macropod type creatures facing left. But their tails bend down and curl into a spiral so making them indicative of ring tailed possums. Red infill legs and head, with a body of long lines following curves. The heads are heavily pecked out but the bodies less so. To their right are faint orange dynamic type figures running with spears, Elegant Action Figures. Other to the right, and the right most is stooped, carrying a spear and a dilly bag. Between them is a small bodied stick figure with long Bradshaw headdress complete with end pompoms, feathers and dangling sash. Dancers, Figure 2: 37cm. Possum 1: 50cm, Possum 2: 56cm along long axis. Dynamic with spear: 19cm, Long headdress fig: 54cm.		
Images:	 		

Site Number: FAB07-21b		**Site Name:**	
		Date:	20 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:		**Orientation:**	223 deg. Grid North
Location:	A long, low, overhang a few metres from FAB07-21a.	**Aspect:**	Faces into courtyard.
Motifs:	Undetermined Bradshaw figure, hand stencil.		
Deterioration:	Exfoliation.		
Deposits:			
References:			
Description:	A red ochre Bradshaw with an amorphous waist sash, but its legs are together, not 'floating' on the rock wall.		

	Figure 74cm long. A small child's handstencil is to the left.
Images:	

Site Number: FAB07-22		**Site Name:**	
		Date:	20 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:	Panel ~110cm x 80cm x 67cm.	**Orientation:**	83 deg. Grid North
Location:	Panel on an upper ledge of an eroded block adjacent to Dingo Burial FAB07-13.	**Aspect:**	Faces towards an open space.
Motifs:	Tassel Bradshaw Group figures.		
Deterioration:	Mineralisation.		
Deposits:	None as on a rocky ledge.		
References:			
Description:	Four eroded Tassel Bradshaw Group figures. Upper portions of figures gone, maybe to salt and mineralisation. Figures 2 and 3 best preserved. Figure 2 has tassels either side of waist. Stomach paunch shown. The left hand holds boomerangs and two canes. The right hand seems to hold a looped cord. Painting style of lines filled in. Figure 4 has smaller twin tassels. Infill of parallel lines of dots.		
Images:	 		

Site Number: FAB07-23		Site Name:	
		Date:	20 July 2007
GPS: (WGS84)		**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Boab Bay
Size:		**Orientation:**	61 deg. Grid North
Location:	Small panel within boulders on the way from the bay to the airstrip.	**Aspect:**	Panel views open gravel, stoney country.
Motifs:	Sash Bradshaw Group figures.		
Deterioration:	Insect - termite, weathering		
Deposits:	Rocky area, no deposits.		
References:			
Description:	Small panel of very faint Sash Bradshaw Group figures, four figures facing left. Figures show sashes, front dancing balloon. Overly large headdress with end pompoms lower dangling triangle from pompom. No photos taken.		

Billabong Area

Site Number: FAB07-24a		Site Name:	
		Date:	21 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4369 King George
Other site ID:		**Region:**	Far Away Bay
		Area:	Billabong Area
Size:	206cm x 86cm x 100cm.	**Orientation:**	183 deg. Grid North
Location:	Outcrop at the western end of the ridge, a little sheltered area raised up on a boulder.	**Aspect:**	
Motifs:	Bradshaw figures, Clothes Peg Figures, modern human figures (anthropomorphs).		
Deterioration:	Salt, insect (mudwasp nests).		
Deposits:	None - rocky floor		
References:			
Description:	'Modern' art with four underlying Bradshaws figures. An unknown Bradshaw figure at the left in orange. A yellow Bradshaw figure with red outline is adjacent. Other orange-red Bradshaw figures along the panel. They seem to be more Clothes Peg Figure variants. To the right is a classic Clothes Peg Figure with a yellow lower body, red outline but a white upper - repainting perhaps? Over the top is a yellow wash of faded modern figures. A horizontal left arm is raised up showing three fingers. Below is a boat shape, red outline, but more probably the arm of a vanished figure.		

Images:	 

Site Number: FAB07-24b		**Site Name:**	
		Date:	21 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4369 King George
Other site ID:		**Region:**	Far Away Bay
		Area:	Billabong Area
Size:		**Orientation:**	307 deg. Grid North
Location:	Small overhang, uneven floor.	**Aspect:**	
Motifs:	Sash Bradshaw Group figure, unknown Bradshaw		
Deterioration:	Termite and wasp nests		
Deposits:	No floor deposits.		
References:			
Description:	A Sash Bradshaw Group figure bends over backwards. It has a big sash of cross-hatch design. A little Bradshaw figure to the left is partially obscured by a termite line.		
Images:	 		

Site Number: FAB07-25		**Site Name:**	
		Date:	21 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4369 King George
Other site ID:		**Region:**	Far Away Bay

		Area:	Billabong Area
Size:		**Orientation:**	83 deg. Grid North
Location:	Very small rockshelter in boulders to the rear of FAB07-24a.	**Aspect:**	
Motifs:	Acorn head Bradshaw figures.		
Deterioration:	Exfoliation.		
Deposits:			
References:			
Description:	Three acorn head Bradshaw figures, all clutching spears. Lower extremities of Fig 2 and 3 lost due to exfoliation.		
Images:			

Site Number: FAB07-26a		**Site Name:**	
		Date:	21 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4369 King George
Other site ID:		**Region:**	Far Away Bay
		Area:	Billabong Area
Size:		**Orientation:**	181 deg. Grid North
Location:	Up on top of a weathered outcrop, a small shelter.	**Aspect:**	View over the outcrop and the plain below.
Motifs:	Sash Bradshaw Group figures, macropod, Wandjina, unknown animal.		
Deterioration:	Mineralisation, mudwasp nests.		
Deposits:	None – rock floor.		
References:			
Description:	A horizontal red ochre Wandjina painted on a narrow panel. Below on another panel is a Sash Bradshaw Group figure with a long headdress, epaulettes and holding twin slightly curved sticks. To its left is an upright macropod, arms raised almost in supplication to the Sash Bradshaw figure and painted in the same mulberry colour as the Bradshaw. Three metres to the right is a Bradshaw panel of Sash Bradshaw Group figures. The row faces right. Over the top of the panel is a faded macropod with only the legs remaining. The right of the panel has a strange figure with a long striped body, hind legs, facing down to the left with its rear raised. Wandjina: 74cm long. 'Supplicating' macropod: 22cm.		

Images:	 

Site Number: FAB07-26b		**Site Name:**	
		Date:	21 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4369 King George
Other site ID:		**Region:**	Far Away Bay
		Area:	Billabong Area
Size:	9m x 3.5m x 2m	**Orientation:**	157 deg. Grid North
Location:	A large rockshelter with a wide roof raised up above the plain below	**Aspect:**	Looks out over the plain.
Motifs:	Bradshaw, Clothes Peg Figure, modern – turtle, fruit bat, crocodile, 'sun' signs,		
Deterioration:	Exfoliation, salt, mudwasp nests		
Deposits:	Grey ash and dust in cracks.		
References:			
Description:	Painted on the ceiling is a huge red painted turtle. Line infill in red and also a yellow line around the turtle showing evidence of repainting (Walsh 1995). Adjacent is a red 'fruit bat' looking modern and a 'sun' sign to the right. Also present is a red ochre crocodile. Low down on a small panel are five 'sun' signs. The floor is rocky but dividing channels are full of grey ash, a sign of occupation. Turtle: 195 x 120 cm. Crocodile: 45cm 'Sun' sign (ceiling) 20cm Fruit bat: 49cm wing x 39cm body. Adjacent to the left is another small shelter with a long modern crocodile superimposed over an underlying Clothes Peg Figures. One mulberry Bradshaw figure has its lower part missing from exfoliation. The crocodile is painted on/over the new surface. This is evidence of a chronological difference between ancient and modern painting. 132 deg orientation for this panel.		

Images:			

Site Number: FAB07-27		**Site Name:**	
		Date:	21 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4369 King George
Other site ID:		**Region:**	Far Away Bay
		Area:	Billabong Area
Size:		**Orientation:**	273 deg. Grid North
Location:	A small panel on top of the outcrop with slight shelter from the elements.	**Aspect:**	
Motifs:	Tassel Bradshaw Group figures with associated animals.		
Deterioration:	Exfoliation, mudwasp nests.		
Deposits:	None.		
References:			
Description:	A small alcove has two Tassel Bradshaw Group figures with associated marsupials similar to those seen at Boab Bay FAB07-15. The clearest animal is in the headdress on Fig 2 but Fig 1 seems to show an eroded one. The figures have elbow tassels with four spikes sticking out. Tassels on Fig 1 very fine with four long tassels, two short, on the left side of the figure. Figure 2 has a long headdress with long dangling dilly bag from the end. The other panel with associated marsupials, FAB07-15, is 15.3 km away, less than a day's walk. Perhaps they were painted by the same artist? Figure 1: 67cm, Figure 2: 63cm. Figure 2 look obviously shorter.		
Images:	 		

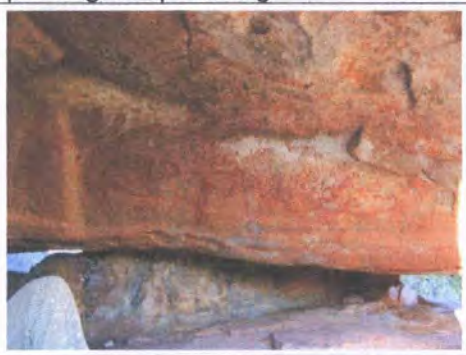
Site Number: FAB07-28		**Site Name:**	
		Date:	21 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4369 King George
Other site ID:		**Region:**	Far Away Bay
		Area:	Billabong Area
Size:	4.5m x 3m x 3m	**Orientation:**	217 deg. Grid North
Location:	A large shelter but with little space due to a roof fall boulder filling the space.	**Aspect:**	Views the plain.
Motifs:	'Sun' sign, boomerangs, hand stencils.		
Deterioration:	Mudwasp nests.		
Deposits:	Grey ash floor, chippings.		
References:			
Description:	Little art present but a hand stencil is on the rear wall. The roof has a 'sun' sign and twin painted boomerangs. All recent art in a bright red paint.		
Images:	 		

Site Number: FAB07-29		**Site Name:**	
		Date:	21 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4369 King George
Other site ID:		**Region:**	Far Away Bay
		Area:	Billabong Area
Size:	4.5m x 2.5m x 3m	**Orientation:**	201 deg. Grid North
Location:	Rock shelter on a ridge top, easy slope up.	**Aspect:**	View of the plain below.
Motifs:	Recent art – large male figures, loops, ellipses and circles.		
Deterioration:			
Deposits:	Dusty floor, stone chippings. Grinding hole on a boulder.		
References:			
Description:	Two large recent male figures in solid red on the roof of the shelter. Both figures portrayed with large stamen testicle and penis. Figure 1 has spiky hair and is reminiscent of a Wandjina, whereas Figure 2 is similar but without the hair. Figure 1: 113cm, Figure 2: 153cm. Other designs such as close looped meandering lines with 'hairs' in red. Ellipse with circles arranged, almost as a paw, present to the right on the roof.		

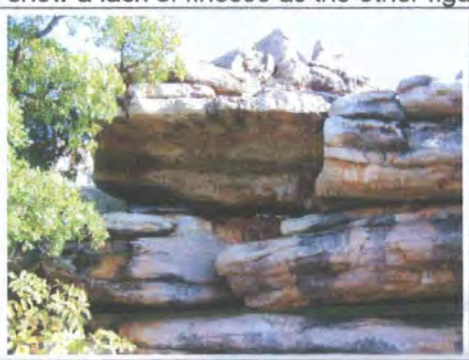
Images:	

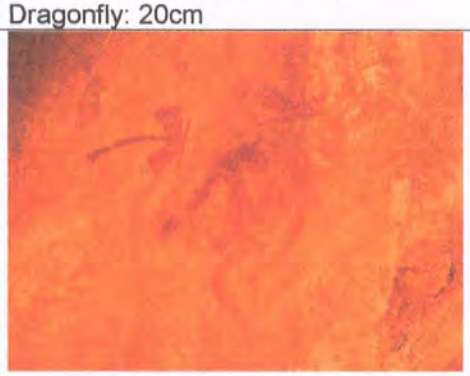
Site Number: FAB07-30		**Site Name:**	
		Date:	21 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4369 King George
Other site ID:		**Region:**	Far Away Bay
		Area:	Billabong Area
Size:		**Orientation:**	197 deg. Grid North
Location:	Small overhang near the top of the outcrop.	**Aspect:**	View of the plain below.
Motifs:	Red figure.		
Deterioration:			
Deposits:			
References:			
Description:	Red elongated figure on the roof with a striped body. Figure 86cm long.		
Images:			

Bush Camp Area

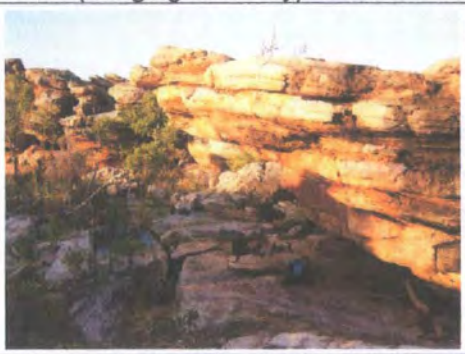
Site Number: FAB07-31		Site Name:	Champagne Rock
		Date:	21 July 2007
GPS: (WGS84)	Undisclosed	1:100k map sheet	4370 Rulhieres
Other site ID:		Region:	Far Away Bay
		Area:	Champagne Rock above Far Away Bay bush camp
Size:	2.5m x 2m 1.5m shelter size	Orientation:	285 deg. Grid North
Location:	On the ridge top south of camp amidst a pile of huge weathered boulders.	Aspect:	Looks out over the beach area.
Motifs:	Irregular Infill Animal Period Bandicoots, macropod.		
Deterioration:	Pecking, pounding.		
Deposits:	A rocky floor so no deposits, but shell fragments seen.		
References:			
Description:	A panel of six bandicoots plus one macropod faces right. Rather nice! Fig 1: 34cm, Fig 2: 54cm, Fig 3: 33cm, Fig 4: 35cm, Fig 5: 35cm, Fig 6: 35cm (to end of tail). Measured nose to backside as tail tips indistinct apart from Fig 6. The bandicoots seem to be Irregular Infill Animal Period with solid legs and dashed line infill following the line of the body. The figures show signs of pecking and pounding.		
Images:	 		

Lost City

Site Number: FAB07-42a		**Site Name:**	
		Date:	23 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:	4m x 2m 1.115m	**Orientation:**	13 deg. Grid North
Location:	South west part of the courtyard. A weathered formation with art on the roof of a raised shelter.	**Aspect:**	Panel looks into the central courtyard.
Motifs:	Irregular Infill Animal macropods, Sash Bradshaw Group figures, Bradshaw figures, Bichrome Figures, Clothes Peg Figure.		
Deterioration:	Salt, pounding, water (dripline).		
Deposits:	Nil.		
References:			
Description:	The ceiling is a mass of superimpositions. The shelter is dominated by a large Clothes Peg Figure in red showing exfoliation and extensive pounding out of the interior. No feet, lower arms gone but a hint of an outline in red. It seems to have little accoutrements, perhaps painted in fugitive pigment. Large figure: 189cm - over six feet long. The figure overlies Irregular Infill Animal macropods. One is under the head, no infill remains. The other is larger, again lacking infill. Head missing as it goes under the dripline. A mini version of the big figure is present but in yellow with a red outline. Yellow figure: 46cm. A long Bradshaw lies at right angles over the main figures stomach. Past the figure's feet are four shapeless, cavorting, Bradshaw figures. The rear wall has a horizontal Bichrome figure, with mulberry hue outline, yellow interior and a missing waist. It has a round head with simple tassels as hair coming off, a hooked stick at the end of a missing lower arm as well as a waist sash and a line outline around the body. Bichrome figure: 87cm. Right of the backwall has four Sash Bradshaw Group figures facing right but show a lack of finesse as the other figures.		
Images:	 		

Site Number: FAB07-42b		Site Name:	
		Date:	23 July 2007
GPS: (WGS84)	Undisclosed	1:100k map sheet	4370 Rulhieres
Other site ID:		Region:	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:		Orientation:	305 deg. Grid North
Location:	Rear of the main shelter and camping spot FAB07-42c.	Aspect:	View of the sea.
Motifs:	Irregular Infill Animal marsupial and bird, Sash Bradshaw Group figures, Elegant Action Figures, 'dragon fly' motifs.		
Deterioration:	Exfoliation.		
Deposits:	None, rocky floor.		
References:			
Description:	The low rockshelter roof has red 'dragon fly' motifs, Sash Bradshaw Group figures and Elegant Action Figures. An Irregular Infill Animal marsupial, not a macropod, is bounded by a line. A strange Irregular Infill Animal 'bird' design is present whose head is a star of radiating lines. It is similar to Gumboot Bay Falls, FAB07-12, bird design. This figure though seems to have macropod legs. Bird: 67cm Marsupial: 39cm tail to nose. Dragonfly: 20cm		
Images:	 		

Site Number: FAB07-42c		Site Name:	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	1:100k map sheet	4370 Rulhieres
Other site ID:		Region:	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:	6m x 4m x 2m	Orientation:	89 deg. Grid North
Location:	Main shelter.	Aspect:	Looks into the central space.
Motifs:	Irregular Infill Animal macropod, Sash Bradshaw Group figures, hand stencils, hand prints, flying foxes, faded figures.		
Deterioration:	Salt, exfoliation, water.		

Deposits:	None, rocky floor.
References:	
Description:	A large open space with a roof to shield from the sun. Faded red figures on the roof include an Irregular Infill Animal macropod partially eroded by the dripline. The lower roof has hand prints, hand stencils, and Sash Bradshaw Group figures. Other art is on the upper back wall. Faded red figures, hand print, a 3MF hand stencil (similar to Arnhem Land stencils) with a hand print superimposed over, remains of faded Irregular Infill Animal figures, flying foxes (hanging vertically) and faded red designs.
Images:	 

Site Number: FAB07-42d		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:		**Orientation:**	09 deg. Grid North
Location:	In the south part of the square east of main shelter FAB07-42c. A large roof shields an upper platform.	**Aspect:**	Faces into the courtyard but has a sea view through a cleft opposite.
Motifs:	Tassel Bradshaw Group figures, Bradshaw figures.		
Deterioration:	Exfoliation.		
Deposits:	Nil – rock ledge.		
References:			
Description:	On the roof are three crudely painted Tassel Bradshaw Group figures in mulberry hue with thick line work. Other faded but more classic Bradshaw figures are present.		

Images:	 

Site Number: FAB07-42e		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:		**Orientation:**	Av. orient. 153 deg. Grid North
Location:	Outcrop with shielded panels facing FAB07-42d.	**Aspect:**	Faces into the courtyard.
Motifs:	Irregular Infill Animal macropod, Sash Bradshaw Group figures, Elegant Action Figure, macropod, Bradshaw figures.		
Deterioration:	Salt, mudwasp, exfoliation and pecking.		
Deposits:			
References:			
Description:	The right alcove has three tall thin Bradshaw figures, Figure1 complete with waist pompom, epaulettes, hair pompom and two boomerangs. Figure 2 has legs only, Figure 3 legs plus torso. Bent knee 'floating' design suggests all Sash Bradshaw Group figures. A red line to the right shows, perhaps, faded figures. Figure 1: 42cm To the left of the Bradshaw art panel is a small shelter with a heavily pecked-out red macropod on the back wall. Faint red outline adjacent to the macropod. Remains of a dynamic/ Elegant Action Figure present. The roof has an Irregular Infill Animal macropod with other Irregular Infill Animal Period unknown figures superimposed. Pecked macropod: nose to tail 69cm. Horizontal Bradshaws on the side panel to the left of the figures. Facing into the courtyard viewing shelter FAB07-42c is a panel of totally worn away faded Bradshaws. Angle 246 deg.		

Images:	 

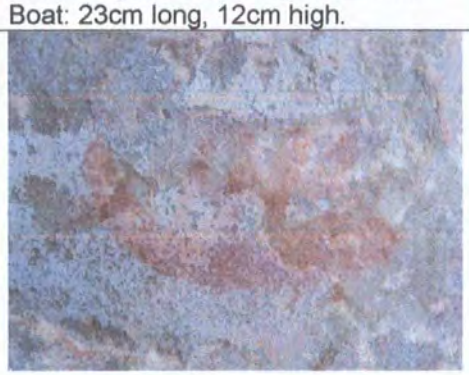
Site Number: FAB07-42f		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:	5m x 2.5m x 2m main section	**Orientation:**	153 deg. Grid North
Location:	Small cave at the northern end of the courtyard.	**Aspect:**	Views the courtyard and site FAB07-42d.
Motifs:	Bichrome figures, Clothes Peg Figures, hand stencils, macropod, stick figure.		
Deterioration:			
Deposits:	Thick dusty floor. Shell fragments, mud mussels, rock chippings (debitage).		
References:	Wilson 2006:164, 165, 240.		
Description:	A small cave with corridors running off from the central section and with enough head height to stand upright in. Of note is the 'throne' described by Wilson (2006). Hand stencils are on the rear panel behind the throne. Bichrome figures and Clothes Peg Figures present on the ceiling plus a red macropod. Red macropod: 61cm On the roof is a long stick, Clothes Peg Figure type figure, with odd Y shaped shoulders in faint red ochre. Long Stick Figure 126cm The yellow Bichrome Figure has yellow infill and red outline. Yellow Bichrome Figure: 39cm The 'throne' shows heavy varnish on the sitter's left side where one's hand would rest. The cave has a thick dusty floor. Shell fragments, mud mussels, rock chippings (debitage).		

Images:	 

Site Number: FAB07-43		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:	2m diameter x 1m x 1m	**Orientation:**	93 deg. Grid North
Location:	A small alcove on the cliff top.	**Aspect:**	Superb sea view.
Motifs:	Tassel Bradshaw Group figures, Bradshaws figures.		
Deterioration:	Vegetation.		
Deposits:	No.		
References:	Wilson 2006: 166, 167.		
Description:	An alcove on the cliff top overlooking the sea has two large Tassel Bradshaw Group figures with 'dreadlocks', and a smaller similar figure. The main figure has dreadlocks, elbow decoration, tassel on waist, left, and a bag on the right. The smaller figure has a big mass of dreadlocks and tassels. The right figure's hair is more like a mass of ferns. Other faint figures on the panel have been superimposed but with their being in faded red paint I can't tell whether they are under or over the main figures. Main figures 1 and 2 are painted in mulberry hue, Figure 3 is a more red colour. To their right are two tall rectangles, probably figures at one time. Fig 1: 42cm, Fig 2: 65cm, Fig 3: 63cm. Superb view!		
Images:	 		

Site Number: FAB07-44		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:	5m x 1.5m x 2m	**Orientation:**	231 deg. Grid North
Location:	A small narrow shelter at the foot of a large block.	**Aspect:**	Faces into the alleyway between eroded blocks.
Motifs:	Sash Bradshaw Group figures, boat, macropods, thylacine.		
Deterioration:	Salt, pounding.		
Deposits:	Sandy floor, with chippings perhaps.		
References:	Wilson 2006: 160.		
Description:	A mass of fading superimpositions. Sash Bradshaw Group figures with skirts, almost like bustles, face left. Large macropods present to the left, in red outline facing left. An adjacent one is facing right then an outline facing left. Could be a possible depiction of megafauna. The right of the shelter has a marsupial, not a macropod, in very faded light ochre. Stripes along the body, outlined in red later. The neck and chest follow the natural curve of a fracture in the rock. Identified as possibly a thylacine but need to exclude other striped animals. The left of the panel has a large red faded banana shape with a stick figure above. Is this a painting of a boat? Striped animal: 55cm nose -tail.		
Images:	 		

Site Number: FAB07-45		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:		**Orientation:**	345 deg. Grid North
Location:	A rock roof providing shelter over an upper ledge.	**Aspect:**	View of the bay.
Motifs:	Elegant Action Figures, Bradshaws, boat.		
Deterioration:	Pounding of Elegant Action Figure heads.		
Deposits:	None – rock ledge.		

References:	
Description:	The roof has faded art present but a well defined red Elegant Action Figure is seen. With wide legs for running it holds a stick in each hand. The back panel is only 30cm deep and shows the remains of many faded Bradshaw figures. The right of the panel has a row of six Elegant Action Figures running / dancing to the left, holding hands. Their heads seem to be deliberately pecked out. A faded red banana shape on the roof is possibly a boat depiction as in FAB07-44, 50cm along from the dancers. Four crew are in it with a hint of rudder to the right. Main Elegant Action Figure: 29cm. Boat: 23cm long, 12cm high.
Images:	 

Site Number: FAB07-46a		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:		**Orientation:**	
Location:	Low cave ~ 1m high	**Aspect:**	
Motifs:	Full length Wandjina figure.		
Deterioration:	Mudwasp nests on top of the painting, dust.		
Deposits:	Thick grey dusty floor.		
References:	Wilson 2006: 160.		
Description:	A surprising find is a full length Wandjina painted on the ceiling, 86cm long. There is a dark red ochre prepared background with the Wandjina painted in white on top, looking almost like a negative image. This is the extreme eastern edge of Wandjina art distribution.		

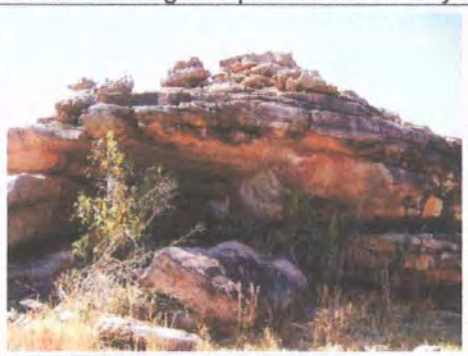
Images:	

Site Number: FAB07-46b		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:	4m x 2m 1.5m variable height.	**Orientation:**	05 deg. Grid North
Location:	A rock shelter at the 'front' of the outcrop, the Wandjina is to the rear.	**Aspect:**	Great sea view.
Motifs:	Recent period turtle figure.		
Deterioration:			
Deposits:	Ashy ground, shells, chippings. Living site.		
References:			
Description:	On the roof is a large turtle design. Turtle 103cm long.		
Images:			

Site Number: FAB07-47		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:		**Orientation:**	197 deg. Grid North
Location:		**Aspect:**	Shelter facing into a 'courtyard'.

Motifs:	Irregular Infill Animal, Bradshaw figures, macropod, Stick Figures, other art.
Deterioration:	Pecking of art.
Deposits:	Stone floor, lots of flakes and chippings. No shells.
References:	
Description:	The rear wall has faded Bradshaw type figures. The main design is on the roof, a macropod 137cm long. It has a solid head, legs, and a barred line interior. The body and head are heavily pecked, but the rest of the roof shows only a little bit of pecking/spalling. This is deliberate. Possibly it is from the Irregular Infill Animal? A few stick figures are nearby. The front lintel has faded red designs, cross hatching but of what I can't tell of what though.

Site Number: FAB07-48		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:	6m x 4m x 3m approx	**Orientation:**	289 deg. Grid North
Location:	A new courtyard area. A large rock shelter provides plenty of space and shade.	**Aspect:**	View into the courtyard.
Motifs:	Bichrome figures, Clothes Peg Figures, possums, stick figures, dismembered body, other figures.		
Deterioration:	Exfoliation, pecking.		
Deposits:	Dirty grey dusty floor with mussel shells. With both Bradshaw and recent art present perhaps the site is worth excavating.		
References:	Wilson 2006: 162, 163.		
Description:	A large rock shelter partially filled by an inclined rock slab. Superb Bichrome and Clothes Peg Figures are painted here. Shelter roof over the inclined slab: Main Clothes Peg Figure: yellow body, red detailing. Left arm extends to a hooked stick, right arm to possible boomerangs. Lower legs have adjacent multibarbed spear heads. Shafts missing but would be mounted in the hooked stick. A gap between flared legs and feet, latter portrayed as soles only (sandals?). A 'fan' on an angled stick superimposed by right arm. The neck area has parallel dark red lines. Tuft at the waist, left. Remains of longer headdress exfoliated. Yellow Clothes Peg Figure 42cm. Bichrome figures have arms extended, legs together. On one forearms gone but hands remain holding a hooked stick woomera and a mounted multibarb spear. A circle either side of the thighs. Feet painted as a slug like arc but with the ankles missing. Bichrome figure: 42cm long. Another bichrome figure is lying down arms raised forward to the woomera and multibarbed spears. No forearms colour present but hands remain. Lying Bichrome figure: 55cm long. Main living area: Inside the shelter only a portion of the roof is suitable for painting, that closest to the fallen slab. It is dominated by the yellow Clothes Peg Figure shown in Wilson's book. The figure is yellow with a white outline and dark red detailing. Left arm bends down to hold a dark red trident, right arm out horizontally. End		

	obscured by superimposed twin possums (?) in plan form. Other faint red figures on the rougher part of the roof. Yellow Clothes Peg Figure 78cm but its feet are exfoliated. The oddest figure is on the right of the shelter by the main entrance. It consists of a dismembered body of recent style which has been heavily pecked. A rounded fat body, arms with fingers, 5 and 6, painted, and a head with spiky hair. The figure is shown with two adjacent fleshy legs. Any feet have been worn away. Legs depicted bent at the knee. Body (hair to waist) 64cm. Crude stick figures painted in red or yellow.
Images:	 

Site Number: FAB07-49a		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:		**Orientation:**	213 deg. Grid North
Location:	Just out of the FAB07-42 courtyard and north past FAB07-42e.	**Aspect:**	
Motifs:	Clothes Peg Figures, Other art.		
Deterioration:	Weathering.		
Deposits:	Soil and ash floor with shell fragments.		
References:			
Description:	The shelter has faint red bichrome Clothes Peg Figures on the roof. A living area with a soil and ash floor with shell fragments. As well as the figures a few scribbles (other art) too. No photographs.		

Site Number: FAB07-49b		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:	3.5m x 2m x 1.5m	**Orientation:**	23 deg. Grid North
Location:	To the rear of the same	**Aspect:**	Shelter views a small

	block as FAB07-49a		courtyard.
Motifs:	Tassel Bradshaw Group figures, unknown Bradshaw figures.		
Deterioration:	Exfoliation, pecking/pounding.		
Deposits:			
References:			
Description:	Of note is a painting of a huge acorn head Bradshaw. Only the upper torso and head remain due to exfoliation. Acorn figure head-torso length: 64cm Acorn figure head only: 23cm long x 16cm wide. Tassel Bradshaw Group figures present. Also some smaller Bradshaw figures show evidence of pounding.		
Images:	 		

Site Number: FAB07-50		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:		**Orientation:**	347 deg. Grid North
Location:	Rockshelter with deep roof and ledge.	**Aspect:**	View of the bay from here.
Motifs:	Macropods.		
Deterioration:	Exfoliating.		
Deposits:			
References:			
Description:	On the roof are two macropods – painted in faint red and now exfoliating. The figures have well painted claws. Fig 1: 48cm, Fig 2: 44cm.		
Images:			

Site Number: FAB07-51a		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:		**Orientation:**	
Location:	Situated up on a ledge is a small overhang facing an 'alleyway' rather than a courtyard.	**Aspect:**	Poor view into the alleyway.
Motifs:	Irregular Infill Animal Period macropods, Bradshaws.		
Deterioration:	Water.		
Deposits:			
References:			
Description:	On a rockpanel are larger and smaller mulberry coloured macropods. Both face to the right. Most probably of Irregular Infill Animal Period. Fig 1: 66cm, Fig 2: 21cm. Panel to the right is of faded Bradshaws with their lower parts exfoliated. The area has not been affected by the recent bushfire so very dense vegetation here.		
Images:			

Site Number: FAB07-51b		**Site Name:**	
		Date:	24 July 2007
GPS: (WGS84)	Undisclosed	**1:100k map sheet**	4370 Rulhieres
Other site ID:		**Region:**	Far Away Bay
		Area:	Lost City (west of FAB camp)
Size:	3m x 2.5m x 2m	**Orientation:**	113 deg. Grid North
Location:	A ground level rockshelter further along to the right from FAB07-51a on a bearing of 348 deg. A large slab fills the shelter.	**Aspect:**	Looks into a vegetation-choked alley.
Motifs:	Irregular Infill Animal macropods, Sash Bradshaw Group figures, Bradshaw.		
Deterioration:	Exfoliation, mudwasp nests.		
Deposits:	Sandy floor, chippings.		
References:			

Description:	The back wall has Sash Bradshaw Group figures and Irregular Infill Animal macropods showing a clear painting split with Sash Bradshaw Group figures to the left of the panel and the macropods to the right. Five macropods face right with four suffering heavy exfoliation. Seated amidst them in a 'yoga' position is an undefined Bradshaw holding a boomerang in each hand. Sash Bradshaw Group figures: Fig 2: 46cm, Fig 3: 46cm Macropods: Macro 1: 113cm, Macro 2: 77cm, Macro 3: 98cm, Macro 4: 44cm, Macro 5: exfoliated.
Images:	 