Style, Space and Social Interaction:

An Analysis of the Rock-Art on Middle Park Station, Northwest Queensland

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Thesis submitted in partial fulfilment of the requirements for the degree of Bachelor of Archaeology (Honours)

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October 2009
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Abstract

This thesis investigates the previously undescribed rock-art of Middle Park Station in northwest Queensland. Queensland rock-art has been intensively studied over the past four decades, leading to the identification of several distinct art ‘provinces’: central Queensland, Mt Isa, the northern Queensland highlands and Cape York Peninsula. The Middle Park study area is centrally located between these art provinces, and is also situated in an area of ethnographically documented trade-routes, making it an ideal setting in which to explore themes such as territoriality, social interaction and ideas exchange. This is achieved through characterisation of the Middle Park assemblage, including analysis of motifs, techniques and their frequencies, and subsequent comparison with those of surrounding regions.

Using Geographic Information Systems to assess site locations, and motif and technique frequencies, a spatial-stylistic approach was adopted at both local and regional levels to identify patterning within the landscape. Application of the principles of the information exchange theory of style then allowed conclusions to be drawn from this data regarding territorial behaviour and inter-group interaction. It was argued that, despite superficial stylistic similarities, the northern Queensland highlands, of which Middle Park is a part, cannot be considered merely an extension of the Central Queensland Province, owing to distinctly different motif ranges and technique frequencies. Further, owing to distinct stylistic and technical disparities within their rock-art assemblages, it was deemed highly unlikely that there was contact with groups from the adjacent Cape York or Mt Isa regions.

Analysis of material culture and hand variations present within the Middle Park rock-art assemblage was also undertaken to complement ethnographic information and extend our knowledge of traditional lifeways. A range of boomerangs, shields, spear throwers and digging sticks were identified, and through ethnographic analogy it was concluded that the majority of artefacts depicted were associated with hunting or fighting. Hand stencil variations were also present, though examination indicates that suggestions by others that they represent sign language among groups in the Middle Park area as recorded ethnographically cannot be supported. Closer consideration of such motifs using digital image enhancement indicated that people bearing cultural hand mutilations were present in the study area.
Declaration

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Victoria Wade
Acknowledgements

First and foremost I would like to thank my supervisor, Dr Lynley Wallis. For her unwavering support, guidance and wisdom throughout the course of this project, and for making every stage from fieldwork to proof-reading an absolute joy, I am truly grateful.

Also, I thank Dr Natalie Franklin for her advice on Mt Isa rock-art and Dr Kate Kahn for providing valuable insights into the Roth Collection at the Australian Museum. I am greatly indebted to Anthony O’Flaherty of TAFE SA for taking the time to show me how to use GIS software, and to Matthew Ebbs for teaching me how to use Photoshop to create digital tracings of rock-art.

Thankyou to the owners of Middle Park Station, the Woolgar Valley Aboriginal Corporation, for allowing this project to proceed.

To my fellow students and good friends, for their constant support and the many lunchtimes spent reassuring each other, I am very grateful; Claire Ratican, TJ Harding, Olly Spiers, Alan Hay and Michael Field.

Finally, to my family, Debbie, Tony and Natalie Wade, for their support and unwavering belief in my ability, and to my partner Richard, for his patience, understanding and support, my deepest thanks.
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Glossary of Terms

**Abrasion**: An engraving technique whereby motifs are created by the repeated friction of an implement in the same axis, as it is drawn horizontally back and forth across the surface of the rock (Quinnell 1975:5).

**Composition**: When more than one motif or technique are deliberately positioned in identifiably associated patterns.

**Drawing**: An image created using direct application of dry pigment to the rock surface.

**Drilling**: A method of engraving during which holes are produced by the continuous rotation of a sharp implement (Quinnell 1975:5).

**Engraving**: See ‘Petroglyph’.

**Grinding Groove**: A grinding groove is pointed at both ends, with some depth to it, and was (presumably) used for sharpening axes.

**Grinding Surface**: Grinding surfaces are generally flat rounded or oval surfaces, used for grinding materials such as seeds or ochre.

**Hand Print**: Formed by placing wet pigment on the palm of the hand and then pressing it against the rock surface. In this thesis, hand prints are categorised more broadly as a form of ‘painting’ (see below).

**Hand Stencil**: The negative impression that remains following application of pigment to the hand and fingers while pressed against a rock surface. Such motifs were commonly produced by blowing pigment from the mouth.

**Hand Variation Stencils**: Created using the same method as hand stencils, though the hand is ‘contorted to form unusual patterns, some appearing to have missing, partly missing, or distorted fingers’ (Walsh 1985:33).

**Painting**: An image executed using direct application of wet pigment to the rock surface, often involving the use of some form of applicator or brush.
Panel: A natural rock cleavage plain or surface, and the rock-art thereon (Whitley 2001:832).

Pecked-then-abraded: An engraving technique whereby the image is first produced using the pecking technique, and is then abraded over the top.

Pecking: An engraving technique whereby shallow depressions in the rock surface are formed by vertical hammering (Quinnell 1975:5).

Petroglyph: An engraved, abraded, incised, pecked, carved, rubbed or scratched rock-art motif (Whitley 2001:832).

Pounding: An engraving method which involves merely bruising the patina of the rock, resulting in almost no depth to the figures.

Rubbing: Involves the production of broad or solid shallow circular or oval depressions are produced by repeated grinding, either along the same groove or in a circular motion (Quinnell 1975:5).

Scratching: A sharp implement is scratched across the rock surface once, scoring a fine shallow line (Quinnell 1975:5).

Stencilling: The application of wet pigment, most commonly blown from the mouth, onto an object which has been placed against the rock surface, thus creating a negative imprint of the item. See also ‘hand stencil’.

Style: The particular way of doing or producing material culture which signals the activity of a particular group of people who distinguish themselves from other, similarly constituted groups (McDonald 2000:54).

Technique: The physical method employed in creating rock-art motifs.
Chapter 1 Introduction

The rock-art of Queensland has been intensively studied over the past four decades, leading to the identification of several distinct art ‘provinces’. Arguments have been presented regarding the stylistic variation present in the different regions, and what this may reveal about tribal boundaries, inter-group interaction and changing social networks through time (e.g. David and Lourandos 1998; Franklin 1996; Morwood 1979). For example, in fertile areas such as Cape York Peninsula it has been argued that closed social networks were operating, as high resource availability meant that strong social relationships with neighbouring groups were not critical for survival (David and Cole 1990:802-804). Consequently, rock art was highly regionalised, with territorial boundaries identifiable through spatial stylistic variability. The research reported herein aims to similarly identify social organisation through an integration of stylistic and spatial attributes of rock-art in a previously unstudied area of northwest Queensland. An investigation of stencilled material culture and hand stencil ‘variations’ is also undertaken in order to further our knowledge of other aspects of past Indigenous lifeways. These findings constitute the first archaeological investigation of rock-art in this area, providing information regarding a previously little known province, and ultimately contributing to a broader understanding of Australia’s prehistory.

1.1 Background to the study

The study is set within the boundaries of Middle Park Station, a pastoral property owned by the Woolgar Valley Aboriginal Corporation (WVAC) (Fig. 1.1). The station is located in the foothills of the Gregory Ranges approximately 120 km north of Richmond and 370 km west of Townsville, thus lying between the well-known Cape York Peninsula, Central Queensland, North Queensland and Mt Isa rock-art provinces.
Though preliminary heritage assessments of the property had been carried out prior to its purchase by the Indigenous Land Corporation (Cooke 1995; Small 1998), minimal information existed regarding its archaeological sites. Systematic surveying on the property commenced in 2002, and aimed to document archaeological sites in order to assist the WVAC develop a greater awareness of their cultural heritage and provide baseline data for management planning purposes (Wallis 2003). Wallis (2003) also planned to draw on the baseline data to generate specific research
questions for subsequent investigation. Survey results indicated that recording and
detailed analysis of the property’s rock-art was urgently required, owing to the
abundance of such art, coupled with high levels and rates of deterioration. It was
also recommended that a comparison of the assemblage and those from
surrounding regions be conducted to elucidate social relationships; these
recommendations are addressed through this study.

Indigenous knowledge about pre- and early contact culture (including rock-art) in
the study area is limited owing to the cumulative effects of murder, disease and
dispossession on the local community. The recordings and collections of
ethnographer Walter Roth are our best source of information about Aboriginal
lifeways in northwest Queensland in the late nineteenth century, though he makes
no specific mention of the rock-art of the study area. However, he did record
information about trade routes, material culture and the use of sign language in
adjacent areas, physical manifestations of which may survive in the rock-art. This
thesis integrates Roth’s ethnographic data with a spatial-stylistic and comparative
analysis of rock-art to explore aspects of past Indigenous culture on Middle Park
Station.

1.2 A spatial-stylistic approach

Our interactions with the various components of the landscape leave a
structured archaeological record; the landscape is signed by our actions.
As our relationships with place change - and the everyday uses of
landscapes as elective environments - so do the material manifestations
of those relationships. (David and Lourandos 1999:107)

A characteristic of rock-art which makes it unique is its immovability. Unlike other
material remains that can be exchanged and traded, rock-art is fixed in its intended
location by its producer, thus maintaining its original, intended context through
time. Mapping the geographical distribution of rock-art is a method commonly
employed to examine issues of territorial boundaries and social interactions among
neighbouring groups (e.g. Chippindale and Nash 2004; Domingo Sanz et al. 2008;
Lenssen-Erz 2008; McDonald 2008; Ross 2003). Spatial continuities and
discontinuities in style and technique are the primary means through which this is
facilitated, and such a spatial-stylistic approach is adopted herein. As such,
fundamental to this study is an examination of the concept of style, and how it relates to social behaviour. McDonald (2000:54) noted that style ‘is the particular way of doing or producing material culture which signals the activity of a particular group of people who distinguish themselves from other, similarly constituted groups’. The use of style as a means of negotiating group identity in the past has resulted in artistic variability, which facilitates discussions of information exchange in the present.

A key paradigm underpinning considerations of social interaction and its relationship with spatial aspects of style is information exchange theory. Emerging in the 1970s, this theory developed in response to the criticised ‘social interaction theory’. The latter was based on the notion that stylistic similarity is a function of distance between groups of people; thus, dissimilarity is thought to reflect geographical or social distance between them (Smith 1989:1). Styles were argued to diffuse via contact between people and hence using this framework, the degree of stylistic similarity was used to estimate intensity of interaction between groups. This approach has been challenged on the grounds of its inability to take into account the different types of social networks operating between groups (Wobst 1977), inter-group competition for resources (Hodder 1977) and social constraints regarding style choices (Hill 1985). Accordingly, the information exchange theory of style was established.

The information exchange theory of style is based on the impact of environmental conditions, population densities and social networks on stylistic variability through space. This approach asserts that stylistic homogeneity is likely to be observed where environmental conditions are poor and thus groups are small, hence requiring open social networks in order to periodically access each other’s resources in times of scarcity (Smith 1989:4). In these instances, style serves a *bonding function*, as groups choose to emphasise the similarities between them, creating cohesion through visual devices. Contrastingly, in resource-rich areas, higher population densities and increased inter-group competition, including possible conflict, to maintain rights to resources result in closed social networks and subsequent stylistic heterogeneity. Such variation serves a *bounding function*, visually reinforcing social differences and delineating territory.
Most applications of information exchange theory have involved movable material culture in recent societies, as opposed to rock-art created beyond living memory (e.g. Braun and Plog 1982; Hodder 1977). This is largely because of the difficulties of determining environmental conditions and population densities in the past (Smith 1989:167). Nevertheless, this theory can successfully explain stylistic variation within the art of hunter-gatherer societies in relation to the social processes operating among them (e.g. McDonald 2008). This thesis integrates the principles of both social interaction and information exchange theories of style in order to elucidate social relationships based on spatial and stylistic evidence.

1.3 Preservation or preference: some limitations

Rock-art spatial analyses are fundamentally influenced by preservation. In considering site distributions across a landscape, it is acknowledged that what survives is merely a sample of the original assemblage, though it is assumed to be representative. Researchers commonly record open engraving sites yet rarely open pigment sites, a phenomenon which is often attributed to differential preservation potential of each technique in exposed contexts (e.g. Chippindale and Nash 2004:9; Morwood 1979:293), and leads to a skewed perception of rock-art distribution and subsequently cultural practices. Furthermore, even within sheltered sites, art is similarly subject to differential deterioration. Rock-art survival is dependent on various factors, including pigment, binder and site types, engraving depth, geology and the level of protection (Bednarik 1994). However, as all archaeological remains are influenced by preservation, these issues are not unique to rock-art and, while they cannot be quantified, analysis proceeds despite these inherent biases.

Another critical factor to recognise is the influence of survey strategy on apparent site distribution patterns. In this study, the areas of Middle Park Station where rock-art is located are extremely remote and often inaccessible except by foot (Wallis 2003:54). In light of this, surveys focussed on sandstone outcrops along watercourses which could be accessed comparatively easily via station tracks, foot or quad bike. Furthermore, surveys were also highly selective in that they targeted sandstone areas adjacent to water sources, as opposed to systematically covering all land unit types.
1.4 Aims of the study

The primary aim of this study is to characterise the rock-art of Middle Park Station and compare it with surrounding rock-art provinces in order to explore issues of rock-art regionalisation. It is the intention of this study to:

1. Summarise previous research conducted in the major rock-art provinces of Queensland, including an overview of styles and techniques present in each, in order to contextualise those of the study area;

2. Analyse the spatial distribution of rock-art sites, specific techniques and motif types on Middle Park Station to identify any patterning present. The comparative data regarding surrounding rock-art provinces will be considered in terms of how social interaction, ideas exchange and cultural influence between groups may be reflected in the art;

3. Assess propositions that the Northern Queensland Highlands (within which the study area is situated) is an extension of the Central Queensland Province;

4. Investigate the range of material culture items depicted in the stencilled art of Middle Park Station in order to extend our currently limited knowledge regarding the region’s traditional toolkit; and,

5. Identify hand stencil variations and determine their origin. This is considered in light of ethnographic evidence regarding a proposed sign language and cultural mutilation practices, in order to ascertain the existence of such practices in the study area.

It was not a formal aim of this thesis to provide management recommendations regarding the rock-art, however its preservation has been summarised and key threats identified. This information provides the WVAC with relevant information regarding management concerns and is valuable in light of cultural tourism prospects in the region.

1.5 Thesis outline

Chapter 2 provides a review of the literature regarding the state of rock-art research in Australia, and a summary of studies conducted in Queensland’s main rock-art provinces. This is followed in Chapter 3 by an overview of the
environmental and historical context of the study area, including a description of previous archaeological work. In Chapter 4 the methodology is described, detailing the process from initial survey through to analysis, including the comparative, spatial and digital enhancement techniques employed. With these processes laid out, Chapter 5 presents the results of the research. A discussion of the results is undertaken in Chapter 6, and the research aims outlined above are addressed in order to gain an understanding of the nature of Middle Park’s rock-art. Chapter 7 concludes the thesis by summarising the outcomes of the study in terms of the originally stated research aims, and suggesting avenues for future research.
Chapter 2 Literature review

Since its emergence in the early to mid-twentieth century, the theoretical frameworks and methodologies used in Australian rock-art research have experienced substantial changes. This chapter provides an overview of these developments, highlighting the current state of the discipline which shapes the approach taken for this study. Several of the key debates which affect the credibility of rock-art as a category of archaeological evidence are also outlined, including issues associated with interpretation and dating. A review of Queensland’s rock-art is then provided in order to provide the regional context for the Middle Park study.

2.1 Rock-art research in Australia

In recent decades, Australian rock-art research has developed from a discipline which emphasised descriptive and subjective interpretive approaches (e.g. Elkin 1949; Levine 1957), to one which favours quantitative and contextual methodologies (e.g. Maynard 1976; Morwood 1979; Ross 2003). This change was initiated in response to such criticisms as those of Mulvaney (1969:174):

...it is difficult for a prehistorian to assess Aboriginal art...A prehistorian may infer methods of application or techniques of engravings, from observation, but comment concerning motivation and meaning is beyond the scope of normal archaeological activities.

During the period Mulvaney was referring to, rock-art was often considered in isolation from other forms of material culture. However, during the 1970s and 1980s the importance of integrating it with cultural and environmental contextual information was realised, and the dominance of more subjective interpretations faded, to be replaced by increasingly ‘objective’ archaeological approaches (McDonald 2004:100-103; Morwood and Smith 1994:21). Contemporary research continues to reflect a commitment within the field to studying rock-art in a holistic manner, focussed on integrating a range of spatial, environmental, ethnographic and archaeological evidence in order to minimise subjectivity. Using such methods, researchers are increasingly demonstrating the ability of rock-art to reflect broader
social themes such as territoriality and inter-group interaction (e.g. McDonald 2008; Ross 2003).

### 2.2 Current issues in rock-art studies

Discourse about rock-art research, and criticisms of its value as a meaningful form of archaeological evidence, often centre around several key themes. These include the inherent difficulty of construing meaning, dating limitations, and arguments about pan-continental stylistic and chronological sequences. Consideration of these debates is thus critical to any investigation of rock-art, and their influence on the study reported herein is discussed below.

One aspect of rock-art research that has been subjected to intense scrutiny is the interpretation and ascription of ‘meaning’ to motifs. Early studies often involved subjective speculation about meaning (e.g. Elkin et al. 1950), however later ethnographic studies highlighted the inherent inability of researchers to interpret images, even at the simplest level (e.g. Macintosh 1977). Recognition of this limitation resulted in the employment of testimonies of Indigenous informants to infer meaning (e.g. Morwood and Hobbs 1992; Mulvaney 1993, 1996). However, as it became apparent that a single motif or panel could have different meanings the flaws in this approach were also underlined (Taçon and Chippindale 1998:6-7). Likewise, issues associated with the validity of contemporary Indigenous interpretations of rock-art created beyond living memory were acknowledged (Taçon and Chippindale 1998:7). Today, although Indigenous perspectives of rock-art are considered valuable, archaeologists tend to avoid relying solely on them. Further, in some parts of Australia, contemporary Indigenous people have no knowledge about traditional rock-art production. In such situations, the more tangible elements of rock-art are considered, such as technique or production, style, spatial distribution and the relationships between these factors (e.g. Franklin 2007; McDonald 2008; Ross 2003).

The difficulty of assigning absolute age to motifs is another key barrier preventing the acceptance of rock-art as a valid data source. Superimposition, differential weathering and stylistic analysis have been popular methods for establishing relative ages for rock-art styles, most convincingly demonstrated with the Arnhem
Land and Kimberley assemblages (e.g. Chaloupka 1984; Chippindale and Taçon 1998; Walsh 1994; Welch 1993). Such studies have proven the value of employing relative dating methods for establishing a preliminary understanding of chronological sequences in rock-art, and although the credibility of such approaches have been questioned (e.g. Rosenfeld and Smith 1997), they remain critical in initial phases of recording and analysis.

As technology develops, direct dating of rock-art using absolute methods is becoming possible, and has been used in some areas to complement relative chronologies. Accelerator mass spectrometry (AMS) techniques allow very small organic samples taken from the images themselves to be dated (e.g. David et al. 1999; McDonald et al. 1990; Smith et al. 2009; Watchman et al. 1997). This technique is widely applicable, enabling dating of charcoal drawings (e.g. David 1992a), organic components of ochre paintings (e.g. Watchman and Cole 1993), mineralised skins (e.g. Cole and Watchman 2005), oxalate crusts (e.g. Watchman 1993) and beeswax figures (e.g. Nelson et al. 1995). However, it is difficult to prove a definite association between the dated organic material and the date of rock-art production (Rosenfeld and Smith 1997:405). For example, it is possible that ancient charcoal might be used for the purpose of art production rather than creating it specifically at the time of the drawing, and thus a date obtained from charcoal represents a maximum possible age for the motif, although the actual age is likely to be younger. Using the optically stimulated luminescence (OSL) technique to date sand grains in mud wasp nests overlying art, minimum dates have been obtained for Bradshaw motifs in the Kimberley region (Roberts et al. 1997; Yoshida et al. 2003), though this provides only a minimum rather than an actual age for art production. Hence, despite technological advances in recent years, rock-art dating remains largely underdeveloped, held back by intrinsic technical limitations.

Another consistent theme that emerges in Australian rock-art research is the question of pan-continental stylistic chronologies (Lommel 1961; McCarthy 1967). Most notably, Maynard (1976, 1979) proposed a three-stage chronological sequence which has been applied across the country. She suggested that a widespread, homogeneous engraving tradition, the ‘Panaramitee’, comprises the earliest form of rock-art, based on superimposition and distributional analyses. This
was followed by the emergence of regionally distinctive additive simple figurative styles, which then developed into a complex figurative style in some regions. This proposed sequence has been noted to occur in many regions of Australia, including Queensland (e.g. Franklin 1996; McDonald 2008). However, the degree of regionalisation and the effects of such factors as preservation on our ability to perceive chronology through superimposition, render such models simplistic and inadequate (McDonald 2004:106, 2008:43-44; Morwood and Hobbs 1995:766; Ross 2003:305).

2.3 The rock-art of Queensland

Middle Park Station is nestled amongst a series of well-researched rock-art provinces, subsequently facilitating analysis of the levels of inter-group interaction between them. In the section below I provide an overview of the rock-art in the Cape York Peninsula, Central Queensland, Mt Isa and North Queensland Highlands Provinces (see Fig. 1.1). This comparison allows the Middle Park area to be contextualised with respect to surrounding provinces, and facilitates the exploration of such issues as regionalisation and territoriality. A summary of the motif types and techniques present in each province is provided in Table 2.1.

2.4 The Cape York Peninsula Province

Cape York Peninsula (hereafter CYP) lies approximately 400 km to the northeast of Middle Park Station, and the southeast Cape is dominated by limestone which provides abundant surfaces suitable for art production. The recording of rock-art sites on CYP began in the 1800s, however systematic documentation did not commence until the 1960s with the work of Trezise (1969, 1971a, 1971b, 1985; Trezise and Oribin 1975) who worked primarily around Laura. The stylistically diverse rock-art of southeast CYP has been intensively studied (see Cole 1988, 1990, 1995, 2006; Cole and David 1992; Cole and Watchman 1992, 1993, 2005; Cole et al. 1995; David 1987, 1991; David and Cole 1990; David and Lourandos 1998; Flood 1987; Morwood 1989a, 1995; Rosenfeld 1982; Rosenfeld et al. 1981; Watchman and Cole 1993) and three central themes dominate the literature: regionalisation, chronology, and the link between the two. As will be outlined in greater detail below, it has been proposed that a widespread, homogeneous engraving tradition
existed in CYP prior to the development of the elaborate, regionally diverse painted method that the area is best-known for today. This stylistic evolution has been the subject of much consideration, with the focus often being on how it is associated with other changes apparent in the archaeological record during the mid-Holocene (e.g. David and Cole 1990; David and Lourandos 1998; Morwood 1989a). As such, CYP’s rock-art has been interpreted as more widely indicating shifts in settlement patterns and interaction networks.

2.4.1 Styles and techniques

Three techniques are present in CYP’s rock-art –engraving, stencilling and painting– and the degree of regional stylistic and formal diversity is considerably large (Cole and David 1992:15). Detailed, colourful paintings are most commonly associated with CYP (e.g. Flood 1997:244-260; Morwood 2002:257-259), with a conspicuous division between painted motif types in the north (predominantly anthropomorphic and zoomorphic figurative paintings) and south (primarily non-figurative paintings of geometric designs, reminiscent of early engravings) (David 1991:41; David and Cole 1990:795; David and Lourandos 1999:113; see Fig. 2.1).

Figure 2.1: Map of southeast Cape York Peninsula showing places mentioned in the text and the proposed stylistic divide (after David 2002:180).
The Laura Province, in the north, is associated with anthropomorphic ‘Quinkan’ figures. Often portrayed with distorted bodies, these motifs are depicted frontally with a variety of infill techniques, including dots, marks, grids, lines and bands (Cole 1995:56, 59). Stencilling (typically of hands) is also common, and hand prints occur in small numbers (Cole 1995:54). Human, animal, bird, reptile, fish and plant motifs are all stencilled, though depictions of material culture—typically common in other stencil rich areas (see below)—are infrequent here (Cole 1995:62; Trezise 1971a:9). Located only 50 km west of Laura, the Koolburra Province is best known for its polychrome anthropomorphic, zoomorphic and therianthropic (most commonly of the ‘echidna people’) motifs, even though 96% of sites also contain hand stencils (Flood 1987:94). Hand stencils are considerably smaller in size than those around Laura, depictions of fauna are comparatively rare and naturalistic human figures are common. The Chillagoe Province, immediately south of Laura, represents the contrast between the northern and southern regions of CYP (David 1991:51, 1992a:140). The paintings of Chillagoe are geometric and linear in nature, with more than 250 different non-figurative motif types recorded (David and Cole 1990:797).

Despite the regionalisation apparent in painted motifs, stencilled rock-art occurs throughout CYP and is more homogeneous in nature. The regions where stencilling is infrequent have a motif range that is limited to hands (Cole and David 1992:15). In contrast, areas where stencils are common, for example Koolburra, have a broader range of subjects (see Table 2.1), though still more limited than that seen in the Central Queensland Province (Cole and David 1992:15-16; see Section 2.5). Occurring even in the earliest superimposed layers, hand stencils range in size from large adults to infants and are predominately of left hands (Trezise 1971a:10). In CYP some interpretation of such motifs is facilitated by contemporary Indigenous knowledge, which reveals that hand and foot stencils were created as the ‘signature’ of an individual and that, in at least some instances, boomerangs and spear throwers were stencilled to generate good luck in hunting (Cole 1995:63). Rosenfeld (1981:89) noted the tendency for boomerang stencils to be spatially separated from other panels of rock-art within a shelter, whether they are clustered...
or a single motif, and also their concentration in shelters where they are the only, or
dominant, motif.

The petroglyphs of CYP are generally overshadowed in the literature by the more
spectacular painted anthropomorphs. However, critical to a holistic analysis of style
and its relationship to social and demographic issues, is this lesser known,
seemingly more homogeneous, rock-art tradition. Engravings are found throughout
the region and consist primarily of non-figurative motifs, though some isolated
examples of figurative motifs have been recorded (Cole and Watchman 2005; David
and Lourandos 1998:201; Trezise 1971a:11, 1993:126-127; see Table 2.1).

2.4.2 Chronology

In comparison to other areas, considerable effort has been expended on dating
rock-art in CYP. There is clear archaeological evidence that painting continued into
very recent times (Cole et al. 1995:151). For example, an informant advised Trezise
that a particular motif was created by his uncle after World War I, and in 1927 Hale,
Tindale and Bay observed people painting at Princess Charlotte Bay (as cited in Cole
et al. 1995:151). Depictions of dingoes and European contact images such as horses
and rifle motifs are also indicative of art production in the recent past (e.g. Trezise
1971a). Similarly, the introduction of the dingo to Australia is known to have
occurred approximately 3,500 years ago (Corbett 1995), and depictions of this
animal in the CYP rock-art indicate a maximum age for such motifs, as well as a
minimum age for those which overlie them (Cole et al. 1995:147).

At the Early Man, Possum Rock and Sandy Creek shelters, Cole and Watchman
(2005) produced AMS dates for carbon bearing oxalate salts within mineralised
skins covering engraved motifs ranging from 1,275 BP at Early Man Shelter to 9,160
BP at Sandy Creek. Likewise, at the Split Rock and Jowalbinna sites, silica skins
covering anthropomorphic motifs yielded results between 7,000 and 4,000 BP, thus
indicating a minimum age for the motifs underlying them (Cole and Watchman
2005:671-672). Two paintings at the Yam Camp site were found to contain plant
fibres most likely used as binding agents during art production, and were
subsequently dated to 725±111 and 730±75 years BP, respectively (Watchman and
Cole 1993). David (1992a) also published an AMS date of 2,056±81 BP for a non-
figurative, linear charcoal drawing from the Chillagoe Province. Further, at Early Man Shelter in excavation layers dated to ca 4,000-5,000 BP, a dramatic increase in ochre fragments led Rosenfeld et al. (1981:28, 34) to suggest there had been an increase in painting activity during this period.

Based on both direct and indirect dating evidence, it is currently accepted that the engraving tradition predates the painted method (Cole and Watchman 2005). The Early Man Shelter contains a rich archaeological deposit built up against engravings on the shelter walls (Rosenfeld et al. 1981). Dating of the deposit revealed an age of 13,000 BP at the base of the engraved panel, thus providing a minimum age for the motifs. Contemporary Indigenous people have no knowledge regarding the origin of any petroglyphs in the region, supporting suggestions of a late Pleistocene age for this style.

2.5 The Central Queensland Province

The Central Queensland Province (CQP) is argued to extend from the central Queensland highlands as far north as Croydon (Morwood 1984:361), thus encompassing the Middle Park study area (see Fig. 1.1). In the CQP, rock-art recording was sporadic until the 1930s, with most observations relating solely to the larger and more spectacular galleries and burial sites (e.g. Meston 1901; Parrot 1888). In 1937, O’Brien (1939/1940) led an expedition to investigate the Carnarvon Ranges, and Goddard’s (1940) subsequent publication is considered the first serious account of Aboriginal art in the region. Further academic interest in the local art did not surface again until the 1960s (e.g. Crosby 1968; McCarthy 1960; Mulvaney and Joyce 1965), and more recent publications by Quinnell (1975, 1976, 1977) and Morwood (1976, 1978, 1979, 1982, 1984, 1989b, 2002:204-230) are the main sources of knowledge for the rock-art of this region.

Unlike CYP, there has not been sufficient research conducted in the CQP to facilitate discussions of regional diversity, and chronological considerations have not been as prominent. Instead, studies have been largely descriptive in nature, often focussing on the styles and techniques present. Though evidence points to the rock-art of CQP being closely associated with mortuary practices (Geary 1939; Morwood 1976,
1978, 1979, 1984; Quinnell 1976), detailed explorations of this possibility have not yet been undertaken.

2.5.1 Styles and techniques

Generally, the province’s rock-art assemblage is characterised by stencilled motifs, painted geometric designs and a variety of engraved motifs, including the regionally distinctive ‘vulva’ design (Morwood 1984, 2002; Quinnell 1976). Prints and drawings are uncommon, and artistic rules appear to have been enforced, as several specific motifs are only ever depicted using a certain technique.

Unsurprisingly, the most common stencilled motifs are human hands (Morwood 1976, 1979:267). Also present are hand stencil variations, which, although comprising only 0.9% of hands in Quinnell’s (1976) dataset, are commonly reported (e.g. Crosby 1968:78; Morwood 1979:339, 1984:366; Mulvaney and Joyce 1965:204; Redmond 1963:271). These stencils have been explained in a number of ways, including deliberate cultural mutilation practices (Quinnell 1976:196), accidental amputation during hunting and gathering (Crawford 1968:21), or representations of sign language (Morwood 1984:366); such explanations are explored further in Chapter 6.

One of the most distinctive features of the CQP stencils is the large quantity of material culture items represented (Elkin 1940:113; Goddard 1940:368-371; Morwood 1984:361; Quinnell 1976; Redmond 1963:271; see Table 2.1). The variety of implements depicted is broader than those recorded ethnographically, in ethnohistorical sources or held in museum collections, thus providing valuable evidence for the range of material culture employed here in the past (Morwood 1984:333). The artefact featured most commonly is the boomerang, occurring in two-thirds of all sites recorded by Quinnell (1976:198), followed in descending order of frequency by axes, clubs, knives, shields, awls and spearheads. Animal related motifs are also present in the CQP repertoire. Though dominated by painted and/or engraved tracks, stencilled animal and bird feet have been recorded, sometimes created using the tips of three or four boomerangs or leaves (Quinnell 1976:41-43; Walsh 1983:38).
Despite the prevalence of stencilling, a significant component of CQP rock-art is engraved. In Quinnell’s (1976:187) survey of Carnarvon National Park, petroglyphs comprised nearly 42% of total motifs. Incorporating both figurative and non-figurative designs, the techniques used to produce petroglyphs in this region include abrasion, pecking, pecked-then-abraded, drilling, scratching and rubbing (Morwood 1979:270, 1984:361; Quinnell 1975:5; see Table 2.1). A characteristic motif is the subjectively labelled ‘vulva’ motif, originally termed the ‘cup and ring’ before its re-interpretation as a female fertility symbol (Morwood 1984). Engravings feature in both open and rockshelter sites, as opposed to the painted techniques, which occur only in protected locations. Though preservation factors alone might explain this patterning, Morwood (1984:262) noted the interesting predominance of pecked, as opposed to abraded or pecked-then-abraded, motifs in open sites, suggesting a degree of cultural choice or artistic ‘rules’ determining where certain techniques were applied. Open rock-art sites differ in environmental context and motif range to rockshelters, as they are always located on sandstone outcrops near water, and incorporate primarily non-figurative motifs, including tracks, connecting lines, circles, arcs, pits and dots, executed using the pecked technique (Morwood 1984:361).

Painting is the least common technique in central Queensland, and it has further been suggested by Walsh (1983:36-37) that many of the painted geometric motifs recorded by Morwood (1979), Quinnell (1976) and Crosby (1968) are actually ‘composite’ stencils. These images, he argued, were executed by creating a perimeter using one’s hands or material culture items and infilling this with blown pigment, resulting in a stencilled motif with a defined edge that looks more akin to a painted motif. Should this be the case, all previous recordings, including statistical analyses of motif type and distribution, would be rendered invalid. As no work has been done to assess Walsh’s proposition, motifs recorded as paintings are treated here as such. Although the majority of painted motifs in the CQP are non-figurative, figurative motifs also occur, though infrequently (e.g. McCarthy 1960:404; Morwood 1976:88, 1979:359; Quinnell 1976:201; see Table 2.1).
2.5.2 Chronology

Dating has not been a particular focus of rock-art research in central Queensland, and therefore the chronology is based primarily on superimpositions. Here the art is not proposed to have experienced a stylistic evolution from geometric engravings to complex figurative forms, as engravings feature in sequences both above and below other techniques, indicating their likely contemporaneous nature (Quinnell 1976:234). Despite there being considerably more evidence of engravings under paintings, this is likely the result of differential preservation as opposed to a cultural change over time (cf Bednarik 1994). Furthermore, engraved images of post-contact themes, such as horse and bullock tracks, demonstrate that this technique was practiced until recent times.

A recurring observation in central Queensland is that white pigment is a more recent addition to the rock-art record, based on its predominance in the upper levels of superimpositions (e.g. Morwood 1976:91; Mulvaney and Joyce 1965:202; Quinnell 1976:213). However, it has also been argued that this is an artefact of the differential preservation of white pigment (e.g. Bednarik 1994:70). This notion is supported by the results of Morwood’s (1979) excavation of the Native Well site where, despite an absence of any painted white motifs in the site, 675 pieces of white pipeclay were recovered up to >1 m below the surface, with their earliest occurrence dated to approximately 6,500 BP. This evidence suggests a date for white rock-art comparable to that of other colours, though no actual images survive to verify such a claim.

Other excavations have also yielded tentative evidence of rock-art production in central Queensland that hint to chronology. Mulvaney and Joyce (1965:201) noted the absence of any painted or engraved fragments or surfaces at the Kenniff Cave or Tombs sites, though ochre was present in all excavated layers at both sites. Radiocarbon dates at Kenniff Cave indicate occupation as early as 16,130±140 BP, and 9,410±100 BP at the Tombs, with ochre having been found in these levels. At Cathedral Cave Beaton (1991) uncovered engravings on the shelter wall, covered by occupation deposits which extended 90 cm below modern ground level. Ochre was also discovered in all levels at this site, which dated to 3,330±80 BP (Beaton
It is critical to note here, however, that the appearance of ochre or other pigments in excavated deposits does not necessarily indicate rock-art production, as such materials may have been used for other activities, including body and artefact decoration and in burials (Brumm and Moore 2005:164-165).

Post-contact motifs have also been used as chronological indicators, with engraved horse and bullock tracks noted at Goat Rock (Morwood 1976:92). Stencilled steel axes have also been noted in several sites, indicating a relatively recent date, although these items may have been traded between groups who had never directly encountered Europeans themselves (Morwood 1984:362; Quinnell 1976:237).

Taking into account absolute dating, spatial, technical, superimposition and differential weathering considerations, Morwood (1984:363-365) suggested three phases of art production in the CQP. The earliest phase (Phase 1) comprised pecked engravings, including tracks, circles, pits, arcs and connecting lines, and was older than 4,200 BP and possibly of Pleistocene age. Excavated pigment fragments suggest paintings and stencils may be of similar antiquity, though no actual motifs of this age have been directly dated as yet. Phase 2 is characterised by the appearance of stencils, paintings, drawings and prints. This phase also includes a change in engraving techniques, such as the emergence of abraded and pecked-then-abraded methods, and the appearance of the ‘vulva’ motif. The more regional character of the rock-art of this phase is also noted. Phase 2 is thought to extend from 4,200 years ago until the contact period (ca 140 - >36 BP). The third phase is restricted to the post-contact period and includes an increased use of white pigment.

2.6 The Mt Isa Province

Located approximately 450 km west of Middle Park Station is the Mt Isa Province (MIP), dominated by engraved and painted motifs (Franklin 1992, 1996; Morwood 1985; Ridges 2003; Ross 1997; see Fig. 1.1). Morwood (1979:393, 2002) suggested that a number of distinctive stylistic features justify the proposal of a regional Mt Isa rock-art style, a supposition explored further by Franklin (1992).
2.6.1 Styles and techniques

The MIP is distinguished by vast engraved assemblages and painted panels, and the very rare occurrence of stencils (Morwood 1979:393; Ross 1997). Pecking is the most commonly observed technique, although pounding has also been noted (Franklin 1996:138). Regardless of technique, circles are the most regularly depicted motif (Franklin 1996:138; see Table 2.1). Other non-figurative motifs are also present, and while known to occur in isolation, are regularly incorporated into complex compositions connected by mazes and lines (Franklin 1996:138). Much less abundant in the engraved assemblages of the MIP are figurative motifs (Morwood 1984:141). When the latter are present, human figures and animal tracks are common, although the latter are far less dominant here compared with elsewhere (Franklin 1992). All figurative engravings in this area consist of simple silhouettes, which are crudely naturalistic and strongly standardised (Franklin 1996:138).

Published information regarding the painted art of the MIP is scarce (cf Eussen 1975; Franklin 1996), though Ross (1997) presented detailed descriptions of MIP painted figures in her unpublished Honours thesis. In 60 rock-art sites she identified two types of anthropomorphs: basic (small, monochrome, rarely depicted with such design elements as feet, hands or headdresses) and detailed (large, usually bi- or polychrome, depicted with decorative elements such as outlines, backgrounds, hands, feet and headdresses). Spatial distribution and stylistic variation of these figures were considered, resulting in their interpretation as a mechanism that supported trends towards regionalisation. Other paintings noted in the region include the use of ochre to infill engravings, and ‘fern’ figures, which are always associated with reliable water (Ross 1997 cited in Ridges 2003:68-71).

In summary, a significant degree of overlap in motif range between painted and engraved motifs in the MIP has been observed, though engravings tend to have a larger non-figurative component. In comparison to other regions, MIP rock-art is characterised by relatively high percentages of complex circles, crescents, simple arcs and figurative motifs, and relatively low percentages of tracks. Based on these characteristics, Franklin (1992:187, 197) concluded that the MIP is stylistically distinct and can be considered ‘intermediary’ between the engraved assemblages of
central Australia to the south and the painted assemblages Laura region of CYP to the northeast.

2.6.2 Chronology

No investigations regarding the age of rock-art in the MIP have been undertaken, although evidence from more general investigations is available. For example, excavations at Cuckadoo rockshelter in the Selwyn Ranges (see Fig. 1.1), revealed radiocarbon dates for occupation of 15,270 BP, and a hearth containing red ochre was dated to 4,270 BP (Davidson et al. 1993:169-170). Davidson et al. (1993:171) suggested that heating ochre destroys the mineral kaolinite, which greatly improves the ability of paint to adhere to rock surfaces and thus that the red ochre found in the Cuckadoo hearth is evidence of paint production in the mid-Holocene. Direct dating of MIP rock-art itself has not been attempted, therefore the majority of assessments regarding chronology are based solely on visual analyses of differential weathering. Advanced physical and chemical weathering is apparent at several sites, with desert varnish covering some motifs (Franklin 1996:139; Hill 1981:6; Morwood 1979:394). This has been used to infer considerable time depth for these motifs, though the use of desert varnish as a means of dating rock-art is contested (Bednarik 1996). Variation in the extent of weathering and patination of engravings in the region was interpreted by Morwood et al. (1978) as indicating a greater age for engravings than paintings, though such an interpretation is clearly problematic.

2.7 The North Queensland Highlands Province

The North Queensland Highlands Province (NQHP; see Fig. 1.1) has been subjected to a comparatively small amount of archaeological research. Morwood (1990, 1992) surveyed between Hughenden, Torrens Creek, Georgetown and Croydon, while Gorecki et al. (1992, 1996) conducted studies on Esmeralda Station, approximately 150 km northwest of Middle Park. Other work of relevance includes that of Walsh (1985) who recorded sites in the White Mountains, northeast of Hughenden, and Smith and Rowland (1991) who assessed the heritage resources of the desert upland region southeast of Hughenden. Such studies have generated sufficient knowledge for the area to have been labelled an extension of the Central
Queensland Province (Gorecki et al. 1996:223; Morwood and Godwin 1982:51; Quinnell 1976:242), however this assumption is challenged in Chapter 6.

2.7.1 Styles and techniques

Morwood (1992:62, 2002:234) characterised the NQHP rock-art assemblage as an emphasis on stencilling, painted mostly geometric motifs, and a predominance of geometric and track motifs in all engraving techniques, though differences in the frequency and range of material culture items and hand variations depicted indicate the presence of regionally distinctive stylistic tendencies.

A total of 97% of all motifs recorded on Esmeralda Station were stencilled and only two out of 154 rock-art sites did not contain stencils, highlighting the prolific nature of this technique. Stencils most commonly occurred in very small numbers, with half of all sites recorded having fewer than ten motifs. However, the richest site had over 223 stencilled images and two hand prints (Gorecki et al. 1996:221). Stencils are mostly of hands, though other motifs are also present (Gorecki et al. 1996:220; see Table 2.1), with left hands occurring marginally more frequently than right.

A further distinguishing feature of the NQHP rock-art is the restricted range of its engraved motifs. Predominately geometric in nature, here motifs are executed using either abrasion or pecking (Morwood 1992:63; Morwood and Godwin 1982:51; see Table 2.1). To the east of the Gregory Ranges are the sandstone White Mountains, where the engravings contain variations not observed on Esmeralda. Images of snakes, goannas, humans, axes, arcs and tracks that have been deeply outlined, then lightly infilled, have been recorded here (Morwood and Godwin 1982:51), whilst only simple engraved ‘stick-figures’ and a limited range of geometric motifs were noted at Esmeralda (Gorecki et al. 1996:222). Such disparity may indicate regionalisation of rock-art styles, an absence of data based on survey strategy in some areas, or differences in rock surface suitability for creating certain types of engravings; these alternative hypotheses are explored in Chapter 6.

Paintings occur relatively infrequently in the NQHP, and comprise mostly geometric motifs (Morwood and Godwin 1982:51; see Table 2.1). At Esmeralda, Gorecki et al. (1996:221) recorded 13 sites with 21 hand prints and 26 paintings. The most
common painted motifs were small white circles, ‘stick-figures’ and an unusual cross motif surrounded by an unstructured array of hand stencils. Gorecki et al. (1996) used the latter two distinctive motif types to propose the existence of a regional ‘Esmeralda’ style.

2.7.2 Chronology

Unsurprisingly, given the limited number of studies conducted here, rock-art chronologies in the NQHP are poorly understood. Visual observations of differential weathering form the basis for the chronological framework, as no chronological markers are depicted and superimpositions are minimal (Morwood 1992:62). Engravings were found covered by archaeological deposits at Mickey Springs 34. The lowermost pecked images were found 15 cm above sediments dated to 9,920 BP, and below those dated to 8,080 BP, indicating an early Holocene age for their production (Morwood 1990:14). Similarly, at Mickey Springs 31, engraved rock fragments likely to have fallen from a panel above were recovered during excavation, the uppermost of which was dated to 5,100 BP (Morwood 1990:20).

2.8 Summary

Rock-art research is a valuable sub-discipline of Australian archaeology. When investigating and interpreting rock-art, it is now common to incorporate spatial, environmental, ethnographic and archaeological evidence, in order to gain a comprehensive insight into its context. In light of this, a spatial-stylistic approach, which also integrates ethnographic and archaeological information, is adopted in this study of the Middle Park rock-art. Though problematic, relative sequences can be constructed and related to the pan-continental model proposed by Maynard (1976). Furthermore, by comparing the rock-art of Middle Park to that of the surrounding provinces, several issues regarding regionalisation which arise in the literature can be explored. These include the supposition that the North Queensland Highlands Province is a stylistic extension of the Central Queensland Province (Morwood 1984:361), and the claim of an ‘Esmeralda’ sub-province (Gorecki et al. 1996). The research results presented in this thesis allows these issues to be addressed.
Chapter 3 Background to the study area

This chapter provides a summary of the environmental context and historical background of the study area. When considering this, it is important to remember that since the mid- to late 1800s extensive mining and pastoral activities have occurred, a result of which has been the gradual, or sometimes rapid, alteration of the landscape.

3.1 Climate

The study area is located within the semi-arid tropics, and experiences a wet-dry seasonal rainfall pattern (Slatyer 1964). An annual average rainfall of ca 500 mm is received, the majority of which falls between December and March (Bureau of Meteorology 2009). The reduction in rainfall during the winter months is accompanied by notably cooler daily temperatures, averaging 17°C (see Table 3.1). During the summer wet season, however, the daily temperature averages above 30°C with significantly higher levels of relative humidity. Annual evaporation levels are also high, generally averaging >2000 mm per year.

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
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<th>Oct</th>
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<tr>
<td>Mean maximum temperature (°C)</td>
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<td>34.9</td>
<td>32.7</td>
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<td>25.9</td>
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<td>35.8</td>
<td>37.6</td>
<td>38.1</td>
<td>32.8</td>
</tr>
<tr>
<td>Mean minimum temperature (°C)</td>
<td>23</td>
<td>22.5</td>
<td>20.7</td>
<td>17</td>
<td>13.1</td>
<td>9.8</td>
<td>8.6</td>
<td>10</td>
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<td>18</td>
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<tr>
<td>Mean rainfall (mm)</td>
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<td>60.2</td>
<td>22.3</td>
<td>15.3</td>
<td>15.6</td>
<td>9.5</td>
<td>4.2</td>
<td>6.3</td>
<td>16.3</td>
<td>30.4</td>
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<td>Mean number of days of rain ≥ 1 mm</td>
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<td>6.3</td>
<td>3.8</td>
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<td>1.7</td>
<td>3</td>
<td>5.1</td>
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</tr>
</tbody>
</table>

Table 3.1: Average maximum and minimum temperature and average rainfall for the study area (Bureau of Meteorology 2009).
These conditions have implications for the survival of both painted and engraved rock-art in the study area. Temperature extremes result in increased exfoliation and weathering of rock surfaces (cf Dragovich 1981; Walston and Dolanski 1976). High temperatures coupled with dry conditions also increases the risk of bushfires, which further affects preservation potential (cf Raper 2003). Water movement over rock surfaces during the wet season can remove pigment, as well as contribute to the formation of surface mineral accumulations that cover art (cf Rosenfeld 1988; Watchman 1992).

3.2 Hydrology

There are two major rivers in the study area: the Woolgar to the southeast and the Norman to the northwest (see Fig. 1.1). The Woolgar flows south where it eventually joins the Flinders River, and from there west across the Mitchell Grass Downs before draining into the Gulf of Carpentaria, while the Norman drains west into the more northerly Gulf. These two larger rivers are supported by a network of smaller, more ephemeral streams, creeks and drainage lines. Owing to the highly seasonal rainfall, rivers and streams commonly flow only sub-surfacely during winter, and often flood the low-lying surrounding plains during summer. The availability of water would have had a major impact on Indigenous settlement patterns in this region, and was an influential factor in determining trade routes and site use (Roth 1897).

3.3 Geology

Northwest Queensland is composed of a combination of rolling downs, vast plains, plateaus and mountain ranges. Middle Park is located in an upland area with tectonically delineated, uplifted blocks of a wide range of Precambrian and Palaeozoic rocks (Twidale 1964:42). Einasleigh metamorphics dominate the southeastern part of the station (White et al. 1963), while the west is classified by Perry et al. (1964) as belonging to the Strathpark Land System, a lower lying area comprised of sand and silt outwash deposits.

The northern portion of Middle Park is dominated by the rugged foothills of the Gregory Range. A NNW-SSE trend of late Tertiary upwarping is argued to be
responsible for the mountainous formation, which reaches 450 m above sea level in places. Characterised by broken sandstone tablelands, it is capped with subhorizontal mottled sandstone and siltstone of late Mesozoic age (Twidale 1966:42; White et al. 1963). The shelters in which rock-art occurs were formed through weathering of these sandstone formations, thus the regional geology is critical in influencing rock-art distribution and preservation, as well as our ability to access it today.

Middle Park Station is also the location of the historic Woolgar Goldfields (Authurs 1995; Bain and Draper 1997; Denaro et al. 2001), the discovery of which played a significant role in the demise of traditional Indigenous life locally (see Wallis et al. 2005). Currently, the station remains of interest to mining companies and a number of active mining exploration leases exist in the area.

3.4 Vegetation

Vegetation patterns in the study area are heavily influenced by the seasonal rainfall cycle, as the regular winter drought period dictates which species can survive. Thick grasses and undergrowth, combined with the dry winter climate, causes an annual fuel build up that encourages bushfires; these may have significantly impacted the survival or state of preservation of rock-art.

The area is dominated by sparse to moderately dense woodland, with a grass understorey (Perry and Lazarides 1964). In the upland sandstone country, lancewood (Acacia shirleyi) is the dominant tree species. However, the plains across which the main rivers run are characterised by woodland, of which the Georgetown Box Eucalypt (Eucalyptus microurne) is the most common tree. Of similar height, Ironwood (Erythrophleum chlorostachys) is also present but is comparatively sparse; the bark, wood, leaves and resin were traditionally used for medicinal purposes, and for making utensils (Woinarski et al. 2002). Other common trees in the area include the quinine bush (Petalostigma banksii), paperbarks (Melaleuca spp.), bean tree (Bauhinia cunninghamii), vine tree (Ventilago viminalis), Alphitonia excelsa, Dolichandrone heterophylla and Terminalia spp. Common shrubs include konkerberry (Carissa lanceolata), Dodonaea filifolia, Acacia spp. and Distichostemon spp. The underlying grass layer is comprised of a combination of species including
three-awn (*Aristida* spp.), blue grasses (*Dichanthium* spp. and *Bothriochloa* spp.), kangaroo grass (*Themeda australis*), spear grass (*Heteropogon contortus*) and ribbon grass (*Chrysopogon fallax*). In the more harsh sandstone country the surface is often bare, or occupied by spinifex (*Triodia* spp.).

### 3.5 Fauna

The study area is home to a variety of native and introduced animals (Strahan 1983). Marsupials such as kangaroos (including the Red and Eastern Grey), wallabies, possums, bandicoots and sugar gliders are present, as are mammals including dingo, flying foxes, and rats, as well as numerous snakes and lizards. Birds present at various times of the year include emus, bustards, herons, ducks, doves, wedge-tailed eagles, and kites. It is highly likely that the local Aboriginal population would have hunted and eaten most of these animals (Wright 1988). Introduced species which have developed sizable feral populations since European colonisation include pigs, cats, goats, rabbits and cane toads, while cattle are grazed on the station. The activities of these and native species in rock shelters can negatively affect rock-art, through directly rubbing against it, as well as creating dust which adheres to rock surfaces and thus decreases preservation potential, particularly of painted motifs (Lambert 1989; Peck 1984:16).

### 3.6 Historical background

A number of early historical sources relating to north Queensland exist in the form of explorers’ journals (e.g. Gregory and Gregory 1884; Leichhardt 1847), however these generally contain little information relating directly to the immediate study area, Indigenous peoples or their rock-art. The famously ill-fated Burke and Wills expedition from Melbourne to the Gulf of Carpentaria in 1860-61 gave rise to four search parties dispatched to north Queensland to recover the missing group but again, whilst making numerous mentions of Indigenous people, fail to provide sufficient detail to be of use here (e.g. Laurie 1866; McKinlay 1862 [1962]). Journals of early pastoralists and their wives from northwest Queensland further describe interactions with and attitudes towards Aboriginal people (e.g. Lucy Gray 1868-70 [1965]). However, by this time the effects of colonisation had been severe, with traditional practices and lifestyles greatly disrupted, and thus are of little use for the
purposes of understanding or interpreting the local rock-art or social relations between groups.

As one of the first explorers to travel through the Richmond area in 1862, Landsborough identified the region as ‘remarkably well adapted for pastoral purposes’ (Laurie 1866:79). The region was soon thereafter opened up to pastoral development, and by 1863 a number of sheep stations had been established including Richmond Downs (now Richmond town) (Palmer 1903:127). During the late 1870s gold was discovered along the upper reaches of the Woolgar River, resulting in a dramatic influx of miners and their families, and an increase in supporting infrastructure (Authurs 1995). The location of European settlements along major water sources, and therefore on or near important Indigenous places, often led to conflict between the two groups (Loos 1993; Morwood 1990; Wallis et al. 2005). This, together with the effects of disease, alcohol, opium and dislocation, brought about the severe disintegration of traditional culture (Wright 1988:8). Since the cessation of mining in the area in the early twentieth century, pastoralism has been, and continues to be, the primary economic interest. Today, Richmond is home to approximately 500 residents and Middle Park is a functioning cattle station.

3.7 Ethnography

It is argued that the local Indigenous population of the Leichhardt-Gilbert area halved in less than three decades during the mid- to late 1800s as pastoralism and mining increased in intensity (Wright 1988:8). For example, on the Woolgar goldfield during the 1880s the fatal spearing of a white Native Mounted Police Sub-Inspector prompted the ‘dispersal’ of Indigenous groups in the area (Wallis et al. 2005). Only one Indigenous person is thought to have survived these massacres, a young girl named Maggie Woolgar, and many members of the WVAC claim descent through her (Hagan 2003:3-4). Such events were common across north Queensland, and as a result, much traditional knowledge was lost, often including information about rock-art production, tribal boundaries and social organisation.

The most comprehensive and significant ethnographic recordings from northwest Queensland were made in the late 19th century by Roth (1897, 1901a, 1901b, 1902,
1903, 1904, 1906, 1907, 1908a, 1908b, 1909a, 1909b, 1910a, 1910b, 1910c, 1910d, 1910e). Roth’s interest in the Indigenous people of the area was sparked whilst working as a medical officer and surgeon in the Boulia, Cloncurry, and Normanton hospitals. His 1897 publication *Ethnological Recordings Among the North-West-Central Queensland Aborigines* is a highly detailed account of traditional culture, with topics ranging from language to law and order to ethno-pornography. This text led to his subsequent appointment as Protector of Aboriginals for the Northern District of Queensland under *The Aboriginals Protection and Restriction of the Sale of Opium Act, 1897* (Kahn 2004:10). Roth went on to publish many bulletins between 1901 and 1910 regarding the culture of north Queensland Aboriginal people, as well as to collect many items of material culture, over 2000 of which now reside at the Australian Museum (Kahn 2004:10). His writings and collections are critical for the analysis of stencilled material culture and hand variations in rock-art described in this thesis, as they provide the only means of comparing the physical evidence of today with the material culture of the past.

Others to write about the Indigenous people of northwest Queensland were also concerned with distinguishing tribal boundaries and language groups. Today, some Indigenous people associated with the Middle Park area identify as Wanamara (MacGillivray 1886; Roth 1897; Tindale 1974), though historical descriptions of the extent of Wanamara territory are not consistent. Indeed, Tindale’s map of tribal boundaries (see Fig. 3.1) indicates that Middle Park lies in a region that could just as likely be Wanamara, Jirandali or Mitjamba territory. This divergence is similarly reflected in the variety of spellings used by different people at different times in reference to the same group, including Wunamara, Woonamurra, Woonomurra, Unamara, Oonoomurra and possibly Quippen-burra (Horton 1994; Tindale 1974:188); Wanamara is preferentially used in this thesis in accordance with community norms.
3.8 Previous archaeological investigations on Middle Park Station

As noted briefly in Chapter 1, two preliminary assessments of the cultural heritage values of Middle Park Station were made in the mid-1990s prior to the ILC purchase of the property (Cooke 1995; Small 1998). However, systematic archaeological research only began in 2002 with the work of Wallis (2003; Wallis et al. 2004), who has since recorded hundreds of sites on the property. The archaeological record is dominated by stone artefact scatters and, in upland areas, rockshelters containing stencilled art, as well as axe-grinding grooves and grinding patches in sandstone areas (Wallis et al. 2004:45). To date, four rockshelters have been excavated, allowing a preliminary chronological sequence for local occupation to be established. Two of the excavated rock shelters (MP76 and MP83) date to the mid-Holocene (4,820±70 BP and 2,280±210 BP, respectively), while another (MP103) is dated to the late Pleistocene (14,080±210 BP) (Wallis et al. 2004:47). Recent excavation of the Gledswood Shelter 1 (GS1) has yielded a non-basal date of 28,000 BP, thus indicating Indigenous activity in the area during the pre-LGM period (Wallis 2008; Wallis et al. in press). Determining a minimum age for rock-art was an initial aim of the latter excavation, and large quantities of ochre have been recovered from the deposit; these are yet to be analysed but may be of direct interest to questions addressed in this thesis (Lynley Wallis pers. comm.). Investigations at Middle Park are ongoing, with regular field seasons involving excavation, survey and recording of targeted sites and areas, gradually extending our knowledge of
Indigenous occupation in the area; this thesis contributes to this increasing understanding.

3.9 Summary

The environment is an important consideration for any rock-art study. In the study area, the tropical climatic conditions affect preservation rates, as temperature extremes increase rates of exfoliation and cause pigment loss. Further, the extreme heat, coupled with dry conditions in winter and thick undergrowth increase the risk of bushfires, which negatively affects preservation potential. Water movement over rock-art panels during summer also removes pigment, and contributes to the formation of surface mineral accumulations which can cover art. Animal presence within shelters can also impact preservation, by creatures such as kangaroos and cows directly rubbing against the art, and/or creating dust by their movements which adheres to rock surfaces. As well as affecting rock-art survival, environmental factors also strongly influence rock-art distribution patterns, as surfaces suitable for art production are restricted to areas of sandstone formations. Water availability also influenced trade routes and site use. Hence the environment has a fundamental impact on the landscape of cultural activities undertaken by groups in the past, and thus plays a vital role in our contemporary perceptions and interpretations of rock-art.
Chapter 4 Methodology

This chapter outlines the methodology used during data collection in the field and subsequent statistical, spatial and comparative analyses. The methods employed were both descriptive and quantitative in nature, as characterisation of the assemblage was achieved by integrating statistical analyses with a spatial-stylistic approach.

4.1 2002 field survey methods

Recording of archaeological sites began in September 2002 and was carried out collaboratively by Wallis and the WVAC, with the assistance of student volunteers over a six-week period. Pedestrian surveys were conducted and, owing to the nature of the local landscape, coupled with the stated research aims, targeted survey of four areas was employed to ensure a large number of sites would be located (see Fig. 4.1). Surveys focussed on sandstone outcrop areas in close proximity to water, accessible via existing station vehicle tracks and, consequently, less than 100% coverage of the study area was achieved.

Handheld GPS was used to record site locations, photographs were taken and site sketches drawn (Wallis 2003:54). General recording of each site’s attributes included information required to meet then-current Queensland site recording standards under the Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987. The variables recorded specifically at rock-art sites included:

- Techniques used [stencilling, engraving (abraded or pecked), painting];
- The presence of compositions;
- Motif types present (categorised as either adult hands, children’s hands, hand variations, boomerangs, hands-plus-forearms, human feet, spear throwers, stone axes, digging sticks, spearheads, shields, animal features, circles, goannas);
- The number of each motif type present;
• Handedness (i.e. left or right) of hand stencils present (assuming that during their creation the artist placed their palm flat against the rock surface);
• Pigment colour (red, orange, red-purple, red-brown, red-orange, white, grey, black, yellow or purple);
• Shelter direction;
• Shelter dimensions;
• Whether other archaeological remains were present, and if so, what they were; and
• Evidence of animal activity in the sites, such as sleeping hollows and mud wasp, termite or bird nests covering the art.

When hand stencils were recorded it was noted if any ‘variations’ occurred, including:

• Little and ring finger both missing;
• Middle finger missing;
• Little finger missing;
• Ring finger missing, little finger only a stub;
• Index finger missing, whole hand deformed;
• Crooked fingers; or
• Top two bones of index finger missing.

Boomerang stencils were assigned to one of two categories–hunting/fighting or toy/comeback–based primarily on their size and ethnographic descriptions (Roth 1897:142-146, 1909:202-203).

Engraved circles were recorded as either ‘simple’ or ‘complex’, the former comprising those depicted as a simple outline, as opposed to the latter, which have some form of engraved infill.
Figure 4.1: Map of Middle Park showing survey areas and archaeological site locations (from Wallis 2003:54).

4.2 2008 field survey methods

In 2008, a one-week survey was undertaken by Wallis and the author using the same methodology outlined above. Additionally, measurements were recorded of each hand and boomerang stencil present at a sample of sites (see Fig. 4.2). It is recognised that measurements of hands taken from hand stencils are inevitably
crude and that they provide only a general idea of the age range of the people who made the stencils, however it is often possible to distinguish adult and children’s hands (Damhuis 2005; Gunn 2006:110). Although studies have attempted to discern gender from hand stencils (e.g. Damhuis 2005), most have concluded that typically this cannot be ascribed (Flood 1987:104; Henneberg and Mathers 1994) and thus was not attempted in this study.

**Figure 4.2:** Measurements of hand and boomerang stencils recorded during the 2008 field season.
In 2008, a site initially recorded in 2002, MP84, was also revisited and recorded in detail, including drawing a baseline-offset plan of the shelter, making sketches of the entire rock-art panel and panoramic photographs, as well as detailed photographs, descriptions and measurements of each individual motif. This site was chosen for detailed recording owing to the unusual array of motifs present (see Chapter 5).

4.3 Analysis of survey results

In light of current approaches to rock-art research, which emphasise the importance of analysing art in a holistic manner, and the absence of Traditional Owner knowledge, the rock-art of Middle Park is analysed in a manner similar to that used for any other category of material culture, without recourse to Indigenous knowledge about its manufacture or meaning. An archaeological approach is adopted, taking into account its context, and focuses on distributional and statistical analyses of techniques and motifs.

4.3.1 Characterisation

General characterisation of the Middle Park assemblage was achieved by analysing the following variables: technique frequency, motif type frequency, frequency of archaeological remains at rock-art sites, left and right hand stencil numbers, pigment colours and rock-art assemblage size (according to the number of stencilled motifs in each shelter).

4.3.2 Comparative analysis

In order to address issues of regionalisation, territoriality and inter-group interaction using a spatial-stylistic approach, a detailed review of the existing literature regarding the rock-art of Queensland was undertaken, a summary of which was provided in Chapter 2. This information allows comparisons between the styles present in the surrounding rock-art provinces and those at Middle Park Station to be drawn. The results of this comparative analysis are combined with spatial data, at both local and state-wide levels, to develop an understanding of how the rock-art reflects social behaviour within the landscape.
4.3.3 Spatial analysis

To analyse the spatial distribution of rock-art sites at Middle Park, Geographical Information Systems (GIS) technology was employed. GIS refers to computer-based mapping which allows the distribution of features to be identified within a given landscape (cf. Ridges 2003). Through GIS it is possible to study rock-art distribution in terms of its natural context, subsequently allowing informed inferences regarding cultural choices to be made. Using ArcGIS software, the distribution of all rock-art sites at Middle Park was investigated by plotting the location of each onto a topographic map. Other basic spatial analyses were also carried out in order to identify any clustering or patterns within the landscape. These included plotting the locations of all sites containing paintings, engravings, hand variations, material culture and children’s hands individually. The distribution of larger assemblages (i.e. those containing more than 30 motifs) was also investigated, as was the distribution of each pigment colour.

Using ArcGIS, Nearest Neighbour Analysis (NNA) was conducted on the sites containing each of the variables outlined above. NNA is calculated by dividing the average distance from each point in a sample to its nearest neighbour, by the expected average nearest neighbour distance given the number of points and size of the region (Ridges 2003:99). However, it was found that the sample size of the specific variables of interest (i.e. painting and engraving sites, material culture depictions) was too small to gain statistically significant results. As a result, investigation of clusters of variables was based solely on visual analysis of distribution within the landscape, facilitated by maps created using GIS (Appendix 1).

4.3.4 Digital image enhancement

A technique which has become common practice in rock-art studies is digital image enhancement using Adobe Photoshop software, or similar. With this archaeologists are able to reproduce motifs with a higher degree of accuracy than is possible using freehand sketching or direct tracing, with the benefit of causing less interference with the art itself (e.g. Brady 2007; David et al. 2001; Domingo and López-Montalvo 2002; McNiven et al. 2000). One of the key advantages of this technique is its ability
to isolate pigment colours, separating them from the background, allowing recovery and identification of faded images that can generally not be distinguished easily with the naked eye. For the purpose of clarifying deteriorated motifs this approach has been utilised in this study. In particular, this was applied to unclear material culture motifs in order to maximise positive identification.

Hand variation stencils were also digitally enhanced in order to determine whether they were created by bending over digits, or reflect mutilations. Walsh (1979) proposed such determinations are possible through analysis of pigment splatter, stating that:

> Relatively flat objects held against a comparatively level rock surface will, when stencilled, create a sharply defined outline. Objects with high rounded edges, or not held firmly against the surface will give foggy or indistinct silhouettes, caused by underspray of pigment at the perimeter of the object. In fact so-called 'mutilated' hands show a high degree of underspray. In the case of genuine amputation, the stub would press against the rock surface with the rest of the hand, giving an outline as distinct as the remainder of the fingers. Obviously a finger folded under the palm of the hand does not allow this section to come in close contact with the rock surface, and fogging from the underspray will occur.

Several researchers have criticised the assumptions of the above methodology, with some suggesting that the ‘underspray’ effect argued by Walsh to indicate bent fingers may be the result of pigment absorption into the rock (Hadingham 1980:144-5). Others have argued that Indigenous people overcame the issue of underspray and fuzzy outlines by placing the back of the hand against the rock and holding down the fingers. However, such debates are pointless given that Indigenous people are unlikely to have been concerned with producing a stencil with a perfectly clear outline. In this study of hand variations at Middle Park, evidence of underspray is assumed to be an indicator of bent fingers, and clear outlines together with the physical ability or inability to bend down certain joints is used to identify mutilations.

### 4.4 Limitations

There are several inherent limitations to this study, resulting primarily from those of the original fieldwork and the nature of rock-art preservation. As noted in Chapter 3
owing to the rugged nature of the study area, access to the sandstone areas in which Middle Park’s rock-art is located was limited and the survey strategy targeted outcrops along watercourses with access via existing vehicle tracks or comparatively easily by foot or quad bike. This selective methodology has no doubt influenced our resulting perceptions of rock-art distribution within the landscape, though was unavoidable given the practical and logistical constraints.

As discussed in Chapter 1, a major limitation in any study of the spatial distribution of rock-art is preservation. Differential rates of deterioration as a result of several factors, including pigment type, site type, depth of engravings, rock surface and exposure to the elements, mean that survival of rock-art is not consistent across space, time or contexts, and thus cannot be quantified. All archaeological site types are similarly subject to taphonomic processes which influence perceptions regarding their distribution and composition and it is recognised that the surviving assemblage at Middle Park is only a representative sample of the original, and that this is an inherent weakness of dataset.

An element of this study which also limits its comprehensive nature is the lack of research relating to some areas of Queensland. For example, it would be valuable to know the degree of regionalisation recognisable in the styles of the Central Queensland and Mt Isa Provinces, in order to enhance interpretations regarding territorial behaviour and social networks operating throughout these regions. There is also only limited information available regarding the North Queensland Highlands Province, therefore regional variations in the broader region surrounding Middle Park cannot be discussed in detail.
Chapter 5 Results

A total of 88 rock-art sites were recorded on Middle Park Station, 79 of these during 2002 and a further nine in 2008 (Fig. 4.1). Stencilled art is found in 100% of art sites, while engraved and painted motifs are found in only 6.8% (n=6) and 3.4% (n=3) of art sites, respectively.

5.1 Stencils

5.1.1 Motif types

A total of 1,348 stencilled motifs were recorded in the 88 sites at Middle Park, with the majority of these comprising adult hands (81.5%; n=1099). Most (70.8%) adult hand stencils were left hands. Other stencils recorded, in decreasing order of occurrence, include children’s hands (n=139, 93 of which were also left), indeterminate, boomerangs, hand variations, hands-plus-forearms, animal motifs (dingo paws, bird feet, snake), human feet, spear throwers, stone axes, digging sticks, spearheads and shields (see Table 5.1). In total, hand stencils (including adults, children, variations and hand-plus-forearms) comprise 94.5% (n=1,274) of the assemblage.

<table>
<thead>
<tr>
<th>Motif</th>
<th>Frequency</th>
<th>% of total stencils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult hands</td>
<td>1099</td>
<td>81.5</td>
</tr>
<tr>
<td>Children’s hands</td>
<td>139</td>
<td>10.3</td>
</tr>
<tr>
<td>Indeterminate</td>
<td>32</td>
<td>2.4</td>
</tr>
<tr>
<td>Boomerangs</td>
<td>19</td>
<td>1.4</td>
</tr>
<tr>
<td>Hand variations</td>
<td>19</td>
<td>1.4</td>
</tr>
<tr>
<td>Hands-plus-forearms</td>
<td>17</td>
<td>1.3</td>
</tr>
<tr>
<td>Animal features</td>
<td>9</td>
<td>0.7</td>
</tr>
<tr>
<td>Human feet</td>
<td>7</td>
<td>0.5</td>
</tr>
<tr>
<td>Spear throwers</td>
<td>2</td>
<td>0.1</td>
</tr>
<tr>
<td>Stone axes</td>
<td>2</td>
<td>0.1</td>
</tr>
<tr>
<td>Digging sticks</td>
<td>1</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Table 5.1: Frequency of motif types at Middle Park.
Nineteen hand variation stencils were recorded in seven sites (MP41, 83, 84, 107, 108, 112B, 114). Within these, seven different variations were recorded (see Fig. 5.1). The only recurring variation is crooked fingers (n=12, all occur in MP108), and the little finger missing (which occurs in MP83 and MP107). The hand recorded as being deformed is an unusual stencil in that, while it is recognisable as a hand (with a clear wrist and fingers), it is an unnatural shape (see Fig. 5.1G). This shape was possibly created by shifting the hand before stencilling was complete, or by using two hands.

Five of the seven hand variations can be identified using Walsh’s (1979) methodology as having been produced as a result of amputated or bent over digits (excluding the crooked fingers, which were clearly created by manipulating the position of the hand, as opposed to digital amputation), whilst two remain indeterminate. In two cases (MP141 and MP112B), it is proposed that fingers have been deliberately bent over in order to produce the motif, on the basis of the presence of underspray (Fig. 5.2). At one of these (MP112B) it appears that while the ring finger has been bent over, the clear outline of the stub of a little finger suggests possible amputation of the top two joints. At the remaining three sites, digital amputation is suggested to have resulted in the hand variation stencils based on the lack of underspray and clear outlines of the hands, including areas of the missing fingers, which indicates that the whole hand could be pressed against the rock during production.

Nineteen boomerangs of a variety of different forms have been recorded, representing both those used for fighting or hunting, and those classified as toys based on ethnographic descriptions (Roth 1897:142-146, 1909:202-203; see Fig. 5.3). One complete spear thrower stencil was located, measuring 70 cm long and 4 cm wide, with an acutely angled ‘peg’ at one end and a distinct bulb shape at the other. No objects of European origin were identified in the stencilled art. Amongst the originally recorded ‘indeterminate’ stencils at MP84, digital enhancement allowed the identification of two further items of unknown material culture (Fig. 5.4).
Figure 5.1: The different hand stencil variations recorded at Middle Park.
Figure 5.2: Two of the hand variation stencils identified as having been produced by bending over digits, based on evidence of underspray.

Figure 5.3: The variety of boomerang forms found in the stencilled rock-art at Middle Park.
5.1.2 Pigment colours

The most common pigment colour used for stencilling is red, which occurs in 78.4% (n=69) of sites, followed by orange and red-purple in 56.8% (n=50) and 48.9% (n=43), respectively. Also present, although in considerably fewer sites, are red-brown, red-orange, white, grey, black, yellow and purple pigments (see Fig. 5.5). The white pigment used was almost certainly pipeclay and the black is assumed to be charcoal-based. No ochre quarries have been located at Middle Park to date.

![Figure 5.4: Two ‘indeterminate’ stencils clarified using Photoshop.](image_url)

![Figure 5.5: Graph showing the relative occurrence of pigment colours.](image_url)
5.1.3 Hand sizes

At seven sites, 144 hand stencils were measured using the methodology described in Chapter 4 and the measurements are presented in Appendix 2. The range of sizes recorded for each of the three measurements taken is shown in Figures 5.6, 5.7 and 5.8. It is apparent from these figures that hand sizes display an approximately unimodal distribution, with no clear distinctions that would indicate child versus adult groupings; nevertheless, the range of sizes do indicate that some stencils are clearly those belonging to children, whilst others clearly belong to adults.

Figure 5.6: Graph showing the range of sizes recorded for hand measurement A.

Figure 5.7: Graph showing the range of sizes recorded for hand measurement B.
Figure 5.8: Graph showing the range of sizes recorded for hand measurement C.

5.2 Engravings

Engravings (n=86) occur in six rockshelters, with no open engraving sites found. Two techniques are present, with pecking occurring in all sites, and abrasion in only one. The former were created by removing only the topmost layer of the rock surface, resulting in white images with very little depth to them, often resembling the effects of natural surface exfoliation. Regardless of technique, the overwhelming majority of engravings are circular motifs, comprising 94.2% (n=81) of the total. Some of these circles are of a ‘complex’ type, depicted with interior cross-hatching, though the majority are simple outlines (see Fig. 5.9). A single figurative motif has been positively identified, a lizard, in MP107 (Fig. 5.10). Additionally, at MP84 a deteriorated pecked image has been tentatively classified as an anthropomorph, as the figure appears to have a recognisable head and arms though due to erosion, the legs are no longer visible (Fig. 5.11).
Figure 5.9: Engraved circles with interior cross hatching at MP107

Figure 5.10: Engraved lizard at MP107.
5.3 Paintings/prints

Paintings represent the smallest category of motifs at Middle Park, located in only three sites, containing a total of 11 motifs. Site MP12 contains two red-purple hand prints while MP130 contains three simple circle outlines, one white and two red-purple, which appear to have been formed using a finger dipped in paint. Site MP84 contains a variety of different painted motifs, including a yellow vertical stripe painted down the centre of a stencilled shield (Fig. 5.12), two large red geometric shapes (Fig. 5.13), one yellow hand print, a cluster of yellow solid infilled circles and a single orange solid infilled circle.
Figure 5.12: Stencilled shield at MP84, depicted with interior pecked design, yellow painted stripe, and associated with a digging stick or club.

Figure 5.13: Unidentified painted geometric motif at MP84.
5.4 Assemblage size

Despite the predominance of stencilled art compared with other techniques at Middle Park, most sites (60.2%) contain less than 10 stencils, and 80.7% contain less than 30 (see Fig. 5.14). Sites with larger numbers of motifs are rare, and only 13 (14.8%) have more than 30. Two sites only (2.3%) contain more than 150 stencils, the richest, MP130, containing 176. MP130 is the most easterly site recorded during the surveys (see Fig. 5.15).

![Site size according to number of stencilled motifs](image)

Figure 5.14: Graph showing site size according to the number of stencilled motifs present in them.

5.5 Compositions

Some compositions are present, most commonly comprising arrangements of stencilled adult hands including rows of hands, pairs of hands, hand variations, and hands with decorative pecked infill. Material culture stencils also appear in compositions, with boomerangs at MP83 depicted back-to-back. At MP84 a hand stencil has been depicted inside a stencilled shield (Fig. 5.12), and three hands are positioned over the top of a boomerang with pecked infill (Fig. 5.16). Three examples of stencils with decorative pecked infill have also been found, including linear designs inside a shield and boomerang at MP84, and pecked dots inside hand stencils at MP107 (see Figs 5.12, 5.16 and 5.17).
Figure 5.15: GIS map showing distribution of sites according to size.
5.6 Site types, morphology and topographic location

All of the recorded art occurs within sandstone rockshelters, and no decorated open sites were observed. Art within these shelters is most commonly located on the rear wall, but also occurs on ceilings and under low rock ledges (too low for even children to stand under) within the shelters. The largest site, MP131, measures 40 m x 6 m x 8 m, and the smallest, MP52, only 2 m x 1 m x 2 m, demonstrating the wide range of locations that were apparently considered appropriate for art production, although no relationship between shelter size and number of stencils is apparent (Appendix 3). The majority of sites (64.8%) have a bedrock floor and therefore do not have the potential to yield occupation deposits. With the
exception of two sites, which were noted to have excellent sediment accumulation, the remainder were recorded as having minimal deposition within the shelters.

Art is most commonly located in shelters oriented to the south; 55.6% (n=40) of the 72 sites for which this variable was recorded face southerly directions while only 6.9% of sites face west (see Fig. 5.18). The mean site height above the plain is ca 20 m, with the majority of sites lying between 0-10 m above the surrounding land surface. All sites lie in close proximity to semi-permanent water, many adjacent to the Norman or Woolgar Rivers, which flood the surrounding low lying areas during the wet season (see Chapter 3). The greatest distance from water recorded was 818 m, while the shortest was ca 1 m.

An important factor influencing preservation of the rock-art at Middle Park is the construction of nests atop motifs by mud wasps, termites and small birds. Such nests were found to obscure art in 10 sites.

5.7 Associations between art and other archaeological evidence

Most of the recorded rock-art sites also contain other types of archaeological evidence, though 29.5% (n=26) have no other evidence for other cultural activity present (See Appendix 4). The main form of archaeological evidence is grinding surfaces, which occur in 48.9% (n=43) of art sites. Stone artefacts occur in 47.7% (n=42) of sites, and 21.6% (n=19) have grinding grooves.
5.8 Spatial analysis

Figure 4.1 shows the location of sites within the surveyed areas, and GIS analysis revealed very few statistically significant clusters and patterns occur in the patterning of particular motifs. Stencilled children’s hands, material culture items, and sites with associated archaeological evidence are found evenly distributed throughout the study area (See Appendix 1), though depictions of boomerangs are more common in the eastern section of Survey Area 3 (Fig. 5.19). Sites generally appear to cluster around this area, which is near the entrance to a major creek feeding into the Norman River known as Black Springs (Fig. 5.20). The area around Black Springs has not been exhaustively or systematically surveyed and it would be valuable to know whether any more painting or engraving sites (or other unusual variables) are located in this region.

5.9 Summary

The Middle Park Station rock-art assemblage is dominated by stencilled art (mainly of adult hands), the infrequent occurrence of pecked and abraded geometric motifs, and a small number of painted images. Generally sites contain less than 30 motifs, although two were recorded as having over 150 stencils. Most of these sites face south, and shelters range in size from 2 m to 40 m in length. Grinding surfaces and stone artefacts are commonly associated with rock-art, although sediment accumulation and subsequent excavation potential is minimal in most sites. Spatial analysis also indicates that sites cluster around the entrance to Black Springs in the eastern section of Survey Area 3. These results are interpreted and discussed further in Chapter 6, by integrating stylistic evidence and spatial data from both the study area and the surrounding rock-art provinces to explore broader themes of regionalisation, territoriality and inter-group interaction, and address the aims laid down in Chapter 1.
Figure 5.19: GIS map showing a cluster of boomerangs in the eastern section of Survey Area 3, near Black Springs.
Figure 5.20: GIS map showing the cluster of sites around the entrance to Black Springs
Chapter 6 Discussion

6.1 Middle Park rock-art in context: an archaeological perspective

In Chapter 2 an overview of the motifs, techniques and their frequencies found in four of the major Queensland rock-art provinces adjacent to the Middle Park study area was provided. Here I present an argument based on comparative information drawn from these summaries regarding the social implications of the results presented in Chapter 5.

The rock-art of Middle Park and Cape York Peninsula (CYP) differ greatly, with the primary disparity being the presence of highly regionalised painted figurative art at the latter. A greater range of stencilled and engraved motifs is also present in CYP, with the Middle Park study area lacking contact art and other unusual stencilled motifs such as ‘dolls’ or ‘human heads and shoulders’. Such divergence suggests northern groups had little contact with those in the Middle Park area, a phenomenon which may be attributable to the closed social networks operating in the fertile CYP region (David and Cole 1990:802-803; see also Lewis 1988 for similar arguments about Arnhem Land). Such environments allow larger populations to be accommodated, therefore increasing competition for resources, and subsequently necessitating stylistic variability in order to reinforce territorial boundaries.

The northern Queensland highlands, of which Middle Park is a part, has generally been regarded as falling within the Central Queensland Province (CQP), based on the similar predominance of stencilling. However, the results of this study demonstrate that although superficially comparable in content, the range and proportions of motifs are distinctly different. As outlined in Chapter 2, the diverse range of motifs depicted using all techniques in the CQP contrasts to the more limited range present in the NQHP, and it is these fundamental disparities which indicate that the two should be considered separate provinces. As such, it can be argued that social ties between the groups of each were not critical for survival in times of resource stress. However, within each region respectively, the relative degree of technical and stylistic homogeneity suggests that environmental and social conditions were such that open social networks were required to facilitate...
access to the resources of neighbouring groups in times of scarcity. In the NQHP the more limited range of motifs, restricted largely to hands and a small range of infrequently occurring material culture items, suggests that a lesser degree of artistic variability was required for territorial delineation than in the CQP, possibly owing to greater unreliability of resources. In light of this, it appears that a broad function of the art of the former, including that of Middle Park, was to create cohesion among groups, with only minor variations, such as the painted stick figures found at Esmeralda Station (Gorecki et al. 1996), indicating the presence of culturally distinguishable groups.

On a narrower scale, distribution of rock-art on Middle Park Station itself does not demonstrate the existence of spatial patterns within the landscape. It is not possible in this study to identify any stylistic boundaries or motif clusters that indicate tribal confines or areas of overlap, largely owing to limitations of survey strategy and the relatively small size of the study area. Although a cluster of unusual motifs, rare techniques and large sites was identified around the entrance to Black Springs, the motivation for intensive activity in this specific area cannot be interpreted. In order to accurately assess how social interaction, ideas exchange and cultural influence between groups is reflected in the art, Middle Park must be considered as part of the broader NQHP, as outlined above.

Lying to the west of Middle Park Station is the Mt Isa Province (MIP), which differs again in terms of techniques and styles. The art of the latter bears greater resemblance to engraving-dominated assemblages to the north at Chillagoe and to the central desert, owing to the predominance of pecked circles. Although pecked circles do occur at Middle Park, including those of the complex type, which are common in the MIP, they are present in only 5.7% of sites. Further, stencils are rare in the MIP. This technical contrast suggests that those occupying the Middle Park and Mt Isa areas did not exchange ideas regarding rock-art, perhaps indicating a lack of social ties between them, or chose not to incorporate the styles of the respective group into their own artistic tradition. The ethnographic evidence relating to this is discussed below.
6.2 The ethnographic evidence

Ethnographic data is an important source of information that can complement and build upon archaeological evidence, subsequently enhancing our ability to interpret social features of rock-art. For the purposes of this study, information regarding trade practices and other forms of social interaction are of particular interest, the primary source for which is Roth. Recording many aspects of Indigenous life in intricate detail, Roth (1897, 1910a) included over a hundred separate references to trade between regions sometimes over 200 km distant in northwest and central Queensland. The impact of such inter-group interaction, and subsequent ideas exchange, on rock-art styles is potentially great, thus ethnographic information regarding the degree and nature of contact between groups is highly valuable.

Roth (1897) described in detail trade in the Boulia, Upper Georgina, Leichhardt-Selwyn and Cloncurry districts, documenting that trade occurred more or less continuously between different groups throughout various districts, though he does not specifically refer to the study area in his discussions. He highlighted the nature of such interaction in the following manner:

...comparatively large numbers of people of both sexes may be congregated sometimes at these large markets. Thus it happens that ideas are interchanged, superstitions and traditions handed from district to district, and more or less modified and altered in transit, that new words and terms are picked up, and that corroborees are learnt and exchanged, just like any other commodities. (Roth 1897:136)

This comment highlights the importance of trade, not only for exchanging goods, but also as a means of transferring intangible aspects of culture, potentially including methods of rock-art production and styles. Roth (1897:132) also described trade routes generally, noting that they invariably ran along watercourses, many were ‘laid down since time immemorial’ and they were ‘of greater or less extent rigidly adhered to’. As described in Chapter 3, Middle Park has two major rivers running across it, the Norman and the Woolgar; however, it is possible that these were overshadowed in terms of human movement by the larger Flinders River, which flows from west-east approximately 100 km to the south. Although the latter is not specifically mentioned by Roth to have been a preferred trade route, this might explain the lack of stylistic variability at Middle Park, as the study area may
have been bypassed to the south by people from neighbouring groups, thus limiting opportunities for social interaction and ideas exchange. Only one mention is made by Roth to the ‘Woonamurra’ (Wanamara) group in relation to trade, in the region surrounding Julia Creek, which is approximately 200 km west of the study area. It is possible that people travelled such a distance for trade, in which case, according to Roth (1897:136), they may have traded fishing nets, woomeras, spears and forehead nets with groups from the Cloncurry district, though it is not stated what the Wanamara received in return. In light of this absence of information, direct inter-group influences on rock-art in the Middle Park area are largely unknown.

Roth’s ethnographic data also provides support for conclusions regarding social interaction drawn solely from the rock-art evidence, including the notion that the Indigenous groups of CYP did not interact directly with groups further south or west. When considered exclusively in terms of style and techniques, the lack of stylistic influence or overlap between the regions indicates the absence of social relationships. This evidence is complemented by the fact that CYP trade routes are known to have been geographically restricted (Roth 1897). Together with the proposition that the region was comprised of closed social networks, the ethnographic evidence potentially explains the lack of stylistic similarity between the CYP and the other provinces. Furthermore, interviews held by David with a number of European settlers in Chillagoe, indicated that groups from the area had no significant contact with those adjacent (David and Cole 1990:794). Two informants independently noted that the Palmer (northern) people were hostile towards the Chillagoe people. This information further supports the notion that groups in CYP had little or no contact with those beyond the peninsula, as the hostile relationship between those of northern and southern CYP may have acted as a barrier.

The stark stylistic differences between the study area and the Mt Isa region may also be explored from an ethnographic perspective. Pearson (1949:197) and MacGillivray (1886:342) recorded that the Kalkadoon of the Mt Isa Province had a hostile relationship with adjacent, weaker groups, such as the Wanamara, from whom they captured women and stole food. Roth (1897:135) also indicated the former were ‘the most savage of the aboriginals [sic] under consideration’ and only
travelled short distances from their own country. The negative nature of any interaction and the distinctly antagonistic relationship between the Mt Isa Kalkadoon and adjacent groups may have resulted in the maintenance of stylistic dissimilarity for territorial delineation purposes.

Within the NQHP, the relatively homogeneous nature of the art has been interpreted above as indicating the presence of open social networks in a harsh environment. Under such circumstances, it has also been proposed that groups keep population levels below maximum carrying capacity to allow for fluctuating and unreliable resource availability (Morwood 1988:33). Support for this interpretation is further provided by MacGillivray (1886:340), who stated that ‘when the Whites first entered on the extensive territory of the Oonoomurra [Wanamara] in 1865 the tribe is estimated to have numbered only two hundred souls’. The low population levels observed during the contact period further indicate the probable operation of open social networks, which are in turn reflected in the rock-art.

On Middle Park Station itself, spatial analyses revealed a cluster of unusual rock-art variables in the vicinity of Black Springs, a large seasonal water source. Although the reason for such intense artistic activity in this one area cannot be explained based solely on the spatial data, MacGillivray’s (1886:342) observations may shed some light on this. Stating that the people of the Flinders and Cloncurry Rivers region ‘stand much in awe of barrakoo, or evil spirits, said to dwell in large waterholes and extensive scrubs’, it appears plausible that such a belief could be the motivation for increased rock-art production around Black Springs.

Alternatively, this pattern may reflect increased art production further into the heart of the ranges. Surveys were conducted primarily on the outskirts of the Gregory Ranges, thus the increase in site assemblage sizes and density of sites further upstream along the Norman River possibly indicates that the core rock-art area is in the heart of the range, and that surveys captured only the fringes of the assemblage. It is known that Indigenous trade routes often ran through mountain ranges, and the Woolgar goldfield was in fact discovered by miners from the Etheridge field to the north, who were probably following Indigenous pathways.
south through the Gregory Ranges. The probability of more intensive artistic activity along these routes throughout the range is therefore high, although additional research is required to assess this proposition.

6.3 Material culture in the rock-art

Material culture items depicted in the rock-art at Middle Park provide the only surviving physical evidence of organic objects used by Indigenous groups in the area. Since the items themselves have long-since decayed and archaeological excavations have largely produced only stone artefacts and charcoal (see Wallis 2003, 2008; Wallis et al. 2004), the stencilled art allows identification of various material culture objects. In this case, boomerangs, spear throwers, hafted split-handled stone axes, digging sticks and shields are represented in the rock-art assemblage.

6.3.1 Boomerangs

Across Australia, boomerangs generally fall into one of two categories: hunting/fighting or returning/toy (e.g. Bennett 1927:409; Davidson 1936:90). The former are larger, heavier and asymmetrical, with the latter characterised by their small size and central bend (Bennett 1927:409; Roth 1897:128). Returning boomerangs are thought to have represented only a small proportion of boomerangs traditionally used by Indigenous groups and were regarded as toys (Davidson 1936:90). A single stencilled boomerang in the Middle Park rock-art fits the description of a returning boomerang (Fig. 6.1), the remaining 18 appearing too large and asymmetrical and therefore classified as the hunting/fighting type.

Roth (1897) identified four separate types of fighting boomerangs: the ornate, fluted, plain and hook types. Only one of these, the ornate boomerang, was reportedly manufactured by the Wanamara. Unfortunately, it is impossible to positively identify the types of fighting boomerangs in the Middle Park rock-art based solely on these descriptions, as the sizes for each recorded by Roth (1897:143-146) overlap, and it is often the decorations, not depicted in the rock-art, which are the defining features. A further factor which also limits comparison and classification of boomerangs is the degree of individual variation that is inherent in
making such implements. Although broad types can be established based on
general shape, size and decoration, as in Roth (1897:143-146), their specific type
and function is often indeterminable. A single stencilled boomerang was identified
at site MP84 as having decorative pecked infill; while it is similar in size to Roth’s
fluted and ornate types, the lack of other defining features means that it cannot be
classified.

Figure 6.1: Possible returning boomerang.

Overall, it can be established that nearly all boomerangs stencilled at Middle Park
are of the hunting/fighting type. The motivation behind their production cannot be
known owing to the lack of local traditional knowledge or ethnographic
information. However, in CYP Indigenous informants advised Trezise (1971a:14)
that weapons were stencilled to increase luck in hunting; it is possible that this
belief was also present among the Middle Park groups.

As described above, the other major boomerang category is the returning/toy
boomerang. Although these are small and used in games (see Roth 1897:128-129),
they should not be confused with children’s boomerangs (Haagen 1994:46).
Children’s boomerangs are more likely to be an imitation of fighting or hunting
types, though also used in play. Haagen (1994:46) reported that in Central Australia,
children used boomerangs to hunt small game and in parrying games requiring
shields. A toy shield was collected by Roth in Cape Grafton (Kahn 1996:81),
indicating their presence in northern Queensland. Despite the abundance of children’s hand stencils, no children’s boomerangs, or other weapons, have been identified in the rock-art at Middle Park. The only stencilled boomerang small enough to have been used by children has a central bend, suggesting it is of the returning type, commonly used in adult games (Roth 1897:128-129).

6.3.2 Shields

A single, narrowly shaped shield stencil was recorded in site MP84 at Middle Park, depicted in red ochre with linear pecked infill and a painted yellow vertical stripe down the centre (see Fig. 5.12). The presence of this shield in the rock-art is interesting, as no scar trees have been recorded in the area despite extensive surveys. Further, trees known to have been used traditionally for making shields, such as box and red gum, are not typically found in the area today. It is therefore possible that in the study area shields were manufactured elsewhere and traded in, although there is no direct ethnographic evidence of this. However, given the operation of steam engines related to stampers on the goldfield at Middle Park in the mid- to late 1800s, it also possible that trees bearing shield scars were cut down for fuel, along the Woolgar River at least. By the end of the 19th century in CYP shields were not often being used and were only made, if at all, by very old men, which may have also been the case in the study area, perhaps accounting for the absence of ethnographic records regarding their distribution. Unfortunately, the decoration on the shield is also unable to shed light on the possible origins of the object, or the possibility of local styles, as Roth’s collection of shields suggests that such adornment was not standardised according to region, with no two shields in the collection having the same decoration (Kahn 1993:64). Kahn (pers. comm.), however, has advised that the shield motif at Middle Park is typical of those found more broadly in northwest Queensland.

From ethnographic parallels in other regions, it can be established that, owing to its narrow shape, this type of shield would have been used at close quarters to ward off blows, as opposed to those used for intercepting spears and other projectile weapons (Hambly 1936:39). Roth noted such variation in the size and shape of shields in various regions of CYP. For example larger, more rectangular shields were
found in regions from the Bloomfield and Endeavour Rivers south to below Cardwell, and along the inland mountain ranges, where large swords were used, than those found on the Tully River (Kahn 1996:32). The lack of large, heavy fighting weapons in the stencilled art of Middle Park further supports the notion that it was used for fighting at close range, probably with smaller weapons such as boomerangs and clubs.

6.3.3 Stone axes

Two hafted, split-handled stone axes were depicted in the MP84 site. The split-handle is distinctive, as many axes elsewhere in Queensland had their handles bound so their proximal ends were joined (McCarthy 1976:47). Bennett (1927:41) described stone axes used by the Dalleburra group, a direct neighbour of the Wanamara, as being manufactured by fastening a stone head with gum of the beef-wood tree into a loop of willow-wood, which was bound tightly round just below the axe-head with kangaroo tendon. Evidence from the stencilled rock-art at Middle Park and Bennett’s description indicate a possible technological preference for production of split-handled hafted stone axes in this region.

The production and presence of stone axes at Middle Park is evidenced by their stencilled imprints, and the literally thousands of axe-grinding grooves found throughout the area, though no suitable quarries occur in close proximity. Whilst a handful of unhafted axe heads have been found by pastoralists, other than small ground stone flakes, none have yet been recovered archaeologically (Lynley Wallis pers. comm.). The abundance of axe-grinding grooves suggests that axe production was prolific in the area, and it is clear that at least some were retained for local use as indicated in the rock-art. However, the small number of axes found compared with the large number of grooves suggests that a great percentage of those manufactured at Middle Park did not remain in the area. It is known through both ethnographic and archaeological evidence that the Mt Isa region was a major source of the stone used for axes, and those made from high quality Mt Isa stone have been found as far as Lake Eyre in South Australia (McCarthy 1976:50; Tibbett 2003, 2005). Despite hostilities between the Kalkadoon of Mt Isa and surrounding groups, as described earlier in this chapter, Roth (1897:135) indicated that trade
was common; therefore it is probable that the people of Middle Park acquired the raw material in large quantities from Mt Isa, processed it locally and then traded it on.

6.3.4 Spear throwers

Two stencilled spear throwers occur at MP84. One of these is partially covered by a termite nest, leaving only the distal end visible. The other, for which measurements could be taken, matches a description by Bennett (1927:409) of those used by the neighbouring Dalleburra group (Fig. 6.2), suggesting possible cultural contact between these geographically close groups:

...a flat stick about 30 inches [76.2 cm] long and two inches [5.1 cm] wide, with a peg gummed and tied to one end at an acute angle; the other end had a lump of gum with two shells enclosing it and forming a knob which prevented the stick from flying out of the hand when the spear was thrown.

Ethnographic evidence suggests that groups in the Flinders and Cloncurry Rivers District used spears of a variety of sizes, and only the smaller ones were thrown using a spear thrower (MacGillivray 1886:341), in order to double the leverage of the arm and increase the momentum of the throw (Bennett 1927:409).

Figure 6.2: Spear thrower at MP84.
6.3.5 Digging sticks / clubs

Two digging stick stencils were recorded at Middle Park in MP84, one of which is very faded and partially covered by termite sheeting. They were identified as such owing to their shape and size, however the association of the more complete of the two with a shield suggests the alternative possibility that it is a club (Fig. 5.12). Although it is thinner than is typical for clubs (Kate Kahn pers. comm.), Davidson (1936:86) suggested that digging sticks were probably used for fighting in all Australian regions when other weapons were not available. Furthermore, he also indicated that in many places, including north Queensland, clubs had sharpened ends, apparently for digging (Davidson 1936:85-86). Such evidence means that the objects in the rock-art at MP84 cannot be positively identified as either clubs or digging sticks, although the association of one of them with a shield supports the notion that whatever their primary function, digging or fighting, in this instance they are likely to be depicting a weapon.

6.4 Hand variations: signals, mutilations or deformities?

It is important to note when considering the hand variation data from Middle Park that the small number of these motifs limits the extent to which reliable conclusions regarding them can be reached. Further, it has been suggested by Wright (1985:5) that hand variations should be interpreted by analysing their archaeological context, especially in relation to burial sites, with interpretations including the motifs indicating the totem of the deceased, or the rank of initiated visitors to the site. However, because no contextual evidence exists at Middle Park (i.e. no burials or other unusual associated archaeological evidence) no such interpretations can be made for the study area.

At least three of the hand variation motifs in the Middle Park rock-art assemblage appear to be genuine instances of a digit missing, with the size and shape of each indicating that they were created by three different individuals. On this basis, it appears that some people in the Middle Park area had amputated digits; however, the lack of ethnographic parallels means that the purpose or significance of this cannot be understood. Further, whether digits were purposely mutilated for cultural reasons or resulted from accidental harm and subsequent amputation is
difficult to determine from rock-art evidence alone. The only recurring motif identified as representing cultural mutilation is the absence of the little finger, found in two sites. It is known ethnographically that amputation of this digit was common among women in many coastal Queensland regions, and was also practiced by the Kalkadoon around Mt Isa (Roth 1910b:42-43). In light of this, it is possible that the presence of these stencils indicates the presence of people from other regions at Middle Park, perhaps arriving through inter-group marriage, as opposed to the practice of mutilation by the people of the study area themselves. If the latter, we might expect to have found more such instances in the rock-art assemblage. Roth (1908:1-2) indicated the importance of exogamy amongst northwest Queensland groups, stating that ‘even marriage...whether by betrothal, authority, mutual attachment, inheritance or exchange, must at least be regulated according to the primary exogamous groups of which the contracting parties are members’. Wright (1988:69) also indicated the existence of this practice by stating that ‘the Wanamara would contract wives from, as well as foster amicable discourse with their neighbours’. As outlined previously, it is known ethnographically that the Kalkadoon stole women from the Wanamara, and although not recorded, it is possible that the opposite also occurred, thus potentially introducing women with this cultural mutilation to the study area. The presence of this particular hand variation is also revealing in terms of the function of sites at Middle Park, as it indicates the active involvement of women in rock-art production.

One of a further two motifs which could not be positively identified as either a mutilation or manipulation stencil is unusual in that it appears to be a deformed hand (Fig. 5.1G). However, whilst Roth (1910:77) did note the presence of congenital deformities among Queensland Indigenous groups, these were all related to the feet. It seems unlikely this ‘deformed hand’ stencil was of a true deformity; rather, it is possible this effect was created by shifting the hand before stencilling was complete or by using two hands.

Another explanation for hand variation stencils is that such motifs are evidence of a sign language observed among many Indigenous groups in Queensland (e.g. Morwood 1979; Walsh 1979:36; Wright 1985). Despite such a language having been noted in northwest Queensland by Roth (1897:71), only one of the variations, the
crooked fingers (Fig. 5.1F), present in the rock-art at Middle Park resembles a documented signal. A hooked forefinger was noted as occurring around Rockhampton where it meant ‘goodbye’, pointing in the direction of the person addressed (Roth 1908b:91). Nevertheless, the distance between the region in which the signal was observed and the study area means that drawing parallels between them is tenuous at best.

A major obstacle when attempting to interpret the variations as signals is the fact that the ethnographically recorded sign language typically involved movement of the hands or arms, as opposed to static signs. Roth (1897:71) stated that ‘the sign of interrogation conjures up the idea of a question, but the nature of the query will depend upon what has gone before or is coming after’, thus indicating that the meaning of the signs was also often dependent on their context. However, Moore (1985), in response to Wright (1985), suggested the possibility that for people who were highly familiar with the sign language through frequent use, the movement was not essential to convey the meaning. Although this is a plausible argument, without such an intimate knowledge of the language it is difficult for contemporary researchers to identify similarities between the signs in the rock-art and those documented by ethnographers. It is also important to note here the likelihood that early ethnographers did not necessarily include the complete range of signs used in Indigenous sign languages. In light of the lack of ethnographic equivalents, it cannot be firmly stated that the hand variations at Middle Park are evidence of the existence of sign language.

6.5 Rock-art function(s)

As outlined above, this study has used spatial and comparative rock-art data to explore inter-group relationships, however analysis of site context on a smaller scale also has the potential to reveal elements of the social context of the art. Rock-art is often thought to have served a spiritual or ceremonial function, however the available evidence suggests that rock-art at Middle Park was more secular in purpose, as described below. This notion is supported by the seven categories of hand stencil function proposed by Moore (1977:322). All ritual explanations offered involve the association of hand stencils with figurative motifs, the latter of which
are absent at Middle Park; further, the lack of associated burials suggests the art did not serve a mortuary function as has been suggested to be the case in the Central Queensland Highland Province (Geary 1939; Morwood 1979, 1984; Quinnell 1976). It therefore appears likely that Middle Park art was produced in a domestic context, perhaps as signatures of individuals (cf Cole 1995) or to record a visit to a site (Moore 1977:322), and that viewing of it was, in most cases, not restricted.

The probable presence of women in sites at Middle Park, evidenced by women-specific hand mutilation, digging stick and infants’ hand stencils, enhances the notion of the rock-art’s secular nature. In the past, it has been assumed that rock-art production was carried out predominately by men (see Baglin and Mullins 1976:26; Crawford 1968: 37; Roth 1904 as cited in Cole 1995:63; Spencer and Gillen 1899[1968]:614; Walsh 1992:50). Such assumptions arose largely through the androcentric nature of early anthropological studies, which were based on the observations of European men, who worked primarily with Aboriginal men (Smith and O’Donnell 2007:105), meaning that women’s roles and activities often went unrecorded. Also, the long-established link between men and power within Western societies influenced the perceived ability of women to create spiritual rock paintings, and such notions were not considered, or ignored (Smith and O’Donnell 2007:105). Although it is now recognised that women were responsible for the production of sacred or ceremonial rock-art in some regions (Smith 1991), the context of women’s stencils at Middle Park, always placed alongside those likely created by men or children, suggests that the art did not have a restricted audience, and thus was more likely to serve a more everyday purpose.

Since the emergence of feminist theory in the 1970s and 1980s, results of several investigations have revealed that women were involved in rock-art production (McDonald 1992, 1995, 1998; Smith 1991). For example, McDonald (1992, 1995) demonstrated the presence of women at the Great Mackerel Rockshelter, located in the Sydney Basin, through a combination of excavated material and rock-art evidence, the latter comprising stencils of women’s and babies’ sized hands and digging sticks in the recent art phase. Furthermore, Smith (1991:46) described the presence of women’s sites in the Victoria River District, Northern Territory, from which men were restricted or subject to various limitations. The art in these shelters
was reported to be not readily distinguishable in style from other sites, including those of men (Smith 1991:46). Such evidence indicates the likelihood of women as producers of rock-art, and thus it is highly plausible that women played a significant role in rock-art production at Middle Park.

Children’s (sized) hand stencils are found evenly distributed throughout sites in the study area (Appendix 1). This, combined with the presence of women, and perhaps production of art by them, supports the notion that viewing of art sites was not restricted. Although the children’s stencils alone do not prove a secular nature, as it is highly likely that children may have been involved in rock-art production in ceremonial contexts, it is the combined evidence of women’s, men’s and children’s stencils appearing together that suggests the former. Additionally, the presence of associated archaeological remains in the majority of art sites, including axe grinding-grooves, grinding surfaces and stone artefacts, indicates that the sites were used for everyday activities, as opposed to being visited only for ritual or ceremonial events. Furthermore, at Esmeralda Station, 150 km northwest of Middle Park, Gorecki and Grant (1994) argued that grinding surfaces in rockshelters were indicative of grass-seed grinding. However, the relative abundance in the study area of these surfaces in rockshelters containing art, compared to open sites, suggests that they were multi-purpose and/or used for pigment production. It would be useful to conduct residue analysis of grinding surfaces at Middle Park, as the results would have implications for the above argument regarding the function of these surfaces and perhaps, by implication, of the art.

6.6 Chronology

Given the constraints of this project, it was not possible to undertake any absolute dating. However, based on differential weathering and Maynard’s tripartite model a basic sequence can be proposed for the surviving rock-art assemblage. Deeply abraded circular motifs at sites such as MP107, characteristic of the Panaramitee style (Maynard 1976, 1979), are sometimes covered with a mineral skin. On this basis, it appears these motifs may be of considerable age, and most likely comprise the earliest art in the study area. This conclusion is supported by absolute dating of rock-art at Mickey Springs by Morwood (1990, 1992, 2002) as described in Chapter
2, where evidence demonstrates that engraving was practiced by groups in the wider NQHP from at least the early Holocene. Although no direct evidence of such activity has been found at Middle Park, excavations in the study area have revealed early dates for occupation, thus there is potential for similar evidence of rock-art production to be found in the future. Four rockshelters at Middle Park have been excavated, one of which contains pecked engravings (GS1), while all of them contain stencilled art (Wallis 2003:151-156). Three of these sites (MP76, 83, 102) yielded Holocene dates for occupation, the earliest being 6,090±100 BP; the fourth site, GS1, has been dated to the pre-LGM period, with uncalibrated radiocarbon dates indicating occupation from 600 - 28,400 BP (Wallis et al. in press; Wallis 2004:47). Such evidence supports the possibility that art in the study area is potentially of considerable antiquity; the presence of ochre fragments in the excavated deposits of GS1 offers a further avenue through which to consider the antiquity of painted art in the area.

Following engraving is a phase that commences with the production of stencilled art using a variety of pigment colours in shades of red, purple, orange and yellow; it appears that this style continues until the cessation of art production in the area in the contact period. It is difficult to ascertain the motif range depicted during this phase, although preservation and a limited amount of superimposition information suggests that material culture stencils did not become part of the assemblage until recently. In light of observations regarding differential weathering, particularly the heavily weathered nature of hand stencils in many sites, it appears that the motif range was largely restricted to these during the initial stages of stencilled art production.

The most recent stage involves the commencement of lightly pecked engravings (that occur atop stencilled art) and the use of white pigment. Owing to the shallow nature of the pecked motifs, and their subsequently reduced preservation potential, it appears as though this technique was practiced into the latest period of rock-art production. In the case of white motifs, the pigment used to create them is widely accepted as deteriorating at a faster rate than other colours (Bednarik 1994:70-71), which, when combined with their frequent occurrence in recent superimposition layers, suggests their relatively recent production.
6.7 Preservation

As noted earlier, an intrinsic limitation of rock-art studies is the impact of deterioration as a result of physical and chemical weathering processes. The nature of the underlying geology on which the art is produced also influences preservation, as coarser grained surfaces, such as the sandstones of Middle Park, are highly susceptible to the effects of corrosion and erosion (Rosenfeld 1988:19). Such forms of deterioration are fundamentally caused by the impact of moisture on chemical processes within the rock, and the movement of water through the surface of a rock exposure (Dragovich 1976:56; Lal 1970:142; Rosenfeld 1988:19). The effects of water are readily observable in many shelters in the study area, as panels of mineral accretions, characterised by dramatic discolouration of the rock, indicate areas of surface flow. For example, in site MP84, a panel of stencilled art has been almost completely obliterated by this natural process, the only indication that the surface had been used for art being the remains of a hand stencil now partially covered by the accretion. As discussed in Chapter 3, the semi-arid tropical climate of the Middle Park area also impacts rock-art preservation. Continuous wetting and drying of surfaces during the wet-dry seasonal cycle can result in the formation of a layer of gypsum beneath the rock’s surface, creating an insulation barrier responsible for differential surface expansion during extreme temperature fluctuations, which creates a plane of weakness in the rock (Walston and Dolanski 1976:5). When the gypsum expands upon contact with moisture during the wet season the surface begins to exfoliate and crumble, consequently removing pigment and evidence of engravings in the process. This is particularly evident at Middle Park at MP107 whereby panels of circular motifs have begun eroding in some areas, making motifs almost impossible to identify (Fig. 6.3).
Another major cause of damage to rock-art at Middle Park is nest creation by mud building organisms. Such nests are found in rock-art sites across Australia, particularly in northern regions, and are commonly made by termites (*Isoptera*), mudwasps (*Hymenoptera*), swallows (*Hirundo neoxena*) or martins (*Cecropis ariel*) (Chaloupka 1978:78; Rosenfeld 1988:43; Sullivan 1978:71). Rock-art is negatively affected when nests are constructed over the top of motifs, and their impact can vary from isolated nests partially covering images (Fig. 6.4), to clusters which obscure panels of art (Fig. 6.5). Furthermore, animals such as kangaroos, wallabies, feral pigs and cattle often have a severely detrimental impact on rock-art sites. Art is often removed by animals rubbing against it, and their movement in shelters results in dust being raised, adhering to rock-art panels and reducing the clarity of images (Chaloupka 1978:79; Sullivan 1978:72). The effects of this have been widely researched, mainly in the context of human visitation and subsequent conservation strategies, which has resulted in construction boardwalks and fencing at many sites (Brown 1995; Brown *et al.* 1995; Sullivan 1978:72).
Preservation factors also offer an explanation for the trend of south-facing art sites. Although many drainage lines in the study area run north-south, with sandstone
outcrops bearing suitable surfaces for art production occurring on both sides, art is rarely found on the west facing ones. While cultural preference is a possible explanation for this pattern, it is also likely that art simply does not preserve as well in west facing shelters, due to its prolonged exposure to the sun.

Overall, the majority of rock-art at Middle Park is poorly preserved, with many of the motifs already deteriorated beyond recognition, thus recording the assemblage before it is destroyed entirely is essential. Also, as rock-art is a particularly visible reminder of traditional lifeways, visitation of these sites by members of the WVAC is a valuable way of reconnecting with their culture and Country. Preservation of these sites therefore plays a significant role in the process of cultural revival. Furthermore, the results presented here have implications for future cultural tourism in the area, as management of the issues outlined above are critical to the long-term survival of sites.
Chapter 7 Conclusion

This investigation of the previously undescribed rock-art at Middle Park Station has broadened our knowledge of Queensland’s rock-art and enhanced our understanding of pre-contact social interaction between Indigenous groups across the region. Through a detailed analysis of the relationship between style and space, and by integrating ethnographic evidence, the social implications of the archaeological evidence have been demonstrated. This chapter returns to the research aims laid out in Chapter 1, and summarises the ways in which they have been addressed throughout this thesis. It concludes with a discussion of future research avenues that have become apparent during the course of this research.

7.1 Research aims

The initial aim of this study was to summarise previous research conducted in the major rock-art provinces of Queensland, including an overview of specific styles and techniques present in each, in order to contextualise the art of Middle Park. Following the characterisation of the Middle Park art, returning to this regional summary allowed an assessment of the proposition that the study area is an extension of the Central Queensland Province.

A summary of previous studies of Queensland rock-art was provided in Chapter 2. This chapter described in detail the motif and technique types and frequencies in each Province, thus allowing the art of Middle Park to be compared and contextualised at a regional level. It was argued that the elaborate figurative art of CYP and the engraving-dominated assemblages of Mt Isa provide a distinct contrast to the primarily stencilled art of central Queensland and the northern Queensland highlands, including Middle Park. Owing to similarities observed between the latter Provinces, it had been suggested that the Central Queensland Province extends as far north as Croydon, thus encompassing the study area (e.g. Morwood 1984:361). However, the detailed comparison of motifs and techniques conducted in this thesis has shown that whilst the assemblages are superficially similar, the significantly more limited range of stencilled, painted and engraved motifs present at Middle
Park, and the wider Northern Queensland Highlands Province, suggests two stylistically separate Provinces.

Comparative data regarding surrounding rock-art provinces was also combined with spatial information and considered in terms of how social interaction, ideas exchange and cultural influence between groups is reflected in art. Unfortunately, on a local level, the spatial analysis of rock-art sites at Middle Park conducted in this study was strongly, and unavoidably, influenced by the chosen survey strategy. Consequently, our perception of site distribution is a product of the methodology employed, as opposed to a true reflection of Indigenous cultural practices across the landscape. As such, site distribution overall could not be analysed as fully as would have been liked. However, through the use of GIS mapping, a cluster of unusual variables was identified (including paintings, engravings, hand variations, hand prints, animal motifs, unusually large sites, and the presence of white pigment) around the junction of the Norman River and Black Springs tributary (Survey Area 3). Although this area was clearly used intensively for rock-art production, the motivation for concentrating artistic interests around this particular landscape feature cannot be interpreted owing to the absence of Indigenous people with knowledge of local rock-art production processes and meaning.

On a broader spatial scale, results of the comparative analysis of styles and techniques were employed in an investigation of how social interaction, ideas exchange and cultural influence between groups may be reflected in the art across Queensland. This was achieved by employing the principles of the information exchange theory of style, which emphasises the notion that stylistic homo- or heterogeneity develops according to resource availability, population density and the subsequent need to facilitate social interaction or delineate territory. It was thus concluded that the people occupying the Middle Park area were unlikely to have had any contact with those of CYP and rarely interacted directly with groups from the adjacent Mt Isa region, if at all. This was indicated primarily by the differences in motif types and techniques employed in the respective regions. In contrast, contact between the Middle Park groups and those of central Queensland was more likely to have occurred, possibly facilitated through stylistic similarities. However, disparities between the two assemblages, and the greater degree of
heterogeneity exhibited in the latter, indicates bounding or territorial activity, and it is therefore unlikely that the groups of each Province were reliant on each other during periods of resource stress.

Owing to the similar range of techniques and motif types depicted, this study confirms Middle Park as being situated within the North Queensland Highlands Province (Morwood 2002:232). The significant degree of homogeneity present within this assemblage indicates that less stylistic variation was required for territorial delineation in this challenging environment with open social networks. Stylistic similarity across the region was interpreted as having functioned to create cohesion amongst groups, with only minor regional variations indicating the presence of culturally distinguishable groups.

An investigation of the range of material culture items depicted in the stencilled art of Middle Park was also conducted. This involved reviewing the ethnographic works of Roth (1897, 1901-1910) in order to identify and describe artefact types present in the general study area, thus extending currently limited knowledge regarding the region’s traditional toolkit. Material culture items depicted in the stencilled art included boomerangs, shields, stone axes, spear throwers and digging sticks or clubs. It was found that the majority of boomerangs depicted are the hunting/fighting type, with only one returning boomerang represented. The single shield stencil was identified as one used for combat at close quarters, and was possibly not manufactured in the study area owing to the lack of suitable trees. Further, as a result of its association with the shield, an object identified initially as a digging stick had its classification questioned, and the possibility of its function as a fighting club put forth. Based on Bennett’s (1927) recordings, the spear throwers and hafted stone axes were both found to represent the preferred form of these items in the wider geographic region, with the split-handled axe identified as a particularly specific regional variation of common hafting methods.

Hand stencil variations were also analysed in order to determine whether they are the product of mutilated hands or were created by simply bending over digits. This theme was considered in light of ethnographic evidence regarding Aboriginal sign languages and cultural mutilation, in order to ascertain the existence of such
practices in the Middle Park area. Of the 19 hand variation stencils recorded at Middle Park, 14 were found to have been produced by bending over digits, three represent true digital amputation, while two could not be positively classified. Owing to the small number of these stencils and a lack of ethnographic parallels, the use of a sign language among the Middle Park groups could not be confirmed. A key component of such languages, as described by Roth (1897:71), was movement of the hand or arm, which cannot be expressed in rock-art. Although it is acknowledged that static representations of these signals may have been recognisable and interpretable by people highly familiar with them, their meaning is now lost.

One type of hand variation stencil, the absence of the little finger, was identified as representing genuine digital amputation. Ethnographic evidence from many Queensland coastal regions and Mt Isa indicates that amputation of the little finger was a common practice among Indigenous women (Roth 1910b:42-43). Representations of this mutilation in the rock-art of Middle Park was interpreted as demonstrating one of two things: either the practice of such mutilations by people in the study area, possibly indicating the exchange of ideas between groups, or the presence of women from the regions ethnographically known to perform this amputation at Middle Park, perhaps present as a result of inter-group marriage. Ethnographic evidence, outlined in Chapter 6, indicates that, although hostile, relationships existed between the Kalkadoon of Mt Isa and surrounding groups, such as the Wanamara. Although exogamy is unlikely to have been practiced between them, the theft of women is reported to have occurred in the region (Roth 1897:135). The small number of these stencils suggests that this amputation was not commonly practiced by the people of the study area themselves, thus indicating the possible presence of women from neighbouring groups.

7.2 Future research

As noted above, the rock-art assemblages within the Northern Queensland Highlands Province require further research in order to gain a more detailed understanding of their internal variability. Further studies in the region will allow the relative homo- or heterogeneity of its assemblages to be determined, thus
testing the conclusion reached in this thesis that the art of the northern highlands is largely homogeneous. Subsequently, on the basis of the assumption that similar styles and motifs reflect open social networks, the nature of social interaction among groups in the Northern Queensland Highlands Province can be further elucidated. Additionally, it may be beneficial to conduct more comprehensive surveys on Middle Park Station. Surveying a wider variety of landscape units would assist in establishing whether or not there is a difference between art located in close proximity to water sources, and those in less habitable environments.

In order to enhance the accuracy and viability of the chronology proposed in this thesis for the rock-art of Middle Park, and the wider Province by extension, it would be highly valuable to carry out a program of absolute dating of rock-art in the area. As described in Chapter 5, mud wasp nests have been found to cover motifs in at least 10 shelters, and thus the potential exists to conduct AMS radiocarbon dating of organic material found in these, as well as possibly OSL dating of the sand grains in order to produce minimum ages for art production. Further, in one shelter, a deeply abraded panel of circular motifs was found to be covered with a mineral skin, which may also be potentially dated. No excavations have thus far been conducted against shelter walls, therefore the potential to uncover buried art panels has not been explored, which is also a promising future research avenue.

7.3 Conclusion

Rock-art on Middle Park Station offers useful insights into the lives and behaviours of those who traditionally occupied the study area. Through detailed analysis of motifs, interpretations regarding the traditional toolkit of the area, cultural mutilation, sign language and site function have been achieved. Recording and analysis of the art in this previously undescribed region have also contributed to our knowledge of Queensland’s rock-art, and adopting a spatial-stylistic approach on a broad scale has allowed inferences to be made regarding social relationships, territoriality and information exchange. The value of rock-art research in exploring symbolic behaviour in Aboriginal societies is irrefutable, and it is through such regional studies as the one presented in this thesis that an increasingly holistic understanding of Australia’s rock-art record is being gradually achieved.
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Appendix 1 GIS maps

**Legend**
- No paintings or engravings
- Engravings only
- Paintings only
- Both paintings and engravings
- Watercourse lines
- Native vegetation areas

**Distribution of sites containing paintings and engravings**

Datum: AGD 1966
Projection: UTM Zone: 54

[Map showing the distribution of sites containing paintings and engravings along the Norman River and Black Springs.]
Distribution of sites containing material culture stencils

Legend
- No material culture
- Material culture
- Watercourse lines
- Native vegetation areas
Distribution of sites containing hand variation stencils

Legend
- No hand variations
- Hand Variations
- Watercourse lines
- Native vegetation areas

Datum: AGD 1966
Projection: UTM
Zone: 54
## Appendix 2 Hand stencil measurements

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