Beeswax Rock Art & Sugarbag Dreaming:
Today's Dreaming, Yesterday's Rock Art

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Thesis submitted to complete the requirements for the degree of Bachelor of Archaeology
(Honours), Department of Archaeology, Flinders University of South Australia
October 2006
Declaration

I certify that this thesis does not include any material that has not been previously submitted for a degree or diploma in any University without acknowledgment; and to the best of my knowledge does not contain any material previously published or written by another person without due reference within the text.

Faye Prideaux  23 /10/2006

Cover image is Motif 10 from Namarnkol Shelter (tracing by author).
Cautionary Note

The author has worked closely with and been guided by Kunwinjku people from western Arnhem Land throughout the fieldwork for this thesis. Permission has been sought to take the photographs included in this thesis and to reproduce them in this document. This thesis does, however, contain the names of some deceased Indigenous people. Care should be taken not to mention these names of these people in the areas concerned as this may cause distress to relatives.
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Abstract

This thesis explores the possibility of using cultural traditions associated with Sugarbag Dreaming to assist with the interpretations of a unique rock art technique made from beeswax. ‘Sugarbag’ is an English translation, used generally across the northern half of Australia to describe the collected contents of the native Australian beehives. The idea of an association between sugarbag traditions and beeswax rock art is not new but more an assumption than a clearly argued connection because materialistically there is a clear association.

The study of beeswax rock art is reasonably young and the ethnographic information connected to this rock art technique is limited. This in itself is interesting, as there are still insights available through ethnographic research on some of the older rock art techniques but not apparently beeswax rock art, of which the majority of motifs appear to be younger than 500 years. This issue is why it is necessary to sublimate the limited ethnographic record that directly relates to beeswax rock art with other means of interpretation. This could be done solely with archaeological techniques without the use of ethnographic data but because of the rich source of available information, this thesis is designed to see if insights can still be gained on this rock art technique through the belief systems that may demonstrate the significance that beeswax, as a material, can hold within Australian Indigenous cultures and therefore, beeswax rock art.

Most past researchers of beeswax rock art have noted the association native bees have in cultural systems but before this researcher, Chaloupka and Alderson (2000) were the only researchers to take the study of beeswax rock art into the cultural aspects of the Sugarbag Dreaming. This thesis questions the assumption that because of a materialistic association between Sugarbag Dreaming and beeswax rock art, there is also an interpretive association.

This study adds to the available research through the collection and analysis of new data, accumulation of the older research and by conducting fieldwork within western Arnhem Land, where beeswax rock art is almost common in comparison to other regions, and Sugarbag Dreaming traditions are also found. This research is ideally suited to determine if it is beneficial to study Sugarbag Dreaming traditions when interpreting beeswax rock art.
Acknowledgements

I would like to thank the numerous people who have made it possible for me to finish this thesis. To start with I would like to thank all of the people who live in the Gunbalanya community for allowing me to do my research within their beautiful country during my January and May visits, with special thanks to Bruce Nabegeyo, Wilfred Nawirridj, Gary Djordom, Gabriel Maralngurra and Jacob Nayinggul for their knowledge, patience and time. The assistance provided by Wilfred and Gabriel in pointing out the beeswax examples on Injalak Hill is also appreciated, as is the fact that Jacob Nayinggul allowed me to visit and record the site named Namarnkol Shelter within this thesis, as the traditional owner of the land on both visits.

Special thanks also go to the staff at Injalak Arts and Crafts (Anthony Murphy, Rebecca Say and Thomas Bundine Nabegeyo) for their assistance during my stays in the community. Thanks for providing me with accommodation and company during both of my visits.

For patience, guidance, constant support, and for reading and editing my numerous rough drafts, even when in another country, I owe my supervisors Dr Sally K May, Dr Claire Smith, and Dr Ines Domingo Sanz lots of gratitude and thanks.

To all of the researchers who responded to my emails but special thanks to Murray Garde, for his company in Gunbalanya as well as emails, and to Peter Sutton, David Ritchie, Yasmine Musharbash, and Bruno David for their responses to the questionnaire.

Finally I would like to thank my friends and family for their support throughout the year with special thanks to my mother Glenny Prideaux, best friend Natasha Place, Kora Collet and Yoland James for editing assistance, and my grandparents John and Gwen Davies for financial assistance and belief. Special thanks needs to be extended to Tash and Jason for uses of her computer when mine was not working and delivering rough drafts into town for me.

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Notes on Terminology

1. Oenpelli or Gunbalanyu?
The use of the name Oenpelli comes from a mispronunciation by Paddy Cahill of the joint name of the site the town is located on, the billabong and Injalak Hill, which came from the word Unbalanj or Asunbelejja from the Mengerr Indigenous language (Cole 1975: 2, May 2005: xxii). Although the name Oenpelli is more commonly known, the name Gunbalanyu has become popular with locals to the extent that many maps of the area use both names. The name Oenpelli will sometimes be used in this paper because the name Gunbalanyu only began to become popular after the Oenpelli Mission relinquished power in the 1970s.

2. Beeswax Rock Art
Beeswax rock art is the end result of the application of pellets and sometimes strips, sheets and blobs of native Australian beeswax onto a rock surface in an assumed deliberate design (Brandl 1968: 19).

3. Sugarbag
Sugarbag is an overall word to describe the collectable contents from the beehive of Australian stingless bees. In the Kunwinjku language the beeswax and related products from the native beehive are called Mankung. Some of the other names for sugarbag in western Arnhem Land include Gundirid'bim, gunngolin, and gunngarn (Chaloupka & Alderson 2000: 17). Although this term is often used to describe honey by itself, unless specifically stated the word ‘sugarbag’ refers to both honey and beeswax within this thesis.

4. Sugarbag Rock Art
Sugarbag rock art includes depictions that are clearly linked via site or story to Sugarbag Dreaming or depictions that may not be so clearly connected but appear to represent native bees, their hives or the collection of sugarbag. Appendix 1 also shows examples of Sugarbag Dreaming characters that are also represented in rock art.

5. The Dreaming
The concept of the Dreaming, when applied to Indigenous Australians, is a general description of Indigenous Australian’s belief systems. This concept is part of both the past and the present and is a representation of a period of time although it is not measured in the xiv
western sense of time. Both the Dreaming tracks and kinship social systems were established within the Dreaming (Smith *in press*).

The word Dreaming is perceived as a controversial term because of the current climate where archaeological and anthropological terms are used and dissected within a legal environment, of which they were not originally intended to stand up against. Although there are problems with this term that has been imposed on Indigenous culture by western researchers, it is a general description of all Indigenous Australian belief systems without narrowing the research down to one distinct cultural group.

6. Sugarbag Dreaming
The term Sugarbag Dreaming within this thesis applies to the stories and sites associated with the Australian stingless bee species (Appendix 3, 4 & 5), honey, beeswax, and any mythological characters that are associated with this 'Dreaming' track (Appendix 2).

7. Sugarbag Dreaming Traditions
Sugarbag Dreaming traditions were defined within the study as including any cultural practiced that has a sugarbag theme and the practical traditions associated with this product such as collection and preparation. This theme is expressed through art regularly via painted rock art and on canvas and bark, ceremonies and stories. The purpose of this thesis is to see if it is also expressed through beeswax rock art.

8. Collage Technique
Erhard Brandl (1968) first applied the term collage technique to beeswax rock art as an overall heading of this rock art technique. Brandl’s definition of this term was the adding of a substance to a rock surface other than a paint pigment (Brandl 1968: 19). Following researchers defined Brandl’s definition as the application of beeswax to a rock surface in definite designs (Welch 1995: 23). This term has become unpopular with recent scholars such as Paul Taçon and George Chaloupka on the grounds that this description should only apply to motifs where both paint and beeswax are used because it does not provide an accurate description of all beeswax rock art motifs, so this phrase will only be used in this thesis when referring to rock art created with a combination of materials, usually paint and beeswax (see Plate 1).
Plate 1: A Namakain figure from the Awunbarra area in the collage technique
(Walsh 1988: 238)
Chapter 1: Introduction

Plate 2: Anthropomorphic figure from the Djuwart site on the Deaf Adder Creek
(Walsh 1988: 241)
1.1 Introduction

This thesis explores the idea that Indigenous Australian ‘Dreaming’ stories can shed light on a rock art technique or, in other words, can today’s ‘Dreaming’ stories help interpret yesterday’s rock art. To explore this issue, I focus on beeswax rock art and Sugarbag Dreaming. Beeswax rock art is a tradition that is unique to northern Australia. While sugarbag has been traded throughout Australia, beeswax rock art has only been recorded in the most northern parts of the country. Moreover, there is no record of beeswax rock art on any other continent. The use of beeswax for other artistic or practical applications and the representation of honey collection in rock art has been recorded world wide, but this thesis focuses only on the examples within the north of Australia to determine if there is any connection between beeswax rock art and Today’s Sugarbag Dreaming traditions.

A rock art site within western Arnhem Land in the Gunbalanya area has been used as a case study to explore the ethnographic information available for a specific rock art shelter, and previous research on beeswax rock art and ethnographic data on Sugarbag Dreaming has gathered to be used as comparison cases. The issues involved in using ethnographic information in interpreting rock art sites are also considered.

In this chapter I introduce the unique rock art technique called beeswax rock art and provide information on the Australian native bees, which produce the beeswax. The largest project conducted on beeswax rock art to date focused on dating this rock art technique so a section has been provided introducing there work. Further information on the history of dating beeswax rock art is provided in Appendix 6. A brief introduction to the other uses Indigenous Australians have found for beeswax, the location of beeswax rock art and a brief description of the community where the primary fieldwork took place are also provided within this chapter.

1.2 Research Question

The research question for this thesis is:

- What is the relationship between present-day cultural beliefs relating to beeswax and the beeswax rock art technique?

My enquiry concerns whether there is more than a superficial connection between the beeswax
rock art technique and the Dreaming stories associated with the material used to create this rock art. The original reason that this idea interested me was because of the limited amount of ethnographic data, which relates directly with beeswax rock art previously recorded. The means of determining if this suggestion holds is to see if there is a connection between motif depictions in beeswax and depictions connected to Sugarbag Dreaming made in other rock art techniques or modern paintings. Further evaluations are to see if there is a geographical connection between beeswax rock art and Sugarbag Dreaming sites and regions.

Sugarbag Dreaming traditions demonstrate the significance that sugarbag, and by extension, beeswax can hold within Australian Indigenous cultures. Although the tradition of creating beeswax rock art is severely diminished and the majority of the ethnographic data relating to the Sugarbag Dreaming traditions is within the context of the last hundred years, if a connection can be found today, it is reasonable to assume that there also may have been a connection in the past.

Plate 3: An anthropomorphic figure from western Arnhem Land (Walsh 1980: 241).
1.3 What is Beeswax Rock Art?

Beeswax rock art is the end result of the application of pellets and sometimes strips, and sheets of native Australian beeswax onto a rock surface in a deliberate shape (Brandl 1968: 19, Plate 3). This art form has only been located in the north of Australia, specifically the Kimberley, the Northern Territory, and at two locations within northern Queensland. There are more sites found in the Northern Territory than in any of the other regions.

While most beeswax on rock could be perceived as art, ethnographic research with Indigenous Australians has also shown other purposes. For example 'blobs' (single pellets or irregular lumps) of beeswax were stuck to rock for good luck when playing cards in central Arnhem Land and as a tick removal procedure in western Arnhem Land (Chaloupka 1993: 158, Taçon & Garde 1974). The tick removal procedure involved creating dotted double rows or anthropomorphic figures of a malevolent spirit called Narmarnde within the infected shelter. Sometimes beeswax figurines of this spirit were also created. After the people had left the shelter the ticks either entered the lines of beeswax or were killed by the Narmarnde spirit making the shelter habitable for the next season (Chaloupka 1993: 158, Taçon & Garde 2000: 74). Some of the individual 'blobs' or pellets could have been the result of spillage when using this material for other purposes near a rock surface, but the majority of the motifs represent a deliberate picture or shape (Bednarik 1994 & 2001, Brandl 1968, Chaloupka 1993, Edwards 1979, Flood 1997, Nelson et al 2000, Watchman & Jones 2002, Walsh 1988, Welsh 1992, Taçon & Garde 2000). Around the base of the Main Gallery located on Injalak Hill (shown in Appendix 7) are numerous examples of 'blobs' of beeswax.

The use of the word 'beeswax' for this rock art technique is not as straightforward as it at first appears because the 'beeswax' used for rock art is not a wax but a resinous compound and there are rare examples of rock art made from other resinous substances including gabbai, made from the roots of the ironwood tree (*Erythrophleum chlorostachys*), and another resin called kalapartaman found in central Arnhem Land (Chaloupka 1993: 161, Taçon & Garde 2000: 71). This last substance has not been chemically analysed as yet (Chaloupka & Giuliani in press). Within this thesis beeswax is used as a common name for the substance left when the honey has been...
extracted from a clump of sugarbag. Because of the similar appearance of the rock art created from other resinous substances and because of their rarity they have also been included within this classification of beeswax rock art when record of there existence has been found.

1.4 Native Australian Bees

One of the reasons why beeswax rock art is not found in every culture where beeswax exists is because of the uniqueness of the wax produced by the Australian stingless bees. There are ten species of Australian stingless bees divided into two genera, Trigona and Austroplebeia. The Austroplebeia are black with small yellow strips whereas the Trigona bees are black with white hair on their faces and sides (Welch 1995: 23). They are about 5mm long and are sometimes called the sugarbag bee or a sweat bee (Zborowski & Storey 1997: 180, 198, Australian Museum 2003: 1-2).

![Figure 2: (Trigona essingtoni) A representation of an Australian stingless bee (Michener & Houston in Naumann 1970: 997).](image)

The different bees have different habitat preferences and their preferred habitat can be used to identify the different species within each geographical area (see Appendix 4) (Chaloupka 1993: 156, Tacon & Garde 2000: 71). There are two kinds of wax in its natural state; one is soft and resinous, found within the bees' nests and is collected at the same time as the honey; and the
second kind is a hard and bituminous wax of a clear colour that is used by the bees as a lining for the entrance of their hives. The first wax is the kind used to create the rock art whereas evidence of the second wax is used as proof that the hive is mature and probably ready for harvesting (Chaloupka & Alderson 2000: 19, Brandl 1968: 27).

A study of the beeswax of the Australian stingless bees was conducted by B V Milborrow, J-M Kennedy and A Dollin (Milborrow et al 1987). The wax of the stingless native bee (T. australis) was compared against the common honeybee (A. mellifera), an Australian bee with a sting. A visual inspection showed that the two kinds of bees had beeswax of different colours (Milborrow et al 1987: 15, Michener & Houston 1970: 1000). When the wax of the T. mellifera was melted it became a pale yellow with only small traces of solid particles from plant tissues and pollen grains. The melted wax of the T. australis was colourless with a dark brown solid residue has a melting point a couple of degrees lower than that of the T. mellifera, and is more mouldable over a longer temperature range (Milborrow et al 1987: 16). The theory of why the T. australis wax is more mouldable or has a greater plasticity over lower temperatures than the T. mellifera is that the smaller bees do not have to hold as much honey as the bigger bees (Milborrow et al 1987: 25). This malleability is why it is more suitable for rock art than the beeswax of the common honeybee. The contents of the solid residue found in the T. australis wax consisted of pollen grains, young adult bee exoskeletons, xylem fibres, vessels and fine sand grains (Milborrow et al 1987: 16, 17). It is this solid material that is mixed uniformly with the wax that gives it an dark brown colour (Milborrow et al 1987: 22).

1.5 Dating Beeswax Rock Art

A large percentage of Australian rock art has only been dated by indirect dating techniques such as stylistic comparisons, seriation and the analysis of stratigraphic superimposition. Beeswax rock art is particularly valuable because it is an organic material that can be directly dated via radiocarbon dating (see Appendix 6, Chaloupka et al 2000: 10). Potentially, dating beeswax rock art also gives other rock art techniques, of which direct dating methods have limited practical application, which overlay or are under a beeswax motif example a maximum or minimum age.
1.6 Recent Beeswax Rock Art

There are five, possibly six, examples of beeswax rock art being created within the last hundred years by identified artists at three sites within western Arnhem Land and at two sites in central Arnhem Land (Table 5 & 6 Chapter 5). Two of these examples were created by the same man, Nayombolmi from the Burrunggui estate where Nourlangie Rock is located, in the Kakadu National Park during the 1920s and 1950s (Chaloupka & Alderson 2000: 25). Big Bill Birriyabirriya from Marrkolidjban near the Liverpool Rivers created the third example at a site called Daddikidje at Table Hill in the 50s or 60s while working beside his father (see Table 6). Birriyabirriya created beeswax rock art designs “mostly for fun”, and suggests that “not all such activity was of serious intent” which leads to the conclusion that some of it was (Taçon et al 2000: 29). In Nayombolmi’s case, according to Nayombolmi’s cousins, the first beeswax examples were created to retain some of his promised wife’s spiritual essence after she drowned at a young age. The second, depictions of himself hunting buffalo and playing cricket, were designed to insure his continued success at these endeavours (Taçon et al 2000: 25). Another artist known to create beeswax rock art when younger, Bardayal Nadjamerrk, also claimed that the purpose in his case was for fun.

During ‘The Beeswax Art Project’ in 1994 some of the younger men helping with the central Arnhem Land research including Malcolm Djimanwanga, Mike Kukatiku’s 14-year-old grandson, spontaneously created a beeswax motif at site A1030 of a Yawk Yawk, female water spirit (see Appendix 2 and Table 8). A few months later more beeswax motifs were created on the back wall of a hut at Yikarrakkal outstation owned by linguist Murray Grade (pers. com. 2006). These included anthropomorphic figures of a Yawk Yawk and humans in or near wooden pole constructions or with a rifle, as well as motifs associated with the Sun and Moon Dreamings. The problem with these new motifs is that they do not appear to have the same preservation abilities as the older motifs. When the first examples created by Malcolm were revisited, they had been chewed on by insects and animals (Taçon et al 2000: 30). This suggests that there were older processing techniques for beeswax not utilised by Malcolm. Other possibilities are that the kind of bee species is important and the wrong type of beeswax was used, or the insects causing the damage may be introduced insect species, which were not a problem in the past.
1. 7 Other Uses for Beeswax

Indigenous Australians in the north of Australia have used beeswax for numerous practical purposes including as a kind of 'glue' for hafting tools as well as fixing damaged wooden objects like spear-throwers, spears, and water containers (Welch 1995: 24). One of the more unexpected uses for beeswax is as a rock art conservation tool. The only ethnographic evidence of beeswax being used to protect rock paintings was by Reverend Love in the Prince Regent River area of the Kimberley in Western Australia (Walsh 1988: 240, Welch 1995: 25). The technique used was to stick a thick downward curving line of beeswax above a painting, presumably like today's silicon drip lines used by conservators for preservation today (Brandl 1968: 27, Love 1930: 8, Naumann 1983: 175 Welch 1995: 25). Beeswax was also used as the raw material to form the mouthpieces of mako (commonly known as didgeridoo's), to wax and preserve string, for decorative hairpins, necklaces, pendants, headbands, and for toys like spinning tops, model animals and human figurines (Brandl 1973: 181, Chaloupka 1993: 156, Peter Sutton 2006 pers. com). With all of these extra uses for beeswax it is easy to see why it was a necessary item carried in men's dilly bags along with ochre, string, fire-sticks, stone blades and pre-prepared bush gum (Chaloupka 1993: 156). All these various uses indicate that beeswax was culturally and practically significant.
Plate 4: Two beeswax figures of Woial the honey man and his sister Yirkala from northeast Arnhem Land (Berndt et al. 1982: 111).

1.8 Areas of Study

The three main areas of study for this thesis are the Northern Territory, the Kimberleys and the Cape York Peninsula. These locations cover northern Australia and have all shown evidence of beeswax rock art and Sugarbag Dreaming but not necessarily in the same locations (Flood 1997: 255, Welch 1995: 23).
Figure 3: Map of the main land of Australia showing main areas where beeswax rock art, Sugarbag Dreaming and sugarbag rock art are documented within this thesis.

The Northern Territory

Within the Northern Territory beeswax rock art is located in the Victoria Rivers District including the Keep River region, Litchfield National Park, specifically around Tabletop Hill, Nicholson River and Arnhem Land (see Fig. 3), specifically the western and central province. Western Arnhem Land is divided into two areas, the Kakadu National Park and the eastern shore of the East Alligator River, which includes the primary research area of Gunbalanya.

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1 The Arnhem Land Reserve has been loosely divided by researchers into northern, eastern, southern, central, and western provinces, these boundaries were set up by researchers but are not the same as the traditional clan estates so some of the language groups cross these artificial divides.
Fieldwork Location

The Gunbalanya community was chosen as a case study area because of the pre-existing relationship between one of my supervisors (Dr Sally K. May), Injalak Arts and Crafts Association, and local Indigenous people (mainly Kunwinjku people), and the previously observed presence of numerous examples of beeswax rock art within a short distance from the community. The pre-existing relationship is important for the gathering of ethnographic data and is addressed in detail in Chapter 3 of this thesis. A newly recorded rock art site called Namarnkol shelter (Namarnkol is the Kunwinjku word for Barramundi) in close proximity to this community was recorded to increase the available database of recorded beeswax rock art shelters. A brief survey of some of the beeswax rock art examples found on nearby Injalak Hill has also been undertaken for this study (see Plate 17, Chapter 5 and Appendix 7).

The Gunbalanya community, formally known as Oenpelli, has three large rock formations surrounding Gunbalanya, which are called Injalak, Arrguluk and Nimbabirr. Arrguluk and Nimbabirr both contain rock art but are also ceremonial sites with restricted access whereas Injalak Hill has an abundance of rock art and has fewer restrictions. Although there are also burial sites on this hill with photography restrictions, they did not impact this study. No culturally sensitive information was recorded for this study.

The traditional owners of this land are the Mengerr-speaking people but the prominent language spoken is Kunwinjku. The Kunwinjku-speaking people originated in the King and Liverpool Rivers area (Fig 4) and migrated to Gunbalanya in the 1920s (Cole 1980: 10, Mulvancy 2004: 53, Taçon 1992: 12). Today there are 46 different clans living within this community, including the Geimbio, Kulgulutehi, Umoji, Kakadu, Uningangk, Erre, Mengerridji, and the Amurrag people (Aboriginal Arts Board 1979: 14, 18, Isaacs 1976: 11, May 2006: 243 unpublished PhD thesis, White 1967: 430).
Figure 4: The Main Language Groups of Arnhem Land in the Northern Territory (adapted from Chaloupka 1993: 68).
### 1.9 Chapters Outline

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### 1.10 Conclusion

In comparison with other rock art techniques, beeswax rock art is reasonably rare but can have a positive impact on our understanding of Australia’s Indigenous past. This thesis explored whether today’s cultural stories relating to beeswax through sugarbag can help us understand the significance of yesterday’s rock art. There is no doubt that beeswax is a significant material within many Indigenous cultural groups in northern Australia and that it is still valued within today’s Indigenous communities, but the significance of beeswax rock art is not as clearly defined as other rock art techniques. An important way of improving our understanding of beeswax rock art is to continue conducting ethnographic research on the topic, and where desired by local Indigenous communities, to record new finds. Directly related ethnographic data for beeswax rock art and Sugarbag Dreaming stories may be hard to find but the significance of this rock art technique to today’s Indigenous people is valuable as a comparison to the perceived significance this rock art technique is likely to have had in the past. Its past significance can be estimated because of the number of preserved examples found today suggest that this tradition was regularly practiced in certain regions for an extended period of time.
Chapter 2: Literature Review

Plate 5: Anthropomorphic figure from the Djarrng site, western Arnhem Land
(Edwards 1979: 31)
2.1 Introduction
This chapter outlines previous research on beeswax rock art to show how the study of this specific rock art technique has developed, what questions have emerged and how this study fits within the wider context of Australian rock art research. The following sections address the major beeswax rock art publications and the prominent researchers who have, in some cases, spent many years researching this topic. The last sections of this chapter introduce the different ways Sugarbag Dreaming is represented through art. The research on Sugarbag Dreaming is more extensive than can be demonstrated within this thesis, but the information provided here has been selected because of its geographic position in comparison with the known beeswax rock art locations. As such it will assist to test the theory of a regional connection between beeswax rock art and Sugarbag Dreaming sites.

2.2 Previous Beeswax Rock Art Research
Within the very small field of beeswax rock art research, two major projects stand out, Erhard Brandl's 1968 paper and the 1990s 'Beeswax Art Project' (Nelson 2000 CD-ROM, Nelson et al 1995, Taçon & Garde 2000). Other researchers have also studied this subject (Chaloupka 1993: 158-161), some based on previous research (Bednárik 2001) and in regions other than the Northern Territory such as the Kimberleys (Welch 1995). Alan Watchman has apparently sampled some of the beeswax from the rock art to produce some Kimberley beeswax rock art dates (Welch 1995: 28).

Beeswax rock art studies have been heavily focused on dating individual motifs and identifying regional variations in motif depiction across Arnhem Land and the Kimberleys. On the other hand, the beeswax rock art from other regions, such as the Victoria and Keep River regions and Cape York Peninsula, has had less attention and no specific research on their beeswax rock art examples so the information on these has come from more general sources.

The first recorded non-Indigenous identification of beeswax rock art was by E C Evans (1964: 18), the chief Welfare Officer of the Northern Territory Administration in the 1960s, whereas the first researcher to publish specifically on beeswax rock art was Erhard Brandl (1968). Brandl (1968) recorded nearly 30 motifs from eight rock art sites in
western Arnhem Land. There is also a reference to other beeswax rock art site located at Mt Girtuth but no further details are provided (Brandl 1968: 19-29, 1973: 177).

There was a break in the study of beeswax rock art for over 20 years after Brandl’s (1968) publication and before the commencement of the ‘Beeswax Art Project’. One of the most interesting finds from this new research was the unexpected 4000-year-old dates obtained from two of the beeswax motifs located within the so-called Test Sites (Nelson et al 1995). To get a better grasp on how the study of beeswax rock art has evolved the major publications will now be individually discussed. The literature relating to the dating of beeswax rock art have already been discussed in the first chapter and so will not be reiterated here.

Erhard Brandl
Erhard Brandl was the first researcher to study beeswax rock art (Brandl 1968: 29, Chaloupka 2000: 17, Welch 1995: 23). Brandl (1968) recorded eight sites containing beeswax rock art (Fig. 5) and provided brief descriptions and a few pictures of these examples. There was no consultation with Indigenous people. It would have been interesting to compare the level of cultural knowledge relating to beeswax from the 1960s to today, however this is not possible. This lack of consultation is probably why Brandl did not identify his sites by local names. Chaloupka and Alderson (2000: 17-28), have discussed Brandl’s literature but it is unclear if either of the authors had personally visited the sites Brandl discussed.

Brandl is the first researcher to (a) bring up the idea of directly dating beeswax rock art, and (b) re-touching beeswax art. He uses the evidence of re-touching to suggest that such a practice could indicate increase rituals. Radiocarbon dating was not used or considered viable at the time of Brandl’s research because of the large sample sizes needed to do radiocarbon-analysis during the 1960s (Brandl 1968: 28). This was before AMS Radiocarbon dating was developed and made the ‘Beeswax Art Project’ possible in the 1990s. The concept of increase rituals being associated with beeswax rock art is credited to Professor Elkin instead of Brandl himself and is not re-addressed in any of the later publications by other researchers (Brandl 1968: 28).
Figure 5: Brandl's site map (adapted from Brandl 1968: 20)
The Beeswax Art Project Publications

Between 1990 and 1994 a group of researchers and traditional owners (Appendix 6) from the top end of the Northern Territory recorded 10 sites with beeswax rock art (Fig. 6). This project was self-labelled a “comprehensive beeswax rock-figure recording and dating study” by Taçon and Garde (2000: 72). Nelson’s (2000) labelled the project ‘The Beeswax Art Project’ and this is the name used throughout this thesis although the implications of this title are misleading because there are numerous other art forms created from beeswax within the Northern Territory and other regions of Australia (see section 1.7, Chapter One).

This research observed that there are many repeated depictions within the same sites (Taçon & Garde 2000: 72). At first the researchers assumed that this indicated that most of the motifs from each site were created within the same time frame but this assumption was soon overturned when the motifs were dated (Nelson 1995: 153, Taçon & Garde 2000: 72). Beeswax rock art has regional variations and although shelters with extensive paintings surrounded many of the beeswax sites, the beeswax motifs are more likely to be clustered within a small area instead of scattered within the majority of the art galleries, leading to the interpretation that the placement of an original motif had influenced the placement of the rest of the motifs (Taçon & Garde 2000: 72, 73).

The only known research conducted on the beeswax rock art located in the Litchfield National Park (Table Top Hill area) is from ‘The Beeswax Art Project’ (Nelson et al 2000: 92, 95). The examples from this area were recorded by Christopher Chippindale, Erle Nelson, and George Chaloupka (Chippindale et al 2000: 92).

For a comprehensive review of the sampling and dating procedures used in the ‘Beeswax Art Project’ refer to Nelson (et al 1995). Because this paper is an early publication from this project there are a few assumptions of which later publications over turn such as the assumption that using only one sample from each motif will produce an accurate date. The practice of re-touching has meant that more than one sample is needed to determine when the motif was originally created and when it was updated (Nelson et al 1995: 152, Nelson 2000: 103).
Figure 6: Becawax Art Project site map (adapted from Taçon et al 2004: 156)

An important aspect of this paper was the idea that Indigenous people repeatedly come back to the same sites for hundreds of years and created similar depictions that can be linked to a larger regional style. The Mann River region beeswax rock art is younger than the samples from western Arnhem Land but older than the Tabletop Hill sites (Taçon & Garde 2000: 72, 73). This is also the area where the repeated sampling of one motif produced clear evidence of re-touching possibly hundreds of years after original creation. What at first appears to be a clear composition may actually be an accumulation of motifs over an extended period of time. Another interesting finding from this research is that ethnographic significance and subject matter is relative to regional variations.
suggesting that the degree of significance and cultural purpose of this art technique has developed individually within each region (Taçon & Garde 2000: 72).

Although Nelson’s (2000) CD-ROM is mostly data collected from the project, there are a few interpretation articles. The most relevant papers within this CD-ROM are (1) Chaloupka and Alderson’s paper on beeswax rock art generally and (2) Nelson’s interpretations within ‘A scientists view of Northern Territory beeswax’. Even though Nelson confesses to writing from a naive person’s perspective he does provide some useful summaries of the results obtained and discusses his theories on why he believes there is such a small amount of ethnographic data available discussed in Chapter 3. Chaloupka and Alderson’s paper is written along a similar direction to this thesis by discussing beeswax rock art in the context of sugarbag traditions as well as providing the only possible connection between beeswax rock art and Sugarbag Dreaming found within the previous literature.

The First Published Kimberley Beeswax Rock Art Motif

The earliest known published recording of beeswax rock art in the Kimberley Region (Fig. 7) was by Utemara and Vinnicombe (1992: 26). This paper is not focused on beeswax rock art nor does it discuss this rock art technique, it simply includes a picture of a beeswax motif because of the subject matter not the beeswax technique (Utemara & Vinnicombe 1992: 26). The significance of this publication in the study of beeswax rock art is that this was the first time a beeswax motif was published from this region.

David Welch: The Kimberley

The only paper containing any details of the Kimberley rock art technique is by David Welch (1995). Within his paper both Kim Akerman and Pat Vinnicombe admitted that they have identified at least one beeswax motif each during previous research, and according to Welch, Alan Watchman has collected some Kimberley beeswax samples and is in the process of using AMS radiocarbon dating to put the Kimberley beeswax rock art in context with the beeswax dated from the Northern Territory (Welch 1995: 25, 28). Watchman is yet to publish his results.
Figure 7: A beeswax collage motif of a Djangarr spirit (adapted from a photo by G Trollett in 1981 and published in Utamara & Vinnicombe 1992: 26).

As with Arnhem Land, there is a lack of reliable ethnographic information that is directly related to the beeswax rock art from the Kimberley (Fig. 8). The circumstances relating to Figure 7, the first published beeswax rock art picture from the Kimberleys, was related to Welch via Patricia Vinnicombe and is recorded in Welch's (1995) paper. The depiction was easily identified as a Djangarr Lightning Figure but the material was at first thought to be painted by Vinnicombe's local consultants because of its weathered and light coloured condition. When this mistake was uncovered they remembered creating beeswax figures as children but there is no mention of them knowing anything about the use of beeswax in rock art (Welch 1995: 25). Another interesting observation that Welch makes in his 1995 paper is that the common double dotted rows commonly found in western Arnhem Land and recent depictions of European contact are not present in the Kimberley beeswax rock art tradition which would suggest that double dotted rows have a regional significance to western Arnhem Land. The lack of contact beeswax rock art could suggest that this tradition died out earlier in this region than it did further east. Most of the motifs depicted in beeswax are also depicted in the painted art of the region.
The highest recorded density of beeswax motifs within one site in the Kimberleys is eight clearly defined motifs (Welch 1995: 25). At the top of this shelter are the best preservation conditions and it is the location of three anthropomorphs (Fig. 9), probably a representation of a dingo because of its high tail and forward facing genitals located in front of the hind legs. All three figures are carrying curved stick-like objects in each hand loosely interpreted as boomerangs, clubs or throwing sticks and are clearly part of the same composition. In the lower section of this shelter under harsher preservation conditions are two more depictions of animals (Fig. 10). Although the preservation of these last two depictions is poorer than the higher motifs, there appears to be a few differences in the style of depiction, which could indicate a different animal species. These examples have possibly curved tails instead of straight and a lack of obvious genitalia. The tail condition is difficult to confirm because of the poor condition of the motifs. The heads are very animal-like and the position of their heads and back suggest a animal on all four limbs but the back legs are longer than the front and there appears to be a hand or paw on the end of each limb. These examples could represent early attempts to depict four-legged animals such as cattle and
horses. Within the Namarnkol Shelter there also is a four-legged animal depiction made from beeswax (Motif 30 Appendix 1) but the similarities between these examples appear to end there.

Figure 9: Three beeswax rock art motifs from the Kimberley
(Walsh 1995: 26)

Figure 10: Two beeswax animals from the Kimberley, the same shelter as Figure 9
(Walsh 1995: 26)

Robert Bednarik
Bednarik (2001) has taken a different approach to the study of beeswax rock art by using the data provided by Nelson's (2000) CD-ROM but looking at the results from a taphonomic perspective (Bednarik 2001: 91-95).
Bednarik's definition of the term taphonomy in regards to rock art research "is the study of the processes affecting rock art after it has been executed, determining most of its present variables, such as appearance, distribution and statistical properties" (Bednarik 2001: 92). Overall taphonomy when applied to rock art is the process that results in the condition of today's rock art and how much of the original record has survived into today. Bednarik's focus is more on the surviving record than the preservation condition of specific beeswax rock art examples or sites. Basically his argument is that we can not assume that the surviving record is a random sample or reproduction of the original record because of continuous degradation since the original creation to today (Bednarik 2001: 93).

![Figure 11: 134 Radiocarbon dates collected from beeswax rock art samples by the 'Beeswax Art Project' from Arnhem Land (Bednarik 2001: 94 edited from Nelson 2000: 52)](image)

Figure 11 is traditionally read, according to Bednarik, as 4000 years ago beeswax rock art was infrequently created until around 700 years ago when it became popular, peaked in the last few centuries and collapsed with the arrival of the Europeans in the late nineteenth century. Bednarik's interpretations of this table are slightly different because of the theory of taphonomic logic. He generally agrees with the interpretation for the last 150 years but believes that the sudden decline was a lot more severe with production reducing to 10% instead of 25% in the last 100 years but completely disagrees with the described 'orthodox archaeological interpretation' in regards to the 1000 and 1500 dates.
Bednarik believes that this was actually a peak in production because of the amount of surviving samples compared to what taphonomy logic would call normal for a lag period, of which he claims this is (Bednarik 2001: 94).

One problem with this paper is that Bednarik assumes that the ten sites recorded by the ‘Beeswax Art Project’ are the only major beeswax rock art sites. Since this is obviously not the case the value of the dating of this rock art technique in the bigger picture of Australian rock art dating is more extensive than stated by Bednarik.

George Chaloupka

The most up to date publication by George Chaloupka discussing beeswax rock art is one of the papers within Nelson’s (2000) CD-ROM, authored along with Michael Alderson but before this paper Chaloupka published a book in 1993 where an entire chapter called ‘Gunbirdi Bim, Beeswax designs’ was dedicated to this rock art technique. This book is always referenced when referring to western Arnhem Land beeswax rock art because Chaloupka is said to have gained the most comprehensive ethnographic data from the East Alligator Rivers region but unfortunately his consultants had died before the ‘Beeswax Art Project’ was started so Chaloupka’s earlier data could not be confirmed (Chaloupka 1993: 156-161, Chaloupka & Alderson 2000: 17-28). The results from interviews conducted in Gunbalanya for this thesis confirmed the accuracy of Chaloupka’s terms relating to beeswax and sugarbag. Although Chaloupka has seen the most beeswax rock art sites and recorded the most relevant ethnographic data, Chaloupka appears to have been unaware of the existence of a few Queensland beeswax rock art sites.

2.3 Previous Sugarbag Research

Within the study of Sugarbag traditions there are three main categories that are relevant to this thesis; the study of how different cultural groups collect and use sugarbag, how sugarbag is represented in art and Sugarbag Dreaming, and the study of the stingless bees and more specifically their beeswax, which has been discussed in section 1.4 of Chapter one of this thesis. The main focus of this thesis is the Sugarbag Dreaming but by evaluating the other traditions associated with the collection of sugarbag and by extension beeswax, it may be possible to determine the cultural significance placed on this substance that could have been transferred to the beeswax rock art.
The authors who have published on the collection of sugarbag within the areas where beeswax rock art has been located included Kim Akerman (1979) and Jennifer Issacs (1989) within the Kimberley, George Chaloupka in western Arnhem Land, the Liverpool-Mann Rivers areas by Murray Garde, Pini Guillani and George Chaloupka. The data collected by Jeffrey Heath (1981) in eastern Arnhem Land is also used within this thesis even though no beeswax rock art has been recorded in this region as yet because of the wealth of sugarbag traditions recorded that could be used as analogies or the regions containing beeswax rock art (Akerman 1979: 169-178, Chaloupka 1993: 156, Heath 1980: 118-123, 464-474).

**Sugarbag Depictions in Art**

The authors who have written on or published photographs of sugarbag rock art found during the researching stages of this thesis including Ian Crawford (1968), Graham Walsh (1988) and Josephine Flood (1997) and Ben Gunn and Murray Garde (pers com 2006) are in the process of publishing photographs of Sugarbag rock art from the Mann River in Arnhem Land (Crawford 1968: 147, Walsh 1988: 176-177, Flood 1997: 255).

Plate 6: A man by a beehive (sugarbag rock art) from the Coomby Creek Shelter in the Laura region of Northern Queensland (Flood 1997: 255, Walsh 1988: 241, section 1 in Plate 31, Chapter 5).

Because sugarbag themes are represented in bark paintings (Plate 8) and are the most regularly used insect motif in this medium, they are also a useful resource on the sugarbag mythology (Waterhouse 1970: 224). The main publications that discuss sugarbag themes in bark paintings are Margie West's (1995) book titled 'Rainbow...
Sugarbag and Moon' on the artwork by Bardayal Nadjamerrek and Mick Kuwarakku from the Mann River region of central Arnhem Land and an article by Waterhouse (1970) in the CSIRO's first volume of 'the insects of Australia' (West 1995: 16-17; 40-41). There is also a decent collection of Sugarbag themed paintings in the Injalak Arts and Crafts Centre catalogue at Gunbalunya.

Plate 7: Lofty painting a Djabidj Bakoluy honey log bark painting (see Appendix 5, photo courtesy of Murray Garde, 2002).

Sugarbag Dreaming Sites
2.4 Discussion and Conclusion

The study of beeswax rock art by rock art researchers was first started by Erhard Brandl in the 1960s but it took over 20 years before it was looked at again. One of the major incentives for the revival of the study of this unique rock art technique was the introduction of AMS radiocarbon dating.

Although Arnhem Land is not the only location where beeswax rock art has been recorded, it is the most studied in a field of research that has only been explored by a handful of researchers. This has left a huge gap between the accumulated knowledge between Arnhem Land and some of the other regions such as the Victoria Rivers and the Queensland examples even though the knowledge acquired about the Arnhem Land beeswax rock art is only a small percent of what can be found in this region. What the previous research shows is that there are more questions than answers in this field of study and plenty of room for further projects. The main contributors to this research subject have been Erhard Brandl, George Chaloupka (who has conducted the most fieldwork), Erle Nelson, David Welch, Paul S.C. Taçon, Murray Garde and Christopher Chippindale. In the following chapter I explore the theoretical concepts underpinning the research for this thesis and consider them in context with the literature outlined in this chapter.
Chapter 3: Ethnography and Beeswax Rock Art

Plate 8: Red Lily Lagoon, western Arnhem Land (photo by author 2006)
3.1 Introduction

"The values, attitudes, concepts and language embedded in beliefs about spirituality represent, in many cases, the clearest contrast and mark of difference between Indigenous peoples and the West" (Tuhiwai Smith 1999: 74).

This chapter summarises the theoretical background behind this archaeological study of rock art by addressing the issue of using today’s Sugarbag Dreaming to interpret a past rock art technique. Some of the significant terms and issues that I will discuss in this chapter are consultant reliability, interpreting meaning in rock art (including multiple levels of meaning), and the use of ethnographic analogies.

One of the key theoretical concepts in this thesis is the idea that ethnographic research, conducted with a present-day cultural group who have cultural continuity with their past societies, can help to produce a more accurate interpretation than an interpretation based solely on archaeological material and outsider’s interpretations. One technique for studying Australian rock art in collaboration with a culturally related group is to gain direct interpretations from community members about what the rock art means to them today through ethnographic recording (see, for example Morwood 1988). The interpretations may not be the same as the original intentions of the rock artists but they do give insights into long cultural processes of art production. This means that they have a much greater chance of comprehending ‘meaning’ in rock art than someone outside of their culture. What makes beeswax rock art an interesting technique to study is that it appears to be one of the least understood art forms in Indigenous Australia.

Two of the arguments against using ethnographic research for the interpretation of Australian rock art have been that it is too late to learn anything about rock art from Indigenous people because of too much cultural change resulting in the loss of traditional knowledge. Some of the supporters of this argument claim, according to Taçon (1992: 11), “that Aborigines are now making up things about the art and that we cannot trust anything they have to say”, and the use of ethnographic sources was considered dangerous because archaeological data is different to ethnographic data despite their resemblances (Murray 1988: 3). Taçon (1992) counters the first claim by stating that after evaluating the consultants from ethnographic records and his own
research over the last 15 years, "there was absolutely no evidence that they made up things in order to deceive me or somehow present the art as being more sacred than it had been in the past" and the second point is valid but can be lessened by acknowledgement of these limitations (Taçon 1992: 17).

3.2 Interpreting Meaning in Rock Art

"Where the study of meaning is concerned, the primary value of ethnographic analogy is merely to remind us of the diversity of possible interpretations" (Layton 1992: 219).

What little direct ethnographic data we have on the creation of beeswax rock art is mostly from Indigenous people who created this rock art technique when they were children working alongside their fathers (Taçon & Garde 2000: 73). It could be argued that today's lack of ethnographic information could directly relate to the more complex meanings and purposes not being passed onto the next generation because of an interruption in the cultural initiation time frame of today's Indigenous people.

Another argument is Luke Taylor's (1996) 'inside and outside' knowledge theory. In summary, his theory is that there are multiple meanings associated with art created by Indigenous people in western Arnhem Land that can be labelled inside and outside knowledge. Within the Kunwinjku culture of western Arnhem Land (see Plate 8), Taylor (1996) found that kun-parkang or outside knowledge is "the most public meaning of things" such as the identification of an animal species, whereas mundjamun or inside knowledge refers to sacred or set apart knowledge. This knowledge is restricted giving the artist the control of the interpretation of their work (Taylor 1996: 10). The passing on of the inside knowledge is done in intervals or by layers, often measured by the level of interest a 'student' shows and initiation ceremonies that traditionally occur at certain ages. This process does not only apply to children but continues into adulthood. In relation to this study of beeswax, it is interesting to consider that knowledge relating to beeswax may be restricted in this way and, hence, the lack of ethnographic information available is limited.
The geometric shapes are an example of art designs that have often been used to restrictive meaning, only allowing the obvious and ‘outsider’ interpretation to be known by an un-initiated observer (Taylor 1996: 16). Geometric designs are also common within beeswax rock art in western Arnhem Land, which could mean, by following the same interpretation given to similar designs from other rock art techniques, that beeswax rock art has been used to deliver restricted information to initiated people (see Chapter 5 for examples of beeswax rock art designs). This means of interpretation by transferring meaning from one rock art technique to beeswax rock art has been tried by previous researchers. An example of this is in Brandl’s (1968) paper where he compared the dotted rows and circles, commonly created from beeswax within western Arnhem Land, against other rock art techniques and bark paintings recorded by George Grey (1841) at Glenecil River and A P Elkin (1930) in the Kimberley (Brandl 1968: 28-29). David Welch also compared a beeswax motif from the northern Kimberley against a Wanjina figure from the same area, and from a visual inspection, it looks like a good match (Welch 1995: 27). Comparisons from the same region have a better chance of staying within the cultural context of the art under study than wider comparisons with outside cultural groups. Within this study this avenue is only briefly explored but could be a possible project for future research.

From a world perspective, rock art interpretations can be classified under five general headings: secular, religious, economic, natural formation and biographic (Whitley 2005: 93). The economic category contains markings that are assumed to have been made for economic or technological reasons such as stone tool sharpening grooves, post holes, cupules used for grinding food or ochre. Natural rock formations are considered rock art when they hold the same significance as general rock art techniques to Indigenous people. An example of this is the fish-shaped rock visible on Injalak Hill in the Northern Territory. Injalak Hills prominent Dreaming is the Long Tom Dreaming and this is represented by a rock shaped like a fish seen from a distance on the side of the Injalak Hill. There is also a natural indent in the roof of a rock art gallery on Injalak Hill that resembles a fish and holds the same significance to the local Indigenous people as the created rock art. The commemorative or biographic rock art category includes rock art that appears to have a narrative, structure and compositional intent instead of randomly placed motifs with individual meanings. Religious or symbolic rock art is any rock art with a close association through meaning intent or purpose with a belief system. Within
Australia Indigenous religion is considered totemic in nature because of creation mythologies and increase rituals (Whitley 2005: 98-100). Secular art is what is left over and is not as common as the other categories and includes creation for the sake of creation and 'bragging' about hunting catches (Whitley 2005: 93, 94, 96).

To determine if beeswax rock art has been used to represent Sugarbag Dreaming the purpose behind some of this rock art technique would have to be religious because the 'Dreaming' is a belief system. Some of the recent beeswax rock art examples have been associated with Moon Dreaming and the ethnographic record suggests that creating images out of beeswax gives the depictions a potency or 'power' sometimes associated with the mythological Rainbow Snake, but the most significant reference for this study is a comment within Chaloupka and Alderson's (2000) paper with the creation or retouching of individual beeswax motifs within native bee increase rituals (Chaloupka & Alderson 2000: 25). Rainbow Snakes are also commonly part of Sugarbag Dreaming stories as Plate 9 shows. Within Appendix 5 a number of sites associated with Rainbow Snakes are listed.

Plate 9: The painting is of Ngalyod a Rainbow Serpent, her eggs, a sugarbag person and munkung, the Kunwinjku word for sugarbag (painted by Peter Naharlambarl 1994 referenced from the Injalak Arts and Crafts Association Database cat no. 459-9-94).
The interpretations provided from the other rock art techniques obtained through consultants are transferred onto the beeswax motifs. The theory is that it is not the material used to create the art that holds the significance, just the style and identification of the depiction. The value of the art is more in the representation of the stories and dictates of the ancestors and the artist’s grasp of traditional law instead of in how visually aesthetic the end result appears (Smith in press).

In the past when archaeologists referred to ethnography, they were often referring to the ethnographic present as a traditional society unsullied by the observer’s culture (Davidson 1988: 19, Morwood 1988: 68, Whitley 2005: 87, Tukitukw Smith 1999: 74). This interpretation is sometimes referred to as a ‘static society’ or as a ‘romantic illusion’ (Davidson 1988: 20). This view has been part of Australia’s interpretations in the past because of the continuity of Australia’s Indigenous cultures (Davidson 1988: 20). Australian Indigenous art has been used to demonstrate that it is ‘fruitless’ to search for meaning in Palaeolithic art because meaning is very complex, even within a small cultural group, and can change over time (Layton 1992 a, Taçon 1992: 17). This argument has been countered with claims that recent rock art styles, such as X-ray art and other styles, which were created in the last few hundred years do not have this problem because it is still possible to obtain knowledge specific to the art (Taçon 1992: 17). Although this argument could be used for beeswax rock art, this study attempts to integrate ethnographic data along with the archaeological recording of a specific rock art site to gain a more comprehensive interpretation than can be created without the input of local Indigenous consultants. The two main projects completed on beeswax rock art in the past, Brandl’s (1968) research and the 1990s ‘Beeswax Art Project’, are good examples of the different amount of detail that can be obtained from this rock art technique with (the Beeswax Art Project), and without (Brandl 1968) the assistance of Indigenous consultants.

3. 3 Degrees of Separation: Today’s Dreaming, Yesterday’s Rock Art

The main concern of this research is the problem of comparing one of today’s Indigenous cultural beliefs in the form of Sugarbag Dreaming against the creation of a rock art technique over the last 4000 years. The case study for this thesis, Namarnkol shelter, has not been dated. However, these beeswax examples have probably been created within the last 1000 years because of the darker colour of the beeswax for the
majority of motifs and the results obtained from other shelters with similar coloured motifs that have been dated to this time period.

During the 19th and 20th century there were mass migrations of different cultural groups within Arnhem Land, some of the causes included buffalo shooting and round ups during the second world war. It also resulted in the loss of many lives through diseases, murder and neglect, which has impacted on the number of knowledgeable elders in Indigenous communities today. The Kunwinjku people in Gunbalanya originally came from the King and Liverpool Rivers areas, which is east of Gunbalanya. When they migrated into the Gunbalanya area they absorbed some of the original Mangerr-speaking people and the neighbouring Gagadju people along with their myths, rituals and traditions (Tacon 1992: 12). There is also an argument stating that all of the tribes of western Arnhem Land including the tribes from the Liverpool River area have a common cultural heritage despite linguistic differences (Elkin et al. 1950: 21). Beeswax rock art has been practiced within western Arnhem Land for at least 4000 years ago up until the recent past. Although the early examples of beeswax rock art were unlikely to have been created by the Kunwinjku-speaking people, they were still in the area when this rock art technique was practiced. There are also beeswax rock art examples within their traditional lands by the Liverpool River, which was practiced at the same time as the western Arnhem Land tradition and clearly have a long history of interaction with the Mangerr people (Nelson 2000: 106). In theory, this would suggest that these people would be ideal as consultants on the subject of beeswax rock art.

Within western Arnhem Land researchers have traditionally been very successful in recording ethnographic data relating directly to other rock art techniques. In the other areas where beeswax rock art is found this success rate is varied but in all of these areas there is a lack of direct beeswax rock art ethnographic data. The presumed previous cultural information relating to beeswax rock art from around the Gunbalanya area could have been lost during this immigration and transfer process but how likely is it for the same information to have been lost in all of the regions where beeswax rock art has been recorded? It could be argued that the lack of recorded information relating to beeswax rock art is due to a number of factors including cultural restrictions, a lack of consultation with Indigenous people, the significantly lower number of beeswax motifs
in Australia (as compared with painted motifs), and the movement of people post-contact.

3.4 Consultant Reliability and Ethnographic Analogy

Consultant reliability is an issue with any ethnographic research and all rock art researchers contemplating the arguments for and against the possibility of interpreting meaning in rock art (Morwood 2002). Of course, there is also an argument that states discovering meaning in rock art is impossible without consultants (Morwood 2002: 72). All ethnographic information comes through numerous filters. The identity of the consultant and researcher influences the questions asked and the answers received. Rathje and Huges conducted the leading research on the subject of ‘informant’ reliability starting in 1973 with the Tucson Garbage Project (Schiffer 1978: 235, for updates on this project refer to Rathje & Murphy 2001). Although the interview and question method may produce a reasonable record of what people’s attitudes and opinions are on their own behaviour, they are less effective at recording “accurate quantitative data on their actual behaviour” (Kent 1987: 49-50, Rathje 1978: 69). People prefer to relate their ideal behaviour and, in short, do not remember or recount every detail of their behaviour and activities sufficiently “to form the basis of a sound behavioural generalizations” (Schiffer 1978: 235). The alternative to solely relying on consultants is to observe the behaviour instead of relying on the re-telling of the event (Schiffer 1978: 235). A more productive technique with less complications resulting from missing either the actions or perceptions from the people under observation is to combine the two approaches instead of relying on one over the other (Hammersley 1992:11-12).

Beeswax rock art has only a limited amount of recorded ethnographic data linked directly to the rock art and because this is a relatively young rock art technique the lack of ethnographic data is even more surprising. A lack of ethnographic data has been used to make interesting interpretations in the past. This includes the argument that no present-day knowledge must mean a prehistoric age. Other possibilities to explain such a lack of data include the ethnographers agenda did not involve asking or recording anything on rock art or the consultants questioned may not have had the appropriate knowledge of the asked information, the consultants may have been unwilling to discuss certain subjects or have had no connection with the subject matter such as being from an unrelated clan (Whitley 2005: 91-2).
The possibility that beeswax rock art is the remanence of a long ago tradition, long lost from today's descendant's memories has not been seriously considered because of the organic nature of beeswax with the low preservation rate of most organic materials. The radiocarbon dates provided by 'The Beeswax Art Project' (Nelson 2000) have extended this original age but not far beyond living memory. The second and third interpretations used in the past seem just as unlikely since at least two of the past projects were specifically focused on beeswax rock art and conducted by experienced rock art researchers in areas where they have had a constructive working relationship with knowledgeable consultants. The fourth idea is possible but when groups take over another's territory they generally absorb or keep alive some of the traditional cultural beliefs because of the connection these beliefs have with specific locations, landmarks or Dreaming tracks (Taçon 1994: 117). There is also always merging of beliefs across traditional lands. Another possibility is that the relevant knowledge has been culturally lost and has not been passed down to the living generations. According to Erle Nelson's observations, the reason for this lack of ethnographic data does not appear to be because of secret knowledge withheld by the consultants approached during the 'Beeswax Art Project'. One of Nelson's (2000) theories is that perhaps only a small section of the community practiced this rock art technique. In the limited time that the ethnographic recording was done during this study, I am not as convinced as Nelson appears to be, that this tradition has completely left the knowledge systems of all of today's Indigenous people. Beeswax is not as noticeable as the many painted motifs in the western Arnhem Land region and people Indigenous people generally do not pay much attention to the art form unless specifically asked. This is discussed in Chapter Five of this thesis.

Within Australia it is archaeologically neglectful to conduct research in an area where there are Indigenous consultants from a cultural group that has a clear cultural connection to the subject under study and not conduct any ethnographic research. Archaeology has implications in the present as well as being concerned with the past and to make claims about another's cultural history without allowing them to have any input is academically elitist.
3.5 Discussion and Conclusion

This chapter addresses the two key theoretical issues of this thesis. Firstly, it considers the problems associated with interpreting beeswax rock art with ethnographic methods. Secondly it considers some of the possible reasons behind the apparent lack of ethnographic data on beeswax rock art when information from older techniques within the same regions is regularly recorded.

Today's 'Dreaming' is not necessarily the same as when all beeswax rock art was being created, nor necessarily were the same collection and processing methods used. However, the current ethnographic data can provide a more likely interpretation than the one we can create without such data, since Indigenous people understand the nuances of their own culture better than outside observers.

The debate regarding the use of ethnographic methods within archaeology is relevant to all rock art research but it is especially relevant to the study of beeswax rock art because of the limited success in finding meaning in this relatively young rock art technique from today's Indigenous consultants.

With the question of finding a means of interpreting beeswax rock art through Sugarbag Dreaming analogies, some of the purpose behind this rock art technique would have to be religious in nature. Two possible indicators of such a purpose are the concept that beeswax holds imbedded power and an association with increase rituals. Both these interpretations have been gained through ethnographic research so, although the ethnographic record is small, the possibility of recording useful information is there if such research is attempted in culturally appropriate ways.
Chapter 4: Methodology

Plate 10: Anthropomorphic figure from the Djarrng site in western Arnhem Land (Edwards 1979: 31)
4.1 Introduction

The methods used in this study include reviewing the previous publications on beeswax rock art and sugarbag traditions, conducting fieldwork within and around the Gunbalanya community and distributing a questionnaire (see Appendix 9). The questionnaire was used to assess what unpublished information on these subjects existed. The fieldwork for this study included recording a beeswax rock art site, surveying sections of Injalak Hill (see Plate 9 and Appendix 9), and conducting interviews with members of the Gunbalanya community. This chapter also includes justifications for the methodological choices made during this research.

4.2 Previous Research

The study of beeswax rock art is a relatively recent phenomenon so there is only a small number of published sources dealing specifically with this rock art technique. Some of the more general publications dealing with Australian rock art have also occasionally produced general information on beeswax rock art locations. Over all there have only been four independent projects specifically on beeswax rock art including this study, the ‘Beeswax Art project’ (Nelson 2000), Brandl (1968), and Bednarik’s paper (2001), which was based on the results obtained from the "Beeswax Art Project".

Other than gaining an understanding of what has previously been published and where this study fits into the wider context of accumulated knowledge on beeswax rock art, these publications were also used to see if the following questions could be answered:

- What direction has the study of beeswax rock art taken?
- Where is this rock art technique located within Australia?
- What are the nearest Sugarbag Dreaming sites to beeswax rock art regions?
- What are the Sugarbag Dreaming stories?
- What is the direct ethnographic data recorded on beeswax rock art?

The data collected on the Sugarbag Dreaming has mostly come from more general sources, often dealing with bark paintings. The reason for this is that the stories recorded along with the paintings are useful means of finding the stories related to the Sugarbag Dreaming and are generally area specific. To get a better understanding of where this natural product traditionally fits into the lives of Aboriginal people, the general topic of sugarbag was also explored.
4.3 Why Choose a Case Study in Western Arnhem Land?

The dates produced from 'The Beeswax Art Project' have shown that the oldest beeswax rock art is found within the East Alligator River region in western Arnhem Land and this rock art technique has been used in this area for at least 4000 years ago (Nelson et al 2000, Walsh 1988: 240). Namarnkol Shelter was recorded because (a) there was an opportunity available to record in this area through the association of my supervisor Dr Sally K May with this region, (b) Namarnkol Shelter was previously unrecorded, (c) the site was home to a large number of beeswax motifs within a small area, and (d) the site was accessible during the latter half of the wet season when the fieldwork would need to be undertaken.

Plate 11: View looking west at Namarnkol Shelter (photo by author 2006).

4.4 Data Selection Processes

Regional Selection

Although there have only been a small number of research projects conducted on this rock art technique, the majority of information collected has come from Arnhem Land. Despite this, there is clearly still an abundance of unrecorded beeswax rock art sites in this region. As well as addressing the issue of interpreting beeswax rock art through Sugarbag Dreaming, this thesis is an accumulation of all of the published beeswax rock art sites and some of the sugarbag traditions. This thesis has included all of the beeswax rock art regions in various degrees of detail, depending on the available data, instead of being restricted to western Arnhem Land to

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gain a more general understanding of how beeswax rock art and sugarbag traditions relate to each other in Australia.

The Selection of Sugarbag Dreaming Data
For the Sugarbag Dreaming sites explored in the previous literature the associated bee, the clan Estate, site name, location and further details such as any related stories are all recorded within a table format (Appendix 1) or recorded in Chapter 5. The associated bee has been added because a lot of these sites are associated with specific native bees and the clan estate and location are separated because one describes the people connected to the site whereas the other is more descriptive of the region the site is located in.

Consultant Selection
Local community members led the process of selecting participants for the interviews. My supervisor introduced me to Gabriel Maralungu and I asked his advice on whom he felt would be most appropriate to talk to. Gabriel has worked with my supervisor as an interpreter for 6 years.

Garry Djorjim was interviewed to get a general understanding of sugarbag, Wilfred Nawirridj demonstrated how sugarbag is collected, Bruce Nahegyro was approached to discuss some of the cultural traditions associated with sugarbag and beeswax, and Jacob Nayinggul (as traditional Owner of the land where Namarrkwal Shelter lies) was approached to see if it was possible to gain some specific information about Namarrkwal Shelter.

Selecting Recipients for the Questionnaire
A list of rock art researchers, including archaeologists, anthropologists and a linguist, Murray Gardc, was developed in order to distribute a questionnaire relating to the unpublished information available on the topics of beeswax rock art and Sugarbag Dreaming (see Appendix 8). The decision to ask anthropologists was to determine if sugarbag traditions have been studied outside of archaeology. Working or having conducted research within the northern parts of Australia was one of the selection criteria. Given the small number of researchers who have worked on rock art and general Indigenous art in these regions, it was not difficult to produce a list of potential recipients for the questionnaire. Each recipient was also asked to suggest other researchers who may have knowledge of beeswax rock art and these individuals were then added to the list of recipients. A full list of researchers who received the questionnaire is included in Appendix 5.
4.5 Analysing the Beeswax Rock Art Examples

This study recorded the motifs within the case study site, Namarrköl Shelter, in terms of their method of application, colour and motif description including width and height. A photographs and a tracing of each motif augments this data (see Appendix 1). For the other beeswax rock art sites discovered through researching the previous literature, the site name, estimated age if known, researcher and reference, number of motifs (if known), and a brief description of the overall beeswax accumulation for each site was recorded. This data is presented in Table 4 in Chapter 5 of this thesis.

The data recorded from Namarrköl Shelter was compared against the data collected from the other beeswax rock art sites to see where this site fits with the wider context of beeswax rock art. The motifs from this site and any other motifs that were photographed and published are then compared against sugarbag images to determine if there are any similarities in depiction. All the comparisons were done through visual analysis from photographs and descriptions found in the previous research.

The majority of the classification and analysis terminology used throughout this thesis for beeswax rock art has been adapted from ‘The Beeswax Art Project’ (Nelson et al, 2000) and a paper by Robert Layton (1985), which discusses silhouette and geometric rock art forms. These descriptions are as follows.

**Anthropomorphic figures**

This term describes a recognisable shape in hominoid form. Sometimes these depictions also included animal features such as a macropod head shown in Plate 12 but because the body is easily recognisable as hominoid, they are still described as anthropomorphic within this thesis.

**Visual Classification: Geometric, Silhouette & Abstract**

Because a large percentage of beeswax rock art is geometric in appearance, beeswax rock art can be generally classified as either geometric or silhouette. Geometric style includes simple motifs such as circles, arcs, and straight or wavy lines by Layton’s (1985: 434) description. When applying this term to beeswax rock art within this thesis, it includes all of the simple forms mentioned above as well as few more complex forms such as lines with arched tips, and infilled rectangles. The silhouette style covers any image that can be described as representing a
human or animal body outline (Layton 1985: 434). The third category is abstract which cannot be identified as being a recognisable shape.

**Method of Application**

There are three main types of beeswax patterns found in beeswax rock art: pellets in a dotted pattern, strips of beeswax, and entire sheets of beeswax. The dotted pattern consists of even or irregular pellets placed in a pattern with a space between each pellet creating a dotted effect. The motifs made from strips of beeswax are usually outlines or anthropomorphic figures. There are no strip examples found at Namarnkol shelter. The sheet pattern according to 'The Beeswax Art Project' definition is a motif created with one sheet of beeswax that covers an area. The data sheets provided in this CD-ROM suggest that the researchers had some trouble distinguishing between narrow sheet patterns and broad strip patterns (Nelson et al 2000: 33). The last descriptive word used within this thesis is a 'blob'. This is generally a single irregular pellet that is of a larger size than the average pellets or a single pellet by itself. This word is used as a catch-all category for any of the leftover beeswax found on a rock surface that doesn’t fit into any of the other categories by 'The Beeswax Art Project' (Nelson et al 2000: 33). The following figures are examples of the different pellet patterns used in beeswax rock art. Figure 11 is labelled a sheet motif in 'The Beeswax Art Project' because of the irregularity of the shapes of the fragments and spacing (Nelson et al 2000: 449).

**Dotted Patterned Motifs**

![Dotted Patterned Motifs](image)

Figure 12: Motif 18 from Namarnkol Shelter in a dotted pattern (tracing by author).
Possible Sheet Patterned Motifs

Figure 13: Motif 1 from Namarnkol Shelter (tracing by author)

Figure 14: Motif A1005-5 from Yikarrakkal

Figure 15: Motif 29 from Djarrng shelter

shelter (tracing from Nelson et al 2000: 666)
(tracing from Nelson et al 2000: 449)
Strip Patterned Motifs

Figure 16: Motif A1005-3 from Yikarrakkal Shelter in a strip pattern (tracing from Nelson et al. 2000: 664).

Figure 17: Motif 4 from Peyi Shelter (tracing from Nelson 2000: 681).

Figure 18: Motif 58 from Djarrng Shelter (tracing from Nelson 2000: 478).

Combination Beeswax Patterns

Figure 19: Motif 68 from Gunbirdi II mixed Strip and dotted pattern (tracing from Nelson 2000: 364).

Figure 20: Motif 29 from Gunbirdi II mixed Strip and sheet pattern (tracing from Nelson 2000: 364).
4.6 Archaeological Recording

Rock Art Recording

Plate 12: Author recording rock art at Namarnkol Shelter, May 2006
(photo by Dr Sally K May).

Namarnkol shelter was the main site recorded for this study (see Plate 12). A few of the beeswax rock art motifs from Injalak Hill were also photographed during fieldwork for this study; however, this was not a systematic survey. The recording of Namarnkol Shelter, however, included baseline and offset mapping (resulted in a site plan and two cross-sections, see Plate 19, 20, and Fig. 22), as well as measurements of height and width for each motif. The individual motifs were also photographed with a Nikon D2-X Digital high-resolution camera along with site overviews. The motif photographs were later used to create tracings that can be seen along with a photograph example in Chapter 5. The clearest photographs were printed, in black and white for the lighter examples to make tracing easier, and then traced by hand with tracing paper and a pencil. The next process was to scan the tracings into the computer. The tracings of some of the lighter motifs to become visible and show more detail whereas the photographs give an indication of beeswax thickness, colour and preservation.
Ethnographic Recording

Plate 13: Wilfred Nawirridj and author with sugarbag collected while looking for bark for painting, May 2006 (photo by Dr Sally K May)

During fieldwork for this thesis the interview technique was mostly used to determine what the interviewed consultants thought or knew about beeswax rock art and sugarbag traditions. When the opportunity presented itself I was also able to directly observe the collection of sugarbag (Plate 15). The first attempt at doing interviews was with a micro-cassette-recorder M-455 on a Sony microcassette MC-60 but this was soon updated to a Sony Digital Handycam DCR-VX1000E video camera recorder with a 3CCD digital zoom 20x and Mini DV digital videocassettes with a camera stand. This last piece of recording equipment was a PMD 660 Marantz Professional. The method used to approach the interviews was to introduce a question or subject and allow the consultant to speak.

Plate 14: Scooping out sugarbag, May 2006 (photo by author)
List of Indigenous Consultants

Gary Diorlom: Gary is an artist at Injalak Arts and Crafts Centre and an Injalak Hill guide.

Bruce Nabegeyo: Bruce is one of the more famous artists at the Injalak Arts and Crafts Centre, one of the community’s elders with high ceremonial status (May 2006: 249-250).

Jacob Nayinggul: Jacob is the Traditional Owner of the region where Namarmkol shelter is located into the Kakadu National Park.

Wilfred Nawirridji: Wilfred is an artist at the Injalak Arts and Craft Centre, Injalak Hill guide and has learned the old stories from Thomas Yulidjirri.

Gabriel Maralngurra: Gabriel is one of the leading artists at the Injalak Arts and Craft Centre, a translator, Injalak Hill guide and has been taught the local stories from Thomas Yulidjirri.

4.7 Questionnaire

After reviewing the published material, a questionnaire was created to determine what unpublished material relating to beeswax researchers had recorded. Another objective was to determine how well known these subjects are to the researchers in the field. The questions were kept reasonably general to allow for elaboration. To gain the responses reasonably quickly the questionnaire was sent via email. This required that I have the appropriate email addresses, which was obtained from a reputable web site associated with archaeology and anthropology or from my supervisors. All of the responses were also returned via email.

Relevance of Questions

Question one is a simple inquiry to see if the participating researchers have heard of this rock art technique before, whereas question two and three are designed to determine what information is known about sugarbag traditions such as sites or stories. The fourth question was designed to determine if there is any sugarbag rock art in the same places as the beeswax rock art to increase the database of sites. The last question is to see if the sugarbag collecting traditions are the same in all regions.
Table 1: Questions

<table>
<thead>
<tr>
<th>Question 1</th>
<th>Is there a tradition of using native bee-produced products in the communities that you have worked in?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 2</td>
<td>Have you come across public Sugarbag Dreaming or any Dreaming associated with native bees, honey or beeswax?</td>
</tr>
<tr>
<td>Question 3</td>
<td>Have you heard of any public Sugarbag Dreaming or similar stories?</td>
</tr>
<tr>
<td>Question 4</td>
<td>Have you ever come across sugarbag images depicted in rock art?</td>
</tr>
<tr>
<td>Question 5</td>
<td>Have you come across any social customs associated with native bee-produced products?</td>
</tr>
</tbody>
</table>

4.8 Limitations of Data

Because this thesis deals with two complex cultural expressions, the data collected on the Sugarbag Dreaming traditions has necessarily been selective because of the time and space restrictions. Some of the other issues that have arisen during this research include:

**Limited data on some of the previously recorded beeswax rock art sites:**

The majority of the information obtained on beeswax rock art that did not come directly from Namarrkol shelter or Nelson’s (2000) comprehensive CD-ROM was sourced from previous publications. These articles generally did not have detailed data of their field results and sometimes were very general about the shelters themselves such as names or locations of sites. The data on the individual motifs was more often than not already summarised and interpreted. The researched beeswax rock art sites are only a small sample of possible sites so by restricting this research, by necessary, to recorded sites, there is a strong possibility that the comparison between beeswax rock art sites and Sugarbag Dreaming sites will be incomplete and show a possible inaccurate conclusion.

**Gender biases in data collection:**

All though there is only a small amount of ethnographic data on beeswax rock art, all of this data has come from male consultants. My own ethnographic research has been no exception. Rock art generally is often considered men’s business but there is just as often rock art at women’s sites and today female artists, such as Ralwurrndji and Boliny Wanambi from the
Yirrkala people, are producing sugarbag themed paintings of which the stories and style of depiction where presumably taught in a traditional way since the art is modern and traditional at the same time (Framed WebSite accessed 9 August).

**Limited responses from the questionnaire:**

Email responses to the questionnaire were very good but the amount of completed questionnaires was comparatively small. Although a large percent of the response stated that the researcher did not know anything on either of the theme subjects of this thesis, the negative answers were useful in determining how well known beeswax rock art and sugarbag traditions amongst archaeologists and anthropologists who work at the Top End of Australia. Some of the less useful negative answers were the result of researchers doing fieldwork, their notes being somewhere else or they were in the process of publishing the requested data themselves. Out of the 43 questionnaires sent, only 5 completed questionnaires were returned. On a positive note, within the next year there should be some interesting publications on this topic emerging from some of the researchers questioned.

**4.9 Conclusion**

Plate 15: Amos Nganjmirra during the trip to collect sugarbag, May 2006
(photo by author 2006).

The methods utilised within this study involved the collection of rock art data directly from a case study, ethnographic data from residents of Gunbalany (see Plate 15), from within the previously published, and some unpublished sources, and by directly contacting researchers in the field. This chapter also explored some of the limitations these methods incurred. In the following chapter I present the results of this research.
Chapter 5: Results

Plate 16: Anthropomorphic figure from western Arnhem Land (Walsh 1988: 241)
Introduction

5.1 Introduction

The section starts with the archaeological recording of the western Antherin Land one study.

Plate 17: An example of the Injaluk Hill Becerrax rock art.

Photo by Anthony Zorab, see also Appendix J.

5.2 Decowax Rock Art

In the chapter they are new data on decowax rock art. Significant archaeological and ethnographic data, and the archaeological records. These results come from the archaeological research on the excavations in the caves of Namaqualand (western Antherin Land), obtaining data from the archaeological research in the Colombaripa community, and the archaeological research in the Colombaripa community.
next section. All of the known recorded beeswax rock art sites are listed within this section along with a brief overview of this rock art technique within each region.

Namarnkol Shelter Case Study

Plate 18: Frontal View of Namarnkol Shelter (photo by author 2006).

Archaeological Site Recording

Namarnkol shelter (Plate 18) is located between the East Alligator River and the Gunbalanya community. It is reasonably easy to access because of its close proximity to four-wheel drive tracks and is at ground level. This site is on Jacob Nayinggul’s traditional land but it is very close to the border with Donald Gumurdul’s traditional land, which includes the Gunbalanya community (see Fig. 21). Namarnkol shelter is accessible during the dry and latter part of the wet season although access at this time of year depends on the water levels. The sandy soil around this shelter also makes it ideal bogging conditions even when there is no visible water. The main tree species in this area is the paperbark tree and at the time of the fieldwork, a large percent of these trees were lying across the access road because of a recent cyclone.
Site History

Namarnkol Shelter is located close to a day campsite, regularly used by locals today but it had only come to the attention of the manager of the Injalak Arts and Crafts Centre, Anthony Murphy, in 2003 when he was shown the site by local Indigenous people. This site was later shown to Dr Sally K May, a rock art researcher, who (with permission from Jacob Nayinggul) showed the site to Flinders University field school students in 2004. This was the first time I saw the site and I have visited the site seven times since. George Chaloupka is known to have explored a large percentage of western Arnhem Land’s rock formations but as far as I am aware he has not visited or recorded this shelter. This site was not recorded during the 1990s ‘Beeswax Rock Art Project’. The archaeological recording of this site took place between January and June of 2006.
Site Description

Namarnkol Shelter is 7 metres wide, 180 cm high and has a depth of 240 cm, facing south (see Plate 18). Underneath many of the beeswax motifs are red painted motifs including anthropomorphic figures as well as a few white motifs. Red is one of the last pigments to fade in rock art (Wilfred Nawirridji pers com. 2006), suggesting that this art is reasonably old. The majority of the back shelter wall contains this painted art. Due to time limitations, the painted art at this site were not recorded for this study. This would certainly be an area for future research and would be an interesting comparison with beeswax art.

The beeswax rock art appears to follow the contours of the rock surface and are generally in small groups of one to four motifs. There also does not appear to be any painted art superimposed on top of the beeswax art. The site is easy to access but does require a squatting position to get the best view of the art. The consistency of the soil within the shelter is very sandy with small charcoal pieces mixed in and slightly sloping down away from the shelter. There is only minimal archaeological evidence of occupation above ground such as the art and some smoke damage to the rock face.

Motif Depictions from Namarnkol Shelter

Individual pellets have been grouped together within the one heading with the more complex motifs. This is because each motif is identified through photographs and it is easier to keep individual pellets, when in close proximity to a more complex design, together. These pellets are separated in the following table (see Table 2) to demonstrate how regularly they are found within this shelter.

Motif Comparisons between Namarnkol Shelter and the ‘Beeswax Rock Art Project’ Sites

This section has been added to show where Namarnkol shelter fits amongst the sites recorded from the ‘Beeswax Rock Art Project’ (see Figure 5, Chapter One for site locations). Only these sites are used because there is enough information available to make the comparison possible. The Gunbirdi 1 shelter has the highest density of motifs out of all of the recorded beeswax sites in Table 3 with 175 motifs within a 15-metre space. The majority of the dot arrays consisted of rectangle-like shapes similar to what is found at Namarnkol Shelter. At Djarring there are no circles only oval present at this site and the strip and sheet motifs are all anthropomorphic figures and because of the small number of examples recorded in the Mann River region, all of sites have been grouped together.
<table>
<thead>
<tr>
<th>Classification</th>
<th>Specific interpretation</th>
<th>Motif Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geometric</td>
<td>Single rows, veridical</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Single rows, horizontal</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Double rows, vertical</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Double rows horizontal</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Triple rows, vertical</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Triple rows, horizontal</td>
<td>0</td>
<td>0</td>
</tr>
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<td></td>
<td>Arched row, facing left</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Arched row, facing right</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Arched double row, facing left</td>
<td>3</td>
<td>7</td>
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<tr>
<td></td>
<td>Arched double row, facing right</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Circular, outlined</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Rectangles, outlined, vertical or horizontal</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Rectangles, in-filled, horizontal</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>or vertical if more than three rows</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S-shaped alphabetical letter</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Silhouette</td>
<td>Fish, Barramundi</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Fish, other species</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Turtle</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Four legged animal</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Abstract</td>
<td>Unknown</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Possible combination of depictions</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Combination geometric shapes</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Blobs</td>
<td>Single pellets</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>More than one pellet</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td><strong>45</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td>12 Months</td>
<td>49 out of 46</td>
<td>Months</td>
<td>10 out of 12</td>
</tr>
<tr>
<td>-----------</td>
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<td>--------</td>
<td>--------------</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>60</td>
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<td>10</td>
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<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 3**: Nanaimo Shelter & Site, Decisive Rock Art, Site & Most Denizens.
Comparison Interpretations (refer to Table 3)

At first glance Namankol shelter appears to have a high density of beeswax rock art motifs but after reviewing the data on the sites recorded by the 'Beeswax Art Project' (Nelson et al. 2000) it was found that Namankol shelter is nearly half the density of the Gundirdi 1 site, also found within western Arnhem Land.

There are a lower percentage of single dotted rows within the Namankol shelter than within any of the other ‘Beeswax Art Project’ sites but a higher percent of double dotted rows than the Gundirdi and Anbarndarr sites, giving Namankol shelter the third highest percentage. Both the Bindu and Yarranggalinja sites had a much higher percentage of double dotted rows than any other site. Namankol Shelter has significantly less circles and strip motifs than is average for western Arnhem Land but nothing notably different to what is expected within this region. Namankol Shelter is an average example of the western Arnhem Land beeswax rock art tradition. However, these tables show a clear difference in beeswax rock art traditions between the Tabletop, western Arnhem Land and central Arnhem Land regions.

One explanation provided by Taçon and Garde (2000) for shelters containing high densities of beeswax motifs can be described as a copycat theory. The theory is that an original motif had influenced the placement of the rest of the motifs, similar to the creation of new motifs when the ‘Beeswax Art Project’ was in progress in central Arnhem Land (Taçon & Garde 2000: 72, 73). This is an interesting idea but it could be argued that there are more reasons for choosing to produce beeswax rock art at specific sites at the proposed peak of this tradition, which according to Bednarik was around 1500 to 1000 years ago (Bednarik 2001: 94).
Plate 19
Top: Cross-Section One of Namarnkol Shelter
Bottom: Left Side of Namarnkol Shelter 2006
Plate 20

Top: Cross-Section Two of Namarnkol Shelter
Bottom: Right Side of Namarnkol Shelter 2006
Namarnkol Shelter Beeswax Rock Art Interpretations

Beeswax rock art interpretations

All of the major interpretations credited to beeswax rock art fall under the general headings of religious or secular. Within the religious interpretations is the theory that beeswax has some imbedded power and is associated with increase rituals. The secular interpretation is 'just for fun'. One interpretation does not cancel out all others because it is likely that there is more than one purpose for each site.

At least three of the Indigenous consultants who were asked about beeswax rock art by previous researchers have answered that the purpose of creating this rock art technique was just for fun. The problem with this answer is that there is evidence that can be interpreted as suggesting more complex reasons. This is not saying that these consultants were either lying or deliberately misleading researchers as some opposers of ethnographic research in archaeology have claimed (see Taçon 1992) but that they possibly did not know of any other purpose (Taçon 1992: 11). When people create pictures for fun, especially children, they often create recognisable figures as a lot of the most recent examples of beeswax rock art have been. A large amount of beeswax rock art is geometric in design. Geometric shapes have been specifically designed, within other Indigenous art forms to hide information (Taylor 1996: 16). The observer needs to have additional information that is not provided within the rock art to produce a similar interpretation to the original artist like a key to a code. Sometimes art can also have levels of meaning that are not recognised consciously.

Another possible secular interpretation is that the recognisable depictions are a record of daily activities such as a fish representing the catch of the day, as Jacob Nayingul suggested when asked about a possible purpose for creating motif 26 from Namarnkol shelter (Jacob Nayingul interview 2006).

There are a number of ways described within the ethnographic record in which beeswax rock art has been infused with power. This includes as a conduct for a spirit to eradicate ticks, to empower certain body parts in the case of collage motifs, to ensure the continued success of the depicted activities, and to contain a dead person's spiritual essence. Nabiwo beeswax has also been perceived as having the same power as a Rainbow Snake and is claimed to be Chaloupka's favourite theory on the purpose of beeswax rock art creation (Chaloupka 1993: 158, Chaloupka & Alderson 2000: 24, Taçon et al 2000: 25).
There has also been a suggestion of sorcery magic being associated with beeswax rock art, specifically within the Keep River region (Taçon et al. 1997, Taçon 2003: 8).

In Chaloupka's version of how ticks were removed from infested shelters, within western Amhem Land double dotted rows and anthropomorphic figures of a malignant spirit called Namamde would be eradicated through Namamde's power or by being drawn into the rows of pellets (Chaloupka 1993: 158). Beeswax has also been used to eradicate ticks in central Amhem Land but not, according to Mivk Kuninjku, in a 'magical' science described by Chaloupka (Taçon et al. 2000: 29).

The purpose behind the creation of beeswax rock art by Nayombolmi in the 1920s and 1950s, according to his cousins, was to retain some of his dead promised wife's spiritual essence and to ensure his continued success at buffalo shooting and cricket (Taçon et al. 2000: 24).

All of the examples above have shown that there is a religious or spiritual element to the creation of beeswax rock art and it was even noted by Nelson (2000: 106) that some of the anthropomorphic figures found at the Djarrgg site suggest a mythological connection but does this suggest a connection between Sugarbag Dreaming and beeswax rock art? The evidence so far only suggests that there is a possible spiritual intention behind the creation of some beeswax rock art but not specifically from Sugarbag Dreaming. The only evidence discovered that could possibly be argued to show such a connection is one reference of beeswax rock art being applied as part of a native bee increase ritual and beehive depictions (Chaloupka & Alderson 2000: 25).

**Increase Rituals**

Within Chaloupka and Alderson's (2000: 25) paper in Nelson's (2000) CD-ROM, there is a claim that beeswax pellets are added to beeswax designs during bee and bee product (sugarbag) increase rituals. This piece of information is the most convincing argument for an association between beeswax rock art and Sugarbag Dreaming because a lot of the Sugarbag Dreaming revolves around the different bee species. The main problem with this line of inquiry is that Chaloupka and Alderson's paper is the only reference stating this point (Chaloupka & Alderson 2000: 25). It has not been independently corroborated in any of the other regions or the ethnographic record, possibly because this could be data collected from one of Chaloupka's consultants who had died before the 1990s 'Beeswax Art Project' was started.
**Beeswax animal silhouettes**

Out of all of the beeswax motifs recorded within western Ambecm Land by 'The Beeswax Art Project' and Brandl (1968), only four animal silhouettes were recorded; two turtles, a macropod head and a buffalo (Chaloupka 1993: 158, Chaloupka & Alderson 2000: 25). Within Chaloupka's (1993: 160-161) book at least three macropod headed anthropomorphs are shown contradicting the earlier claim of only one such example. Within Namamkol shelter there are three animal silhouettes and a possible fourth (see Table 2), a turtle (Motif 18), a four-legged animal (Motif 30), and a fish (Motif 26). The fourth possible animal silhouette (Motif 21) could also be a fish but of a different species (Appendix 1).

**Beeswax superimposition**

There have been numerous examples of abstract beeswax motifs recorded but there has been no mention within any of the previous publications of possible superimposition of beeswax on top of beeswax. Because of the regular practice of painting over the top of older motifs it is not a huge jump to assume that this could have also been practiced with other rock art techniques but maybe because of the textured nature of beeswax rock art it appears to have been only rarely practiced. Namamkol shelter has a possible example. Motif 21 ranges in colour from black, through to grey and the thickness of the beeswax also varies. Within the near centre of this motif is a double row with thicker pellets that the rest of the motif and the left section appear to represent a fish (refer to Appendix 2). The difference between this example and the numerous other examples of re-touching is that this appears to be completely different depictions superimposed on top of each other whereas re-touching generally is the same depiction updated.

**Beeswax Re-Touching**

Changing colour and pellet density within the same motif are indicators of re-touching. There are plenty of examples of this at Namamkol shelter. A lot of the beeswax pellets appear to be a lighter colour closer to the rock surface than they do on top. Either there is a chemical reaction between the beeswax and rock surface or the outer layer of beeswax is fresher than the bottom layer. This is not the first site that indicates that the practice of re-touching happened on beeswax rock art. The dates provided from 'The Beeswax Art Project' showed that a few of the older examples from the Mann River sites were also re-touched (Taçon et al. 2000: 89).
APPENDIX 1

Namannkol Shelter Beeswax Motifs

Motif ID Number One

Method of Beeswax Application The condition of this motif is poor but it could have originally been made from beeswax sheets or strips.

Beeswax Colour As the photograph of this motif shows, the colour is nearly the same as the rock, making it a light grey.

Motif Description This is an abstract motif because it does not have an easily recognizable shape although it is assumed that some of the motif has worn away. One suggestion for an interpretation of this motif is of a former anthropomorphic figure. The two arrows on Plate 24 show were the motif begins and ends. This motif has a height of about 20 cm and a width of 10 cm from the edges of the beeswax shown in the tracing.

Motif 1

---

The location of all the motifs is recorded in Plates 21-26 (Chapter 5 of this thesis).

119
<table>
<thead>
<tr>
<th>Motif ID Number</th>
<th>Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method of Beeswax Application</td>
<td>Created in a dotted pattern.</td>
</tr>
<tr>
<td>Beeswax Colour</td>
<td>The colour of this motif is light grey to white. Because there is hardly any beeswax left in this motif the colour appears more like a stain on the rock than applied beeswax.</td>
</tr>
<tr>
<td>Motif Description</td>
<td>This is a rectangular-like geometric shape with a width of 13 cm and a height of 4 cm.</td>
</tr>
</tbody>
</table>

![Motif 2 Image]
Motif ID Number
Three

Method of Beeswax Application
This motif is made in a dotted pattern but some of the older pellets have bled together at the bottom of this motif.

Beeswax Colour
There are two distinct colours within this motif, black and grey-white. This could be an indicator of retouching.

Motif Description
This motif is a geometric abstract design because it appears to be at least three double dotted curved rows joined together. There is also a single dotted row shown in both the tracing and photograph that may have originally been part of this motif and so is included this Motif ID. This motif has a width of 35 cm and a height of 25.5 cm.
Motif ID Number: Four

Method of Beeswax Application: Created in the dotted pattern.

Beeswax Colour: The colour of this motif is very similar to the rock face. The main indicator of the location of this motif is the large blob of beeswax above motif three. There are small traces of beeswax left but the majority of this motif is stains left on the rock.

Motif Description: This motif is a small 'S' shaped single line above a blob of beeswax.

Plate 27: Motif 4

Blob of beeswax

Because of the poor visibility of this motif I have drawn circles around where the pellets used to be. A tracing was not created because the tracings were created from photographs and there was not a clear enough photograph to trace from.
Motif ID Number: Five
Method of Beeswax Application: Created in the dotted pattern.
Beeswax Colour: Motif made up of a mixture of black, grey and white stains.
Motif Description: A geometric design of a triple dotted rowed vertical rectangular-like shape of a 35.5 cm height and a 5.5 cm width.
Motif ID Number: Six

Method of Beeswax Application: Created in the dotted pattern.

Beeswax Colour: The colour is mostly black with a few missing pellets leaving light grey stains on the rock.

Motif Description: This motif is as an abstract geometric shape. There are also a few individual pellets in close proximity to this motif so they have been included under the single heading. The width of this motif is 25.7 cm and the height is 27.7 cm.
Motif ID Number: Seven
Method of Beeswax Application: Probably made from sheets of beeswax.
Beeswax Colour: The colour of the beeswax is dark grey.
Motif Description: This is a geometric design that was probably completely in-filled originally. The extra lines shown on the tracing represent where it appears to be lighter stains showing the missing beeswax. The width is 9.6 cm and the height is 17 cm.
Motif ID Number: Eight
Method of Beeswax Application: Created in a dotted pattern.
Beeswax Colour: Black
Motif Description: A vertical rectangle with no in-filling or a double dotted row that is closed at both ends. The width is 5.7 cm and the height is 9 cm.
Motif ID Number: Nine
Method of Beeswax Application: Created in a dotted pattern
Beeswax Colour: The colour is black. This motif is one of the darker examples and is the most visible from a slight distance from the shelter.
Motif Description: A geometric single vertical row with smaller pellets at each end. The spacing is not even between pellets but it does not appear as if there are any missing pellets within the row. The height is 14 cm.
Motif ID Number: Ten
Method of Beeswax Application: Created in the dotted pattern.
Beeswax Colour: The majority of this motif is white but there are a few darker black flecks scattered amongst the pellets and above the motif. The dotted outlined pellet shapes represented in the tracing symbolise that these pellets are more white stains on the rock than white beeswax.
Motif Description: Technically this motif could have been separated into four motifs, an arched, left facing double row, a vertical double row, and a right facing arched double row. The fourth motif would have been the individual dots shown in the top right corner of the photograph and tracing as blobs. These images have been grouped together because of how close they are to each other. The three main depictions also appear as if they were created together in one composition. The width is 53.2 cm and the height is 29 cm.
Motif ID Number

Eleven

Method of Beeswax Application

Created in a dotted pattern

Beeswax Colour

This motif has black pellets over white stains with some of the black pellets missing altogether. A few of the pellets are also turning grey.

Motif Description

A right facing double rowed arch with a single row connected to the outer row of the arched motif. A single 'blod' is also above the arch and could have originally been part of another row. This blod stands out because it is positioned within the eye socked of a red painted motif behind the beeswax.
Motif ID Number
Twelve

Method of Beeswax Application
Dotted pattern.

Beeswax Colour
White stains with a few thicker white beeswax pellets.

Motif Description
A geometric shape of double dotted row, off-centre from vertical with a slight curve.
Motif ID Number: Thirteen
Method of Beeswax Application: Created in a dotted pattern
Beeswax Colour: Mostly white beeswax and stains with a few light and dark grey pellets mixed in. There are also some sections of this motif missing of which even the white stains have faded.
Motif Description: A Geometric shape of a right facing arched double row.
<table>
<thead>
<tr>
<th>Motif ID Number</th>
<th>Fourteen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method of Beeswax Application</td>
<td>Dotted pattern</td>
</tr>
<tr>
<td>Beeswax Colour</td>
<td>Mostly white with a few dark pellets mixed amongst the white pellets. Some of the white pellets have degraded to white stains of the rock. This is a combination geometric design. There are two double dotted rows within a winding double row that turns into a circle. Connected to this are two separate double dotted arched rows, both facing right, which is east at the shelter.</td>
</tr>
<tr>
<td>Motif Description</td>
<td></td>
</tr>
</tbody>
</table>

![Motif 14](image1)

![Motif 15](image2)
Motif ID Number
Fifteen

Method of Beeswax Application
Created in a dotted pattern

Beeswax Colour
White with a few dark grey patches on some of the pellets.

Motif Description
Right facing double arched row.
Motif ID Number
Sixteen

Method of Beeswax Application
Created in a dotted pattern

Beeswax Colour
Mostly light grey with a few dark grey and white stains.

Motif Description
A double dotted row with missing pellets and a few extra pellets at the bottom of the motif.

Plate 39: Motif 16

Figure 40: Motif 16
Motif ID Number: Seventeen

Method of Beeswax Application: The appearance is dotted but because of the extended pellet shapes it could have been strips. Dark brown to black.

Beeswax Colour: Dark brown to black.

Motif Description: An oval shape at a possible 20-degree angle. There are also some extra pellets at the bottom of the motif.

Motif 17
Motif ID Number
Eighteen
Method of Beeswax Application
Dotted pattern
Beeswax Colour
Dark black
Motif Description
This motif resembles a short-necked tortoise. The width is 18.2 cm and the height is 29.3 cm.
Motif ID Number
Nineteen

Method of Beeswax Application
Created in a dotted pattern

Beeswax Colour
Light grey to white

Motif Description
A double dotted row almost in a oval shape because of the 30-degree angle.
<table>
<thead>
<tr>
<th>Motif ID Number</th>
<th>Twenty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method of Beeswax Application</td>
<td>Created in a dotted pattern.</td>
</tr>
<tr>
<td>Beeswax Colour</td>
<td>Dark grey with light grey stains.</td>
</tr>
<tr>
<td>Motif Description</td>
<td>This is a double dotted row with various pellet thicknesses within the one motif. There appears to be less of a curve in the photographed version because the curves follow the rock surface.</td>
</tr>
</tbody>
</table>

![Motif 20]