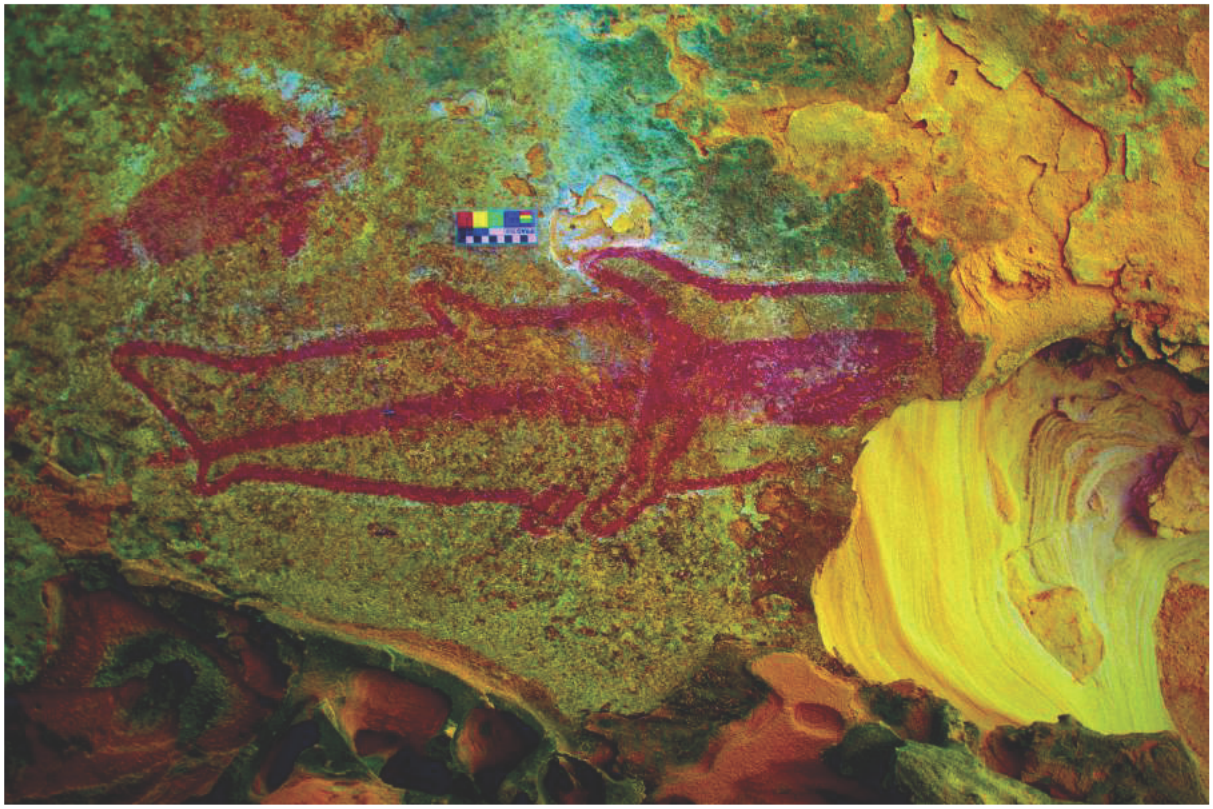
Symbols of a Seascape:

Archaeological Assessment of Maritime Motifs in Yanyuwa 'Rock Art'



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Abstract

Aboriginal art from northern Australia has captivated archaeologists worldwide, but relatively little research has assessed the significance of rock art in the construction of maritime identity. This paper draws from a dataset of 3,183 images collected from 65 sites in the Sir Pellew Group of Islands in the Gulf of Carpentaria during the Yanyuwa Rock Art Project (YRAP) and collaborates with the extensive ethnographic record of Yanyuwa culture. Synthesizing a formal analysis of motifs with information shared by the Yanyuwa community with researchers over the past 43 years allows for the enhanced identification and interpretation of distinctive maritime attributes. The ocean-centric imagery represented includes ceremonial and cosmological iconography, marine animals including dugong, spotted stingray, blue-ringed octopus, and hammerhead shark as well as dugout and bark canoes. The spatial distribution and significant proportion of maritime-themed paintings across Yanyuwa Country sheds light on the way Saltwater People use visual symbols to link the sea with the land. The Yanyuwa dataset is further compared with marine specialist rock art from diverse geographic regions, including Hawaii, Indonesia, Chile and particularly Scandinavia. These findings contribute to a deeper understanding of Indigenous seascapes and challenge prevailing ideas of the "Western" versus the "Traditional" in this context. This archaeological engagement with Yanyuwa rock art builds on previous ethnographic research and adds another layer of knowledge that sits alongside, and is enriched by, Yanyuwa knowledge.

Declaration

I certify that this thesis:
1. does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university
2. and the research within will not be submitted for any other future degree or diploma without the permission of Flinders University; and
3. to the best of my knowledge and belief, does not contain any material previously published or written by another person except where due reference is made in the text.
Signed.
Date 10 November 2023

Acknowledgements

This project builds on and is indebted to the knowledge shared by the *jungkayi* and *ngimirringki* of the Yanyuwa, Marra and Garrwa communities in the southwest Gulf of Carpentaria since 1980. This knowledge has been documented and adapted into new media formats as part of Dr. John Bradley's long-term research. The formal establishment of the Yanyuwa Rock Art Project (YRAP) from 2010 onwards by Dr. Bradley, Dr. Liam Brady and Dr. Amanda Kearney brought further insights and contributions. This thesis would not have been possible without the dedication of all people who facilitated the YRAP over the past 43 years.

My introduction to and involvement with Yanyuwa rock art originated as a part of the thesis advising process at Flinders University. I wanted to study maritime-related Aboriginal art formats, so in conversation with Dr. Daryl Wesley I formulated a research proposal, originally centring boats featured on bark art. Dr. Brady informed me that an extensive photographic dataset of Yanyuwa rock art which had not yet been assessed from a maritime archaeology framework was available. Dr. Bradley also indicated that a maritime synthesis for this data set would make a worthy contribution to the Yanyuwa archive. Drs. Wendy van Duivenvoorde and Jonathan Benjamin of the maritime archaeology program also helped facilitate this project.

There are numerous people to thank for their guidance over the course of the YRAP. The images featured in this research and the stories and traditional knowledge underlying them were made accessible by David Barrett, Ginger Bunaja, Banjo Dindalhi, Jimmy Pyro Dirdiyalama, Samuel Evans Jamika, Shaun Evans, Nicholas Fitzpatrick Milyari, Shaun Fitzpatrick Babawurda, Graham Friday Dimanyurru, Ross Friday Kulabulma, Ruth Friday a-Marrngawi, Musso Harvey Bankarrinu, Roddy Harvey Bayuma-Birribalanja, Nora Jalirduma, Anton Johnston Rakawurlma, Archie Johnston, Steve Johnston Jamarndarka, Johnny Johnston, Annie a-Karrakayny, David Isaac Birribirrikama, Jemima Miller a-Wuwarlu, Don Miller Manarra, Joanne Miller a-Yulama, Eileen McDinny a-Manankurrmara, Dinny McDinny Nyilba, Whylo McKinnon Widamara, Ron Ricket Murundu, Old Tyson Nguliya, Ida a-Ninganga, Dinah Norman a-Marrngawi, Leonard Norman Wungunya, Leanne Norman a-Wuwarlu, Trey Mawson Lhawulhawu, Troyce Mawson Waliyangkayangka, Tommy Reilly Nawurrungu, Tom Simon Balantha, Larry Simon Wunakathangu, Shirley Simon, Thomas Simon Mawubitha, Theresa Simon a-Anthawarramara, Lynette Simon a-Mambalwarrka, Johnson Timothy Babarramila, Judy Timothy a-Marrngawi, Maureen Timothy a-Jungundumara, Mavis Timothy a-Muluwamara, Nero Timothy Wangkarrawi, Old Tim Timothy Rakawurlma, Warren Timothy Walala, Wilton Timothy Yarrambilyi, Isaac Walayungkuma, the li-Anthawirriyarra Sea Rangers and all extended family of the Yanyuwa, Marra and Garrwa people of the southwest Gulf of Carpentaria.

List of Figures, Maps and Tables

Chapter One: Introduction

Despite the worldwide fame of Australian Aboriginal rock art, relatively little research has assessed the significance of rock art, defined as culturally significant marks on rocky surfaces, to the construction of maritime identity. This research develops a case study involving the Yanyuwa Aboriginal people of the southwestern Gulf of Carpentaria to understand how Saltwater People, meaning marine specialist cultures, convey connection to the aquatic environment through rock art. A sample of 3,183 images of rock art from Yanyuwa Country recorded between 1980 and 2019 is interpreted, drawing on the archive of Yanyuwa voices, to contextualise how rock art informs Indigenous sense of place within the maritime realm. This thesis compares how Yanyuwa ideas of the maritime environment relate to other cultures that are also defined by reliance on and interaction with the sea. Drawing on the approaches of maritime cultural landscape and seascape[1] contextualises Yanyuwa relationships with the ocean as depicted in rock art. This framing references maritime history, ethnography, and land-based marine subsistence with spatial understandings. The ways people perceive the sea and use their maritime knowledge to construct a societal worldview are highlighted – in this case, *Yanyuwangala,* the essence of being Yanyuwa.

The rock art of the Yanyuwa People has not yet been archaeologically assessed in-depth for maritime attributes, including marine flora and fauna, marine-centric cosmological iconography, maritime hunting implements, and watercraft. Both cultural and biological aspects of marine interaction are presented as 'maritime' due to the linkage of Yanyuwa lifeways to the sea and its creatures via cosmology. By combining formal methods, which rely on observed characteristics of motifs, and informed methods, which rely on information from the community, motifs are categorized, statistically analyzed, and contextualized. This research integrates the theoretical nuances of the seascape framework, incorporating anthropological interpretations to provide a multifaceted picture of maritime influences on Yanyuwa society. Another aim is to demonstrate the importance of Indigenous cultural archiving by including narratives from previous generations of Yanyuwa elders. This engagement with Yanyuwa rock art builds on previous ethnographic research from the Yanyuwa Rock Art Project (YRAP, see Chapters Two and Three), adding another layer of archaeological analysis that sits alongside, and is enriched by, Yanyuwa knowledge.

[1] These approaches are further defined, investigated, and critiqued in Chapter Two.

Several questions are introduced and explored in this thesis:

1. What is the role of rock art in construction of maritime identity in Yanyuwa society?
    - What does the distribution and frequency of maritime attributes across island and mainland areas indicate about clan relationships to Sea Country?
    - How do these maritime attributes correlate with traditional, marine-centric Yanyuwa lifeways and songlines?
2. How can Yanyuwa ontologies of rock art creation coexist with archaeological classification?
    - Can the idea of the seascape help translate Yanyuwa ideas of rock art into archaeologically comprehensible terms?
    - How do archaeologically defined maritime attributes relate to Yanyuwa cosmology?
3. How does the significance of maritime-themed rock art compare between Saltwater People both in Australia and worldwide?

These lines of inquiry touch on a variety of past and present debates in archaeological practice which are unlikely to be resolved through one project. Rather, these questions are analysed from statistical, historical, and ethnographic perspectives to consider Yanyuwa maritime rock art more comprehensively, within its cultural context.

1.1 Socio-Environmental Context

Yanyuwa rock art cannot be investigated without first understanding the connection of Yanyuwa people to their environment, and how these geographic understandings shape ontologies. Yanyuwa Country[i] extends across the land and sea of the southwestern Gulf of Carpentaria region in Australia's Northern Territory (Map 1). As Saltwater People this includes the Sir Edward Pellew Islands and extends 13 kilometres inland to incorporate brackish waters, including the McArthur River Delta (Fig. 1), estuaries of the Wearyan River, and the mouth of the Robinson River (li-Yanyuwa li-Wirdiwalangu et al. 2023:46). The geography, geology and ecology of the region are intimately connected with Yanyuwa lifeways, culture, history, language, and cosmology. Due to these relationships, Yanyuwa refer to themselves as *li-Anthawirriyarra,* "people whose spiritual and cultural heritage is associated with the sea and coastal Country" (Bradley 1997:12).

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Map 1: Location of Yanyuwa Country within Australia.

Fiona Holley 2023

Figure 1: Aerial Views: McArthur River mouth (Top) and near Borroloola (Bottom).

Liam Brady 2010

Yanyuwa Country features *nankawa* (lagoons), *mambulmambul* (swamp systems), *walangarra* (Eucalyptus forests) (Fig. 4) and *wumburr* (grassed plains). Along the coast there are *a-ngalawurr* (creeks) and *na-wulangi* (river systems) (Fig. 1) lined with *lhukannguwarra* (mangrove forest) (Fig. 2) as well as extensive saline coastal flats. The islands also consist of *narnu-wurru* (beaches), *rawu*

(sand dunes) (Fig. 3), *jidalbirringki* (sandstone ridges) and *diwurru* (bluffs). Although Yanyuwa distinguish their Country in particular units and regions, these are more than simply geographic features. Landforms are spiritual imprints of the ways Yanyuwa ancestors moved over the terrain and reflect how people utilised resources historically (Bradley 1997).

Figure 2: Lhukannguwarra mangrove forest.

Liam Brady 2010

Traditional Yanyuwa lifeways were highly adapted to utilize the marine and mangrove environments in *wurrulwurru* (brackish) and *alhibi* (saltwater) areas. Most water on mainland Yanyuwa Country is brackish, but there are seasonal freshwater *bingkarra* (lagoons) and *ngaydu* (springs) in *wumburrwumburr* (grassland areas) on the mainland. Water is only available in the lagoon systems until the hot dry season. As a result, the large freshwater lake Walala (Lake Eames) on Vanderlin Island, and *mabin* (wells) on both the islands and the mainland are primary reliable sources of water and are an important factor in where Yanyuwa chose to live (Bradley 1997; Bradley and Kirton 1992). The Pellew Islands particularly contain wells and soaks, in relative proximity to the sandstone formations where rock art is often found. The Dreamings created wells and other places of significance as they travelled, animated, and marked the land, a tradition which Yanyuwa people uphold in the present day (see Chapter Five).

Figure 3: Arnarra cliff faces at Wulibirra (left) and *rawu* sand dunes (right) at Muluwa.
John Bradley 2010

Yanyuwa spirituality and hunting activity is important throughout the extent of their territory, as *li-Anthawirriyarra* the Pellew Islands and coastal areas represent the heart of Yanyuwa thought and existence (Bradley and Kirton 1992). Aspects of Sea Country are known and comprehensively named in Yanyuwa ontology. This aquatic knowledge extends to the extensive mapping of geographic features of reefs, seagrass beds and the sea floor.

Figure 4: Women hunting in *walangarra* eucalyptus forest on Yanyuwa Country.
Amanda Kearney 2010

The traditional Yanyuwa way of life was influenced by seasonal cycles just as much as geography. During *lhabay* (the wet season), torrential thunderstorms cause widespread *ngurrunmantharra* (flooding). The floods cause rivers, creek systems and lagoons to overflow, allowing inland freshwater sources to join the sea. The wet season also brings life-threatening cyclones which are the realm of *Bujimala* (the Rainbow Serpent; Appendix D.5).[ii] During the subsequent cool dry season, weather is influenced by the *a-mardu* (south-easterly winds), the realm of the *Buburna* Black Nosed Python, which curtails the rain-bringing power of *Bujimala*.[iii] At the beginning of the dry season, the seas are calm, so men hunt *walya* (dugong) and *wundanyuka* (sea turtles). Both men and women hunt *arlku* (fish), shellfish, and *nyinga* (crabs) using spears and hand lines.[iv] The dry, cool weather meant camps could be established on beaches and foredunes.[v]

Midway through the cold season, south winds intensify, the sea becomes rougher and weather colder. *a-Yabala* (the Milky Way) shines brightly at night midway through the cold season. The Pleiades constellation is to the Yanyuwa the Seven Sisters Dreaming. At sunrise, the Seven Sisters descend to the sea in the form of *li-Jakarambirri* (Blue-ringed Octopus). At sunset, *li- Jakarambirri* returns to the sky as the Seven Sisters. Senior Yanyuwa people sung to this constellation to give strength to the people and land (Bradley 2010). Men hunted *walya* and *wundanyuka* by careful observation of the sea, switching to hunt *jijaka* (kangaroo) during inclement weather (Bradley 1998). Women returned to the mainland to hunt terrestrial *lhuwa* (reptiles).[vi] In the later stages of the cool dry season, land-based hunting accelerated. Women extensively burned mainland grass to hunt *a-wayurr* (blue tongue lizard) and *kirarra* (large sand goannas). The islands were also burnt from shoreline to opposite shoreline, reducing the wet season growth to *alban* (ashes).

Fogs signal the conclusion of the cold dry season and the beginning of the hot dry season. The lagoons begin to desiccate so women gathered *ma-kakayi* (lily corms) and hunted *murndangu* (long-necked turtles) as they began to hibernate in the *wararr* (mud) (Bradley and Kirton 1992). Available foods include *ma-ngakuya* (fruit from ripening *ma-rnbaka* cycad palm), *wujbi* (sea turtles' eggs), and small sharks and *adumu* (stingrays). The hot dry season is accompanied by *kurrumbirribirri* (strong north winds and dust storms) as *Bujimala* stirs, building clouds.[vii] The Morning Glory cloud formation rolls east to west, bringing *na-wungkala* (flying fox colonies), pigeons, parrots and other bird species to feed on blossoms.

This summary of Yanyuwa traditional lifeways introduces a worldview with a distinctive way of seeing, categorising, and understanding. The notion of the ecological land and seascape as intertwined with all aspects of human and non-human life portrays Yanyuwa Country as a place

where relational understandings of the maritime world shape the fabric of society. Presenting the interrelated dynamics of language, cosmology, natural phenomena, foodways, and ritual activities provides necessary context for the framing of rock art as a culturally situated aspect of the seascape.

1.2 Historical, Cultural and Cosmological Background

Relational understandings and context underpin the creation, symbolism and meaning of Yanyuwa maritime culture and by extension, its rock art. This section provides an historical overview of the Yanyuwa in terms of their relationships to both human and non-human kin as outlined by Law, their relationships with other language groups in the southwest Gulf of Carpentaria, and their relationships with Southeast Asian and European cultures. These interactions provide a backdrop to interpret the role of rock art in Yanyuwa society past, present and future.

Yanyuwa Social Organization

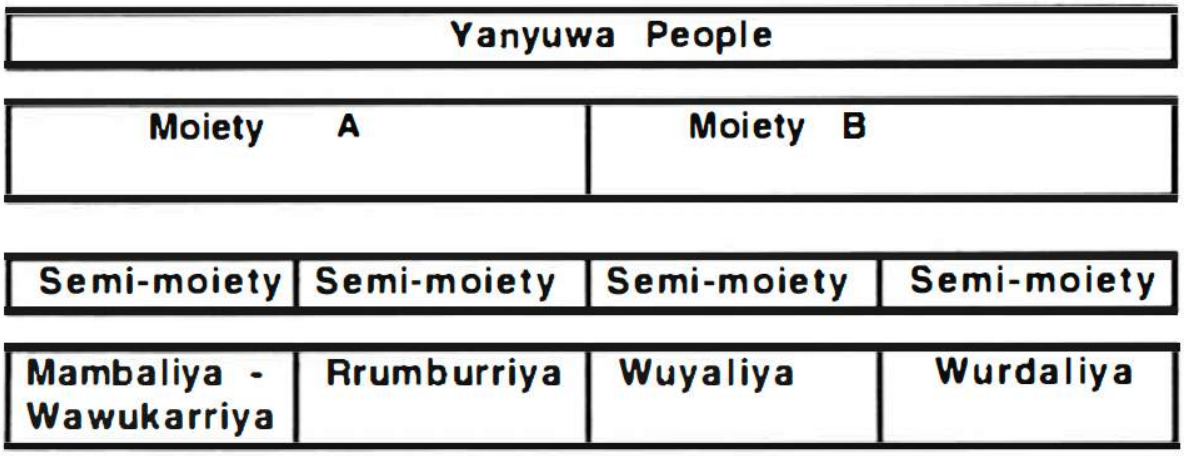

Figure 5: Yanyuwa Moiety System. *Bradley 1997:143*

Yanyuwa people organize their society according to a patrilineal clan system involving two unnamed patri-moieties[viii] that are subdivided into four named clans/semi-moieties: Mambaliya-Wawukarriya, Rrumburriya, Wurdaliya, and Wuyaliya (Bradley 1997; Fig. 5). This moiety system describes kinship relationships of people as well as plants, animals, and other environmental phenomena including rain, lightning, wind, and fire (Fig. 6). Relationships to mother's country are also important within this system. Specific land and sea management practices, designs, phenomena, rituals, and artefacts of material culture are designated on a clan basis, with each group responsible for a particular set of obligations and rites that are further allocated to individual *jungkayi* (guardians) and *ngimirringki* (owners) (Map 5, top). The moiety and clan system also shapes interactions with the environment, figures from the Dreamings, and spiritual entities (Bradley with Yanyuwa Families 2010; Yanyuwa Families et al. 2003).

YANYUWA FAMILIES			
Water (Wabuda)		Fire (Buyuka)	
Rrumburriya	**Mambaliya-Wawukarriya**	**Wuyaliya**	**Wurdaliya**
Human kin	**Human kin**	**Human kin**	**Human kin**
Mother's mother	EGO (male)	Mother	Father's mother
Mother's mother's brother	Brothers	Mother's sisters	Father's mother's brother
Mother-in-law	Sisters	Mother's brother	Wife
Sister's daughter's children	Father	Mother's father	Brother-in-law
Son-in-law	Father's brother	Mother's father's sister	Sister-in-law
	Father's brother's sons and daughters	Mother's brother's sons and daughters	Sister's sons and daughters
	Father's sister		Sister's son's sons and daughters
	Father's father		
	Father's father's sister		
	Son's sons and daughters		
	Sons (of male members only)		
	Daughters (of male members only)		
Non-human kin	**Non-human kin**	**Non-human kin**	**Non-human kin**
Saltwater Crocodile	Olive Python	Groper	Green Turtle
Hill Kangaroo	Brolga	Barracuda	White Egret
Tiger Shark	Crow	Cold Season Wind	Pelican
Hammerhead Shark	Centipede	Peregrine Falcon	Trevally
North Wind	Wet Season Rain	Freshwater Crocodile	Hot Season Winds
White-Bellied Sea Eagle	Wedge-Tailed Eagle	Mangrove Tree	Osprey
Rock Wallaby	Brush-Tailed Possum	Pleiades/Seven Sisters	Green Tree Frog
Cabbage Palm	Stringybark Tree	Goanna	Shooting Star
Cycad Palm	Moon	Frill-Necked Lizard	Cycad Palm Fruit
Waves	Sun	Beach-Stone Curlew	White-Bellied Mangrove Snake
Sea	Loggerhead Turtle	Hollow Log Coffin	Hawksbill Turtle
Dugong Hunters	Whirlwind	Riverine Wallaby	Flatback Turtle
Harpoon Rope	Tasselled Spear-Thrower		Tree Wild Honey
	Scorpion		Harpoon Points
			Bandicoots

Figure 6: Yanyuwa clans and associated Dreamings.

li-Yanyuwa li-Wirdiwalangu et al. 2023: 36

The foundation of Yanyuwa relationships to kin and Country is *yijan* (the Dreaming).[ix] During *yijan,* Spirit Ancestors also known as Dreamings arose and travelled the landscape, creating geological features, plants, animals, and the Laws which govern society, all mapped through song (Bradley 1997). Yanyuwa ways of life and relationships with Country, including rock art, are impacted by spirit beings, including deceased kin and spiritual entities called *ngabaya* that are timeless and indigenous to the landscape. The natural world, plants, animals, and weather patterns can also be influenced by human activities (1997:139). If the Laws and rituals, explained in the 13 fundamental *kujika* (songlines) are not followed and Country is not properly cared for, the Spirit Ancestors may leave or grow weak (Bradley with Yanyuwa Families 2021:207).[x] The songlines are tracks and places of power within a network of meaning created by the Dreamings (Appendix D.6). Spirit Ancestors such as the *Ngurdungurdu* (Tiger Shark), *a-Kuridi* (Groper), and *li-Maramaranja* (Dugong Hunters) (Map 3), create maritime routes and flow through Country to this day. Songlines are illustrated through the paintings in rockshelters on Yanyuwa Country, indicating rock art's role in affirming this cosmology. The introduction of non-Yanyuwa people, however, would introduce new ways of relating to Country.

Cross-Cultural Interactions in the Gulf of Carpentaria

Six language groups (Yanyuwa, Garrwa, Gudanji, Marra, Binbingka and Wilangarra) were known to live in the southwest Gulf of Carpentaria prior to European arrival (Bradley 1997). Interactions with Southeast Asians from at least the seventeenth century contributed to local trade networks; by contrast, later European settlement severely disrupted Indigenous ways of life. Intermittent frontier violence, as well as several massacres, led to the Binbingka and Wilangarra ceasing to exist as landowners by the early 1900s (T. Roberts 2005). Due to their cultural affinity, the Yanyuwa assumed responsibility for what had once been Wilangarra and Binbingka land (Baker 1990; Kearney et al. 2021; Map 2). These historical interactions carry over into the present, and interface with the broader cultural context of Northern Australia.

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Map 2: Language group distribution in Gulf Country prior to extinction of the Wilangarra and Binbingka (left) and after Yanyuwa custodianship (right). *Fiona Holley 2023*

Researchers have categorised cross-cultural relationships in northern Australia into four discrete chronological phases (McIntosh 2006). The first phase pre-1700's involved burgeoning relationships with whale and dugong hunters from southeast Asia, known as Bayini, Badu, Wurrumula or pre-Macassans; it is unknown whether these groups interacted with the Yanyuwa (McIntosh 2006; Wesley 2014). A second phase, dating around 1637 to the early 1800s, was known as the "Golden Age" and characterised by cooperative trade between Southeast Asian fishermen and Aboriginal people from the Gulf of Carpentaria (including Yanyuwa), the Kimberley, and Arnhem Land regions (Berndt and Berndt 1954; May et al. 2010; McIntosh 2006; Wesley et al. 2016:169). This era involved consistent diffusion of goods, culture, and ideas.

Exchanges between Southeast Asian seafarers and Indigenous Australians are documented by rock art and other paintings (Clarke 2000; Frieman and May 2019; May et al. 2010, 2013; Taçon and May 2013; Taçon et al. 2010; Wesley and Litster 2015). Crews departing from Makassar, modern-day South Sulawesi, Indonesia, began visiting the Northern Territory coast seasonally on *prau* vessels c. AD 1637 (Wesley et al. 2016:169). These diverse crews carryied men from Madura, Sulawesi, Java, Flores, Borneo, Rote, Timor and New Guinea (Taçon and May 2013). The Indonesian visitors primarily harvested *trepang* sea slug, a delicacy and valuable commodity in the Chinese market, linking northern Australia to wider maritime trade networks (May et al. 2009:370). On fleets of 60+ boats with up to 2,000 sailors, they established encampments to boil and dry *trepang* (Appendix D.4). Southeast Asian sailors introduced goods like tobacco and cloth, and technologies like dugout canoes and steel weapons while Yanyuwa people exchanged *karrubu* (hawksbill turtle-shell) and *mathalmathal* (shark fin) (Appendices B and D.3). Recent studies of

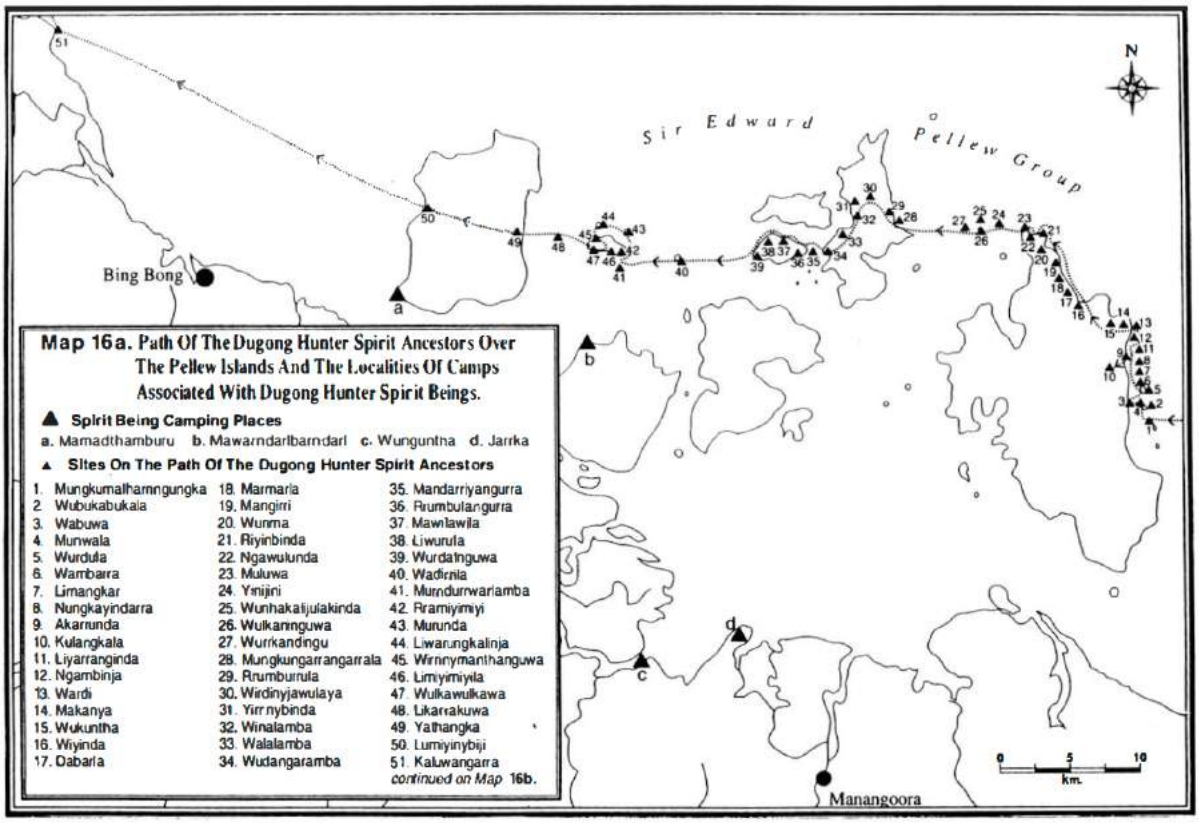
Arnhem Land rock art note portrayals of fighting watercraft originating from Maluku Tenggara, Indonesia, painting a more diverse picture of culture contact (de Ruyter et al. 2023:14). These voyages established intercultural relationships with Aboriginal societies and entered the archaeological record through detailed depictions of introduced imagery at rock art complexes (May et al. 2009, 2010, 2013; Taçon and May 2013; Wesley and Litster 2015). Historical records show that numerous Aboriginal Australians, including Yanyuwa men, travelled to Indonesia with the *trepangers* and settled there, a major source of cultural diffusion (Burningham 1994:140; Russell 2018).[xi] This influx of unfamiliar cultures and practices profoundly impacted coastal Indigenous societies like the Yanyuwa.

The third phase from 1800 to 1906, known as the Colonial Era, "Time of Fire," or "wild times," involved deterioration of relations between Saltwater People in the Gulf of Carpentaria and *trepangers* while Europeans took control of the area (Baker 1990; McIntosh 2006; Wesley 2014). This phase describes the founding of English settlements in the early 1800s, establishment of Darwin and related industries in 1879, and end of Macassan *trepanging* due to the White Australia Policy of 1907. Bringing Yanyuwa history into this narrative disrupts that trend, as Vanderlin Island was documented as early as 1644 by Dutchman Abel Janszoon Tasman (Heeres 1899:vi). But the fact that the remote Pellew Islands were not coveted by settlers allowed Yanyuwa to escape the brunt of early colonial violence by retreating to the archipelago when targeted by Europeans and maintain their traditional occupational patterns until the mid-twentieth century (Baker 1999; Brady and Bradley 2014a).

A fourth period from 1906 to around the 1960s, the "Mission Time" or welfare period saw the social and economic impacts of mission settlements, pastoral industry, servicemen, and mining interests (Wesley 2014:23-27). The coercive 1953 Northern Territory Welfare Ordinance, as well as the allure of regular flour rations, caused Yanyuwa families to consolidate a permanent settlement along the McArthur River in the township of Borroloola, 60 km inland from the Pellew Islands (Baker 1990). Despite this geographic movement, and the adoption of terrestrial lifeways on inland cattle stations, Yanyuwa have retained kinship ties with other Gulf of Carpentaria groups, as well as ceremonial and trade relationships involving the sea (Yanyuwa Families et al. 2003).

In the aftermath of these contacts, the Yanyuwa now mostly reside inland; however, their identity remains inextricably bound to their relationships with the marine environment (Brady and Bradley 2014a). This maritime identity is further demonstrated through the cultural importance Yanyuwa place on hunting marine animals such as dugong and sea turtle via evolving nautical technologies

(Bradley 1997, 1998). The Yanyuwa also remain connected to neighbouring Marra and Garrwa peoples through their ancestral Dreaming paths (Bradley with Yanyuwa Families 2010; Map 3). Yanyuwa cosmology, now translated to new media forms such as animated videos and digital maps, continues to demonstrate how Yanyuwa perception of their environment and its creation is linked to the aquatic realm (Bradley 1997; Brady and Bradley 2016a; Bradley with Yanyuwa Families 2021).



Map 3: Maritime trajectory of the Dugong Hunter Dreamings.

Bradley 1997: 279

This brief introduction to the environmental, geographic, linguistic, social, historical, and cosmological context of Yanyuwa society has highlighted many threads within in the net of Saltwater identity in the Gulf of Carpentaria. The interconnectivity of concepts that are demonstrated here provides a background for understanding ongoing relationships between Yanyuwa people, the maritime environment, and cultural expressions such as rock art. A substantial body of literature, discussed in Chapter Two, further expands on the broader context of rock art research as well as the anthropological and archaeological aspects of Yanyuwa society.

1.3 Research Aims and Chapter Overview

A central aim of this thesis is to classify and determine the proportion of 'maritime imagery,' motifs which represent interaction with the sea, within this sample of Yanyuwa rock art. This proportion is then harnessed using anthropological and Yanyuwa perspectives to investigate the ways maritime lifeways are inscribed on the landscape. A further research aim is to interpret the distribution of maritime imagery between clan and geographic perspectives. This thesis seeks to reconcile statistical information with voices from the archive, transforming a purely formal analysis into a socially informed case study. Many maritime subjects were non-representational, so Yanyuwa perspectives are essential for interpretation. Comparison between Yanyuwa rock art and maritime specialist rock art (See Chapter 2.5), particularly that of Scandinavia, provides insight into how Saltwater identity is constructed through visual markers.

Chapter one has introduced the social and historical context of Yanyuwa life, as well as the ways Yanyuwa identity is interwoven with Sea Country. Chapter Two situates this research in relation to previous archaeological and anthropological investigations on Yanyuwa Country, key theoretical and ontological debates in rock art research, and questions of the seascape as seen through maritime specialist rock art. Key terms continue to be defined throughout Chapter Two. Chapter Three outlines the chosen methods for this project and explains the reasoning behind them, as well as the limitations of this approach. Chapter Four presents and discusses the results of the formal analysis including information about the proportion and distribution of different sorts of imagery found throughout Yanyuwa Country. Chapter Five presents informed analysis, derived from Yanyuwa knowledge that has been shared about the meaning of rock art as relates to Dreamings. Chapter Six presents detailed comparisons to other maritime specialist cultures as a means of interpreting Yanyuwa rock art. Finally, Chapter Seven revisits recurrent questions and threads by expanding on the themes of maritime identity and future roles of rock art within Yanyuwa society.

Chapter Two: Literature Review

This chapter provides a critical orientation to research, theoretical debates and findings that link rock art, the maritime cultural landscape, and Yanyuwa Country. First, previous research priorities and existing anthropological and archaeological studies from Yanyuwa Country are described. Then, problems and debates in rock art research are introduced. Issues of interpretation deriving from juxtapositions of Western and Traditional Knowledge are discussed. Yanyuwa visual expression is situated in relation to scientific ontology and epistemology. Expanding the scope globally, the category of maritime specialist rock art is elaborated, while throughout, relevant terms are defined. This chapter critiques existing scholarship and demonstrates the necessity for integrating Indigenous knowledge into existing methods of rock art and maritime archaeological research to understand how rock art maps a conceptual seascape.

2.1 Previous Research on Yanyuwa Country

Although the Northern Territory is home to some of the world's most renowned rock art, archaeological fieldwork on Yanyuwa Country is far from extensive. Preliminary archaeological research focussing on Macassan contact sites on the Pellew Islands was conducted by Richard Baker in the early 1980s (Baker 1984; Bradley 1997; Brady and Bradley 2014a). In 1999, the Sir Edward Pellew Island Archaeological Project (SEPIAP) was initiated by Robin Sim and colleagues to determine the chronology of human habitation in the region (Sim 1999, 2002). Excavations on Vanderlin Island built on Sandra Bowdler's theories to investigate island occupation and abandonment during rising Holocene sea levels (Bowdler 1995; Sim and Wallis 2008). Results revealed three discrete phases of Holocene-era occupation beginning c. 8000 BP (Sim and Wallis 2008). Excavation-based research has been limited to the Vanderlin Island and Centre Island sites.

Anthropological research into Yanyuwa society, beginning in the twentieth century, has been more comprehensive. Sir Walter Baldwin Spencer and Francis James Gillen incorporated brief encounters with the Yanyuwa at Borroloola into their 1904 and 1912 ethnographic accounts. Later research more comprehensively documented Yanyuwa kinship patterns (Avery 1985; Reay 1962; Kirton and Timothy 1977; Bradley 1997). Other research has focussed on linguistics and documenting the endangered Yanyuwa language (Bradley 1988, 2016, 2017; Kirton 1971, 1988; Kirton and Timothy 1982). Ethnomusicologist Elizabeth Mackinlay has written extensively on Yanyuwa women's

songlines and musical traditions (Mackinlay 2005, 2009, 2010, 2012; Bradley and Mackinlay 2007; Mackinlay and Bradley 2003*)* Another line of research has been Yanyuwa relationships with Country (Bradley 1997, 1998, 2001; Bradley and Kearney 2009; Bradley et al. 2021a; Kearney and Bradley 2009; Kearney 2009). Since the 1980s, John Bradley has become a primary researcher given his longstanding connections with the community arising from his time as a schoolteacher in Borroloola and four decades of anthropological work.

There is a growing body of literature surrounding rock art on Yanyuwa Country. Early research focussed on documentation and interpretation. Beginning in the 1960's, anthropologist Marie Reay claimed to have photographed most of the rock art on Vanderlin Island, although the photos were never archived or published (Reay 1965). Geologist Dehne McLaughlin was active during the 1970s documenting rock formations around Borroloola, South West Island and Black Craggy Island, and obtained interpretations of associated motifs from Yanyuwa people (McLaughlin 1975). According to accounts, rock art was still in production near Borroloola in 1975 (Layton 1992). As part of SEPIAP, Ken Mulvaney and Chris Crassweller recorded 18 rock art sites on Vanderlin Island (Sim and Wallis 2008). John Bradley is a major contributor to rock art research as he has documented the significance of motifs and Yanyuwa perceptions as a part of a larger anthropological project (1988, 1991, 1997). Bradley's translation and interpretation of Yanyuwa concepts has informed my reading of the maritime themes in Yanyuwa rock art.

From 2010, John Bradley, Liam Brady and Amanda Kearney were invited by senior Yanyuwa women and men to record rock art on Yanyuwa Country to enhance future monitoring and management. This initiative became formalised as the Yanyuwa Rock Art Project (YRAP), an ongoing collaboration between Traditional Owners and social scientists (Brady 2020). Going beyond the documentary efforts of previous research, this project had the aims of conserving rock art sites in collaboration with community, passing on knowledge about rock art to younger generations, and harnessing archaeological perspectives to comprehend rock art creation (Brady and Bradley 2014a; Brady and Kearney 2016; Brady et al. 2016). YRAP asks specific questions about how Yanyuwa rock art has impacted communication and exchange networks operating across the Gulf region, created a socially engaged environment, and inscribed seascapes with place markers relating maritime experiences (Brady 2020). This multifaceted project also questions previously defined archaeological ontologies of "rock art," challenging researchers to deconstruct their pre-defined archaeological praxis and realize the potential of ethnoarchaeology (Brady and Bradley 2016a; Bradley et al. 2016).

2.2 Rock Art Research: Questions and Debates

Archaeologists have categorised rock art by three modes of production: pictographic, petroglyphic and to a lesser extent, geoglyphic (Chippindale and Taçon 1998). Pictographs are created by applying natural pigments such as ochre, manganese dioxide, huntite, and charcoal, or even post-contact materials such as Reckitt's Blue (a European laundry powder) as well as beeswax or binding agents onto rock surfaces using techniques such as painting, drawing, stencilling, encaustic, and imprinting (Miller et al. 2022). Petroglyphs are created by engraving methods including pecking, hammering, chipping, abrasion, drilling, fluting, or scratching (Ross and Travers 2013). Geoglyphs are earth figures created by intaglio, mounding, or stone arrangement. Rock art is a global phenomenon, with examples across Africa, Europe, the Americas, and Asia; Australia is the most prolific, home to over 125,000 sites (Lewis-Williams and Pearce 2004; Taçon et al 2008; Zawadzka 2019).

While researchers value rock art as a direct expression of the aesthetics and symbolism of the distant past, interpretation of this work may be shaped by viewers' preconceptions. Unlike more utilitarian site types such as middens or lithic scatters, pictographs and petroglyphs hold potential for insight into the rituals and symbolic priorities of ancient societies as they marked their landscapes (David et al. 2013; Robinson et al. 2020). But to many modern Aboriginal Australian groups, these marks are ontologically separate from Western notion of "art," and are more akin to visual of embodiment of ancestors in a place (Kearney et al. 2021). Australian rock art provides a unique interpretive resource as communities may retain knowledge about the meaning of these works (Bednarik 2016). Globally, the perception of these marks and their role in their respective societies likely differs from modern interpretations of visual expression. Many rock art researchers have speculated from an etic[xii][2] perspective on the specific mythic significance of rock art (Ross and Davidson 2006; Solomon 1997; Zawadzka 2019). These findings merit scepticism, as neuroscience and investigations of "cognitive modernity" have yet to provide a scientific means of accessing the culturally informed mental frameworks of ancient mark-makers (Bednarik 2016; David et al. 2013; Whitley 1998). In some cases, researchers' interpretations reflect their own cultural beliefs about "prehistory," or pareidolia, the tendency to impose meaning on nebulous visual patterns (Bednarik 2016). Rock art represents diverse cultural reflections on the nature of reality over time and space, which is part of the challenge of interpretation (Jones 2017; McNiven and Russell 1997).

[2] In anthropology, "etic" refers to a research method that studies a culture from the perspective of an outside observer or researcher. The inverse, "emic," studies a population from the perspective of an insider to that culture.

A methodological theme in the study of rock art has been the dichotomy between informed and formal research approaches. The informed approach depends on insights gleaned directly or indirectly from the people who made and used the rock art (Chippindale and Taçon 1998:6). Informed methods use ethnography and the historical record to contextualise images research and bring insider perspectives into how and why traditional cultures made rock art. Formal methods, by contrast, do not depend on inside knowledge, but are restricted to information available to archaeologists from within the images themselves (1998:7–8). Formal information can be discerned from images' relation to each other and the landscape, or in relation to available archaeological context. Formal methods can include approaches from geographic information systems analysis and landscape survey to digital imaging (Jones 2017). In many instances, it may be beneficial to combine both formal and informed perspectives (Brady 2015; Lahelma 2008; Weeks 2012).

A debate specific to formal rock art research has been the contrast between "descriptive" versus "comparative" approaches (Morwood 2002). Descriptive analysis relies on direct observation of figurative elements of rock art to inform understandings of past social structures, economies, material culture, spiritual ideas, and paleoenvironmental context. A primary limitation of descriptive rock art interpretation is that assemblages have individual stylistic conventions, so unfamiliar researchers may misidentify or misinterpret subjects. Indeed, meanings may be specific or esoteric, making it impossible to reconstruct the original significance of motifs (Clegg 1978). Comparative analyses of rock art are consistent in scientific approach with other subfields of archaeology and seek to explain patterns or selective discrepancies in the structure of assemblages (Morwood 2002). This research most commonly analyses the chronological and geographic distribution of motifs. Other examples of comparative analysis include investigating demarcation between style zones; distribution of motifs between and within sites; choice of subjects; and choice of media and cultural contexts (McDonald 2017; McDonald and Veth 2006). Although the materiality of rock art differs from other subjects of archaeological inquiry, comparative analysis is an attempt to apply "standard" archaeological methods.

In rock art research, classification often centres around the concept of style, defined as formal conventions that characterise a body of artwork and reinforce geographic connections and time sequences between images and their respective cultures (Chaloupka 1993). Style refers to past human actions that are perceptible in material culture and is an analytical tool allowing scholars to identify discontinuities in the archaeological record and apply them to questions about spatial and temporal distribution of cultural practices (Domingo Sanz and Fiore 2014). Most stylistic analysis

involves determining typologies, or iconographic categories, of motifs and considering aspects such as frequency, range, or continuity (Whitley 2016). Attempts at identification of representative motifs occur after their assignment to a "type." Stylistic frameworks and design elements may also be used to determine the authorship of artwork (Smith et al. 2017).

Stylistic classifications have been a source of ontological inquiry in Australian rock art research. Classification by style is sometimes seen as necessary in scientific data collection of rock art, although critics have argued that this approach is ill-defined and creates knowledge production power imbalances by failing to consider Indigenous ontologies (Brady and Bradley 2014a). Moreover, concepts of style may inadequately address the role of taphonomy and degradation on regional groupings (Officer 1992). Style-based regions may be constructed based on variables chosen without reference to ethnographic or interdisciplinary information. Separate style zones covering broad geographic areas may obscure relational understandings associated with the motifs themselves or erase transitional junctions between style provinces that could contribute to knowledge about diversity and intercultural interaction (Taçon 2013). Researchers may aim for a replicable and systematic classification; however, stylistic determinations are ultimately influenced by the researcher's interests, perceptions, and biases resulting in an ultimately subjective process (Jones 2017). Further, there can be no assurance, especially without cultural informants, that the iconographic assumptions of a researcher align with the representational intent of the artist (Bednarik 2016). While stylistic analysis allows for spatial assessment of cultural exchange, it may reduce appreciation of the dynamism and context of individual sites and compromise Indigenous philosophies (Brady and Bradley 2014a; Porr and Bell 2012).

Rock art research also challenges archaeologists' epistemological reliance on chronology (Porr and Bell 2012; Gillespie 1997). Radiometric dating of rock images can be difficult, as organic materials may be absent or preserved in insufficient quantity to obtain samples (Deacon 1999). AMS radiocarbon methods have been used on pictographs containing charcoal, beeswax, whewellite crusts, blood, insect contaminants, or organic binders (David et al. 2013; Finch et al. 2020; Taçon et al. 2010; Wallis 2002; Watchman 1987). The oldest directly-dated painting in Australia is from c. 29,700±500 BP, at Walkunder Arch Cave, Queensland (Campbell et al. 1996; Langley and Taçon 2016).[xiii] Mineral components and rock surface disturbances can also be dated by correlating the chemistry of accretions above pigments to paleoenvironmental conditions (David et al. 2013). Identifying time-specific subjects, such as foreign vessels or extinct animals, can also correlate the artwork with a particular period (Morwood 2002; Taçon and May 2013). Optically stimulated luminescence (OSL) has been used to determine minimum ages of wasp nests overlying pictographs

(R. Roberts et al. 1997). Countering these approaches, an epistemological aspect of chronology is the belief of Aboriginal Traditional Owners that rock images are created by spirit entities or ancestral beings rather than people (Kearney et al. 2021). Therefore, the rock markings are not a static relic of the past, but rather, closely entwined with kinship, songlines and the state of people's relationships with Country (2021). In this sense, rock art reflects fundamental differences in ways people conceptualise and categorise their world.

These debates have informed the research approach of this paper by reinforcing that circumspection must be exercised surrounding claims made about rock art. Both informed and formal, as well as descriptive and comparative, approaches are employed to balance the classificatory framework. Discussions of style and chronology in Yanyuwa rock art are contextualised with the critiques of those modes of analysis. And care is taken to avoid hubristic claims of expert knowledge into the mental frameworks of authors of Yanyuwa rock art. It must be acknowledged that this research should not be taken as an authoritative voice, and differing or diverging perspectives may augment the validity of this research and similar studies.

2.3 Western Science, Traditional Knowledge, and the Meaning of Symbols

The establishment of rock art research as a reputable, academic, and scientific endeavour has taken a convoluted path. Rock art has been researched in China from geographic and art historical perspectives since at least the 4th century CE, although the relationship of these studies with archaeological science is debated (Ge 2022:23). Rock art also received documentation in 16th century Latin America in association with missionary activity (Brandão 1930; Ge 2022). In 1780 Sweden a pioneering yet eccentric dissertation focused on the rock art of Bredarör on Kivik (Goldhahn 2018a). However, these early reports failed to attract widespread academic influence (Goldhahn 2018a:52). Rock art research gained notoriety in early 19th century Europe, with the discovery of supposedly "primitive" images in limestone caves and rockshelter deposits in Dordogne, France and Cantabria, Spain (Morwood 2002). This became linked to racial science and social evolutionary thinking of the era. A prevailing theory was that artists' imitation of nature progressed linear to the evolution of society, so the less-realistic stylistic attributes of the works suggested origins at the beginnings of human civilisation (Moro Abadía 2015). Rock art research in North America, South Africa, and India was initiated in the late 19th century (Lewis-Williams and Pearce 2004; Morwood 2002). Many archaeologists reacted sceptically towards such publications (Chippindale and Taçon 1998). For example, the 1879 discovery of a Pleistocene-era bison painting at Cueva de Altamira, Spain was declared a forgery. Although the antiquity of that site was

eventually acknowledged by the archaeological community, rock art continued to be dismissed into the 1970's among certain circles (Cartailhac 1902; Morwood 2002). This disregard was partially due to its reputation as a "feminine" interest, influenced by a "lunatic fringe" of avocational researchers who were prone to unscientific and fanciful interpretations (R. Bradley 1991:78; Hays-Gilpin 2004). Evidently, the scientific value of rock art has not been seen as immutable, but rather, has been heavily influenced by the perceived status of this knowledge within society.

Scholars began to appreciate Australian rock art as they realised they could draw on ethnographic information from extant hunter-gatherer groups in Australia to contextualise ancient images from other cultures worldwide. In 1903, art historian Salomon Reinach referenced the ethnographic literature of Spencer, Gillen, and others to infer that European cave art represented "sympathetic magic" increasing hunters' bounties (R. Jones 1967). Individuals such as D.S. Davidson, Andreas Lommel, Norman Tindale, Charles Mountford and Fred McCarthy documented petroglyphs and pictographs throughout Australia in the early twentieth century (Flood and David 1994; Clarke et al. 2022). A political objective of this early documentation, to co-opt Aboriginal imagery to promote the interests of Australia on the world stage, sometimes overshadowed scientific goals (Thomas 2010). This introduces a tension between scientific ideals and political attitudes surrounding symbolism and meaning in rock art.

Archaeological framing of peoples' histories traditionally utilises binaries, separation, and categorisation to derive meaning from material culture (Beaudoin 2016; Renfrew and Bahn 2016). It also enforces a binary between "Western" and "Traditional"[3] knowledge. In *Jakarda Wuka,* an anthropological discussion of Yanyuwa visual expression, the authors suggest that archaeological engagement with Yanyuwa rock art could add another layer that sits alongside, and is enriched by, Yanyuwa knowledge (li-Yanyuwa li-Wirdiwalangu et al. 2021:297). Although this thesis attempts to fill that gap in the literature*,* the methodology utilised here creates a typology seeking insight into symbolism and therefore relies on "Western" archaeological categorisation. However, it also incorporates and acknowledges aspects of Yanuwa ways of knowing. Despite using a fundamentally Western framing, this discussion also provides context for how kinship and relationships to Country are integral to Yanyuwa visual expression. Although ethnographic discussions often attempt to decolonise by distancing themselves from such binaries, it is important to acknowledge that it is not necessarily possible, or even desirable, to remove the positionality of

[3] Contentious terms including "rock art" and "Western Knowledge" are discretionally put in quotations to destabilise or capitalised to reify their meanings.

the researcher (Schneider and Hayes 2020). Rather, it may be more impactful to assess the inputs of so-called "Western" perspectives and how they impact interpretation of Yanyuwa "rock art."

To understand the discordance between supposedly "Western" and "Traditional" perspectives, it is necessary to investigate these loaded terms that are taken for granted in academic and public discourse. Ideals of Western Civilisation are often misrepresented as flowing directly from Ancient Greece to contemporary "white people" (Dhindsa 2020). The mindset of empiricism in science is framed similarly (Iaccarino 2003:220). Ethicist and geneticist Maurizio Iaccarino emphasizes that, contrary to popular perception, Western scientific traditions were heavily influenced by Islamic civilisation in the seventh through fifteenth centuries, as well as cosmopolitan India, Persia, and Central Asia (2003:221). Yet the term Western now describes the intellectual heritage of Western Europe and settler-colonial offshoots such as the US, Canada, and Australia (2003:221). This "West," often centred around British academic thought, is posited in opposition to an "East," a mysterious and geographically confused realm of "second-order knowledge" from "exotic" and "oriental" cultures (Said 1977:165). Beyond even the inscrutable yet sophisticated and threatening "East" is the reified simplicity of the "Traditional."

While the quantitative methods of Western Science are sometimes framed as reductionist and mechanistic, Traditional Science observes natural phenomena from a view of "cultural environmentalism" (Iaccarino 2003; Sunder 2007). The West is the "developed world," while the Traditional is the "developing world," the underdog "poor and Indigenous people's knowledge" (Sunder 2007:100). Echoing earlier tropes of social evolutionism and the "noble savage," Traditional Knowledge is seen as ancient, static, and above all else, *natural* (2007:100). Whereas the West extracts the raw material of Traditional Knowledge to innovate, the Traditional is conservative, in the sense of ecological conservation, but also, resistance to change and exclusion from modern political and economic advancement. The twisted framework that underlies these widely accepted terms should be restructured. Yet the terms Western, Traditional, and rock art are used throughout this discussion, because to coin new terms would be to run away from uncomfortable histories and questionable academic legacies, rather than to challenge them. While reframing this conversation is a massive project, recognizing the unspoken assumptions in the warped binary of the Western versus the Traditional is a start.

The concept of "rock art" is also heavily impacted by Western perceptions of the world. The Western notion of art as an object to be collected and displayed for aesthetics contrasts with the Aboriginal linkage of visual expressions to the Dreaming, Country, and kin (Morphy 1998:145).

Although both Western and Aboriginal art may involve painting, drawing, or engraving, the context of these actions is distinct. Yanyuwa language does not have direct translation of "art" as a visual representation of "something" (li-Yanyuwa li-Wirdiwalangu et al. 2023). Images found on rocks on Yanyuwa Country are *ki-wankalawu* (belonging to the past times), *liyi-wankalawu* (belonging to the old people), and *ki-yijandu* (belonging to the Dreamings) (2023:40). These images are not considered as painted by humans, but rather, created by Dreamings such as *a-Kuridi* the Groper or *li-Maramaranja* the Dugong Hunters, *li-wankala* spirits of deceased kin, and spiritual entities known as *ngabaya*. In 1985, Johnson Timothy Babarramila explained to John Bradley that the paintings at Babangki on Vanderlin Island were painted by "any kind of *ngabaya* really, they just travel over this Country, paint what they want, that's their way." He clarified that present-day Yanyuwa, his paternal ancestors, or the "old people" did not create these markings (2023:41). The motives of Western artists likely diverge significantly from those of *ngabaya*, so grouping concepts together through the language of "rock art" may take away from the significance of these images.

In some cases, images on Yanyuwa Country are not painted representations at all, but are literal embodiments of spirit beings such as Wurrunthurnambaja, Burrunjurdangka and Jawajbarrangka, who, according to Old Tyson Nguliya, dwell in the Wulibirra rockshelter and "put themselves into the rock" (2023:226; Fig. 15). The idea that "rock art" is created by spiritual entities with agency may be challenging for people viewing rock art from a Western archaeological lens. It may be tempting to rationalise the cosmological aspects of rock art as merely the Yanyuwa's *beliefs* about reality (Alberti 2016). However, circumventing Yanyuwa ways of thinking would not allow archaeological and Traditional knowledges to sit alongside and mutually enrich one another. To sincerely engage with Yanyuwa ways of being, archaeologists should challenge their own ontological assumptions (why must paintings be painted by people?) just as much, or as little, as they challenge non-Western ideas.

While rock art is often considered to be created by past societies, in Australia it remains a vital component of the lived culture of contemporary Aboriginal people and thus involves anthropological and sociological understandings (Marshall 2020). In some oral traditions, information about rock art may be preserved across generations; Yanyuwa knowledge recorded in the 1980's retains continuity with community perceptions in the 2010s (Brady et al. 2016). In other contexts, contemporary informants' ideas of rock art evolve and are reanimated over time due to the dynamic nature of meaning based on the circumstances in which it is viewed (Adgemis 2017). The traditional practice of refreshing artwork involves modifying imagery, either via repainting or overpainting older faint images and contributing to superimposition (Giorgi and Harding 2021;

Marshall and Taçon 2014). This presents an ontological difference in conservation to Western methods characterised by chemical treatments and metal barriers (Marshall 2020). The process of colonisation and primacy of the Western scientific perspective has impacted the cultural approach to rock art revitalisation. National legislation controlling conservation has devalued continuation and maintenance of Indigenous culture in comparison with the preservation of older versions of paintings (Marshall 2020). Conservation of rock art is further imperilled and brought into political conflict by modern-day issues such as population increase and associated expansion to remote areas; encroachments from the mining, agriculture, and urban development sectors; and environmental degradation linked to climate change (Marshall 2020; Mulvaney 2022; Zarandona 2011). Aboriginal communities living within twenty-first century political frameworks contribute to a living tradition of rock art, both in arid and coastal zones.

Positioning Yanyuwa and Western knowledge alongside one another in a "maritime" categorisation is complicated by the fact that the distinction of "maritime" does not exist in Yanuwa ontology. The separation that Western people are taught to see between land and sea is not constructed equivalently by Yanyuwa people (li-Yanyuwa li-Wirdiwalangu et al. 2023:25). In Yanyuwa logic, the sea is not separate from the land as both are parts of Country that are named, known, spoken for, held, and cared for by human kin (2023:25). Yanyuwa mainland Country is cared for with the same philosophy as Yanyuwa sea Country, which includes the currents over offshore reefs and places deep within the sea. While Westerners may think and that the sea ends at the high-water mark, Yanyuwa people see it as extending inland to incorporate the saline flats and mangrove creeks which were influenced by the flow of Dreamings in the saltwater and may become flooded in extreme tides (2023:46). Yanyuwa rock art is connected to present-day narratives of Yanyuwa identity, the spiritual realm, ceremonies, the wellbeing of people and Country, and the travels of figures in songlines. Many Dreamings feature themes that Western people might categorise as "having to do with the sea." For the purposes of this thesis, maritime connection has been ascribed from a hybrid lens; taking information from Yanuwa cosmology, i.e. "maritime Dreamings" to reinforce a concept of "maritime rock art." This may in some respects be a fundamentally misguided attempt to reconcile two worldviews. However, it provides an opportunity to challenge pre-existing concepts of the maritime cultural landscape.

2.4 Maritime Cultural Landscapes and Seascapes

Observation of the maritime activities of the first Australians preceded the acceptance of rock art research as a reputable academic focus. Western investigation of coastal occupation in Australia

began with the exploits of colonists, amateur naturalists, and mariners (Smith and Burke 2007). The first to record observations about coastal resource use was English buccaneer William Dampier, who documented food remains of past Indigenous Australians on the shores of Western Australia c. 1688 (Smith and Burke 2007). The first excavations of shell mounds in 1788 in the Colony of New South Wales contributed to knowledge on marine resource exploitation and coastal economies (Horton 1991). However, the terrestrial focus of rock art research initially overshadowed maritime investigations (Chippindale and Taçon 1998; Morwood and Smith 1994). Early maritime archaeology was principally concerned with describing European seafaring and nautical technologies, ports, and submerged remains of cultural heritage (Breen and Lane 2004; Gould 2000; Muckelroy 1978; Ruppé and Barstad 2002). Research predominately centred the physical structure of ships to establish chronologies of shipbuilding methods, rather than contextualising maritime activities within broader societal frameworks (Breen and Lane 2004; McGrail 1987).

Maritime archaeologists in Australia initially neglected research into the Indigenous past due to Eurocentric and colonial bias, but many aspects of Aboriginal archaeology are incidentally related to the maritime cultural landscape (Fowler 2015). After the professionalisation of archaeology in the mid-twentieth century, ongoing maritime themes such as the peopling of Sahul, Macassan contact, and the search for submerged landscapes developed (Benjamin et al. 2020; R. Jones 1979; MacKnight 1986, 1986, 2011; Nunn and Reid 2016, O'Connor 2007). Discussions also included establishing occupation timescales and watercraft use for offshore islands such as Tasmania, Montebello Islands, the King Island Group, Kangaroo Island, and Vanderlin Island (Bowdler 1995; R. Jones 1977; Sim and Wallis 2008; Sim 1994; Veth 1993). Cultural interactions between Aboriginal and Melanesian peoples captured the attention of anthropologists and archaeologists, initially described as a one-way diffusion of "advanced cultural traits" from New Guinea to mainland Australia via the Torres Strait (McNiven 2021). Later, the concept of the Coral Sea Cultural Interaction Sphere (CSCIS) emerged, reframing scholarship in terms of two-way interactions, gene flow, and object movement across the Torres Strait. CSCIS highlighted canoe-voyaging and long-distance maritime exchange networks over the past 3000 years (2021). Despite diversifying research focuses, maritime archaeology draws critiques of being driven by technological advancements to facilitate underwater exploration, rather than the theoretically integrated approaches expected from terrestrial studies (Breen and Lane 2004). As a result, the discipline sometimes fails to present a nuanced and culturally situated impression of diverse maritime activities. The relative lack of spatial and anthropological grounding within maritime archaeology has left it conceptually adrift.

The term “maritime cultural landscape” was coined by Christer Westerdahl in the Scandinavian context in the early 1990’s to address the need for a more holistic and spatially nuanced approach to maritime theory (Westerdahl 1992). This methodology reflected a priority to integrate maritime history, ethnography, and land-based residues of maritime culture with spatial understandings of the landscape (Ford 2011). A maritime cultural landscape highlights how people perceive the sea and use their maritime knowledge to constitute their worldview and societies they inhabit (O’Sullivan and Breen 2007). Since the 1990s, numerous archaeologists have brought insights in diverse cultural contexts using the language of maritime cultural landscape (Aberg and Lewis 2000; Busch 2006; Flatman 2009; Horlings and Cook 2017; McErlean et al. 2002; McNiven 2004; O’Sullivan 2004; O’Sullivan and Breen 2007; Parker 2001; Reinders 2001; Rönnby 2007). This body of literature extends the focus of research beyond shipwrecks and takes seafaring vessels as only one of many expressions of material culture that shape a maritime society. The maritime cultural landscape approach highlights how seafarers spend only a fraction of their life on the water, while they are backed by a broader land-based community that depends on, supports, or profits from maritime resources, warfare, or commerce.

The related concept of “seascape” refers to a spatial, mental, and cosmological map that allows a person to perceive and understand their place in the world out of sight of land (Ford 2011; McNiven et al. 2008). Seascapes are sea-spaces and sea-places that become central to the identity of maritime peoples through inheritance, mapping, social interaction, resource extraction, spiritual belief, and ritual (McNiven et al. 2008). A seascape may involve environmental factors including swells, constellations, animals, winds, clouds, phosphorescence, and currents supplemented and modified by cultural constructs, including routes, navigation instruments, charts, and stories (Ford 2011). This thinking has conceptually expanded maritime archaeology such that island and coastal archaeology are often seen as subsets or facets of a seascape (Ford et al. 2012).[xiv] Some scholars, understanding the shore as a continuum which has been variously submerged and exposed through time, integrate the landscape as viewed from the sea into seascapes and may include seamarks, harbors, reefs, islands, shallows, and coastal phenomena into this concept (McNiven and Feldman 2003; Breen and Lane 2004). This provides a multifaceted perspective, considering how the same landmass is culturally augmented when perceived from the sea rather than exclusively on land.

Archaeologist Ian McNiven uses the framework of the seascape to interpret how Saltwater People throughout mainland Australia and the Torres Strait have constructed cosmological and symbolic realms in relation to hunting and inscribed through rock art (McNiven and Feldman 2003; McNiven 2004; McNiven and Brady 2012). “Waterscapes” may expand this concept to include lakes, rivers,

wells, and other aquatic environments (Nimura 2018). McNiven posits that the phenomenon of inscribed maritime identity, such as that found in rock art, relates to the nuanced concept of the seascape, where lived sea-spaces are socially mapped, politically historicised, technologically engaged, and imbued with ritual and spiritual potency (McNiven and Feldman 2003, McNiven 2008). Appreciating marine cosmologies and the ontological and epistemological underpinnings of seascape construction, maintenance, and engagement is critical for developing an archaeological understanding of marine-themed rock art (McNiven and Brady 2012). The cosmological facet of the seascape can also be defined as a "spiritscape," allowing for spiritual connection with the sea to be ritually conveyed across open-water, intertidal, and terrestrial zones (McNiven and Feldman 2003). Indications of seascapes in the archaeological record include deposits of offerings into the sea, burials of boats on land, stone arrangements in the intertidal zone, and marine-themed petroglyphs and pictographs in coastal areas (Ballard et al. 2003; McNiven and Feldman 2003; Samson 2006).

Study of maritime cultural landscapes, seascapes, waterscapes, and spiritscapes as part of the human experience has allowed maritime archaeology to encompass the study of past human interactions with bodies of water as interpreted through material culture more broadly, including rock art. These inscribed meanings relate to marine cosmology as well as ontological and epistemological aspects of seascape construction (McNiven and Brady 2012). In rock art research, the terrestrial paradigm has limited and distorted the relationships between early societies and the sea (Ling 2008). Centring this concept of the seascape can reframe an archaeological focus on the symbolic linkages between Saltwater People and the ocean, even far beyond the intertidal zone. However, writing seascapes over people's distinct ways of connecting with the marine environment risks supplanting non-archaeological ways of seeing and speaking about the sea. Maritime archaeologists should take care that the proliferation of "scapes" as a mnemonic for expansive thinking does not ironically flatten theoretical discourse to Western-centric jargon.

2.5 Global Connections in Maritime Specialist Rock Art

Archaeological research into marine specialist cultures, such as the Saltwater People of coastal northern Australia, has focused on marine food resources and hunting technology (McNiven 2004). However, relatively little research has investigated the ways that maritime cultures both in Australia and on a global scale perceive and use symbolic markers to conceptually construct relationships with the sea (McNiven 2004). Marine animals and watercraft iconography are common themes in rock art across coastal cultures, providing an opportunity for cross-cultural comparison and further research into the role of rock art in creating and maintaining maritime cosmologies.

The influence of Saltwater People on the body of Australian rock art has been highlighted by investigations of, for example, Anindilyakwa (Groote Eylandt, NT) and Yaburara (Murujuga, WA) artwork (Mulvaney 2022; Tindale 1925–26). There has been a sustained program of Anindilyakwa rock art research in the Groote Eylandt archipelago since the early twentieth century, beginning with the research of South Australian Museum curator Norman Tindale and Peter Worsley (Frederick and Clarke 2022; Tindale 1925–26; May et al. 2009). The coastal nature of Murujuga (Dampier Archipelago including Burrup Peninsula) is reflected in the extensive rock art created by the Yaburara and others, which is threatened by ongoing industrial development (Bigourdan 2013; Mulvaney 2022; Zarandona 2011). The 1948 American-Australian Expedition to Arnhem Land led by ethnographer Charles Mountford documented maritime motifs such as *praus* (Southeast Asian vessels) and marine animals in rock art and other paintings from coastal communities (May 2011; Mountford 1956). Also in Arnhem Land, the presence of a *badik* (Southeast Asian dagger) motif at Malarrak indicates Macassan influence in local art and material culture (Taçon and May 2013).

A cross-cultural theme in coastal and island-based rock art is assessment of how people have hunted and interacted with marine fauna. Maritime specialist rock art in Easter Island, Vanuatu, Murujuga, Princess Charlotte Bay, Stanley Island, the Torres Strait as well as the southwest Gulf of Carpentaria features numerous marine animals including sharks, dugong, crocodile, stingrays, fish, turtle, snubfin dolphin, blue-ringed octopus, and jellyfish (Brady 2015; Brady and Bradley 2014a; Hale and Tindale 1934; Lee 1992; McDonald 2015; Walsh 1985; Spriggs and Mumford 1992). Ethnographic information from the Polynesians of Easter Island and people of Vanuatu highlights their identity as marine hunters and may demonstrate "fishing magic" (Lee 1992; Spriggs and Mumford 1992). Similarly Indonesian rock art found in cliffs in South Sulawesi, Southeast Sulawesi, East Kalimantan, Maluku, Papua, and West Papua heavily features fish, turtles, and other marine animals, which is cited as evidence of ancestor worship, communal traditions, and hunting magic (Permana and Mas'ud 2022). These zoomorphs may have expressed hope for an abundance of game, respect and protection for the animal, symbols of victory, trophies of a successful hunt, or totemic representation (Brady 2015; Halverson 1987). In Sweden, the agency of the maritime world during the hunt is a theme in some scholarly interpretations of these images (Ling 2008). In the carvings at Zavraluga on the White Sea, the stature of beluga whales highlights the praxis of the hunt (Janik 2019). Likewise, El Médano-style pictographs from the Atacama Desert coast in Chile represent ancient marine hunting and maritime traditions, comprising hundreds of scenes that illustrate the complexity of the community's relationships to marine resource extraction (Ballester

2018). These diverse examples underscore the multifaceted interactions between First Nations and marine species as depicted in rock art.

Another focus in maritime rock art research worldwide has been the technological and social diffusion associated with seafaring and watercraft. In western Arnhem Land, investigations into contact rock art provided insight into technological exchanges between Indigenous groups and fleets from Makassar, referred to as Macassans (See Chapter One; McIntosh 1996, 2006; Clarke 2000). The concentration of foreign vessels in art from the Wellington Range and Groote Eylandt led to speculation on the influences of Macassans and European culture contact on Aboriginal maritime technology (Burningham 1994; May et al. 2012). Tham Phrayanaga cave in southern Thailand presents a visual record of cultural interaction and change through imagery depicting the watercraft of various cultural groups (Sukkham et al. 2017). Mesolithic rock art in Valle, northern Norway highlights the utility of skin boats for settlement (Gjerde 2021). Similarly, in Bronze Age rock art sites in northern Bohuslän, Sweden, the frequency of ship motifs and their proximity to the sea suggests a transition from an agrarian society to maritime engagement and technology (Goldhahn 2014; Ling 2008; Nimura 2015). The depiction of seafaring vessels including war canoes in Bronze Age Scandinavia is viewed as evidence for trade, technological innovation, and cultural diffusion via warfare (Ling and Cornell 2017). In the Tutuala region of East Timor, rock art images have provided insights into past shipbuilding technologies (Lape et al. 2007). These examples represent how maritime imagery has augmented our understanding of the diffusion of social and technological developments associated with seafaring.

Maritime portrayals of rock art worldwide provide a rich backdrop for theoretical assessment of human relationships to the sea. A cosmological expression of the liminal shoreline where land, sea, and sky converge can be seen in rock art from Scandinavia (Helskogg 1999), Hawaii (Tuggle and Tomonari-Tuggle 1999), and elsewhere. Recurrent depiction of vessels and semi-aquatic turtles may be due to their transcendent power to traverse the threshold between sea and land (Malinowski 1922; McNiven and Brady 2012). This transcendence may also be why the motif of the boat is linked with funerary contexts in Scandinavia, Southeast Asia, the Torres Strait, and Melanesia (Ballard et al. 2003: See Chapter Six). The use of rock art as a means of inscribing maritime meaning on non-coastal places suggests a human desire to reinforce cultural linkage with the aquatic realm.

This literature review of the historical, theoretical, and archaeological basis of rock art research has orientated Yanyuwa rock art within a broad lens of symbolic human relationships with the sea. A

diverse assemblage of rock art across northern Australia and coastal regions has been documented, primarily from a Western perspective. The literature on Yanyuwa rock art, and coastal rock art more broadly, is multivocal and extensive, but lacks a cohesive means of synthesizing, comparing, and making meaning from diverging ontologies. This research addresses a notable gap in the literature by applying a systematic approach to assess the frequency of occurrence of specific indicators of maritime culture contact in Yanyuwa art. Going forward, assessing statistical, spatial, and relational patterns between and within large, longitudinally collected assemblages of rock art across time and space may produce insights that are relevant to present-day communities and issues.

Although the similarities in maritime rock art across cultures are striking, these links have not previously been fully elucidated (Chippindale and Taçon 1998; Morwood and Smith 1994). Further, scholarship on the relationships between cosmology embedded in rock art and the concept of the seascape remains preliminary (McNiven and Brady 2012). This thesis seeks to delve into those connections. However, a detailed comparison of the role of maritime rock art within specific societies is outside the scope of this discussion. The case study of Yanyuwa rock art illustrates the layering of relational meaning that can be derived from a deeper investigation of a maritime archaeological context. Maintaining an approach that acknowledges a plurality of interpretations of the past, present, and future can allow for comparison of motifs across culture and time. There is space to incorporate more Indigenous perspectives to better understand people's changing maritime relationships with rock art across generations. Integrating and interrogating the Indigenous archive of voices past and present can shed light into the maritime relationships Yanyuwa people have developed with rock art and establish the inter-cultural relevance of this process.

Chapter Three: Methods

This chapter explains the methodology used to assess the presence and prevalence of maritime attributes in Yanyuwa rock art and their spatial relationships across the archipelago. The longitudinal procedure of photographic sampling and anthropological fieldwork with Yanyuwa families is described, as well as the location and distribution of the sites sampled. The formal data analysis is explained, including image processing protocols and the rationale for a 6-tiered motif classification system. The means of establishing the frequency of maritime related imagery are justified, while future aims for expansion of the statistical rigor of the project are introduced. These frequencies are then related to the cultural environment via mapping of geospatial information. The framing of informed analysis drawing from the Indigenous archive is introduced. Finally, the limitations of this study are considered. Although this methodology heavily features a Western viewpoint of categorization, it integrates Yanyuwa storylines to bring insight into aspects of maritime culture emphasized in the rock art of the Pellew Islands.

3.1 Sample Collection

This sample consists of 3,183 photographs of rock art collected in the Sir Pellew Group of Islands on Yanuyuwa Country. These photographs were taken from 65 sites (Table 1), mostly representing cave or rock shelter environments in proximity to coastal areas. Fieldwork was conducted in collaboration with the Yanyuwa Aboriginal community starting in 1980 as part of John Bradley's independent research. This documentation was continued in 2010 with the further contributions of Liam Brady and Amanda Kearney during YRAP. Data collection was undertaken with Yanyuwa *ngimirringki* ('owners' of specific areas of land and sea and associated Dreamings); *jungkayi* ('guardians' for the Country of their mother and associated Dreamings; responsible for the care of sacred places)*;* and *li-Anthawirriyarra* Sea Rangers (responsible for natural and cultural resource management in Yanyuwa Country) to ensure that fieldwork adhered to cultural protocols. Knowledge of specific motif identifications was shared by ngimirringki or jungkayi and documented during field collection. All survey sampling was also directed by Yanyuwa Family members to focus on areas of known cultural significance, covering approximately 30 percent of Yanyuwa Country. In the early stage of research in the 1980s and 1990s, rock art sites were sporadically photographed using a film camera. Post-2010, during the YRAP images were systematically recorded using a Canon EOS60D camera and approximate locations were mapped

using a Garmin GPS unit. During the YRAP, each rock art site selected by Yanyuwa Family members was systematically inspected so that all traces of pigment were recorded, even marks that appeared deteriorated or indistinct. Photography of the sites involved overlapping panel shots followed by closeups of individual motifs.

Table 1: Rock art sites by clan/semi-moiety

Rrumburriya clan (43 sites):

- Babangki, Vanderlin Island (collected 1981)
- Bambarrani sites 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, Bambarrani, near Borroloola, mainland (collected July 2012); note: formerly Binbingka Country
- Kammandaringabaya, Vanderlin Island (collected July 2012)
- Limiyimiyila sites 1, 2, 3, and 4, Black Craggy Island (east section) (collected April 2010)
- Limiyimiyila site 5, Black Craggy Island (west section) (collected April 2010)
- Liwingkinya sites 1, 2, 3, 4, 5, 6, and 7, Vanderlin Island (collected June 2019)
- Liyalkangka, near Borroloola, mainland (collected July 2012); note: formerly Binbingka Country
- Rramiyimiyi, Black Craggy Island (north section) (collected September 2010)
- Ruwuyinda sites 1, 2, 3, 4, 5 and 6, Vanderlin Island (collected June 2019)
- Wardarrila, White Craggy Island, (collected 1980); note: since 1992, rock art is no longer visible
- Warnngibangirarra, Vanderlin Island (collected 1981)
- Wirnbila, Vanderlin Island (collected 1981)
- Wulibirra sites 1, 2, 3 and 4, North Island (collected September 2015); men's site
- Wulubulu sites 1, 2, and 3 near Borroloola, mainland (collected July 2012); note: formerly Binbingka Country
- Yungkurriji, Vanderlin Island (collected 1981)

Wurdaliya clan (7 sites):

- Langadanga sites 1, 2, 3 and 4, North Island (collected July 2012)
- Linguwarangala, Watson Island (collected April 2010)
- Liwayidbulungu, Watson Island (collected September 2010)
- Maabayny, West Island (Collected September 2011).

Wuyaliya clan (15 sites):

- Lilardungka sites 1, 2, 3, 4, 5, 6, 7 and 8, South West Island (collected April 2010)
- Liwarrangka sites 1, 2 and 3, South West Island (collected April 2010)
- Mandarrila, South West Island (collected April 2010)
- Minyadawiji, South West Island (collected April 2010)
- Wirdijila 1 (main and second panels) and 2, South West Island (collected April 2010)

Mambaliya-Wawukarriya clan:

- Inland Mambaliya-Wawukarriya Country contains no rocky outcrops or escarpments, so there are no rock art sites pertaining to this clan. However, kinship links Mambaliya-Wawukarriya people to other Yanyuwa rock art and forms of visual expression; see li-Yanyuwa li-Wirdiwalangu et al. (2023:245-258) for further anthropological explanation.

3.2 Image Processing

Images that appeared indistinct or indeterminate were processed using DStretch®, a rock art analysis plugin to the scientific image processing platform ImageJ©. The DStretch plugin applies an image enhancement technique first used in remote sensing of multispectral images from astronomy, called Decorrelation Stretch, to enhance faint pictographs (Harman 2008). Since its development in 2005, this visualisation technology has been successfully utilised in numerous rock art studies all around the world, for instance in Cambodia (Tan et al. 2013), Egypt (Evans and Mourad 2018), throughout North America (Mark and Billo 2006), Patagonia (Acevedo and Franco 2012), and Spain (López Fraile et al. 2016). DStretch is fit-for-purpose as it increases differences in hue, allowing for superimposed and faint marks to be discerned (Harman 2008). As DStretch offers certain filters controlled by an operator-independent enhancement algorithm, some have suggested that this tool reduces subjective input in image processing when compared to more manual workflows (Le Quellec et al. 2015). The systematic use of this enhancement allows for a thorough review of indistinct, deteriorated, or hidden images as well as clarification of complex designs.

3.3 Classification Scheme

After processing, motifs were classified from an archaeological, etic perspective based on formal attributes and differentiations (Table 2). For this study, motifs are defined as distinct images that visually and spatially represent a particular subject. An individual motif may contain several components. For instance, a group of seven kangaroo tracks on one wall of a cave could be visually interpreted as one 'track cluster' motif, or each individual track might be perceived separately depending on the spatial discernment of the observer. The baseline method of hierarchal motif classification was adapted from Brady and Bradley's 4-stage protocol for assessing the formal attributes and stylistic variability of Yanyuwa rock art (Fig. 7), with an additional fifth tier designating maritime characterisation (Brady and Bradley 2014a). Specific motifs were also identified based on traditional knowledge shared by *ngimirringki, jungkayi* and Yanyuwa elders during survey. The sixth tier indicates formal information, noted by inverted comma, and Yanyuwa information without inverted commas. Rock art production techniques (painted, printed, stencilled), as well as colours used, were also distinguished but not denoted in the classification structure.

Table 2: Motif Classification Methods. *Etic designations use inverted commas (e.g. 'straight line'); Yanyuwa identifications are without (e.g. hands, stingray).*

Tier	Classification Criteria
1: Determination	**'Determinate':** The motif CAN be classified according to its formal attributes or **'Indeterminate':** The marking CANNOT be formally identified (possibly due to natural damage, deterioration, and fading or the intent of Dreamings/spirits)
2: Figuration	**'Figurative':** Motifs with formal resemblance to objects, beings, and ceremonial designs or **'Non-figurative':** Motifs are 'abstract' or **'Tracks':** Motifs represent marks imprinted on surfaces by creatures, including human and spirit appendages, macropod tracks, and bird tracks. This is based on the Yanyuwa concept of *na-marnda*, where feet from all animals are one category.
3: Motif Grouping	**Distinct figurative categories:** Includes 'zoomorphs', 'material culture', 'anthropomorphs', plants, ceremonial designs, 'faces' or **Distinct non-figurative categories:** Includes 'closed geometrics', 'open geometrics', 'linear non-figuratives', 'dot compilations, 'irregular shapes' or **Track categories:** hands, species of bird, foot/feet, macropod
4: Motif Specification	**Specific forms:** Yanyuwa identifications e.g. stingray, hammerhead shark, yalkawarru and **Systematic etic descriptions:** e.g. 'straight line', 'rectangle variant', 'V-shape variant'
5: Maritime Categorization	**'Maritime':** Motif is thematically relevant to interactions with the sea and other bodies of water. Maritime imagery includes: - Marine/coastal animals (dugong, rays, sharks, fish, turtles, waterbirds) - Marine hunting-related artefacts (weapons such as spears identified by Yanyuwa as used for hunting dugong and sea turtles) - Watercraft (bark and dugout canoes influenced by Macassans) - Materials related to Southeast Asian trade - Ethnographic (identified by Yanyuwa as related to marine-centric Dreamings such as the Dugong Hunters) **'Terrestrial':** Motif is thematically or pictorially related to interactions with the land. Terrestrial imagery includes: - Terrestrial animals (macropods, goannas) - Terrestrial hunting-related artefacts (boomerangs) - Ethnographic (identified by Yanyuwa as related to land centric Dreamings) **'Ambiguous':** Motif is neither clearly maritime, nor explicitly terrestrial; it thematically or pictorially relates to "amphibious" phenomena. Ambiguous include: - Unidentified bird tracks birds on coastal Yanyuwa Country may traverse both terrestrial and marine landscapes (birds identified by Yanyuwa as waterbirds are categorised as maritime). - Unidentified anthropomorphs and hand/foot tracks Humans and anthropomorphic spirits traverse both terrestrial and marine landscapes on Yanyuwa Country - Ceremonial Designs motifs such as yalkawarru, kundawira, **'Unknown':** Motif cannot be categorised because it is either 'indeterminate,' 'non-figurative,' or of unknown significance
6: Information Type	**'Formal':** Information was based only on formal/etic assessment or **'Informed':** Information was based on Yanyuwa knowledge

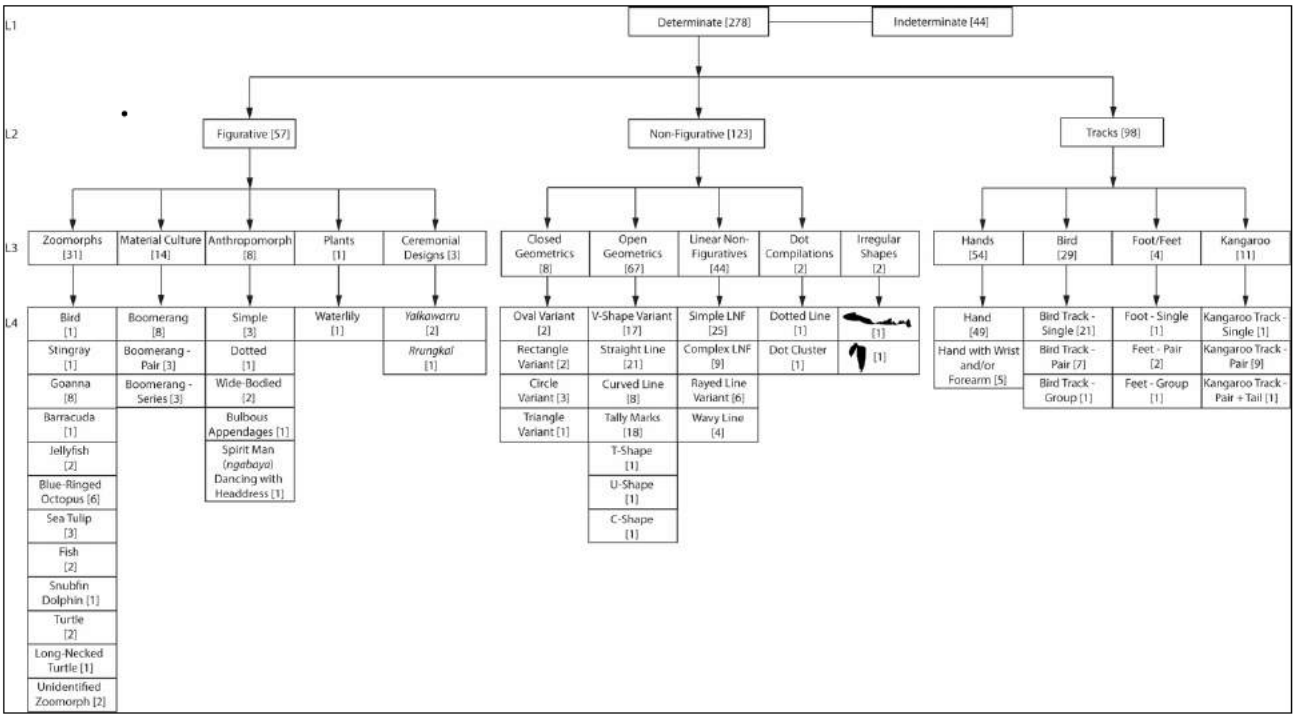


Figure 7: Motif groupings modelled from previous publications.

After Brady and Bradley 2014a:168

Watercraft motif attributes are further categorized. The framework used to assess technological components and structural aspects in Indigenous depictions of ships is modified from maritime archaeologist Martin Gibbs' typology (Gibbs 2006:6–7). It also takes inspiration from Wesley et al.'s application of this framework for the analysis of non-Indigenous watercraft depicted in rock art in north-western Arnhem Land (Wesley et al. 2012:255; Table 3). A similar format was applied to a small sample of Macassan vessels in bark art from Groote Eylandt (May et al. 2009). However, as the Yanyuwa watercraft dataset consisted exclusively of canoes, the attribute descriptions were simplified (see Chapter 4.2).

Table 3: Example illustrating maritime attribute analysis in watercraft motifs. *After Wesley et al. 2012:255*[xv]

Presence of maritime elements, features and attributes in ship motifs at Malarrak

Elem	Features Attributes	Watercraft 1	Watercraft 2	Watercraft 3	Watercraft 4	Watercraft 5	Watercraft 6	Watercraft 7	Watercraft 8	Watercraft 9
Major structural										
	Hull structure	x	x	x	x	x	x	x	x	x
	Hull planking, frames									
Minor structural										
	Superstructure									
	Cabins, wheelhouse			x		x			x	
	Propulsion									
	Engine			x						
	Boiler, funnel, smoke stack			x		x				
	Rudder			x	x				x	
	Anchors, anchor chain								x	
	Masts	x	x		x	x	x	x		x
	Internal structure									
	Decks								x	
	Bulkheads	x				x	x	x	x	x
	Mechanical items									
	Auxiliary engines, boilers									
	Winches, windlasses, capstans				x	x				
	Pumps									
Fixtures or fittings										
	Rigging									
	Sails	x	x		x		x	x	x	x

3.4 Statistical and Spatial Analysis

This study primarily assesses the patterning in the spatial distribution of maritime imagery using Excel software. A proportional analysis of maritime imagery determines what proportion of the assemblage on the islands and mainland are maritime in nature (Map 5). The percentage of maritime imagery in the assemblage is further assessed on a clan-based distributional level. Frequencies of non-maritime motifs and rock art production techniques are also discussed for further context of the local rock art milieu and seascape. The findings of this analysis are compared with previously published assemblages from rock art sites in Australia and abroad. Statistical comparative analysis of these works will contribute to a greater understanding of the maritime context of Yanyuwa culture. These proportions are reinforced by spatial analysis as the locations of sites, as well as maritime imagery are mapped using ArcGIS Pro. This allows for geographic assessment of distribution of maritime imagery in relation to cultural and natural features. This analysis contributes to an archaeological interpretation of seascape archaeology and spatial patterning in rock art.

3.5 The Living Archive: Written Voices and Mapped Songlines

The Yanyuwa rock art data set is ultimately a case study for how Indigenous archives can be harnessed to reinforce and build on existing knowledge that is of interest to communities (Atalay et al. 2014). Prior to Western scientific involvement, Yanyuwa knowledge was held in song, relational understandings, and the Country itself (li-Yanyuwa li-Wirdiwalangu et al. 2023). Now, a variety of non-traditional media assist the community in retaining culture while adapting to the needs of the present. For example, songlines have been visually mapped onto Western spatial understandings (Map 4), while young people use audio and written records of the words of their ancestors to learn Yanyuwa language (John Bradley, pers. comm. 2023). Important songlines have been animated to appeal to the hyper-visual culture of the present-day media environment (Atalay et al. 2019). The informed aspect of this project explores how those voices, written on the page and preserved in video, take on a life of their own and play an increasingly important role in the preservation of visual Saltwater culture in the Gulf of Carpentaria.

Archiving is often seen as a colonial practice that evokes mistrust within Indigenous communities (Russell 2006). Early archival records were obtained through surveillance of Indigenous people while their voices were excluded and supplanted by the impressions of white authorities and "experts" (2006:33). However, centring Indigenous people and their expressions of how they prefer their oral memory to be recorded and accessed by others can reimagine these records and bring them a critical "afterlife" (Schweitzer and Henry 2019:4). This acts as a case study for how drawing on the indigenous archive can be a transformative practice that serves the community.

Figure removed due to copyright restriction.

Map 4: All documented Dreaming paths on Yanyuwa Country. *Yanyuwa families, Bradley, Cameron, and McKee 2016*

3.6 Limitations, Scope, and Areas for Further Research

A significant limitation has been my lack of direct consultation with Yanyuwa people for their perspectives on the concept of "maritime" classification. Integrating Yanyuwa feedback could have proved insightful, however due to the passing of many individuals previously involved with the YRAP and the constrained timeline of a master's thesis, spending significant time with the community was not possible (Liam Brady, pers. comm. 2023). Luckily John Bradley and associates' research with Yanyuwa families spans five decades and has documented many conversations in full, allowing for integration of Yanyuwa voices into this project. Although the older generations of Yanyuwa families who spoke with John in the 1980s and 90s left written records, this does not mean that the knowledge and interpretations noted at the time were static. Archival research has the unfortunate effect of fossilizing a living and evolving form of oral knowledge. A further research priority would be to continue this conversation with younger generations of Yanyuwa people, as the meaning and significance of rock art changes based on age, gender, initiation, and circumstance.

Assessment of the statistical significance and association of various parameters, including the relationships between percent of maritime imagery per complex and the distance from the coast, distance from freshwater, and distance from projected maritime Dreaming paths, is an area for further research. This project also relies upon photographs rather than physical observation, so aspects of superimposition and environmental influence are difficult to perceive. Due to scope and time constraints, more complex statistical and spatial analysis using the program JMP will be elaborated in future publications.

Geopatial and temporal precision could be improved in future studies. It is important to note that maps of rock art locations are approximate rather than based on GPS data, as *jungkayi* and *ngimirringki* decided against publishing exact locations to protect significant sites (Liam Brady, pers. comm. 2023). Because of this precautionary measure, maps in this thesis are to be interpreted as visual aids for understanding spatial relationships rather than precise documentation (See Map 5). As only one *yalkawarru* image has been dated so far (see Chapter Four), chronological understanding of this artwork may also be improved. Further materials analysis of paint samples could illuminate paleoenvironmental context.

Another note is the inherent subjectivity of formal analysis; what to one observer is a 'curved line' could be interpreted as a *wakirli* boomerang by another. Categorisation is shaped by the

researcher's own visual expectations, exposures, and biases. That is not necessarily a shortcoming, as it provides an avenue for independent viewers to add their own insights and observations in the future. The benefit of these formal categories is that future researchers can have a shared vocabulary to communicate and record their observations of rock art.

An aspect of the "Western Scientific Lens" that often impedes understanding is the assumption of the objectivity and impersonality of the researcher. Not every Western viewer sees with the same eyes; we are products of our lived experiences. For that reason, the discussion is written in first-person voice where applicable. My "Western knowledge" was shaped by being raised in the United States and Quebec at the turn of the twenty-first century, attending public schools in the Los Angeles Unified School District, and being exposed to the viewpoints of my mostly postgraduate-educated family members. This was a setting where people of disparate cultural backgrounds from all over the world interacted regularly. Whereas my grandmother tells me that throughout her life, she was expected to assimilate from her Ashkenazi Jewish background into a dominant "white" culture, my cohort of students was encouraged to cultivate an awareness of their specific cultural or racial identity. I studied a curriculum of anthropology and history of science at the University of Chicago that featured both the self-consciously "decolonising" viewpoints of younger scholars, as well as an old guard of professors who were less likely to appreciate calls for reflexivity. As a non-Australian, I interpret many cultural elements relevant to this research from the position of an outsider. Wherever your perspective as a reader comes from, your accumulated knowledge is unique, and will shape the way you interpret the data presented through this research.

Chapter Four: Formal Analysis

This section advances stylistic understandings of the formal attributes of Yanyuwa rock art, and their connection to the Western concepts of the seascape and maritime cultural landscape. This perspective adds a quantitative and spatial element, allowing for future comparison between disparate maritime contexts. It relies on discrete classifications, diagrams, geographic information systems, and numerical and graphic representations of 'maritime attributes' to assess maritime identity through rock art.

4.1 Classification Results

Pictographs and petroglyphs in Yanyuwa Country are located in culturally significant areas across the Pellew Islands and the mainland, with images generally found in sandstone shelters on flat, sandy plains or at the base of elevated sandstone rock stacks. A 'complex' is defined as a rock art location that consists of a single or multiple 'sites,' spatially distinct aggregations of motifs (see Sample Collection). The Yanyuwa rock art assemblage consists of paintings, stencils, cupules, etchings, and prints. Motif colours, listed from most to least represented in the sample, include monochrome red, white, yellow, mulberry, and black, as well as bichrome examples. A recent radiocarbon date (AMS plasma sedation) of rock art on the mainland sampled by Karen Steelman dated to just 400 years ago, indicating a relevance to late Holocene occupation patterns (Liam Brady, pers. comm. 2023). Samples on the Pellew Islands are also likely recent, due to accelerated deterioration from water and salt damage in a coastal setting.

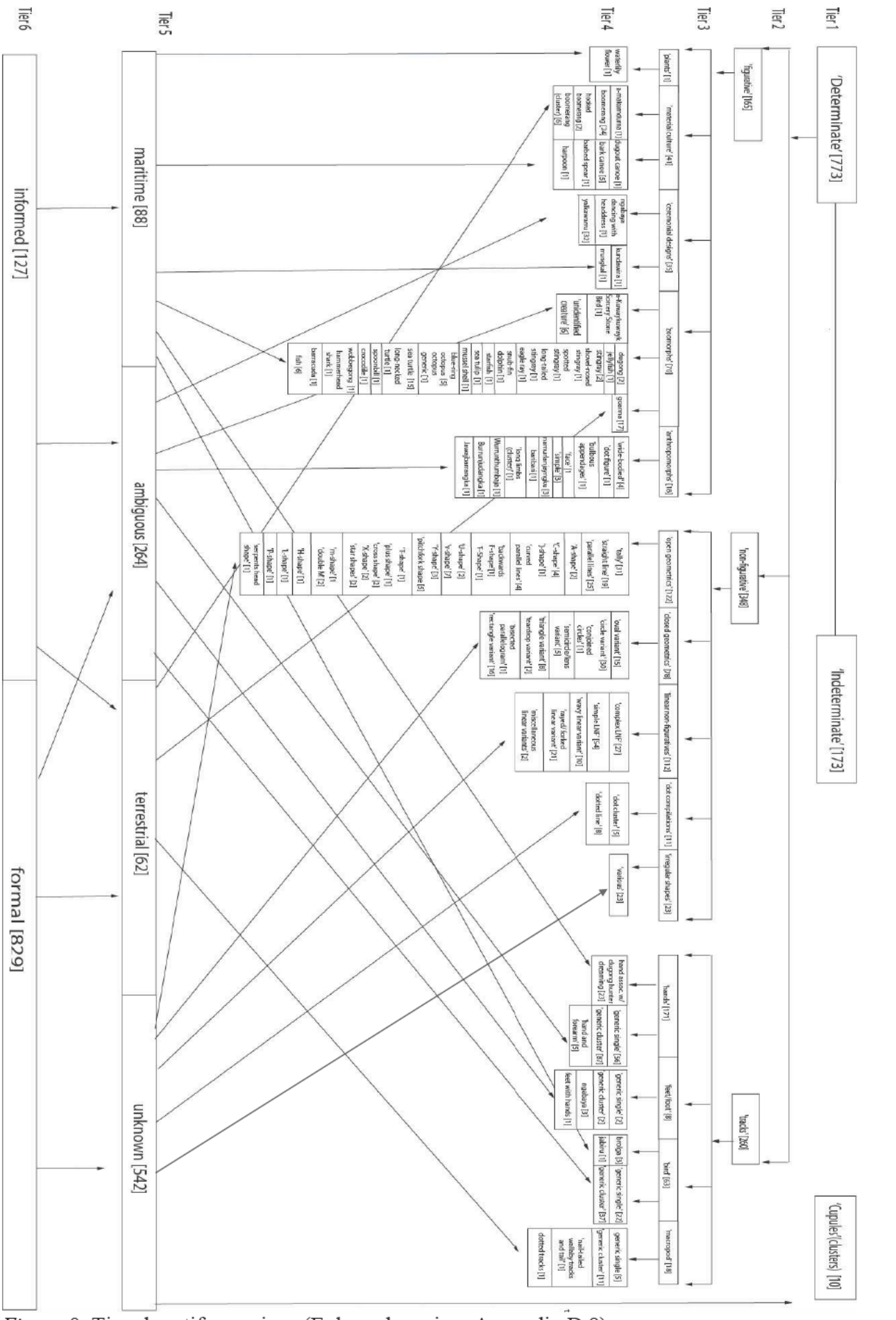
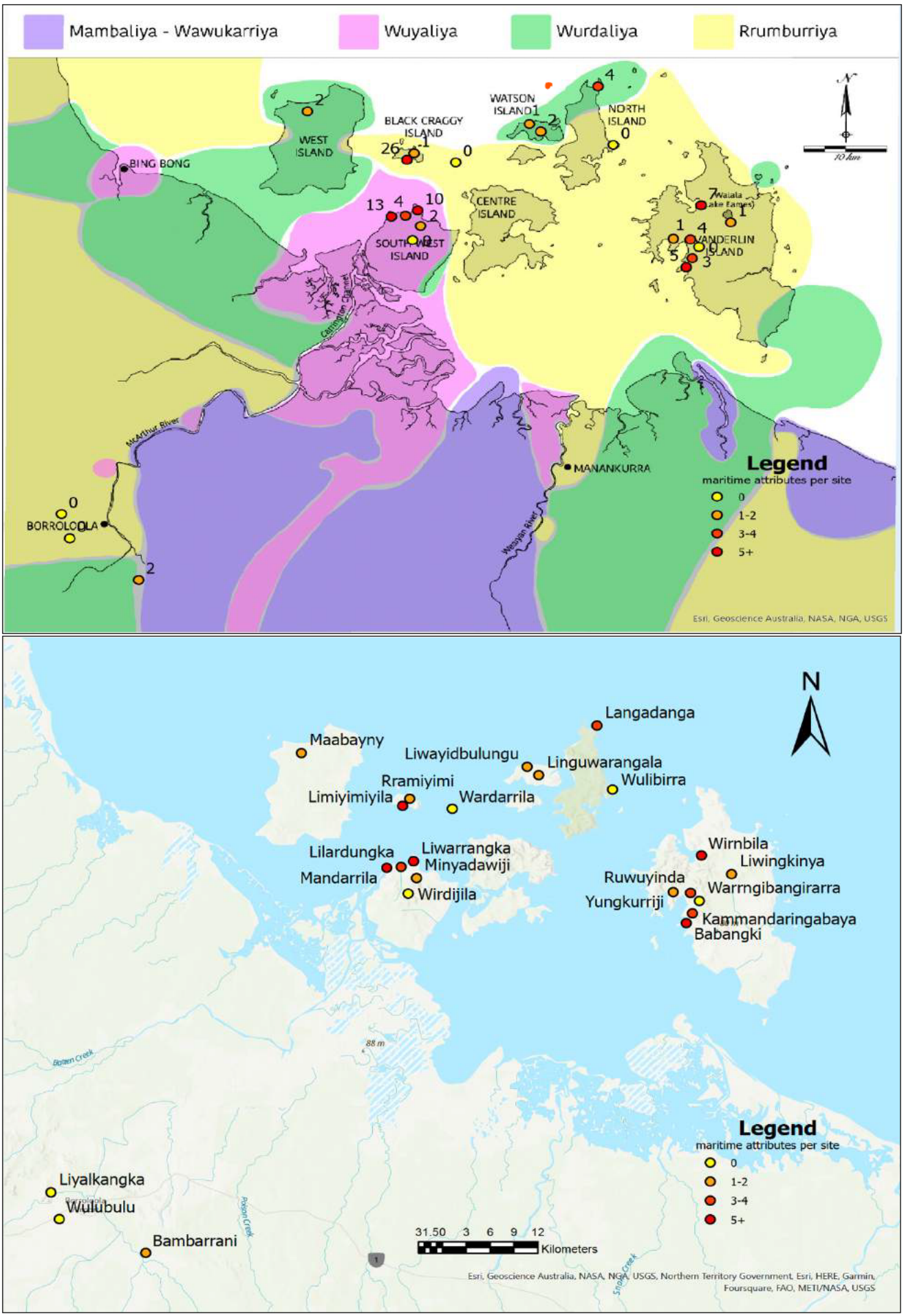


Figure 8: Tiered motif groupings (Enlarged version: Appendix D.8)

The initial process of rock art analysis was ‘formal,’ classifying visually apparent ‘motifs’ into observed etic categories. After training my eye on previous analysis from South West Island and Black Craggy Island, I analysed rock art from 22 complexes comprised of 65 sites on Yanyuwa Country. This formal analysis resulted in the identification of 956 motifs. 173 motifs (18% of the dataset) were of ‘indeterminate’ form due to natural deterioration or the intent of Dreamings/spirits. 10 cupule clusters (1%) became a separate category because these depressions may have a culturally distinct role when compared to painted motifs. I identified 773 images as ‘determinate’ because they could be further classified by their formal attributes (Fig. 8). The second “tier’ of formal categorisation classed 260 motifs (27% of the dataset) as ‘tracks’ (indentations left by human and animal appendages); 165 (17%) as ‘figurative’ (images representing people, flora/fauna, concepts, and items); and 348 (36%) as ‘non-figurative’ (imagery that is not apparently representational). Non-figurative motifs made up a plurality of the data. The purpose of categorisation was to understand the range and variety of Yanyuwa visual expression and render the images into something easily understood as a “dataset” within a Western frame of understanding that could be systematically compared across Yanyuwa country and beyond.

Non-figurative imagery was further grouped into a third tier of descriptive categories: ‘open geometrics’ (n=122); ‘closed geometrics’ (n=78); ‘linear non-figuratives’ (n=112); ‘dot compilations’ (n=11); and ‘irregular shapes’ (n=23) (Fig. 9) Descriptors were chosen based on continuity with previous work on Yanyuwa rock art (Brady and Bradley 2014a). A fourth tier of specific descriptors for individual motifs made the data set more granular. Non-figurative categories are artificially constructed, as the difference between a “closed geometric’ such as a circle versus an “open geometric” such as an L-shape is based in a way of seeing that differs from a Yanyuwa perspective, and presumably from the mental framework of any spiritual entity who may have made these images. Further, a ‘linear non-figurative’ such as a ‘wavy linear variant’ and an ‘open geometric’ such as a ‘curved parallel line’ might convey or represent equivalent concepts. Similar motifs such as a ‘cross-shape’ or ‘’T-shape’ might not be distinct in the logic of their creator or might have been part of a larger image that has since faded. So similar motifs have been grouped together on the diagram (Fig. 8). Non-figurative images could not be categorised as “maritime’ using a formal lens, as a ‘dotted lines’ or ‘L-shapes’ lack context linking them to past human relationships with the sea, so they were presented as ‘unknown’ variables.

Figure 9: Non-figurative rock art examples



Map 5: Concentration of maritime motifs across Yanyuwa Country. Clan boundaries (top); site names (bottom).

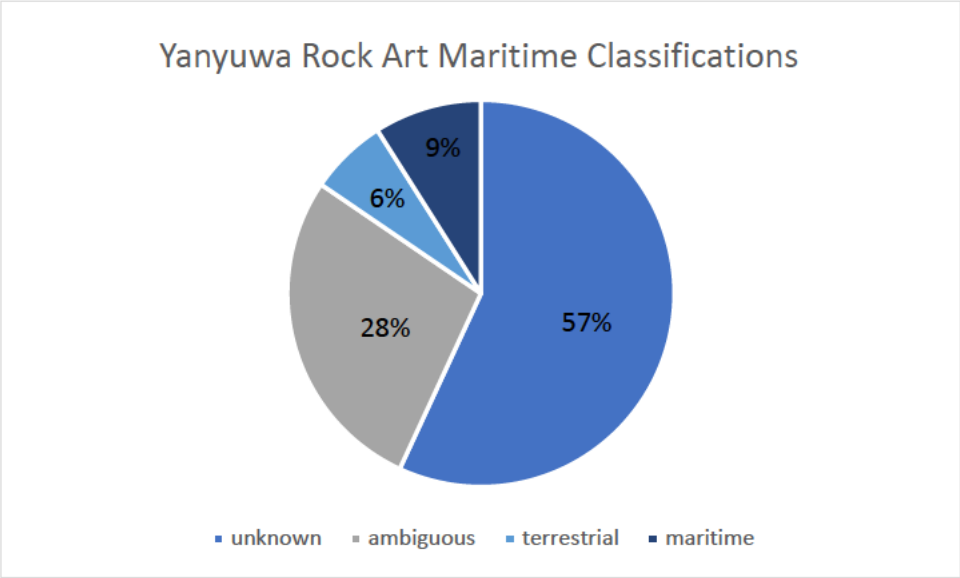
Of the 'tracks,' there were 171 hands and hand-clusters, 8 foot or feet-clusters, 63 bird tracks, and 18 macropod tracks. Hands and feet were mostly stencilled and printed, while bird and macropod tracks were painted. Although the likeness of these motifs to bird and macropod tracks was visually apparent, it was not possible to infer species from these tracks without Yanyuwa knowledge. The high proportion of hands was distributed throughout the islands, but the mainland sites of Bambarrani and Liyalkangka notably did not feature handprints. However, the mainland site of Wulubulu featured two hand stencil clusters. Photographs from the island sites of Babangki, Warnngibarngirarra, and Wirnbila on Vanderlin Island also did not feature hands, however these were collected in 1981 and were not systematically documented, perhaps indicating sampling preference for elaborate images. Of the more recent systematic samples, only Maabayny on West Island collected in 2010 did not feature hands.

Figurative images were grouped in Tier 3 as 1 'plants' (n=1), 'material culture' (artifacts (n=41), 'ceremonial designs' (n=35), 'zoomorphs' animal figures (n=70), and 'anthropomorphs' human figures (n=18). There appears to be an association between bichrome design and ceremonial and zoomorph motifs.[4] Many figurative classifications were visually apparent to a trained eye; a boomerang stencil (material culture) and a fish painting (zoomorph) are intuitive. However, many elements such as specific ceremonial designs like the *Yalkawarru* required Yanyuwa information for further understanding (Fig. 14). Zoomorphs made up 42% of the figurative images and 7% of the total dataset, with sea turtle motifs (n=15) being the most represented in the sample. This is unsurprising considering the significance of *Wundanyuka* as a food resource and Dreaming (Bradley 1997). Dugongs, however, only featured twice, which is unexpected as they are also a revered food source (Appendix D.2). *Yalkawarru* ceremonial designs (n=32) and various configurations of boomerangs (n=32) also were well-represented. A Western perspective might hypothesize that the frequency of certain motifs relates to spatial patterns of both maritime and non-maritime food procurement, maritime trade, Dreaming paths, songlines, and seasonal influences. More sophisticated statistical and geospatial analysis may help parse those relationships and is a focus of ongoing inquiry.

[4] This will be clarified in future statistical comparisons using the program JMP.

Table 4: Maritime rock art motif classification across Yanyuwa Country

Maritime Classification	Motif Count	Percent of Dataset
unknown	542	57%
ambiguous	264	28%
terrestrial	62	6%
maritime	88	9%
total motifs	**956**	
maritime + ambiguous	352	37%



The fifth tier involved an iterative process, sorting all motifs into either 'maritime,' 'terrestrial,' 'ambiguous' or 'unknown' using the sixth tier of 'formal' and/or 'informed' principles (Table 4). Most distinctive maritime imagery, including marine animals, aquatic plants, and hunting or seafaring technologies, were 'figurative' (Fig. 8). However, maritime categorisations could not be confirmed without information from *jungkayi* and *ngimirringki*. For instance, *li-jakarrimbirri* (blue-ringed octopus) are distinctive but would not be positively identified without community input (Fig. 9). It should be noted that the *wundumarlamarla* figure is depicted with white perimeter dots (Fig. 9, right) around its yellow body. These perimeter dots are a common design from inland Gulf Country regions, especially Marra and Gudanji Country, and are rare to see in Pellew Islands rock art. This leads Western researchers to speculate that artists responsible for pieces like the *wundumarlamarla* may have been from, or influenced by, the Marra or Gudanji groups (li-Yanyuwa li-Wirdiwalangu et al. 2023:49). Dreaming paths and history about Macassan seafaring also informed assignments of 'maritime' relevance to motifs (Chapter Five).

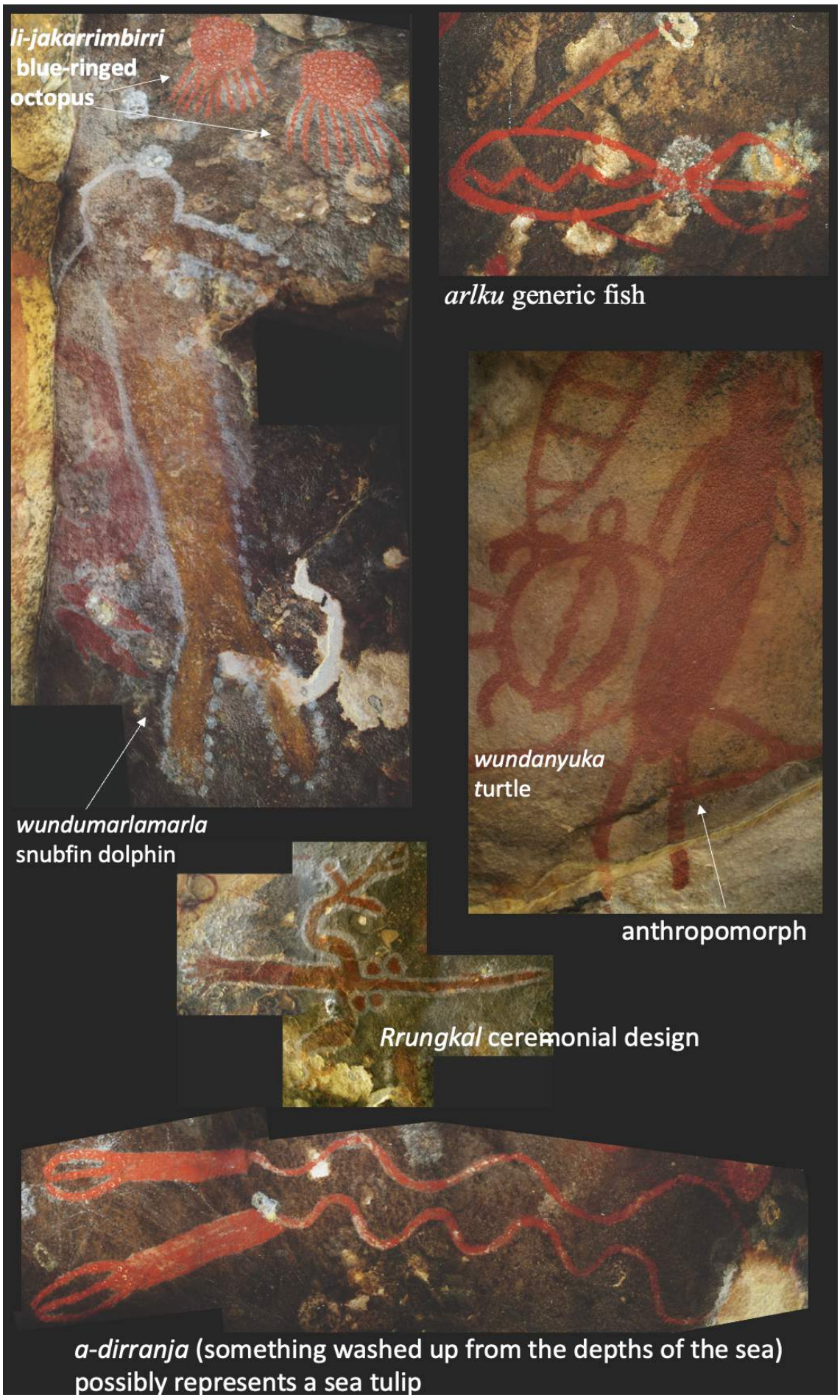


Figure 10: Maritime motifs at Mandarrila. *After Liam Brady and Nona Cameron 2023*

Notably, Rrumburriya clan had the highest proportion of decisively maritime rock art, with 48 motifs making up 12% of the dataset (Table 6). Without knowing that Rrumburriya people are *likilinganji-Wurralhibi*, kin to saltwater from the depths of the sea, and *likilinganji-Jamarndarrka,* kin to the White-Bellied Sea Eagle, it is difficult to explain this distribution (li-Yanyuwa li-Wirdiwalangu 2023:173). However, it should not be assumed that higher percentages of 'maritime' motifs indicate higher affinity to Saltwater culture. Wuyaliya has a greater proportion of maritime imagery (n=29, 10%) than Wurdaliya (n=11, 4%), which is unexpected as Wurdaliya appears to have larger coastal and island territories (Tables 6 and 7). However, Wuyaliya is *likilinganji-Kirlakanku*, kin to the Grey Mangrove Dreaming, and is associated with numerous other "maritime Dreamings" including Groper, Barracuda, Jabiru, Black Bream, and Mangrove Jack (2023:75). Wurdaliya clan includes people who are *likilinganji-ngangkurrurru*, kin to places of marine turtle hatchlings, and *likilinganji-murrmurrwarra*, kin to vast windswept beaches, and are associated with Osprey and Sea Turtle Dreamings. Mambaliya- Wawukarriya, with mostly inland and freshwater holdings, were not found to have maritime imagery on their Country (2023:144). They are *likili-nganji kumbarikanyajulaki,* kin to the Brolga, and *likili-nganji yurrungkurru,* kin to sand ridge and messmate forest Country (2023:243). Black Craggy Island, the western shore of Vanderlin Island, and the northern shore of South West Island have the highest concentration of maritime imagery. Interestingly, although Centre Island is also on Rrumburriya Country, it lacks rock art (Map 5). This may be due to differences in terrain, sampling bias, or perhaps lesser association with Dreamings involved in pictograph or petroglyph creation.

Table 5: Maritime rock art motif classification across Rrumburriya clan Country

Maritime Classification	Motif Count	Percent of Rrumburriya Dataset
unknown	206	50%
ambiguous	138	33%
terrestrial	23	6%
maritime	48	12%
total motifs	**415**	
maritime + ambiguous	186	45%

Table 6: Maritime rock art motif classification across Wuyaliya clan Country

Maritime Classification	Motif Count	Percent of Wuyaliya Dataset
unknown	144	52%
ambiguous	80	28%
terrestrial	25	9%
maritime	29	10%
total motifs	**278**	
maritime + ambiguous	109	39%

Table 7: Maritime rock art motif classification across Wurdaliya clan Country

Maritime Classification	Motif Count	Percent of Wurdaliya Dataset
unknown	192	73%
ambiguous	46	18%
terrestrial	14	5%
maritime	11	4%
total motifs	**263**	
maritime + ambiguous	54	22%

4.2 Watercraft

Five bark canoes, all from Vanderlin Island, and one dugout canoe (Fig. 10) from Langadanga on North Island were identified and assessed in terms of their technological attributes (Table 8). Linear patterns on these watercrafts are interpreted as 'hull planking,' although they can also be interpreted as infill or patterning not meant to represent a specific technology. The overall shape is interpreted as 'hull structure,' with bold lines being gunwales (Fig. 10, right). This terminology is appropriated from larger watercraft with European and Asian origins and raises questions of how smaller watercraft fit into these schematics (Wesley et al. 2012). It also raises questions on how technological elements of watercraft are perceived cross-culturally, as we cannot assume that a mast or hull structure have equivalent significance as in Western seafaring, although they may serve the same purpose.

Table 8: Canoe attributes

Elements	Attributes	Langadanga Dugout	Ruwuyinda Bark 1	Ruwuyinda Bark 2	Wirnbila Bark 1	Wirnbila Bark 2	Yungkirriji Bark 1	Liyalkangka (possible bark)
major structural								
	hull structure	x	x	x	x	x	x	x
	hull planking		x	x	x	x	x	x
	gunwales		x	x	x	x	x	x
minor structural								
	rudder							
	anchor							
	mast	x						
fixtures or fittings								
	sails	x						
hunting apparatus								
	spears				x (associated)	x (associated)		
	ropes							
cargo and contents								
	animals	x			x (background)	x (background)		
	people							

The Langadanga dugout image was an outlier as it featured a mast, sails (Fig. 11 left; Appendix D.3) and was a dry charcoal drawing while most images in the data set were painted (Fig. 11 right). The two bark canoes at Wirnbila on Vanderlin Island were associated with spears or harpoons and turtles; the hull of the dugout canoe at Langadanga contained two outlined turtles and a dugong displayed in 'x-ray style,' suggesting that these watercrafts represented hunting vessels (Fig. 11). It is unclear whether the bark canoes represented sea-going craft, *na-riyarrku,* or simpler constructions made from a single large sheet of folded bark, *na-wulka.* A potential bark canoe from Liyalkangka is featured in the table, and there are two other less convincing potential canoe motifs in the dataset.

Figure 11: Dugout canoe at Langadanga (left); Bark canoes at Ruwuyinda Site 2 (right).

John Bradley 1980 (left) and Liam Brady 2019 (right)

Figure 12: Douglas and Timothy families navigate in Old Tim Timothy's dugout canoe named *a-Bayalmakurra.*

E. MacDonald in Yanyuwa families et al. 200:139.

This formal approach has parsed apart Yanyuwa motifs in a classificatory fashion and has raised more questions than it answers. Maps and tables display statistical and spatial information about rock art motifs, which serve to translate this information into the "language" of Western Science. But how can we read this language? How can we measure and quantify the tangible relationships of 'maritime imagery' to intangible Dreaming paths? What correlation exists between maritime imagery placement and its geographic relationship with saltwater and freshwater sources? Can this be viably understood without measuring precise locations of rock art sites, the radiocarbon dates of all rock art, and reconstructing the locations of saltwater and freshwater at the date of the creation of the rock art? What can be concluded about the significance of maritime hunting technology to the Yanyuwa based on its frequency in the rock art record? After all, only one harpoon and two dugongs were identified, but ethnographic information shows that harpooning dugongs has been a tremendously culturally significant activity. To address these silences in the archaeological record, we turn to Yanyuwa voices.

Chapter Five: Informed Analysis

This chapter draws on an archive of Yanyuwa reflections and perspectives on their history, culture, and place within society as relates to rock art. The informed approach attempts to bridge the dichotomy of Traditional versus Western by harnessing Dreamings, songlines and cosmology to interpret the archaeological concept of 'maritime imagery.' This section provides insights into the relationships of Spirit Ancestors to Sea Country, rock art, and *yanyuwangala*.

5.1 *Yijan* and Yanyuwa Rock Art Philosophy

This maritime archaeological research involves the study of past Yanyuwa interactions with the sea as explored through material culture. Therefore, paintings of vessels and marine animals, presumably depicting prey and cosmologically significant creatures, are evidently maritime and fall under the purview of material culture. But is it possible to definitively say that some Yanyuwa motifs are "maritime," while others are terrestrial according to formal attributes? As *li-Anthawirriyarra*, "People of the Sea," should *all* Yanyuwa cultural output be considered maritime? The interpretation of rock art is seldom as simple as the sum of its formal characteristics. When described by Yanyuwa people, much of what researchers see as rock art is integrally connected to Country, spirituality, and kinship (Bradley et al. 2021b).

Pictographs are linked to *yijan,* the Dreamtime, and the continuous activities of Ancestral Spirits. Through human voices and the images left on rock, the Ancestors of *yijan* reach through the past to dwell on country and create a powerful vision of the never-ending present (Bradley and Yanyuwa Families 2022:133). The events of *yijan* extensively link to the sea through multifaceted concepts of geography, philosophy, and the identities of *Yanyuwangala* and *li-Anthawirriyarra.* Consequently, much of Yanyuwa rock art is related to maritime or marine-centric Dreamings. This chapter discusses narratives that explain links between coastal and oceanic places, marine and freshwater animals, and maritime activities such as hunting and navigating through the lens of rock art.

Figure 13: Fresh-looking stencils at Liwingkinya (top) and Langadanga (bottom).

Liam Brady 2012.

The agency and relational embeddedness of rock art is potentially a source of incommensurability between archaeological and Yanyuwa understandings. One anecdote that highlighted the diverging ontology of the YRAP team occurred after failure to re-locate an image of a *yirrikirri* (European-introduced donkey) that Yanyuwa community members remembered at Lilardungka on South West Island. Archaeologists assumed it had deteriorated due to the wind and rain associated with cyclonic wet seasons. This reasoning is consistent with reconstructing site taphonomy. However, Dinah Norman a-Marrngawi had another explanation for its absence:

> "Oh dear! Old people must have taken it away, too many of them [old people] have died you know. There are more words I can tell you about this painting. They are getting faint, they are hard to see, they are falling off the rocks, why is this happening? It is because the old people have all died, my mother's father, my father's mother, my father's father and my mother's mother's brothers, they have all died, all of those strong people that once held this Country, the islands and the sea they held this Country with an intensity, now they have all died and the paintings are fading, they are hard to see, truly this Country is lamenting them" (li-Yanyuwa li-Wirdiwalangu et al. 2023:9).

From Dinah's perspective, the wellbeing of the community and integrity of kinship with Country, not weather patterns, impacted the visibility of the rock art. This echoes concerns of other community members that spirits become "sad" and reclusive when Yanyuwa visit Country infrequently (2023:42). Conversely, fresh-looking hand stencils were created by the *Namurlanjanyngku* spirits at Liwingkinya after the YRAP project associates sang the *kujika* for that Country; the freshness of the paintings suggested the spirits had anticipated the arrival of the team and painted the stencils just before they arrived (2023:206; Fig. 13). This connection also challenges assumptions that the images inscribed on Yanyuwa Country are "rock art." These images are integrally linked and responsive to the actions and presence of Yanyuwa people.

To understand the dynamic seascape of rock art on Yanyuwa Country, it is necessary to learn more about the multidimensional sea- and landscape of *yijan.* Senior Yanyuwa man Musso Harvey Bankarrinu, explains *yijan*:

> "The Dreamings made our Law or narnu-yuwa. This Law is the way we live, our rules. This Law is our ceremonies, our songs, our stories; all of these things came from the Dreaming. The Dreamings are our ancestors, no matter if they are fish, birds, men, women, animals, wind or rain. It was these Dreamings that made our Law. All things in our Country have Law, they have ceremony and song, and they have people who are related to them" (li-Yanyuwa li-Wirdiwalangu et al. 2023:8).

Relationships between Yanyuwa families, places, laws, tradition, actions, ceremonies, songs, emotions, and the ancestral world are part of the story of rock art, as these images are *ki-yijandu,*

belonging to the Dreamings (2023:40). Rock art is often presented as integral to the way Dreamings brought Country into being, and the maintenance and wellbeing of Country. An extensive narrative of the events of *yijan* is best learned through other sources (Bradley with Yanyuwa Families 2021; li-Yanyuwa li-Wirdiwalangu et al. 2023), so this focuses on Dreamings which directly situate rock art or link it to a maritime theme.

5.2 Dugong Hunters of Excellence Ancestors

The *li-Maramaranja* Dugong Hunters of Excellence narrative is foundational to the maritime culture of Yanyuwa country. These Dugong Hunters are spiritual beings important to the Rrumburriya clan but have a great deal in common with contemporary Yanyuwa *li-maranja* dugong hunters. The *li-Maramaranja* arose from the depths of the sea and travelled in skilfully manufactured bark canoes, with strong gunwales, high prows, internal bracing, and watertight stitching (Bradley with Yanyuwa Families 2022:137). They were backed by *Lhambiji,* a powerful Northerly Storm Wind Ancestor, which influences areas where rock art is found including Wulibirra and pertains to Vanderlin and North Island. The Dugong Hunter Dreaming traversed the seascape much as Yanyuwa men would during traditional hunts, but marked their surroundings in ways humans never could (Map 6). Just as the *li-Maramaranja* carefully coiled their harpoon ropes, so do present-day dugong and sea turtle hunters (2022:144). Tall cabbage palms represent the harpoons of the Dugong Hunters. The *li-Maramaranja* announced success in the hunt with the voice of the Conch Shell Dreaming, much as Yanyuwa hunters called through a conch to alert the community to prepare ground ovens (2022:151). Their voyages are recorded in a songline which has over 300 verses.[xvi]This songline enlivens the sea and islands, providing a metaphysical road to follow and "lift the country up" (2022:109). To Yanyuwa, due to the linkages between the Dugong Hunters of Excellence and present-day dugong and sea turtle hunters, this narrative is "like real history" (Bradley 1997:227).

Figure removed due to copyright restriction.

Map 6: Dugong Hunters of Excellence and White-Bellied Sea Eagle travel across Rrumburriya Country, with rock art sites marked. *li-Yanyuwa li-Wirdiwalangu et al. 2023:192.*

As they voyaged, the *li-Maramaranja* trailed their dugong-hunting harpoon ropes behind, creating reefs and islets while holding Rrumburriya clan Country together. Dugong Hunters, as well as the Old People who used these bark canoes, imbued them with power songs (Bradley 1997:291). The *li-Maramaranja* created landforms and features, including figures inside the rockshelters on Black and White Craggy Islands, Rramiyimi, Limiyimiyila and Wardarrila (li-Yanyuwa li-Wirdiwalangu et al. 2023:41). The Dugong Hunters located a permanent lagoon Rumannguwa north of rock art site Wulibirra (Bradley with Yanyuwa Families 2022:205). Jawajbarrangka featured at Wulibirra is also mentioned in the Dugong Hunter Dreaming (2022:217). Senior Yanyuwa woman Dinah Norman a-Marrngawi emphasizes that the handprints and stencils at Limiyimiyila on West Black Craggy Island were created by the *li-Maramaranja* (li-Yanyuwa li-Wirdiwalangu et al. 2023:5). The Dugong Hunters then stopped at Wardarrila on White Craggy Island and left more red hand stencils, which were visible in 1980 but have since deteriorated (2023:231). After numinous journeys across Yanyuwa Country they moved to Marra Country, providing a linkage between the groups. The journey of *li-Maramaranja* and its evidence in material culture differentiates the Yanyuwa as people who are ecologically, technologically, and economically entwined with the sea.

Dugong Dreamings

Dugongs are also important features of numerous Yanyuwa storylines, and are acknowledged as kin with “strong Law” in the Dugong Hunters Dreaming (Bradley and Yanyuwa Families 2022:229). In fact, according to senior Yanyuwa woman Annie Karrakayny, “that dugong, he is a proper man

too," so hunting, cooking, and sharing of dugong meat must be in careful observance of Law (2022:222). In Yanyuwa language, there are at least 13 words for dugong, specifying life stages and different aspects of "dugongness" (Bradley 1997). So, it is surprising that there are only two dugongs documented in Yanyuwa art. One *Waliki* Dugong is depicted in the hull of the canoe at Langadanga on North Island. The other *Jiyamirama* Dugong is at Liwarrangka. The *Waliki* Dugong Dreaming is typically associated with the Rrumburriya clan; however, the Lone Male Dugong *Jiiyamirama*, as depicted at Liwarrangka (Fig. 14), pertains to Wuyaliya (li-Yanyuwa li-Wirdiwalangu et al. 2023:82–83). *Jiyamirama* belong only to a specific area and keep the seagrass beds healthy. Superimposed over the *Jiyamirama* is a *Yalkawarru,* a symbol of the post-funerary ceremony belonging to the Wuyaliya and Wurdaliya clans, which returns spirits of recently deceased clan members back to Country. The superimposition of the *Yalkawarru* over the dugong indicates the significance and interconnectedness of the Wuyaliya and Wurdaliya clans with creatures of the marine environment.

Figure 14: Yalkawarru at Liwarrangka superimposed over a *Jiyamirama* (Lone Male Dugong).

Liam Brady 2010

5.3 Groper Songline

The a-*Kuridi* Groper *(Proicrops lanceolatus)* Dreaming associated with the Wuyaliya clan is also integral to understanding rock art. The Groper is a common thread in the gulf country, as her extensive voyage starts far to the east in Ganggalida Country, travels to Yanyuwa Country, then moves west to Marra and Warndarrang country and represents kinship between these groups (li-

Yanyuwa li-Wirdiwalangu et al. 2023:156). The route travelled by *a-Kuridi* across Country is described in *kujika* (Map 7). Her songline ties together many different maritime Dreamings, which can be seen in rock art at Liwarrangka, Wirdijila, Lilardungka, Mandarilla, and Minyadawiji.

a-Kuridi was responsible for naming and creating several rock art sites. She sang of the bones of deceased kin and laid down the law that they be placed into the caves and shelters like Liwarrangka (2023:79). She passed through Wirdijila rock art site and associated with the nearby *a-Mankurdurdu* Diamond-Scaled Mullet *(Liza vaigiensis)* Dreaming, which takes the form of a sandbar. She also marked the rock art site Lilardungka. The only plant in the dataset, the *ma-rnaya* waterlily flower at Lilardungka, is mentioned in the Groper *kujika* and is also a kinship-related food source (2023:97). At Lilardungka, the *a-Mukarra* Barracuda *(Sphyraena barracouda)* Dreaming is pictured. *A-Mukarra* belongs to the Wuyaliya clan because they are *ngimirrimgi* for this Dreaming; it is their father's father.[xvii]

Figure removed due to copyright restriction.

Map 7: Travels of the Groper and Jabiru Dreamings across Wuyaliya Country with recorded rock art sites marked.

li-Yanyuwa li-Wirdiwalangu et al. 2023:77

The Groper breathed life into the area of the Mandarrila rock art site on South West Island. She also created the *Rrungkal* as painted at Mandarrila, a powerful symbol associated with the Grey Mangrove *(Avicennia marina*) Dreaming that is kin to Wuyaliya clan (Fig. 9). She associated with the Dugong Hunter Dreaming near that rock art location (Bradley 1997). Just offshore from Mandarrila rockshelter is the *a-Marrinda* Black Bream *(Hephaestus filiginosus)* Dreaming from the Groper *kujika*, forming a rocky sea-stack. Notably, the Pleiades/Seven Sisters constellations as *li-Jakarambirri* Blue-Ringed Octopus *(Hapaloclaena maculosa)* are also painted at Mandarrila rockshelter, linking sea and sky (li-Yanyuwa li-Wirdiwalangu et al. 2023:128).[xviii] Another connective motif at Mandarrila is the *a-dirranja,* which refers to things which wash onshore from deep in the sea after storms (Fig. 9). Traditional Owners suggested the *a-dirranja* could represent sea tulips (*Pyura sp*.) after seeing pictures of these organisms. Sea tulips are typically found around New South Wales and Tasmania, making their appearance in Yanyuwa Country rock art confusing to archaeologists. However, this was easily rationalised as the motifs must have "came from another Country" and the *li-wankala* (spirits of deceased kin) "saw things that [present-day Yanyuwa] never saw" (2023:118). It is unclear whether this understanding of *a-dirranja* is a feature of the Groper narrative, but it could be interpreted as extending the Groper's role of linking kinship groups beyond even the Gulf Country.

The *Wurrmangurli* Jabiru *(Xenorhynchus asiaticus)* Dreaming, also described in the Groper *kujika*, nests at the rock art site Minyadawiji on South West Island. There are no jabiru tracks at Minyadawiji, so without knowledge of Yanyuwa cosmology it would be difficult to link such a site to a Dreaming. The *Wambuyungu* ceremony (Appendix D.7) carried by the Barracuda linked the Groper with other maritime dreamings such as Jabiru, Black Bream, Beach-Stone Curlew, Osprey, Green Turtle, and Pelican. People that are kin to the Groper hold her *kujika* and ceremonies such as a-Milkathatha in common (Bradley 1997:165). The linkage between Island, Sea, and Sky Country in areas of rock art linked by the Groper's *kujika* demonstrate the extensive seascape and maritime cultural landscape behind Wuyaliya rock art.

5.4 White-Bellied Sea Eagle Dreaming

The *a-Karnkarnka* White-Bellied Sea Eagle *(Icthyophaga leucogaster)* Dreaming explains relationships behind rock art at Wulibirra. *a-Karnkarnka* originated on the east bank of the Wearyan River mouth, travelled to a place called Muluwa, then continued her journey (Bradley and Yanyuwa Families 2022:190). The Sea Eagle interacts with the Dugong Hunters in her songline, tying together Rrumburriya and Mambaliya-Wawukarriya clans (2022:155). During her travels, *a-*

Karnkarnka carried out the important and powerful *Kundawira* ceremony of the Rrumburriya clan. This ceremony is considered by Yanyuwa to be a "proper saltwater island ceremony" (li-Yanyuwa li-Wirdiwalangu et al. 2023:187). The *Kundawira* ceremony (Appendix D.7) honours the ancestral presence of people whose bodies were lost at sea due to shark and crocodile attack, as well as drownings from canoes capsizing mid-journey. A *Kundawira* motif is found at Rramiyimi, North Black Craggy Island on Rrumburriya Country.

a-Karnkarnka made her nest at the rock art site Wulibirra on North Island. She remains at Wulibirra to this day as she found her true home (Bradley and Yanyuwa Families 2022:190). Wulibirra remains secret and sacred to the Rrumburriya clan, although the information presented here was made public by Yanyuwa Elders. The anthropomorphic spiritual entities Wurrunthurnambaja, Burrunjurdangka and Jawajbarrangka are associated with *a-Karnkarnka* and *Kundawira*, and they "put themselves into the rock" at Wulibirra according to Old Tim Timothy Rakawurlma (li-Yanyuwa li-Wirdiwalangu et al. 2023:225; Fig. 14).

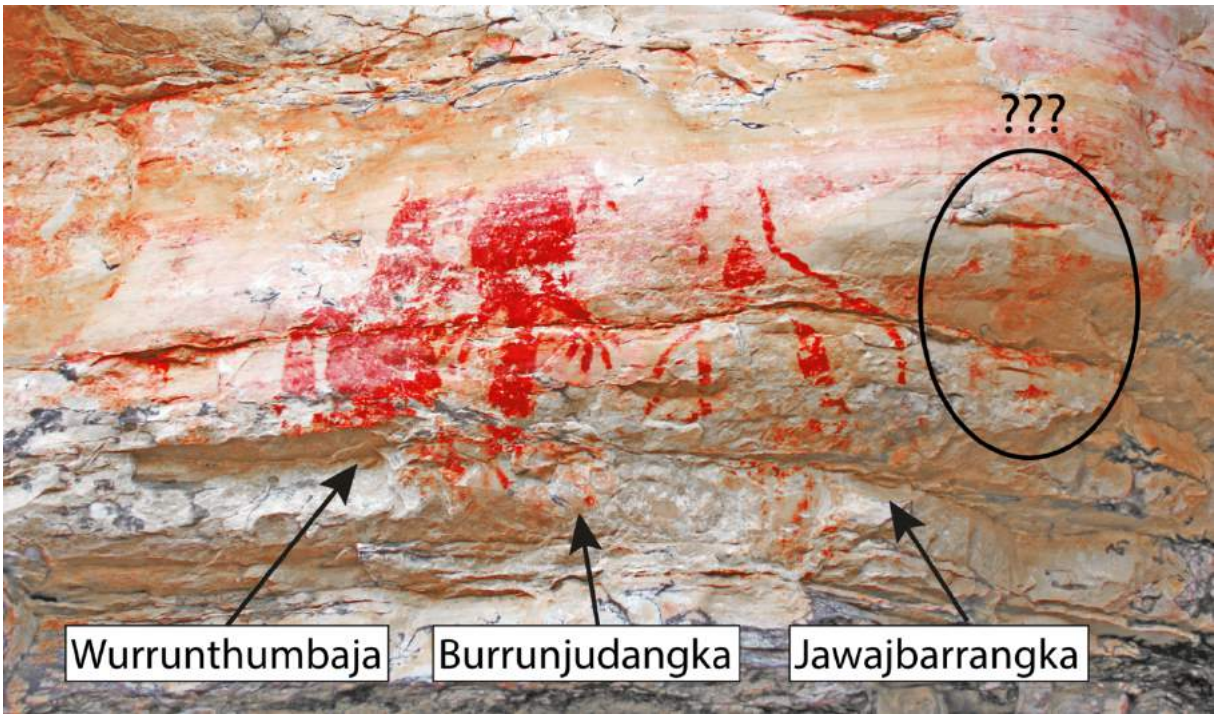


Figure 15: Anthropomorphic spirits at Wulibirra.

Liam Brady 2015

5.5 Sea Turtle and Osprey Predation Narrative

The *Wundanyuka* Sea Turtle Dreaming shapes Wurdaliya Country and rock art at Maabayny and Langadanga through its relationship with its ferocious predator *Jujuju* Osprey *(Pandion Haliaetus*

(Map 8). The *Wundanyuka kujika* details the cosmological life cycle of various species of sea turtles (li-Yanyuwa li-Wirdiwalangu et al. 2023:151). *Wundanyuka* is multifaceted and present in both land and sea. This is demonstrated as the Luldara freshwater well on West Island forms the eye of the Sea Turtle Dreaming, while Wurdaliya Sea Country is home to rich turtle-hunting seabeds and sea turtle egg-rookeries on the beach in front of Maabayny rock art site (2023:151). Interestingly, no turtles are depicted at Maabayny, despite their heavy presence in the environment. However, *arlku* generic fish, *Yalkawarru* and the *Arribarri* Wobbegong Shark (Fig. 16) Dreaming appear here. *Arribarri* is a Rrumburriya Dreaming, which appears incongruous because it is found deep in Wurdaliya clan Country. Yet Yanyuwa people, when asked, take no issue with the motif placement as the actions of the Dreamings are "not to be second guessed" (2023:180). Langadanga, painted on sandstone sea-stacks, was formed at the location *Jujuju* Osprey killed and ate *Wundanyuka,* after a protracted and eventful chase. Langadanga rock art is unique among the Yanyuwa dataset as along with typical yellow and red pigment paintings it features charcoal drawings, notably a dugout canoe with a dugong and two turtles in the hull (Fig. 10).

Figure 16: Wobbegong with superimposed Yalkawarru ceremonial design at Maabayny

Liam Brady 2010

These two rock art sites associated with the *Wundanyuka* Dreaming play a significant role in Yanyuwa cultural education. While the motifs at Maabayny seem unrelated, relationships between Wurdaliya clan and *Wundanyuka* are reinvigorated here by the Turtle Camp run by the li-Anthawirriyarra Sea Rangers. At Turtle Camp, scientific monitoring of turtle populations at

Maabayny and cultural activities are organised on a yearly basis (147). Further, the dugong and turtles from the Langadanga charcoal drawing are stylised and replicated in the Borroloola School logo. This communicates the ongoing importance of saltwater identity, as conveyed through rock art, to young Yanyuwa people.

Figure removed due to copyright restriction.

Map 8: Sea Turtle and Osprey Dreamings travel across Wurdaliya Country, showing rock art sites. *li-Yanyuwa li-Wirdiwalangu et al. 2023:142.*

5.6 Shark and Stingray Voyages

Hammerhead Shark, Tiger Shark, Long-Tailed Stingray, and Eagle Ray

Sharks and stingrays in Yanyuwa narratives are often associated with the voyages of the Dugong Hunters. *Warriyangalayawu* Hammerhead Shark *(Sphyrna lewini)* navigated westwards with two *Nguku* Long-Tailed Stingrays *(Hypanus longus)* in the Dugong Hunter *kujika* (Yanyuwa Families et al. 2016:441). At the site Limiyimiyila, a *Warriyangalayawu* (Fig. 17) and *Nguku* Dreaming are depicted. However, the presence of these Dreamings in rock art at Limiyimila (on Black Craggy Island) does not necessarily imply that the events of the Dugong Hunter Dreaming, or the connections described between figures in that *kujika,* are localised to this area. These distinctive paintings of Hammerhead Shark and Long-Tailed Stingray represent connections between clans, language groups, and Spirit Ancestors from both sea and land (li-Yanyuwa li-Wirdiwalangu et al. 239). *Minyminyi* Eagle Ray *(Myliobastis australis)* also is seen in the rock art at Limiyimiyila and was known to meet with the Dugong Hunters on the east coast of Vanderlin Island (Bradley 1997:506).

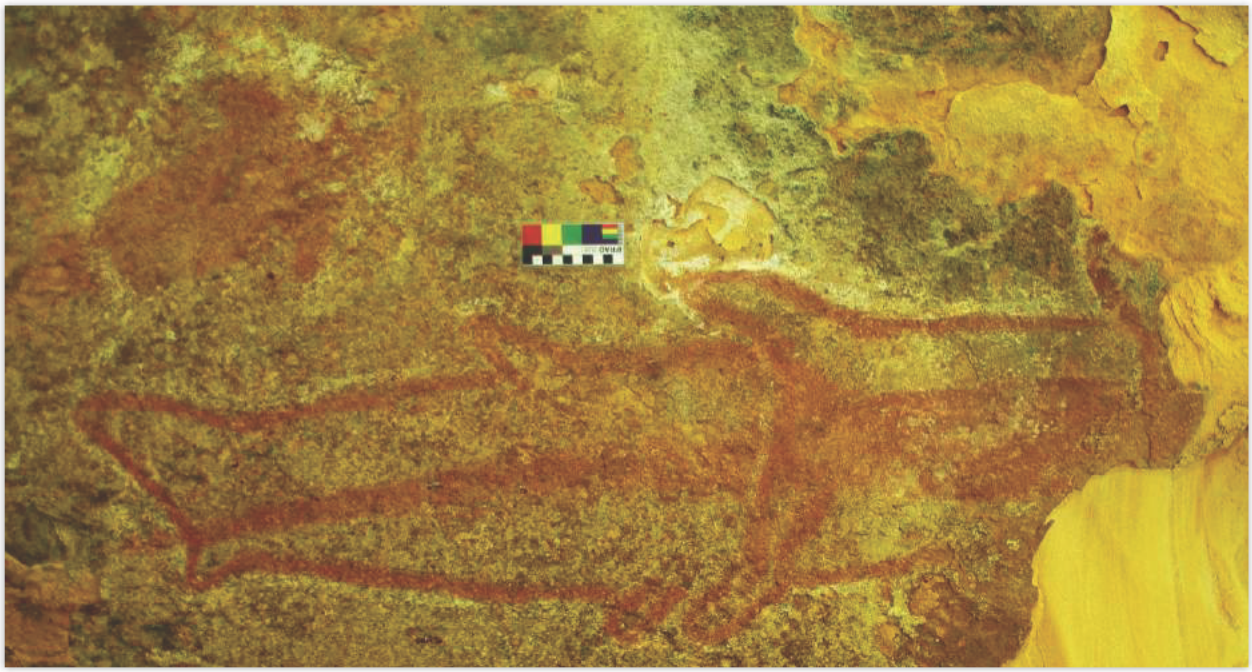


Figure 17: Ray and hammerhead shark at Limiyimiyila.
Liam Brady 2010

The Rrumburriya ancestor *Ngurdungurdu* Tiger Shark *(Caleocerdo cuvieri)* met with the *Warriyangalayawu* Hammerhead Shark Dreaming at Vanderlin Rocks as a travel companion (2016:441). Although rock art may appear motionless, the Tiger Shark Dreaming is dynamic, as its songline contains an urgent "moving verse" to keep the *Ngurdungurdu* travelling (Bradley and Yanyuwa Familes 2022:159). The *Ngarraburna* Parrotfish Dreaming is also associated with the Tiger Shark Dreaming, although no parrotfish were identified at any rock art sites. The Hammerhead and Tiger Shark Dreamings also link the sea to the estuarine area, as they traverse brackish and mangrove-lined areas along with saltwater crocodiles (Bradley 1997:70). The transit-oriented nature of the Hammerhead Spirit Ancestor and Tiger Shark Spirit Ancestor is also noted in material culture as they are the namesake of several dugout canoes (1997:297).

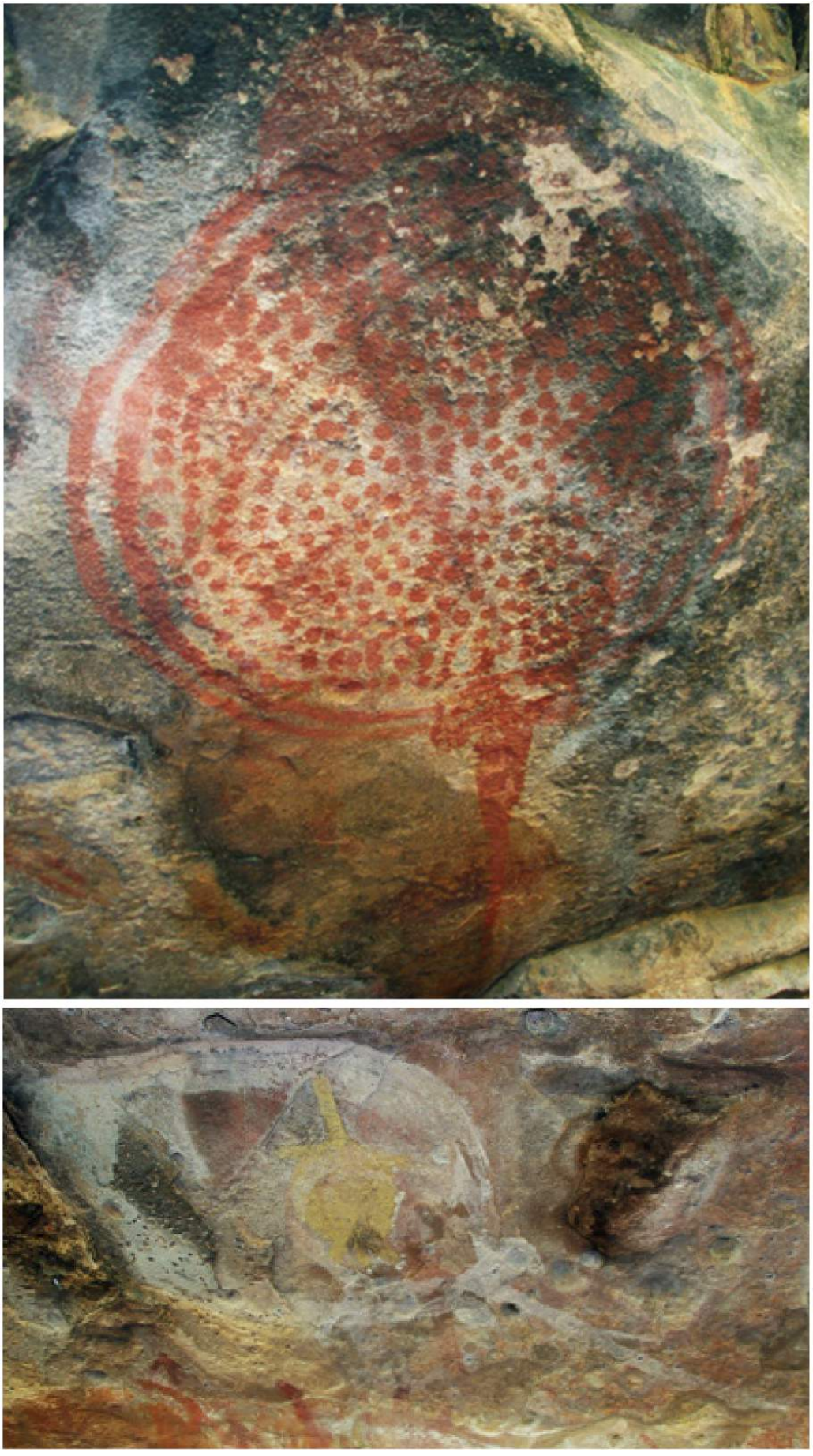


Figure 18: Spotted (top) and Shovel-Nosed Stingray (bottom) with superimposed yellow Long-Necked Turtle at Liwarranka. *Liam Brady 2010*

Spotted and Shovel-Nosed Stingray Dreamings at Liwarrangka

At Liwarrangka on South West Island at least four figures, *a-Janngu* Spotted Stingray (*Himantura toshi) a-Mirrbundu* Shovel-nosed Stingray (*Rhinobatus batillum)*, *Murndangu* Long-necked Freshwater Turtle *(Chelodina longicollis)* (Fig. 18)*,* and *Jiyamirama* Lone Male Dugong *(Dugong dugon)* (Fig.13) stand out as having maritime significance, linking the site to a broader maritime cultural landscape. The large, fresh-looking *a-Janngu* Spotted Stingray represents a Dreaming. This is linked to other aspects of *yijan,* as from the mouth of *a-Janggu* comes a North Wind Ancestor called *a-wurrarumu* (waves from the depths of the sea), which is located on the southwestern coast of Vanderlin Island (Bradley 1997:128). Knowledge about northerly storm winds, of which there are several types, is integral to Yanyuwa seafaring songs (li-Yanyuwa li-Wirdiwalangu et al. 2023:59). These creatures are not just representations at Liwarrangka but are present as a living force. With the inclusion of the freshwater turtle, we see a mixing of saltwater and freshwater species in the rock art, positioning maritime heritage as a continuity from fresh to brackish to saltwater connections.

5.7 Freshwater Dreamings of Mambaliya-Wawukarriya Country

Although there is no rock art on Mambaliya-Wawukarriya clan Country, they are still linked to this seascape through various aquatic Dreamings. Freshwater soaks are important and are scarce along the coastal flats of the mainland and are associated with the activities of Ancestral Dreamings (Yanyuwa Families et al. 2016:2). A major Dreaming that is kin to the Mambaliya-Wawukarriya clan is the *Kurdarrku* Brolga *(Grus rubicunda)* waterbird. Brolga tracks are found at Lilardungka on Wuyaliya clan Country and Kammandaringabaya on Rrumburriya Country. The Brolga is associated with lagoon features, tying into the freshwater and estuarine connection of Mambaliya-Wawukarriya people. These *wurunkurun* brackish water connections continue as *Arlkujarra/Walkuwalkulangu* Milkfish *(Chanos chanos)* jumped from a creek as he was frightened of the localised *Karrmamba* Stingray Dreaming on coastal Mambaliya-Wawukarriya Country. The Milkfish Dreaming landed at a place called Milrila, leaving its eye there as a freshwater well (li-Yanyuwa li-Wirdiwalangu et al. 2023:252). This echoes how the Dugong hunters left their eyes as freshwater wells at Limiyimiyila (Yanyuwa Families et al. 2016:432). These examples demonstrate the expansion of Yanyuwa cosmology beyond a seascape to a ‘waterscape’ of concepts where freshwater sources are also regarded as relationally significant (Nimura 2018).

The sand spit at Milrila and a nearby beach and foredunes hold the *Warrabawarraba* Fish Net Dreaming. The Fish Net follows the coast and connects Yanyuwa Country to Marra Country, as well as providing a geographic touchpoint for oceanic Mambaliya-Wawukarriya Dreamings such as the *Limarrwurrirri* Loggerhead Turtle *(Caretta caretta)* or *Liwurrujarra/Wulwujarra* Spanish Mackerel *(Scomberomorus commerson)* and coastal, brackish leading to riverine species and dreamings like *Wangkuwa* Rock Cod *(Epinephelus tauvina)*, and a-*Nyana* Brahminy Kite *(Haliastur indus), Mardumbarra* Saltwater Crocodile *(Crocodylus porosus)*. Connections to Saltwater Country and maritime identity are still reflected in freshwater and brackish Dreamings.

This informed analysis has provided an in-depth assessment of Yanyuwa rock art's connection with the maritime cultural landscape. Community reflections demonstrate how material culture in this seascape goes beyond the quantitative and allows connection with Country through a complex net of interwoven stories. The following chapter expands on both formal and informed notions of Yanyuwa identity in relation to maritime specialist rock art.

Chapter Six: Interpretation through Comparison

In this chapter, Yanyuwa rock art is placed in conversation with assemblages from northern Australia, Torres Strait, and in a geographically disparate case study, Scandinavia. This expansion of the concept of "maritime specialist rock art" acts as a case study of how both formal and informed methods can aid in the substantive comparison of rock art assemblages. The question of what the pictographically-inscribed seascape 'says' is considered. This comparison expands interpretations of meaning in maritime rock art, elaborating on associations with themes of survival, sacredness, remembrance of the dead, and liminal linkages of land, sky, and sea.

6.1 Comparison Between Northern Australian Rock Art Assemblages

Previous comparisons of rock art imagery within Australia have dealt with archaeological and anthropological questions using the "style" of motifs to assess pre- and post-contact interregional interaction (Chaloupka 1993; Map 9). Studying the attributes and design conventions that make up parietal images can allow etic observers to determine patterns of similarity and difference between datasets, allowing for delineation of regional information exchanges and social organisation (Conkey and Hastorf 1990; Ross 2013; Solomon 2011; Wade and Wallis 2011; Wobst 1977). Yet researchers have often neglected the social and cultural relationships behind that artwork (Brady and Bradley 2014b). In the case of the rock art of the broader Gulf Country region, it is relational understandings that put Yanyuwa rock art in context.

Figure(s) removed due to copyright restriction.

Map 9: Major rock art regions in Australia vary according to researchers' definitions.

Taçon 2000:Fig 17.1 (top left); Morwood 2002:Fig 2.1 (top right); McDonald and Clay 2016:Fig 5 (bottom).

The first point of comparison with Yanyuwa maritime motifs is the art of surrounding Gulf of Carpinteria groups, including the Garrwa, Gudanji, Marra, Binbingka, Wilangarra, Wannyi, and Alawa. This has been described as the 'Gulf Country style' (McDonald and Clayton 2016).[xix] Commonalities between language groups in the Gulf of Carpentaria relate to sorcery, rather than maritime imagery. This is unsurprising, as the Yanyuwa are Saltwater People, whereas the Garrwa, Gudanji, Marra, and others are Freshwater People but share relationships to certain Dreamings. The prevalence of maritime imagery in Yanyuwa rock art may be distinctive when compared to inland groups in the Gulf of Carpentaria, although not enough research into attributes on rock art from other groups has been conducted to determine this. Shared knowledge of rock art is revealed in fear, as there is a sorcery site on Marra Country and one on Gudanji Country which are widely seen as dangerous by Aboriginal communities between Mornington Island in the southeast and in Alawa Country near Roper River (Brady and Bradley 2014b). The site Kurrmurnnyini on Gudanji Country lies approximately 90 kilometres inland, south of Borroloola (Brady and Bradley 2016b). This lagoon site was once associated with Binbingka and is now part of a sandstone outcrop in Rrumburriya clan Country that is surrounded by Wurdaliya clan Country. Kurrmurnnyini is associated with the deadly poison of the King Brown Snake Dreaming, and is perceived as a place to avoid, a source of intergenerational murder, guilt, and suffering (Brady and Bradley 2016b). The *Baribari* anthropomorphic shooting star spirit at Wangkalarla (Fig. 19) in former Binbingka Country (now bordering Yanyuwa and Garrwa) is linked to rock art from northwest Queensland with its perimeter dots and is known as far east as Wannyi Country for evil sorcery (Brady and Bradley 2014b). Although the archaeological story of rock art can be told in terms of the stylistic similarities of motifs from across northern Australia, it is also a story of shared worldviews and ideas about wellbeing and survival.

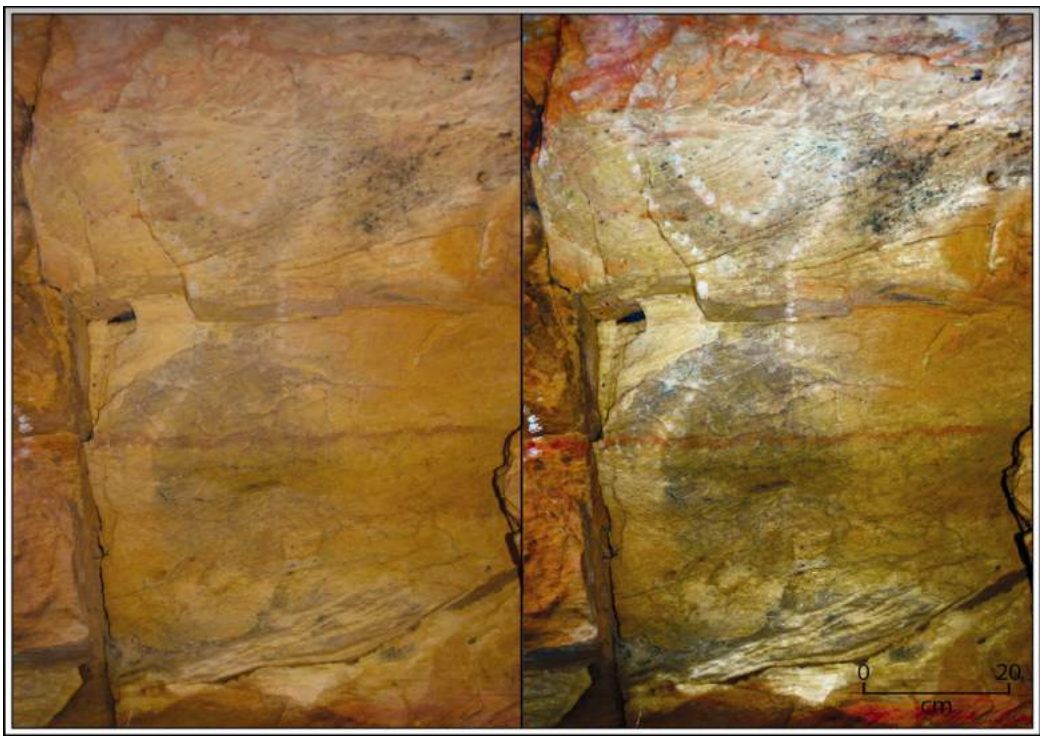


Figure 19: Baribari. *Brady and Bradley 2016b: online viewer.*

Returning to the concept of style, maritime images are found across northern Australia, within the bordering Arnhem Land, Groote Eylandt, and Cape York Peninsula (Morwood 2002; Taçon 2001). Nanguluwurr Rock Art Site in Kakadu National Park features a high proportion of fish and turtles displaying the backbone, guts, and stomach, many painted as recently as the 1970s (Hayward et al. 2021). In western Arnhem Land, 'x-ray style' art depicting specific fish species accounts for 62.5% of a sample of 2979 paintings gathered from Jawoyn, Gundjeibmi and Gagudju/Erre/ Mangeridji Country (Taçon 1993). This is a high percentage of fish motifs in comparison to the Yanyuwa assemblage, as maritime motifs only accounted for 9% of the sample (7 of those specifically being *arlku* fish). The Arnhem Land sample includes estuarine fish like the fork-tail catfish *(Hexanematichthys leptaspis)* and marine species such as barramundi *(Lates calcarifer),* whereas the Yanyuwa examples were less detailed and more difficult to identify on a species basis (Taçon 1993). How can we interpret these differences? Should the study distinguish between saltwater and freshwater fish? Were fish simply less important to Yanyuwa subsistence than to the people of western Arnhem Land? Or was the societal role of portrayal of marine imagery different between these groups? Fish imagery in Jawoyn rock art is commonly referenced as secular while for the Gundjeibmi, Gagudju and some Kunwinjku people fish are symbols to explain abstract ideas about the nature of existence (Taçon 1993). For Yanyuwa people, images of marine creatures are usually relevant to aspects of *yijan.* Comparing frequencies of maritime attributes between language groups presents unresolved questions.

Another source of maritime imagery in Arnhem Land rock art is the non-Indigenous watercraft featured at sites including Awunbarna, Mount Borradaile, Malarrak, Djulirri, and Bald Rock (de Ruyter et al. 2023, May et al. 2010, 2013; Wesley et al. 2012). The watercraft from Arnhem Land feature more detailed motifs which capture more technological elements when compared to the stylised Yanyuwa depictions of canoes (Tables 3 versus 8). Given that Macassan trade is documented as a strong influence in both the Gulf of Carpinteria and Arnhem Land cultures including the Yolngu, Anindilyakwa, and people of the Cobourg peninsula, it merits inquiry why Yanyuwa rock art seemingly provides a less thorough representation of the maritime traditions of *trepang* traders and other newcomers (Clarke 1994; Wesley et al. 2012; Taçon and May 2013). Morevoer, maritime-themed artwork in Arnhem Land rock art is noted at inland sites belonging to Mangowal, Maung, and Amurdak speakers who might never have personally interacted with Southeast Asian visitors (D. Roberts 2004; Taçon and May 2013). By contrast Yanyuwa maritime imagery appears limited to island settings which would have received contact with Macassans. The meaning of this apparent contradiction in spatial distribution of watercraft depictions requires further investigation.

The rock art of Groote Eylandt archipelago off Arnhem Land on the Western coast of the Gulf of Carpentaria also has notable points of comparison with the rock art of the Pellew Islands. The Anindilyakwa speakers living throughout the over 100 islands in the Groote Eylandt archipelago, like the Yanyuwa, developed intricate social structures, technologies, and cosmology reinforcing marine connections (Mountford 1956; Tindale 1925-26; Clarke and Frederick 2006). The frequency of boats between these datasets may be comparable. In this Yanyuwa dataset, at least 6 (with three additional potential watercraft) out of 956 motifs were found to represent boats (0.62-0.94% of the dataset). Clarke and Frederick's sample of Groote Eylandt analyses 23 boat motifs and cites a 1960 survey of 2,400 total motifs, resulting in 0.96% watercraft represented, although it is unclear whether either metric is comprehensive (2006). Yet despite boats being prominent in the oral history of both Anindilyakwa and Yanyuwa people, Groote Eylandt rock art features more post-contact vessels and higher dynamism, complexity and diversity of watercraft, with elaborate Macassan *praus* (65% of all watercraft), European sailing boats and luggers (26%), and modern vessels (9%), depicted with crews and technological elements (Clarke and Frederick 2006:124). The Yanyuwa watercraft motifs also tend to be far simpler than those from Groote Eylandt. Of the nine (confirmed and potential) Yanyuwa watercraft, only one was a dugout canoe (introduced by the Macassans), while the other examples were all bark canoes. This evidence may support the claim that Macassan influence on Yanyuwa Country was not as pervasive as off the coast of Arnhem

Land (Yanyuwa Families et al. 2016:9). A more robust comparison of the relative frequencies of watercraft motifs in coastal rock art in Australia could contribute to contact archaeology narratives.

Cape York Peninsula assemblages present patterns of marine versus terrestrial iconography in rock art, providing insight into archaeological determinants of maritime subsistence and marine identity. Some theorists simplistically assume that marine-themed rock art correlates with marine subsistence activities (see McNiven and Brady 2012). However, in the rock art of Princess Charlotte Bay (Map 9) this relationship is challenged (Beaton 1985; David and Watchman 1991). Prized marine food sources determined from archaeological excavations of local sites near Princess Charlotte Bay, such as turtles and dugongs, are well-represented in nearby rock art, while prized terrestrial food species found in *every* hearth excavation, such as macropods, are notably *absent* from rock art (David 2004:172). In the rock art of the Koolburra Plateau, 75% of the data set represents marine species (crocodile, turtle, and fish), seemingly decoupled from the popularity of macropods as a food source (David 2004). At Laura in far north Queensland (Map 9), the most common animals represented in rock art were flying foxes and fish, yet bats made up less than 4 percent of the fauna represented in the local diet and fish were not present at all in the excavated food assemblages (David 2004:172). In rock art from the Pellew Islands and environs, the relationship between food and rock art is similarly decoupled. Ethnographic accounts highlight the importance of dugong hunting as a cultural identifier and food source for the Yanyuwa (Bradley 1997), yet the percentage of marine animals (42 animals; 4% of the dataset) is not far off from the percentage of terrestrial animals like macropods and goannas (33 animals; 3% of the dataset). This finding highlights the importance of integrating informed perspectives where possible. As both the coastal rock art of far north Queensland and the Pellew Islands assemblage demonstrate, it cannot be assumed that rock art reflects subsistence patterns. Archaeologists might consider instead the cosmological and relational dimension of animal portraits in the lived experiences of rock art creators.

Looking north, [xx] Yanyuwa rock art also has several parallels to that of the Torres Strait Islander, Kaurareg and Gudang peoples of Zenadh Kes (Torres Strait) (Map 10). Both Yanyuwa and Torres Strait rock art are from the late Holocene, including contemporary examples in the case of the Torres Strait (Brady 2015). The number of motifs documented in the Torres Strait (n=998) is comparable with the sample from Yanyuwa Country (n=956). However, the record of Torres Strait watercraft is more extensive. At least 41 paintings of canoes throughout six islands along the western chain (Dauan, Pulu, Badu, Mua, Zurath and Kirriri, and adjacent mainland near Somerset) were found, and these were stylistically more complex than the 6 confirmed, 3 potential Yanyuwa canoe motifs (McNiven 2015). Although both Yanyuwa and Torres Strait Islanders interacted with

European ships, neither group depicted these in their rock art (Brady and McNiven 2021). Like the Dugong Hunter Dreaming, the canoes found in the rock art of Zenadh Kes are associated with spirit ancestors who paddle canoes while traversing the seascape, although the Torres Strait vessels are more directly associated with the deceased (Brady 2015). Both groups maintain that motifs are not simply representations, but actual manifestations of spiritual entities. This example provides not only a statistical but also ethnographic similarities to the Yanyuwa data set.

Figure removed due to copyright restriction.

Map 10: The Torres Strait. *McNiven 2015:131.*

6.2 Comparative Maritime Rock Art in Scandinavia and Beyond

The research on Scandinavian Bronze Age rock art parallels the cosmological significance of Yanyuwa maritime themes and presents cross-cultural comparison to the rock art field. Ships in Scandinavian rock art extend across Denmark, Norway, and Sweden, often concentrated near the coastline, although depictions of watercraft were also associated with inland lakes (Nimura et al. 2020). Some publications have established a 'maritime paradigm' investigating technological aspects of voyaging and the proximity of vessels motifs to the ocean, while others have expanded on relationships between death, mythology, and the cosmos (R. Bradley and Nimura 2013; Goldhahn 2014, Nimura 2017). Drawing from Ling's research on images of boats, animals, and people depicted on rocky outcrops at Bohuslän, Sweden, a significant body of work has theorised on the integration of maritime ritual into the landscape (Ling 2004, 2008, 2012; Ling et al. 2018; Skoglund et al. 2017). This research highlights the role maritime-themed rock art plays in manifesting maritime economics, warfare, and lifeways. Like Yanyuwa motifs, many Scandinavian panels have a close spatial and relational connection to the sea.

The Bohuslän researchers have produced entertaining hypotheses drawing on the language of conspiracy, including that these panels allude to a "secret society" of seafarers and that Bohuslän itself was a top-secret pilgrimage location (Chacon et al. 2020). Although the scholars frequently use loaded terminology in asserting that the Bohuslän rock art was "propagandistic," "esoteric," and pertained to "exotic ritual paraphernalia," they offer insight into the relevance of ritual to the risky business of seafaring, linking it with the practices of the Tsimshian and Bella Coola peoples of Northwest North America (2020:79). Yanyuwa maritime rock art also demonstrates a linkage to the risk of seafaring via the *Kundawira* mortuary ceremony as well as the *kurdukurdu,* secret and sacred, aspects of rock art that are not discussed in this publication. Could these observations about connections of maritime rock art to ritual speak to the transcendent experience of leaving the stability of the shore, and marking an identity as a person of the sea?

In Scandinavia more broadly, researchers have elaborated on the significance of ship motifs as connected to practices which tie together the earth, sky and sea (R. Bradley and Nimura 2013). These observations have linked motifs of marine hunting and fishing to a cosmology of 'sacred animals,' which can be compared to interpretations of the Dugong Hunter Dreaming (Zvelebil and Jordan 1999). Burials in boats are found throughout southern Scandinavia, which has led to discussions of associations between ships, the sea, and the dead (R. Bradley and Nimura 2013). While the Yanyuwa are not known to have made burials in ships, *larla* (hollow log coffins) are

associated with the carapace of the Sea Turtle Dreaming and are found in conjunction with maritime rock art at Liwarrangka and Wulibirra (li-Yanyuwa li-Wirdiwalangu et al. 2023:52). The *Kundawira* (stone memorials, which ceremonially stand in for the body of those lost at sea) are painted with the same motifs as *larla.* Both hollow log coffins and the *Kundawira* motifs straddle the worlds of humans and Dreamings. Additionally, the Scandinavian cosmological belief of ship motifs transiting the sky carrying the sun during the day and traversing the sea at night can be put in conversation with the Yanyuwa motif *li-Jakarrimbirri* (blue-ringed octopus by day, *Pleiades* constellation by night), which also transits the sea and sky in conjunction with sunrise and sunset. Yanyuwa and late Bronze Age Scandinavian culture, separated by time and space, both can be seen as harnessing the transitive power of maritime rock art to link the sea with the spiritual.

This cross-cultural similarity in the importance of maritime lifeways in rock art is especially interesting, given that the social organisation of farming societies in northern Europe differs significantly from northern Australian Aboriginal culture. Moreover, while watercraft is less represented in Yanyuwa rock art, boats make up nearly 80% of figurative rock art in other areas in northern Europe (Goldhahn 2018b). Also important to reiterate is the fact that proximity to the sea does *not* always correlate with the proliferation of marine-themed rock art, as seen in the motifs present inland in Arnhem Land as well as other global contexts (Gunn et al. 2017). For instance, the Hawaiian migrants of Iosepa inscribed petroglyphs of marine turtles, fish and whales when they settled in the deserts of Utah far from the Pacific Ocean, perhaps as an attempt to assert their maritime identity (Malakoff 2008; McNiven and Brady 2012). Further articulation of the spatial relationship between social structure, marine resource use, and maritime rock art production is beyond the scope of this project yet might be an intriguing area for future research.

These reflections on the inter-cultural relevance of maritime rock art address the third question of this thesis; to characterise the practice of inscribing a seascape through rock art on a more global scale. The case studies of maritime specialist rock art, as introduced in Chapter 2.5 and expanded in this chapter, have highlighted themes of rock art as a liminal realm between physical and metaphysical, with depictions of maritime technologies and ceremonies taking on a transitional role. This pattern becomes especially apparent when the rock art of Scandinavia is compared to the Yanyuwa case study while not being geographically linked. To refrain from overstating the transcendence of these examples, further discussion of the parallels found in maritime rock art, especially as relates to the concept of the "spiritscape," could prove anthropologically or theologically fascinating.

Chapter Seven: Significance and Conclusions

7.1 Dynamic Meanings in Yanyuwa Rock Art

While images painted, stencilled, drawn or printed on rocky surfaces may seem two-dimensional using descriptive and aesthetic explanations, their meanings are nuanced and enveloped in an evolving ecological web of relationships involving Dreamings, fauna, flora, non-human kin, social protocols and every conceivable aspect of Yanyuwa life. The narratives and *kujika* songlines behind these relationships reflect Yanyuwa logic and demonstrate how kinship and the ancestral world are integral to the significance of rock art. The significance of these images is linked to the changing status of the wellbeing of people and Country, as well as the present-day interpretation of *yijan*. Therefore, Yanyuwa people are the "living experts of their own thought worlds" and as such, the meaning or interpretation of rock art is not static (Adgemis 2017:54).

Rock art sites are increasingly relevant in political and educational efforts of the Yanyuwa community. While creating visual art was once associated with sorcery acts called *narnu-bulabula*, this prohibition has loosened in recent years (Bradley 1997; li-Yanyuwa li-Wirdiwalangu et al. 2023). Adults were traditionally cautioned against drawing as it was considered lethal and might "make people spirits," yet since the late 1980s the Waralungku Arts Centre has fostered a contemporary art movement showcasing a variety of historical and current themes including frontier violence and protection of Country from mining interests (li-Yanyuwa li-Wirdiwalangu et al. 2023). Rock art is also connected to the activities of the li-Anthawirriyarra Sea Rangers who carry out cultural and natural heritage management on Country. Near Maabayny rock art site, the relationship between Yanyuwa people and *Wundanyuka* Sea Turtles (both physical animals and Dreamings) is reinvigorated by the Turtle Camp run by the Sea Rangers. Cultural activities are combined with monitoring of nesting habitats at this Yanyuwa-run initiative (2023:147). Animations from the Yanyuwa Animation Project present *kujika,* Dreamings and rock art images in a way that is accessible to a younger generation who has been raised in the digital world (2023:54). It is also significant that the dugong and turtles from the hull of the canoe at Langadanga are featured in the Borroloola School emblem. These examples of the present-day role of rock art in cultural stewardship activities highlights its ongoing relevance to the saltwater identity of the Yanyuwa community.

The implications of rapid social and cultural change, as well as modern evolutions of colonial power dynamics, have reconfigured the Yanyuwa seascape and interactions with visual media. Much of the ethnographic information that has informed the interpretation of the rock art in this thesis is derived from words of an older generation of Yanyuwa intellectuals that have since passed. In his 2017 ethnography of the relational understandings of young Yanyuwa men, Phillip Adgemis, a young Greek-Australian man, highlights how intellectual framings and markers of identity have shifted over time within the Yanyuwa community at Borroloola. Visual knowledge transmission, both in Borroloola and in Australia, has been impacted by globalism, new media formats, and the American-influenced film industry (Adgemis 2017:10). Learning to navigate Sea Country is now a matter of choice, rather than an obligation in a subsistence economy. This has created an environment where all generations of Yanyuwa people take initiative to adapt cultural knowledge into new forms. As understood by younger Yanyuwa people, the "recruitment" of John Bradley, his colleagues, and academic successors to translate Yanyuwa ideas into English formats including text, audio and animated video was part of the "ultimate plan them old people had" (2017:59).

In 2016, brothers in their twenties, Nicholas and Sean Fitzpatrick, reflected on how past generations had provided resources for younger generations to "blend [Yanyuwa and Western cultural heritage] together in a way that would be in harmony" (2017:59). Yet the legacy of archaeologists as a vanguard of intellectual hegemony, deriving our knowledge production methods from a past generation of researchers who represented Yanyuwa people as primitive and lacking personhood, reproduces a power dynamic in this proposed blended knowledge (Spencer and Gillen 1912). In 2023, Western scientific language has become the means of gathering and disseminating culturally-specific knowledge, both to younger generations in the Yanyuwa community and to outsiders. Ironically, these frameworks have also become the means of enforcement for assimilation and cultural uniformity. This is in some ways perpetuated by scientific and bureaucratic resource management strategies that neglect intangible aspects of Yanyuwa connection to Country (Adgemis 2017:226). I write in English of anthropology, history, archaeology, and their connections to a Sea Country that I have never seen, while according to senior Law women, Country "can only hear Yanyuwa" called out (2017:125). As researchers, we cannot know how our work will be used and perceived in the future. I hope that this thesis plays a positive role in adapting the relationship of Yanyuwa rock art to the marine environment into a new form, to sustain Yanyuwa knowledge through change. I also hope it contributes to the archive of Indigenous knowledge that is currently being compiled by the li-Anthawirriyarra Sea Rangers and the continuity of saltwater knowledge.

The adoption of contemporary initiatives that integrate rock art and other visual imagery into education and conservation efforts indicates that the significance of rock art images is continuously adapting to present-day relationships with Country. Contrary to archaeological perceptions, the relational dynamics of rock art are not relics of the past. Whether or not the "original" meaning of this rock art can be understood by formal analysis or ethnographic accounts, people's engagement and interaction with these images provides another layer of understanding. In fact, there may not be one authoritative or definitive meaning for each motif, as their interpretation differs between individuals depending on factors including generation, clan identity, ceremonial experience, gender, experiences of living on Country and broader kinship connections.

7.2 Future Aims for Formal Analysis

Beyond relational dynamics, this project was a first attempt to comprehensively assess the rock art of the Yanyuwa People in the Gulf of Carpentaria via formal analysis for maritime attributes. As evidenced by 37 percent of motifs being maritime or ambiguous in nature compared to only 6 percent of the dataset categorised as definitively terrestrial (Table 4), an aquatically transitional understanding of rock art was reinforced through formal assessment. The correspondence of the spatial positioning of rock art across the Pellew Islands with the paths of Dreamings illuminates the way Yanyuwa people have used visual symbolism to inscribe Sea Country onto the landscape. Over-reliance on formal analysis results in a silence in maritime insight that is best remedied by hearing informed perspectives.

However, it must be emphasized that the value of this formal analysis surpasses specific findings of the percent of attributes that are considered maritime or otherwise, by applying a standardised vocabulary for talking about and categorising rock art. The advantage of these formal categories is that this classification builds on previous research and goes beyond categorisations based on 'style,' potentially providing a means to compare large datasets of rock art from different regions (Brady and Bradley 2014a). It also provides a way for future researchers to compare their interpretations of the same data set, potentially revealing and assessing biases and substantial similarities. Insights from different sets of eyes looking at the same data through the same methodology could improve the project as two people may easily consider the same rock art but record different distributions of motifs. This research will benefit from more rigorous statistical analysis of spatial relationships between geological features, water sources and rock art motifs going forward.

7.3 Identity in Maritime Specialist Rock Art

A primary aspect of Yanyuwa rock art is its use of marine imagery to express a maritime identity inland from the coastline (McNiven and Brady 2012). Yanyuwa people are experts in maritime-based subsistence and technology. And they have a deep relationship with the marine environment expressed through worldviews and knowledge systems referencing the sea and its contents both biological, geological, and cosmological. Senior woman Dinah Norman a-Marrngawi says, "the sea, the salt water, the waves, they are my mother…" (Bradley with Yanyuwa Families 2021:122). Dinah does not refer to the sea as her mother in a vaguely spiritual sense; she means that her biological mother's life spirit came from her Ancestor which is the sea. (2021:122). The production of marine-themed rock art is theorised here to be a strategy to express the sense of being Saltwater People and kin to the marine environment while living on the land.

Yanyuwa rock art has agency in the ritual contexts of creation and cosmological engagement, as it can be read as symbolizing active and specific engagements with the sea (McNiven and Brady 2012:76). Marine themed rock art can be interpreted as a visual means of community integration and communication, transforming terrestrial lived spaces into part of the seascape. For instance, hand stencils and prints at Limiyimila are credited to the *li-Maramaranja* Dugong Hunters of Excellence, while others are attributed to *Namurlanjanyngku* and *ngabaya* spirit beings or *li-wankala* spirits of deceased kin, creating a tangible symbol of Yanyuwa engagement with their spiritual world and their maritime identity (Bradley 1997:185). Yanyuwa rock art reaffirms significant and interconnected marine cosmologies, particularly the continuity of the Groper, Sea Turtle, White-Bellied Sea Eagle, and Dugong Hunters of Excellence *kujikas*. The consideration of ethnographic perspectives is informed by the need to establish a more integrative understanding of how past peoples would have conceived of coastal landscapes and seascapes through rock art.

The interpretation of what it means to be a Saltwater Person, however, does not always correspond straightforwardly to maritime archaeological theories. Yanyuwa ontological categories diverge, for example, the definition of the coastal area extends onto the margins of inshore saltpans and mudflats that receive saltwater infrequently during king tides and storm surges (Bradley 1997). Further, freshwater and brackish Dreamings expand the sense of the 'waterscape' beyond the sea. This complicates the archaeological understanding of the land-sea interface and associated rock art. Exploring and sometimes challenging the binary of Western versus Traditional in this way has allowed Yanyuwa and archaeological narratives to be situated side by side. This research has integrated formal analysis of this data set with the seascape framework and incorporated the archive

of Yanyuwa voices to provide a multifaceted picture of the maritime influences on Yanyuwa society. Exploring how emic and etic inputs relate to one another in rock art research expands our understanding of the roles that scholars of maritime material culture play. As a result, the information presented here does not fit neatly into one way of seeing the sea but rather, draws on a variety of voices.

Cross-cultural comparisons have also indicated parallels between Indigenous conceptions of what maritime archaeologists call seascapes. This thesis has called attention to and elaborated on some striking similarities in maritime rock art across cultures. By centring the Yanyuwa case study, this project has highlighted the recurrent associations of maritime-themed rock art to funerary contexts, celestial or astronomical cosmology, and the transitory or liminal aspects of seafaring. Ongoing research into specifically maritime rock art will allow for a greater understanding of the strategies used by past peoples to connect with the sea.

Yanyuwa rock art is connected to the travels and motivations of Dreamings and spirits, leading to the construction of seascapes as a part of Yanyuwa identity. As Eileen McDinny said of the creatures, items and entities existing on Yanyuwa Country, *"*everything has a song. No matter how little, it's in the song, all got a meaning, everything has to be there" (Bradley with Yanyuwa Families 2021:207). The meaning of this rock art will continue to be linked to the relational context of past, present and future events within the Yanyuwa maritime cultural landscape.

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Appendices

A. Language notes

Yanyuwa language is used as much as possible throughout this research, both in an effort to preserve or revive aspects of this critically endangered language, and to introduce readers to the underlying ontology embedded in its linguistics. Yanyuwa language is integrated wherever it contributes to comprehension of the subject matter. Culturally significant nouns are displayed in sequence with Yanyuwa first, English translation second, and binomial nomenclature (for biological species) third. Concepts related to Dreamings and spiritual entities are capitalised both in Yanyuwa and English, while secular topics are not capitalised. Most non-English words are italicised according to convention as the primary narrative of this document is in English. Yanyuwa place names and people's names are not italicised, as there is often no English equivalent.

When referring to rock art with etic descriptions, inverted commas are applied (e.g. 'straight line') while Yanyuwa identifications are without inverted commas (e.g. *ngabaya* foot, *a-Makurndurna*, spotted stingray).

Contentious terms like "rock art" and "Western Knowledge" may be alternately put in quotations or capitalised to either destabilise or reify their meanings.

B. Macassan Connections and the Potential for Contact Rock Art

While the connections between the Macassans and Yanyuwa have already been introduced, this section comments further on the maritime trade and its impact on the visual landscape of Yanyuwa society. Researchers have speculated about possible Macassan motifs including a prau and sword in Yanyuwa rock art (Sim 1999, 2002). However, Bradley's ethnographic data has made it seem unlikely that these motifs document interactions with Macassans. Sim (2002:6) recorded a motif interpreted as 'a sailing boat with strong similarities to a Macassan prau' in rock art at Barbara Cove shelter, called Yungkurriji in Yanyuwa, on the west coast of Vanderlin Island (Brady and Bradley 2014a:160). Contradicting this interpretation, Bradley along with two senior Yanyuwa men, Johnson Timothy and Steve Johnston, visited this shelter in 1984; and the men informed him that the paintings in question represented bark canoes (Bradley 1991; Brady and Bradley 2014a). Bark canoes were utilised as transport and for hunting by Yanyuwa prior to the adoption of dugout canoes brought as gifts by Macassans (Bradley 1997: 286). As the Maccassans greatly influenced the Yanuyuwa, the infrequency of their representation in rock art is perhaps surprising. However, this may have to do with the Macassan's position as outsiders and the role of rock art in affirming Yanyuwa identity, *Yanyuwangala,* and connection to Country (Bradley 1997:32). Nonetheless, there may still be Macassan imagery in rock art that has not yet been documented, or there may have once been in art that has since deteriorated.

Figure 20: Hawksbill turtleshell plates intended for trade with Macassans at Lilardungka. *From Li-Yanyuwa li-Wirdiwalangu et al. 2023, page 92.*

Despite a lack of pictographs, there exists further archaeological evidence for Macassan and Yanyuwa trade that is spatially connected to rock art (Mitchell 1996). At the Lilardungka rock art site on South West Island, there are small crevices at the back of rockshelters that were used for storing objects or food, covered with paperbark and flat rocks (li-Yanyuwa li-Wirdiwalangu et al. 2023:92). In 2010, a cache of hawksbill turtleshell plates was encountered during rock art recording (fig. 20). Yanyuwa elder Judy Timothy a-Marrngawi indicated that these artifacts were likely stored in preparation for trade with *trepangers* by her father Jurli, who had been a senior Wuyaliya man at the time. Jurli awaited the seasonal trade with the Macassans, but as they had been banished by the White Australia Policy of 1907 they were never to return. The turtleshell remained at Lilardungka as a poignant reminder of this legacy.

C. Glossary

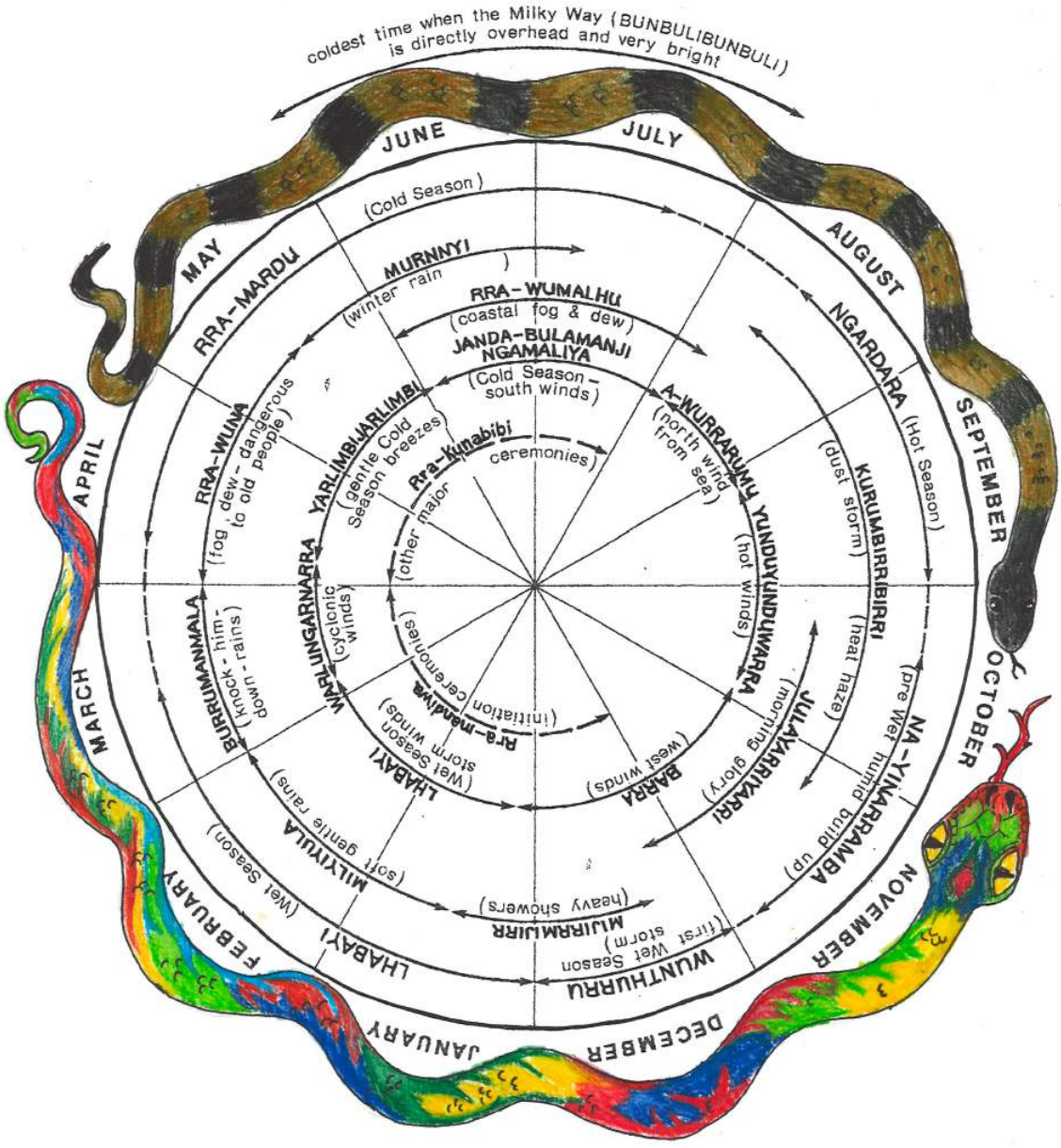
adumu– generic term for a stingray or shark
a-Janngu – a spotted stingray species (*Himantura toshi)*, and a Dreaming associated with the Wuyaliya clan.
a-Karnkarnka–White-Bellied Sea Eagle *(Icthyophaga leucogaster)* Dreaming, who carried out the important and powerful saltwater *Kundawira* ceremony of the Rrumburriya clan.
a-Kunabibi – an important secret and sacred ceremony performed during the cool dry season by the Rrumburriya and Mambaliya-Wawaukarriya clans.
a-Kuridi – the Groper fish *(Proicrops lanceolatus)*, and an important Dreaming associated with the Wuyaliya clan.
alban– ashes
alhibi – saltwater
a-Mankurdurdu– Diamond-Scaled Mullet *(Liza vaigiensis)* and a Dreaming which is today represented as a specific sandbar in Yanyuwa Sea Country.

a-Makurndurna – crescent-shaped ritual object used in the Yalkawarru ceremony depicted at Bambarrani rock art site on the mainland.
a-mardu –south-easterly winds
a-Marrinda– Black Bream *(Hephaestus filiginosus)* and a Dreaming which is visible today as a rocky sea stack
a-Marndiwa – circumcision ceremonies for young Yanyuwa men.
a-Mirrbundu– shovel-nosed stingray (*Rhinobatus batillum)* and Dreaming
a-Mukarra – Barracuda, an important Dreaming associated with the Wuyaliya clan.
a-ngalawurr – creeks
a-*Nyana*– Brahminy Kite *(Haliastur indus)*
arlku – generic term for fish, but not sharks or rays.
Arlkujarra/Walkuwalkulangu**:** Milkfish *(Chanos chanos)* Dreaming
Arribarri– Wobbegong Shark, a Rrumburriya clan Dreaming
Awara –multivocal Yanyuwa term relevant to the concept of the 'cultural landscape,' may refer to Country, places, earth, dirt, soil, the sea and possessions.
a-wurrarumu– a North Wind Ancestor, waves from the depths of the sea, arising from the mouth of a-Janngu
a-wayurr –blue tongue lizard
A-yabala– the Milky Way
bingkarra– lagoons
Buburna – the Black Nosed Python, responsible for curtailing the rain-bringing power of the
Bujimala– Rainbow Serpent.
Burrunjurdangka– anthropomorphic spiritual entity associated with *a-Karnkarnka* and *Kundawira* which resides at Wulibirra
diwurru– bluffs
emic: of or pertaining to the analysis of a cultural system or its features from the perspective of a participant in that culture.
etic: of or pertaining to analysis of a culture from a perspective situated outside all cultures.
formal: methods of categorisation that are limited to the information which is available to the archaeologist from within the form of the motifs themselves.
informed: method of rock art interpretation that depends on insights from the people who made and used the rock art.
Jawajbarrangka– One of the anthropomorphic spiritual entities associated with *a-Karnkarnka* and *Kundawira* which resides at Wulibirra
jidalbirringki– sandstone ridges, which may house rock art
jijaka– kangaroo
jiyamirama– lone male dugong *(Dugong dugon)*
jungkayi – people with special responsibilities to care for the Country of their mother and mother's brothers. Sometimes this role extends to the Country of their father's mother. Often translated as "guardian", "policeman" or "manager."
Jujuju – Osprey *(Pandion Haliaetus)* or "fish hawk"; a fundamental Dreaming associated with the Wurdaliya clan.
Karrmamba – Stingray Dreaming
kirarra– large sand goannas (*Varanus gouldii)*
kirdil– sandfly
kujika – Yanyuwa songlines; each clan has its own songlines consisting of many didactic, poetic verses that are sung and danced during ceremonies. These songlines describe the paths of particular Dreamings as well as the inherited rituals for each clan.
Kulyukulu– funerary rite associated with the Brolga and Salmon-Tailed Catfish Dreamings
Kundawira – a powerful, secret and sacred ceremony associated with the White-Bellied Sea Eagle Dreaming. The ceremony belongs to the Rrumburriya and Mambaliya-Wawakarriya clans.

Kurdarrku– Brolga *(Grus rubicunda)* waterbird and major Dreaming that is kin to the Mambaliya-Wawukarriya clan.
kurrumbirribirri– strong north winds and dust storms associated with the hot dry season and the renewed activity of *Bujimala* the Rainbow Serpent
lhabay– wet season on Yanyuwa Country
lhukannguwarra – mangrove forest
lhuwa–generic term for reptiles
li-Anthawirriyarra – "People of the Sea." More specifically, "People whose spiritual origins come from the sea"; a general descriptor used by Yanyuwa people to refer to themselves.
li-Jakarambirri – the Pleiades or Seven Sisters star constellation and Blue-Ringed Octopus *(Hapaloclaena maculosa)*. This refers to the Blue-Ringed Octopus Dreaming by day which becomes the Pleiades (Seven Sisters) constellation at night; they are the same being, both in the sea and the sky. This is an important Dreaming with many songs and rituals associated with the Wuyaliya clan.
li-Maramaranja – Dugong Hunters of Excellence, a major Dreaming and songline associated with the Rrumburriya clan.
Limarrwurrirri – Loggerhead Turtle *(Caretta caretta)* Dreaming
li-wankala – the "old people", deceased human ancestors and kin.
Liwurrujarra/Wulwujarra– Spanish Mackerel *(Scomberomorus commerson)* Dreaming
mabin– wells
ma-budanja– fruit of the cycad palm
ma-kakayi– lily corms
mambulmambul: swamp systems
manja– cycad palm
Mardumbarra– Saltwater Crocodile *(Crocodylus porosus)* Dreaming
Maritime Cultural Landscape: A maritime archaeological framing that contextualises maritime history, ethnography, and land-based reliance on the sea with spatial understandings, highlighting how people perceive the sea and use their maritime knowledge to construct societal worldviews.
Minyminyi – Eagle Ray *(Myliobastis australis)* Dreaming
murndangu– long-necked freshwater turtle *(Chelodina longicollis)*
murndu–mosquito
na-marnda –generic term for feet; whether human, animal or bird. Similar to the Western concept of tracks.
Namurlanjanyngku – a major Dreaming of the Rrumburriya clan describing a group of human-like spiritual entities endemic exclusively to Vanderlin Island.
nankawa– lagoons
narnu-wurru– beaches
na-wulangi– river systems
na-wungkala– flying fox colonies
Ngabaya – a specific group of human-like Dreamings associated with the Wurdaliya clan.
ngabaya – a generic term for any anthropomorphic spiritual entity including the spirits of deceased kin.
ngaydu– springs
ngimirringki – people who own their Country through patrilineal descent. They are the descendants of both human and non-human kin associated with the area in question.
Nguku – Long-Tailed Stingray *(Hypanus longus)* Dreaming
Ngurdungurdu– Tiger Shark *(Caleocerdo cuvieri)* Dreaming
ngurrunmantharra– flooding or putting underwater
nyinga– crabs
Ontology– beliefs and principles about the nature of being
rawu– sand dune
Rra-waj kana –wild honey

Rrungkal – a specific powerful design or object that is associated with specific Dreamings and clans.
Seascape: A spatial, mental, and cosmological map that allows a person to understand their place in the world perceived from the sea (rather than land)
style: Formal conventions that characterise a body of artwork and reinforce geographic connections and time sequences between images and their respective cultures.
"Traditional Knowledge": Ways of thinking and perceiving shaped by Indigenous and Global South cultures.
wakirli – Generic term for boomerangs
walangarra– Eucalyptus forest
Waliki – A generic term for dugong *(Dugong dugon)*. The dugong is a Dreaming associated with the Rrumburriya clan.
walya– collective term for dugong and/or sea turtles
Wambuyungu– sacred memorial ceremony focussed on the Dingo, Waterlily and Goanna Fat dreamings
Wangkuwa– Rock Cod *(Epinephelus tauvina)* Dreaming
Warrabawarraba– Fish Net Dreaming
Warriyangalayawu– Hammerhead Shark *(Sphyrna lewini)* Dreaming
wararr– mud
"Western Culture": a loaded term that has come to refer to the heritage and mindsets of Western Europe and its settler-colonial offshoots such as the US, Canada, and Australia
"Western Knowledge": Ways of thinking and perceiving shaped by the confluence of Western Culture and Western Science.
"Western Science": Refers to the tradition of empiricism and dispassionate quantification; often associated with British and Western European academic thought.
wulungu– sea turtles' eggs
wumburr/wumburrwumburr: grassed plains
wundanyuka – a generic term for marine turtles, and a significant Dreaming associated with the Wurdaliya clan.
Wurrmangurli– the Jabiru *(Xenorhynchus asiaticus)* Dreaming, which nests at the rock art site Minyadawiji on South West Island
wurrulwurru/ wurunkurun – brackish
Wurrunthurnambaja– one of the anthropomorphic spiritual entities associated with *a-Karnkarnka* and *Kundawira* which resides at Wulibirra s
Wundanyuka– Generic term for sea turtles as well as a significant Dreaming
Yalkawarru – a post-funerary ceremony for the return of deceased kin back to Country. It is associated with the Wurdaliya and Wuyaliya clans, and the Black-Nosed Python, *Ngabaya* Spirit Being and Plains Kangaroo Dreamings. However, the specific lone male dugong is a Dreaming for the Wuyaliya clan.
yijan – the Dreaming, a period of time in the distant past when Dreamings brought Country into being. It also describes the Dreamings who rose up from the earth or travelled from distant places and created, placed and/or shaped geographical features, plants, animals and phenomena. Dreamings are non-human kin that may take forms including animals (i.e. Groper), natural phenomena (i.e. Winter Rain), artefacts (i.e. Fishing Net) and plants (i.e. Waterlily). Dreamings also created a charter that is the Law of existence and prescribes traditions such as kinship, ceremonies and dugong butchering.
yirrikirri – donkey (*Equus asinus)*, introduced by Europeans.

D. Additional Images and Context



D.1 Yanyuwa interpretation of seasons. *Yanyuwa families et al. 2003:40*

Little Peter Wurnkuli, Wuyaliya
father of Annie Karrakayn. In this photo his is spinning a dugong rope. Little Peter Wurnkuli had the 'nickname' *Ngarawalawalya* which contains the words for low tide and dugong and sea turtle. The meaning of this nickname is that he was a good hunter of dugong and sea turtle and could capture them at low tide.
(Spencer and Gillen 1901)

D.2.a Dugong hunting in the past. *Yanyuwa families et al. 2003:131*

Figure removed due to copyright restriction.

Yukuyi [Clarkson Point] Ron Ricket and Mussolini Harvey with dugong. 1950's.
Photo by Steve Johnston

Walangkurra [Mule Creek-Bing Bong] Johnson Timothy with dugong

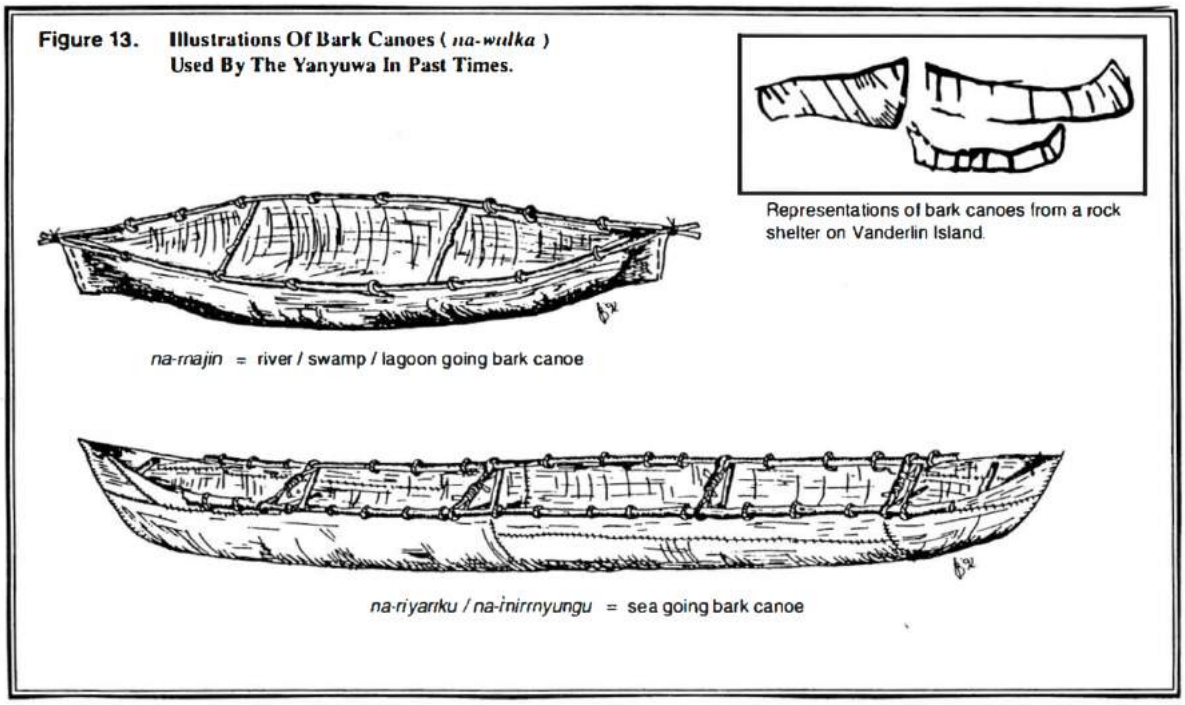
2.b Dugong hunting in the past. *Yanyuwa families et al. 2003:54(top);275 (bottom)*

Jawuma [The Landing] Maureen Timothy cooking dugong in a ground oven.

2.c Dugong hunting in the past. *Yanyuwa families et al. 2003:220*

Figure removed due to copyright restriction.

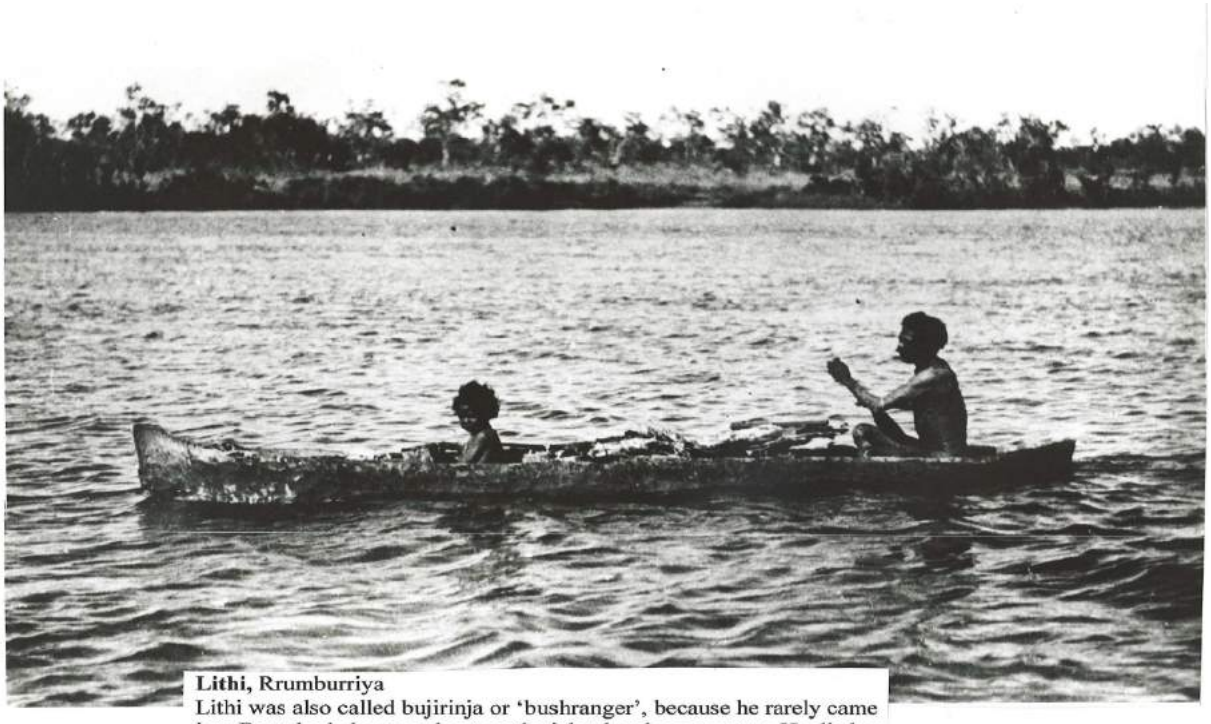
D.3.a Past uses of canoes. *Yanyuwa families et al. 2003:55*



3.b. Yanyuwa bark canoes. *Bradley 1997:288*

Kalwanyi. Annie Karrakayn, Ida Ninganga and Isaac Isaac Walungkuma work on the canoe a-Kalwanyimara.

3.c Dugout Canoe. *Yanyuwa families et al. 2003: 237*



Lithi, Rrumburriya
Lithi was also called bujirinja or 'bushranger', because he rarely came into Borroloola he stayed out on the island and sea country. He died on Vanderlin Island and was buried by Old Steve Johnson..
child is unknown
Grandfather of Kathy Jupiter

3.d *Yanyuwa families et al. 2003:132*

Karruwa [Little Vanderlin Island]. Tamarind trees left by the Macassans can be seen in the left hand side of the photo.

Karruwa [Little Vanderlin Island]. Stone lines left by the Macassans. These stones lines are the remains of fireplaces where large pots of trepang were boiled.

D.4 Remnants of Macassan presence. *Yanyuwa families et al. 2003:56*

Figure removed due to copyright restriction.

D.5 Bujimala. *Yanyuwa families et al. 2003:138*

Figure removed due to copyright restriction.

D.6 One part of the Brolga *Kujika*. *Illustrated by John Bradley, Yanyuwa families et al. 2003:381*

Figure removed due to copyright restriction.

D.7 Yanyuwa ceremonies with clan, Dreaming, ngimirringki and jungkayi interconnectivity and dates of last known performance. *Adgemis 2017:184*

Tier 1

'Determinate' [773]

'Indeterminate' [173]

'Cupules'(clusters) [10]

Tier 2

'figurative' [165]

'non-figurative' [348]

'tracks' [260]

Tier 3

'plants' [1]

'material culture' [41]

'ceremonial designs' [35]

'zoomorphs' [70]

'anthropomorphs' [18]

'open geometrics' [122]

'closed geometrics' [78]

'linear non-figuratives' [112]

'dot compilations' [11]

'irregular shapes' [23]

'hands' [171]

'feet/foot' [8]

'bird' [63]

'macropod' [18]

Tier 4

waterlily flower [1]

a-makurndurna [1]
boomerang [24]
hooked boomerang [2]
boomerang (cluster) [6]

dugout canoe [1]
bark canoe [5]
barbed spear [1]
harpoon [1]

ngabaya dancing with headdress [1]
yalkawarru [32]

kundawira [1]
rrungkal [1]

a-Kuwaykuwayk Sorcery Stone Bird [1]
'unidentified creature' [6]

dugong [2]
jellyfish [1]
stingray [2]
shovel-nosed stingray [1]
spotted stingray [1]
long-tailed stingray [1]
eagle ray [1]
snub-fin dolphin [1]
starfish [1]
sea tulip [1]
mussel shell [1]
blue-ring octopus [5]
octopus generic [1]
sea turtle [15]
long-necked turtle [1]
spoonbill [1]
crocodile [1]
wobbegong [1]
hammerhead shark [1]
barracuda [1]
fish [6]

goanna [17]

'wide-bodied' [4]
'dot figure' [1]
'bulbous appendages' [1]
'face' [1
'simple' [3]
namurlanjayngku [3]
baribari [1]
'long limbs (cluster)' [1]
Wurrunthumbaja [1]
Burrunjudangka [1]
Jawajbarrangka [1]

'tally' [31]
'straight line' [19]
'parallel lines' [25]
'A-shape' [2]
'C-shape' [4]
')-shape' [1]
'curved parallel lines' [4]
'backwards F-shape'[1]
'F-Shape' [1]
'U-shape' [2]
'v-shape' [7]
'Y-shape' [3]
'pitchfork shape [5]
'T-shape' [1]
'plus shape' [1]
'cross shape' [2]
'X-shape' [2]
'star shapes' [2]
'm-shape' [1
'double M' [2]
'H-shape' [1]
'L-shape' [1]
'P-shape' [1]
'serpents head shape' [1]

'oval variant' [15]
'circle variant' [30]
'conjoined circles' [1]
'semicircle/lens variant' [5]
'triangle variant' [8]
'teardrop variant' [2]
'bisected parallelogram' [1]
'rectangle variant' [16]

'complex LNF' [27]
'simple LNF' [54]
'wavy linear variant' [10]
'rayed/ forked linear variant' [21]
'miscellaneous linear variants' [2]

'dot cluster' [5]
'dotted line' [8]

'various' [23]

hand assoc. w/ dugong hunter dreaming [23]

'generic single' [56]
'generic cluster' [87]
'hand and forearm' [5]

'generic single' [2]
'generic cluster' [2]
ngabaya [3]
feet with hands [1]

brolga [3]
jabiru [1]

'generic single' [22]
'generic cluster' [37]

generic single [5]
'generic cluster' [11]
'nail-tailed wallaby tracks and tail' [1]
dotted tracks [1]

t

Tier 5

maritime [88]

ambiguous [264]

terrestrial [62]

unknown [542]

Tier 6

informed [127]

formal [829]

D.8 Motif Groupings, A3 Layout

E. Annotations

[i] Country is capitalized here to highlight the nuanced ways Aboriginal people construct their identities in relation to connections with many facets of their ancestral lands. This is a departure from non-Aboriginal ways of thinking about 'country' in terms of national territories or physical features within a region.

[ii] For this reason, Yanyuwa continue to perform *a-Marndiwa* (circumcision rituals) in the wet season, because the threat of the *Bujimala*'s power regulates the initiates' behaviour while these boys transition to adulthood (Adgemis 2017; Bradley and Kirton 1992).

[iii] During this season, significant sacred rituals such as *a-Kunabibi* and *Wambuyungu* were performed as the spirits of deceased relatives returned to their Country. *Kulyukulu* and *Yalkawarru* ceremonies were also performed in this time (Bradley and Kirton 1992).

[iv] In the present day, hunting has adapted to community needs and modern technologies, including metal dinghies, but retains some traditional characteristics (See Adgemis 2017:127-254).

[v] Camping on foredunes became more convenient during this time as *murndu* (mosquito) and *kirdil* (sandfly) populations diminished. Camping practices have also changed with present-day conditions.

[vi] *Rra-waj kana* (wild honey) also became plentiful during the cold season.

[vii] Early storms and strong winds of the wet season come from south and east and may cause sickness because they carry the renewed vigour of *Bujimala*.

[viii] Moiety is an anthropological kinship term describing one half of a society consisting of only two separate descent groups. This may also be referred to as dual organization (White 1981).

[ix] Dreaming is an anthropological term describing the spiritual worldview of Aboriginal people as it relates to the actions of ancestral figures in deep time (Spencer and Gillen 1912). This framing is easily criticized as the temporally expansive concepts in the Dreamtime stories are not well summarised by non-Aboriginal associations with "dreaming." However, this term has been widely adopted within Australian society.

[x] This can even lead to the alteration, fading or disappearance of rock art that would have otherwise been visible (Bradley 1997:180-181). The Spirit Ancestors infuse the topography of the islands with their activities; for example, Yanyuwa elders know that the hand stencils and prints on Black Craggy Island were created by the dugong and sea turtle hunter spirits (Bradley 1997:185). See Chapter 5 for more detail.

[xi] Malay loanwords are noted in Yanyuwa as well as other Aboriginal languages throughout the Top End (N. Evans 1992).

[xiixii] The study of rock art has developed from a disregarded subfield of archaeology to an influential area of investigation (Chippindale and Taçon 1998; Morwood and Smith 1994). Discussions of the ethnographic significance of Aboriginal Australian artwork have influenced academic interpretation of rock art across Europe, Central Asia, and North America (Bednarik 2016; Chippindale and Taçon

1998). Rock art, defined as marks made by humans on natural rocky surfaces, is uniquely important to archaeological investigation due to its symbolic, religious, and representational value (Jones 2017; Keyser and Classen 2017; Pwiti and Mvenge 1996). This "landscape art" inscribes human meanings onto natural features and is linked to worldview, lived experience, spirituality, and ritual (Lewis-Williams 1995; Whitley 1998).

[xiii] Older dates have been obtained through association with stratigraphic sections, including at Carpenter's Gap, and the question of "oldest" continues to be contested in Australian archaeology more generally (Veth et al. 2018). Most rock art sites are more recent, although one Gwion Gwion-style motif from the Kimberley was dated to c.17 ka (Veth et al. 2020).

[xiv] Yet Coastal rock art is not inherently indicative of a seascape; to constitute a part of a seascape, rock art must play a role in symbolically connecting a people to the sea (McNiven and Brady 2012). Conversely, not all seascape art is necessarily coastal. For instance, the Hawaiian migrants of Iosepa inscribed petroglyphs of marine turtles, fish and whales when they settled in the deserts of Utah far from the Pacific Ocean (Malakoff 2008; McNiven and Brady 2012).

[xv] The Yanyuwa dataset noted fewer technological attributes due to solely consisting of canoes.

[xvi] The last time the Dugong Hunters was sung in full by senior *ngimirringki* and *jungkayi* was in 1984, when it was transcribed.

[xvii] Rrumburriya and Mambaliya-Wawukarriya people are *jungkayi* for the Barracuda rock art and Dreaming because it is their mother or father's mother, while it is the mother's mother of Wurdaliya clan people (2023:96). Negotiations as to who can hunt and eat barracuda fish are specific to this kinship relationship.

[xviii] In daytime the Pleiades sinks into the water to trawl its nets for fish, the stars becoming the glowing blue rings on the octopus's body.

[xix] In the 1980s, research in Wannyi Country (east of Garrwa Country) identified predominantly simple figurative and non-figurative motifs, featuring large bichrome arches, motifs with white dots delineating their perimeter, motifs comprised of dots and as well as scratched engravings (Border 1988, 1989; Walsh 1985). These attributes are also characteristic of the Yanyuwa dataset. Another description concentrated in the Northern Territory statistically defined 'Large Silhouette' style motifs and two sub-classes of geometric motifs, 'Type B' ('rectilinear mazes and grids', 'zig–zags and chevrons', 'crosses') and 'Type C' ('arcs,' 'stemmed circles,' 'barred circles' and 'tridents') as motif classes (Layton 1992:206) This description coincides with the Yanyuwa dataset; *Yalkawarru* motifs may be seen as "rectilinear grids." *Yalkawarru*-associated iconography can be seen throughout Garrwa, Gudanji and Binbingka Country (Brady and Bradley 2014b). These two assessments lacked testimony from Traditional Owners regarding relational meanings or understanding of linguistic and clan boundaries. A characterisation of rock art in the southwestern Gulf of Carpentaria from ceremonial and relational perspectives objects to the term 'Gulf style' as it homogenises the worldviews of distinct language groups (Brady and Bradley 2014b).

[xx] To the west, the rock art of the Kimberley is quite varied in style, well-surveyed, and covers an extensive temporal range from ca. 50,000 BP to present (Veth et al 2018). Marine imagery including fish and long-necked tortoise are prominent in the 'Irregular Infill Animal Style' ca. 3600-1800 BP, which has similarities to contemporaneous rock art in Southeast Asia (Veth et al 2018; Motta et al. 2021). By contrast, Yanyuwa rock art is less comprehensively dated and is thought to be recent in origin (c. 400 ya) and style differentiations in the Pellew Island data set are less distinctly characterised. This raises questions of how to best compare rock art across temporal continuities.