

Towards a historical archaeology of Western Australia's Northwest

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This research project 'The historical archaeology of the post-European period in the Pilbara, Western Australia' begins a regional synthesis of the historical archaeology of post-European settlement life in this remote region in the northwest of Australia. This study involved field investigations of archaeological evidence for historical coastal settlements; activities to do with the Indian Ocean, mainly pearling and whaling; the establishment of the pastoral industry in this remote region; and the residential and working lives of Asian, Aboriginal and European peoples. This paper reports on the genesis of this project, provides an overview of fieldwork and sites, and presents some preliminary findings.

Shipping Intelligence

SAILED: 13 June, *Tien Tsin*, 254 tons, J.P. Jarman, commander, for North West Coast of Australia. Passengers—Mr. W. Taylor (in cabin) and Messrs McCourt, Pollard, Conway, and Boy. Cargo—516 sheep, 17 horned cattle, and 2 pkgs sundries.

The Inquirer and Commercial News, 1 July 1863

The settlement of Gregory's Land may now be considered as certain, and the newly discovered territory bids fair to be to Western Australia what Port Phillip was to New South Wales. From the account furnished by Mr. Padbury ... it will be at once seen that the trip of the *Tien Tsin* has been altogether successful, the pioneer party, with their stock, having been landed in safety. The country is reported to be of excellent quality, water abundant, the native quiet, and, when

Mr. Padbury left, everything was going on as well as could be wished.

The natives are described to be quiet; having a taste for tobacco and a horror of horned stock. The former they ate in any quantity, of the latter they entertained great fear, decamping as soon as they were landed, and not reappearing at the time the vessel left. This state of affairs cannot however be expected to last long, and when they begin to appreciate the flavor of beef and mutton, disagreements between the black and white occupants of the soil will probably commence.

The Inquirer and Commercial News, 3 June 1863

INTRODUCTION

This paper reports on the regional assessment of the archaeology of European intervention in this region

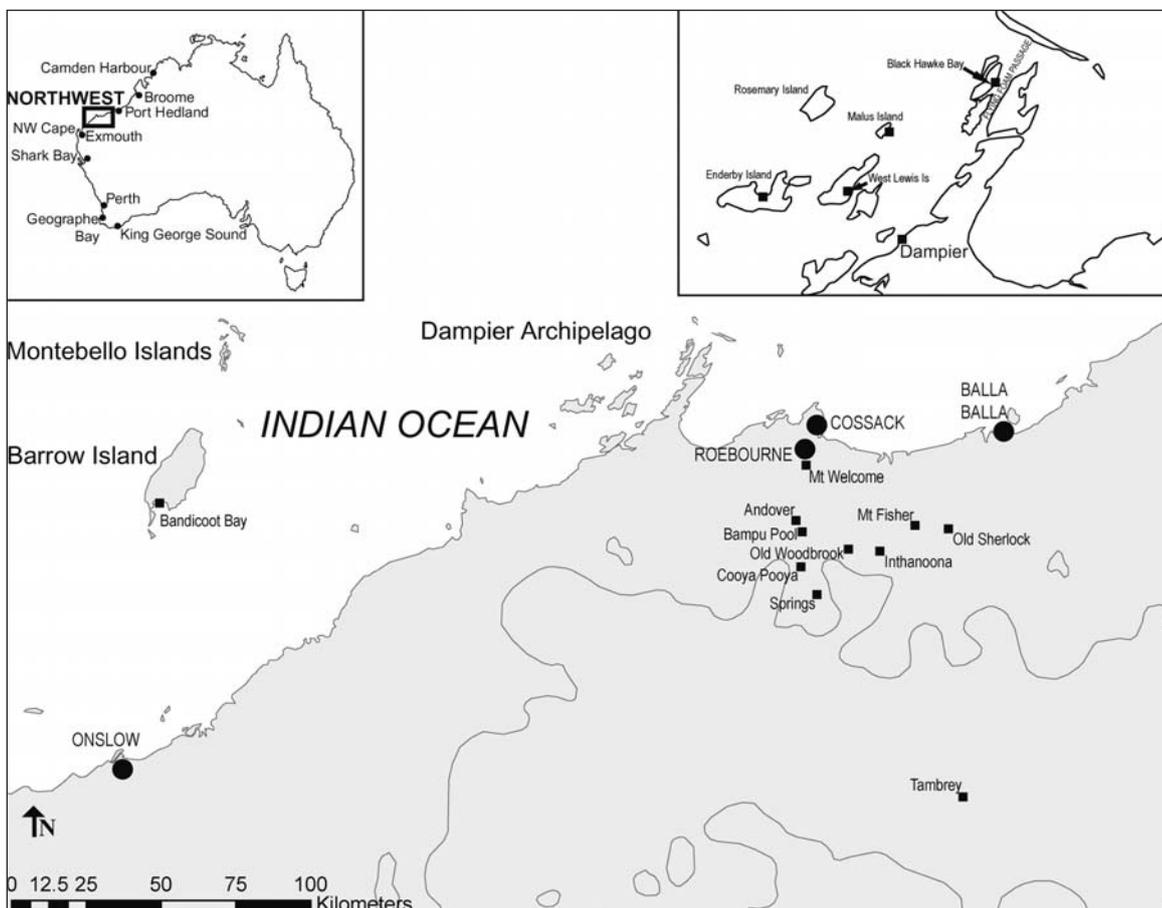


Fig. 1: The Northwest of Western Australia.

undertaken after 2002 as part of the Australian Research Council funded Discovery Project (DP0208298): ‘The historical archaeology of the European period in the Pilbara, Western Australia’. This first overview paper of the work presents an account of significant archaeological sites, fieldwork and methods, and some initial outcomes and implications of the project. A more comprehensive analysis based on the GIS analysis of settlement patterns and the archaeology of pastoral settlement is in preparation, as are papers on specific sites (Paterson and Wilson forthcoming). Additionally six theses in historical archaeology have been conducted (two in preparation) and publications should arise from these researchers. Our approach to the research potential of the region is as a case study in nineteenth-century historical colonisation, better comprehension of instances of culture contact between indigenous Australians and settlers, and—eventually—improved understanding of the historical archaeological resources in this rapidly transforming region which, while once remote from the vast majority of Australians, is now the heart of economic growth in early twenty-first-century Australia. The aim of this paper is to provide a sense of the potential of the region for archaeological researchers.

The project set out to conduct archaeological research into the colonial settlement of the Pilbara, specifically pastoral habitation and work sites, and places related to the pearling industry. This region has had infrequent contact with Europeans since the 1600s, however this research was largely interested in more permanent nineteenth and early twentieth-century settlement (1860s onwards). This was a region about which very little was known from a historical archaeological perspective, although there is extensive recording of older Aboriginal sites (mainly surface assemblages, shell middens and petroglyphs). The overarching aim of this work is to develop an understanding of the origins and development of past cultural processes and colonial systems: essentially the colonial legacy. This is not esoteric knowledge. In contemporary Australia, as in other settler societies such as New Zealand and Canada, the colonial period has continuing relevance in social, political, cultural and legal arenas. An improved understanding of the material record of nineteenth and twentieth-century life is essential for contemporary communities and heritage bodies faced with the interpretation, conservation and management of cultural heritage. This project attempts to highlight the lives of those who are often ‘hidden’ from history, such as women, indigenous people, and non-Anglo ethnicities. The primary aim of the project was to follow an initial stage of multiple-site survey with focussed recording and excavation of selected sites. The ARC funding was more limited than requested, requiring a focus on the recording of pastoral sites which, as should be clear in this paper, were recorded to a greater level than the sites on islands. That said, a discussion of the islands is included here as a first step in our understanding of these potentially important sites.

This research has required investigating the evidence for separate cultural divisions (Aboriginal, European and Asian) in the region and how this is shown in the character and organisation of archaeological material. In particular, this requires exploring how Aboriginal people were involved in pastoral and other industries, and transitions from pre-contact hunter-gatherer lifeways, which are reflected here at pastoral, island and town sites.

This paper begins by describing fieldwork and some preliminary results deriving from the recording of archaeological sites with the discussion focussing on the overarching themes of colonisation and culture contact to begin the task of ‘balancing the record’ for a region where historical archaeological resources have been largely overlooked.

Table 1: Key historical sites in discussion.

Site name	Description
CSK 1 – CSK 12	Historical campsites fringing Cossack, with evidence for use by Asian and Aboriginal groups.
SB1 – SB3	Settlers Beach: surface scatters on coastal dune, possibly Aboriginal peoples’ historical camps.
Malus Island	19th-century shore-based whaling station.
Black Hawke Bay	19th-century pearling establishment, located on Flying Foam Passage.
West Lewis Island	19th-century settlement for sheep pastoralists, and possibly for pearlers.
Enderby Island	Historical stone structures, possibly one burial, and mobiliary art (petroglyphs).
Enderby Island	WWII American Navy Catalina wreck site.
Bandicoot Bay (Barrow Island)	Campsite, possibly related to pearling, with glass flaking and boat debris.
Springs	Head station complex including shearing yards and itinerant-occupants’ huts, and rock engravings (19th century use).
Cooya Pooya	Head station complex (19th and 20th-century uses) including rock engravings and remains of original shearing buildings.
Old Woodbrook	Head station complex including extensive rock engravings (of both graphics and text), outstations, and stone fencing.
Inthanoona	Head station complex including stone yards, extensive rock engravings.
Andover	Head station complex.
Mt Fisher	19th-century homestead remains.
Old Sherlock	19th-century head station remains including stone walls.
Tambrey	19th and 20th-century head station and yards.
Bampa Pool	Possible market garden settlement, Asian market remains.

FIELDWORK AND SITES

Various methods were adopted in this regional study (Fig. 1, Table 1). Recording at archaeological sites was typically preceded by an investigation of heritage registers of historical places and the study of historical sources to determine site location. The patchy character of historical documents became apparent early in this process, with the pearling industry in particular having few primary sources with the exception of a handful of general, typically adventuresome, accounts (Richardson 1914; Bligh 1984). The early pastoral stations, too, had few primary reports, with the exception of some general secondary histories of notable pioneering families (Mercer 1958; Withnell Taylor 2002). More general histories and collections of useful information exist (Battye 1915; Weller 1979; Forrest 1996; Hardie 2001; Bridge 2004) and there are Aboriginal accounts of life in the twentieth century, mainly on pastoral stations, (e.g. Olive 1997), but there are very few nineteenth-century records about indigenous people when large groups are known to have worked in the pearling and pastoral industries. There is evidence of instances of great injustice on the frontier against indigenous peoples in the name of access to land and workers (Wright and Stella 2003). Some accounts exist for the significant townsites of Cossack and Roebourne (De La Rue 1979; Lambden Owen 1984; Hoey 1997).

The documentary analysis identified a series of potential sites which were then investigated during several phases of fieldwork. Investigations of historical sites were conducted on

islands in the Dampier Archipelago and on Barrow Island to explore the evidence for coastal and island activities. During the second stage we investigated the remains of the earliest pastoral settlements in the region. Finally, two field seasons were conducted at the site of Cossack where, given previous research at the European townsite (Nayton 1992) and the Asian settlement (MacIlroy 1992; Yates 2002), the remains of camps fringing the more formal townsite were targeted in the expectation they would provide some insight into the extensive Aboriginal and Asian workforce and population. Each phase is discussed here in turn.

HISTORICAL USE OF ISLANDS OF THE NORTHWEST

The island groups off the Northwest include the Dampier Archipelago, the Montebello Islands, as well as Barrow Island and isolated islands. The Dampier Archipelago had been known to Europeans since the late seventeenth century when visited by William Dampier in August 1699 (Dampier 1703). Nicolas Baudin later named the islands for Dampier's courage in exploring uncharted coastal waters (Pearson 2005:46). The islands were later mapped independently by Baudin and Philip Parker King (Pearson 2005:89). Few accounts exist of Aboriginal people, although King reportedly met an Aboriginal man on a raft and the islands contain Aboriginal archaeological sites. More remote islands, like the Montebello Islands, may have been permanently abandoned at the time of sea level rising after 7000 BP (Veth 1994).

Historical archaeological sites in the Dampier Archipelago were recorded in a joint survey with the Department of Maritime Archaeology, Western Australian Museum (WAM) and the Department of Conservation and Land Management (CALM) (Paterson and Souter 2004), while Barrow Island was visited in 2004 (Hook et al. 2004; Souter et al. 2006). This field work aimed to assess historical sites previously reported; more historical sites will presumably be discovered on these and other islands in future surveys. From this initial survey key historical themes related to the islands can be proposed. These research avenues include the activities of whalers; European exploration; the pearling industry and use of the islands as prisons for Aboriginal people; colonial maritime shipping; guano extraction; the islands as quarantine stations and Lock hospitals;¹ and turtle fishing. Among the twentieth-century themes are sites related to the British nuclear tests in the Montebello islands, World War II sites like air raid shelters for Japanese bombing raids and a plane wreck on Enderby Island.² In this paper I will focus on sites associated with whalers and pearlers.

Whaling in the 1800s

British colonisation of Western Australia began in the southwest, first at King Georges Sound (1826), and then the Swan River Colony (1829). The settlement of the Northwest would occur three decades later, with the arrival of the first pastoralists and their stock in 1864. The primary activities in the waters off Western Australia prior to historical colonisation were whaling and sealing, which were dominated by vessels from the United States. Whalers were familiar with the Australian coastline; however the scale of their visits is poorly defined for few historical accounts exist from these entrepreneurs. Whalers frequented the Dampier Archipelago, at the heart of the coastal Northwest. It is not clear from the surviving log books to what extent whalers practiced shore-based whaling over trying down on board, although the latter is more probable. Currently only one shore-based station is known of in the islands, that on Malus Island (Paterson and

Souter 2004). A sense of the whalers' activities and the popularity of the Dampier Archipelago in the 1840s, 1850s, and 1860s are suggested in the following selected excerpts from log books, which are largely from vessels out of Massachusetts ports. The logs survive in archival collections in home ports in Massachusetts, particularly the Kendall Whaling Museum (KWM), New Bedford and the Peabody Essex Museum (PEM) collection in Salem. Some, but not all, have been captured in the Pacific Manuscripts Bureau.³

The *Kingston* sailed out of London to the Indian Ocean with master Thomas Dennis in January 1800, returning in December 1801. The ship eventually arrived at 'Rosemary Island, NW Australia', and then to King George Sound (KWM logbook 263). These voyages predated British settlement anywhere west of Botany Bay (1788). References to 'Rosemary Island(s)' often referred to the Dampier Archipelago. Some 40 years later the *Mercator* out of New Bedford, captained by Obed Delano (ship's log kept by George M. Stetson, KWM 372) hunted in the waters off Kangaroo Island, then provisioned at Vasse (Geographe Bay, Western Australia), collected turtle at the Muiron Islands off Northwest Cape, observed other whalers off Barrow Island, before arriving at Rosemary Island in the Dampier Archipelago in July 1842 where they spent three months hunting whales and catching turtle. During that period at least three other vessels, including the barque *Cossack*, were observed and on 24 July they 'saw natives' fires on the land'. For the *Mercator* these were profitable waters; in two months in the 'Mermaid Strait' south of Enderby Island 'many whales are caught' (KWM 372:131). The islands were popular as a reliable destination for whales, as noted by the *Mars*' captain's log: 'Bark *Mars* Bound to Rosemary Islands a humpbacking' (KWM log 137:216, July 21 1859).

In July 1843 the *Neptune* broke a two-year voyage by getting whales and provisions at 'Rosemary Islands' (KWM 157). At the same time the *Albion* out of Fairhaven, captained by Jahaziel Jenney, also reported whaling at Rosemary Island and in the Mermaid Straits (KWM 9). The *Barclay* out of New Bedford arrived in these years at Rosemary Island (KWM 274). The *South America*, during her voyage of 1853–1857, arrived in mid-1857 at Rosemary Island (KWM 175:84). The bark *Mars* in her voyage between 1856–1859 describes some of the popular haunts for whalers along the coast, stopping at Exmouth Gulf, Muiron Islands and Barrow Island before arriving at Rosemary Island where she met several other American whaling vessels: *Minerva Smith*, *Abigail*, *Stephania*, *William Smith*, *Splendid* and *Richard Mitchell* (KWM 137).

This brief survey of some whalers' accounts reveals their familiarity with the islands off the Northwest well before any permanent British settlement—it is probable that archaeological evidence for this activity remains to be discovered on islands and along the coast. A whaling station on Malus Island (Fig.1) is the only site demonstrably related to shore-based whaling (RNE Place No: 04585). Using historical sources Gibbs noted that 'a colonial shore station was first established on Malus Island in 1870 by W.S. Marmion and W.S. and G. Pearce using the 34 ton schooner *Argo* to assist operation (*Inquirer* 20/7/1870)' (Gibbs 1995:368–373). Local merchants turned whalers were also active from the island during the 1870s. The site consists of the remains of the brick try station, as well as another brick structure, possible an oven. Both structures have been severely compromised by a well-intentioned but incorrect reconstruction attempt. Despite being disturbed, the site has potential to be tested by a more complete investigation of the beach platform which has debris such as barrel hoops; while whale carcasses and archaeological remains may survive under the sand in the bay.

One new potential whaling site was located on Enderby Island (Fig. 1), comprised of a possible grave and eight coral and stone features that may or may not be graves or remains of shelters (Paterson and Souter 2004:22). This site is located just above the high tide mark. There are ten rock engravings on portable stones, all located within 50 m of the stone features. These depicted lizards and one possible whale. In 1851 the Captain of the *Saucy Jack* reported three burials, Aboriginal tracks, a recently dug well and whale bones (MacIlroy 1979:61). Later in 1879 Pemberton Walcott of the *Prescott* described five graves built of stone about 18 inches high, that he considered to be whalers' burials at least two decades old. It is certainly not inconceivable that these features are graves associated with whalers, especially as deaths were common on whaling voyages. The site could also relate to pearlers (European, Asian or Aboriginal) who were active in these waters. However, the presence of a rock engraving of a possible whale, and the use of what appears to be whale bone as a grave marker, suggests the site relates to whalers, not pearlers. Excavation of the 'grave' may clarify the nature of this site; however, the potential for survival of human remains on a rocky sea platform inundated by rain and salty water seems slight.

Pearling (1860s onwards)

Following British settlement in the early 1860s the Northwest was the centre for a significant colonial-era pearl shell industry. As early as 1861 the exploration team led by Gregory (May to October 1861) collected pearl oysters at Nickol Bay, returning to Perth with a rich cargo of pearlshell (Gregory and Gregory 1884). The evidence of pearling is found at several sites recorded throughout the islands, at a site complex at Black Hawke Bay, Gidley Island; and a presumed pearlers' camp on Bandicoot Bay, Barrow Island. Other pearling-related sites are historical burials reported throughout the islands, for example on Dolphin Island (WA Heritage Council Place No. 08662; RNE Place No: 10108).

The remains of the settlement on Black Hawke Bay sit on rocky slopes overlooking the Flying Foam Passage, an area that saw a lot of activity from the pearling fleet (Fig. 1). Historical accounts suggest crowded waters and frenetic activity for the fleet. The pearling industry in the early 1870s was small but significant and growing, involving '75 Europeans, who employ about 350 Aboriginal natives ... (exclusive of women and children who are also fed) and a few Malays' (De La Rue 1979:73). The industry peaked in 1890 when '1,173 people, comprising 86 Europeans, 92 Aborigines, 19 Chinese and 976 Malays, Japanese and other



Fig. 2: Pearl luggers, Black Hawke Bay, Flying Foam, date unknown. McKenna Collection, WA Museum.

Asiatics, were employed on a total of 171 steamers, luggers, schooners, cutters and small boats' (De La Rue 1979:75).

For Black Hawke Bay a rare historical photograph of careening luggers exists (Fig. 2). The archaeological site survey reveals a settlement on the slopes overlooking the bay; this existed perhaps to offload boats and process shell, as well as providing residential accommodation. Throughout the settlement are glass fragments from bottles for beer, Hoboken schnapps, pickles, salad oils, and medicines. The remains suggest simple structures and pathways were located on ground cleared of stone; and that stones used to hold down the edges of tents. A couple of door hinges and locks suggest more secure structures once existed.

Close to the edge of the bay is a substantial stone and earth platform paved with flat stones; possibly the focus for offloading and other pearl-shell work. Embedded in the thick mud around the margins of the bay are copper sheathing, ships' fitting, piles of iron chain and engine components. Despite historical reports of significant Aboriginal labour on the pearling fleet there were few indigenous archaeological deposits at this bay, although there are some rock engravings of native fauna.

Another site related to the pearling era was visited on Barrow Island (Fig. 1). This is the largest island off Western Australia's coast, and potentially a place visited by Aboriginal people after insulation following 7500 BP. Prior to British settlement, and then during the colonial period, it probably played a role in whaling, turtling, pearl shell and phosphate extraction industries. A total of five sites with historical material are known (Quartermaine Consultants 1994; Souter, Paterson and Hook 2006), and, of these, three sites were recorded with flaked or retouched glass fragments, presumably made by Aboriginal people on the island. The most important site appears to be a pearling camp, where flaked glass artefacts occur amongst a scatter of occupation debris and wooden boat remains in a sheltered campsite in the sand dunes overlooking Bandicoot Bay. A handful of sources, some more speculative than others, suggest that the remoteness of Barrow Island and other islands played a role in holding Aboriginal workers captive. In 1884 the Attorney-General reported that 'it appears that kidnapping of natives by persons engaged in the Pearl Shell Fishery is carried out somewhat extensively in the North' (CSO 1884). Forced labour was provided through 'blackbirding', as stated in 1882 by colonial Governor Frederick Napier Broome:

Some official reports and papers which have recently been before the Governor ... to show that the proceedings of the persons who annually visit different parts of the northern districts with the view of obtaining services of the natives as divers in the Pearl Industry, are not in harmony with the laws which have been framed with the object of securing equal freedom of contract to the Aboriginal natives of this colony ... in some cases, an unwarrantable degree of moral pressure, and some actual personal restraint has been used to induce or compel natives to leave their homes to engage themselves as divers. (GG, 5/12/1882; CSO 1884)

Nothing is known of the wooden boat wreckage at Bandicoot Bay, although there were reportedly many unregistered pearl luggers associated with the pearling operations in the Northwest.

Pastoralism and pearling

Considering their remoteness, the difficulty of access, and scarcity of water it was surprising to find evidence for a sheep station represented by the archaeological remains of the

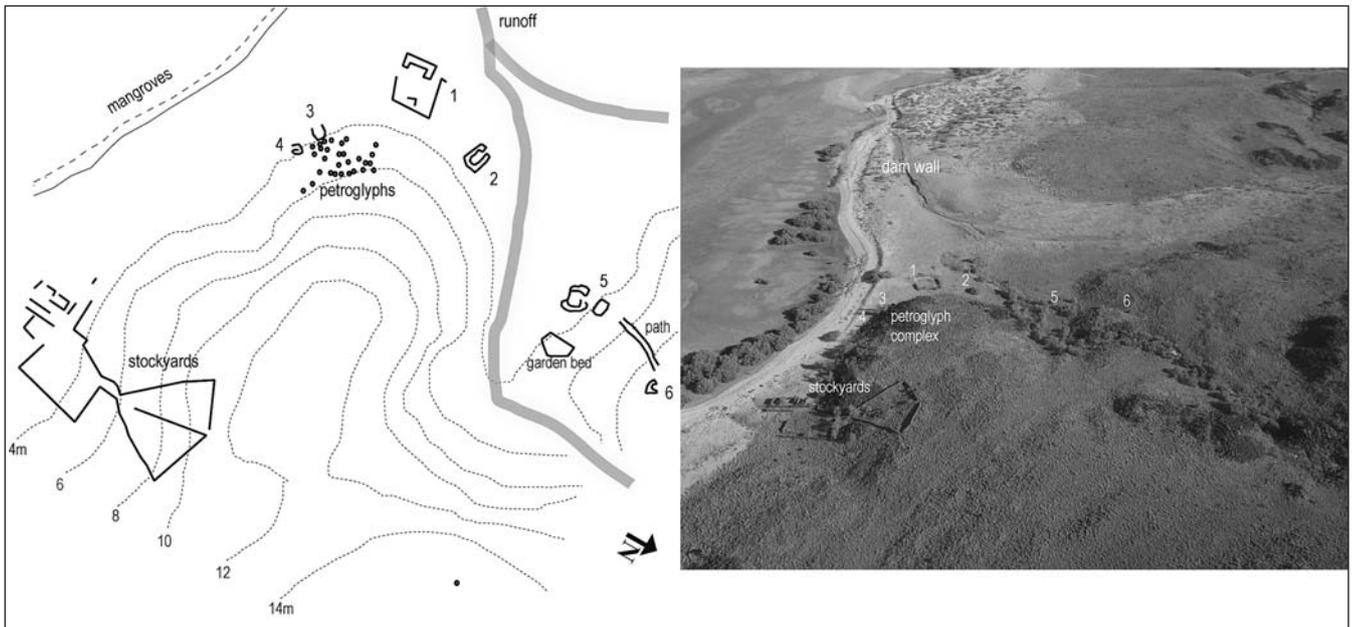


Fig. 3: West Lewis Island settlement plan and aerial photograph. Aerial photoraphy Warren Richards

settlement on West Lewis Island (RNE 10107; HCP No: 08691). This site is significant as a rare, probably unique in this region, example of a nineteenth-century island pastoral settlement (McIlroy 1979; Paterson and Souter 2004:15–19). The historical settlement is located where the West and East Lewis islands are joined by a sand bar at low tide, possibly allowing for easier offloading of stock. The survey recorded the remains of stone buildings and yards, and an extensive array of rock engravings in the centre of the settlement (Fig. 3). Many of the engraving may predate the colonial era, although Aboriginal people were involved in many historical activities in the region and continued to produce rock art after settlement. Some engraving were historical, most distinctly the carved name ‘Tunney’, a West Australian Museum naturalist who visited the settlement in 1901.

Two types of remains were present, with one large building (no. 1) which had been robbed of masonry, and several smaller buildings with thicker stone walls (2, 3, 4, 5 and 6, and the stockyards). Most structures were close to protective rock outcrops, perhaps shielding them from the cyclones which batter the Northwest annually. The distinctive fan-shaped stone yards would have forced sheep into the stone shearing shed. The effort to build these structures and yards indicates a substantial investment in labour to build this sheep station. The 1882 *Western Australian Almanack* states that there were six people on the island, three were graziers and one a pearler, suggesting that the settlement residents pursued several economic activities. This type of economic ‘doubling-up’ is considered below for Inathanoona Station.

THE ESTABLISHMENT OF PASTORAL STATIONS IN THE NORTHWEST, 1864 ONWARDS

A rich record of a range of camps, yards and stations from the earliest days of British settlement after 1864 was located after an investigation of historical sources, then aerial survey followed by initial site visits, and finally archaeological survey. The primary pastoral stations recorded were Old Woodbrook, Inathanoona, Springs, Cooya Pooya, Mount Fisher, Old Sherlock, Andover, Tambrey and Mount Welcome stations. Other sites identified included a Chinese market

gardens at Bampu Pool, colonial roads and bridges, outstations, and the location of fences (Fig. 1). Research on these sites includes the analysis of Inathanoona Station in Paterson and Wilson (forthcoming), Old Sherlock Station in Sanders (2005), and the historical rock engravings at Old Woodbrook, Springs and Cooya Pooya stations in Sinclair (2006).

The early stations of the Northwest were situated in promising country, on the flat coastal plain fed by westward flowing rivers, in the rocky valleys at the western extent of the tableland, and on the tableland country further inland. These stations formed nodes in the colonial frontier, and were the setting for hard lessons about pastoralism in this difficult environment, as well as for cross-cultural meetings between pastoralists and Ngarluma, Jaburrara, Kariyarra, Yindjibarndi and Martuthunira people. The land was made accessible to settlers with generous provisions in pastoral leases, so that in 1865, merely one year after the arrival of the first settlers, 3 million acres of land was held under lease, and 16,000 sheep stocked the land (Battye 1912:180). Some of the challenges faced by early settlers are detailed in Paterson and Wilson (forthcoming), suffice to say that the earliest stations were experiments in pastoralism. Our interest in these places is to test the successes and failures of these individual attempts at colonisation using the archaeological record, within a greater set of cross-cultural adaptations and within a program of deliberate and less intentional environmental adaptation. It is worth noting that many of these early head stations were abandoned by the end of the nineteenth century, as suggested by the reliable baseline of pastoral activity provided by Battye’s early twentieth-century account of active properties (Battye 1915).

Survey methods and preliminary findings

The methods used for site survey were designed to record as much of each site as possible, within the resource limits common to remote field work. Thus, a ‘whole of site’ approach was adopted, made easier by the use of Differential GPS (DGPS). These sites were comprised of structural remains and scatters of archaeological material, largely surface deposits, over the entirety of head stations. All features were described using a standard recording form which had

provision for a plan and quantitative contents data. Structures and artefact concentrations were both described and planned. Each feature plan included the location of a point surveyed by Total Station or DGPS which tied the drawn plan into the overall site survey. These two data sets in combination provided a complete spatial record of the visible sites. The contents of the artefact concentration features were listed in tabular form in accordance with a set of predefined variables. These reported the frequency of such items as Aboriginal artefacts and residues, European artefacts and residues, different colours of glass, bottle bases and lips, and modified (flaked or broken) glass and ceramics. Where artefacts were too numerous to count samples were counted and used in combination with the total area of the feature to produce a total frequency estimate. These tabular data provide a quantitative record of the material on the surface of the site. Selected significant objects with marks and inscriptions useful for dating were drawn and/or photographed. This qualitative record provides dating information and forms the basis for the study of use, distribution and modification of particular groups of artefacts and the types of activities they may represent.

The use of Differential GPS to survey archaeological deposits and landscape features allowed for the rapid and accurate mapping of features and the generation of whole-of-site plans.⁴ Some preliminary findings of the archaeological survey can be offered here, however the required comprehensive analysis of the archaeological assemblages is still in progress. Firstly, the archaeological material at the station sites represents different site functions, the degree of commitment to settlement, and individual decisions and preferences about architectural style, building construction, and portable material culture such as ceramic wares. Interestingly, despite being remote there is evidence for variation in the consumption of luxury items. This is best demonstrated at the ruins of Old Sherlock Station, once owned by the prominent early Northwest colonists the Withnells (Withnell Taylor 2002). The occupants had a far greater range

of ceramics than any other site in the Northwest (Sanders 2005). While no standing structures survive, the analysis of the site complex suggests that a homestead once stood overlooking the Sherlock River, with several other structures (probably mens' quarters, kitchen, and work-related buildings) on the other side of the hill straddled by the settlement (Fig. 4). Surface archaeological material, as indicated on the plan by surveyed points, was found across the whole settlement. The greatest range of ceramic wares was recorded near the remains of the homestead. The homestead represents other material ways that the occupants projected their taste and standing in the region: the building were decorated with cast iron decorative lace, one fireplace was faced with white marble, another with black slate, and the rooms decorated with painted tiles, although none survive in situ to indicate where they were placed. These materials would have been expensive to transport to this remote location. Although not as difficult as carting a German piano into Old Woodbrook Station, as indicated by its remains in the drawing room, which required a gruelling journey through very rocky country.

The organisation of the settlement at Old Sherlock Station reveals a deliberate separation between the placement of the headstation and the set of buildings for pastoral work and workers. This may replicate attitudes of this station's owners. Other stations were closer knit. At Inthanoona Station (Fig. 5) the buildings on the north side of the Jones River accommodated the headstation, workers' quarters and cook house, forge, and other storage and work buildings. There still remains diversity at Inthanoona however, for the complex on the southern side of the Jones River suggests yards and stone shearing shed, and a camp for Aboriginal people and pastoral workers (who may be the same thing).

These findings indicate the strong commitment in terms of money, labour and effort made to establish and maintain the early stations. Abandoned stations, as many of these were, initially suggest failure. However, lines of evidence test that perception. One is the degree of effort put into the design and construction of the early settlements, with an overriding

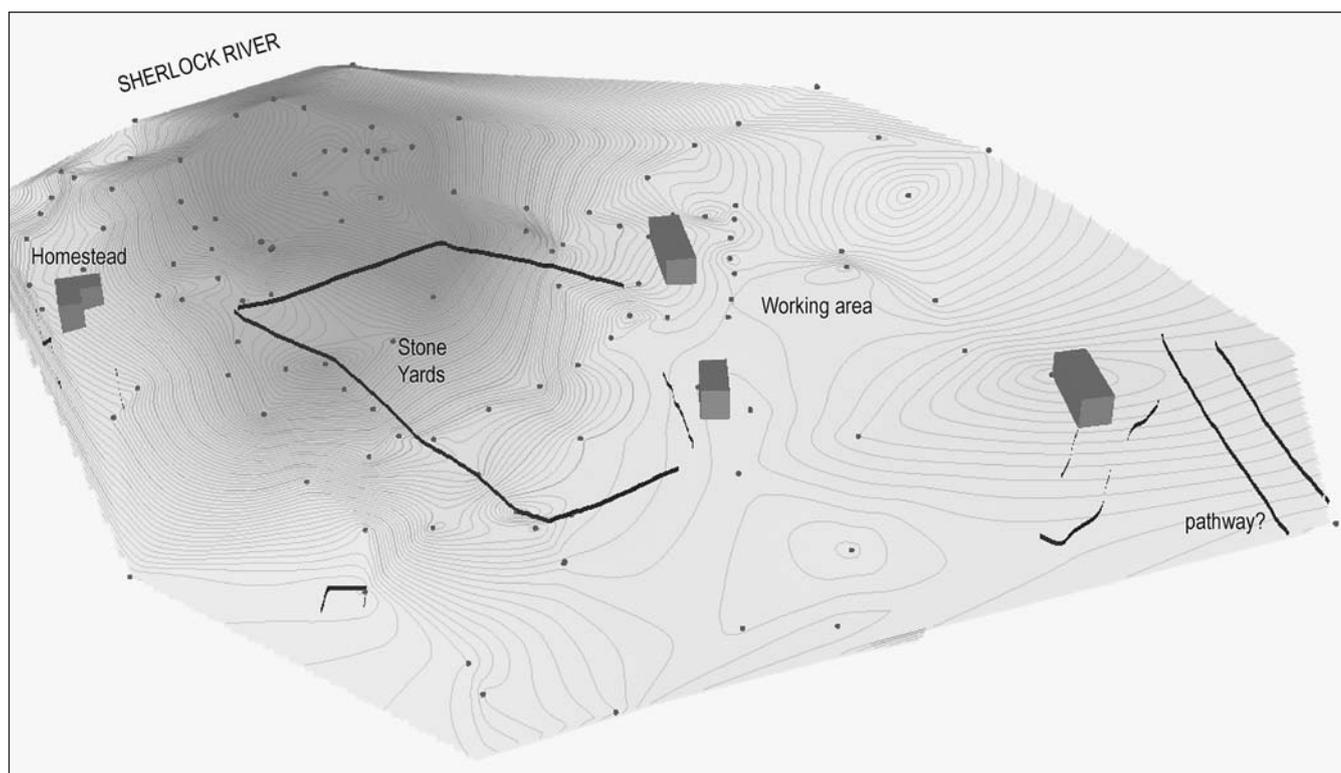


Fig. 4: Plan of structures at Old Sherlock station reconstructed in isometric projection. There were no structural remains at this site above the level of foundations, and the wall heights are only estimates. Artefact scatters indicated by dots. Top of figure orientated to north. Andrew Wilson

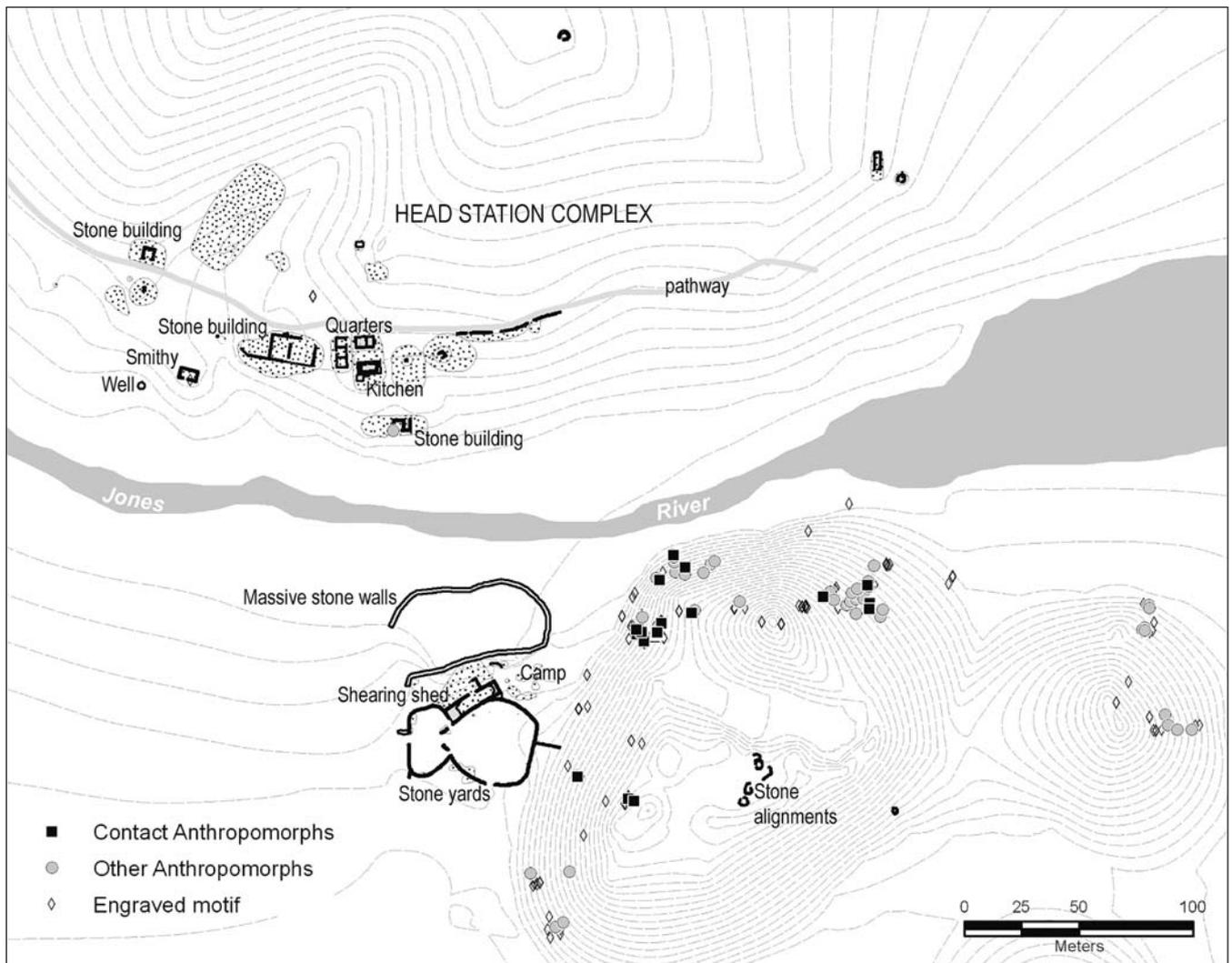


Fig. 5: Inthanoona site showing head station complex north of river; remains of yards, shearing shed and camping ground south of river; distribution of rock engravings of anthropomorphs; and the extent of archaeological deposits in shaded areas. Top of figures orientated to north. Contour interval 1m.

preference for stone masonry and well-planned arrangements of buildings. A rock engraving at the most solid set of ruins, Old Woodbrook Station, suggests stonemason Platt was brought in from Cossack to construct the main buildings, requiring many months of work. Similar efforts were made for certain stone yards, such as those on West Lewis Island and at Inthanoona Station (Figs 3, 5), both with a very distinctive design. Further research should demonstrate that mainly early stations were abandoned around the end of the nineteenth century, initiating the second phase of the pastoral domain in the Northwest, when much larger runs were formed through the amalgamation of existing properties. A related shift was the eventual abandonment of the open range sheep pastoralism and the construction of fenced paddocks for stock, with the earliest sheep paddocks reportedly formed first in 1878 on De Grey Station (Richardson 1914:46). This shift would have changed the demand for shepherds, which had implications for Aboriginal pastoral workers, as demonstrated in Central Australia around the same time (Paterson 2005). As Aboriginal people often were shepherds they would need to do other work to stay on stations, such as hunting dingos and rabbits, building outstations and other improvements, housework, working with horses and cattle, shearing and other sheep work.

Our survey recorded architectural and structural traditions imported into the Northwest. The commonest construction materials were stone masonry, although great variation existed in the competency of masonry and the style of dry stone

walling. Some masonry work was of a high quality, for example, the walls of Old Woodbrook Station homestead. Other structures were more hastily built, such as stone huts presumably built for itinerant pastoral workers, as seen at Springs Station. At Tambrey Station a rare experiment in adobe construction survives, whereby the adobe was strengthened with ceramic and glass sherds, animal bones, fleece and stone flakes. A shift in construction occurred over time: stone fences were replaced by wire, stone sheds replaced by timber-framed buildings finished with iron sheeting, and some wooden posts were replaced by metal posts. This shift occurred after most of these sites were abandoned and is only seen at Cooya Pooya, the one site in this study to remain in use for much of twentieth century. A recent survey of shearing sheds by Lacy (2002) reveals that while much is known about later stations in the Pilbara little is known of this early period of pastoral station building construction, a gap being addressed by this project.

The collaborative use of the archaeological and historical sources allows for a better understanding of the nature of the success and failure of these early colonists. One facet of the early sheep pastoralists is how some combined their pastoral endeavours with those of the fledgling pearling industry. This is best demonstrated at the site of Inthanoona, as detailed elsewhere (Paterson and Wilson forthcoming; Reynolds 1987). Inthanoona Station, despite being located well inland, was significant in the development of the pearl-shell industry in the 1860s or 1870s. Historical accounts of Inthanoona

Station, and the biography of Charles Harper (Mercer 1958:35), state that the owners built a pearling boat:

in conjunction with Mr Harper ... [Mr Viveash] built a boat and engaged in the pearling industry for three seasons, this firm being the first in the north-west to employ Aboriginal divers for obtaining the pearl shell. The vessel was called the *Amateur* ... The seventeen natives employed in the summer on the pearling-fields were, in the winter, equally invaluable on the station shearing-shed and in handling the sheep, which were rapidly increasing in numbers [Battye 1985 [1912], vol. 2:170].

The archaeology at Inthanoona contact site reveals that Aboriginal people camped against the stone yards of the early station (Fig. 5), as revealed by stone and glass tools and general paraphernalia. Rock engravings at the station demonstrate that rock art was produced after the arrival of Europeans. Among the 261 motifs recorded 53 illustrate post-contact items and introduced animals. The Aboriginal artists took to documenting the colonial world in stone, focussing not on the numerically dominant sheep, but rather on European men and women, horses and riders, European clothing (notably hats and boots), pistols and rifles, huts, a buggy, and clay pipes (Fig. 6). All the art was located in places visible to Europeans and therefore was not art created for private Aboriginal purposes. Seven ships are portrayed in the assemblage, suggesting familiarity with the working of sailing ships. Some appear to show divers, as would be expected for the pearling fleet. One is probably the *Xantho* which sank in 1872 (McCarthy and Paterson 2005). None of the images are of the *Amateur* (described above by Battye) as there are no depictions of a single-masted vessel. Further study of these and other engravings at Springs, Cooya Pooya and Old Woodbrook head stations, and at the ruins on West Lewis

Island, promise to provide greater understanding of the historical production of Aboriginal rock art and, additionally, the European practice of engravings dates and names at pastoral stations (Sinclair 2006).

COASTAL SETTLEMENTS: COSSACK, ROEBOURNE AND OLD ONSLOW

Cossack and Roebourne hold great significance as early settlements, with Roebourne servicing the pastoralists, and Cossack a coastal port; however the shallow waters presented a hazard to shipping. After 1865 Cossack operated as the home of the pearling fleet until it was largely abandoned by the 1920s, yet today Broome is remembered for the pearling fleet, while Cossack's role in the development of this significant industry is overlooked. Port Sampson, Balla Balla and Port Hedland became more important in the early twentieth century, each developing for different phases of hard rock mining and for general shipping. Further south lays Onslow, the port for the Ashburton and Yannarie River districts when these regions were colonised in the 1870s (Fig. 1). Onslow was relocated several kilometres in the early twentieth century. An investigation of the original townsite suggests excellent preservation of archaeological material underneath alluvial deposits and potentially a significant archaeological record for comparison with Cossack and other Australian colonial coastal settlements. Old Onslow faces no immediate threat, unlike at Cossack which is being promoted as a new residential centre for the rapidly growing Pilbara population.

The key colonial port of Cossack has received more archaeological attention than any other historical site in the Pilbara, with an emphasis on key buildings in the townsite and

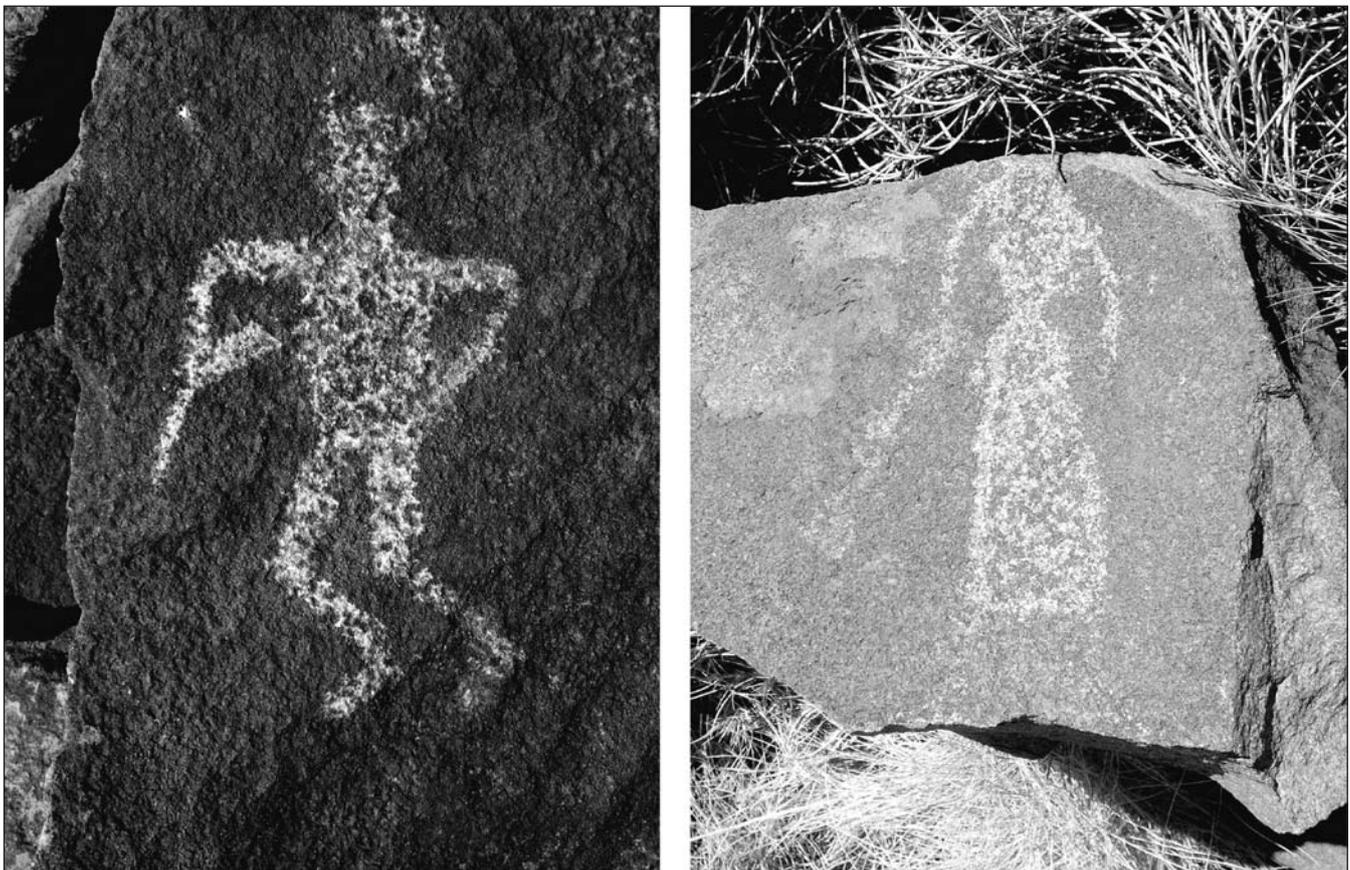


Fig. 6: Nineteenth-century rock engravings of (left) pastoralist at Inthanoona Station and (right) headless figure in long dress at Springs Station. (Paterson).

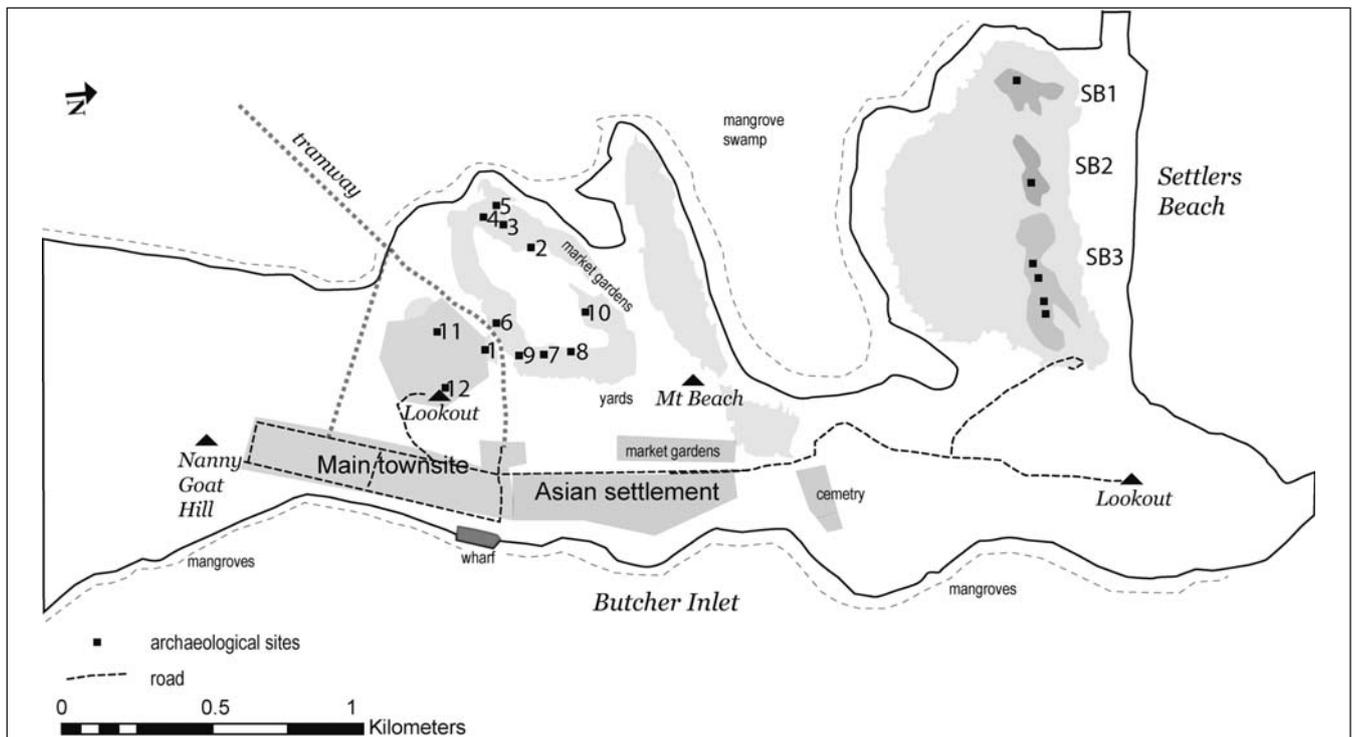


Fig. 7: Plan of Cossack showing location of archaeological sites.

Asian settlement. Nayton excavated one of the more substantial early buildings—the Knight and Shenton General Store. The building had a longer use than most structures in the town, with several phases of use including being the Muramat family laundry and diving store in the early twentieth century. Nayton's (1992) work furthers our understanding of the nature of the goods present on this remote frontier and provides a comparable set of data to interpret the campsite fringing the town. In the late 1980s McIlroy conducted several excavations in the Asian settlement area as part his postgraduate studies (Fig. 7), as well as conducting surveys of the archaeological remains of Chinatown and Pearl Street. He used the presence of Asian ceramics and other distinct Asian artefacts as ethnic markers for Asian settlement which, during the 1870s to the 1890s, included Chinese, Malay, Japanese and Filipino migrants. Unfortunately the material collected during this work cannot be located, although some may be displayed in the town museum. His results suggested a strong correlation between Asian ethnic markers and with the areas described in historical sources as Asian occupations. In her PhD, Yates (2002) provides additional information about Cossack, notably the markets gardens associated with the townsite (Fig. 7). Features deemed to relate to market gardening include pits and channels, wells and the remains of simple structures. Yates' analysis uses documentary accounts to link these activities with Asian gardeners.

Despite this work there is still much to learn about Cossack. The sites recorded for the Historical Archaeology of the Pilbara Project (HAPP) were chosen for their potential to address gaps in the archaeological study of Cossack; we focused on recording the remains of campsites that fringe the townsite and in the dunes at Settlers Beach (Paterson 2003). These two broad areas are described as Cossack (CSK) and Settlers Beach (SB) (Fig. 7). Most of the archaeological material at Cossack lays on the surface, although wind-blown sands in this cyclonic region obscure some material. Archaeological material was collected from the surface in 1m squares to allow both inter-site and intra-site comparisons.

The amount of coverage varied between 180 sq m (site CSK1) and 8 sq m (several sites). In addition to surface sampling at Settlers Beach we excavated four 1m squares to an average depth of 1m to determine whether stratified middens existed at the site, none were found.

The material from Cossack's fringe camps has been analysed in several associated research projects. In summary, this research reveals aspects of the colonial world 'beyond' the typical historical accounts of this nationally significant site and previous archaeological research. Some sites suggest historical Aboriginal occupation, demonstrated most convincingly in the record of Aboriginal glass flake production in the late 1800s (Wilson 2005). Over 500 flakes from eleven sites were recorded, and hypothesised to be used for woodworking and processing shellfish on the basis of use wear patterns. Other aspects of Aboriginal life are shown as continuities in traditional subsistence, as exhibited in the intensive use of marine and estuarine shellfish at many of these sites (Lewis 2003).

Not all of the fringing sites were used by Aboriginal peoples; however, as at least one (site CSK2) is interpreted as a camp for Asian workers probably responsible for maintaining market gardens (Carson 2003). Perhaps not surprisingly, of all the CSK sites, this site is the closest to the market-garden features identified by Yates (1992).

A functional analysis is currently underway comparing variations in activities between the fringing camps, as well as attempting to determine when the camps were occupied to better understand the history of Aboriginal involvement with the Cossack town and the activities that occurred there, predominantly related to the pearl fleet, and possibly domestic work (McHarg 2006). The most significant outcome of all of the work conducted on the fringing camps is the additional information about the Aboriginal contribution to the historical activities at Cossack, the character of which is rarely described in historical sources. Another implication of the work at Cossack demonstrates that the surface sites are potentially significant: for example, the sites at Cossack listed on the Register of the National Estate are standing buildings,

the wharf and the cemetery. The remains of Asian and Aboriginal activities, and thus the fuller diversity of the historic population at Cossack, are either campsites or ruined remains of buildings and are not as well protected.

While Cossack is significant because of its Asian settlement, there are other Asian settlements. One new Asian site recorded for HAPP was a camp for market gardeners at Bamba Pool on Woodbrook Station, south of Roebourne. This small camp site had two stone buildings. The archaeology at this site suggests a preference of the occupants for Asian ceramics, and perhaps continuities in foodways. Future work on Asian sites could explore whether there existed in the Northwest the same sort of trading relationships with Asia that existed in NSW and Victoria. In this regard, the presence of these ceramics is about much more than the continuation of foodways—potentially it is about trade and kin patterns, and about who is funding the Asians to work in these places. Interestingly, some ceramic fragments from CSK2 were analysed to determine where they were made; some were from South China, while at least one vessel was from Thailand (Graves, pers. comm. 5 October 2006).⁵

TOWARDS THE HISTORICAL ARCHAEOLOGY OF WESTERN AUSTRALIA'S NORTHWEST

The Northwest has great potential for historical archaeological research. While this is largely a descriptive and introductory paper, several themes of interest are raised which could be developed in future research. Firstly, there is a pre-colonisation period characterised by visiting European explorers and other visitors, mainly whalers. Secondly, the character of British colonists requires further attention, as well as study into how colonisation unfolded. The difficulties faced by settlers were sometimes prohibitive, while the rewards for some were encouraging. To consider one example, many family groups that came to settle in the Northwest were from Victoria (mainly the area around Portland) who in mid 1864 'leapfrogged' the Swan River Colony to settle the area around Camden Harbour, in the Kimberley (Fig. 1). The Camden Harbour Pastoral Company was a disaster, and the settlement abandoned within a year. Some of the more relentless survivors from this venture were among the first settlers of the sites described in this paper. The origins of settlers may also relate to other aspects of the archaeological record, such as preferences in material culture, house and building construction, styles of masonry, and the design of yards. Colonisation is a significant theme for Australian archaeologists of all eras, and the Northwest, a remote region only by some measures, provides an important case study in European colonisation replete with aspects of culture contact, implementation of pre-existing cultural practices, great ethnic diversity including significantly greater Asian population than other parts of Australia, broad scale environmental change, and adaptation of sheep and cattle pastoralism. Rich ground indeed for studies of historical settlement.

In terms of colonisation, it should be noted that very little work has been conducted on historical mining in the Northwest; however, mineral deposits of gold, copper and other minerals were being extracted by the late nineteenth century. The resources boom here included a Gold Rush, the sites of which could be compared to existing archaeological studies of better-known Gold Rush settlements, both in Australia and overseas.

The archaeological evidence demonstrates the presence of Aboriginal people at pastoral stations, at pearling sites, and at regional settlements, such as Cossack. This agrees with

historical records which suggests the colonial world of the Northwest involved interaction between settlers and Aboriginal people based largely on the settlers' demand for indigenous peoples' work and services. This counter points with shared demands for land and the resources of the land (including sheep), the forced movement of people from the hinterland to the coastal pearling activities, and statutes—such as the *Master and Servants Act*—that provided access to cheap Aboriginal labour, often with minimal regulation or protection. Future analysis of the archaeological deposits will provide a more nuanced analysis of the archaeology of contact at these places and build on research in the Kimberley (Head and Fullagar 1997; Harrison 2002; Smith 2000) to generate a regional understanding of cultural aspects of nineteenth-century life in the north of Western Australia. Historical archaeological work into Aboriginal people's experiences requires further analysis of individual sites and provide evidence of the texture of contact along the pastoral frontier. Following that, it should prove possible to link local sites into broader events, such as the effects of epidemics (notably smallpox and influenza), the exhaustion of local Aboriginal workers, and the sometimes forced movement of pearling fleet workers from other regions, such as the Kimberley.

This is an important theme for Aboriginal people today, as local resistance fighters sometimes ended up prisoners on Rottneet Island off Perth. Many Aboriginal people today track their family histories through time as station workers. On stations, too, Aboriginal people were involved with the British settlers, and vice a versa. Both pastoralists and Aborigines were involved with the pearling fleet. This is seen in accounts, one example provided by Donald McRae, the manager at Old Woodbrook Station, who wrote in the late 1870s: 'I was very busy getting my darkies together for pearling. I have got a very good crowd this season, nearly forty and would have done good things if it had not been for these new regulations which will throw us back a bit' (McRae 1881). The relationship between pearlers and pastoralists as late as the 1890s was described by Arthur Bligh in his colourful account *The Golden Quest*:

The method of obtaining this labour is better imagined than described. It is sufficient to say it was crude. Many of the pearlers also owned blocks of country on which they usually ran sheep and cattle. On the runs the owners mainly used the old men and all the women and children to work and care for the stock, while the young men were diving ... this generation of young men soon died out. (Bligh 1984[1958]:35)

This archaeology is about balancing the record and exploring the local places where both Aboriginal and Europeans worked and lived and dealt with the initial aspects of the colonial era. Asian people, too, are part of this picture.

The sites of Cossack and Onslow invite comparisons with other colonial ports, both in Australia, as well as overseas, perhaps into the material evidence for how well connected these places were to the broader world, as well as the spatial organisation of settlement, particularly along ethnic lines. This could be compared with settlements where archaeological work has been conducted, such as Russian Fort Ross in California, where Russian, Inuit and indigenous Californian activities are clearly visible in the archaeological record (Lightfoot, Martinez and Schiff 1998). Within the Asian region, comparisons could be sought with settlements such as Madras, Bombay, Calcutta, Manila, Singapore, Jakarta (Batavia), Macassar and colonial Shanghai (McIlroy 1992:3), as well as smaller settlements of a similar scale to Cossack and Onslow.

In conclusion, this project presents a challenge for the future; these archaeological deposits are cultural resources in

one of the fastest growing industrial regions in Australia. They often remain unprotected by heritage legislation. Hopefully recording, reporting and interpreting these sites will play a positive role in a future for the past of the Northwest.

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I acknowledge the important contribution made by Associate Professor Judy Birmingham to some of the topics alighted upon in this regional research project: colonisation (setting the debate in Birmingham and Jeans [1983], see also Birmingham [1990]), culture contact (2000), field methods (1997), and whaling (1987). This reveals Judy's contribution to a diverse set of topics in Australian archaeology. I conducted fieldwork with Judy in Central Australia and in Sydney in the 1990s, and encountered someone for whom debate and the power of ideas was given a primary place in archaeology, well into the night.

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ENDNOTES

1 Lock hospitals were established to house victims of infectious diseases, such as leprosy and venereal diseases. In Western Australia, their inmates were typically Aboriginal people. This topic is being addressed for Dorre and Bernier islands in Shark Bay, Western Australia, by

Jade Stingemore (Archaeology, University of Western Australia) in her doctoral research: 'Surviving the "Cure": Life on Bernier and Dorre Islands under the Lock Hospital Regime'.

- 2 Recently the wreck was reported to be that of a Catalina (#08130) blown ashore in the vicinity of 'Heron Haven' (Advance Base 'Easy'), reported by Bob Cleworth based on testimony from Frank Blundell Navigator 43 Squadron RAAF (email to Silvano Jung posted on PBY@yahoogroups.com on behalf of Bob Cleworth, Fri 7/14/2006 7:28 PM).
- 3 The Pacific Manuscripts Bureau is an archive of copied historical material related to the Pacific region, based in the Research School of Pacific and Asian Studies at The Australian National University. This includes whaling material, notably copies of logbooks.
- 4 With Differential Global Positioning System (DGPS) a fixed base station records correction data while mobile GPS receivers (rovers) are used on site. The two data sets are later compared to correct the rover data to sub-metre accuracy. In our work, despite a radio broadcast Real Time Correction signal being available from Port Hedland, we used a portable GPS base station at each site, whereby a Trimble ProXR backpack receiver was set up at high point on each site. The rover units were Trimble GeoXT handheld receivers, using Asset Surveyor software to generate a dictionary of common points. The archaeological data base, and the point data, were then imported to ARC GIS software.
- 5 The master dataset is based on Asian and dated European shipwreck assemblages, in work conducted by Dr Peter Graves, Archaeology and Palaeoanthropology, University of New England.

ABBREVIATIONS

CSK	Cossack
CSO	Colonial Secretary's Office
HAPP	Historical Archaeology of the Pilbara Project
HCP	Heritage Council Place
KWM	Kendall Whaling Museum
PEM	Peabody Essex Museum
RNE	Register of the National Estate
SB	Settlers Beach

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