Historical archaeological research in Western Australia: a critical review and suggestions for future research

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Historical archaeological investigation in Western Australia has mirrored investigations common to much of historical archaeology in Australia, such as shipwrecks, European colonisation, cross-cultural contact, convictism and industry. While a number of large scale studies have made inroads into our understanding of colonial life, much of the focus of Western Australian historical archaeology has concentrated on investigating specific historic places in isolation rather than the larger systems which supported them. Western Australian historical archaeology has favoured remote rural and coastal sites in the north of the state, largely ignoring the large urban centres of the south-west. Areas of future research for the discipline include the archaeology of urban centres, colonial expansion in the south-west, understanding the impact of the convict system in 1850, then the gold rushes in the 1880s, and finally, social and industrial issues related to industries such as mining and timber-getting.

INTRODUCTION

To date no review of historical archaeological investigation within the state of Western Australia has been conducted. This paper, inspired by the joint 2012 ASHA/AIMA conference, aims to address the need for a critical review of research conducted over the past 30 or so years. It is carried out in the spirit of similar reviews (e.g. Casella 2006; Gojak 2001; Paterson and Wilson 2000) and aims to provide an overview of the nature and intent of historical archaeology within the state. The explicit intention here is to examine themes and areas that have been investigated and, crucially, to identify areas of need for future research. This paper accepts Orser’s (1996:26-27) broad definition of historical archaeology as being the archaeology of the modern world, that it studies the ‘… processes that have formed and shaped modernity, and the way that the past is understood from the perspective of the present’ (Hall and Stillman 2006:2). Dutch and British ships have been visiting the west of the continent since the seventeenth century, before the initial British colonisation of Western Australia which began in 1826 in Albany, while in 1829 settlement commenced around Perth, followed by movement into the north of the state after 1860. This paper will examine research covering this entire period.

MATERIAL REVIEWED

This review aims to provide coverage of significant works, giving preference to those projects that have used historical archaeology to advance our knowledge of the history of the state. Consequently the focus of this paper is on research focused work rather than on that conducted within a mitigation framework. This approach necessarily preferences published and scholarly research over grey literature produced as a result of commercial work. Where commercial projects have resulted in significant outcomes they will be discussed, but much of the grey literature produced as a result of commercial mitigation work is often limited in scope, or entirely descriptive, or both, with limited interpretation, and reports related to monitoring, investigation of individual features or test-pitting will not be referred to here due to space requirements. Likewise where published and scholarly work also lacks significant outcomes it is not discussed. However, while this means that much commercial output is not discussed in this paper, it should be acknowledged that this work gathers valuable information about Western Australian sites and contributes to both the development of the sub-discipline of historical archaeology in the state and knowledge of the state’s history. Additionally, prior to the commencement of widespread academic research in Western Australia in the 1990s, terrestrial historical archaeological work in the state was largely the province of consultants, and the early work of practitioners such as Jack McIlroy and Gaye Nayton should be acknowledged.

In order to comprehensively cover the peer reviewed published material, relevant journals were searched, including the three main Australian journals Australian Archaeology, Australasian Historical Archaeology and Archaeology in Oceania, relevant international journals such as Historical Archaeology, the International Journal of Historical Archaeology and World Archaeology, maritime archaeology journals such as the AIMA Bulletin and the International Journal of Nautical Archaeology and specifically Western Australian journals such as the Records of the Western Australian Museum and Studies in Western Australian History. To ensure coverage outside these journals searches were conducted using academic databases such as JSTOR, Proquest, Informit and Academic Search Premier. Searches were conducted in suitably stocked libraries and numerous published books were also examined. Unpublished scholarly output primarily comprising PhD, Masters and Honours theses, largely completed at the University of Western Australia, with some contributions from other universities such as Flinders and Notre Dame Australia, was also reviewed. Grey literature, comprising an unquantified collection of unpublished excavation and consultancy reports, and documents such as conservation plans, was reviewed where possible. This corpus of material is described as ‘unquantified’ because no collation of the grey literature has been attempted, such as has occurred with the NSW Archaeology Online Project (Gibbs and Colley 2012). There is currently no central repository for grey literature and no agency or other body has overall responsibility for this material. Some reports are lodged with the Battye Library, while others are held by the State Heritage Office or the National Trust, and many are simply provided to proponents without being otherwise disseminated. As such this review will use grey literature where known, but makes no pretensions towards claiming a comprehensive review of this material.

THEMATIC REVIEW OF PREVIOUS WORK

A number of specific areas have been targeted for historical archaeological research in Western Australia, and as such this review will be divided thematically. Major places listed in this review are shown in Figure 1.
investigated survivor camps associated with the wreck of the *Batavia* on the Abrolhos Islands near Geraldton and particular attention has been given to physical anthropological study of the mass graves on Beacon Island (e.g. Franklin and Freedman 2003; Pasveer et al. 1998; Paterson and Franklin 2004).

A number of nineteenth-century British wrecks have provided information about the early Western Australian colony, including the *James Matthews* (Henderson 1975, 2008, 2009; Staniforth 2003), *Eglinton* (Staniforth 2003) and *Xantho* (McCarthy 2000; Veth and McCarthy 2009). Staniforth (2003:141) used excavated cargoes from the *James Matthews*, wrecked in 1841, and the *Eglinton*, wrecked in 1852, to argue that the Western Australian economy prior to implementation of the penal system was severely depressed and based entirely on orders from the small group of Western Australian elites. In contrast he argued that the implementation of the penal system in 1850 injected capital into the Western Australian economy and allowed its inclusion in wider Imperial trade systems. Trade to the colony after the 1890s gold rushes was investigated in a similar fashion by Souter (2007) who analysed the assemblage from the wreck of the *Sepia*. The investigation of the *Xantho* (McCarthy 2000; Veth and McCarthy 1999) has demonstrated the spread of European activities into the state’s northwest, and the vessel’s use in the pearling trade, as a cargo ship, and in the transportation of Aboriginal prisoners. More recently there has been a shift to the investigation of twentieth-century maritime sites related to World War II. Wreck sites related to navy assets sunk during World War II, such as those of the *Sydney* and *Kormoran* (McCarthy 2009a, 2009b, 2011) have received attention, as have coastal sites related to these wrecks (Anderson and Garcia 2008). Coastal defence sites have also been investigated, with aircraft destroyed during Japanese bombing raids recorded in Broome (Jung 2007, 2009) and submarine defences in Cockburn Sound (Anderson 2011).

**Colonialism, colonisation, exploration and expansion**

A number of studies have investigated colonialism and the nature of early colonisation, expansion and adaptation in Western Australia. Two main waves of colonisation have occurred, first in the south-west after 1826, then into the north after 1860. Burke (2007a) and Burke and others (2010) have investigated the failed settlement at Peel Town, 14 km south of Fremantle. Investigations at this site have shown that the initial 1829–1830 colonisation, which was intended to import a strict British social hierarchy to the new colony, rapidly broke down both physically and socially. Isolation, lack of leadership and a range of other privations encouraged indentured workers to actively undermine their colonial masters, leading to the collapse of the settlement. This mirrors Burke’s (2004a, 2004b, 2007b) earlier PhD research in the Swan Valley which demonstrated that economic conditions within the colony prior to 1850 allowed working-class labourers to transcend traditional class barriers and acquire land and property. This economic mobility was allowed by lack of capital and labour within the colony, a small population and isolation from the rest of the Empire. However, Fleming’s (2003) investigation of Haddrell’s Cottage in the Swan Valley suggested that, despite this opportunity for economic mobility, traditional social relationships were maintained with labourers and elites...
tending to marry within their own class, rather than crossing class boundaries. Burke (2004a:334) also demonstrated attempts by elites to maintain social hierarchy through the construction of large visible buildings, while Hamersley (2011) argued that they used landscape at the 1829 settlement on Garden Island to control the working classes. Similarly, Gardos (2004) argued in her Masters research at Old Farm Strawberry Hill in Albany that circumstances in the new colony allowed for a modicum of social as well as economic mobility. She suggested that the lack of available labour caused elites to engage in manual labour and mix with labouring classes, rather than maintaining the rigid hierarchies imported from Britain.

Burke (2004a) also argued that the intention during initial British colonisation to establish traditional British-style rural areas based around market towns was rapidly undermined by lack of capital and consumer goods within the colony. Instead, small local hamlets developed in the hinterland, dependent upon the exploitation of local resources. Nayton (2011: 53), who analysed the development of the Swan River economy, also suggested that the self-sufficiency of these communities was limited to the production of foodstuffs and a restricted range of goods based on locally available resources. Shortages of imported structural materials resulted in the need to use whatever local materials were available for buildings and infrastructure (Nayton 2011:23-27). Both Burke (2004a:346) and Staniforth (2003:141) demonstrated that these shortages before 1850 were the result of a lack of capital within the colony, which inspired an abnormal trade system based on orders from colonial elites, rather than the delivery of speculative trade cargoes to Western Australian ports. It was not until the advent of the convict system in 1850 that contact with the rest of Empire increased and an influx of capital allowed the inclusion of the colony in standard world trading networks.

Nayton (1992, 2011) also investigated the second wave of colonisation in the state’s north, investigating sites at Broome, Old Onslow and Cossack. Using her market capitalism model she argued that the necessity to ship goods through Fremantle rather than directly from northern ports hindered the capacity of northern industry to thrive. Additionally, the prohibition on convicts in the northern expansion contributed to labour shortages, leading to the necessity to develop new industries based on local resources and made possible by Aboriginal labour, such as pearling, based out of Cossack and Broome, and a dependence on sheep pastoralism throughout the northwest.

The town of Cossack has been intensively studied compared to most other early Western Australian sites. As well as Nayton (2011), McIvory (1988, 1990) conducted extensive surveys to record the town, while Clifford (2008, 2012) used glass artefacts collected at Cossack in her study of glass patination processes. Cossack was also a central site for the major ARC funded project, The Historical Archaeology of the European Period in the Pilbara (hereafter referred to as HAPP) which aimed to develop an understanding of ‘...the origins and development of past cultural processes and colonial systems in the Pilbara’ (Paterson 2006:100). This project, particularly focused on colonial European expansion and contact with Indigenous people, was wide ranging, encompassing a number of themes and resulting in numerous publications (including Paterson 2006, 2008, 2011; Paterson and Wilson 2009) and research theses (including Bolton 2005; Carson 2003; Lewis 2003; McHarg 2006; Sanders 2005; Sinclair 2006; Wilson 2005). It investigated nineteenth-century sites including Cossack, coastal pearling and whaling sites throughout the Dampier Archipelago and numerous pastoral stations, arguing that European expansion was dependent upon the exploitation of Aboriginal labour. The study found that while Indigenous people tended to aggregate their camps around these European settlements they maintained traditional practice through rock-art and the incorporation of European material culture such as bottle glass into traditional tool manufacture.

Culture contact studies

A number of other studies have examined culture contact between Indigenous Australians and European settlers, primarily in the state’s north. The ARC-funded project Picturing Change built on HAPP, examining contact rock-art in the Pilbara region (Tacon et al. 2012), demonstrating that images of European material culture were incorporated into existing rock-art practice by Indigenous people. A number of Honours theses have also examined cross-cultural contact in the Pilbara using both direct analysis of rock-art motifs and spatial analysis of their positioning in the landscape (Fyfe 2010; Harris 2009; Smith 2008; Strano 2009). Although it is still in its infancy, a new ARC-funded multi-disciplinary project also plans to investigate culture contact on Barrow Island, across a range of site types (Souter et al. 2006).

Culture contact has also been examined in the Kimberley region where O’Connor and others (2013) have interpreted rock-art as being used by Indigenous people to restate traditional themes in response to pressure from European expansion. Smith (2001; Smith and Smith 1999) examined the process of Indigenous movement from traditional nomadism to station-based life, demonstrating that it involved a change in material culture and diet, but that changes were informed by traditional preferences and practice. Harrison (2002a, 2002b, 2002c) conducted research at Old Lamboo Pastoral Station, near Hall’s Creek. He argued for Aboriginal agency in mediating contact with settlers, evidenced through their recontextualisation of specific material culture such as iron tools (Harrison 2002b:73-74) and suggested that the two groups experienced a shared history in the development of pastoralism in the region. The combined research of Smith, Harrison and Paterson demonstrates Indigenous responses to the arrival of white settlers as part of a continuum of cultural behaviour. They argue that Indigenous responses, seen through rock art and the adoption of European material culture occurred within existing cultural traditions and were designed to mitigate the significant changes that were being imposed on traditional culture.

A number of other studies have also examined settler–Aboriginal interaction in Western Australia. Stingemore (2002, 2010) examined the incarceration of Indigenous people in syphilis hospitals on islands in Shark Bay in the early twentieth century. She showed that institutional processes were used to study and control Aboriginal people, most of whom actually did not have syphilis, and despite the impact of institutionalisation Aboriginal inhabitants were able in part to maintain traditional lifeways and beliefs. Technological adaptation through the use of glass for Indigenous tool-making has also been examined by a number of researchers. Harrison (1996, 2000) examined Aboriginal glass artefacts from two regions, Shark Bay and the Perth region, concluding that technological variation between the two districts may reflect differential Aboriginal reactions to new materials. Curry-Bowran (2011) concentrated on the Perth region and concluded that Noongar people were not passive in response to European incursions on their traditional lands, but instead were active agents in their attempts to mediate relations with the colonists. Harrison (2003, 2006) argued that the knapping of artefacts from bottle glass represented Aboriginal agency in response to the arrival of Europeans. In particular he positioned the manufacture of the Kimberley Point during the nineteenth century as ‘an artefact of colonial desire’ (Harrison
Convictism and penal transportation

A number of studies have investigated convict transportation to Western Australia. Gibbs (2001, 2006) conducted a pilot study that aimed to ‘...understand some of the more fundamental aspects of the structure of the system and its physical expression’ (Gibbs 2001:60). He developed a convict site typology, delineating between places crucial to the operation of the system (e.g. prisons, depots, work stations), accommodation (e.g. barracks and villages), and public works (e.g. roads, bridges, buildings) resulting from convict labour. He also assessed the archaeological potential of known Western Australian convict sites. Gibbs (2007) conducted survey and limited excavation of one convict depot, at Lynton, arguing that its physical position was the result of aesthetic rather than practical considerations and that this led to the failure of the settlement. Winter (2011, 2013a, 2013b, 2013c), built on the baseline data developed by Gibbs, explicitly situating Western Australian convictism as part of the larger system of British transportation, showing how the evolution of that system over time led to the form seen in the Swan River colony and arguing that the Western Australian system was ideologically, legislatively and physically different to that in operation in eastern Australia. He investigated convict depot sites at Guildford, Toodyay and York in the Avon Valley region, using spatial analysis to argue that they were open access places rather than punitive penal sites, and that ticket-of-leave convicts residing there had a relatively high level of personal freedom. He juxtaposed this with the highly restricted Fremantle Prison, designed for the reform and punishment of convicts (Bavin 1994). Bush (2012) investigated the contribution of convicts to Western Australia’s built environment. She also noted the difference between the Western Australian convict system and that of earlier convict regimes in the eastern states, demonstrating that skilled ticket-of-leave men, trained in the British public works prison system by the Royal Engineers, caused a fundamental change to the built environment in the colony. She argued that convicts brought modernity in building techniques and materials and provided the colony with a skilled labouring force that allowed an expansion of building sizes and styles. Studies which deal more directly with convictism include those by Burke (2004a) who discussed the effect of the system on the development of the towns of Guildford, and Allen (2002) who investigated evidence of gender at the Guildford Police Station and Gaol site. The centre of the convict system in Western Australia was Fremantle Prison (Figure 2), but investigation of this site has gone beyond just the convict period, examining the prison’s working life between 1855 and 1991. It has been included in a number of larger studies. Casella’s (2009) investigation of graffiti within cells was part of a larger global study of prisoner graffiti. Kerr (1984, 1988) discussed the prison as part of his larger study of Australian penal architecture, showing that it was a product of contemporary ideology. The substantive study of the prison was conducted by Bavin (1994) as part of her doctoral studies, with subsequent studies by Burke (1998) and Mein (2010) as part of Honours projects. Bavin’s project investigated Fremantle Prison as one of three Western Australian colonial prisons and she demonstrated that the monitoring and control of prisoners was the most important aspect of prison design (Bavin 1994:238); that social contact between prisoners was tightly controlled (Bavin 1994:239); and that religious areas were of crucial importance to the design of nineteenth-century prisons and central to ideas of prisoner reform (Bavin 1994:242). Both Burke (1998) and Mein (2010) analysed assemblages recovered from underfloor deposits within prison cells but with differing results. Burke (1998) drew a distinction between private and public space at the prison, suggesting that assemblages recovered from within cells represented private activity. Mein (2010) went beyond this, suggesting that assemblages recovered from two separate cells demonstrated prisoner coping strategies designed to deal with the monotony of prison life.

Studies of labour and industry

A number of studies have concentrated on the development of industry and the experience of the people involved in them. Given the centrality of mining in the history of Western Australia, it might be expected that historical archaeology would have focused extensively on this industry. Only two major studies, however, have examined nineteenth-century mining, one focusing on mining prior to the 1890s gold rushes and the other examining 1890s goldfield sites. Gibbs (1997a, 1997b, 2010a) examined mid-nineteenth-century mining in the Murchison region around Northampton, concentrating on lead and copper exploitation. His study recorded a number of mines and settlements and he examined both the technology of mining (Gibbs 1997a) and social organisation within settlements (1997b; 2010a). He demonstrated that a lead smelter at Warrabunno, used for processing ore from the nearby Geraldine mine, was based on state-of-the-art contemporary British technology and produced high grade ore, but despite this the mine failed and the smelter consequently closed (Gibbs 1997a:61-63). His investigation of the nearby Gwalla settlement suggests that despite a largely convict workforce, local leaders attempted to create an idealised and highly organised society in a remote frontier location (Gibbs 1997b, 2010a).

Fleming’s (2011) PhD research examined 1890s gold rush settlements in the Mid West goldfields near Cue. She suggested that despite evidence for some adherence to what might be termed a global gold rush culture, Western Australian gold rush participants were strongly influenced by local conditions, manifesting in evidence for cooperative practices to ensure survival in harsh conditions. Populations were also...
impacted by, and contributed to a developing Australian identity that was influenced by local events and conditions. One other major study investigated sites crucial to mining during the gold rushes. Bolton’s (2009) ARC-funded PhD research examined settlements along the Golden Pipeline, built to bring water from Mundaring to the eastern goldfields settlements of Kalgoorlie and Coolgardie. Her research showed these sites to be mostly ephemeral and transient, populated largely by men either travelling to the goldfields or working on infrastructure built to service the goldfields, including the railway line and water pipeline.

Whaling has been extensively researched, with a number of studies demonstrating the importance of bay-whaling to the early Western Australian economy. These have provided good historical context for the industry and a number of sites have been investigated in detail. McLroy (1986) recorded remnants of the Bather’s Bay whaling station in the centre of Fremantle, including the tryworks, jetty and associated structures. Gibbs (1995, 1998 2005, 2010b) investigated numerous sites but concentrated on the remote south coast site at Cheyne’s Beach, which developed as the Fremantle site was in decline. He charted the development of the site and analysed a rich faunal assemblage, showing that the inhabitants relied heavily on the consumption of domestic rather than native animals. Rodrigues (2011) conducted a preliminary investigation at the site of the Pakington Whaling Station at Port Gregory, recording a range of material culture related to whaling activities but without significant analysis. These studies have investigated the social and industrial aspects of whaling, demonstrating that the Western Australian industry was largely remote, almost entirely based on shore whaling, and prior to the advent of the convict system in 1850, provided important economic stimulus to the depressed Western Australian economy.

Pearson (1986, 1990) investigated industrial technology associated with the lime-burning industry and recorded a number of kiln sites in the south-west of the state. He determined that, due to the abundant sources of limestone in Western Australia, lime burning was rapidly adopted by early settlers but there was wide variation in kiln types which may have related to the geographical origins of the people using them. Gibbs (2007) recorded a lime kiln at the Lynton convict depot, suggesting the use of lime mortar was an expedient use of locally available materials, while Bush (2012) found that lime was a crucial component of pre-1850 construction, as lime wash protected inferior bricks and rammed earth structures from degradation due to weather.

A number of other industrial processes have been examined within Honours theses. The colonial timber industry was investigated by Smith (2003) who studied timber mill sites at the Jarrahdene and Dean Mills in the southwest, and Winter (2005) who examined primary timber-getting in the forests to the east of Perth. Allia (2005) investigated early building styles and techniques in the Swan River colony, while Checchi (2008) examined the beginnings of the wine making industry, and Woodhams (2002) conducted a preliminary study of the early Western Australian railways. Finally, Cunneen (2005) studied the development of the south-coast fishing industry.

**DISCUSSION**

The preceding thematic review suggests that, while a number of major studies have been completed, there is still significant scope for research to be conducted in historical archaeological processes in Western Australia. While research conducted to date has been extensive in specific areas, in others it must be considered that only baseline data have been gathered. Much of the work conducted has been atheoretical and site based, rather than concentrating on larger processes and systems. Encouragingly, over time there has been a shift towards a more theoretically based approach, with a number of major studies conducted in the last two decades taking sophisticated approaches to research questions.

When considering the development of the sub-discipline in the state, the clear dichotomy between the investigation of marine and terrestrial sites must be acknowledged. The strength of maritime archaeology in Western Australia is the result of numerous factors including movements to protect wreck sites since the 1960s, leading to the enacting of the *Maritime Archaeology Act 1973*, and the development of an extremely strong and proactive research environment at the Western Australian Maritime Museum dating from that period (Rodrigues 2011:76-91). In contrast, until the 1990s terrestrial historical archaeology in Western Australia primarily occurred in the commercial sphere and the early important work cited in this paper was largely conducted as a result of consultancy projects. The vast majority of research focused projects have been conducted since 1990, mirroring a rise in interest in historical archaeology within the discipline of archaeology at The University of Western Australia. However, there was not a tenured academic position within Western Australian universities filled by a historical archaeologist until the year 2000. Encouragingly there are now at least four tenured academic positions filled by researchers engaged in historical archaeological investigation in Western Australia.

When assessing historical archaeological research conducted in Western Australia there are clear areas where a great amount of knowledge has been accumulated. Obviously investigation of ship-wrecks and other maritime sites is considerably developed. Four other areas have had coverage allowing an understanding of systems rather than individual sites. These are convictism and penal archaeology; Indigenous contact in the Pilbara and Kimberley; the whaling industry; and to a lesser extent, colonisation and development of the state. For convictism the research of Bavin (1994), Gibbs (2001), Bush (2012), and Winter (2013a) have provided significant insight into the Western Australian convict system. Additionally, current intensive research at Fremantle Prison is providing insight into the post-convict use of this one major site. However, there is a need for considerable further work relating to the convict period. Convictism in regional areas, particularly those south of Perth, and the life of ticket-of-leave men in private employment is not well understood, while the use of convicts as a labour force and in particular, the major transformation caused by conversion to a penal colony also need investigation.

Colonisation and Indigenous contact in the state’s north is also well understood thanks to the efforts of Paterson (2006), Smith (2001) and Harrison (2002c). There is limited knowledge, however, of Indigenous participation in pastoralism or indeed other industries in the south and east of the state. Other contact and post-contact Indigenous sites such as missions and massacre sites, as well as the nature of contested space on the frontier all have great potential for research. Burke (2004a), Paterson (2006) and Nayton’s (2011) studies have provided significant understanding of the waves of European colonisation throughout Western Australia, although the experience of settlers in different places and at different times needs further investigation.

When looking at the entire corpus of historical archaeological research in Western Australia, a number of factors become immediately apparent. First, the vast majority of studies have been conducted in rural areas of the state, often in frontier situations. Second, most research has concentrated on sites in northern (Pilbara and Kimberley regions) and central (Murchison region) areas of the state or on coastal sites. Third, the nature of much of the research has been as pilot projects conducting the first investigation of a particular topic. In these
cases, while significant insight has been gained further research is required to consolidate those initial steps. And fourth, research has been confined to a number of narrow topics, with wide scope for expansion.

The most glaring omission is the limited research into urban settlement sites. There has been virtually no investigation of the state’s major nineteenth-century population centres, with the exception of Guildford, where a number of studies have been conducted (e.g. Allen 2003; Aliia 2005; Burke 2004a). There has been no research on the development of Perth, Bunbury, Geraldton or Kalgoorlie, and only limited engagement with Fremantle and Albany. Of the latter, the majority of research in Fremantle has centred around Fremantle Prison, with only two papers (McCarthy 1987; McIlroy 1986) being published on non-penal parts of the settlement, and a small number of consultancy reports on specific parts of the city (e.g. Burke 2006; McIlroy 2008), while research in Albany has concentrated primarily on the site of Old Farm Strawberry Hill (Gardos 2004; Paterson and Winter 2008). Given that urban centres have housed the majority of the population since European colonisation, their omission within research frameworks needs immediate redress. The archaeological investigation of Perth city is similarly limited, with only three unpublished research theses that concentrate on individual sites (Bavin [1994] at Perth Gaol and Waddell [2001] and Elder [2008] for East Perth Cemetery) and a number of consultancy reports that concentrate on individual sites (e.g. Gow et al. 2012 for the Deanery and Nayton 1998, 2003, 2010 at Government House).

As Perth has served as the capital of Western Australia since 1829, this lack of research is anomalous. However, developing appropriate research projects for Perth city becomes problematic when it is considered that the centre of the city in the twenty-first century, where most modern development is occurring, is the same as that during the nineteenth century. The erection of high-rise buildings throughout this urban core has obliterated most evidence of that initial settlement, with very few places left that would retain a nineteenth-century deposit. Figure 3, a view of St. George’s Terrace, the ‘main street’ of Perth since settlement in 1829, demonstrates the dilemma, showing that modern high-rise buildings dominate the landscape. In contrast Fremantle has retained much of its nineteenth-century character. However, research into the development of Fremantle is also needed. For both Perth and Fremantle, important questions include the nature of initial settlement and expansion beyond the urban core, adaptation to the local Western Australian environment, the nature of the relationship between the two places, the impact of the implementation of the penal colony in 1850, the lifeways of inhabitants, culture-contact in an urban environment and a range of other possibilities. The same research questions could also be equally applied in the other regional centres. There is less of a development imperative in these towns (with the exception of Kalgoorlie) and so less urgency, but similarly important research possibilities.

The concentration of existing research, not only on rural areas, but also on the sparsely populated north and east is also of interest. During the nineteenth century the majority of the rural population and development was restricted to the south-west corner of the state and indeed, expansion beyond this was discouraged before 1850. A number of interesting questions could be investigated in this area, including the nature of adaptation to new environments, the development of pastoral and agricultural industries, contact with Noongar traditional owners, and in particular, the nature of life in small, isolated settlements on the periphery with limited contact with the centre. This investigation of isolation could be extended to the entire state, which in the first half of the nineteenth century was amongst the most isolated outposts of the British Empire and further research into the impact of this isolation is needed. In particular settler adaptation during this early period needs further investigation.

Another potential large scale question is the difference between Western Australia and the eastern Australian colonies. The assumption that historical processes in Western Australia have been similar to the eastern states has been challenged by a number of researchers including Winter (2013a, 2013b) and Bush (2012) who demonstrate that the convict system in the west was distinctly different from that of the eastern colonies, while Staniforth (2003:126) has argued that the development of the Swan River colony was severely retarded compared to other Australian colonies, also implying a difference between east and west. These differences have implications for the nature of material culture within the colony, including processes for acquisition through trade, use and adaptation. Western Australia underwent two major transformative events in the nineteenth century, the implementation of the penal colony in 1850 and the gold rushes in the 1890s. The impact of these events on the state has only had limited investigation and provides great scope for further research.

Beyond these large scale processes a number of areas not yet discussed are ripe with research possibilities. Of the nineteenth-century industries that were important to the state’s survival, only whaling has been researched in a fashion that allows a good understanding of the industry and processes established within it. All other Western Australian colonial industries have had limited or no investigation. Both the industrial processes associated with these industries and labour and social relations of those people working within them provide possibilities. Important industries that have so far gone untouched include the sandalwood trade, pastoralism and agriculture in the south-west, and flour milling. Industries with limited investigation include the development of the rail and transport system, including the nineteenth-century process of road building. Other industries with significant potential include the fishing industry, wine making and beer brewing, and the development of the Western Australian building industry. The two economically important industries of timber-getting and mining also require further investigation. Important questions for investigation of the timber industry

Figure 3: View of St George’s Terrace from the Barracks Arch, looking east.
include the nature of the adaptation of existing technologies to the hardwood timbers of jarrah and karri, the social systems within isolated, short lived timber settlements, and the development of appropriate systems for transporting timber from forest to mill.

For the mining industry, important questions relate to the nature of gold rush expansion in the eastern gold fields, and in particular the twentieth-century expansion of coal, iron ore, nickel and other mineral exploration and exploitation. Given that the history and economy of the state is so intrinsically linked to the mining industry, these should be considered priority research areas. In particular, the tendency of mining companies to use open-cut pit-mining in areas of nineteenth-century exploration (e.g. the Kalgoorlie Super Pit) potentially obliterates early evidence of this industry. Other areas with research possibilities include the many failed settlements on the periphery, the development of the overland telegraph line, and other forms of communication with the eastern states. A number of twentieth-century developments are also of interest, including the network of military sites set up throughout the state during World War II, and subsequent Greek and Italian post-war migrations.

CONCLUSION

This review has provided an overview of historical archaeological investigation in Western Australia. When the relatively recent commencement of terrestrial historical archaeology is considered, a significant corpus of research has been conducted. Encouragingly, there have been a number of recent projects addressing larger issues beyond the site level, and other similar projects are either ongoing or currently in the planning stage. However, there is still much to achieve in Western Australian historical archaeology and there remains vast potential for the discipline to play a substantial role in providing information about the development of the Swan River colony and then the state of Western Australia. Probably the most pressing need, and the area with the greatest potential, is the investigation of the heritage of the urban centres of the south-west. These places, home to the majority of the population of the state for its 175 year history, are largely unresearched and without a consideration of their development we cannot hope to gain an understanding of what life was like for the majority of the inhabitants of the state for the majority of its history.

ACKNOWLEDGEMENTS

This paper began as an extension of my PhD literature review and a desire to get a handle on Western Australian historical archaeology. This would have been impossible without the assistance of Alistair Paterson and Shane Burke, who provided critical advice and commented on drafts of this paper, and Kelly Fleming who helped me formulate aspects of the paper through discussion. Thanks also to all of the various practitioners who have worked to record and interpret the historical archaeology of Western Australia, in particular Gaye Nayton who has worked tirelessly in the face of great adversity to champion historical archaeology, to educate the public and to protect historical sites within the state.

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