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CHAPTER

## The Archaeology of Agrarian Australia

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### Abstract

The arrival of Europeans in Australia heralded the establishment of new forms of farming reliant on a range of foreign domesticated plants and animals. More than any other colonial industry, farming transformed the continent's environments, ecosystems, and Indigenous cultures. This chapter considers the history of the archaeology of agrarian Australia, and in particular the ways that Aboriginal people provided labour and knowledge. At the same time farming relied on Aboriginal peoples' Country. Recent research highlights both the social and environmental dimensions of this history. Other work highlights how Aboriginal people managed landscapes in their own right, a fact also reported by some colonial observers. This management has the potential to highlight Aboriginal peoples' agency and to offer ways to reconsider contemporary land management in an era increasingly concerned with the challenges of the Anthropocene.

**Keywords:** pastoralism, Indigenous engagement, precolonial, colonial industries, farming, Anthropocene

**Subject:** Archaeology by Region, Archaeology

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## Introduction

The arrival of the British in Australia in 1788 heralded the start of new forms of farming that were to clash with Indigenous economies and practices, as well as impact upon Australian ecosystems and environments. These dramatic changes were part of a spectrum of changes occurring globally since the fifteenth century. For North America, Crosby described the translocation of European farming practices, technology, pathogens, and human populations as the ‘Colombian Exchange’ (Crosby 1986: 2003). While no similar term popularly exists for Australia, for environmental historical Tom Griffiths, 1788, like 1492, was ‘a momentous date in world ecological history [when] ... Australia ... experienced colonization and industrialization almost coincidentally, a compressed, double revolution’ (Griffiths 1996: x). The traditional view of colonialism in Australia focusses on the transportation of convicts, the establishment of Western practices and institutions, and the extent of dependency of colonies on Britain. However, equally significant were attempts to establish industries (mostly extractive in nature), and the relationship between agrarian farming and local Indigenous peoples. An archaeology of agrarian Australia (Paterson 2018) has been suggested as a corollary to colonial farming in other parts of the world (Castillo 2014).

The story of agrarian Australia is part of the global story of agriculture. Only one animal—the dingo—had been introduced to Australia in the Holocene prior to European colonization. The arrival of non-Aboriginal others meant the deliberate introduction and promotion of multiple animal species, including horses, camels, donkeys, cattle, sheep, goats, buffalos, pigs, dogs, cats, chickens, and foxes—amongst others ranging from fire ants to rats. Introduced plants species also postdate 1788, with the First Fleet carrying wheat and corn seeds, and a mix of plants with both decorative and culinary uses collected from Cape Hope (South Africa) en route—quince, apple, pear, strawberry, fig, bamboo, sugar cane, oak, and myrtle.<sup>1</sup> Aboriginal people in the early colonial world would probably have encountered introduced animals before they met the newcomers (Davidson 1989).

Agrarianism was integral to European colonization and colonialism: farming and pastoralism being the largest uses of land in Australia. In 2021, pastoral leases covered 44% of Australia, while lands with legally recognized Native Title covered 40%. Across the world pastoralism developed due to several factors, including the presence of rangelands dominated by plant species suitable for animal grazing—these were typically in semiarid regions; suitable animal species made available through either domestication or, in the case of Australia and many other settler societies, diffusion; and human population densities (Blench 2001: 2). In Australia, pastoralism was inherently part of colonialism and represented the usurpation of traditional Indigenous country and land-use practices following introduction of domesticated species and clearing of forests for the establishment of grassland pastures. Interestingly, forms of medieval land management suited to the open range were common in semiarid Australia, with the animals tended by shepherds with infrequent corralling (Paterson 2008).

Prior to the arrival of Europeans, Aboriginal Australians managed different plants and animals by various means—this is a story of hunter-foraging lifeways. Increasingly, studies of Aboriginal land management allow us to respond to concepts based on rejected evolutionary ideas of economic development formed in Europe, wherein societies develop from hunter-foraging to farming in a hierarchy of development. We now see ways in which the manipulation of the environment by Aboriginal people is part of a larger story of anthropogenically transformed landscapes and human interactions with companion species.

This chapter provides an overview of archaeological research in Australia relevant to agrarian history. It begins with a review of the current debate regarding the nature of Aboriginal resource management and foodways around Australia prior to the arrival of European invaders. A central part of these discussions relates to concepts like ‘agriculture’ and ‘hunter-gatherers’—these types of terms have not been constant over time in their use and have come to reflect racist and evolutionary worldviews. A challenge today is to continue to understand how Aboriginal people lived effectively in Australia prior to the arrival of European farmers, and the consequences of that history. Many of the early archaeological studies of agrarian Australia presented in this chapter have overlooked the Aboriginal dimensions of farming, rather focussing instead on industrial and white settler histories. However, recent decades have seen a substantial effort by archaeologists to explore the cross-cultural dimensions of agrarian Australia and its heritage. A more recent

challenge, identified here in a couple of studies, is to integrate the evidence available through archaeology with environmental sciences to better understand the ways in which Australian ecologies and environments were transformed by the interdiction of European farming.

## Aboriginal Land and Resource Management Prior to Contact

The topic of Aboriginal and Torres Strait Islander land and resource management prior to the arrival of Europeans has become part of a national discourse in recent years—fuelled by publications claiming that Aboriginal Australians practiced forms of agriculture (Gerritsen 2010; Pascoe 2014). Much of the evidence for these claims comes from a reading of historical accounts by European explorers from across colonial Australia that suggest that ‘Aborigines were building dams and wells, planting, irrigating and harvesting seed; preserving the surplus ... and manipulating the landscape’ (White 2019: 63 citing Pascoe 2014: 2) as well as forms of sedentism (see also Gammage 2011). There are various responses to this thesis (e.g., Keen 2021; Paterson 2013; Sutton & Walshe 2021; White 2019), which, in its attempt to highlight accounts of Aboriginal innovation, risk falling back on evolutionary thinking that sees agriculture as a more developed form of subsistence than hunter–forager lifeways. Sutton and Walshe (2021: 18–19) note: ‘We also take issue with the notion that recognisably European ‘settled’ ways of living, focused on material and technical ‘development’ in food production, are in any way to be valued more than the ways of living that existed in Australia before invasion’.

Another problem with the use of Gammage and Pascoe is that the literature generalizes for the whole of Australia, rather than recognizing regional variations. Hiscock (2008) and Ulm (2012) argue that pan-Holocene and pan-Australian trends should be considered cautiously, instead arguing that regional diversity reflects a mosaic of independent cultural trajectories based on continuous adjustments to local physical and social exigencies (Ulm 2012: 189). Pascoe’s *Dark Emu* has raised debate regarding the definition of agriculture. White finds that the activities cited by Pascoe are ‘hard to describe ... as other than agricultural’ (White 2019); however, contrary to Pascoe, Keen (2021: 106) finds that the sum of evidence suggests that there is another conclusion to draw: that Aboriginal people in 1788 were hunter–gatherers, and along rivers, lakes, and the coast, they were also fishers, and that Aboriginal languages lack vocabularies associated with gardening and agriculture, which would be expected from long-term agriculturalists (Keen 2021, citing Sutton & Walshe 2021). Archaeological and anthropological evidence accumulated over several decades does, however, support ‘The current consensus in archaeology ... that before the British colonisation of Australia, Aboriginal people engaged in practices to do with the intensification of food resources. These included some replanting and transplantation, and some rudimentary sowing’ (Keen 2021: 111). These practices and those of harvesting and storage are not necessarily forms of cultivation, and the translocation of plants does not mean domestication. However, any hard distinction between forager and farmer is too rigid, and instead food production can be seen to be complex and diverse across Aboriginal Australia (Keen 2003). Sutton and Walshe (2021: 172) prefer the term ‘hunter–gatherers-plus’ for economic activities that occurred in some regions. Hynes and Chase (1982) propose alternate terms such as *domiculture*, in their study for Cape York food production; while Denham (2009) proposes a practice-based approach, building on Bourdieu, which advocates looking at the practices around plant exploitation over time locally, whether undertaken by foragers or farmers (Denham’s example here being drawn from the Highlands of Papua New Guinea).

At contact, Aboriginal Australians relied on diverse food resources managed through a variety of means, such as the use of fire, the promotion of certain plant and animal species, the use of physical structures such as traps and barriers to direct resources, and through the timing of activities (see McNiven, Manne, & Ross this volume). The anthropogenic use of fire is known from historical sources, Aboriginal knowledge and practice, and palaeoecological records (Paterson 2013: 7; see Rowe et al. this volume). Certain accounts have been well cited, such as Edmund Curr: ‘there was another instrument in the hands of these savages which must be credited with results which it would be difficult to over-estimate. I refer to the *fire-stick*.... he tilled his land and cultivated his pastures with fire’ (Curr 1883: 189–190, quoted in Gammage 2011: 2). It is the selective use of historical accounts such as this in *Dark Emu* that is critiqued by Sutton and Walshe (2021). In fact, a reading of settler accounts reveals that there were very few references to Aboriginal gardens or farms; rather, the absence of agriculture among Aboriginal people was used by the invaders to justify white claims to land ownership (Gammage 2011; Gott 1982).



Accounts such as that by Curr inspired archaeologist Rhys Jones's (1969) work on 'fire stick farming' to describe burning as a resource management tool. This work was followed by other archaeologists (e.g., Hallam 1975), and ecologists and historians (e.g., Burrows et al. 2006; Gott 2002; Gill et al. 2002; Head 1994; Latz 1995; Pyne 1998). Fire-modified landscapes were sometimes beneficial to Europeans and their farming (see Gammage 2011 for a review of historical sources), something observed by colonial administrators (e.g., Ward 1998 for southwest Western Australia). The use of fire as a management tool to promote biodiversity and manage fire regimes is a contemporary concern, leading to experimental research and long-term studies of the consequences of human burning practices (Bliege Bird et al. 2008).

The evidence from archaeology and palaeoecology for management of plant species remains challenging, largely reflecting the paucity of survival of plant remains in archaeological sites and the dramatic changes in land forms across Australia since European arrival. However, studies have revealed the intensive reliance on various 'wild' plants (Beck et al. 1989; Denham et al. 2009; Denham 2008; Gott 1982, 1983) and their social implications (Antolin et al. 2016).

Other forms of land modification reveal the intensive quest for food—restricted to specific localities. The use of fish traps, nets, and canals to assist the capture of fish is demonstrated in some inland rivers and along the coast (see McNiven & Lambrides this volume). The most widely recognized example is the World Heritage Listed Budj Bim cultural landscape in southwest Victoria, where the ancestors of the Gunditjmara excavated channels to funnel water into low-lying areas to create new habitats for eels and other freshwater fish in the Late Holocene and into the contact period (Builth 2014; Clarke 1994; McNiven et al. 2012).

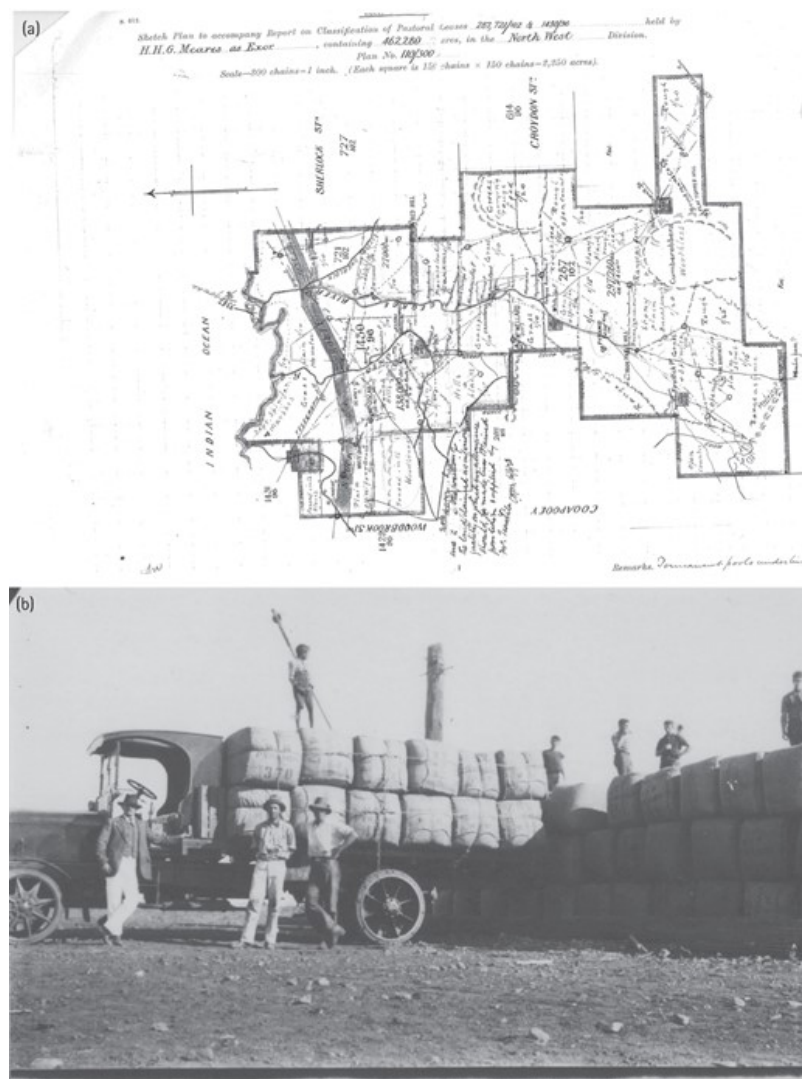
The only domesticated animal to precede European contact was the dingo, introduced as a domesticated species over 3500 years ago; it has long been realized that Aboriginal people maintained a close relationship with dingoes (Balme & O'Connor 2016, this volume). Recently, Adam Brumm (2021) has argued that Aboriginal peoples' interactions with dingoes involved management and domestication processes, but not as conventionally defined (i.e., controlled breeding and artificial selection). This new view builds on critiques of binary understandings of domestication (i.e., animals having their breeding controlled by humans) versus nondomestication (i.e., animals having no interaction with humans) (Fijn 2018).

A heterogeneous image of the continent at the threshold of European arrival has emerged from the history, archaeology, and palaeoecology of lifeways and intensities of resource use in diverse regions. As Ulm (2012: 189) cogently notes:

we might conceive of a landscape in which at any point in time there might be a range of higher-density populations distributed across resource-rich areas separated by lower-density populations. Not every society needs to be complex and we should not have the expectation that this will be the case. This is not denying anyone agency or ability; it simply recognizes the fact that different people developed different ways of living to meet particular needs in particular circumstances shaped by what came before (i.e. historical contingency).

## Agrarian Australia

Substantial and dramatic changes occurred across Australia in the century after European arrival in 1788. The ecology of the entire continent was reworked by the disruption of fire regimes and the destruction of Aboriginal societies, the introduction of plough agriculture, the wholesale clearance of forests, and the spread of exotic plant and animal species into every ecological zone (Lawrence & Davies 2018: 230). Agrarian Australia involved forms of crop farming and pastoralism, but for much of semiarid and arid Australia the only form of farming was sheep and cattle pastoralism (Paterson 2005a, 2005b, 2018) (Figure 1a).



Pyramid Station, Pilbara, Western Australia. (a) Pastoral lease map showing landscape features, pastures, water sources, stock routes, and improvements (1920, Map to accompany Inspector's Report on Classification of Pastoral Leases, Government Surveyors Office). (b) Loading wool bales for transport at Pyramid Station, 1925–1930

(courtesy City of Karratha Local History Office, 2005.389).

The study of agrarian Australia has a long history; pastoral history until the 1950s was the central component of the general history and 'national narrative' of Australia, which was said to ride on the sheep's back (Pearson & Lennon 2010: ix) (Figure 1b). The themes of exploration, squatters, and the national wool industry were at the heart of the national psyche—fuelled by commercial dominance, literature, and art. Historical (Barnard 1962; Bean 1912) and architectural overviews of the pastoral industry have highlighted certain historical narratives and the heritage primacy of built infrastructure, especially of homesteads, woolsheds, and other iconic structures such as windmills (Pearson & Lennon 2010). The historical ecology of agrarian Australia has been largely the domain of environmental historians, environmental scientists, and geographers; however, the informative potential for historical archaeology and industrial archaeology is emerging (Lawrence & Davies 2018).

A significant element of farming is industry, as the history of Australian society was intrinsically linked with industrial processes. Pastoralism and mining drove the expansion of Europeans into the interior of the continent. Extractive primary industries—agriculture, pastoralism, mining, whaling, and timber-getting—created raw materials for consumption and export and were the main contributors to the economy (see Gibbs & Russell this volume). As argued by Casella (2006), there are three aspects of industrial archaeology: (1) the origin of industries, equipment, and technology; (2) adaptation of industries to Australian conditions; and (3) Australian industrial innovations—all themes relevant to agriculture and pastoralism (Winter & Paterson in press). Ireland (2002) explores how British industrial archaeology in the 1970s and 1980s influenced the study of mining and pastoralism in Australia.

Pastoralism was the vehicle for the expansion of the colonial frontier, initially in the early eighteenth century with convicts as shepherds then developing other forms of labour, including Aboriginal labour

(Davidson 1994). Twinned to this expansion was the development of transport infrastructure (riverine, maritime, and overland), energy production (initially steam and also wind, and to a lesser extent water), the development of specialist work sites (for example, woolsheds, wool scours, yards, fenced paddocks, etc.), new forms of water management (leading to the development of artesian bores), inland settlements, and related mercantile and commercial sites (wool stores, banks, telegraph and post facilities) (Figures 2a and b). It is difficult then to state exactly where colonialism ‘ends’, given its deep articulations with farming and pastoralism. Accordingly, agriculture and its associated works sites also represented colonialism and relate directly to sites of governance, policing, health, and incarceration of Aboriginal peoples. For example, a survey of Aboriginal historical places in central Queensland includes pastoral sites such as droving sites in a wider range of historical places, including sites related to massacres, Native Police, yambas (camping), ceremonies, resource gathering, missions, and reserves, and events such as birthing places (Godwin & L’Oste–Brown 2002).

**Figure 2**



(a) Australian Agricultural Company's Coal Works, Port Stephens, New South Wales (attributed to J. C. White) (SSV1B/NEWC/1840-9/1, State Library, New South Wales). (b) Wool scour at Strangways Springs, Western Australia, ca. 1870 (B1491, State Library of South Australia).

Historical archaeology has long been interested in the sites and relics of industry, including farming and pastoral sites (e.g., Birmingham et al. 1979; Walker & Forrest 1995). In the 1970s, Connah (1977) conducted landscape-level work at Saumarez Station, in New South Wales, leading to later work on colonial estates (Connah 2007). An interest in technology and adaptation around water fuelled much earlier work, with investigations of woolscours (Figure 2b) and woolsheds (Cannon 1992; Cummins 1989; Partridge 1984), water-powered flour mills (Connah 1994; Pearson 1996), and access to water over time (Godwin & L’Oste–Brown 2012; Paterson 2003), including Aboriginal waterholes (Grimwade 1998) and artesian springs (Paterson 2005c). Early farms have been examined by historical archaeologists using microfossils, sedimentology, archaeological features, anthroecology, and archaeobotany to better understand the origins



of European farming landscapes at colonial Parramatta (Macphail & Casey 2008) and Albany (Winter et al. 2016).

Homesteads were mainly studied by heritage architects, although after the 1970s these were subject to archaeological investigation, especially at the residences of rural elites (e.g., Connah et al. 1978; Connah 1986). However, other social and political aspects relevant to life on farms have been explored. Dimensions of early agricultural companies have been touched upon by archaeologists at the Australian Agricultural Company at Port Stephens, New South Wales (Bairstow 1985) (Figure 2a) and the Van Dieman's Land Company in northwest Tasmania (Murray 1988), both English joint-stock companies. At the Kinchega Pastoral Station in western New South Wales, Allison used archaeology (particularly ceramics) and documentary evidence to explore domestic behaviour in rural Australia in the late nineteenth and early twentieth centuries, highlighting the activities of women and children (Allison 2003; Esposito & Allison 2020). Terry's (2013) study of Caboonbah, a pastoral property in the Brisbane Valley of Queensland in the late nineteenth and early twentieth centuries, excavated domestic waste to highlight how a middle-class family maintained their values in a remote setting. Egloff et al. (1991) used archaeology to study the 1891 shearer's war and the main strike camp at Barcaldine, Queensland. In the Pilbara, the attempts made by the foundation pastoral families from the 1860s to demonstrate their aesthetics are revealed in material choices, such as expensive and tasteful building materials and musical instruments (Paterson 2006; Smith 2008). Farming settlements were also significant for Chinese settlers; there is a rich tradition of historical archaeological research into the Chinese in Australasia. Despite the focus on mining and urban life, the Chinese migrants also often maintained market gardens, such as Ah Toy's garden on the Palmer River goldfield (Jack et al. 1984). In contrast, some forms of farming have had almost no archaeological attention, such as the dairy industry which—with the exception of Casey's (1999) analysis of a home dairy at the Brickfields site—has undergone significant developments worthy of archaeological research, such as technological innovations and the shift from household-level herd ownership and management to larger corporate farms.

Historical archaeologists have moved beyond a site-based approach to consider landscape and environmental transformations. Most notably, Lawrence and Davies (2019; Davies & Lawrence 2015) have used archaeological evidence to demonstrate the ways that the Victorian goldfields resulted in the mass movement of sediments, transformed hydrology, and landforms—and tied these changes into an archaeological approach to the Anthropocene (Lawrence et al. 2016). Similar to mining, both farming and pastoralism transformed landscapes, ecosystems, and environments through removal/elimination of native plant and animal species, changes to topsoil through tilling and animal treadage, increased erosion, changes to hydrology, and various structural changes, such as roads, fences, bores, wells, dams, canals, and built structures—termed 'improvements'. In the recent volume *Historical Archaeology and the Environment* (Torres de Souza & Costa 2018), Murray (2018) maps out an archaeology of pastoralism in the Great Artesian Basin in southeast Australia that defines the diverse themes of an archaeology of pastoralism at a regional level: contributing to ecological history, treating wool as a global commodity, the impact of new technologies (particularly bores), and Aboriginal dispossession (see later). Lawrence and Davies (2018: 230–231) see a central role for historical archaeology and settler history in Anthropocene studies and provide a comprehensive review of studies of settler-driven anthropogenic change as they relate to archaeology: 'Environmental data from disciplines such as ecology, palynology and geomorphology have yet to be fully integrated into the human narrative.... [and] It is historical archaeology, working with documentary as well as material sources, that can integrate the multiple lines of evidence needed to understand what has happened to the environment in the 200 years since European arrival'.

## Aboriginal People and Agrarian Australia

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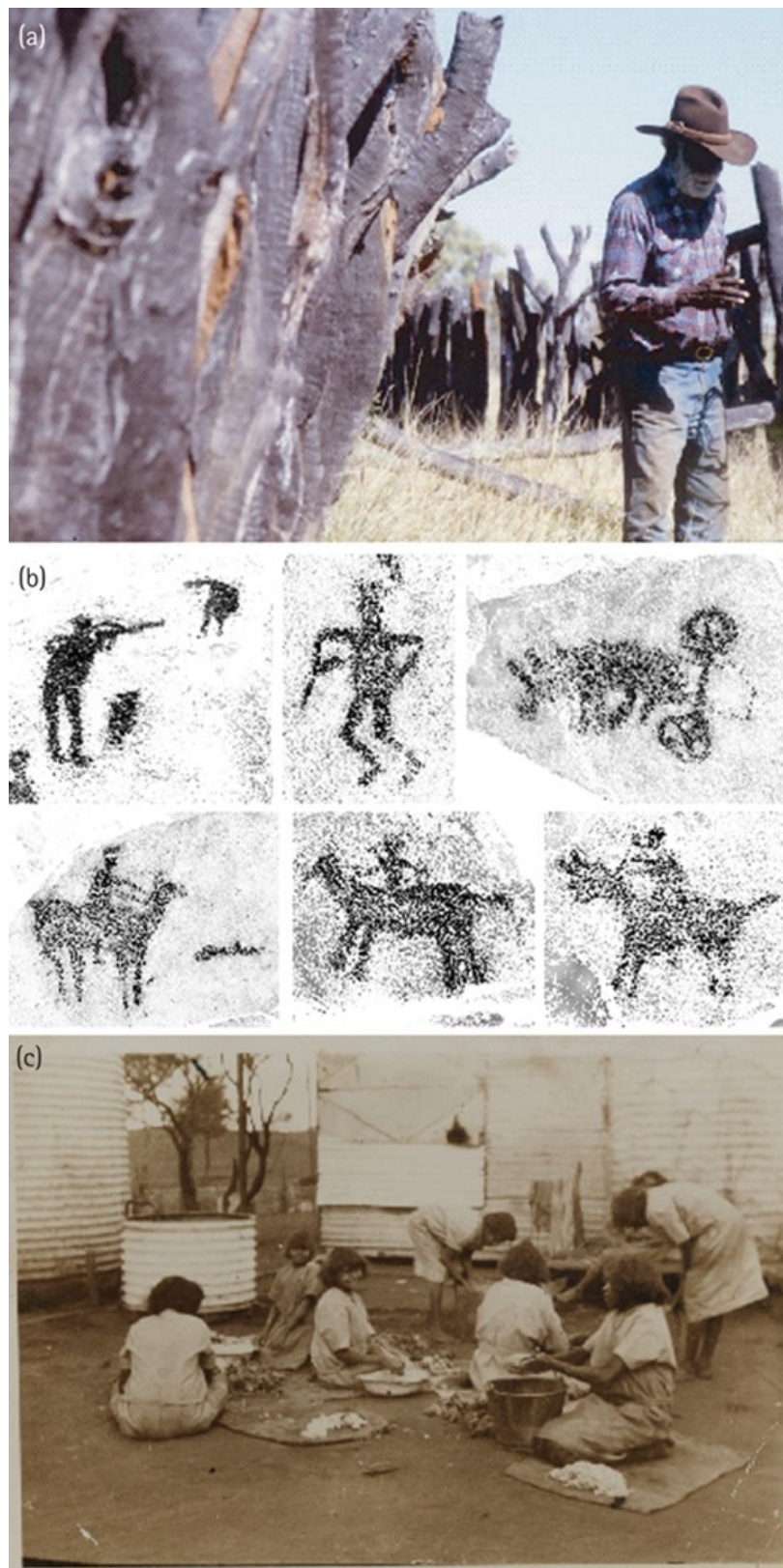
The evidence for the presence of Aboriginal people on farms and pastoral stations represents a larger body of archaeological work, growing from the 1980s onwards. This is due to the growth of archaeological work on culture contact and Aboriginal experiences in the colonial world. It followed and built on revisionist history (particularly that of Henry Reynolds and others) concerned with the forms of Aboriginal engagement with settlers on the frontier (Reynolds 1972, 1990)—which for much of Australia involved agrarian dimensions—and the ways that these histories were hidden, obscured, and forgotten (Reynolds 1998). Work on frontier violence by historians (Dwyer & Ryan 2012; Reynolds 2001) is equally relevant to archaeological approaches to the pastoral frontier (Burke et al. 2018; Wallis et al. this volume).

It goes without saying that farms and pastoral stations were created on Aboriginal peoples' Country. Farms can be read as a palimpsest that often acted to obscure the evidence for Aboriginal people. Archaeological material in farming landscapes for Aboriginal people's past occupation became subject to colonial collecting processes (Griffiths 1996). In some instances, pastoralists removed, destroyed, and obscured the evidence for Aboriginal people as well excluding and restricting Aboriginal people's access (Liebelt 2016).

The archaeological evidence for the historical presence of Aboriginal people on farms and pastoral stations is important evidence for the strategies of survival and negotiation deployed by Aboriginal people. Archaeology reveals how farmers, pastoralists, and government policies variously relied upon, constrained, and excluded Aboriginal people in farming landscapes over time—from the nineteenth century through the twentieth century until the land rights movement of the 1960s. As such, the historical legacies of power relations are represented in archaeological sites on farms. In Liebelt's (2019) innovative study of affective and emotional responses to the material properties of Aboriginal grindstones on Narungga Country on Guuranda/Yorke Peninsula, South Australia, and Yandruwandha Yawarrawarrka Country in the Strzelecki Desert (northwest South Australia and southwest Queensland), she highlights how Aboriginal peoples and Australian rural settler-descendants are reminded of history by archaeological site and artefacts within farming landscapes.

Aboriginal people were often present on farms as they accessed their Country, laboured as workers and visited kin, and in some cases as they became farmers themselves (Paterson 2018) (Figure 3). The archaeological evidence for settlements of Aboriginal labourers and their kin has been studied across pastoral Australia (see Castle & Hagan 1988). In the Kimberley region of northern Western Australia, Harrison's work at Old Lamboo Station highlighted the material evidence for negotiated Aboriginal access to labour and resources (Harrison 2002a, 2002b, 2004a; see also Smith 2001). Head and Fullagar (1997) used evidence from site locations and contents, rock art, stone tools, and plant food use to reveal how Kimberley Aboriginal people have maintained links with sites on Country and negotiated their interaction with pastoral colonization and attachments to places. Feakins (2019) reveals how buffalo hunting in what is now Kakadu National Park involved Aboriginal men and women, as revealed through buffalo camps and oral history—challenging the dominant colonial legend of the white male and commemorating Bininj/Mungguy heritage of the historical past.





(a) Murphy Kennedy at the remains of Tjinjarra block yard, Murchison Ranges, Northern Territory (which operated in the 1930s), 2000 (photography by A. Paterson). (b) Aboriginal rock art images at 1860s sheep station, Springs Station, inland from Roebourne, Pilbara, western Australia (digitally enhanced by A. Paterson). (c) Girls washing wool at Mt Margaret Mission, Western Australia, ca. 1930 (BA1340/ERA3/16D, State Library of Western Australia).

In the Pilbara of Western Australia, the remains of the earliest sheep stations established in the 1860s have been recorded, revealing the presence of Aboriginal people and the connections between the pastoral settlers on a remote frontier (Paterson 2006, 2008, 2011). The pastoral settlement on West Lewis Island in the Dampier Archipelago of Western Australia appears to have attempted to bridge both pearlshell fishing and sheep (Souter et al. 2006). The Northern Territory pastoral frontier relied on cattle—the earliest period remains largely unstudied (however see Anthony 2004), although mid-twentieth century archaeological sites have been studied through the lens of biography for the Murchison and Davenport Ranges (Gill et al. 2005; Gill & Paterson 2007). In Central Australia, sheep stations were established from the 1860s, with

archaeological work at Strangways Station (Paterson 2005c, 2008) and Killalpaninna Mission, which had a small number of animals (Birmingham & Wilson 2010).

In southeastern Australia a rich body of work has focussed on the heritage values of Aboriginal sites in pastoral landscapes, driven by the leadership of National Parks and Wildlife Service staff (at the time), including Denis Byrne, Steven Brown, and Rodney Harrison, whose 'shared landscape' approach reflected and inspired contemporary archaeological and heritage thinking (Brown 2010, 2011; Byrne 2003; Byrne & Nugent 2004; Harrison 2003, 2004b). A correlate to this research is work into the archaeology of missions, remembering that some missions like Coranderrk (Lydon 2002) and New Norcia (Shellam 2015) were focussed on producing Aboriginal gardeners and farmers. The presence of Aboriginal people on pastoral work sites has been presumably overlooked, an issue highlighted in Wolski's (2000) study on the pastoral frontier in western Victoria. Wolski compared outstations (shepherd's huts) with other 'contact' sites to explore details of Indigenous technological and subsistence practices previously inaccessible to archaeological research—particularly the potential of modified glass artefacts to act as indicators of Aboriginal 'everyday resistance' (see Loy & Wolski 1999). At a similar type of site on the Tasmanian pastoral frontier, Murray (1993) excavated a shepherd's hut of the Van Dieman's Land Company (VDL) that colonized northwest Tasmania after 1825 and found Aboriginal glass and stone artefacts in the hut. Rather than being Aboriginal workers on the frontier, Murray argued that 'It is a reasonable conjecture that the people who left the Aboriginal artefacts found at Burghley ... fought the guerrilla actions against the VDL after 1836' (Murray 1993: 514). At Budj Bim in southwestern Victoria the first detailed excavation of an Aboriginal stone hut house (site KSH-1) discovered bottle glass artefacts and a cache of thirty-four iron nails (McNiven et al. 2017). The stratigraphic evidence suggests multiple, short-term occupation events between the 1840s and 1870s, a period when Aboriginal people variously resisted and negotiated the pastoral invasion.

Diet and economic considerations related to Aboriginal people are implied in archaeological studies of colonial agrarianism, given the evidence for shifts from traditional foods to new foods, although few studies are specifically focussed on diet (see, however, Smith 2000; Zeanah et al. 2015). The institutional practice of providing rations to Aboriginal people dates from the earliest period of contact through to Citizenship, and it has been explored in terms of its relationship to protectionism, assimilation policies, historical Aboriginal settlements, welfare, and Aboriginal agency (e.g., Rowse 1998). On pastoral stations rations were provided on behalf of governments as a distribution to Aboriginal people deemed in need of support, and also to employees as a form of payment (Rowse 1987). Rationing supported extended families beyond the immediate recipients, the material expression is Aboriginal settlements in relation to pastoral sites. At Strangways Springs, for example, the archaeological record reveals a spatial trend where certain Aboriginal camps reveal a wide range of material culture largely derived from rationing as payment for labour. At camps more distant from the central pastoral work sites the amount of rationed material decreases, yet the range of material—clothing, food, tobacco, and tools—remains constant, suggesting that Aboriginal people across the pastoral landscape had similar access to rations, probably through Aboriginal intermediaries 'inside' the pastoral domain (Paterson 2003).

A range of studies across Australia have linked archaeological evidence such as rock art to the consequences of pastoralism—in some instances rock art provides evidence for Aboriginal perceptions of change related to pastoralism. For example, in Central Australia, Frederick (1999) tracks the emergence of charcoal motifs to the new world of pastoral work. In the Kimberley, O'Connor et al. (2013) related contact-era rock art to forms of resistance on the colonial frontier. In the Pilbara on Ngarluma people's Country, rock art and archaeological evidence at sheep stations reveal the presence of resident groups of Aboriginal workers. At several sheep stations Aboriginal rock art depicts pastoral work (Figure 3b) (Paterson & Wilson 2009) as well as work on pearl shell luggers owned by the white pastoralists (Paterson & van Duivenvoorde 2014). These studies provide tantalizing glimpses into early perceptions of Aboriginal people to the arrival and realities of pastoral colonialism.

To date, the archaeology of agrarian Australia has only begun to gain a significant sense of its potential to reveal the ecological, social, cultural, and heritage dimensions of agrarian Australia. However, the field remains cleaved between Aboriginal and non-Aboriginal histories, and it has yet to develop a broad interdisciplinary methodology. There exist major opportunities for close-disciplinary collaboration and integration. The amount of literature on the topic of the archaeology of the Anthropocene is growing quickly as the challenges of climate change and its mitigation come into focus (Boivin & Crowther 2021; Lawrence & Davies 2019). Most definitions of the start of the Anthropocene focus on recent centuries or the twentieth century (Bashford 2013). Settler Australia and its associated environmental impacts are central to these time frames and relevant to issues of environmental and social justice.

The first opportunity is the further integration of ecological records with archaeological evidence. The significant history of overlapping archaeological and ecological approaches is reviewed in Lawrence and Davies (2018) and, despite some studies suggesting the effectiveness of such efforts, such as the multidisciplinary investigation of the nineteenth settlement of Willunga Plains, South Australian (Denham et al. 2012), overall there are few truly integrated projects. This opportunity leads directly to the second—specifically, the relevance of archaeology to our understanding of human-environmental histories. Future projects will hopefully contribute to regional research programs, such as those undertaken by Lawrence and Davies, to validate the potential of using archaeological thinking to shift the frame of evidence from smaller sites to whole landscapes. Furthermore, research into farming and pastoralism through an environmental history lens invites broadening the frame to consider agrarian Australia similarly to emerging historical archaeologies of geoheritage, mining, and other extractive processes (Lawrence & Davies 2018), and the archaeology of the movement of industrial contaminants like mercury (Lawrence & Davies 2020). Legacies of farming and pastoralism include environmental damage, species extinction and replacement, and contaminants (i.e., waste at work sites and farm/pastoral settlements), although there is little archaeological engagement with these topics. Similarly, environmental research into grasslands and rangelands rarely includes archaeological perspectives, if at all. Recent work in the social sciences shifts the focus from humans to consider nonhuman species, such as anthropologist Anna Tsing's (2015) exploration of how the lives of fungi reveal problems with narratives of progress. This type of research invites rethinking on how categories of wild, feral, and domestic relate to animal 'management' in cross-cultural settings in Australia.

The third, and related, opportunity is to better understand the relationship between Aboriginal economies at the time of the arrival of the British to determine how they were altered by colonization and to develop histories which privilege Indigenous innovation rather than argue for ways that this resembled agriculture elsewhere. Perhaps more so than any continent, the relatively recent and rapid transition from hunter-foraging to farming and pastoralism in Australia provides potential insights into processes that occurred earlier elsewhere (Paterson 2018). White (2019: 64) reminds us that this transition requires asking: How did Aboriginal agriculture differ from what the European invaders were used to? This questioning makes an important link between Aboriginal perceptions of agriculture and landscape and wider ideas and histories of agriculture in Australia, with implications for the future of land management in Australia. Finally, looking forward, the future of maintaining the multispecies landscapes that have nurtured humans, among others, will require farming, pastoralism, and other industrial actions to be considered, along with precolonial Aboriginal environmental management.

# References

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Allison, P. M. (2003). The Old Kinchega Homestead: Doing household archaeology in outback New South Wales, Australia. *International Journal of Historical Archaeology*, 7(3), 161–194.

[Google Scholar](#) [WorldCat](#)

Anthony, T. (2004). Labour relations on northern cattle stations: Feudal exploitation and accommodation. *The Drawing Board: An Australian Review of Public Affairs*, 4(3), 117–136.

[WorldCat](#)

Antolín, F., Berihuete, M., & López, O. (2016). Archaeobotany of wild plant use: Approaches to the exploitation of wild plant resources in the past and its social implications. *Quaternary International*, 404(Part A), 1–3.

[Google Scholar](#) [WorldCat](#)

Bairstow, D. (1985). *The Australian Agricultural Company at Port Stephens: An archaeological contribution to history*. Cremorne: self-published.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Balme, J., & O'Connor, S. (2016). Dingoes and Aboriginal social organization in Holocene Australia. *Journal of Archaeological Science: Reports*, 7, 775–781.

[Google Scholar](#) [WorldCat](#)

Barnard, A. (1962). *The simple fleece: Studies in the Australian wool industry*. Parkville: Melbourne University Press in association with The Australian National University.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Bashford, A. (2013). The Anthropocene is modern history: Reflections on climate and Australian deep time. *Australian Historical Studies*, 44(3), 341–349.

[Google Scholar](#) [WorldCat](#)

Bean, C. E. W. (1912). *On the wool track*. London: Alston Rivers.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Beck, W., Clarke, A., & Head, L. (1989). *Plants in Australian archaeology*. Tempus 1. St. Lucia: Anthropology Museum, University of Queensland.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Birmingham, J., Jack, I., & Jeans, D. N. (1979). *Australian pioneer technology: Sites and relics*. Richmond: Heinemann Educational Australia.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Birmingham, J., & Wilson, A. (2010). Archaeologies of cultural interaction: Wybalenna settlement and Killalpaninna mission. *International Journal of Historical Archaeology*, 14(1), 15–38.

[Google Scholar](#) [WorldCat](#)

Blench, R. (2001). *'You can't go home again': Pastoralism in the new millennium*. Food and Agriculture Organisation, United Nations: Animal Health and Production Series, No 150. London: Overseas Development Institute.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Bliege Bird, R., Bird, D. W., Coddig, B. F., Parker, C. H., & Jones, J. H. (2008). The “fire stick farming” hypothesis: Australian Aboriginal foraging strategies, biodiversity, and anthropogenic fire mosaics. *Proceedings of the National Academy of Sciences of the United States of America*, 105(39), 796–801.

[Google Scholar](#) [WorldCat](#)

Boivin, N., & Crowther, A. (2021). Mobilizing the past to shape a better Anthropocene. *Nature Ecology & Evolution*, 5, 273–284.

[Google Scholar](#) [WorldCat](#)

Brown, S. (2010). *Cultural landscape: A practical guide for park management*. Sydney: Department of Environment, Climate Change, and Water.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Brown, S. (2011). Documenting pastoral landscapes—Connecting archaeology, history, and communities. *Heritage & Society*, 4(1), 33–58.



Brumm, A. (2021). Dingoes and domestication. *Archaeology in Oceania*, 56, 17–31

[Google Scholar](#) [WorldCat](#)

Builth, H. (2014). *Ancient Aboriginal aquaculture rediscovered*. Saarbrücken, Germany: LAP Lambert.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Burke, H., Barker, B., Cole, N., Wallis, L. A., Hatte, E., Davidson, I., & Lowe, K. (2018). The Queensland Native Police and strategies of recruitment on the Queensland frontier, 1849–1901. *Journal of Australian Studies*, 42(3), 297–313.

[Google Scholar](#) [WorldCat](#)

Burrows, N. D., Burbidge, A., Fuller, P. J., & Behn, G. (2006). Evidence of altered fire regimes in the Western Desert region of Australia. *Conservation Science Western Australia*, 5(3), 14–26.

[Google Scholar](#) [WorldCat](#)

Byrne, D. (2003). The ethos of return: Erasure and reinstatement of Aboriginal visibility in the Australian historical landscape. *Historical Archaeology*, 37(1), 73–86.

[Google Scholar](#) [WorldCat](#)

Byrne, D., & Nugent, M. (2004). *Mapping attachment: A spatial approach to Aboriginal post-contact heritage*. Sydney: Department of Environment and Conservation.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Cannon, A. (1992). Woolsheds and catastrophe theory: The lower Lachlan experiment. *The Australian Journal of Historical Archaeology*, 10, 65–74.

[Google Scholar](#) [WorldCat](#)

Casella, E. C. (2006). Transplanted technologies and rural relics: Australian industrial archaeology and questions that matter. *Australasian Historical Archaeology*, 24, 65–75.

[Google Scholar](#) [WorldCat](#)

Casey, M. (1999). Local pottery and dairying at the DMR Site, Brickfield, Sydney, New South Wales. *Australasian Historical Archaeology*, 17, 3–37.

[Google Scholar](#) [WorldCat](#)

Castillo, J. A. Q. (2014). Agrarian archaeology in Early Medieval Europe. *Quaternary International*, 346, 1–6.

[Google Scholar](#) [WorldCat](#)

Castle, R., & Hagan, J. (1988). Settlers and the state: The creation of an Aboriginal workforce in Australia. *Aboriginal History*, 22, 24–35.

[Google Scholar](#) [WorldCat](#)

Clarke, A. (1994). Romancing the stones. The cultural construction of an archaeological in the Western District of Victoria. *Archaeology in Oceania*, 29(1), 1–15.

[Google Scholar](#) [WorldCat](#)

Connah, G. (1977). Wool, water and settlement: The archaeological landscape of Saumarez Station. *Armidale and District Historical Society*, 20, 117–127.

[Google Scholar](#) [WorldCat](#)

Connah, G. (1986). Historical reality: Archaeological reality. Excavations at Regentville, Penrith, New South Wales, 1985. *The Australian Journal of Historical Archaeology*, 4, 29–42.

[Google Scholar](#) [WorldCat](#)

Connah, G. (1994). Bagot's Mill: Genesis and revelation in an archaeological research project. *Australasian Historical Archaeology*, 12, 3–55.

[WorldCat](#)

Connah, G. (2007). *The same under a different sky? A country estate in nineteenth-century New South Wales*. BAR International Series 1625. Oxford: British Archaeological Reports.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Connah, G., Rowland, M., & Oppenheimer, J. (1978). *Captain Richards' house at Winterbourne: A study in historical archaeology*.

Crosby, A. W. (1986). *Ecological imperialism: The biological expansion of Europe, 900–1900*. Cambridge: Cambridge University Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Crosby, A. W. (2003). *The Columbian exchange: Biological and cultural consequences of 1492*. Westport, CT: Praeger.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Cummins, R. D. (1989). Scouring the clip: Boom and burn on Woolscour Lane. *Australian Journal of Historical Archaeology*, 7, 23–28.

[Google Scholar](#) [WorldCat](#)

Curr, E. M. (1883). *Recollections of squatting in Victoria, then called the Port Phillip District (from 1841 to 1851)*. Melbourne: G. Robertson.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Davidson, B. R. (1994). The development of the pastoral industry in Australia during the nineteenth century. In C. Chang & H. A. Koster (Eds.), *Pastoralists at the periphery: Herders in a capitalist world* (pp. 79–95). Tucson: The University of Arizona Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Davidson, I. (1989). Escaped domestic animals and the introduction of agriculture to Spain. In J. Clutton-Brock (Ed.), *The walking larder: Patterns of domestication, pastoralism and predation* (pp. 59–71). London: Unwin-Hyman.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Davies, P., & Lawrence, S. (2015). Dams and ditches: Cultural landscapes of colonial water management in the highlands of Victoria. *Historic Environment*, 27(3), 36–47.

[Google Scholar](#) [WorldCat](#)

Denham, T. (2008). Traditional forms of plant exploitation in Australia and New Guinea: The search for common ground. *Vegetation History and Archaeobotany*, 17, 245–248.

[Google Scholar](#) [WorldCat](#)

Denham, T. (2009). A practice-centred method for charting the emergence and transformations of agriculture. *Current Anthropology*, 50(5), 661–667.

[Google Scholar](#) [WorldCat](#)

Denham, T., Donohue, M., & Booth, S. (2009). Horticultural experimentation in Northern Australia reconsidered. *Antiquity*, 83, 634–648.

[Google Scholar](#) [WorldCat](#)

Denham, T., Lentfer, C., Stuart, E., Bickford, S., & Barr, C. (2012). Multi-disciplinary investigation of 19th century European settlement of the Willunga Plains, South Australia. In S. Haberle and B. David (Eds.), *People landscapes: Archaeological and biogeographic approaches to landscapes* (pp. 393–412). Terra Australis 34. Canberra: ANU E-Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Dwyer, P. G., & Ryan, L. (2012). Theatres of violence, massacre, mass killing and atrocity throughout history. *War and Genocide*, 11, 299.

[Google Scholar](#) [WorldCat](#)

Egloff, B. J., O’Sullivan, M., & Ramsay, J. (1991). Archaeology of the 1891 shearer’s war: The main strike camp at Barcaldine, Queensland. *Australian Historical Archaeology*, 9, 63–75.

[Google Scholar](#) [WorldCat](#)

Esposito, V., & Allison, P. M. (2020). *Who came to tea at The Old Kinchega Homestead?: Tablewares, teawares and social interaction at an Australian outback pastoral homestead*. BAR international series. Oxford: BAR.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Feakins, C. (2019). Buffalo shooting in the ‘wild’ north: The hidden heritage of Kakadu National Park. *Historic Environment*, 31(1), 10–26.

[Google Scholar](#) [WorldCat](#)

Fijn, N. (2018). Dog ears and tails: Differential ways of being with canines in Aboriginal Australia and Mongolia. In H. A. Swanson,

M. E. Lien, & G. B. Ween (Eds.), *Domestication gone wild: Politics and practices of multispecies relations* (pp. 72–93). Durham, NC: Duke University Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Frederick, U. (1999). At the centre of it all: Constructing contact through the rock art of Watarrka National Park, Central Australia. *Archaeology in Oceania*, 34(3), 132–143.

[Google Scholar](#) [WorldCat](#)

Gammage, B. (2011). *The biggest estate on earth: How Aborigines made Australia*. Crows Nest: Allen & Unwin.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Gerritsen, R. (2010). Evidence for Indigenous Australian Agriculture. *Australasian Science August 2010*, 1–3.

<http://australasianscience.com.au/article/issue-july-august-2020/evidence-indigenous-australian-agriculture.html>

[Google Scholar](#) [WorldCat](#)

Gill, A. M., Williams, J. E., & Bradstock, R. A. (2002). *Flammable Australia: The fire regimes and biodiversity of a continent*. Cambridge: Cambridge University Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Gill, N., & Paterson, A. G. (2007). A work in progress: Aboriginal people and pastoral cultural heritage in Australia. In R. Jones & B. Shaw (Eds.) *Loving a sunburned country? Geographies of Australian heritages* (pp. 113–131). Aldershot: Ashgate.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Gill, N., Paterson, A., & Murphy, M. (2005). ‘Murphy, do you want to delete this?’ Hidden histories and hidden landscapes in the Murchison and Davenport ranges, Northern Territory, Australia. Faculty of Science Papers, <http://ro.uow.edu.au/scipapers/19>. Wollongong: University of Wollongong.

[WorldCat](#)

Godwin, L., & L’Oste-Brown, S. (2002). A past remembered: Aboriginal ‘historical’ places in central Queensland. In R. Harrison & C. Williamson (Eds.), *After Captain Cook: The archaeology of the recent indigenous past in Australia*. Sydney: Sydney University Archaeological Methods Series 8, Archaeological Computing Laboratory, 191–212.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Godwin, L., & L’Oste-Brown, S. (2012). Water, water everywhere: Attempts at drought-proofing properties using surface water infrastructure in central West Queensland in the early 1880s. *Australian Archaeology*, 74, 55–70.

[Google Scholar](#) [WorldCat](#)

Gott, B. (1982). Ecology of root use by the Aborigines of southern Australia. *Archaeology in Oceania*, 17, 59–67.

[Google Scholar](#) [WorldCat](#)

Gott, B. (1983). Murning—*Microseris scapigera*: A study of a staple food of Victorian Aborigines. *Australian Aboriginal Studies*, 2/1983: 2–17.

Gott, B. (2002). Fire-making in Tasmania: Absence of evidence is not evidence of absence. *Current Anthropology*, 43, 650–56.

[Google Scholar](#) [WorldCat](#)

Griffiths, T. (1996). *Hunters and collectors: The antiquarian imagination in Australia*. Melbourne: Cambridge University Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Grimwade, G. (1998). The Canning Stock Route: Desert stock route to outback tourism. *Australasian Historical Archaeology*, 16, 70–79.

[Google Scholar](#) [WorldCat](#)

Hallam, S. J. (1975). *Fire and hearth: A study of Aboriginal usage and European usurpation in south-western Australia*. Canberra: Australian Institute of Aboriginal Studies.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Harrison, R. (2002a). Archaeology and the colonial encounter: Kimberley spearpoints, cultural identity and masculinity in the north of Australia. *Journal of Social Archaeology*, 2(3), 352–377.

[Google Scholar](#) [WorldCat](#)

Harrison, R. (2002b). Australia’s Iron Age: Aboriginal post-contact metal artefacts from Old Lamboo Station, Southeast Kimberley, Western Australia. *Australasian Historical Archaeology*, 20, 67–76.

Harrison, R. (2003). The archaeology of 'lost places': Ruin, memory and the heritage of the Aboriginal diaspora in Australia. *Historic Environment*, 17(1), 18–23.

[Google Scholar](#) [WorldCat](#)

Harrison, R. (2004a). Contact archaeology and the landscapes of pastoralism in the north-west of Australia. In T. Murray (Ed.), *The archaeology of contact in settler societies* (pp. 109–143). Cambridge: Cambridge University Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Harrison, R. (2004b). *Shared landscapes: Archaeologies of attachment and the pastoral industry in New South Wales*. Sydney: UNSW Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Head, L., & Fullagar, R. (1997). Hunter-gatherer archaeology and pastoral contact: Perspectives from the northwest Northern Territory, Australia. *World Archaeology*, 28, 418–428.

[Google Scholar](#) [WorldCat](#)

Head, L. (1994). Landscapes socialised by fire: Post contact changes in Aboriginal fire use in northern Australia, and implications for prehistory. *Archaeology in Oceania*, 29(3), 172–181.

[Google Scholar](#) [WorldCat](#)

Hiscock, P. (2008). *The archaeology of ancient Australia*. London: Routledge.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Hynes, R. A., & Chase, A. K. (1982). Plants, sites and domiculture: Aboriginal influence upon plant communities in Cape York Peninsula. *Archaeology in Oceania*, 17, 38–50.

[Google Scholar](#) [WorldCat](#)

Ireland, T. (2002). Giving value to the historic past: Historical archaeology, heritage, and nationalism. *Australasian Historical Archaeology*, 20, 15–25.

[Google Scholar](#) [WorldCat](#)

Jack, I., Holmes, K., & Kerr, R. (1984). Ah Toy's garden: A Chinese market-garden on the Palmer River goldfield, North Queensland. *Australian Journal of Historical Archaeology*, 2, 51–58.

[Google Scholar](#) [WorldCat](#)

Jones, R. (1969). Fire stick farming. *Australian Natural History*, 16, 224–228.

[Google Scholar](#) [WorldCat](#)

Keen, I. (2003). Aboriginal economy and society at the threshold of colonisation: A comparative study. *Before Farming*, 3(2), 1–24.

[Google Scholar](#) [WorldCat](#)

Keen, I. (2021). Foragers or farmers: Dark emu and the controversy over Aboriginal agriculture. *Anthropological Forum*, 31(1), 106–128.

[Google Scholar](#) [WorldCat](#)

Latz, P. K. (1995). *Bushfires and bushtucker: Aboriginal plant use in Central Australia*. Alice Springs: I.A.D. Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Lawrence, S., & Davies, P. (2018). Archaeology and the Anthropocene in the study of settler Australia. In M. A. Torres de Souza & D. M. Costa (Eds.), *Historical archaeology and the environment* (pp. 229–251). Berlin: Springer.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Lawrence, S., & Davies, P. (2019). *Sludge: Disaster on Victoria's goldfields*. Melbourne: Black.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Lawrence, S., & Davies, P. (2020). Historical mercury losses from the gold mines of Victoria, Australia. *Elementa: Science of the Anthropocene*, 8, 35, doi:10.1525/elementa.432.

[Google Scholar](#) [WorldCat](#)

Lawrence, S., Davies, P., & Turnbull, J. (2016). The archaeology of Anthropocene rivers: Water management and landscape change in 'Gold Rush' Australia. *Antiquity*, 90(353), 1348–1362.



Liebelt, B. (2016). *Aboriginal occupation traces in agricultural assemblages* (PhD thesis). Department of Archaeology and Department of History, The University of Western Australia.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Liebelt, B. (2019). Touching grindstones in archaeological and cultural heritage practice: Materiality, affect and emotion in settler-colonial Australia. *Australian Archaeology*, 85, 267–278.

[Google Scholar](#) [WorldCat](#)

Loy, T. H., & Wolski, N. (1999). On the invisibility of contact: Residue analyses on Aboriginal glass artefacts from western Victoria. *The Artefact*, 22, 65–73.

[Google Scholar](#) [WorldCat](#)

Lydon, J. (2002). 'This civilising experiment': Photography at Coranderrk Aboriginal Station during the 1860s. In R. Harrison & C. Williamson (Eds.), *After Captain Cook: The archaeology of the recent indigenous past in Australia* (pp. 59–74). Sydney: Sydney University Archaeological Method Series 8.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Macphail, M. K., & Casey, M. (2008). "News from the Interior": What can we tell from plant microfossils preserved on historical archaeological sites in colonial Parramatta? *Australasian Historical Archaeology*, 26, 45–69.

[Google Scholar](#) [WorldCat](#)

McNiven, I. J., Dunn, J. E., Crouch, J., & Gunditj Mirring Traditional Owners Aboriginal Corporation. (2017). Kurtonitj stone house: Excavation of a mid-nineteenth century Aboriginal frontier site from Gunditjmara country, south-west Victoria. *Archaeology in Oceania*, 52, 171–197.

[Google Scholar](#) [WorldCat](#)

McNiven, I. J., Crouch, J., Richards, T., Dolby, N., Jacobsen, G., & Gunditj Mirring Traditional Owners Aboriginal Corporation. (2012). Dating Aboriginal stone-walled fishtraps at Lake Condah, Southeast Australia. *Journal of Archaeological Science*, 39, 268–286.

[Google Scholar](#) [WorldCat](#)

Murray, T. (1988). Beyond the ramparts of the unknown: The historical archaeology of the Van Dieman's Land Company. In J. Birmingham, D. Bairstow, & A. Wilson (Eds.), *Archaeology and colonisation: Australia in the world context* (pp. 99–108). Sydney: The Australian Society for Historical Archaeology.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Murray, T. (1993). The childhood of William Lanne: Contact archaeology and Aboriginality in Tasmania. *Antiquity*, 67, 507–519.

[Google Scholar](#) [WorldCat](#)

Murray, T. (2018). Towards an archaeology of extensive pastoralism in the Great Artesian Basin in Australia. In S. M. & C. D. (Eds.), *Historical archaeology and environment* (pp. 109–127). Berlin: Springer.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

O'Connor, S., Balme, J., Fyfe, J., Oscar, J., Oscar, M., Davis, J., Malo, H., Nuggett, R., & Surprise, D. (2013). Marking resistance? Change and continuity in the recent rock art of the southern Kimberley. *Antiquity*, 87(336), 539–554.

[Google Scholar](#) [WorldCat](#)

Partridge, M. (1984). The excavation of the Mount Wood woolscour, Tibooburra, New South Wales. *Australian Journal of Historical Archaeology*, 2, 38–50.

[Google Scholar](#) [WorldCat](#)

Pascoe, B. (2014). *Dark Emu: Aboriginal Australia and the birth of agriculture*. Broome: Magabala Book.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Paterson, A. G. (2003). The texture of agency: An example of culture contact in central Australia. *Archaeology in Oceania*, 38(2), 52–65.

[Google Scholar](#) [WorldCat](#)

Paterson, A. G. (2005a). Hunter-gatherer interactions with sheep and cattle pastoralists from the Australian arid zone. In M. A. Smith & P. Veth (Eds.), *Desert peoples: Archaeological perspectives* (pp. 276–292). Oxford: Blackwell.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Paterson, A. G. (2005b). Historical interactions between Aborigines and European pastoralists in Australia's drylands. In M. A. Smith & P. Hesse (Eds.), *23 degrees south: Archaeology and environmental history of the southern deserts* (pp. 267–280). Canberra: National Museum of Australia.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Paterson, A. G. (2005c). Early pastoral landscapes and culture contact in central Australia. *Historical Archaeology*, 39(3), 28–48.

[Google Scholar](#) [WorldCat](#)

Paterson, A. G. (2006). Towards a historical archaeology of Western Australia's northwest. *Australasian Historical Archaeology*, 24, 99–111.

[Google Scholar](#) [WorldCat](#)

Paterson, A. G. (2008). *The lost legions: Culture contact in colonial Australia*. Lanham, MD: AltaMira Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Paterson, A. G. (2011). Considering colonialism and capitalism in Australian historical archaeology: Two case studies of culture contact from the pastoral domain. In S. Croucher & L. Weiss (Eds.), *The archaeology of capitalism in colonial contexts: Postcolonial historical archaeologies* (pp. 243–267). New York: Springer.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Paterson, A. G. (2013). Enduring contact: Australian perspectives in environmental and social change. *Occasion: Interdisciplinary Studies in the Humanities* 5 (March 1). <https://arcade.stanford.edu/occasion/enduring-contact-australian-perspectives-environmental-and-social-change>

[Google Scholar](#) [WorldCat](#)

Paterson, A. G. (2018). Once were foragers: The archaeology of agrarian Australia and the fate of Aboriginal land management. *Quaternary International*, 489, 4–16.

[Google Scholar](#) [WorldCat](#)

Paterson, A. G., & van Duivenvoorde, W. (2014). The sea, inland: Aboriginal rock art depictions of boats from the western Pilbara. *Great Circle*, 35(2), 30–54.

[Google Scholar](#) [WorldCat](#)

Paterson, A. G., & Wilson, A. (2009). Indigenous perceptions of contact at Inthanoona, northwest Western Australia. *Archaeology in Oceania*, 44, 98–110.

[Google Scholar](#) [WorldCat](#)

Pearson, M., & Lennon, J. (2010). *Pastoral Australia: Fortunes, failures and hard yakka. A historical overview 1788–1967*. Collingwood: CSIRO.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Pearson, W. (1996). Water power in a dry continent: The transfer of watermill technology from Britain to Australia in the nineteenth century. *Australasian Historical Archaeology*, 14, 46–62.

[Google Scholar](#) [WorldCat](#)

Pyne, S. J. (1998). *Burning bush: A fire history of Australia*. Seattle: University of Washington Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Reynolds, H. (1972). *Aborigines and settlers: The Australian experience, 1788–1939*. North Melbourne: Cassell Australia.

Reynolds, H. (1990). *With the white people*. Ringwood: Penguin.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Reynolds, H. (1998). *This whispering in our hearts*. St. Leonards: Allen & Unwin.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Reynolds, H. (2001). *An indelible stain?: The question of genocide in Australia's history*. Ringwood: Penguin.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Rowse, T. (1987). 'Were you ever savages?' The Aboriginal insiders and pastoralists' patronage. *Oceania*, 58(1), 81–99.

[Google Scholar](#) [WorldCat](#)

Rowse, T. (1998). *White flour, white power: From rations to citizenship in Central Australia*. Cambridge, Melbourne: Cambridge University Press.

Shellam, T. (2015). On my ground: Indigenous farmers at New Norcia, 1860s–1900s. In A. Lester & Z. Laidlaw (Eds.), *Indigenous communities and settler colonialism: Land holding, loss and survival in an interconnected world* (pp. 62–85). London: Palgrave.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Smith, P. A. (2000). Station camps: Legislation, labour relations and rations on pastoral leases in the Kimberley region, Western Australia. *Aboriginal History*, 24, 75–97.

[Google Scholar](#) [WorldCat](#)

Smith, P. A. (2001). Station camps: Identifying the archaeological evidence for continuity and change in post-contact Aboriginal sites in the south Kimberley, Western Australia. *Australian Archaeology*, 53, 23–31.

[Google Scholar](#) [WorldCat](#)

Smith, S. (2008). *Early Pilbara headstations: Spatiality and social relations* (Honours thesis). Archaeology, University of Western Australia.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Souter, C., Paterson, A. G., & Hook, F. (2006). The assessment of archaeological sites on Barrow Island and the Dampier Archipelago, Pilbara, Western Australia: A collaborative approach. *Bulletin of the Australasian Institute of Maritime Archaeology*, 30, 85–92.

[Google Scholar](#) [WorldCat](#)

Sutton, P., & Walshe, K. (2021). *Farmers or hunter-gatherers? The Dark Emu debate*. Melbourne: Melbourne University Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Terry, L. (2013). Caboonbah: The archaeology of a middle class Queensland pastoral family. *International Journal of Historical Archaeology*, 17(3), 569–589.

[Google Scholar](#) [WorldCat](#)

Torres de Souza, M. A., & Costa, D. M. (2018). *Historical archaeology and environment*. New York: Springer.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Tsing, A. (2015). *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton, NJ: Princeton University Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Ulm, S. (2012). ‘Complexity’ and the Australian continental narrative: Themes in the archaeology of Holocene Australia. *Quaternary International*, 285(2013), 182–192.

[Google Scholar](#) [WorldCat](#)

Walker, M., & Forrest, P. (1995). *Pastoral technology and the National Estate*. Australia ICOMOS.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Ward, D. (1998). *Fire, flogging, measles and grass: Nineteenth century land use conflict in southwestern Australia*. Perth: Department of Conservation and Land Management.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

White, P. (2019). Book review: Dark Emu. Aboriginal Australia and the birth of agriculture, by Bruce Pascoe. Magabala Books, Broome, Western Australia, New Edition, 2018. *Archaeology in Oceania*, 55, 63–64.

[Google Scholar](#) [WorldCat](#)

Winter, S., Forsey, C., Dotte-Sarout, E., & Paterson, A. (2016). The settlement at Barmup: Britain’s first farm in Western Australia. *Australasian Historical Archaeology*, 34, 32–43.

[Google Scholar](#) [WorldCat](#)

Winter, S., & Paterson, A. (in press). Australian colonial land settlement. In M. Nevell & E. C. Casella (Eds.), *Handbook of industrial archaeology*. London: Oxford University Press.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

Wolski, N. (2000). *Brushing against the grain: Excavating for Aboriginal-European interaction on the colonial frontier in Western Victoria, Australia* (PhD thesis). University of Melbourne.

[Google Scholar](#) [Google Preview](#) [WorldCat](#) [COPAC](#)

## Note

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- 1 <https://www.thecultureconcept.com/fantastic-flora-in-australia-first-fleet-to-federation>; accessed 24 March 2021.