CHAPTER 9

MOUNDS AND MODELS

'persistent places became prominent places' (Schroeder 2004:822)

9.1 INTRODUCTION

In this final chapter I discuss the outcomes of the study and draw conclusions about the archaeology of the Hay Plain based on my research framework and objectives. The study illustrates that different approaches and scales of research open up different avenues of enquiry. I was faced with the difficult task of finding new ways of looking at the archaeological record in order to provide solutions to previously unanswered questions. I begin in 9.2 by comparing the results to the proposed models outlined in Chapter 3, loosely following the three major research themes of 1) heat retainer technology and its fundamental role in mound construction, 2) the dynamics of human behaviour, and 3) interpretive archaeology. In 9.3, I discuss a proposed generalised model for the distribution pattern of mounds in Australia. In 9.4 the results are compared against generalised models of mid to late Holocene change in human behaviour. I finish by providing a concluding statement about the results, methods and research framework, which have restored the reputation of mounds from 'enigma' to 'archaeological deposit' and the flat plains from 'empty' to 'culturally inscribed' landscapes.

9.2 TESTING MODELS AGAINST THE RESULTS

9.2.1 Reasons for Using Heat Retainer Technology

In this section I return to the research objectives outlined in Chapter 3 and discuss the theme relating to heat retainer technology and its fundamental role in the construction of mounds. Australian and global archaeological, ethnographic and phytochemical research indicates that heat retainer ovens are used for a wide range of

purposes, including baking large fat-rich animals, steaming lean animals, cooking large quantities of food, food for large groups, to cook a variety of plant foods, to preserve, soften or detoxify food, as well as for medicinal purposes and plant fibre preparation. The most common use of ovens is to cook carbohydrate rich plant foods, including USOs such as rhizomes, corms, bulbs, tubers, or above ground carbohydrate storage organs such as agave stems. Starches, particularly amylose, and complex long and/or branched carbohydrates such as inulin are changed by prolonged baking/steaming into simpler polymers that are easier for humans to digest and absorb (Wandsnider 1997).

The global trend in the mid to late Holocene was to intensify the use of plants with complex carbohydrates that need prolonged baking/steaming in heat retainer ovens, thus maximising the energy return. This intensified use of plants with complex carbohydrates was associated with various plant management strategies and specialised knowledge of harvesting, preparation and cooking. Ovens were also used to detoxify or soften foods that could not be utilised otherwise (Thoms 2003a, Wandsnider 1997).

The ethnohistory from the Murray Darling Basin and including the Hay Plain indicates that wetland plant USOs were extensively utilised and baked/steamed in heat retainer ovens, including *Typha*, *Bolboschoenus*, and *Triglochin*. Non-wetland USOs were also baked/steamed in heat retainer ovens, including the well-known *Microseris scapigera* tubers. Additional foods were brought into use as steaming in heat retainer ovens made them edible and cookable, for example the otherwise unpalatable *Lepidium* leaves were eaten in large quantities during winter as a steamed green vegetable which tasted like cabbage (Bonney 1866-1915, Eyre 1845 Vol II:254). The ethnohistory and physics of cooking also suggest that in certain areas lean animals were utilised as drought fall-back food by prolonged oven streaming in the skin to soften the meat and hydrolyse the bone marrow and skin fat. Heat retainer oven cooking also preserved food, particularly *Typha* rhizomes, by prolonging baking to reduce moisture. This preserving process was used to store food for predictable periods of food shortage, prolong the availability of favourite plant foods, provide food to trade, to feed people at ceremonial or exchange gatherings or for travel to ceremonies and gatherings (Berndt & Berndt 1993). Heat retainer ovens were also used to steam fibre rich plants as the initial stage in making quality fibre for fishing lines, nets, carry bags, and accessories, and ovens were used as medicinal

steam/heat baths. The archaeology and ethnohistory demonstrates the similarities of chronology of oven and mound use, the technical details and variations of construction, and the types of foods prepared, between the Murray Darling Basin including the Hay Plain, and other areas in the world such as North America.

The results of the review of heat retainer technology indicate that Model 5 proposed in Chapter 3 can be applied to the Hay Plain mounds and generally to mounds in Australia:

- *A primary purpose of heat retainer ovens is the prolonged baking/steaming of plant foods containing complex carbohydrates such as amylose starches, fructan and inulin, which converts them to more digestible and better tasting carbohydrates and sugars, thus maximising the energy value. Ovens also detoxify, soften and preserve foods.*

9.2.2 Are Hay Plain Mound Mounds Derived from Repetitive use of Heat Retainer Ovens?

The excavations of the Ravensworth 3 and Tchelery 1 mounds provide actual evidence of heat retainer oven use, including the baked clay heat retainers and fragments of baked clay, fused silica, charcoal, ash, lenses of ash, and pit, hearth or oven features. The carbonised, calcined and fragmented faunal bone, turtle shell, mussel shell and eggshell also provides evidence of repetitive use of ovens in the mounds. The Ravensworth 3 and Tchelery 1 mounds are characterised by few well defined features or activity areas, but with rare exceptions the contents such as heat retainers, faunal bones and stone artefacts have lost definite spatial relationships. Such mixing provides further evidence that the mounds were continuously dug into as new ovens were made.

The rounded to irregular shaped lumps of baked clay found in the excavations indicate the use of ovens containing baked clay heat retainers, and are similar to baked clay heat retainers found in the remains of individual ovens off the mounds including the excavated Gundaline ovens. The fine-grained, tabular fragments of baked clay casts suggest that different types of heat retainer cooking were also used on the mound, including the wrapping of food in mud for baking. The Ravensworth 3 sediment particle analysis and magnetic susceptibility analysis showed that the finer sediment was largely the result of the breakdown of baked clay heat retainers, and

that these heat retainers were not derived from the coarser sediment adjacent to the mound. Thus heat retainers were brought to the mound, probably from the nearby lake, used and re-used and then incorporated into the mound matrix. The colour of heat retainers varies but over two thirds have been in an oxygen poor reducing environment during use or re-use which indicates that they were buried during part of the cooking process. Klaver's (1998) excavations of 2 mounds and 2 incipient mounds at Cooey Point Lagoon on the Murrumbidgee East resulted in her conclusion that mounds were used for cooking in heat retainer ovens, citing the presence of baked clay, ash, charcoal, burnt bone, and oven features such as pits.

The ethnohistory of the Hay Plain and the adjacent Murray Riverine Plain describes mounds as being the location of heat retainer ovens used for cooking *Typha* rhizome and other foods such as *Bolboschoenus* corms and *Triglochin* tubers (Beveridge 1883, Eyre 1845, Kirby 1895, Krefft 1866a, Mitchell 1839 Vol II). The charcoal from Ravensworth 3 and Tchelery 1 is dominated by wood for fuel and *Typha* rhizome, and included round plant carbohydrate storage organs which are consistent with *Bolboschoenus* corms. The pollen from Ravensworth 3 also points to large amounts of wetland plants such as *Typha* and *Cyperaceae* (which includes *Bolboschoenus),* as well as chenopods and grasses. The mussel shell and faunal bones also demonstrate a wetland focus, however the relatively small amounts of shell and bone found in the excavations suggest that plant food was the major food cooked in the mounds. I have concluded that the various line of evidence presented in the study support the expansion of Model 5:

- *the mounds of the Hay Plain derive largely from the repetitive use of baked clay heat retainer ovens in a designated, bounded locale, primarily to cook carbohydrate rich wetland plant food such as Typha rhizome.*

9.2.3 Chronology of Heat Retainer Technology and Mounds

Heat retainer ovens in Australia date from around 31,000 BP at Lake Mungo (Barbetti & Allen 1972:48), similar in age to the 34,000 BP baked clay heat retainer basins in Greece (Karkanas et al. 2004). Ovens continued to be made throughout the Murray Darling Basin, including the Hay Plain, until the contact period approximately 150 years ago, and cooking of kangaroo and emu in ovens currently occurs in the Darling River region.

Holdaway et al. (2005) show that in the semi-arid western section of the Murray Darling Basin the increase in late Holocene heat retainer oven dates is a result of geomorphological processes, and cannot be directly explained by an increase in oven use. However, on the eastern section of the Basin, the flat terrain, aggrading nature and heavy soils of the Hay and Murray Riverine Plains suggest that sites are destroyed at a slower rate, and evidence in Chapters 5 and 6 demonstrate the excavated mounds have survived for over 4,000 years because they are protected by a pavement of heat retainers and soil formation. The excavation of the Ravensworth 3 and Tchelery 1 mounds on the Hay Plain Southwest indicates that their construction began around 4,100 BP and 4,300 BP respectively, similar to the date of 5,000 BP for a burial closely associated with a nearby complex of mounds (Pardoe 1995). Ravensworth 3 and Tchelery 1 were rapidly built up over a relatively short time frame, from 300-600 years respectively, and ceased to be utilised as cooking ovens by around 3,800 BP and 3,700 BP. The combined dates from this study, Klaver's work on the Murrumbidgee East, and research on the Central Murray to the south, provide evidence for an overall increase in mound numbers during the last 2,000 years, with variation in timing in different areas. The dates indicate that the Hay Plain Southwest mounds may have started 1-2,000 years before the Murrumbidgee East and Murray River mounds. The top and bottom dates for the 12 mounds with multiple dates suggest that mounds can take anything from 50 to 1,200 years to be constructed, and on average take about 500 years.

- *The dates provide support for an extension of Model 5: that mounds represent a mid to late Holocene increase in exploitation of plant foods needing cooking in heat retainer ovens. The chronology indicates that mound construction began before 4,000 years ago and continued to the contact period, and that mound building increased during the last 2,000 years. Mounds were used on average for 500 years and then abandoned.*

9.2.4 Models of Distribution on the Hay Plain

The GIS mapping indicates that archaeological material is widely spread over the various hydrological and geomorphological landforms of the Hay Plain. However, when types of archaeological material are considered separately different patterns emerge. Artefact scatters, individual ovens, or open sites (usually artefacts and/or ovens) are widespread over the entire plain and over various hydrological and

geomorphological categories. Middens are restricted to the levee banks of the Murrumbidgee and Lachlan River channels and the lunettes of the large open water lakes. The mounds and burials, however, have a similar distribution pattern which does not simply reflect the hydrology and geomorphology depicted by the GIS mapping. Both burials and mounds are concentrated on the western side of the Hay Plain, and occur on the Hay Plain Northwest, Southwest, Lowbidgee and lower Lachlan River. In contrast on the eastern side of the plain burials are rare and mounds are restricted to billabong or lagoon features of the Murrumbidgee River East channel. This east-west dichotomy, first noticed for the distribution of burials by Bonhomme (1990b), is tied to the large-scale topography of the plain. The mounds and burials are concentrated on the western half of the plain which has the larger, richer, more predictable and permanent wetland features. This low-lying western plain is fed larger and more frequent flood pulses and its lowness also ensures there is less gravitational pull to force water back into the main channel. The network of creeks, anabranches, distributaries, swamps and lakes distributes and captures water, nutrients and sediment and the confluence of the Murrumbidgee and Lachlan forms the vast delta-like Great Cumbungi Swamp. Mounds and burials are concentrated in the productive, diverse, and dependable wetlands of the Lowbidgee, Lower Lachlan, and Abercrombie Creek systems, which contained abundant and predictable plant, fish and other animal resources. The ethnohistory describes *Typha* rhizomes cooked in baked clay heat retainer ovens in mounds as a staple food of these 'reed bed' areas (Mitchell 1893 Vol II). This situation is mirrored in the Murray, Edwards, Wakool system immediately to the south of the Hay Plain, with its large concentration of mounds.

- *The distribution of mounds correlates with the previously discussed model 5 of mounds reflecting intensive management, harvesting and cooking of carbohydrate rich plants. The distribution shows that mounds are concentrated on the western Hay Plain where they are associated with more productive and permanent wetlands than those found on the eastern Hay Plain except for the narrow Murrumbidgee River floodplain. Mounds are associated with wetland USOs such as Typha.*

Distribution mapping also indicates that burials and mounds are closely associated on the western half of the plain, and burials are located in mounds or in small tightly bounded clusters close to mounds. On the eastern half of the plain burials are rare and occur singly or in small clusters of 2-3, and are usually found in middens or

'campsites', but not in mounds. Very small bipolar microblade stone tool technology characterises most of the Hay Plain, but is particularly characteristic of the mound complexes of the Hay Plain Southwest. The Hay Plain Northeast is dominated by a radically different technology based on the cobble or pebble raw material source. This includes split pebble tools and medium sized core and flake technology, including thick flake wood working tools. There is a distinct boundary on the western edge of this technology, which corresponds to the Wiradjuri boundary noted in the historic period.

Distribution of single heat retainer ovens shows that they are spread widely across the Hay Plain, and that while they may sometimes be incipient mounds, they are often found in areas that do not have mounds and represent a different type or scale of activity. This contradicts Klaver's (1998) findings that ovens were always incipient mounds. My different interpretation results from the larger study area and GIS database, which was designed to demonstrate patterns of distribution over the whole plain, including areas both with and without mounds.

- *Distribution of single heat retainer ovens suggests that they are sometimes incipient mounds, but they are often found in areas that do not have mounds and therefore represent a different type or scale of activity.*

Distribution across minor landforms shows that **all** types of archaeological materials tend to be located on the slightly higher sandier palaeochannel soils. However, a few mounds are built on low grey clay soils, for example on the western side of swamps. Palaeochannel features are common and large enough to negate the need to build mounds as high domed structures. Thus the moundedness factor is not a direct outcome of a new pattern of locating mounds on flood-free areas or building upwards to keep dry (Model 1 suggested by Williams [1988] for mounds in Southwest Victoria).

- *Mounds are not a direct outcome of a new pattern of creating flood free campsites*

9.2.5 Correlating Mounds with Changing Environments

In model 4a I proposed that Hay Plain mounds were a response to evolution of swamps, billabongs and other resource rich environments which may not have existed in the early stages of evolution of the modern Murrumbidgee and Lachlan, following Pardoe's (1995) model for the Murray River. However, examination of the riverine

environment clearly shows that environments suitable for the growth of dense predictable crops existed in the early Holocene or even earlier. For example the large palaeo-lagoons on the Murrumbidgee River to the east of Hay belong to the 35-25,000 year old Gum Creek system have been continuously connected to the superimposed Holocene river (Page et al. 2005:569). These lagoons are characterised by large numbers of mounds which date from the late Holocene, for example Cooey Point Lagoon where mounds were dated to between 1,000 BP and 400 BP and a heat retainer feature dated to 2660BP (Klaver 1998). Thus at Cooey Point Lagoon and similar features, mounds appeared a substantially long time after the connection between the palaeo-lagoons and modern river developed.

The palaeochannels of the Gum Creek system which incorporates the Abercrombie Creek system existed in the Pleistocene and early Holocene (Page et al. 1996). The Ravensworth 3 and Tchelery 1 mounds date from around 4,300 to 4,100BP, and there is a date of 5,000 BP from nearby Jeraly (Pardoe 1995). The dating and indicates that the mounds on the Abercrombie Creek system were initiated around 4-5,000 BP, again suggesting that mounds appeared a long time after the evolution of wetlands suitable for *Typha* and other food crops.

- *The results of this study shows that model 4a cannot be applied to the Hay Plain. The initial appearance of mounds on demonstrably older wetland systems substantially post-dates, and is* ***not*** *a direct outcome of, the evolution of suitable wetland or riverine features landscape features in the mid to late Holocene.*

Model 4b) proposed that mound building was triggered by a wetter climatic period. A possible wetter period around 4-5,000 BP (Kershaw 1995) suggests a model of mounds being a response to wetter period and more predictable food resources which gradually diminished over the last 2,000 years. A corollary of this is that the big mounds on Hay Plain South West may have built in the 5-3000 BP period and smaller mounds on the modern rivers are more recent (Martin 1996c). All the Hay Plain Southwest mounds are on the Abercrombie Creek system that originates as part of the Gum Creek system which leaves the Murrumbidgee near Darlington Point. It is possible that this system became less reliable due to decreased flood heights and lack of bank full stages and less take off from this section of the river. This would reflect a reduction of rainfall and/or snowfall in the highlands, or different timing that

lowered the height of the flood pulses. The older dates of the Tchelery, Ravensworth and Jeraly sites compared to the younger Cooey Point Lagoon mounds support this model, however, more dates are necessary for confirmation.

- *There is at present only the circumstantial evidence to link the initial appearance of mounds to the possible wetter period around 4-5,000 B (Model 4b). However, there is evidence for the following: A change in climate or geomorphology some time after 3,500 BP may have decreased flood-peak flow in the Abercrombie Creek system on the Hay Plain Southwest and triggered a localised shift in mounds from this system to the Lowbidgee and lower Murrumbidgee and Lachlan River channels*

9.2.6 Mounds with 'Style'

The data for size, roundness and moundednesss of the Hay Plain mounds and other areas with mounds indicates that different areas have different 'styles' or templates of mound size and shape, but that cluster size is not a 'style' attribute. The lack of roundness and moundedness of the otherwise similar Menindee ashy deposits corroborates that these attributes are redundant from a functional perspective and thus the Hay Plain mounds were deliberately shaped to cultural templates or 'styles', as proposed in Model 6.

- *The results of the study indicate that that mound size and shape are influenced by 'style'. 'Style' provides an explanation for mound attributes not directly explained by heat retainer cooking of dense, predictable plant foods.*

9.2.7 Mounds as Elements in Composed Cultural Landscapes

The Hay Plain is devoid of rocks for painted or engraved art, another type of mnemonic was used. Sculpted earth constructions formed the major elements of the cultural landscape, particularly on the flat plains. Shaped or styled mounds are a subset of the overall pattern of sculpting earth to impress cultural messages. The Hay Plain landscape was spatially arranged and composed with constructed features which carried information about diverse aspects of cultural life including land tenure boundaries, individual ownership of constructed features such as weirs, pathways marking approved routes and linking important places, burial huts, mounds and/or sculpted rings indicating the burial places of significant males, mounds marking important occupation areas, ceremonial features known as *burbang* or bora rings

and excavated wells or reservoirs. Similar forms of sculpted earth were used for different purposes; mounds, burial mounds and ceremonial ground mounds, earth rings around burials and around ceremonial grounds. This may reflect a process whereby people chose to remember and use previous cultural features in a different situation and for a different purpose, as in the development of monumental Mississippian mound centres from Emergent Mississippian incipient mound centres (Schroeder 2004:817).

The constructed landscape elements overlay the ideational or storied landscape which was 'sensually inscribed' with sounds, smells and visual triggers of memory and understanding (Langton 2002:254). Landscape features such as the flat treeless plains, the rainbow serpent waterholes and the reed beds provide visual and sensual triggers for the stories which connect the present occupants with their ancestors and the creators or *Story* Beings. The storied landscape enables us to reconstruct something about how people perceived landscape as the personification of creation beings, and how rules shaped their relationship with the landscape. Current perspectives of landscape elaborate how constructed features such as mounds act as a memory trigger about ancestors perceptions and actions, leading to the current occupants feeling of identity, rights and obligations. Mounds, particularly when seen as mirages, impress the vast scale and flatness of the plains, mounds give a vantage point to view the landscape, mounds contain messages about past events, people and management of resources. Non-Aboriginal landowners also interpreted aspects of the landscape in parallel ways by building houses and sheds on mounds, placing roads on traditional pathways, and planting crops in former wetlands.

- *Model 7 in Chapter 3, which proposed mounds are elements of a Cultural Landscape, has been successfully applied to the Hay Plain and has provided insights into the constructed, spatially arranged, sensually inscribed, and storied landscape.*

9.2.8 Socialised Landscapes and the Inclusion/Exclusion Models

Evidence presented in Chapter 8 suggests that the Hay Plain was a very complex social landscape at the contact period. The attributes of language, social organization, trade and exchange, marriage pools, material culture such as stone artefacts, the various perceptions of landscape type such as reed beds, possum forest or *Acacia pendula* scrub, the storied landscape of the ancestors and the *Story* Beings (Langton 2002),

all overlap in different ways. The overall picture is of groups belonging to and inscribing the land with constructed features such as mounds, burials paths, weirs, dams, and reservoirs, but also having very wide, multi-layered and varying social networks with surrounding groups. Once the languages that were present at contact were in place a system of borrowing of language features, social organization and ceremonies was forged. The people occupying the Hay Plain had (and still have) a range of languages, social systems, ceremonies, and trade alliances forming a multi-layered social network with boundaries cutting across each other. In addition people differentiated themselves on a different scale by the type of landscape they lived in and their 'style' of living. Thus 'reed bed' people from different language groups had an additional name signifying how they lived, and possibly mounds played a role in differentiating local groups who live around reed beds and swamps. Men also identified themselves as belonging to certain swamps, and could be called by the name of an important swamp. Men 'owned' potential canoe trees or fish weirs, and I have suggested that women had a similar 'ownership' of the wetland food plants and created and sculpted the mounds.

While aspects such as mound complexes indicate a focus on small ranges containing wetland features, other aspects suggest wide-reaching and complex social networks existed across the region. I have suggested that the focus on wetlands and managed dense root crops allowed a change in mobility patterns. Groups who "owned" the right kind of wetland could get a living from a smaller area, but this did not mean people did not fully utilise or negotiate networks. The smaller and less mobile the group, the more they needed to have strong networks with outside groups to find marriage partners and the variety of relationships that they needed throughout their life, including social relationships, trade, ceremony and information exchange. The necessity of marrying outside these small ranges means the people had to have something valuable such as nets to trade so they could engage in social relations with a large social network. This is the dichotomy - focus on intense exploitation and management of a swamp or system of swamps would lead to more sedentism, lower mobility, smaller range and a need to "own" the resources they were putting such effort into and getting so much energy out of. However, far from resulting in stricter boundary exclusion, as suggested by the Pardoe model listed as 2b in Chapter 3, carefully proscribed social interaction became more important. Although Aboriginal small land-tenure groups have inalienable or 'exclusive' tenure of land (Berndt & Berndt 1968:42), this is a legal definition, not an actual practice. The people on

the ground, or small land-utilising groups, consist of family units and visitors, many of whom do not have exclusive tenure to the land they are living on (Berndt & Berndt 1968:44-45).

The evidence presented allows some insight into how people perceived their cultural landscape, although there are many questions as yet unanswered. The very large Abercrombie Creek mounds out on the flat treeless plains suggest that they were not there to warn people away so much as to invite guests in. Such large mounds would be visible for several kilometres, but this area is famous for its mirages which on sunny winter days enabled people to see large mounds which were in fact below the horizon, that is 10 km or more away. This and the large footpaths and other constructed and marked landscape features suggest that the whole landscape was mapped for people to read, not as a warning but to inscribe relationships so everyone knew where they were welcome and how to approach an area correctly under the complex laws and customs that existed. The more concentrated the resources, the more potential for visitation, and the more the landscape needed to be 'sign posted'. The early historical accounts also suggest that the people of the western half of the Hay Plain and their neighbours to the south and west were frequent visitors to each other's country even when ceremonies where not occurring. However the relationship between the various small groups of the western Hay Plain and the Wiradjuri of the eastern Hay Plain seems to be subtly different. The change in various names for *Typha* common to all the western Hay Plain and Murray River groups, to the Wiradjuri name *balyan*, and the distinct change in burial construction, stone tool technology and source material in Wiradjuri country, also suggest that there was a boundary of some sort between the western groups of the Hay Plain and the Wiradjuri. Tindale suggested the Wiradjuri looked to the rest of the large Wiradjuri-Gamilaraay language group for relationships, and maintenance of a 'cycle of ceremonies that moved in a ring around the whole tribal area tended to assist tribal coherence despite the large occupied area' (Tindale 2006).

- *Mounds on the Hay Plain are **not** simply territorial markers related to exclusive use of territories, as suggested by Pardoe's 'inclusion/exclusion' models 2b and 2c. I have outlined evidence suggesting that a more complex multi-layered social landscape and wide reaching networks existed on the Hay Plain during the early contact history. Smaller ranges had the effect of increasing the need for social interaction, and the intensified staple food*

production enhanced the opportunity for social interaction. The comprehensive borrowing of words, grammar, social organization and ceremony, and the varied sources of stone raw material, shows that this complex social landscape and networking was a significant factor on the Hay Plain for a considerable time period.

9.2.9 Spatial Patterning of Mounds and Social Organisation

The clustering of mounds was found not to be a 'style' attribute, as the study indicated that all areas of the Hay Plain tend to have large clusters of 20 or more mounds, independent of the size or shape of the mounds. The rapid build up of the large Ravensworth 3 and Tchelery 1 mounds suggests that only one mound in a complex was used at a time. This is corroborated by several early ethnohistorical sources which state that only one mound in an area would be in use, the others abandoned, sometimes with large trees growing out of them or half worn away by the river (Cameron 1886, Curr 1883:107-108, Mitchell 1839 Vol II). The very large mounds of Ravensworth and Tchelery were built over 300 and 600 years respectively, which represents between 15 and 20 generations based on 20 years per generation. A similar time frame of mound construction is evident in other mounds on the Hay and Murray Riverine Plains, although there is a wide variation in construction times (Table 4.1), and Beveridge (1869:187) witnessed a mound built near Swan Hill over a 28 year period. This suggests that mound complexes are actually genealogies, each mound representing a family lineage. Littleton's work supports this idea by showing that burials on the Hay Plain Southwest associated with or in mounds tend to display clustered events forming small, highly patterned and dense groups of burials of usually around 20 individuals (Littleton 2002). The fact that on the Hay Plain Southwest, individual mounds within a mound cluster often have distinctly differing ratios of stone artefact material also supports the idea that clusters grew sequentially. I speculate here that each mound actually represents a land-tenure group, created and styled by the women in the group or married into it, as a celebration of their knowledge and status as crop managers, harvesters, mound builders and net makers. As a descent line phased out a new mound would be started, and the old mound could become a burial ground. Thus burial mounds with burial structures would be the complete mnemonic for memorising genealogies and deriving identities. Mounds are not located and shaped 'randomly across the landscape, but rather are an ordered

component of socially constructed space' (Wilson & David 2002:7).

- *It is proposed that on the Hay Plain mounds grew sequentially within clusters, one mound at a time in use for cooking, and after a mound was abandoned it could be used as a burial place. This is a corollary of Model 3b in Chapter 3, as suggested originally by Witter pers. comm. (1996), that when in use a mound would be a central cooking place with huts placed in a set spatial pattern, the arrangement reflecting social structure and shared activities.*

Craib (1991) proposed that big mounds were base camps and small mounds were satellite specialist sites on the Murray Riverine Plain to the south of the Hay Plain (Model 3a in Chapter). On the Hay Plain clusters are the usual distribution pattern and may contain big mounds, small mounds or a mixture of sizes. Some sections of the Hay Plain Southwest do show a pattern of isolated mounds some distance from clusters of mounds, and these may be satellite sites of the main cluster (but not necessarily smaller, different in content or reflecting a different activity).

- *The hypothesis that big mounds were base camps and small mounds were satellite specialist site, does not fit the Hay Plain mound distribution pattern.*

9.2.10 Managed Landscapes and Gender Relations

The mounds of the Hay Plain, and in particular the mound complexes and very large rapidly built mounds of the Hay Plain Southwest such as Ravensworth 3 and Tchelery 1, provide evidence of a landscape managed to maximise the dense predictable wetland foods such as *Typha*. This rapid build up and the large numbers of mounds and numerous associated burials indicates changing patterns of plant use, wetland use, and sedentism. The ethnohistory describes ways of managing the plant resources including firing, water management, spacing plants and harvesting at the time of peak carbohydrate content, and preserving food. Ethnohistory indicates women were the specialist knowledge holders and undertook management, harvesting, preparation, cooking and preservation of plant foods, and it is therefore suggested it was women who largely constructed the mounds. This is also supported by the detailed analysis of stone artefacts from the Ravensworth 3 and Tchelery 1 excavations which indicates that the few backed blades discarded on the mounds were made elsewhere, and the characteristic small unretouched bipolar flakes and flakes with usewear or side retouch suggest the mound contains domestic discard with only very rare

indications of male activities such as large game hunting. The artefacts from the mound excavations are in direct contrast to non-mound sites in the area, such as the microblade workshop (Dry lake TSR4), the larger flakes on Dry Lake 11, or the Ravensworth Lake 12 site with its larger flakes, larger and unfinished backed blades, and high proportion of grinding equipment.

Women had full access to the plant foods cooked in mounds, and power over its distribution. This may have given the women a greater degree of autonomy on one hand, but also a greater role in providing the food for ceremonies and gatherings. Women also played a major role in the procurement of *Typha* fibre and other plant fibres and the making of nets, which were a major trade item. The role of women in managing these food and fibre crops is a counterpoint to the patrilineal land tenure that is often assumed to have been the major element of people's association with land. Viewed from this perspective, the important role woman played in managing the food crop may also have encouraged more frequent visiting of married women's families, as the women could provide for them.

The exogamous system would result in the export of knowledge about the management, harvest and cooking of root crops, and of mound building. This exporting of the knowledge and the associated constructed cultural landscape template, would result in an outward movement of mound building from managed swamps and reed beds into new landscapes. Thus the mounds in the Macquarie Marshes 500 kilometres to the north of the Hay Plain, may reflect the export of cultural information into a new area via marriage networks. Trade and exchange is often considered in the context of male dominated systems of archaeologically visible trade items such as ground edge axes, but mounds inform us about the exchange of ideas.

Large-scale cooking in mounds created female co-operatives which led to a change in relationships between women and between women and men, both within local groups and between groups. These roles and the increased sedentism signalled a change in gender relations (Model 8 in Chapter 3), which has left visible reminders in the form of mounds.

- *The archaeology and ethnohistory of the Hay Plain provide evidence linking women to specialised knowledge of plant management, harvesting, preparation, cooking in ovens on mounds, and mound construction, as well*

as plant food preservation and fibre making. It is suggested that women's co-operative food production, and distribution of the staples produced, resulted from changes in gender relations. These changes are reflected in the construction of mounds.

9.3 A GENERALISED MODEL OF MOUND DISTRIBUTION IN AUSTRALIA

This study has shown that on the Hay Plain mounds are unevenly distributed and concentrated in areas of the western half of the Hay Plain suitable for growth of dense predictable wetland food plants. Similar geomorphology and landforms on the eastern side of the Hay Plain tend not to have mounds, except on the Murrumbidgee channel, because topography and hydrological characteristics are not suitable for the dense, predictable and permanent growth of wetland food plants. The ethnography for the Lower Murrumbidgee and Lachlan Rivers and the adjacent Central Murray River and its tributaries and distributaries shows that mounds were associated with wetlands often called 'reed beds' or 'swamps'. The ethnography and the excavation data indicate that a major food source found in these wetlands and cooked in mounds and ovens was *Typha* rhizome, as well as other plant resources such as *Bolboschoenus*, and *Triglochin*, in addition to a predominantly aquatic fauna including waterbirds, turtles, yabbies, and fish.

In contrast, mounds apparently do not occur along the Murrumbidgee River near Balranald as it enters the Murray Mallee Sandplain downstream to its junction with the Murray River. As the Murray River flows south through a confined channel in the Murray Mallee, mounds apparently do not occur. On the lower Murray, particularly around the Lower Murray Lakes or delta system, mounds occur again. Mounds also occur in the large wetland system of the Macquarie Marshes. This distribution pattern corroborates the connection between mounds on the Murray River and its tributaries, including the Hay Plain and the Macquarie Marshes, to wetland areas with dense predictable 'root crops' such as *Typha* and/or *Bolboschoenus*. The Menindee Lakes and adjacent Darling River has some features in common with the Lower Murrumbidgee and Lachlan Rivers, such as lake inlet and outlet creeks, large billabongs, swamps and 'back swamps'. Here similar deposits to Hay Plain mounds, incorporating baked clay heat retainers, ash, charcoal, burnt shell and bone, have been recorded (Martin, et al. 1994 and Pardoe & Martin 2002, Martin 2003).

Bolboschoenus was processed in large quantities in this area at contact, and still grows there. The large ashy heat retainer rich deposits reflect exploitation of this food. Looking further afield the same model applies to earth mounds on the northern Arnhem Land coast which are associated with cooking 'roots of water plants and rushes' in 'termite bed ovens' during the dry seasons (Peterson 1973:181-2).

In contrast, while some mounds in central and southern Victoria are associated with wetlands (Williams 1988), others are associated with open temperate meadows which were the favoured habitat of *Microseris scapigera* or *murnong* (Bonwick 1870, Gott 1982,1989, McPherson 1885, Robinson in Clark 1998-2000). The meadows were deliberately kept open by firing, and the crop enhanced by digging, firing, curation and replanting (Gott 1982, Berndt & Berndt 1993). *Murnong* contains inulin (Gott 1989), and this was converted to more digestible carbohydrates and sugars by cooking in heat retainer ovens in mounds. In southern Victoria ovens in mounds had a distinctive construction, with stone heat retainer forming a basin, and one or two large stones sticking up which were used for creating steam (McPherson 1885). Comparing *murnong* meadows with the Hay Plain, the habitat is different, the food plant is different, and the mound construction is different. However, the fundamental model is the same, a focus on dense predictable carbohydrate crops which were managed and cooked in heat retainer ovens to convert the complex carbohydrates to more digestible forms and maximise the energy return.

Thus the mounds of the 'reed beds' of the Hay Plain and sections of the Murray River and its tributaries, the Murnong mounds of the temperate meadows of southern and central Victoria, the earth mounds of the Arnhem Land wetlands (Figure 1.3), and the ashy deposits of the Menindee area all have a similar origin; intensive focus on and management of dense and predictable carbohydrate crops, in these cases USO's, which were baked in heat retainer ovens, the repetitive use of ovens forming distinct constructed landscape features. Other food plants in Australia were possibly managed and utilised in a similar way, for example the carbohydrate-rich bracken fern (*Pteridium esculentum*) of temperate forests was managed by fire and usually roasted before further preparation and eating (Veitch 1985). Bungwall (*Blechnum indicum*) from the Wallum coastal swamps of the South East Queensland coast was also roasted before being 'bashed' and eaten (Gillieson & Hall 1982:2-3). The Pandanus groves of North Queensland (David & Lourandos 1998) and the Yam and *Typha* crops of the Swan River Valley (Hallam 1987) were managed in a similar way to maximise

energy returns from the landscape. I suggest that mounds or ashy deposits with heat retainers may also exist in these areas.

This idea is supported by the suggestion that mounds are **not** found in areas that only have widely spaced, unpredictable or non-permanent carbohydrate rich crops that need cooking in ovens. For example, in the Murray-Darling Basin, only small heat retainer hearths are found in non-riverine semi-arid areas with less predictable and less dense stands of root crops. In the arid centre of Australia, where USO's are widely spaced and less predictable, heat retainers are not used at all and large emu and kangaroo are cooked in a shallow heated pit with ashes and coals heaped over the body but not sealed as in oven cooking (Spencer & Gillen 1968 [1899]:22-24). The animals are eaten partially raw, which the Murray Darling Basin people find disgusting (Martin 1999a). Mounds or ashy deposits are also unlikely to be found in rainforest or thick forest, unless crops were managed by fire to increase density. Mounds are found in three main areas of Australia, the northern coastal wetlands, the wetlands of South Eastern Australia (particularly the Murray and its tributaries including the Murrumbidgee/Lachlan of the Hay Plain), and the culturally created temperate meadows of South Eastern Australia. Thus mounds reflect a focus on dense and predictable root crops, and are often found in wetland situations for this reason.

- *The distribution of mounds in non-wetland temperate meadows, as well as wetlands, indicates that mounds (and large ashy deposits with heat retainers) are found where suitable dense and predictable crops needing prolonged cooking in heat retainer ovens existed naturally or as a result of land management, and were intensively exploited. This is a general explanation for the distribution of large heat retainer features, including mounds and ashy deposits. Within this general model there is an infinite variety of attributes influenced by other factors, including the type of heat retainers used and what other resources were exploited from the same space, but largely reflecting differing cultural practices and social organization.*

9.4 MOUNDS AND GENERALISED MODELS

9.4.1 Mounds of the Hay Plain and the Lourandos 'Intensification' Model

The use of heat retainer technology and the focus and management of dense predictable carbohydrate rich plant foods has been shown to be a world wide

phenomenon in the mid to late Holocene. This can be related to other concepts such as 'broad spectrum revolution' (Edwards & O'Connell 1995:769) or the 'intensification' model of Lourandos (1980, 1983, 1997). I have shown that the mounds of the Hay Plain result from the intensive management and cooking of wetland plant foods in heat retainer ovens, and specific cultural templates and social organisation. But does this relate to the general intensification model proposed by Lourandos? There are a number of reasons why hunter-gatherers in Australia may choose to intensify exploitation of certain food resources (Lourandos 1997, Balme 1995):

- to maintain or increase population
- to utilise smaller territories
- to reduce mobility
- to maximise efficiency of food procurement
- to create larger group sizes
- to support large 'redistribution' networks
- risk minimisation

The rapid build-up of the large mounds excavated on the Abercrombie Creek system indicate that some time before 4,300 BP people changed the pattern of site usage to one which involved more people days per year in the tiny loci of individual mounds on this vast plain. The mounds and associated archaeology such as the burials, suggest that in parts of the western half of the Hay Plain there was a movement towards smaller ranges, and reduced mobility for part of the year. We thus have a picture of smaller ranges, or at least more restricted mobility within ranges, and focus on particular wetland plant resources within those ranges.

The management of crops such as *Typha* and the communal cooking in heat retainer oven in mounds indicate that food procurement efficiency was maximised. It is not possible to evaluate, at the present level of knowledge and dating, whether there was an increase in population, either before or during the development of the focus on wetland plant crops. However, the evidence of smaller burial clusters on the Hay Plain than on the Murray River (Littleton 2002), suggest that land-utilising group sizes

did not necessarily increase although short-term gatherings of people may have increased in size. As discussed previously the increased management of plants and maximization of energy by women's communal cooking in mounds created a situation where a predictable food source and increased sedentism funded the making of infrastructure such as fish nets, fish weirs and possibly water control features. The increased 'redistribution' potential included nets for trade, preserved *Typha* rhizome and predictable excess fish for trade or gatherings/ceremonies, The fibre for string and nets was produced as a by product of cooking *Typha*, and cooking of *Typha* supplied food and enabled people (women) to be sedentary long enough for the time-consuming making of nets. Krefft (1866a) suggested that the fibre was more important than the food, but the fibre was the end product of a long process of managing, harvesting, cooking and eating, and finally string and net-making.

Risk minimisation is another obvious reason why people intensified the exploitation of wetland plants. Crops such as *Typha* or *Bolboschoenus* were used to tide people over in seasons when other food was difficult to obtain, such as the gap in food production that occurred fairly widely along the Lachlan, Murrumbidgee and Murray Rivers, in the late winter and particularly in the spring during the initial pulse of the spring flood (MacDonald 1850 [1969]: 37). By introducing certainty in this period a larger population could be supported, or a less mobile population, or a less hungry population (or all of these). From another perspective, a secure food crop meant that some members of the community could concentrate their energies on more risky large game hunting and fishing for the larger fish with spears. In addition, energy could be concentrated on the building of infrastructure. The building of large-scale infrastructure such as the eel traps and eel 'farms' of South Western Victoria may have depended on a staple plant food to support the work. Thus mounds are not the inevitable result of eel farms, but processed food to fund the building and maintenance of eel farms (thus explaining why Williams [1988] could not find mounds next to fish traps). Food processing on mounds on the Hay Plain may have similarly funded the building of wooden fish traps, weirs and possibly earthen dams.

Thus the mounds of the Hay Plain and other archaeological material such as the burials provide evidence for 'intensification' as defined by the above list, except that there is no direct evidence of increase in population or small land-utilising group size.

In a slightly different interpretation, David and Lourandos (1998:210-212) list various

changes in socio-cultural patterns that they argue occurred on Cape York in the Late Holocene including a 'unified system of territoriality, land use and information exchange':

- new territorial systems which may be exemplified by smaller territories, well managed crops
- Enlarged diet breadth, incorporating new staple foods capable of being collected in large quantities over extended periods of time, for reasons of risk minimisation and resources for ceremonies
- Restricting the ranges of resource extraction and settlement to short-spaced and/or more commonly reused areas, thus residential bases become more marked and overall mobility reduced

The Hay Plain clearly satisfies all three of the above points, but possibly only in those areas where dense predictable wetland plant crops occur. Thus the areas of Murrumbidgee East which have billabongs and lagoons, the wetlands and reed beds of the Lower Murrumbidgee or Lowbidgee, Lower Lachlan, and the Abercrombie creek system conform to the above points. Considered on a larger scale this type of change also occurred on the adjoining Wakool, Edwards, and Murray Rivers. This combined large area and must be considered a focal point for Holocene socio-cultural change. The Macquarie Marshes is separated from the Hay Plain by nearly 500km, but has a similar permanent wetland with *Typha*, and large numbers of mounds.

However, the eastern areas of the Hay Plain, despite the palaeochannels, creeks, and swamps, show little or no archaeological evidence of this type of socio-cultural change. Thus on the Hay Plain some areas show evidence of dramatically intensified exploitation of particular plant crops, reduction in range, and social changes, while other areas did not. This disparity is a significant area for future research. By understanding the global trend in cooking technology I have been able to examine processes on the Hay Plain or Australia in general and enter the 'intensification versus taphonomy' debate (Chapter 2) from another angle. The focus on management, harvesting and oven baking of dense and predicable but difficult to digest carbohydrate crops, particularly USOs, is a worldwide trend which was taken up enthusiastically by people in areas of the Murray Darling system. This study has shown that 'intensification' of resource extraction occurred substantially later

than the creation of prospective habitats and crops, and was thus driven by social change, with ecology acting as a constraining factor. This supports Lourandos' concept that the evolution of social relations led to the intensification of resource extraction (Lourandos 1980, 1983, 1997), although I describe it as co-evolution of social organisation and resource extraction built on specialised knowledge of plants and older technology such as heat retainer cooking. The dates from the Ravensworth and Tchelery mounds confirm that this trend was adopted before 4,300 BP on the Hay Plain, which is much earlier than expected when compared to other similar mound systems in Australia.

- *The age, short time span and rapid build up of these large mounds of the Abercrombie Creek system corroborates that these mounds are associated with a form of 'intensification' as defined by David and Lourandos (1998). The increase in mounds in the late Holocene on the Hay Plain and the adjoining Murray, Edwards and Wakool Rivers, indicates that this trend continued and increased in scale, leaving the unique monumental landscape for future generations to cherish. The Hay Plain also offers evidence of the social changes that accompanied the intensified exploitation of Underground Storage Organs. The earlier discussions on mound style, landscape archaeology and gender relations provide the kind of detail about the dynamics of social relations that is consistent with the 'intensification' model. The Hay Plain also has the advantage that the mounds can be dated, thus providing a chronology of social change.*

9.4.2 Food for Thought- Mounds, Ovens and Global Models

In western North America fire cracked rock middens were most commonly associated with cooking carbohydrate rich foods including underground storage organs such as camas bulbs or above ground storage organs such as agave stems and prickly pear leaves. These foods are considered to be 'low ranked' in terms of energy returns, but were managed to maximise yield and/or provide predictability. This type of exploitation was still occurring at the time of contact in some areas, ceased after the adoption of farming and ceramic pots in others, and in others it held a position in communities that made a living from both farming 'domesticated' plants and collecting 'wild' or 'managed' plants (Leach in press, Leach & Bradfute 2004, Terrell et al. 2003). It has been shown that in some areas people shifted between these aspects

of plant use depending on circumstances, for example they returned to 'managed' or 'wild' plants during dry years when farming was unsuccessful or not successful enough (Layton et al. 1991:260). In some marginal areas agriculturists returned permanently to gathering as land was degraded or climate deteriorated, but had to intensify plant use as the population was higher or people had become used to a more sedentary larger village lifestyle (Leach & Bradfute 2004). Of special interest are the agave farmers where there was a cross over from collecting wild agave and cooking in ovens to growing agave and cooking in ovens (Leach in press). Thus the continuum between 'domesticated' and 'wild' plants, and 'farming' and 'managing' of plants is strongly linked to the use of heat retainer ovens in many areas. Even in Mesoamerica the central role of root crops and 'wild' plants in the diet is emerging and replacing the idea that maize was the staple (Terrell et al. 2003:338). A similar continuum can be seen in plant use from New Guinea, across the Torres Strait to Cape York and into the continent of Australia (Harris 1995). Oven use intensified at the time of introduction of agriculture in North America (Leach 2005), and at the same time on the Hay Plain, not because Australians were on an 'evolutionary' path to agriculture but because they had a similar purpose in maximising energy from dense predicable but difficult to digest crops. The Hay Plain archaeology shows that the mound building 'reed bed' people had different relationships with plants from the adjacent and related possum hunting forest people or myall scrub people. As they spoke the same languages and intermarried they were able to shift between ways of life like the North American gatherers and farmers.

Dewar (2003:369) links the dependence on roots rather than cereals in the eastern Oceania on the increasing variability in inter-annual rainfall variation. From this viewpoint, the lack of horticulture in Australia is the far end of this trend: it is a direct result of the unpredictable climate. How does this relate to the fact that some of the most predictable rainfall/flood regime areas of Australia were characterised by intensive management and use of root crops and other carbohydrate rich crops cooked in heat retainer ovens? This suggests that a lack of horticulture in these particular areas of Australia may not be a direct result of an unpredictable climate, but another factor. Dewar postulates that the relatively recent introduction to northern Australia of some *Dioscorea* and *Colocasia* species may relate to attempts at farming such crops, possibly during periods of climatic stability (Dewar 2003:376). Of more importance than the possibility of an attempt at 'farming' is the evidence of movement of plant knowledge. Leach (1987) shows that Maori brought knowledge

of plants with them to New Zealand and applied it, including knowledge of which wild plants needed prolonged cooking in ovens. This all suggests that the most important trend in human history is the increasingly specialised knowledge of plants and the sharing of such knowledge. The themes of farming as evolution, revolution or replacement should be exchanged for the 'knowledge is power' theme (Terrell et al. 2003:359), the diversity of human behaviour reflecting 'speadsheets' or an 'interactive matrix of species and harvesting tactics' (Terrell et al. 2003:323) which people pick and choose from to fund their individual and communal social lives.

Where 'horticulture' is characterised by root crops such as *ti* (*Cordyline terminalis*) or other plants with carbohydrate storage organs such as *agave*, it may be seen as a development of the process of managing dense and predictable crops for cooking in heat retainer ovens in order to maximise the energy obtained from the carbohydrates and a given area of land. This process evolved from much older heat retainer technology and its use to change the structure of carbohydrates is an intensification of existing knowledge and practice. In a similar way the Holocene focus on seed grinding in semi-arid New South Wales (Allen 1974, 1998, Balme 1991, 1995) developed from a much older seed grinding technology dating from at least 30,000 BP (Fullagar & Field 1997). Thus in some regions farming can be seen as a sideways development of this process of plant management and carbohydrate energy maximisation through heat retainer cooking or grinding. Horticulture can be seen as simply being an adjunct in the development of cooking technology! Ceramics also co-evolved with ovens in a similar fashion. Heat retainer ovens were also used as kilns for firing pottery (Wandsnider 1997:34), thus and the idea of ceramics possibly originated with baked clay heat retainers, explaining the concurrent development on separate continents. The way ceramics were developed by some baked clay heat retainer users and ignored by others (as in Australia), also supports the 'interactive matrix' concept (Terrell et al 2003:323). Finally, people also co-evolved with ovens and mounds as heat retainer cooking increased the food availability, chewability, digestability and concentration of calories. This has had selective effects on the human genome, resulting in regional variation in tooth size reduction (Brace et al. 1987:715) and ability to digest complex carbohydrates (Wandsnider 1997:29-32). This study has demonstrated that ovens and mounds were an integral factor in social change related to co-operative plant food production and changes to food access and distribution.

9.5 CONCLUSION

The comparison of the results of this study to the models proposed in Chapter 3 indicated that many of the models help explain relationships between material remains and human behaviour on the Hay Plain. Other models clearly do not fit the data and were rejected. I was able to build up a complex picture of the intertwining of ecology, agency and history on the Hay Plain by using these models as tools to work with the data. The interpretive archaeology models enabled me to look at the data with entirely new perspectives and obtain some explanations for aspects that had previously defied explanation. For example the testing of size and shape data for mounds against the idea of mounds having style led to the conclusion that these attributes are cultural rather than economic. The distribution data showed that mounds are associated with dense, predictable plant crops that need cooking in heat retainer ovens. It also showed that the adoption of the intensified management harvesting and cooking of these foods is not a direct result of changes to the environment, but a cultural choice which was constrained by the environment. I have contributed new perspectives and additional knowledge of the archaeology of the Hay Plains and particularly the phenomenon of mounds by following the objectives and research framework outlined in Chapters 2 and 3. This study has researched all the archaeological material types on the Hay Plain, using data about burials, stone tool technology and ovens, as well as mounds, to provide explanation of the archaeology, thus demonstrating that mounds cannot be studied in isolation from the rest of the archaeological record. The research into heat retainer technology has highlighted the continuous use of this technology from the Pleistocene, to the Holocene and the present time, and also delineated similarities and differences between single heat retainer ovens, mounds and ashy deposits with heat retainers. The success of the research objectives and framework is demonstrated by the way the explanations generated by different approaches and scales have successfully meshed together to form a coherent story.

I have attempted to restore the reputation of mounds from 'enigma' to 'archaeological deposit' and the flat plains from 'empty' to 'culturally inscribed' landscapes. Future research needs to focus on these two aspects. Mounds deserve to be the focus of detailed archaeological research that examines the distribution, chronology, and contents in the same way as other significant archaeological deposits. We need to understand the environmental variables, the chronology, and to identify the heat

retainers, artefacts, pollen, charcoal, starch, lipids, sediments, fibres, bones, scales, and what ever else can be found. A range of issues about the detail of heat retainer cooking remain to be investigated, and can only be examined by middle range experimental cooking, A future dating program can provide additional dates designed to refine the various models and concepts outlined above. The simple technique of coring mounds, pioneered at Ravensworth 3 for this study, has opened up the possibility of regional dating programs and sampling of pollen, sediments, and other microparticles without the need for time consuming, expensive and damaging excavations.

Research into these 'inscribed' landscapes must bring the men, women and children, the ancestors and the *Story* Beings back into focus. Research into mounds needs to address the variables of human behaviour, the intertwining of environment, opportunity, social aspirations and networking. The focus on managing and cooking wetland plant Underground Storage Organs in heat retainer ovens maximised the energy return, provided predictable staple foods and increased sedentism. This enabled building of infrastructure such as fish weirs, making of trade items such as nets (Krefft 1866a), and preserving of food for ceremonies, gatherings and travel.

Mounds reflect changes in gender relations and social organization, as food came to be cooked communally by co-operative effort and distributed in new ways. I have interpreted mounds, ashy deposits, and particularly mound complexes, as the result of long-lived occupation in areas of high potential for production of food which is most efficiently utilised by cooking in heat retainer ovens. Mounds and particularly mound complexes are constructed to 'style' templates as such landscapes are appropriated, inscribed and socialised forming palimpsests of meanings and memories reflecting social structures and histories. Thus 'persistent places became prominent places' (Schroeder 2004:822-3) and 'mounds are also a kind of inscription of social memory in space' (Pauketat & Alt 2003:161).

REFERENCES

Abbott, J. T., and C. D. Frederick. 1990. Proton magnetometer investigations of burned rock middens in West-Central Texas: clues to formation processes. *Journal of Archaeological Science* 17:535-545.

Adams, G., and A. J. Mortlock. 1974. Thermoluminescent dating of buried sands from fire hearths at Lake Mungo, New South Wales. *Archaeology and Physical Anthropology in Oceania* 9:236-237.

Allen, H. 1972. *Where the Crow, Flies Backwards: Man and land in the Darling Basin.* unpublished Ph.D thesis, Australian National University.

—. 1974. The Bagundji of the Darling Basin: Cereal Gatherers in an uncertain Environment. *World Archaeology* 5:309-322.

Allen, H. 1998. "Reinterpreting the 1969-1972 Willandra Lakes Archaeological Surveys," in *Willandra Lakes. People and Palaeoenvironments. Vol 33(3) Archaeology in Oceania.* Edited by H. Johnston, P. Clark, and J. P. White, pp. 207-220.

Amick, D. S. 2004. Wilson-Leonard : An 11,000-year Archaeological Record of Hunter-Gatherers in Central Texas. Book Review Essay. *Plains Anthropologist* 49:193-200.

Anon. 1903. Aboriginal Words and Meanings. *Science of Man* 6:206.

Anschuetz, K., R. H. Wilshusen, and C. L. Scheick. 2001. An Archaeology of Landscapes : Perspectives and Directions. *Journal of Archaeological Research* 9:157-211.

Anthony, I. M. C., D. C. W. Sanderson, G. T. Cook, D. Abernethy, and R. A. Housley. 2001. Dating a Burnt Mound from Kilmartin, Argyll, Scotland. *Quaternary Science Reviews* 20:921-925.

Ashmore, W., and A. B. Knapp. Editors. 1999. *Archaeologies of Landscape: contemporary perspectives.* Malden, Mass.: Blackwell.

Bailey, G. 1994. "The Weipa Shell Mounds. Natural or Cultural?," in *Archaeology in the North. Proceedings of the 1993 Australian Archaeological Association Conference.* Edited by M. Sullivan, S. Brockwell, and A. Webb, pp. 107-129. Darwin: North Australia Research Unit (ANU).

Bailey, G., J. Chappell, and R. Cribb. 1994. The Origin of Anadara shell mounds at Weipa, North Queensland, Australia. *Archaeology in Oceania* 29(2):69-80.

Baker, R. G. V., R. J. Haworth, and P. G. Flood. 2005. An Oscillating Holocene Sea-level? Revisiting Rottnest Island, Western Australia, and the Fairbridge Eustatic Hypothesis. *Journal of Coastal Research* Special Issue No. 42:3-14.

Balme, J., and W. Beck. Editors. 1995. *Gendered Archaeology. The Second Australian Women in Archaeology Conference.* Canberra: ANH Pub. RSPAS, ANU.

—. 1996. Earth Mounds in Southeastern Australia. *Australian Archaeology* 42:39-51.

Balme, J. M. 1991. The antiquity of grinding stones in semi-arid western New South Wales. *Australian Archaeology* 32:3-9.

—. 1995. 30,000 years of fishery in western New South Wales. *Archaeology in Oceania* 30:1-21.

Barbetti, M., and H. Allen. 1972. Prehistoric man at Lake Mungo, Australia, by 32,000 years BP. *Nature* 240:46-48.

Barbetti, M., and H. A. Polach. 1973. ANU Radiocarbon Date List V. *Radiocarbon* 15(1):241-251.

Barfield, L. H. 1991. "Hot Stones: Hot Food or Hot Baths," in *Burnt Mounds and Hot Stone Technology.* Edited by M. A. Hodder and L. H. Barfield, pp. 59-68: Sandwell Metropolitan Borough Council, West Midlands.

Barham, A. J., and R. I. Macphail. Editors. 1995. *Archaeological Sediments and Soils, Analysis, Interpretation and Management. Papers from the Tenth Anniversary Conference of the Association for Environmental Archaeology held at the Institute of Archaeology , UCL July, 1989.*: Institute of Archaeology, University College, London.

Barrett, J. C. 1999. "The Mythical Landscapes of the British Iron Age," in *Archaeologies of Landscape : contemporary perspectives.* Edited by W. Ashmore and A. B. Knapp, pp. 253-265. Malden, Mass: Blackwell.

Beamish, M., and S. Ripper. 2000. Burnt Mounds in the East Midlands. *Antiquity* 74:37-38.

Beaton, J. M. 1983. Does Intensification Account for Changes in the Australian Holocene Archaeological Record? Comment. *Archaeology in Oceania* 18(2):95-97.

Beck, W. 1992. Aboriginal Preparation of *Cycas* Seeds in Australia. *Economic Botany* 46:133-147.

Beck, W., L. Conroy, and S. Martin. 1999. *Report On Ravensworth 3 AMS Dates*. UNE.

Beckett, J. 1959. Further Notes on the Social Organisation of the Wongaibon of Western New South Wales. *Oceania* 29:200-207.

Beckham, E. 1846. "Letter to the Colonial Secretary," in *G. Gipps Despatches 1846 ML CY683*, pp. 69-75. Mitchell Library, Sydney.

Beleia, A., F. Yamashita, S. R. de Moraes, C. A. da Silveira, and L. A. Miranda. 2004. Textural Changes during Cooking of Cassava (Manihot esculenta Crantz) Roots. *Journal of the Science of Food and Agriculture* 84:1975-1978.

Bell, W. T. 1991. Aboriginal Fireplaces and the Implications for Radiocarbon Dating. *Archaeometry* 33 (1):43-50.

Benda, L., L. N. Poff, D. Miller, T. Dunne, and G. Reeves. 2004. The Network Dynamics Hypothesis : How Channel Networks Structure Riverine Habitats. *BioScience* 54(5):413-427.

Bender, B. 1992. Theorising Landscapes and the Prehistoric Landscapes of Stonehenge. *Man, New Series* 27:735-755.

Berndt, R. M. 1987. Panaramittee Magic. *Records of the South Australian Museum* 20:15-28.

Berndt, R. M., and C. Berndt. 1968. *The World of the First Australians*. Sydney: Ure Smith.

Berndt, R. M., and C. H. Berndt. 1943. *A Short History of Acculturation at Menindee Government Aboriginal Station, Darling River. Unpublished Report.* AIATSIS.

—. 1993. *A World that Was. The Yaraldi of the Murray River and the Lakes, South Australia*. Melbourne: Melbourne University Press & Miegunyah Press.

Berryman, A., and D. Frankel. 1984 a. *Archaeological Investigation of Mounds on the Wakool River, N.S.W. Preliminary Field Report*. NSW NPWS.

—. 1984 b. Archaeological Investigations of Mounds on the Wakool River, near Barham, N.S.W. *Australian Archaeology* 19:21-30.

Beveridge, P. 1865. A Few Notes on the Dialects, Habits, Customs, and Mythology of the Lower Murray Aborigines. *Transactions and Proceedings of the Royal Society of Victoria* 6:14-24.

—. 1869. On Aboriginal Ovens. *Journal of the Anthropological Society of London* 1:187-189.

—. 1883. Of the Aborigines inhabiting the Great Lacustrine and Riverine Depression of the Lower Murray, Lower Murrumbidgee, Lower Lachlan, and Lower Darling. *Journal and Proceedings of the Royal Society of New South Wales* 17:19-74.

—. 1889. *The Aborigines of Victoria and Riverina as seen by Peter Beveridge*. Melbourne: M.L. Hutchinson

Bingham, H. 1846. "Letter to the Colonial Secretary," in *G. Gipps Despatches 1846 ML CY683*, pp. 77-90. Mitchell Library, Sydney.

Bintliff, J. 1991. "The Contribution of an *Annaliste*/structural history approach to archaeology," in *The Annales School and Archaeology*. Edited by J. Bintliff. Leicester, London: Leicester University Press.

Bird, C. F. M., and D. Frankel. 1991 b. Problems in Constructing a Prehistoric Regional Sequence: Holocene South-East Australia. *World Archaeology* 23(2):179-19.

—. 1991a. Chronology and Explanation in Western Victoria and South-Eastern South Australia. *Archaeology in Oceania* 26:1-13.

Birdsell, J. B. 1953. Some Environmental and Cultural Factors influencing the Structuring of Australian Aboriginal Populations. *American Naturalist* 87:171-207.

—. 1968. *Some Predictions for the Pleistocene based on Equilibrium Systems among Recent Hunter-gathers. Man the Hunter*. Chicago: Aldine.

Black, S. L., L. W. Ellis, D. G. Creel, and G. T. Goode. 1997. *Hot Rock Cooking on the Greater Edwards Plateau: Four Burned Rock Midden Sites in West Central Texas*: Texas Archaeological Research Laboratory & Texas Department of Transportation.

Blandowski, W. 1858. Recent Discoveries in Natural History on the Lower Murray. *Transactions of the Philosophical Institute of Victoria* 2:124-137.

Blitz, J. H. 1999. Mississippian Chiefdoms and the Fission-Fusion Process. *American Antiquity* 64:577-592.

Blitz, J. H., and P. Livingood. 2004. Sociopolitical Implications of Mississippian Mound Volume. *American Antiquity* 69:291-301.

Bonhomme, T. 1990 a. *An Archaeological Survey of the Barmah Forest. Occasional Report No. 34,*. Victoria Archaeologial Survey.

—. 1990 b. *Aboriginal Burials and Sand Mining on the Riverine Plain, N.S.W.* A Report to NSW NPWS.

Bonhomme, T., and J. Stanley. 1985. Magnetic Mapping of Prehistoric Aboriginal Fireplaces at Bunda Lake, Belarabon Station, Western New South Wales. *Australian Archaeology* 21:63-73.

Bonney, F. 1866-1915. "The Bonney Papers. ML MSS 259," in *Mitchell Library*. Sydney.

—. 1884. On some Customs of the Aborigines of the River Darling, New South Wales. *Anthropological Institute of Great Britain and Ireland* 13:122-137.

Bonwick, J. 1857. *Western Victoria. Its Geography, Geology, and Social Condition. The narrative of an Educational Tour in 1857.* Melbourne William Heinemann Australia Pty Ltd

Bowler, J. M. 1998. "Willandra Lakes revisited : environmental framework for human occupation," in *Willandra Lakes : People and Palaeoenvironments*. Edited by H. Johnston, P. Clark, and J. P. White, pp. 120-155: Archaeology in Oceania 33(3).

Bowler, J. M., and A. Kotsonis. 1997. *Geomorphic Survey Balpool Station. A Survey in support of Cultural Heritage for the Environmental Impact Statement.*

Bowler, S. C. R. 1901. Aboriginal Customs. Bogan and Lachlan River Aborigines. *Science of Man* 4:147.

Brace, C. L. 1995. *The Stages of Human Evolution*: Prentice-Hall, Englewood Cliffs, New Jersey.

Brace, C. L., K. R. Rosenburg, and K. D. Hunt. 1987. Gradual Change in Human Tooth Size in the Late Pleistocene and Post-Pleistocene. *Evolution* 41:705-720.

Brady, J. E., and W. Ashmore. 1999. "Mountains, Caves, Water: Ideational Landscapes of the Ancient Maya," in *Archaeologies of Landscape :contemporary perspectives*. Edited by W. Ashmore and A. B. Knapp, pp. 124-145. Malden, Mass.: Blackwell.

Briggs, S. V. *A Directory of Important Wetlands in Australia - NSW.* 2 nd edition: NSW NPWS.

Brink, J. W., and B. Dawe. 2003. Hot Rocks as Scarce Resources: The use, re-use and Abandonment of Heating Stones at Head-Smashed-In Buffalo Jump. *Plains Anthropologist* 48:85-104.

Brock, D. G. 1988 [1844-6]. *To the desert with Sturt.* Adelaide: Royal Geographical Society of Australasia.

Brockwell, S. 1996. Mound Sites on the Adelaide River Coastal Plains. *Indo-Pacific Prehistory Association Bulletin* 15:159-164.

Brough Smyth, R. 1878. *The Aborigines of Victoria.* Vol. I. Melbourne: Govt Printer.

Brown, C. M., and A. E. Stephenson. 1991. *Geology of the Murray Basin, Southeastern Australia.* Bulletin 235, Bureau of Mineral Resources, Geology and Geophysics, Canberra.

Browne, J. H. 1897. Anthropological notes relating to the Aborigines of the Lower North of South Australia. *Transactions of the Royal Society of South Australia* 21:72-73.

Buchan, R. 1980. Appendix 2: Survey of Aboriginal Sites at Lake Coomaroop, Tooleybue to Nyah. *Records of the Victorian Archaeological Survey* 10:43-47.

Buckley, V. M. 1991. "Irish Fulachta Fiadh: an Overview," in *Burnt Mounds and Hot Stone Technology*. Edited by M. A. Hodder and L. H. Barfield, pp. 3-9: Sandwell Metropolitan Borough Council, West Midlands.

Buikstra, J. E., and D. K. Charles. 1999. "Centering the Ancestors: Cemeteries, Mounds, and Sacred Landscapes of the Ancient American Midcontinent," in *Archaeologies of Landscape:contemporary perspectives.* Edited by W. Ashmore and A. B. Knapp, pp. 201-228. Malden, Mass: Blackwell.

Bulmer, J. 1878. "Native Language, Gippsland and Murray," in *The Aborigines of Victoria*, vol. II. Edited by R. B. Smyth, pp. 33-37. Melbourne.

Bushby, J. E. 1980. *Saltbush Country. History of the Deniliquin District.*: J.E.Bushby & Library of Australian History.

Cairns, J. 1859. On the Weir Mallee, a water-yielding Tree, the Bulrush, and Porcupine Grass of Australia. . *Transactions and Proceedings of the Royal Society of Victoria* 3:32-35.

Cameron, A. L. P. 1885. Notes on Some tribes of NSW. *Journal of the Anthropological Institute of Great Britain and Ireland* 14:344-370.

—. 1886. "Letter to A.W. Howitt 6 June 1886 MS 9356," in *Howitt Papers*, pp. 1-4. State Library of Victoria, Melbourne.

—. 1899a. On some Tribes of Western N.S.W. *Science of Man* 2.

—. 1899b. "letter to W. Wentworth-Bucknell dated 3rd Sept 1899 :page 241," in *Royal Anthropological Society of Australasia CDROM.* Sydney.

—. 1905. "Some Tribes of Western New South Wales," in *TheAnthropological Society of Australasia Vol 2 (10151) CD*, pp. 8.

Campbell, A. 1994. *Victorian Aborigines : John Bulmer's Recollections 1855-1908. Occasional Papers Anthropology & History Series Number 1.* Museum of Victoria.

Clark, I. D. 1998-2000. *Journals of George Augustus Robinson, Chief Inspector of Port Phillip Aboriginal Protectorate*. Melbourne: Clarendon. Heritage Matters.

Clark, P., and M. Barbetti. 1982. "Fire, Hearths and Palaeomagnetism," in *Archaeometry: An Australian Perspective*. Edited by W. Ambrose and P. Duerden. Canberra: Australian National University

Coles, B. Editor. 1992. *The Wetland Revolution in Prehistory*. Exeter: Prehistoric Society and WARP.

Collins, M. B. Editor. 1998. *Wilson-Leonard: An 11,000-year Archaeological Record of Hunter-Gatherers in Central Texas. Studies in Archaeology 31*. Austin: Texas Archaeological Research Laboratory, University of Texas.

Conkey, M. 2003. Has Feminism Changed Archaeology. *Signs* 28:867-880.

Conkey, M., and C. Hastorf. 1990. "Introduction," in *The Uses of Style in Archaeology*. Edited by M. Conkey and C. Hastorf, pp. 1-4. Cambridge: Cambridge University Press.

Conkey, M. W., and J. M. Gero. 1991. "Tensions, Pluralities, and Engendering Archaeology: An Introduction to Women and Prehistory," in *Engendering Archaeology : Women and Prehistory*. Edited by J. M. Gero and M. W. Conkey, pp. 3-30. Oxford: Blackwell.

Coutts, P. J. F. 1980. Victoria Archaeological Survey Activities Report 1978-1979. *Records of the Victorian Archaeological Survey*, 10:1-39.

—. 1982. Cultural Resource Management in Victoria 1979-198. *Records of the Victorian Archaeological Survey*,

Coutts, P. J. F., P. Henderson, and R. L. K. Fullagar. 1979. A Preliminary Investigation of Aboriginal Mounds in North-Western Victoria. *Records of the Victorian Archaeological Survey* No. 9.

Coutts, P. J. F., D. Witter, M. McIlwraith, and R. Frank. 1976. The Mound People of Western Victoria. A Preliminary Statement. *Records of the Victorian Archaeological Survey* 1:1-54 plus Figures and Tables.

Coutts, P. J. F., and D. C. Witter. 1977 New Radiocarbon Dates for Victorian Archaeological Sites. *Records of the Victorian Archaeological Survey* 4:59-73.

Coutts, P. J. F., D. C. Witter, and D. M. Parsons. 1977. Impact of European Settlement on Aboriginal Society in Western Victoria. *Records of the Victorian Archaeological Survey* 4:17-58.

Craib, J. L. 1991. *Archaeological Survey in the Moira-Millewa State Forests*. Unpublished report for the NSW National Parks and Wildlife Service.

Cribb, R. 1996. "Shell Mounds, Domiculture and Ecosystem Manipulation on Western Cape York Peninsula," in *Archaeology of Northern Australia Tempus Vol 4*. Edited by P. Veth and P. Hiscock, pp. 150-173: Anthropology Museum, University of Queensland.

Cribb, R. L. 1991. Getting into a flap about shell mounds in northern Australia: a reply to Stone. *Archaeology in Oceania* 26:23-25.

Curr, E. M. 1886-7. *The Australian Race: its origin, languages, customs, place of landing in Australia, and the routes by which it spread itself over that continent*. Melbourne: John Ferres, Govt Printer.

—. 1965 [1883]. *Recollections of Squatting in Victoria from 1841 to 1851*. Melbourne: Melbourne University Press. Edited version of 1883 edition.

Dalager, B. 2005. Distance to the Horizon. *www.pvv.ntnu.no/~bcd/shadoworld/info/horizon.html*.

David, B. 1990. "How was this Bone Burnt?," in *Problem Solving in Taphonomy*, vol. 2, *Tempus. Archaeology and Material Culture Studies in Anthropology*. Edited by S. Solomon, I. Davidson, and D. Watson, pp. 65-76.

David, B., and H. Lourandos. 1998. Rock Art and Socio-Demography in Northeastern Australian Prehistory. *World Archaeology* 30:193-219.

David, B., and M. Wilson. Editors. 2002. *Inscribed Landscapes: marking and making place*. Honolulu: University of Hawai'i Press.

Dawson, J. 1981[1881]. *Australian Aborigines. The Languages and Customs of Several Tribes of Aborigines in the Western District of Victoria, Australia*, Facsimile edition. Canberra: AIATSIS.

Dering, P. 1999. Earth-oven Plant Processing in Archaic Period Economies: An Example from a Semi-Arid Savnnah in South-Central North America. *American Antiquity* 64:659-674.

Dewar, R. E. 2003. Rainfall Variability and Subsistence Systems in Southeast Asia and the Western Pacific. *Current Anthropology* 44 (3):369-388.

Dobres, M.-A. 1995. "Beyond Gender Attribution: some Methodological Issues for Engendering the Past," in *Gendered Archaeology. The Second Australian Women in Archaeology Conference*. Edited by J. Balme and W. Beck, pp. 51-66. Canberra: ANH Pub. RSPAS, ANU.

Dobres, M.-A., and J. E. Robb. 2005. "Doing" Agency: Introductory Remarks on Methodology. *Journal of*

Archaeological Method and Theory 12:159-166.

Donaldson, K. 1996. *Draft Statement of Significance of the Willandra World Heritage Area to Aboriginal People of Western NSW.* Western Regional Aboriginal Land Council and Western Heritage Group Inc.

Douglas, K. 2002. "Scarcely any Water on its Surface," in *Words for Country. Landscape and Language in Australia.* Edited by T. Bonyhardy and T. Griffiths, pp. 69-83. Sydney: UNSW Press.

Downey, B., and D. Frankel. 1992. Radiocarbon and Thermoluminescene dating of a Central Murray Mound. *The Artefact* 15:31-35.

Draper, N. 1992. *Greenfields Kaurna archaeological and burial site Progress Report 2pps.*

Dunbar, G. K. 1943. Notes on the Ngemba Tribe of the Central Darling River, Western New South Wales. *Mankind* 3(5):140-148.

—. 1944. Notes on the Ngemba Tribe of the Central Darling River, Western New South Wales (concluded). *Mankind* 3 (6):172-179.

—. 1945. A Short Vocabulary of the Ngemba Tribe, Western New South Wales. *Mankind* 3(7):211-212.

Dunkin, D. J. 2001. Metalwork, Burnt Mounds and Settlements on the West Sussex Coastal Plain:a Contextual Study. *Antiquity* 75:261-262.

Dury, G. H., and T. Langford-Smith. 1970. A Pleistocene Aboriginal Camp Fire from Lake Yantara, Northwestern New South Wales. *Search* 1(2):73.

Dwyer, P., and M. Minnegal. 1990. Yams and Megapode Mounds in the Lowland Rain Forest of Papua New Guinea. *Human Ecology* 18(2):177-185.

Eardley, K. A. 1999. *A Foundation for Conservation in the Riverina Bioregion.* Unpublished Report, NSW National Parks & Wildlife Service.

Eden, M. J. 1993. Swidden Cultivation in Forest and Savanna in Lowland Southwest Papua New Guinea. *Human Ecology* 21 (2):145-166.

Edmonds, V. 1995. *An Archaeological Survey of Wyvern Station, West of Griffith, New South Wales.* A Report to Booth Associates.

Edmonds, V., and A. Long. 1998. *Balpool Station Piggery. Archaeological Survey, Sub-surface excavations and monitoring on Balpool Station, near Deniliquin, Western NSW.* Report Prepared for Bunge Meat Industries Pty. Ltd..

Edwards, D. A., and J. F. O'Connell. 1995. Broad Spectrum Diets in Arid Australia. *Antiquity* 69:769-83.

Elliot, P. J. 1980. Magnetometer Survey of Aboriginal Mounds in the Nyah Forest, Wood Wood. *Records of the Victorian Archaeological Survey* 10:98-108.

Etheridge, R. 1893. The Mirrn-yong heaps at the North-West Bend of the Murray River. *Proceedings of the Royal Society of South Australia* 17:21-24.

Eyre, E. J. 1845. *Manners and Customs of the Aborigines of Australia. Journal of Expeditions of Discovery into Central Australia, and Overland from Adelaide to Saint George's Sound in the years 1840-4.* London: T. & W. Boone.

Fankhauser, B. 1993. "Residue Analysis on Maori Earth Ovens," in *Archaeometry. Current Australasian Research.* Edited by B. L. Fankhauser and J. R. Bird, pp. 13-20. Canberra: Department of prehistory, RSPacS, ANU.

Fedick, S. 1995. Indigenous Agriculture in the Americas. *Journal of Archaeological Research* 3(4):257-303.

Finnis, H. J. 1966. Dr John Harris Browne's Journal of the Sturt Expedition, 1844-1845. *South Australiana* V(1).

Frankel, D. 1991. *Remains to be Seen.* Chesire, Melbourne: Longman.

Frazier, P., K. Page, and A. Read. 2005. Effects of Flow Regulation on Flow Regime in the Murrumbidgee River, South Eastern Australia : an Assessment using a Daily Estimation Hydrological Model. *Australian Geographer* 36 (3):301-314.

Fullagar, R., and J. Field. 1997. Pleistocene Seed-grinding Implements from the Australian Arid Zone. *Antiquity* 71 (272):300-307

Gale, S. J., and P. G. Hoare. 1991. *Quaternary Sediments. Petrographic Methods for the Study of Unlithified Rocks.* New York, Toronto: Halstead Press.

Gammage, B. 1986. *Narrandra Shire*: Narrandra Shire Council.

Gillespie, R. 1991. "A Note on Geoffrey Keating's description of Fulachta," in *Burnt Mounds and Hot Stone Technology.* Edited by M. A. Hodder and L. H. Barfield, pp. 69-70: Sandwell Metropolitan Borough Council, West Midlands.

Gillieson, D. S., and J. Hall. 1982. Bevelling Bungwall Bashers: a use-wear study from southeast

Queensland. *Australian Archaeology* 14:43-61.

Gilmore, M. 1986. *Old Days Old Ways - A Book of Recollections*. North Ryde.

Gleeson, C. T. 1995. "Gender and Aboriginal Fire-use in Australia- a preliminary analysis of the results of a questionnaire," in *Gendered Archaeology. The Second Australian Women in Archaeology Conference*. Edited by J. Balme and W. Beck. Canberra: ANH Pub. RSPAS, ANU.

Godfrey, M., C. Bird, D. Frankel, J. Rhoads, and S. Simmons. 1996. From Time to Time: Radiocarbon Information on Victorian Archaeological Sites held by Aboriginal Affairs Victoria. *The Artefact* 19:3-51.

Goren-Inbar, N., N. Alperson, M. E. Kislev, O. Simchoni, Y. Melamed, A. Ben-Nun, and E. Werker. 2004. Evidence of Hominin Control of Fire at Gesher Benot Ya'aquov, Israel. *Science* 304:725-727.

Gosden, C. 2005. What do Objects Want? *Journal of Archaeological Method and Theory* 12:193-211.

Gosden, C., and L. Head. 1994. Landscape- a usefully ambiguous concept. *Archaeology in Oceania* 29:113-116.

Gott, B. 1982. Ecology of Root Use by the Aborigines of Southern Australia. *Archaeology in Oceania* 17(l):59-67.

—. 1987. "Murnong- a Victorian Staple Food: Some Nutritional Implications," in *Archaeology at ANZAAS, Canberra*. Edited by G. K. Ward, pp. 111-115: Canberra Archaeological Society, ANU.

—. 1989. "The Uses of Ethnohistory and Ecology," in *Plants in Australian Archaeology*. Edited by W. Beck, A. Clarke, and L. Head. St Lucia: Tempus Volume 1.

—. 1999 a. Cumbungi, *Typha* species: a Staple Aboriginal Food in Southern Australia. *Australian Aboriginal Studies* 1999/number 1:33-50.

—. 1999 b. "Fire as an Aboriginal Management Tool in South-Eastern Australia." *Australian Bushfire Conference, Albury, 1999 b.*

Grant, E. J. 1970. *Walking with Time. The Story of the Wakool Country*. Melbourne. Abacada Press.

Hagen, R. 2001. Ethnographic Information and Anthropological Interpretation in a Native Title claim: the Yorta Yorta Experience. *Aboriginal History* 25:216-227.

Hallam, S. J. 1987. "Yams, Alluvium and "Villages" on the West Coast Central Plain," in *Archaeology at ANZAAS, Canberra*. Edited by G. K. Ward, pp. 116-132: Canberra Archaeological Society, ANU.

Harris, D. 1995. Early Agriculture and the Torres Strait Divide. *Antiquity* 69:848-854.

Hastorf, C. 1991. "Gender, Space, and Food in Prehistory," in *Women in Prehistory*. Edited by J. M. Gero and M. W. Conkey, pp. 132-159. Oxford & Cambridge USA: Blackwell.

Hawdon, J. 1952 [1838]. *The journal of a Journey from NSW to Adelaide*. Melbourne: Georgian House.

Hawley, M. F. 2003. The Hanthorne Site (14LT335), a Late Woodland site in southeast Texas. *North American Archaeologist* 24:167-193.

Head, L. 1983. Environment as an Artefact: a geographic perspective on the Holocene occupation of Southwestern Victoria. *Archaeology on Oceania* 18 (2):73-80.

—. 1987. The Holocene Prehistory of a Coastal Wetland System: Discovery Bay, Southeastern Australia. *Human Ecology* 15(4) 435-462.

—. 2000. *Cultural Landscapes and Environmental Change*. London: Arnold.

Hegmon, M. 2003. Setting Theoretical Egos Aside: Issues and Theory in North American Archaeology. *American Antiquity* 68:213-243.

Heidorn, K. C. 1999. "Weather Phenomenon and Elements. Mirages. A Primer," in *www.islandnet.com /~see/weather/elements/mirage 1.htm*.

Hercus, L. A. 1965. The Survival of Victorian Languages. *Mankind* 6(5):201-206.

—. 1969. *The Languages of Victoria: A late Survey. Australian Aboriginal Studies No. 176. Linguistic Series No.6. Australian Aboriginal Studies No. 176. Linguistic Series No.6*. Canberra: AIAS.

—. 1971. Eaglehawk and Crow. A Madimadi Version. *Mankind*, 8:137-140.

—. 1986. *Victorian Languages: a Late Survey*. Canberra: *Pacific Linguistics Series B*.

—. 1989. Three Linguistic Studies from far South-Western NSW. *Aboriginal History* 13 (1-2):45 - 62.

—. 1993. *Paakantyi Dictionary*. Canberra: AIATIS.

—. 1998. "The Paakantyi Language Group and its Position 1788-1850. Preliminary Report," NSW Aboriginal Land Council, Sydney.

Hercus, L. A., and I. M. White. 2000. "A Brief History of Jack Long," Amended version of article first published in *Victorian Naturalist* 88; 1971.Unpublished Manuscript.

Hill, E. 1998. Gender-Informed Archaeology: The Priority of Definition, the Use of Analogy, and the Multivariate Approach. *Journal of Archaeological Method and Theory* 5:99-128.

Hobler, G. 1992. *The Diaries of "Pioneer" George Hobler, October 6, 1800 - December 13,1882: with introductory information on his children, grandchildren, and selected great-grandchildren.* Vol. 1. California: C & H Reproductions, Inc.

Hodder, I. Editor. 2001. *Archaeological theory today.* Cambridge UK; Maldon MA: Polity Press; Blackwell Pub.

Holdaway, S., P. Fanning, and J. Shiner. 2005. Absence of Evidence or Evidence of Absence? Understanding the Chronology of Indigenous Occupation of Western New South Wales, Australia. *Archaeology in Oceania* 40:33-49.

Holdaway, S. J., and P. C. Fanning. 2003 a. *Time, Period, Place and Preservation: Analysis of Aboriginal Heat Retainer Hearths from Fowlers Gap, Western NSW. Unpublished Report.* New South Wales National Parks and Wildlife Service.

—. 2003 b. *Geoarchaeological Investigation of Aboriginal Landscape Occupation in Peery National Park, western NSW: Results of Radiocarbon Age Determinations on Charcoal from Heat Retainer Hearths. Supplementary Report. Unpublished.* NSW National Parks and Wildlife Service.

Holdaway, S. J., P. C. Fanning, M. Jones, J. Shiner, D. Witter, and G. Nicholls. 2002 a. Variabilityin the Chronology of Late Holocene Aboriginal Occupation on the Arid Margin of Southeastern Australia. *Journal of Archaeological Science* 29:351-363.

Holdaway, S. J., P. C. Fanning, and J. Shiner. 2002 b. *Geoarchaeological Investigation of Aboriginal Landscape Occupation in Peery National Park, Western NSW. Unpublished Report.* New South Wales National Parks and Wildlife Service.

Holdaway, S. J., P. C. Fanning, and D. C. Witter. 2000. *Report of the Western New South Wales Archaeological Project. Unpublished Report.* New South Wales National Parks and Wildlife.

Holdaway, S. J., and N. Stern. 2004. *A Record in Stone. The Study of Australia's Flaked Stone Artefacts*: Museum of Victoria & Aboriginal Studies Press.

Holdaway, S. J., D. Witter, P. C. Fanning, R. Musgrave, G. Cochrane, T. Doleman, S. Greenwood, D. Pigdon, and J. Reeves. 1998. New approaches to open site spatial archaeology in Sturt National Park, New South Wales, Australia. *Archaeology in Oceania* 33:1-19.

Hope, G. Editor. 1998. *Identifying Wood Charcoal Remains as Palaeo Evidence for Regions of Central and Northeast Australia. Research Papers in Archaeology and Natural History, No.28.* Canberra: ANH Publications, RSPACS, ANU.

Hope, J., T. Donaldson, and L. A. Hercus. 1986. *A History of the Aboriginal People of the Willandra Lakes Region. Part of the study on the significance of the Willandra Lakes World Heritage Region to Aboriginal Communities.*

Howitt, A. W. 1996 [1904]. *The Native Tribes of South-East Australia.* Canberra: Aboriginal Studies Press.

Huchet, B. M. J. 1991. Theories and Australian Prehistory: the Last Three Decades. *Australian Archaeology* 33:44-51.

Huxtable, J., and M. J. Aitken. 1977. Thermoluminescent dating of Lake Mungo polarity excursion. *Nature* 265:40-41.

Hynes, R. A., and A. K. Chase. 1982. Plants, Sites and Domiculture: Aboriginal Influence upon Plant Communities in Cape York Peninsula. *Archaeology in Oceania* 17:38-50.

Jeffery, S. 1991. "Burnt Mounds, Fulling and Early Textiles," in *Burnt Mounds and Hot Stone Technology.* Edited by M. A. Hodder and L. H. Barfield, pp. 97-108: Sandwell Metropolitan Borough Council, West Midlands.

Johnston, H. 1997. *The Ravensworth Mounds.* NSW NPWS.

Johnston, H., and J. Littleton. 1993. *Western Region Burials Project, Project Summary Report.* N.P.W.S. Western Region.

Johnston, R. 2004. Excavation of a late Holocene Aboriginal Mound at Lake Boort, north west Victoria. *The Artefact* 27:46-58.

Kable, C. 1899. "Letter to W. Wentworth Bucknell," in *Anthropological Society of Australasia CD Vol 2 file 10116.* Sydney.

Karkanas, P., M. Koumouzelis, J. K. Kozlowski, V. Sitlivy, and K. Sobczk. 2004. The Earliest Evidence for Clay Hearths: Aurignacian Features in Klisoura Cave 1, Southern Greece. *Antiquity* 78:513-525.

Kelton, J. 1998. *An Archaeological Survey for the Proposed Gundaline Irrigation Development, South-western New South Wales.* A report to Twynam Pastoral Co. Pty. Ltd.

—. 1999. *An Archaeological Study of Martin's and West Ray's Paddocks: Gundaline Property, between Darlington Point and Hay, South-Western NSW.* Report to Twynam Pastoral Company & Booth Associates.

Kenyon, A. S. 1912. Camping Places of the Aborigines of South-East Australia. *The Victorian Historical Magazine* 2 (3):97-110.

—. 1914-5. The Story of the Mallee. *The Victorian Historical Magazine* 4:23-56, 57-74,121-150,175-200.

Kershaw, A. P. 1995. "Environmental Change in Greater Australia," in *Transitions. Pleistocene to Holocene in Australia & Papua New Guinea. Antiquity 69.* Edited by J. Allen and J. F. O'Connell, pp. 656-675.

Kingsford, R. T. 2003. Ecological Impacts and Institutional and Economic Drivers for Water Resource Development - a case study of the Murrumbidgee River, Australia. *Aquatic Ecosystem Health & Management* 6:69-79.

Kirby, J. 1895. *Old Times in the Bush of Australia: Trials and Experiences of Early Bush Life in Victoria during the Forties.* Melbourne: George Robinson & Co.

Klaver, J. 1987. *Old Ovens are Soon Hot: A Study of the Function and Location of Aboriginal Mounds along the Murrumbidgee River.*Unpublished BA (Hons) thesis, A.N.U.

—. 1990. *Nomination of Significant Aboriginal Earth Mound Sites in the Murray Valley for Inclusion on the Register of the National Estate.* Australian Heritage Commission.

—. 1995. *Preliminary Fieldwork Report Cooey Point Lagoon, Carrathool, NSW.* ANU Department Archaeology & Anthropology.

Klaver, J. M. 1998. Late Holocene Occupation of the Central Murrumbidgee Riverine Plain. Unpublished PhD, A.N.U. Canberra.

Knight, V. J. 2004. Characterising Elite Midden Deposits at Moundville. *American Antiquity* 69:304-321.

Krefft, G. 1866a. On the Manners and Customs of the Aborigines of the Lower Murray and Darling. *Transactions of the Philosophical Society of N.S.W.* 1:357-374

—. 1866b. On the Vertebrated Animals of the Lower Murray and Darling, their habits, economy, and geographical distribution. *Transactions of the Philosophical Society of N.S.W.* 1:1-33.

Lane, L. 1980. Aboriginal Earthen Mounds along the Little Murray River in Northern Victoria. *Records of the Victorian Archaeological Survey* 10:109-118.

Langton, M. 2002. "The Edge of the Sacred, the Edge of Death. Sensual Inscriptions," in *Inscribed Landscapes. Marking Place and Making Place.* Edited by B. David and M. Wilson, pp. 253-269. Honolulu: University of Hawai'i Press.

Larsson, T. B. 1990. "Skarvstenshogar - the Burnt Mounds of Sweden," in *Burnt Offerings. International Contributions to Burnt Mound Technology.* Edited by V. M. Buckley, pp. 142-153. Dublin: Wordwell Ltd.

Layton, R., R. Foley, and E. Williams. 1991. The Transition Between Hunting and Gathering and the Specialised Husbandry of Resources. A Socio-ecological Approach. *Current Anthropology* 32 (3):255-274.

Leach, H. M. 1987. "A Review of Culinary and Nutritional Apaptations involving Wild Plant Foods follwing Polynesian Settlement of New Zealand," in *Archaeology at ANZAAS,Canberra.* Edited by G. K. Ward, pp. 138-142. Canberra: Canberra ARchaeological Society, ANU.

Leach, J. D. 2005. Sharp increase in cook-stone use in the Chihuahuan Desert during periods of agricultural intensification. *Antiquity* 79 (304):Project Gallery.

—. In Press. A Brief Comment on Estimating Caloric Yields from Cultivagted Agave in Southern Arizona. *Desert Plants.*

Leach, J. D., and T. W. Bradfute. 2004. Cultural response to demographic and environmental stress during the Classic Mimbres period (AD 1000-1130/40), Southern New Mexico: the cook-stone evidence. *Antiquity* 78 (300):Project Gallery.

Littleton, J. 1993. *Kerri East and Jeraly: Burials and Mounds.* A Report prepared for the Hay Local Aboriginal Land Council.

—. 1994a. *Nap Nap Cemetery (48-1-2).* ANU.

—. 1994b. *Another Cemetery on the Hay Plain- Nap Nap.* Report for the Hay Local Aboriginal Land Council.

—. 1995a. *Sites in the Dry Lake/ Tchelery Area, Hay: a description of burials recorded during 1994.* A Report to the Hay Aboriginal Community.

—. 1995b. *Jeraly North: More Burials on Jeraly.* A Report for the Hay Aboriginal Community.

—. 1995c. *Burials on the Hay Plain. A Community Report of Work Conducted in 1994.* Report for the Hay

Aboriginal Community. Archaeology & Anthropology, ANU.

—. 1996. *Toocimbie Burials Survey, Hay, N.S.W.* A.N.U. Canberra.

—. 1999. East and West: Burial Practices along the Murray River. *Archaeology in Oceania* 34(l):1-14.

—. 2002. Mortuary Behaviour on the Hay Plain : do Cemeteries Exist? . *Archaeology in Oceania* 17(3):105-123

—. 2005. "Data Quarrying in the Western Riverina," in *Many Exchanges: archaeology, history, community and the work of Isabel McBryde.* Edited by I. MacFarlane, M. J. Mountain, and R. Paton: Aboriginal History Monograph 11.

—. n.d. "Kerri East Mounds and Burials," NSW NPWS.

Littleton, J., and H. Johnston. 1993 b. *The Burials on Dry Lake and Tchelery.* A Report to the Hay Local Aboriginal Land Council.

—. 1993a. *Burials and Occupation at Dry Lake and Tchelery, via Hay.* NSW NPWS.

Littleton, J., S. Martin, C. Pardoe, and L. Baulch. 1996. Archaeology on the Hay Plain: Flat does not Equal Empty.Unpublished Manuscript.

Loewus, F. A., and W. Tanner. Editors. 1982. *Encyclopedia of Plant Physiology. New Series. Vol 13A Plant Carbohydrates I.* Berlin, Heidelburg, New York: Springer -Verlag.

Loonus, G. E. 1898. "Letter to R. H. Mathews, Box 32-1/9/2," in *Elkin Papers, Fisher Library.* Sydney.

Lopez, M. G., N. A. Mancilla-Margalli, and G. Mendoza-Diaz. 2003. Molecular Structures of Fructans from *Agave tequilana* Weber var. *azul. Journal of Agricultural and Food Chemistry* 51:7835-7840.

Lourandos, H. 1980. Change or Stability? : hydraulics, hunter-gatherers and population in temperate Australia. *World Archaeology* 11:245-266.

—. 1983. Intensification: a Late Pleistocene-Holocene Archaeologial Sequence from South-Western Victoria. *Archaeology in Oceania* 18(2):81-94.

—. 1984. Changing Perspectives in Australian Prehistory : a Reply to Beaton. *Archaeology in Oceania* 19:29-33.

—. 1985 a. "Intensification and Australian Prehistory," in *Prehistoilc Hunter-Gathers: The Emergence of Cultural Complexity.* Edited by T. D. Price and J. Brown Academic Press.

—. 1985 b. Problems with the Interpretation of Late Holocene changes in Australian Prehistory. Comment. *Archaeology in Oceania* 20:32-37.

—. 1997. *Continent of Hunter-Gatherers. New Perspectives in Australian Prehistory*: Cambridge University Press.

Lourandos, H., and B. David. 1998. Comparing long-term archaeological and environmental trends: North Queensland, arid and semi-arid Australia. *The Artefact* 21:105-114.

Lourandos, H., and A. Ross. 1994 The 'Great Intensification Debate": its History and Place in Australian Archaeology. *Australian Archaeology* 39:54-63.

MacDonald, G. J. 1850. "Mr. Commissioner MacDonald's Report. Crown Lands Office, Euston," in *British Parliamentary Papers. 1852-53. Papers relating to Australia 1852-53. Colonies, Australia Facsimile edition 1969.* vol. 15, pp. 36-38. Shannon, Ireland: Irish University Press.

MacPherson, P. 1885. The Oven Mounds of the Aborigines of Victoria. *Journal & Proceedings Royal Society of NSW* 18:49-59.

Martin, S. 1979. Mud, Mussels and Toes. The Ecology and Archaeology of the Narran Area, University of New England, Armidale. B. Sc. Hons. Thesis.

—. 1995 a. *Archaeological Survey, Llandillo Station, Darling River, near Bourke, NSW.* Report to NSW NPWS.

—. 1996 a. *Hay Plain Burials Management Project. Unpublished report for the Hay Local Aboriginal Land Council.* National Estate Project.

—. 1996 b. *The Tchelery 1 Aboriginal Earth Mound, Hay Plain South. Preliminary Excavation Report. Prepared for the Hay Local Aboriginal Land Council.* National Estate Grant.

—. 1996 c. "Hey What! The Hay Plain Earth Mounds." *Australian Archaeological Association Annual Conference, Adelaide, 1996 c.*

—. 1998. *The Pinnacles Archaeological Survey.* Report for the NSW National parks & Wildlife Service.

—. 1999a. *Report for the Paakantyi Claimants Wentworth Native Title Claim NC95/10.* Unpublished Report for the Representative Body: N.S.W. A.L.C.

—. 1999b. *Ravensworth Black Earth Mounds, Near Hay, NSW. Report on Field Work.* University of New England.

—. 2000a. *Archaeological Salvage of the Sam's Paddock Sites, at Gundaline Station, East of Hay, NSW.*

Booth Associates.

—. 2000b. *Comments on the Muthi Muthi (Mathi Mathi) Native Title Claim NC 00/03 (NG6079/98).* NSW Native Title Services.

—. 2000c. *Maude Cattleyards Burials.* UNE.

—. 2001. *Menindee Lakes Aboriginal Cultural Heritage Part 1.Ties to the Land.* Menindee Lakes Ecologically Sustainable Development Project Steering Committee. DLWC and MDBC.

—. 2003. *Western Sand Spit, Cawndilla Lake, Menindee.* UNE.

—. 2005 In press. "Cook it in the Hole : Heat Retainer Technology in the Murray-Darling Basin, South-Eastern Australia," in *Learning from Once Hot Rocks.* Edited by J. D. Leach: BAR (UK).

Martin, S., and D. O'Donnell. 1995. "Stephen's Creek Archaeological Salvage near Broken Hill, Western NSW," in *Archaeologists and Aborigines Working Together.* Edited by I. Davidson, C. Lovell-Jones, and R. Bancroft, pp. 73-75. Armidale: University of New England Press.

Martin, S., D. Witter, and C. Webb. 1994. *The archaeology of Lakes Menindee and Cawndilla and the impact of artificial water storage. Unpublished report.* NSW National Parks & Wildlife Service and NSW Department of Water Resources.

Massola, A. 1966. Notes on some Antiquities of the Colac District. *Victorian Naturalist* 83:125-136

—. 1970. *Aboriginal Mission Stations of Victoria.* Melbourne: Hawthorn Press.

Mathew, J. 1889. The Australian Aborigines. *Journal & Proceedings Royal Society of NSW* 23:335-449.

Mathew, R. H. 1908. Folk Tales of the Aborigines of New South Wales. *Folk-Lore* 19:303-227.

Mathews, R. H. 1896. Stone Cooking-Holes and Grooves for Stone-Grinding used by the Australian Aborigines. *Journal of the Anthropological Institute of Great Britain and Ireland* 25:255-259.

—. 1897. The Burbung, or Initiation Ceremonies of the Murrumbidgee Tribes. *Journal & Proceedings Royal Society of NSW* 31:111-153.

—. 1902. Languages of some Native Tribes of Queensland, New South Wales and Victoria. *Journal and Proceedings of the Royal Society of N.S.W* 36:135-190.

—. 1906. Notes on Some Native Tribes of Australia. *Journal and Proceedings of the Royal Society of N.S.W.* 40:95-129.

Matthews, D. 1901. Native Tribes of the Upper Murray. *Proc. Roy. Geog. Soc. of Australasia. South Australian Branch* 4:43-52.

Meehan, B. 1982. *Shell Bed to Shell Midden.* Canberra: Australian Institute of Aboriginal Studies.

Mereweather, J. D. 1859. *Diary of a Working Clergyman in Australia and Tasmania kept during the Years 1850-1853...* London: Hatchard & Co.

Merlan, F. 2000. Representing the Rainbow:Aboriginal Culture in an Interconnected World. *Australian Aboriginal Studies* 1 & 2:20-26.

Miller, J. E. 9th Oct 1905. "The Nankeen Crane and the Crow," in *R.H. Mathews Papers.* ANL, Canberra.

Minato, W. 1999. *The Geomorphic Development of the Riverine Plain with special emphasis on Fluvial Landforms.Honours Essay No.1.*

Mitchell, C. 1996. Interpreting Charcoal Patches on Open Site Archaeology: need we be stumped for and Answer? Unpublished Honours Thesis, UNE, Armidale.

Mitchell, T. L. 1839. *Three Expeditions into the Interior of Eastern Australia...* . Vol. 2. London: T. & W. Boone. 1996 Limited Edition Facsimile by Eagle Press.

Morey, E. 1843-1908. "The Morey Papers. Being the Reminiscences, the Letters, and the Diary of Emund Morey Esquire, pioneer of Euston Station on the Murray River, Tintonallogy on the Darling; and Euston on the Darling Downs, Queensland. Arranged by Vivian R. deVaux Voss 1952.," in Mitchell Library MSS 883. Sydney.

Moss, M. L. 2005. Rifts in the Theoretical Landscape of Archaeology in the United States: A Comment on Hegmon and Watkins. *American Antiquity* 70:581-587.

Munson, M. K. 2000. Sex, Gender, and Status: Human Images from the Classic Mimbres. *American Antiquity* 65:127-143.

Neiman, F. 1995. Stylistic Variation in Evolutionary Perspective : Inferences from Decorative Diversity and Interassemblage Distance in Illinois Woodland Ceramic Assemblages. *American Antiquity* 60:7-36.

Nicholas, G. P. 1998. Wetlands and Hunter-Gatherers: A Global Perspective. *Current Anthropology* 39(5):720-731.

Nixson, A. 1950. "A History of Gunbar Farm and District," in *Gibson Papers FM4/5682 ML.* Mitchell

Library, Sydney.

Norris, H. 1899. "Aboriginal Place Names page:133," in *Royal Anthropological Society of Australasia CD ROM*. Sydney.

Norton, A. 1907. Stray Notes about our Aboriginals. *Science of Man* IX (7):102.

O'Brien, M. J. 1987. Sedentism, Population Growth, and Resource Selection in the Woodland Midwest: A Review of Coevolutionary Developments. *Current Anthropology* 28:177-197.

O'Connell, J. F., and K. Hawkes. 1981. "Alyawara Plant Use and Optimal Foraging Theory," in *Hunter-Gatherer Foraging Strategies*. Edited by B. Winterhalder and E. A. Smith, pp. 99-125. Chicago & London: University of Chicago Press.

O'Connor, S., and M. E. Sullivan. 1994. Distinguishing Middens and Cheniers : a case study from the Southern Kimberly, W. A. *Archaeology in Oceania* 29(1):16-28.

Oxley, J. 1820. *Journal of Two Expeditions into the Interior of New South Wales, undertaken by Order of the British Government in the Years 1817-18*. London: J. Murray.

Page, K., G. Nanson, and D. Price. 1996. Chronology of Murrumbidgee River Palaeochannels on the Riverine Plain, Southeastern Australia. *Journal of Quaternary Science* 11 (4):311-326.

Page, K., A. Read, P. Frazier, and N. Mount. 2005. The Effect of Altered Flow Regime on the Frequency and Duration of Bankfull Discharge: Murrumbidgee River, Australia. *River Research and Applications* 21:567-578.

Page, K. J., G. Nanson, and D. M. Price. 1991. Thermoluminescence Chronology of Late Quaternary Deposition on the Riverine Plain of South-Eastern Australia. *Australian Geographer* 22(1):14 - 23.

Pardoe, C. 1988. The Cemetery as a Symbol: the Distribution of Aboriginal burial grounds in Southeastern Australia. *Archaeology in Oceania* 23:1-16.

—. 1990. "The Demographic Basis of Human Evolution in Southeastern Australia," in *Oceania Monograph*, vol. 39. Edited by B. Meehan and N. White, pp. 59-70.

—. 1994. Bioscapes: the Evolutionary Landscapes of Australia. *Archaeology in Oceania* 29:182-190.

—. 1995. Riverine, Biological and Cultural Evolution in Southeastern Australia. *Antiquity* 69:696-713.

Pardoe, C., and M. Grist. 2001. *Lake Baker Burial Protection Project, Swan Hill, Victoria. Unpublished report.* Aboriginal Affairs Victoria and North West Regional Aboriginal Cultural Heritage Program.

Pardoe, C., H. Johnston, and D. Witter. 1993. "Archaeology on the Hay Plain. Flat # Empty. Unpublished MS."

Pardoe, C., and S. Martin. 2001. *Murrumbidgee Province Aboriginal Cultural Heritage Study. Unpublished report* New South Wales National Parks and Wildlife Service.

—. 2002. *The Nature and Distribution of Archaeology at the Menindee Lakes. Menindee Lakes Ecologically Sustainable Development Project.* NSW Department of Land and Water Conservation.

Park, J. 1934. "Letter to A.P. Elkin, 1/3/15 Box 11," in *Elkin Papers, Fisher Library Archives*. Sydney.

Pauketat, T. R., and S. M. Alt. 2003. "Mounds, Memory, and Contested Mississippian History," in *Archaeologies of Memory*. Edited by R. M. Van Dyke and S. E. Alcock: Blackwell Publishers Ltd.

Peebles, C. S. 1991. "*Annalistes*, hermeneutics and positivists : squaring circles or dissolving problems," in *The Annales School and Archaeology*. Edited by J. Bintliff. Leicester, London: Leicester University Press.

Peterson, N. 1973. Camp Site Location amongst Australian Hunter-Gatherers : Archaeological and Ethnographic Evidence for a Key Determinant. *Archaeology and Physical Anthropology in Oceania* 8:173-193.

Porteners, M. F. 1993. The Natural Vegetation of the Hay Plain: Booligal-Hay and Deniliquin-Bendigo 1:250 000 Maps. *Cunninghamia* 3:1-123 & Map.

Prendergast, H. D. V., M. J. Kennedy, R. F. Webby, and K. R. Markham. 2000. Pollen Cakes of Typha spp. [*Typhaceae*] - 'lost' and Living Food. *Economic Botany* 54:254-255.

Prescott, J. R. 1982. "Advances in Thermoluminescence dating and their significance for Australia and Oceania: A review," in *Archaeometry: An Australian Perspective*. Edited by W. Ambrose and P. Duerden. Canberra: Australian National University.

Preucel, R. W., and I. Hodder. Editors. 1996. *Contemporary Archaeology in Theory: a Reader*. Cambridge, Mass.: Blackwell

Quigg, J. M., M. E. Malainey, R. Przybylski, and G. Monks. 2001. No Bones about it: Using Lipid Analysis of Burned Rock and Groundstone Residues to Examine Late Archaic Subsistence Practices in South Texas. *Plains Anthropologist* 46:283-303.

Radcliffe-Brown, A. 1918. Notes on the Social Organisation of Australian Tribes. Part I. *Journal of the Royal Anthropological Institute* 48:222-253.

—. 1923. Notes on the Social Organisation of Australian Tribes. Part II. *Journal of the Royal Anthropological Institute* 53:424-447.

—. 1930. The Social Organisation of Australian Tribes. Part II. *Oceania* 1:206-246.

Ramseyer, D. 1991. "Bronze and Iron Age Cooking Ovens in Switzerland," in *Burnt Mounds and Hot Stone Technology*. Edited by M. A. Hodder and L. H. Barfield, pp. 71-92: Sandwell Metropolitan Borough Council, West Midlands.

Ravi, S., and G. Padmaja. 1997. Mechanism of Cyanogen Reduction in Cassava Roots during Cooking. *Journal of the Science of Food and Agriculture* 75:427-432.

Richards, C. 1902 a. Wirra-Dthoor-ree Wir-ai' Yar-rai Wair-rach' ar-ree Wir-ra Jer-ree. *Science of Man* 5:114-119.

—. 1902 b. Wirra-Dthoor-ree Wir-ai' Yar-rai Wair-rach' ar-ree Wir-ra Jer-ree. *Science of Man* 5:133-138.

—. 1902 c. Wirra-Dthoor-ree, Wir-rai' Yar-rai, Wirrach' Ar-ree. Wir-ra' Jer-ree. *Science of Man* 5:165-168.

—. 1903. Warra' Atthoorree. Wirrai' Yarrai'. Warrach'aree. Wirra'jerree. *Science of Man* June 23. 1902.

Roberts, A. 1994. "Cultural Landmarks. The Milingimbi Mounds.," in *Archaeology in the North. Proceedings of the 1993 Australian Archaeological Association Conference*. Edited by M. Sullivan, S. Brockwell, and A. Webb, pp. 176-187. Darwin: North Australia Research Unit (ANU).

Robins, R. 1996. A report on Archaeological Investigations of open hearth sites in Southwest Queensland. *Queensland Archaeological Research* 10:25-35.

Robinson, G. A. 1843. "Journal of an Expedition through the Interior during the months of March and April 1843," in *G. Gipps Despatches 1843 ML CY669*, pp. 1241-1257. Mitchell Library, Sydney.

—. 1846. "Report of a Journey 1845," in *G. Gipps Despatches 1846 ML CY683*. Mitchell Library, Sydney.

Ross, A. 1985. Archaeological Evidence for Population Change in the Middle to late Holocene in Southeastern Australia. *Archaeology in Oceania* 20(3):81-89.

Rowland, M. 1994. "Mounds around the World. A Contribution to Understanding Australian Shell Middens and Mounds," in *Archaeology in the North. Proceedings of the 1993 Australian Archaeological Association Conference*. Edited by M. Sullivan, S. Brockwell, and A. Webb, pp. 142-161. Darwin: North Australia Research Unit (ANU).

Rowland, M. J. 1999. Holocene environmental variability: have its impacts been underestimated in Australian pre-History? *The Artefact* 22:11-48.

Sassaman, K. E. 2005. Poverty Point as Structure, Event, Process. *Journal of Archaeological Method and Theory* 12:335-364.

Saunders, J. W., and T. Allen. 1994. Hedgepeth Mounds, an Archaic Mound Complex in North Central Louisiana. *American Antiquity* 59(3):471-489.

Saunders, J. W., T. Allen, R. Mandel, and R. Saucier. 1995. "Watson Brake : A Middle Archaic Mound Complex (ca. 5900-5300 B.P.) in Northeast Louisiana." *1995 Annual Meeting of the Geological Society of America, New Orleans, 1995.*

Saunders, J. W., R. D. Mandel, R. T. Saucier, E. T. Allen, C. T. Hallmark, J. K. Johnson, E. H. Jackson, C. M. Allen, G. L. Stringer, D. S. Frink, J. K. Feathers, S. Williams, K. J. Gremillion, M. F. Vidrine, and R. Jones. 1997. A Mound Complex in Louisiana at 5400-5000 Years before the Present. *Science* 277:1796-1799.

Schroeder, S. 2004. Power and Place : Agency, ecology, and history in the American Bottom, Illinois. *Antiquity* 78:812-827.

Sharma, K. P., and V. N. Pradham. 1983. Study on Growth and Biomass of Underground Organs of Typha angustata Bory & Chaub, Aquatic Plants, India. *Hydrobiologia* 98:147-151.

Simmons, S. 1980. Site Surveys on the Floodplain between the Murray and Wakool Rivers, New South Wales. *Records of the Victorian Archaeological Survey* 10:57-86.

Simms, S. R. 1985. Acquisition Cost and Nutritional Data on Great Basin Resources. *Journal of California and Great Basin Anthropology* 7:117-126.

Sims, I. M., and A. J. Cairns. 2001. Structure of Fructans from Excised Leaves of New Zealand Flax. *Phytochemistry* 57:661-668.

Sinclair, P. 2002. "Blackfellow Oven Roads," in *Words for Country. Landscape & Language in Australia.* Edited by T. Bonyhardy and T. Griffiths, pp. 163-175. Sydney: UNSW Press.

Smith, C. 1996. *Situating Style:an Ethnoarchaeological study of an Australian Aboriginal Artistic System*: PhD Thesis. Archaeology and Palaeoanthropology. University of New England. Armidale.

Smith, C. S., W. Martin, and K. A. Johansen. 2001. Sego Lilies and Prehistoric Foragers: Return Rates, Pit

Ovens, and Carbohydrates. *Journal of Archaeological Science* 28:169-183.

Smith, C. S., and L. M. McNees. 1999. Facilities and Hunter-Gatherer Long-Term Land Use Patterns: an Example from Southwest Wyoming. *American Antiquity* 64:117-136.

Smith, M. A., L. Vellen, and J. Pask. 1998. "Central Australian Region," in *Identifying Wood Charcoal Remains as Palaeo Evidence for Regions of Central and Northeast Australia.* Edited by G. Hope. Canberra: *Research Papers in Archaeology and Natural History, No.28* ANH Publications, RSPACS, ANU.

Smyth, R. B. 1878. *The Aborigines of Victoria.* Melbourne.

Soil Conservation Service of NSW. 1990. *Hay District Technical Manual.* Soil Conservation Service of NSW.

Solomon, S. 1998. "Report on animals found in the Midden site at Clearwater Lake, Narran Lakes, northern NSW.Unpublished Report for Dr. Judith Field." Sydney: University of Sydney.

Spencer, Baldwin. 1918. Kitchen Middens and Native Ovens. *Victorian Naturalist* 35:113-118.

Spencer, Baldwin and F. J. Gillen. 1968. *The Native Tribes of Central Australia,* Unabridged version of 1899 Macmillan & Co. Ltd. London edition. New York: Dover Publications.

Stahl, A. 1984. Homind Diet before Fire. *Current Anthropology* 25:151-168.

Stanner, W. H. 1934. " Inquiries made at Menindee Aborigines Station 26-27/4/1934. Tribal Disposition and Boundaries," in *Elkin Papers 1/3/15 Box 11, Fisher library Archives*

Stephenson, A. E. 1986. Lake Bungunnia - a Plio-Pleisticene megalake in Southern Australia. *Palaeography, Palaeoclimatology, Palaeoecology* 57:137-156.

Stiner, M. C., and S. L. Kuhn. 1995. Differential Burning, Recrystallization, and Fragmentation of Archaeological Bone. *Journal of Archaeological Science* 22:223-237.

Stone, A. C. 1911. The Aborigines of Lake Boga,Victoria. *Proceedings of the Royal Society of Victoria* 23(2):433-468.

Stone, T. 1989. Origins and Environmental significance of shell and earth mounds in Northern Australia. *Archaeology in Oceania* 24:59-64.

—. 1991. Two Birds with One Stone : a reply. *Archaeology in Oceania* 26:26-28.

Sturt , C. *1833. Two Expeditions into the Interior of Southern Australia during the Years 1828,1829,1830 & 1831...* London: Smith, Elder & Co.

Sturt, C. 1849. . *Narrative of an Expedition into Central Australia....* London: T. & W. Boone.

—. 1990 [1838]. *Charles Sturt. An Account of a Journey to South Australia 1838.* Adelaide: Sullivan's Cove.

Sullivan, A. P., R. A. Cook, M. P. Purtill, and P. M. Uphus. 2001. Economic and Land-use Implications of Prehistoric Fire-Cracked Rock Piles, Northern Arizona. *Journal of Field Archaeology* 28:367-382.

Sullivan, M., and S. O'Connor. 1993. Middens and cheniers: Implications of Australian Research. *Antiquity* 67(257):776 (13).

Sullivan, M. E. 1980. Appendix 3: Fieldwork on the Geomorphology of the Nyah Forest Area, and on Site Locations in the Murray Valley. *Records of the Victorian Archaeological Survey* 10:49-56.

Sullivan, M. E., and R. A. Buchan. 1980. Distinguishing between Aboriginal and Natural Mounds in the Murray Valley. *Records of the Victorian Archaeological Survey* 10:87-97.

Tacon, P. 1994. Socialising Landscapes: the long- term Implications of signs, symbols and marks on the land. *Archaeology in Oceania* 29:117-129.

Taplin, G. Editor. 1879. *The Folklore, Manners, Customs and Languages of the South Australian Aborigines.* Adelaide: Govt. Printer.

Taylor, P., and P. Undy. 1994. *Descendants of Warangesda. Some Oral Histories.* A Report Prepared for National Parks & Wildlife Service, N.S.W.

Terrell, J. E., J. P. Hart, S. Barut, N. Cellinese, A. Curet, T. Denham, C. M. Kusimba, K. Latinus, R. Oka, J. Palka, M. E. D. Pohl, K. O. Pope, P. R. Williams, H. Haines, and J. E. Staller. 2003. Domesticated Landscapes: The Subsistence Ecology of Plant and Animal Domestication. *Journal of Archaeological Method and Theory* 10 (4):323-368.

Teulon, G. N. 1886. "Bourke, Darling River," in *The Australian Race: its origin, languages, customs, place of landing in Australia, and the routes by which it spread itself over that continent.* Edited by E. M. Curr, pp. 190-223: Government Printer: Melbourne.

Thomas, N. W. 1906. *Natives of Australia.* London: Archibald Constable.

Thoms, A. V. 1998. "Earth Ovens, Plateau Root Foods," in *Archaeology of Prehistoric Native America. An Encyclopedia.* Edited by G. Gibbon, pp. 232-235, 664-666.

—. 1999. Hot Rock Cooking on the Greater Edwards Plateau: Four Burned Rock Midden Sites in West

Central Texas (Book Review). *American Antiquity* 64:172-3.

—. 2003a. "Cook-stone Technology in North America: Evolutionary Changes in Domestic Fire Structures during the Holocene," in *Colloque et Experimention: Le Fue Domestique et Ses Structures au Neolithic aux Auges des Metaux, Collection Prehistories No. 9.* Edited by M. C. Frere-Sautot, pp. 87-96. France: Editions Monique Mergoil.

—. 2003b. "Subsistence Patterns, Site Structure, and Cook-stone Features," in *Sites and Site Formation Processes in the Tobacco River Plains and Vicinity: Archaeological Investigations in the Middle Kootenai River Valley, North-West Montana. Draft, Reports of Investigation No 8.* Edited by N. W. Thomas: Centre for Ecological Archaeology, Texas A & M University.

—. submitted 2003. Fire -Cracked Rock Features on Sandy landforms in the Northern Rocky Mountains : Toward Establishing Reliable Frames of Reference for assessing Site Integrity. *Geoarchaeology.*

Thorburn, A. W., J. C. Brand, and A. S. Truswell. 1987. Slowly Digested and Absorbed Carbohydrate in Traditional Bushfoods: a Protective Factor against Diabetes? *American Journal for Clinical Nutrition* 45:98-106.

Tilley, C. 1996. The Powers of Rocks: Topography and Monument Construction on Bodmin Moor. *World Archaeology* 28:161-176.

Tindale, N. B. 1937. Two legends of the Ngadjuri Tribe from the Middle North of South Australia. *Transactions of the Royal Society of South Australia* 61:149-153.

—. 1938-39. "Harvard -Adelaide Universities Anthropology Expedition Vol 1-2. Extracts from the Field Journal.," in *Tindale Collection. South Australian Museum Anthropology Archives.*

—. 1938. "Menindee Genealogies," in *Tindale Collection. South Australian Museum Anthropology Archives.*

—. 1939. Eagle and Crow Myths of the Maraura Tribe, Lower Darling River, NSW. *Records of the South Australian Museum* 6(3):243-261.

—. 1974. *Aboriginal Tribes of Australia.* Berkeley and Canberra: University of California Press.

—. 2006. "Tindale's Catalogue of Australian Aboriginal Tribes," in *www.samuseum.sa.gov.au*: South Australian Museum.

Tipping, M. ed. 1979. *Ludwig Becker: Artist and Naturalist with the Burke and Wills Expedition.* Melbourne University Press.

Tite, M. S., and C. Mullins. 1971. Enhancement of the Magnetic Susceptibility of Soils on Archaeological Sites. *Archaeometry* 13 (2).

Triggs, B. 1996. *Tracks, Scats and Other Traces. A Field Guide to Australian Mammals.* Melbourne: Oxford University Press.

Trubitt, M. B. 2000. Mound Building and Prestige Goods Exchange:Changing Strategies in the Chaokia Chiefdom. *American Antiquity* 65:669-690.

Tucker, M. 1977. *If Everyone Cared:Autobiography/Margaret Tucker.* Sydney: Ure Smith.

Van Dyke, R. M. 2003. "Memory and the Construction of Chacoan Society," in *Archaeologies of Memory.* Edited by R. M. Van Dyke and S. E. Alcock: Blackwell Publishers Ltd.

Veitch, B. 1985. Burning Bracken Fern : A Contribution to the Ecology of the Aborigines of Southeast Australia, BA Hons. Thesis. University of New England, Armidale.

—. 1994. "Hearth Stones in the Mound," in *Archaeology in the North. Proceedings of the 1993 Australian Archaeological Conference.* Edited by M. Sullivan, S. Brockwell, and A. Webb, pp. 167-175. Darwin: North Australia Research Unit (ANU).

Wakefield, N. A. 1966. Mammals of the Blandowski Expedition to North-Western Victoria, 1856-57. *Proceedings of the Royal Society of Victoria* 79(2):371-391.

Wandsnider, L. 1992. "The Spatial Dimension of Time," in *Space, Time, and Archaeological Landscapes.* Edited by J. Rossignol and L. Wandsnider, pp. 257-282. New York: Plenum Press.

—. 1997. The Roasted and the Boiled: Food Composition and Heat Treatment with Special Emphasis on Pit-Hearth Cooking. *Journal of Anthropological Archaeology* 16:1-48.

—. 2000. Hot Rock Cooking on the Greater Edwards Plateau: Four Burned Rock Midden Sites in West Central Texas (Book Review). *Plains Anthropologist* 45:117-118.

Watkins, J. E. 2003. Beyond the Margin: American Indians, First Nations, and Archaeology in North America. *American Antiquity* 68:273-285.

Webb, S. 1984. Intensification, Population and Social Change in Southeastern Australia: the Skeletal Evidence. . *Aboriginal History* 8 (1-2):154-171.

—. 1989. *Prehistoric stress in Australian Aborigines: a palaeopathological study of a hunter-gatherer*

population. British Archaeological Reports, international series no. 490. Oxford, U.K.

Westbrooke, M. E., M. Kerr, and J. Leversha. 2001. The Vegetation of Kinchega National Park, western New South Wales. *Cunninghamia* 7:1-25.

Westwood, J. J. 1865. *The Journal of ...J.J. Westwood. An Account of Eight Years' Intineracy to the Townships and Squatting Stations of Victoria, New South Wales, South Australia, and Tasmania.* Melbourne: Shallard & Co.

Williams, E. 1985. Estimation of Prehistoric Populations of Archaeological Sites in Southwestern Victoria: some Problems. *Archaeology in Oceania* 20(3):73-80.

—. 1988. *Complex Hunter-Gatherers, a Late Holocene Example from Temperate Australia. International Series 423.* Oxford UK: British Archaeological Reports.

—. 1994. "Earth Mounds in South-West Victoria. What were they used for and how do we know they are cultural features?," in *Archaeology in the North. Proceedings of the 1993 Australian Archaeological Association Conference.* Edited by M. Sullivan, S. Brockwell, and A. Webb, pp. 162-166. Darwin: North Australia Research Unit (ANU).

Williams, E., and D. S. Gillieson. 1987. "Soil Properties and Activity Areas in Aboriginal Mound Sites in South-Western Victoria," in *Archaeometry : Further Australian Studies.* Edited by W. Ambrose and J. M. J. Mummery, pp. 128-134. Canberra: Dept. Prehistory, Australian National University.

Wilson, M., and B. David. 2002. "Introduction," in *Inscribed Landscapes. Marking and Making Place.* Edited by B. David and M. Wilson, pp. 1-9. Honolulu: University of Hawai'i Press.

Witter, D. 1992. *Regions and Resources.* Unpublished PhD Thesis, A.N.U., Canberra.

—. 2000. *Mount Drysdale Aboriginal Place archaeological study: final draft.* New South Wales National Parks and Wildlife Service.

—. 2004. Regional Variation of the Archaeology in Western New South Wales. *Rangeland Journal* 26:129-149.

Wood, V. 1995. *An Archaeological Study of the Proposed MFP Stage One Urban Development at the Levels, South Australia.* A Report to MFP Aust.

Wrangham, R. W., and N. L. Conklin-Brittain. 2003. Cooking as a Biological Trait. *Comparative Biochemistry and Physiology Part A* 136:35-46.

Wrangham, R. W., J. Holland Jones, G. Laden, D. Pilbeam, and N. Conklin-Brittain. 1999. The Raw and the Stolen. Cooking and the Ecology of Human Origins. *Current Anthropology* 40(5):567-594.

Allen, H. 1974. The Bagundji of the Darling Basin: Cereal Gatherers in an uncertain Environment. *World Archaeology* 5:309-322.

Anschuetz, K., R. H. Wilshusen, and C. L. Scheick. 2001. An Archaeology of Landscapes : Perspectives and Directions. *Journal of Archaeological Research* 9:157-211.

Balme, J., and W. Beck. 1996. Earth Mounds in Southeastern Australia. *Australian Archaeology* 42:39-51.

Balme, J. M. 1995. 30,000 years of fishery in western New South Wales. *Archaeology in Oceania* 30:1-21.

Barbetti, M., and H. Allen. 1972. Prehistoric man at Lake Mungo, Australia, by 32,000 years BP. *Nature* 240:46-48.

Bell, W. T. 1991. Aboriginal Fireplaces and the Implications for Radiocarbon Dating. *Archaeometry* 33(1):43-50.

Berndt, R. M., and C. H. Berndt. 1993. *A World that Was. The Yaraldi of the Murray River and the Lakes, South Australia.* Melbourne: Melbourne University Press & Miegunyah Press.

Beveridge, P. 1865. A Few Notes on the Dialects, Habits, Customs, and Mythology of the Lower Murray Aborigines. *Transactions and Proceedings of the Royal Society of Victoria* 6:14-24.

—. 1883. Of the Aborigines inhabiting the Great Lacustrine and Riverine Depression of the Lower Murray, Lower Murrumbidgee, Lower Lachlan, and Lower Darling. *Journal and Proceedings of the Royal Society of New South Wales* 17:19-74.

—. 1889. *The Aborigines of Victoria and Riverina as seen by Peter Beveridge.* Melbourne: M.L. Hutchinson

.

Bonhomme, T. 1990 a. *An Archaeological Survey of the Barmah Forest. Occasional Report No. 34,.* Victoria Archaeologial Survey.

Bonney, F. 1866-1915. "The Bonney Papers. ML MSS 259," in *Mitchell Library.* Sydney.

Brock, D. G. 1988 [1844-6]. *To the desert with Sturt.* Adelaide: Royal Geographical Society of Australasia.

Clark, P., and M. Barbetti. 1982. "Fire, Hearths and Palaeomagnetism," in *Archaeometry: An Australian Perspective.* Edited by W. Ambrose and P. Duerden. Canberra: Australian National University

Craib, J. L. 1991. *Archaeological Survey in the Moira-Millewa State Forests.* Unpublished report for the NSW National Parks and Wildlife Service.

Curr, E. M. 1883. *Recollections of Squatting in Victoria*

. Melbourne: Melbourne University Press.

Downey, B., and D. Frankel. 1992. Radiocarbon and Thermoluminescene dating of a Central Murray Mound. *The Artefact* 15:31-35.

Dunbar, G. K. 1944. Notes on the Ngemba Tribe of the Central Darling River, Western New South Wales (concluded). *Mankind* 3 (6):172-179.

Edmonds, V., and A. Long. 1998. *Balpool Station Piggery. Archaeological Survey, Sub-surface excavations and monitoring on Balpool Station, near Deniliquin, Western NSW.* Report Prepared for Bunge Meat Industries Pty. Ltd. .

Eyre, E. J. 1845. *Manners and Customs of the Aborigines of Australia. Journal of Expeditions of Discovery into Central Australia, and Overland from Adelaide to Saint George's Sound in the years 1840-4.* London: T. & W. Boone.

Finnis, H. J. 1966. Dr John Harris Browne's Journal of the Sturt Expedition, 1844–1845. *South Australiana* V(1).

Gott, B. 1982. Ecology of Root Use by the Aborigines of Southern Australia. *Archaeology in Oceania* 17(1):59-67.

Holdaway, S. J., and P. C. Fanning. 2003 a. *Time, Period, Place and Preservation: Analysis of Aboriginal Heat Retainer Hearths from Fowlers Gap, Western NSW. Unpublished Report.* New South Wales National Parks and Wildlife Service.

—. 2003 b. *Geoarchaeological Investigation of Aboriginal Landscape Occupation in Peery National Park, western NSW: Results of RAdiocarbon Age Determinations on Charcoal from Heat Retainer Hearths. Supplementary Report. Unpublished.* NSW National Parks and Wildlife Service.

Holdaway, S. J., P. C. Fanning, M. Jones, J. Shiner, D. Witter, and G. Nicholls. 2002 a. Variabilityin the Chronology of Late Holocene Aboriginal Occupation on the Arid Margin of Southeastern Australia. *Journal of Archaeological Science* 29:351-363.

MacPherson, P. 1885. The Oven Mounds of the Aborigines of Victoria. *Journal & Proceedings Royal Society of NSW* 18:49-59.

Martin, S., and D. O'Donnell. 1995. "Stephen's Creek Archaeological Salvage near Broken Hill, Western NSW," in *Archaeologists and Aborigines Working Together.* Edited by I. Davidson, C. Lovell-Jones, and R. Bancroft, pp. 73-75. Armidale: University of New England Press.

Mitchell, T. L. 1839. *Three Expeditions into the Interior of Eastern Australia...* . Vol. 2 Vols. London: T. & W. Boone. 1996 Limited Edition Facsimile by Eagle Press.

.

Morey, E. 1843-1908. "The Morey Papers. Being the Reminiscences, the Letters, and the Diary of Emund Morey Esquire, pioneer of Euston Station on the Murray River, Tintonallogy on the Darling; and Euston on the Darling Downs, Queensland. Arranged by Vivian R. deVaux Voss 1952.," in *Mitchell Library MSS 883.* Sydney.

Prescott, J. R. 1982. "Advances in Thermoluminescence dating and their significance for Australia and Oceania: A review," in *Archaeometry: An Australian Perspective.* Edited by W. Ambrose and P. Duerden. Canberra: Australian National University.

Robins, R. 1996. A report on Archaeological Investigations of open hearth sites in Southwest Queensland. *Queensland Archaeological Research* 10:25-35.

Sturt, C. 1849. . *Narrative of an Expedition into Central Australia....* London: T. & W. Boone.

Teulon, G. N. 1886. "Bourke, Darling River," in *The Australian Race: its origin, languages, customs, place of landing in Australia, and the routes by which it spread itself over that continent.* Edited by E. M. Curr, pp. 190-223: Government Printer: Melbourne.

Tucker, M. 1977. *If Everyone Cared:Autobiography/Margaret Tucker.* Sydney: Ure Smith.

Wandsnider, L. 1997. The Roasted and the Boiled: Food Composition and Heat Treatment with Special Emphasis on Pit-Hearth Cooking. *Journal of Anthropological Archaeology* 16:1-48.

Westbrooke, M. E., M. Kerr, and J. Leversha. 2001. The Vegetation of Kinchega National Park, western New South Wales. *Cunninghamia* 7:1-25.

Witter, D. 2000. *Mount Drysdale Aboriginal Place archaeological study: final draft*. New South Wales National Parks and Wildlife Service.