Hunter-gatherer burials and the creation of persistent places in southeastern Australia

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Abstract

One of the difficulties in interpreting hunter-gatherer mortuary practices is that many mortuary theories are derived from sedentary societies and rely upon an excavated record. This paper is an analysis of both historical and archaeological evidence of Aboriginal burial practices in the Murray River region of southeastern Australia. The archaeological data relies primarily upon analysis of burials exposed through erosion rather than systematic excavations which limits the range of burial characteristics that may be recorded and interpreted. The mortuary practices identified are highly patterned but regionally and locally variable. It is argued that the evidence demonstrates the persistence of place for Aboriginal people. The existence of persistent places is further related to a potentially fluid but structured connection between people and land.

Keywords: Mortuary practices; Cemeteries; Hunter-gatherer burials; Australia; Murray Valley; Time-perspectivism; Aboriginal burials

Introduction

Burials are one of the few tangible remains left by hunter-gatherers and a prominent feature of the archaeological record of the Murray Valley, southeastern Australia. Studies of human burials in the Murray Valley, and in Australia generally, are carried out to reconstruct demography (Webb, 1987), to study the incidence of disease (Webb, 1995), and to study prehistoric behaviour in terms of mortuary practices and what these can tell us about pre-contact ideologies (Pardoe, 1988). To a certain extent, archaeologists have assumed that it is possible to read prehistoric behaviour directly from the archaeological record and, second, to link the record directly with ethnographic observations of Aboriginal mortuary customs and beliefs concerning death and the afterlife (Meehan, 1971).

One interpretation of Aboriginal burial practices in the Murray Valley has been that numbers of burials in close physical proximity represent cemeteries (Pardoe, 1988). This was further tied to the well known set of mortuary theories linking the existence of cemeteries with corporate control over resources and territorialism, following Goldstein (1981), Saxe (Saxe and Gall, 1977) and others. In this formulation a cemetery is more than a number of burials located together, it is a piece of land set aside for a particular purpose—a social practice guided by a set of beliefs (Goldstein, 1981). Within the context of
the general understanding of hunting and gathering society, and Australian Aboriginal society in particular, cemetery behaviour is regarded as unusual (Pardoe, 1988; Woodburn, 1982). In this examination of Murray Valley burial practices it is argued that an association between cemeteries and social complexity outside Australia has been projected onto the Australian evidence (Lourandos, 1997, pp. 232–235). A closer examination of the variation in mortuary behaviours demonstrates that what were interpreted as cemeteries could more usefully be considered persistent places (Schlanger, 1992) rather than a single identifiable site type.

Cemeteries and territorialism cannot be directly identified from the number of burials set near each other as there are a number of intermediary processes which must be taken into account before the conclusion of a cemetery can be drawn. The chief of these are taphonomic—the processes of erosion, decay, preservation, redeposition and recovery which can, at any one point in time, reveal or hide burials from the archaeologist’s view.

Allied to these are aspects of contemporary behaviour which may bring individual Aboriginal burials into sight with varying degrees of frequency. Some of these relate to natural processes of erosion and dune mobility, for example, over-grazing and the reduction of vegetation. Others, however, are fully humanly informed: the location of settlements, roads, irrigation canals, sand mining ventures, even archaeological survey projects and the presence of a researcher (Bonhomme, 1990). Each and all of these processes introduce bias into the archaeological record and a Vect the probability that numbers of burials will be observed in some places and not in others. The way around these problems is to construct research designs and measures that take these factors into account before conclusions concerning Aboriginal behaviour are drawn.

Neither is it then possible to work directly from the record as if behaviour is then a simple empirical fact. In between observations of burials, proximity, frequency, density, age, sex, etc. and the inferences of behaviour a set of concepts should be inserted that organise and make sense of these observations. In the following, the question of cemetery behaviour will be examined in two adjacent but contrasting environments, using spatial, temporal, and behavioural inferences as organizing principles.

Time here is used in a number of ways using Bailey’s (1983) distinction between short and long term processes and spans (Table 1). While an individual burial may be a relatively transitory event, the memory of the burial and any visible monuments may endure over a longer span (e.g., Draper cited in Wandsnider, 1992, p. 264). The potential then exists for this longer span to stimulate further activities but that link needs to be derived from the archaeological record, rather than assumed on the basis of proximity.

Interpreting such burials therefore becomes a matter of trying to extract different levels of information represented by the archaeological remains (e.g., Olivier, 1999). It is only once the composition of the record is understood that interpretation of meaning can follow. Yet burials because they reflect both a point in time and a set of long-term activities do give a different lens onto the past (Carr, 1995). In this paper, both the archaeological record and the ethnohistoric record of burials will be analysed and the argument made that, despite current site invisibility, burials formed a significant part of the landscape of Aboriginal people and that the creation in some places of mortuary landscapes helped to structure particular uses of the land.

Table 1

<table>
<thead>
<tr>
<th>Process</th>
<th>Span</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term</td>
<td></td>
</tr>
<tr>
<td>The recording of the burial</td>
<td>c.1 day</td>
</tr>
<tr>
<td>The duration of the disposal event</td>
<td>&lt; 1 generation</td>
</tr>
<tr>
<td>The burial in relation to the seasonal round</td>
<td>&lt; 1 generation (1 year?)</td>
</tr>
<tr>
<td>The death in the life cycle of an individual</td>
<td>1 generation</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>The duration of the visible monument</td>
<td>&gt; 1 generation?</td>
</tr>
<tr>
<td>Burial exposure</td>
<td>Potentially cyclical</td>
</tr>
<tr>
<td>Long-term</td>
<td></td>
</tr>
<tr>
<td>The time of burial in relation to landscape formation</td>
<td>1 generation+</td>
</tr>
<tr>
<td>The time of burials in relation to each other</td>
<td>Simultaneous to 2000+ years</td>
</tr>
</tbody>
</table>

Background

The particular nature of the Murray River needs to be explained first. The Murray Basin extends over
300,000 km² of inland southeastern Australia (Fig. 1; Brown and Stephenson, 1991). The basin comprises the southern half of the Murray-Darling River systems. Within this area, the Murray River, and tributaries, drains from the Great Dividing Range in the east, across the plains of central and western NSW and north Victoria into South Australia where it turns southwards towards the Southern Ocean.

In its middle and lower reaches the area these rivers traverse is largely semi-arid: evaporation exceeds rainfall and the average variability in rainfall is 33% meaning cycles of droughts and floods. The rivers supply an important source of extra-rainfall water originating from the winter snow-melt in the ranges.

The area discussed in this paper is the central region of the Murray River. In the east of the region lies the Hay Plain traversed by the Lachlan, Murrumbidgee and Murray Rivers and their tributaries and anabranches. In the western half the single river course of the Murray narrows and is confined as it travels in a narrow flood plain surrounded by aeolian landforms. In this paper, these two areas will be referred to as the Hay Plain and Murray corridor.

The accounts of early explorers suggest that this was an area of relatively high population density permitted by the predictable riverine resources (Bickford, 1966). Birdsell’s (1953) study of Aboriginal population density and distribution along with Tindale’s (1974) reconstruction of tribal boundaries supported this early impression. Tribal areas were much smaller within the Murray Basin than in the surrounding areas which were less well supplied with water. Hercus’ work on languages (Hercus, 1969, 1971, 1978; Hercus and White, 1971) supports this notion of population diversity and Pardoe (1993a) has argued on the basis of skeletal non-metrics that such linguistic diversity is matched by high levels of biological variation between populations. More recently archaeological work to the south of this region has suggested marked economic intensification during the mid-late Holocene (although this has been hotly disputed) (Lourandos, 1983, 1997).

Given these indications of cultural, linguistic and biological diversity, Pardoe (2003) has proposed a model of Holocene occupation within this area of

Fig. 1. Map of Southeastern Australia showing the location of the Hay Plain and Murray corridor and burial locations with more than 10 burials.
the basin based on evidence of burials, human biology, ecological patterning and historical documentation. The model suggests that the Central Murray represented a predictable, stable and productive riverine environment which could support large and dense populations. Given this high population density he argues that the area was occupied by highly territorial, endogamous groups with well-defended boundaries. The biological outcome of this is an increased genetic distance between neighbouring groups and he suggests that this was reflected in a mortuary practice that included cemeteries as visual symbols of land ownership (Pardoe, 1988). These processes operate in contrast to surrounding groups of the arid and semi-arid country who occupied the country at low density and formed exogamous populations with large inclusive social networks, the mortuary corollary of this being individual isolated burials. In light of the argument suggested above that burials have several different relationships with time, this paper will re-examine the mortuary evidence from the region suggesting that large burial sites need to be seen in two lights: as part of a range of mortuary behaviour and as features constructed both over and in time.

**Ethnohistoric accounts of burial**

There are ethnohistoric accounts of burials in this region but their completeness is unknown. Infectious disease from the Europeans, particularly smallpox, arrived in the area before any direct physical contact between the colonists and Aboriginal people (Dowling, 1997; Mein, 1897) Aboriginal accounts collected by Europeans after settlement describe disease (probably smallpox) as coming with a great wind from various directions (from the south, up the river, from the east).

The historic accounts, therefore, need to be interpreted in the awareness that the Aboriginal people alive at the time are the survivors of serious epidemics and that the impact of infectious disease may have been quite uneven so that the distribution of people in the landscape does not necessarily represent the pre-contact pattern.

The historic accounts collected by Europeans after settlement describe disease (probably smallpox) as coming with a great wind from various directions. The regional variations apply to location of the graves (high ground along the Darling and Murray corridor but not necessarily on the Hay Plain) and to the form of the visible monument (hut vs wood vs fishing net and logs). These were visible monuments but such monuments decayed over time and in some instances their decay was assisted for example by burning down the hut which in the case mentioned above marked the final stage of mourning, the avenging of the death.

Further west, he wrote:

We continued our journey, and soon found all the usual features of the Darling; the hills of soft red sand near the river, covered with the same kind of shrubs seen so much higher up. The graves no longer had any resemblance to those on the Murrumbidgee and Murray but they were precisely similar to the places of interment we had seen on the Darling... (Mitchell 1839(II): 113).

The accounts of burial sites have several common features despite the observations of regional variations. They are most commonly accounts of up to three burials, visibly mounded, surrounded by a boundary of some type (generally ridges), and often surmounted with a hut, or other structures.

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The other visible markers of graves were scarred or carved trees particularly east of the Riverine Plain (Bonhomme, 1990) and artefacts associated explicitly with burials: widows caps of gypsum plaster, kopi eggs (spindle shaped gypsum plaster) placed near the grave. These are particularly
associated with Barkindji people from the lower Darling River (Matthews, 1911).

Accounts of actual burials are much less common. Hobler, for instance, describes what he considers a rudimentary burial on the Murrumbidgee River:

> the blacks do not always pay so much respect to the dead as we supposed—I heard lately of their turning the bones out of an old grave to make room for another body—and a few days ago they opened an old grave at the end of the garden and tugged in the body of an old man so quickly that we were not aware of it till the stench found the fact—I gave them credit for acting the part of Scots Old Mortality as they observed to have packed the bark upon the grave more carefully and scraped away the weeds for a few yards around it, but it seems it were from laziness only—they made the sunken grave hold another tenant. (Hobler, 1992: 7 March, 1847).

In contrast, Musgrave (1930) wrote an extensive description of a burial practice whereby the bodies of children who had died were carried by their mothers until an appropriate adult male had died at which time they were buried with him.

The ethnohistoric accounts point to the visibility of at least some graves, but also at the potentially short term nature of such visibility, i.e., visibility in terms of a generation not over hundreds of years. Clustering of some graves is noted but again mention is only of small numbers. Aboriginal people are clearly aware of where burials occur and several writers mention both avoidance of burial locations for camping and avoidance of the names of the dead (Mereweather, 1859, p. 125). Regional variation is noted in placement of the body, location of the graves, and specific grave form (Krefft, 1866) but there is an overall adherence to both primary burial (except for children) and rules that relate in varying circumstances to clan (Robinson cited in Clark, 1990), age and sex (Littleton, 1998a). The difficulty is assessing the relationship, if any, between these accounts which incorporate short term events at the time of death and the long term archaeological accumulation of burials in a cemetery which might span hundreds and possibly thousands of years.

**Archaeological work**

There have been a number of amateur excavations of burial sites in this region starting with Cunningham (1817). Murray Black excavated nine burial grounds in the Euston-Lake Bennanee-Robinvale Area (Sunderland and Ray, 1959), collecting more than 400 individuals. He excavated a further series of sites in the Lake Victoria-Rufus River-Lindsay Island area, collecting 570 individuals. The majority of these have now been repatriated and reburied.

In contrast there have been relatively few professional excavations. Of sites with large numbers of burial, only three have been excavated: a site near Robinvale potentially affected by sandmining was excavated in 1983 (Bowdler, 1983), the burial site as Kow Swamp was excavated in the 1970s (Thorne and Macumber, 1972), and test excavations at Lake Victoria (Littleton et al., 1994).

There have, however, been major surveys of burial sites undertaken in consultation with Aboriginal communities documenting graves exposed through erosion. Pardoe has focused on the Murray corridor/ lower Darling region (Pardoe, 1985, 1988, 1993a), Littleton on the Hay Plain (Littleton, 1997, 1998a,b, 2002), and Bonhomme undertook a general survey of National Parks and Wildlife Service sites (Bonhomme, 1990). It is the results from these surveys that now provide most of the data on site location and variation over space while the excavations provide information about particular points in space.

**Taphonomy**

The results of both surveys and excavations need to be interpreted in the context of the conditions underlying either the need for their excavation (sandmining, water erosion) or the reason for their initial visibility.

Throughout western New South Wales Aboriginal burials are exposed through wind and water erosion. Developments, particularly sand quarrying, overstocking, and maintenance of higher water levels all play a major role in exposure but even prior to this burials were coming to the surface. The relative shallowness of burials and preferential burial in sand bodies rather than heavier soils explain why so many are currently exposed in western NSW (Johnston and Littleton, 1993). Soil movements mean that new burials are appearing all the time. This has been very clearly demonstrated at Lake Victoria, in particular at Gecko Island, Lake Victoria (Fig. 1), where a site initially subjected to water erosion and then exposed to wind for two months was documented in detail.
Gecko Island is part of a series of dunes lining the southern end of the lake near its inlet and outlet creeks. The western end of the island is a broad wind and water scoured platform of grey sandy clay with some carbonate, and numerous burials. This is the principal unit in which burials, mapped as *in situ*, visible pit or scatter, and artefacts are located. A minimum of 111 individual burials (43 *in situ*, 59 pits, 9 scatters) were recorded (Littleton et al., 1994).

The number of exposed burials, however, bears little relationship to the potential total number of burials. As seen in Fig. 2a, below the 25.8 m contour burial pits predominated, while above this contour intact burials were more common. On the higher, less eroded surface there is the potential for more *in situ* burials to lie beneath the current ground surface. Burial pits below this layer, however, represent the lowest level of burials with upper layers probably already lost through erosion.

The burials on Gecko Island were recorded and mapped at two different times: in April, 1994, when first observed, and six weeks later in June after the site had been visited many times and after severe windstorms in late May. The difference in terms of

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**Fig. 2.** Site plan of Gecko Island showing the difference in the number and nature of burials recorded in (a) April and (b) June 1994. Darkened symbols indicate remains which in (a) disappeared before June and in (b) appeared in June only.
results is indicated in Fig. 2. Of the records made in April twenty-five burials could not be relocated in June. The most obvious reason for loss was wind-blown sand which had moved across the site particularly on the eastern side. In June fifty new recordings were made. The burial of a single adult in April was cleared of approximately five more centimetres of sand revealing the burial of five closely placed bodies. Several processes were clearly in operation: wind erosion and the removal of sand; the obscuring of material by drifts of windblown sand; and the decay of poorly preserved burials, both by exposure to the elements and damage by human traffic.

What the recording on Gecko demonstrated was simply the magnitude of difference a short period of time such as two months could make to a locale indicating that burials need to be interpreted in terms of their ephemeral visibility. In addition, when trying to assess absolute numbers of burials it is necessary to take into account factors such as stratigraphy, degree of preservation and patterns of erosion. This is as true for excavations as for survey data.

Apart from the cycle of processes occurring at one site, it has also become apparent that there are longer-term cycles affecting site visibility. During 1993, a severe drought on the Hay Plain caused many more burials to become exposed. At the height of the drought the regional archaeologist was receiving approximately one report of exposed burials every week (Johnston, 1993 pers. com). Around Hay anecdotal evidence is that comparable conditions have only been seen in the late 1940s/early 1950s. Is it possible that many burials recorded in the intervening years were first exposed in this earlier drought? The question has implications for estimations of how many burials there are in an area. More significantly, however, it confirms that the burial record is not a static representation of the past but a record of what is visible as moments of an erosion cycle. Hence, the information inherent in burials needs to be interpreted in terms of recurrent patterning and relationships between particular site elements, rather than as a total or proportional sample.

Findings

Given this limitation due to site taphonomy characteristics of burial sites need to be interpreted carefully. As described historically, there are apparent differences in burial practices across this region despite some persistent common features. The following focuses upon a few characteristics of burial sites from the region: location, numbers of burials per locale, density, burial form, demographic representation, body position.

Location

The majority of burials in the central Murray have been identified in source-bordering dunes or lunettes near permanent lakes or rivers (Table 2). Pardoe (1993b) suggests that there is a distinct inverse relationship between areas of occupation debris and large burial sites.

On the Hay plain there is a much greater degree of variability in burial location (Littleton, 1998b). Rather than being concentrated in on the major permanent water sources, burials are distributed more widely across the landscape being associated at times with ephemeral water courses and ancestral stream deposits (Fig. 1). A high proportion of the burial locales are within cultural deposits: 2% in middens and 56% within oven mounds. The burials appear to postdate the living use of these locations and there is an unknown temporal gap between the two events. It is, however, the accumulation of a settlement deposit which then creates a potential location for a burial.

In addition, unlike many of the locales with multiple burials in the Murray corridor, on the Hay Plain, multiple burials are not necessarily placed beside or in easily recognisable locations (e.g., lake inlets) or on high points of the landscape. Such burial locations are less overt on the landscape although researchers have found that with experience it is relatively easy to predict potential burial locations which are often not the most highly visible points but lower sand bodies (Littleton, 2002).

Numbers per site

Excavations at Lake Victoria (two sites), Robinvale and Kow Swamp have demonstrated that

<table>
<thead>
<tr>
<th>Location</th>
<th>Hay Plain</th>
<th>Murray corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claypan</td>
<td>13.2</td>
<td>0</td>
</tr>
<tr>
<td>Levee</td>
<td>3.6</td>
<td>0</td>
</tr>
<tr>
<td>Mound</td>
<td>55.7</td>
<td>0</td>
</tr>
<tr>
<td>Midden</td>
<td>1.8</td>
<td>0</td>
</tr>
<tr>
<td>Riverbank</td>
<td>0.6</td>
<td>0</td>
</tr>
<tr>
<td>Residual</td>
<td>1.8</td>
<td>0</td>
</tr>
<tr>
<td>River Terrace</td>
<td>0</td>
<td>6.8</td>
</tr>
<tr>
<td>Dune</td>
<td>21.6</td>
<td>93.2</td>
</tr>
<tr>
<td>Total N</td>
<td>167</td>
<td>44</td>
</tr>
</tbody>
</table>
there may be a wide disparity between the number of burials visible in a surface exposure and the number actually within the site (Littleton, 1998b). Hence data on the number of burials per locale is tenuous, representing the minimum number possible and partially depends upon inferences based upon surface density and maximum size and depth of the deposit.

Significantly, however, there are relatively few individual burials identified in the Murray corridor (Fig. 3). Even within lunettes more than one burial is frequently found within a radius of less than 30 m. Twenty recorded locales (47.6%) contain between 2 and 10 individuals with nearly a quarter of locales containing more than 20 exposed burials (Littleton, 1998b).

In contrast, as a proportion of all burial locales, in the Hay Plain 39.5% are individual graves not associated with other burials, while a further 53% are burials of less than 10. Large numbers of graves within a small area are much rarer.

Taphonomy could create a potential bias in this record. The Murray corridor burials being largely in sand bodies could be more subject to erosion, exposure and decay than bodies in the heavier soils or occupation deposits of the Hay Plain. This could mean that the smaller number of burials on the Hay Plain is due to a lack of erosion. However, these soils and deposits have been subject to much more extensive sand-mining and cultivation which should have exposed large accumulations of grave if they were present.

The difference in numbers buried per locale ties in with the difference in burial location. In the Murray corridor it appears that potential burial locations are restricted to two particular landforms causing burials to accumulate even by chance, on the Hay Plain the choice of potential burial places is much wider.

**Density**

One way of distinguishing this is to look at the density of burials within the deposit (Table 3). The data are based upon exposed burials and are calculated only for locales with three or more burials by calculating the area from the diameter of the two most distant graves. In the Hay Plain, locales with three or more burials have an average density of 8.3 burials per 100 square metres. Burial locations comprise small numbers of individual interments and single inhumations, but at the same time, burials of larger groups of people (up to 30 at least) occur in tightly packed locations, and multiple clusters of burials may coexist in one area (Fig. 4). Clustering, therefore, is a deliberate act not a random placement. In the Murray corridor in contrast, burial sites are often larger, more restricted in site locations but also locally less dense.

**Table 3**

Density of burials in sites containing 3+ bodies

<table>
<thead>
<tr>
<th></th>
<th>Hay Plain</th>
<th>Murray Corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>63</td>
<td>19</td>
</tr>
<tr>
<td>Number of people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>6.6</td>
<td>23.4</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>5.4</td>
<td>27.5</td>
</tr>
<tr>
<td>Density per 100 m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>8.3</td>
<td>1.9</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>24.4</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Fig. 3. Distribution of the number of burials per locale in the Murray Corridor and on the Hay Plain (%).
Burial form

Primary burial is the most common form of burial throughout the central Murray region. However, the evidence for secondary burial is hard to identify. One visible sign of secondary processing is the bundling of the body where remains were exposed or carried prior to their final interment. This is visible in the combination of disarticulation with tight flexure or stacking of individual elements. Only 3% of burials recorded in the Murray corridor are bundles (Table 4). A higher percentage have been found on the Hay Plain (9.0%).

In the case of children these bundles are placed with an adult burial. Such bundles are found within clusters of burials in both areas suggesting that the body has been returned to a specific location or kept till a particular death as in Musgrave’s (1930) description of child burials.

A small proportion of individuals were cremated. In the Murray corridor 2.9% of all burials were cremations compared to 8.3% on the Hay Plain (Table 4). Distinctively, of the 42 cremations on the Hay Plain nine were children and all four of the adults for whom sex could be identified were female. Of the
22 cremations in the Murray corridor two were females (the remainder could not be sexed) and only one of the 22 was a child.

The type of cremation and its subsequent treatment varied. In some cases the body was burnt in situ and either left uncovered or only lightly covered. In the Hay Plain the cremated remains particularly of children were interred with the primary burial of an adult suggesting that cremation was part of delaying a burial. A further small subset are instances where the remains were burnt, then they were deliberately broken into even smaller fragments, bundled with ochre and then buried. There are three identifiable cases of this practice: two in the Murray corridor (Littleton et al., 1994; Pardoe, 1993b) and one on the Hay Plain (Littleton, 2002). All involve a young woman’s remains. This is the same treatment given to the burial of Mungo I dated to 24500 BP (Thorne, 1975) suggesting a long history to this burial form. What cannot be assumed is a continuity of the symbolism. Meehan (1971) documents local variations in beliefs concerning death and that most areas had multiple forms of burial, including cremation. Hence there is no simple association between burial form and ideology.

If cremation and bundle burials are a way of delaying burials then such practices are more common on the Hay Plain than in the Murray corridor and occur despite the ubiquity of possible burial locations in the landscape. Delay may be of particular significance when children are involved.

**Demographic representation**

Despite this differential treatment of children there are few differences across the region in terms of age and sex representation. In both the Murray corridor and Hay Plain males are more frequently identified than females (Table 5). On the Hay Plain in particular males form a higher proportion of the single isolated burials, women being more frequently buried within groups. There is, however, also an inexplicable dearth of middle-aged females in clusters: young women and old women predominate (Littleton, 1998a). This apparent division is not observed in the Murray corridor.

Burials of subadults (less than 15 years) are more frequently observed on the Hay plain than in the Murray corridor. In both areas, however, such burials are predominately found with other burials. Of the subadults however, the overall proportion is very low (lower than expected if there is a demographic cross-section) and the burials of very young children in particular are underrepresented. This may be the result of taphonomic basis.

**Body positioning**

Body orientation and position are two aspects of mortuary behaviour that do remain visible and according to the ethnohistorical evidence were part of the customary practices surrounding the dead (Robinson cited in Clark, 1990).

In the Murray corridor there is a fairly clear preference for bodies to be laid in an extended position (Table 4) with the head pointing towards to southwest (Fig. 5). There are, however, some significant differences between sites. At Lake Victoria in the East Nanyah burial location bodies are primarily in this orientation and laid in extended positions, yet across the creek most burials are oriented to the south and in a flexed position suggesting highly patterned behaviour within particularly discrete locations (Littleton et al., 1994).

This, however, is much clearer on the Hay Plain where, rather than there being one predominant orientation, direction tends to vary by cluster so that, while within a group of burials there is a fairly consistent orientation and position, orientations do not hold across groups in the same locale (Littleton, 2002). In this area various flexed positions rather than extended positions predominate (Table 5) giving an overall appearance of heterogeneity between sites but homogeneity within sites.
Dating

Very few burials have been radiocarbon dated and even less frequently has more than one burial from a site been dated. Known dates are given in Table 6. The majority of graves date from the mid- to late Holocene with a particular increase around 6000 BP and a fairly constant distribution after that date (Holdaway et al., 2005). Furthermore, however, they indicate that a single site (such as Katarapko) may encapsulate a large amount of calendrical time. This is also suggested by sites such as Nap Nap where there are marked differences in the layers in which bodies are buried (some are very close to the surface, others in the dune core) and where this corresponds to the degree of mineralization of the bone indicative of a large amount of geomorphological time. Yet, despite these indications that multiple burials may accumulate large amounts of time, there are some indications of relatively short time gaps between paired burials (e.g., Hobler, 1992: 7 March, 1847).

Discussion

There are common features that identify hunter-gatherer burials within this large region. The ethnohistoric record suggests that burials were highly visible, at least for short periods of time, were avoided for camping, and involved patterned placement of bodies. The archaeological record confirms: a general avoidance of burial areas for occupation (although occupation is a precondition for some burial locations on the Hay Plain); that primary burial of all individuals predominates but that there is some patterning by age and sex; and that burial patterns tend to be formalised. In the Murray corridor it has been argued that there is a normative position and orientation between most sites (Pardoe, 1988), on the Hay Plain such formalism is patterned in particular locations.

Pardoe divided burials into cemeteries—groups of burials deliberately contiguous and occurring at high density within bounded locations—and isolated burials occurring at low density with little or no association between each burial event (Pardoe, 1988). Cemeteries were interpreted as affirming membership to a particular group and asserting for those who bury their dead in that location their ancestral rights. In this sense isolated burials become a null event in that they fail to symbolise belonging to a particular group.

The Hay Plain burials however complicate this picture by demonstrating a range of burial practices that are, in some locations, very formalised and patterned, yet involve only small numbers of people.
(Littleton, 2002). They serve to question the existence of a simple boundary between cemetery and non-cemetery burials since they have many of the characteristics of burials but lack the large numbers and possibly the time depth of cemeteries. Effectively they demonstrate that hunter-gatherer burials do not neatly fall into particular categories and attempts to create such categories tend to leave large numbers undefined, not simply because of the problems of preservation, but also because the archaeological record of burials is a long temporal series of individual acts. Pattern is imposed post hoc and was not necessarily obvious to the actors in the past.

The record is created out of several repeated actions from which some patterns can be recreated. The majority of the burials are primary with the very specific exceptions of children whose bodies may (but not always) be carried for long periods of time or cremated (and then carried). Children’s bodies in this area, at least until early adolescence, are transportable and need to be transported. Sarah Musgrave’s account suggests a particular set of practices explicitly for this age group (Musgrave, 1930). The material finds match her account (Hope, 1998; Witter et al., 1993). It suggests that burials of children may be less tied to a particular place than to the deaths of particular adults. Until early adolescence children held distinctly different status to adults and that this particular practice occurred over a very wide area encompassing in historic times at least, tribal groups not thought to be in close cultural contact.

For adults, however, burials seem to have been more tied to place. Analysis of the Hay Plain and Murray corridor burials suggests there are two underlying characteristics of burial places: preference for particular locations and maintenance of specific locations over time. Preference is evidenced by the multiple use of highly specific locales over time. Unfortunately few sites have a good sequence of radiocarbon dates but on Katarapko Island approximately 2000 years separates two burials (Dowling, 1989); on Nap Nap burials vary considerably in which layer they are laid and later burials cut through earlier burials (Littleton, 1997). All of these suggest preference over time.

Isolated burials, while possibly more variable in location, also occur in particular landforms. This is not simply a matter of easy digging—longitudinal dunes for instance are not used for burials in con-

<table>
<thead>
<tr>
<th>Location</th>
<th>Date (BP)</th>
<th>Material</th>
<th>Lab#</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td><strong>Hay Plain</strong></td>
<td></td>
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</tr>
<tr>
<td>Coobool Ck</td>
<td>14300 ± 1000</td>
<td>U/Th</td>
<td>LLO-416</td>
<td>Brown (1989)</td>
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<td>Narcurrie</td>
<td>11440 ± 160</td>
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<td>ANU-403b</td>
<td>Thorne (1975)</td>
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<td>ANU-619b</td>
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<td>Bone</td>
<td></td>
<td>Daley (1986)</td>
</tr>
<tr>
<td>Kerrie East #1</td>
<td>4060 ± 160</td>
<td>Charcoal</td>
<td>ANU-10213</td>
<td>This Study</td>
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<tr>
<td><strong>Central Murray</strong></td>
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<tr>
<td>Mallee Cliffs</td>
<td>6610 ± 190</td>
<td>Apatite</td>
<td>ANU-5787A</td>
<td>Pardoe (1988)</td>
</tr>
<tr>
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<td>Blackwood and Simpson (1973)</td>
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<tr>
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</tr>
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<tr>
<td>Wamba yadu</td>
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<td>Apatite</td>
<td>ANU-8648</td>
<td>Pardoe (1995)</td>
</tr>
<tr>
<td>David’s dune</td>
<td>7140 ± 300</td>
<td>Apatite</td>
<td>ANU-8647</td>
<td>Pardoe (1995)</td>
</tr>
</tbody>
</table>
contrast to dunes resulting from nearly water bodies. From the frequency of use it appears that places in the landscape were recognised as appropriate or inappropriate for burials. These places, however, may not always be reused despite conforming to the pattern of appropriate place.

Preference exists on two levels: first, a generic preference for particular landforms which are not necessarily places distinct from occupation, and second, in the case of clustered burials, preference for particular places on a landform or for particular isolated landforms.

Furthermore areas used for multiple burials are maintained as burial locales. They were not subsequently reused for occupation despite what must have been in some instances prime locations, for example, the foreshore dunes at Lake Victoria. Such avoidance, however, does not necessarily indicate a symbolic setting aside of an area for current and future burials which is often implied by the term cemetery. The ethnographic record is clear that burials are marked by specific physical remains: huts, ridges, mounds of sticks and, around the lower Darling, widows’ caps, kopi eggs. It is also apparent that following a burial people moved away. This may have been only a short distance but they did move. Effectively the burial structured subsequent actions and helped to create a landscape of meaning. In a resource-rich zone such as Lake Victoria it is easily to imagine how a place could become by a series of burials, set aside for that activity. After time a group may start to assert rights or linkages to those burials or that burial area but again the arrangement may be post hoc rather than deliberately planned. This means that burial areas may be created by a process of accumulation over time, and may in turn, by becoming mortuary landscapes, structure human activity and contribute to the landscape of meaning.

Pardoe (1988) following Goldstein (1980), suggests that those buried within a particular area are buried in particular formal styles and that these reflect common group membership and territoriality. There is no doubt that within burial clusters the form of burial may be highly repetitive These burials, however, occur over variable lengths of time: at Katarapko 2000 years or more. Despite the potentially large numbers involved along the Murray River, they do not necessarily represent continuity and exclusive use by one group of a particular location. The numbers of individual burials at any one site are too small. Even the highest estimates of total burial numbers at Lake Victoria represent only one burial per generation if use of the site was continuous (Littleton et al., 1994). Continual and exclusive use by one group of people for a short period of time is unlikely given the few dates involved and stratigraphic positions within sites. It is more likely that people are using multiple burial locations at one time. This is particularly clear on the Hay Plain where the grouped burials are small in number.

In both areas of the Murray some burial clusters are highly formalised with groups of burials with distinctly different normative burial positions. This is apparent on the various foreshore dunes of Lake Victoria as well as on a smaller and much more complex scale at some locales on the Hay Plain where each individual cluster is distinctly different from the next.

Consistent patterning like this is invisible to those not involved in the burial. There is no record of any visible signs on the surface such as head and foot markers to indicate appropriate orientations. Later burials which uncovered earlier ones would reveal such evidence but there are few clear instances of this (Dowling, 1989). In most cases a specific burial position and orientation is effectively insider knowledge. A burial locale may be known to all but the specifics of the burial known only to those who share those practices.

This suggests that there are groups sharing general locations (and ideas about what constitutes a suitable location). Unless there is a rapid succession of one group over another for example, the group practising extended burials replaced by the group practicing flexed burials, then what is occurring is almost the opposite of strict territoriality with rigid boundaries. While there may have been at the time of first contact in the area an expressed ideology of clan and territory (Clark, 1990), the long term mortuary record argues for a flexible, more fluid and less bounded system where claims to territory “existed at the level of the individual or individual family, the local group and the tribe,... individuals could call on a variety of criteria to legitimise access to resources or claims to land (Allen, 1996, p. 664).” This is the long term material record of a phenomenon noted by Morphy (1998, p. 138) that “the system linking people, ancestral beings, and places together has resulted in a very stable relationship between ancestral law and place and a very fluid relationship between actual groups of people and place.”

So rather than there being a strongly delineated “cemetery equals territory” system constant over
time, people were moving across the land. At times they are close to a burial ground at times they are not. When they are not people are buried elsewhere. There may be differences in the importance of an individual reflecting how far they are moved but at times both male and female adults were buried in isolated locations.

Based on a survey of ethnographic accounts, Hofman (1986) demonstrates that many hunter-gatherer examples of common burial locations indicate burial symbols and locations shared by unilineal descent groups but that these are not necessarily tied to corporate group control or to resources. In the central Murray the highly formalised clusters of burials are partial representations of the group producing the dead. These clusters are more likely to signify a social grouping than a corporate land holding group.

The continuity of a particular descent group with a particular burial location cannot be assumed. Even if a group leaves an area and are eventually replaced by others the landscape symbols will attract similar but new stories and designs (Morphy, 1995). There are two different time processes occurring. One is a persistence of place over long periods of time whereby human activity is structured by existing monuments. Two, over a shorter span in the Hay Plain and possibly longer in the Murray corridor, is a persistence of custom within a group.

It cannot be hypothesised, however, that such groups have exclusive and long term rights to a particular place. One, the record is too slight—there are simply insufficient burials to argue for long term sedentary and large populations, and second, locations are used by more than one descent group (or similar sized organisation) either at the same time or in succession. What we may be observing in the central Murray is much more the result of a social organisation that allows for flexibility and a system that persists even when resources are relatively predictable because, while they may be predictable in comparison to arid Australia, they are still subject to high levels of variability.

Within this system burials may be understood in terms of persistent places, cultural features which “structure the use and reuse of the larger landscape (Schlanger, 1992, p. 92).” Schlanger suggests there are three ways in which persistent places may be created: first, through the recognition of unique qualities whereby particular locales are suited to certain activities; second, through remains that focus reoccupations once built, attracting reuse and reoccupations and structuring later activities; and third, through long term processes of occupation and revisitation. Burials locations along the Murray Valley are persistent places in two of these senses. First, specific landforms are recognised as possible burial locations for example, in the Murray corridor source bordering dunes fulfill this possible function. However, as has been argued here, more specifically once a burial has occurred then its very existence and physical marking can focus and restructure successive use serving as a marker to avoid reoccupation but to site burials in that location. Hence the two characteristics of a place, its persistence and its active maintenance, create the current burial record. It may well be that such persistent places are then used by specific actors to legitimate ancestral links but this will be only one of multiple ways in which the relationships between land use and land holding were negotiated.

Conclusion

Making use of a wider variety of spatial, temporal and behavioural inferences has allowed us to demonstrate that cemetery behaviour is not necessarily associated with increased territorialism as previously hypothesised. Neither is it necessary to go outside our understanding of the range of hunter-gatherer behaviour to explain the existence of cemeteries. On the other hand, we are still far away from understanding the specific historical and cultural contexts underlying these burials. A major unknown in this reconstruction is the absolute time span over which burials were occurring. Confirming our potential reconstruction requires a more substantial dating effort. Such projects, however, need to be undertaken in accordance with the desires of local traditional custodians. The analysis so far demonstrates that it is necessary to see how the record of what is left by hunter-gatherers is created—which does the mix of human action and taphonomy leave for us to read? In this reading it is very tempting to move directly from physical remains to symbolic reconstructions based upon observations of very different economic and social groupings when what is potentially being observed is a series of human actions which then structure future human behaviour.

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