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AWLS MADE FROM THE ULNA BONE OF CAPRIDAE DURING EARLY SETTLEMENT OF ADELAIDE, SOUTH AUSTRALIA

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Abstract

This paper describes three awls, each manufactured from the proximal portion of an ulna bone of Capridae (sheep or goat). These unusual finds have not been previously reported from post contact sites in Australia. All of the ulnae described here were found on the south side of the River Torrens near Adelaide, during an archaeological salvage at the Adelaide Gaol and the New Royal Adelaide Hospital site. These two sites are separated by less than 300m and it is proposed that the awls were manufactured, used and discarded soon after settlement.

Introduction

The bone awl represents a more common object. Made from the ulna (front lower leg bone) of a sheep or goat, its extremity has been shaped in such a way as to form a point. This will have been used to perforate soft substances such as skin or leather, which were important elements of clothing of the pastoral populations of the period (Honegger 2004:67).

Honegger was describing an awl manufactured from the ulna of a goat or sheep (Capridae) by Sudanese hunter-gatherers approximately 4000 years ago. Ulnae bones of Capridae (sheep and goat) and Cervidae (deer) families lend themselves particularly well to this type of implement as the proximal area provides a natural grip with the thumb resting against the facets. Archaeological assemblages from Europe, Central Asia, Africa and North and Northern America have revealed that herders and/or hunters of sheep, goat or deer commonly manufactured awls from the ulnae of these animals (Hamalainen 1984;
Mainfort and Walling 1996; Moss and Erlandson 2012; Stein 1992). There are also examples from South America of weaving tools being manufactured from the ulnae of llama (Kim Akerman pers. comm. 2012). Sheep, goats, deer, llama and alpaca were unknown in Australia until colonial settlement and prior to colonisation Indigenous Australian hunter-gatherers predominantly manufactured awls from the fibula (lower leg bone) of mature kangaroos or wallabies (Walshe 2008). The shift to using exotic materials for manufacturing traditional tools has been the subject of much analysis and research has revealed a rapid and widespread uptake of new materials by Indigenous Australians. In particular, glass quickly became a favoured material in view of its fracturing, retouch and cutting properties (Harrison 2004). However, no archaeological evidence to date has been reported in Australia for a similar transition to using exotic bone in the manufacture of traditional implement types (Lawrence and Davies 2011).

The first English fleets into South Australia in 1836 brought not only colonial settlers but also their cattle, sheep, pigs, rabbits and poultry for both food and breeding stock. The south eastern parts of Australia had been colonised some years earlier and by 1836 it was possible for sheep stations in western Victoria and New South Wales to contribute to the new Colony’s stock. In 1838 the ‘overlanding’ of sheep into South Australia commenced and informal livestock yards were established to the northwest of Adelaide to accommodate them (Maurovic 2007). By 1845 the formally named and built Newmarket sheep yards in the same location were receiving sheep for sale and dispersal to local butcher shops (Maurovic 2007) – this sheep yard is now the site of the New Royal Adelaide Hospital (NRAH). Two of the awls described here were found on the narrow space of land that separated the Newmarket from the edge of the River Torrens (Figures 1 and 2). The third awl was found beneath the floor of a building (circa 1840) at the Adelaide Gaol and approximately 200m west of the Newmarket (Figures 1 and 2).
Figure 1 Location of Adelaide Gaol, NRAH site and Adelaide CBD.
Figure 2 Location of ulna awl finds at Adelaide Gaol and NRAH.
The Adelaide Gaol

The Adelaide Gaol stands near the River Torrens and operated from 1840 until 1988. It was designed by George Strickland Kingston on the Pentonville model where each radiating arm has a rectangular cell block with adjoining yard. The building under which the find was made provides the only exception to the model, being notable for its quadrilateral shape. It is also unusual in having wooden floor boards approximately 0.8m above the natural ground surface rather than a concrete floor placed directly onto the natural ground surface, which characterises all other cells in the Adelaide Gaol.

When archaeological investigations commenced, the original floor boards were still in situ over the ground surface of interest. The construction date of this building is still a point of conjecture but it can be said that construction took place during or after 1840, in line with general construction of the Gaol (Walshe 2011). In 1840, one of the three ‘native locations’ along the River Torrens was located near the site of the Adelaide Gaol (Jones 2007). With the building of the Adelaide Gaol, this portion of land ceased to be as accessible to Indigenous people.

Archaeological investigation of the ground surface beneath the floor boards in the quadrilateral building has recovered numerous finds that represent both the changing cultural landscape and the changing internal architecture of the building (Walshe 2011). The finds also reflect the size of gaps between floor boards or around the intersection of floor and wall which have acted as natural sieves for objects small enough to fall below. However, some finds were too large to have fallen below and it is logical that these finds were in situ and the building constructed over them. These finds are also outside of the expected range of goods associated with prisoners such as: transfer ware and decorative ceramic pieces including porcelain; table and bottle glass and large pieces of bone from good cuts of meat (Casella 2007; Scheiffers 2002).
It was amongst this assemblage that an ulna awl measuring 72mm was located (Figure 3). Interestingly, two pieces of flaked stone and three fragments of modified bottle glass were also located. The former may have no temporal association as numerous stone tools would have littered the banks of the River Torrens prior to settlement but the latter are highly likely to be contemporaneous. The glass is typical of bottles manufactured during the early to mid 1800s in Britain.

![Figure 3 Ulna awl from Adelaide Gaol showing cut mark along lower margin near tip.](image)

**The New Royal Adelaide Hospital (NRAH) Site**

Construction works commenced at the NRAH in 2011 and initially required the removal of one to two metres of fill. Removal of this fill revealed the original ground surface as it was prior to the late 1800s and in turn, pits filled with post settlement discard were revealed. Discard included ceramic, glass, clay pipes, metal, iron, animal bone and other objects that date to the mid to late 1800s, drawing on both manufacture and discard (Walshe 2012).
The site for the NRAH was used as a sheep yard (Newmarket) from circa 1845 to 1913 and thereafter as railway yards until construction commenced (Maurovic 2007). Between circa 1875 and 1900 the Adelaide Council organised regular refuse collections and these were disposed of into pre-existing (e.g., pugholes) or purpose dug pits in Adelaide’s Parklands (Piddock 1992). Council records indicate that the site for the NRAH was one such designation and in view of the spatial distribution of the archaeology finds from this area it is suggested that rubbish was discarded between the Newmarket sheep yards and the Torrens River (Walshe 2012).

Two ulnae awls measuring 75mm and 77mm (Figure 4) were found in two different areas of archaeological salvage (Figure 2). Many thousands of sheep were no doubt yarded here from circa 1838 until 1914 and along with this, it is anticipated that mortality before sale would have taken place. Additionally, drovers and others attending to the sheep may have camped along the River before returning inland (Bowen 1987; Maurovic 2007). The question arises over when the awls were likely to have been manufactured and if these objects can be assigned to Indigenous or European artisans.

Contact on the Torrens River Cultural Landscape

Adelaide’s early settlement years were a meeting of Europeans and Indigenous people on an Indigenous cultural landscape along the Torrens River. It was here that the first settlers lived in rudimentary huts made from raw materials gathered along the River. Those with prior information brought out tents or Manning houses and these were soon dotted amidst the reed and mud huts (Kerr 1978). The shortage of more permanent dwellings in the town area was acute from first arrival in 1836 and into the 1840s.

Parties of settlers from the first fleets organised themselves in clusters according to their ship, giving rise to two well-known ‘rows’ in the north west Parklands: Buffalo and Coromandel Rows and were located between the Gaol and Colonel Light’s survey tent (Adelaide Observer 1906; Jones 2007; Kerr 1978). The site of Light’s tent is marked by a memorial plaque on the NRAH site.
The challenges faced by settlers in their tents and huts have been described to some extent in letters, diaries and reminiscences (Duncan 2007; Thomas 1983) and it is more than likely that many of the wares brought out from England did not survive the transition from life in the Parklands to life in a town house.

Figure 4 Ulna awl finds from Adelaide Gaol (top) and NRAH (lower and middle).
The encounter between Indigenous people and Europeans has been variously presented in letters and diaries written by early settlers (Hope 1968; Leigh 1982; Thomas 1983), early histories (Blackett 1907; Hawker 1975) and more recently in revisionist research (Foster 1990; Simpson and Hercus 1998). European occupation of the Torrens River appears to have been initially unchallenged by Indigenous people who found in it an opportunity to bargain and trade for unusual commodities such as ready-made flour, tea, biscuits and knives (Duncan 2007). Mary Thomas records gifts of meat to Indigenous people as a good will gesture and indeed the urge to convey ‘friendly relations’ appears to have been common in the first few years (Duncan 2007; Thomas 1983).

Indigenous Australians made bone implements for everyday use and commonly carried them (Walshe 2008). The natural handle-like shape of the Capridae ulna would not have escaped a keen eye. Although awls manufactured from Capridae ulnae have been found in association with pre-agricultural sites in Europe (Hamalainen 1984), there are no available reports of such implements being used in more recent times by rural or industrial folk.

Manufacture and Chronology of the Awls

The Capridae ulna naturally sits snug against the radius, forming the scaffolding for the front lower leg of the animal (Figure 5). Experimentation was undertaken by the author and it was found that this unison is best separated by running a blade between the two and drawing it up at the thinnest point of the ulna. The ulna readily snaps off at the thinnest point or if removed complete, can be easily shortened by holding the proximal end and bending back the distal end. Both techniques result in the ulna snapping at the thinnest point, shown as a dark line in Figure 5. The ulna awls have been shaped at a point much higher up the shaft and closer to the proximal end (Figure 5). This area is the broadest and most robust section of the shaft, demonstrating the deliberation required to cut and shape the bone at this point. Under usual butchering techniques applied to sheep and lambs, this action is not standard butchery and is unnecessary (Ashbrook 1955).
Figure 5 Complete ulna and radius; complete ulna showing line of natural breakage as a dark line and ulna awl finds from Adelaide Gaol and NRAH.
The awls are manufactured from the same bone of the same animal, are similar in size and shape and were found within 200m of each other, close to south side of the River Torrens. The end shape of each is remarkably similar, as shown in Figure 4. Figure 5 shows a cut below the pointed end of an awl which is consistent with a steel blade and it is proposed that a steel blade was used to rough out the pointed end. The end on each has been reshaped again by use and the find from the Adelaide Gaol has also been smoothed along the sloping surface. The uniform morphology, dimension and spatial location of the awls suggest a shared temporality.

The awl from below the floor of the original female cell block in the Adelaide Gaol can be confidently dated to post 1836 and pre 1841. It is possible that this ulna was derived from a gift to or theft of meat by an Indigenous person (Gara 1998) or was sourced by Indigenous people from refuse discarded by families making do in their impermanent dwellings (Thomas 1983). This scenario also explains the presence of both modified glass and bone on the site, as mentioned earlier in this discussion.

The awls from the NRAH site were located amidst an array of mid to late 1800s domestic ware and it is reasonable to assume that these were in situ when the refuse was dumped on top. It is unlikely that the awls were discarded by Indigenous people directly into the pits after 1875 in view of their displacement from this part of the Torrens by this time (Foster 1990). It is also unlikely that these awls were manufactured by Europeans in the mid to late 1800s when metal or steel utilitarian tools were available in Adelaide’s stores (Kerr 1978). The cut marks on the awls have been made by a steel blade rather than sharpened stone, as shown in Figure 4. Indigenous people were also gifted axes and knives at settlement but it is also possible that knives had already been gained from whalers and sealers who plied the coast from circa 1800 (Cumpston 1970).
Conclusions

The ulna awls reported here come from a narrow section of the River Torrens and share a common morphology and context. The purpose of such an implement was presumably for piercing soft materials such as skins. A ‘native location’ was situated near the location of these finds (Jones 2007) and the River Torrens provided a pathway to the other native locations, as well as allowing cultural relationships with land to continue. In view of the lack of necessity for Europeans to use sheep or goat bone for tool making, it is more likely that the ulna awls were manufactured by Indigenous people. However, it is also possible that Indigenous or non-Indigenous drovers and or shepherds, visiting the sheep yards may have made use of bone on an opportunistic level.

Awls from Capridae ulnae bone have not been previously reported from archaeological assemblages in Australia (Lawrence and Davies 2011). It could be that these have been overlooked, poorly preserved or their existence was limited in both time and distribution. This question remains to be explored and will require a review of existing collections as well as greater awareness when analyzing post contact faunal assemblages. It is likely that such objects could exist in assemblages from fringe camps, pastoral stations and missions but have yet to be identified. The reporting of these finds will hopefully allow other researchers to make similar identifications, if indeed, other Capridae ulna awls exist.

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