
The Life of Things Long Dead: a Biography of Iron Age Animal Skulls from Battlesbury Bowl, Wiltshire

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This study expands perceptions of ritual behaviour in the British Iron Age, which conventionally focus on the deposition and burial of objects. Classification of animal bones as special deposits in Iron Age Britain, and interpretation of the ritual activities they may represent, has tended to concentrate on the significance of their burial location and composition and/or the cultural perception of the particular animal species deposited. Other than for consumption and sacrifice, little consideration has been given to the complex, dynamic histories (biographies) and cultural significance of animal remains in the period between death and burial. Detailed examination of the taphonomic and pre-depositional histories of animal deposits, are one means by which it is possible to explore the activities that occurred above ground in the past. Zooarchaeological investigations of a group of cattle and horse skulls from Battlesbury Bowl, Hampshire, provide an excellent example of a 'special deposit' where it was the objects themselves, as much as their species, location or structured burial that held special significance for the Iron Age community. By taking a biographical approach, we can create detailed narratives of archaeological animal bones and their treatment, thereby expanding the view of activities that fall under the 'ritual' umbrella.

When addressing the question of ideologies and beliefs of past societies, simply applying labels of 'special' or 'ritual' to animal remains does little to further our understanding (Hill 1995, 97). It is more important to examine the archaeological evidence to explore past peoples' behaviour relating to specific activities of raising, selection, killing, processing, consumption, collation, curation and disposal of animals and animal remains that took place in the past, and then to consider what, if anything, this might tell us about the beliefs and ideologies of the society (Madgwick 2010; Morris 2011). Buildings, boundaries, archaeological deposits and the individual objects within them may have complex, dynamic histories and lifecycles (biographies), incorporating changes in meaning and cultural significance through time (Brück 1999a; 2006, 80). Brudenell and Cooper's detailed analyses of complete assemblages of pottery and burnt human remains from a Late Bronze Age site help to build a strong case for moving away from

interpretations that are restricted to the identification of structured deposits based on uncritical application of rigid diagnostic checklists. They demonstrate how approaching assemblages with an open mind, and not assuming that deposits have been intentionally composed, enable archaeologists to build contextually specific histories of accumulation and deposition that lead to broader and more varied interpretations of the activities that took place on prehistoric sites (Brudenell & Cooper 2008). There is a need to apply the same principles to zooarchaeological analyses and to provide more detailed narratives of deposits of faunal remains. It is only by taking this approach that we can more clearly specify in what way remains appear special and attempt a more detailed description of the sort of activities that may or may not fall under the 'ritual' umbrella.

Evidence for the possible ritual or symbolic treatment of animal remains has been recovered from many Late Bronze Age and Iron Age settlements in

southern Britain (Hambleton 2008, 82). This usually takes the form of deposits that comprise groups of carefully selected objects deliberately placed within pits or ditches, which often include animal skulls, skeletons or articulated limbs. Classification of such groups as special deposits (see below), and the interpretations of the ritual activities they may represent, has tended to concentrate on the significance of their location (in the ground) and their composition (the types and combinations of objects present) (e.g. Wait 1985; Cunliffe 1992; Hill 1995). Cultural perceptions of economic and symbolic importance of particular animal species have also been considered (e.g. Grant 1984a, 543; 1991; Green 1992; Creighton 2000, 14–19). However, other than processing of animal carcasses for raw materials and food to be consumed or sacrificed (Maltby 1985a; Grant 1984a; Hill 1995, 57–9, 102), until recently little consideration has been given to the period between death and burial for special animal bone groups (Morris 2011). This study builds on previous studies of ritual behaviour in the British Iron Age, which focus on the burial of objects, by exploring whether objects incorporated into special deposits (specifically animal bones) had a history of unusual treatment and a special significance of their own even before they were buried. This article encourages detailed examination of the taphonomic and pre-depositional histories of animal deposits as a means of exploring evidence for some of the activities that occurred above ground in the past. Zooarchaeological investigations of a group of cattle and horse skulls from Battlesbury Bowl, Hampshire (Hambleton & Maltby 2008), provide an excellent example of a so-called special deposit where it was the objects (skulls) themselves, as much as their location or structured burial that held special significance for the Iron Age community.

Identifying and interpreting special deposits: what makes an animal bone ‘special’?

In the broadest sense, any assemblage that is considered unusual or remarkable could be labelled ‘special’. The inference of this label is that such deposits result from activities that were in some way special to past communities. In reality the label is assigned by archaeologists, for archaeologists. It indicates merely what appears special to the archaeologist, rather than what was special to people in the past, although the two need not be mutually exclusive (Brück 1999b). The lexicon used to describe structured deposits has become increasingly diverse, reflecting nuances in their character and interpretation (see Brudenell & Cooper 2008, 15–16 for a summary of different terms

and their usage). The debate over how such deposits are identified and categorized has been positively informed by Hill’s (1995) in-depth analysis of the contents of Iron Age pits. However, the rigorous and detailed methods developed by Hill to identify distinct characteristics of structured deposits have not always been employed by other Iron Age scholars. Rather, there has been a tendency to simply adopt Hill’s diagnostic criteria wholesale and apply them uncritically to other assemblages. A further problem prevalent in recent Bronze Age and Iron Age studies is that the *identification* of structured deposition is the full extent of interpretation, and there is little attempt to further interpret and explain the processes by which these deposits were formed (Brudenell & Cooper 2008). This article explores these issues in relation to the identification and interpretation of special animal deposits and associated bone groups in the British Iron Age. The Battlesbury Bowl case study demonstrates how a biographical approach and detailed analysis of accumulation and depositional histories of animal remains can inform and expand our understanding of the human behaviour associated with apparently special or structured deposits.

In animal bone studies, the term ‘special deposit’ was made popular by Annie Grant’s study of the Iron Age faunal remains from Danebury hillfort in Hampshire (Grant 1984a). Grant identified special deposits of animal remains, consisting of skeletons, skulls and/or articulated limbs, usually found at the bases of pits. She classed animal remains as special principally where they appeared notably different in composition, preservation and distribution from the ‘ordinary’ mixed and fragmented animal remains that typified domestic refuse at the site. Grant interpreted these special bone groups as evidence of the symbolic and ritual use of particular animals involving sacrificial offerings. Consequently, special deposits of animal skeletons, articulated limbs or skulls have often been taken to be synonymous with ritual/religious deposits of animal remains, particularly with reference to Iron Age material from southern England (Grant 1984a, 533–48; 1984b; 1991; Wait 1985, 125). However, this is a questionable assumption since non-ritual taphonomic factors, both natural and cultural, may in some instances more easily account for such accumulations of bone (Maltby 1985a; Wilson 1992; Hill 1995). Many of Grant’s special deposits may indeed have some kind of ritual or religious significance, but Wilson (1992) effectively demonstrates that defining general diagnostic criteria for special deposits is fraught with problems.

Hill’s (1995) study of Iron Age pit deposits concluded that a major proportion of such deposits were

'structured', a term originally used by Richards and Thomas (1984) in relation to Neolithic remains to indicate *purposeful (sic.)* selection and disposal of material. Both Grant and Hill highlighted the potential ritual nature of animal bone remains on Iron Age sites, a consequence of which has been an increased tendency among zooarchaeologists to interpret certain animal remains as ritual (Morris 2008a; 2011). However, Hill (1995, 16) stressed that while ritual activities may be manifest in the archaeological record as structured deposits, structured deposition is by no means always the result of ritual activity. Despite Hill's clear distinction between 'structured' and 'ritual', there remain considerable difficulties with definition and usage of the term 'special deposit' and other associated terms such as 'structured deposit' and 'ritual deposit' (Brudenell & Cooper 2008). Archaeologists, including zooarchaeologists, commonly use all three interchangeably in verbal discussion, if not always in press.

Interpretative decisions as to whether or not faunal remains constitute a special deposit are influenced by many variables. These include: location in terms of feature type; location spatially or stratigraphically within a feature or site; types of species and/or body parts; associations with particular species, body parts and other objects; rapidity of deposition; scale of deposition. However, there is no single factor that conclusively indicates ritual significance, nor are there any consistent combinations of variables that provide indisputable evidence of ritual or special deposition of faunal remains (Brudenell & Cooper 2008). The difficulty in recognizing and arguing convincingly for the presence of special or structured deposits in the archaeological record, at least in part reflects the difficulties in defining these terms and the criteria by which objects are assigned to either group.

These difficulties in identifying special groups of bones are compounded by a persistent tendency to classify the archaeological record along the lines of binary oppositions — e.g. sacred *versus* profane; ritual *versus* functional — which is a product of post-Enlightenment philosophy and not necessarily the way in which prehistoric peoples viewed or conceived their worlds (Brück 1999b). Animal bone groups derived from 'normal' butchery waste would not necessarily differ in their composition from those generated from preparation of carcasses for feasting or sacrifice (Morris 2008a,b). Besides, conceptualizing ritual consumption in the British Iron Age as something other than 'normal' is arguably an inappropriate dichotomy (Hill 1995, 102).

In many instances a single deposit of faunal remains (or, indeed, other objects or materials) cannot be conveniently classified into a single category (Brück

1999a). For example, butchered animal remains buried in a pit may represent waste from food preparation (i.e. rubbish: a functional interpretation); the rapid burial of such noxious waste may be considered a functional act (hygiene) and, by dint of being deliberate and purposeful, also an act of structured deposition. If the butchered remains derive from a feast or special meal, they constitute material evidence of ritual activity even if their subsequent disposal had little social or symbolic significance, while alternatively (or additionally) the eventual act of depositing the animal remains may have been a ritual event in itself. When interpreting the zooarchaeological record it is important to recognize the potential for objects to have multiple meanings/roles; in other words, bones may be both ritual and rubbish at the same time (or neither). These meanings/roles may also have changed through time.

Skulls as special deposits:

The discussion of special animal deposits is not confined to articulated limbs and complete or partial skeletons. Skulls, in single or multiple accumulations, are often considered to be of special significance (Wilson 1999). Indeed, skulls are probably the single skeletal element most commonly interpreted as special/structured deposits when found on Late Bronze Age–Late Iron Age archaeological sites from southern England (Hambleton 2008). This is particularly true if skulls are found in significant locations on a site or have the appearance of having been deliberately placed in a specific position and location (Grant 1984b; Wilson 1999).

Skulls, like whole skeletons, can look impressive when revealed during excavation, and it may be the striking appearance of a complete skull that encourages archaeologists to consider it as a special object. Similarly, species may also influence interpretation: cattle and horse skulls are more commonly remarked upon and categorized as special in British Iron Age archaeological reports than the smaller, less visually impressive skulls of sheep and pigs (Hambleton 2008). It is interesting that single finds of skulls are readily accepted as having potential for special significance while other individual finds of post-cranial elements are commonly excluded from consideration as potential ritual deposits. At Suddern Farm, Hampshire, Poole (2000, 146) interpreted some deposits of single post-cranial bones as special, based on their association with other significant archaeological finds, but such examples are rare in the archaeological literature compared to the frequency with which lone skulls are noted as potentially ritual or symbolic.

The most credible arguments for skulls as special deposits are made in combination with other factors, such as their spatial and contextual location, or their association with other remains or artefacts (Wilson 1992, 342; 1999). For example, at Watchfield, Oxfordshire, a cow skull was interpreted as special based on its association with a human skull (Hamilton-Dyer 2002) and at Farmoor, Oxfordshire, two horse skulls were interpreted as special based, amongst other things, on their location at the entrance terminals of a ditch (Wilson 1979). Most zooarchaeologists recognize that deposits of skulls in isolation, or with other faunal remains, may be explained convincingly as discarded domestic refuse and butchery waste, e.g. at Winnall Down, Hampshire (Maltby 1985b). Nevertheless, there is an unfortunate tendency in the wider archaeological literature for skulls, which are notorious for their common appearance in special deposits, to be seen as a defining special characteristic in themselves, even in the absence of other supporting contextual information or artefacts (Wilson 1992, 342).

Changing meanings: the importance of taking a biographical approach to bones

Taking a biographical approach allows us to explore the history of an object by providing a narrative of its treatment and interactions with other objects and people. By doing so, this enables us to better understand the uses, meanings and identities afforded to the object and how these may have accumulated and changed throughout its 'life' (Gosden & Marshall 1999). The concept, proposed by Kopytoff (1986), of artefact biographies is now well established, as is the idea that objects form part of an interactive social system with individuals and communities, and that meaning and use of material things can change within these dynamic systems as objects 'are passed down, reworked and their significance renegotiated' (Thomas 1996, 62). The potential for exploring dynamic lifecycles and biographies is not restricted to individual artefacts or classes of material. For example, Brück (1999a) has applied similar concepts to the interpretation of Middle Bronze Age houses and their associated artefact assemblages. However, this is an approach most commonly applied to the study of manufactured objects (e.g. Joy 2008) and has only recently been championed as having use in the study of archaeological animal remains (Morris 2008b; 2011).

Since the 1970s the recording of taphonomic markers on bone has become an important and established part of zooarchaeological analyses, adding to our understanding of the agents, processes and sequences of natural and cultural modifications

that have contributed to the final composition and appearance of faunal assemblages. The emphasis on describing and understanding detailed sequential taphonomic and depositional histories fits well with the biographical approach (Brudenell & Cooper 2008; Madgwick 2008; 2010; Randall 2010). However, interpretation of taphonomic markers has tended to focus on functional explanations for assemblage composition (Lyman 1994), and the potential for taphonomic observations to shed light on symbolic and ritual activity has been largely unexplored. Schiffer (1972, cited in Thomas 1996, 56) asserted that, 'objects and materials are taken out of nature and circulate in a series of engagements with a social system until such time as they are discarded, deposited or lost'. The zooarchaeological markers of perthotaxic factors (taphonomic factors affecting faunal remains after the death of the animal, but before final deposition/burial), such as gnawing, weathering, fragmentation and carcass processing (butchery), have potential to inform us about modification of animal remains associated with these engagements. This has been clearly demonstrated in the case of Battlesbury Bowl, where taking a biographical approach and focusing on detailed analysis of the perthotaxic taphonomic history of faunal remains has successfully identified the possible use of several animal skulls as objects of display.

Case study: the Battlesbury Bowl skulls

The site of Battlesbury Bowl lies along a narrow chalk ridge immediately to the north of Battlesbury Camp, an Iron Age hillfort near Warminster, Wiltshire. In 1999, excavation of a long thin strip, *c.* 400 m long and covering *c.* 0.6 ha, took place along the ridge prior to the construction of a tank road across part of the Defence Training Estate Salisbury Plain. Excavations revealed Late Bronze Age–Iron Age features including ditches, post holes, and almost 200 pits, clustering in four main areas (Feature Groups 1–4) along the length of the site (Fig. 1). Several features were identified as containing potentially special, 'structured deposits' (Ellis & Powell 2008, 1).

Within an excavated section (F4105) of this ditch, several cattle and horse skulls had been deposited in close proximity to each other within the same layer (context 4101) (Fig. 2). Radiocarbon dates from one of the cattle skulls (790–420 cal. BC) and an articulated cattle forelimb from the same context (770–400 cal. BC) are consistent with the Early Iron Age date assigned from the associated ceramic evidence (eighth–mid fourth centuries BC) (Ellis & Powell 2008, 14–15). In addition to the skulls, there were several other com-

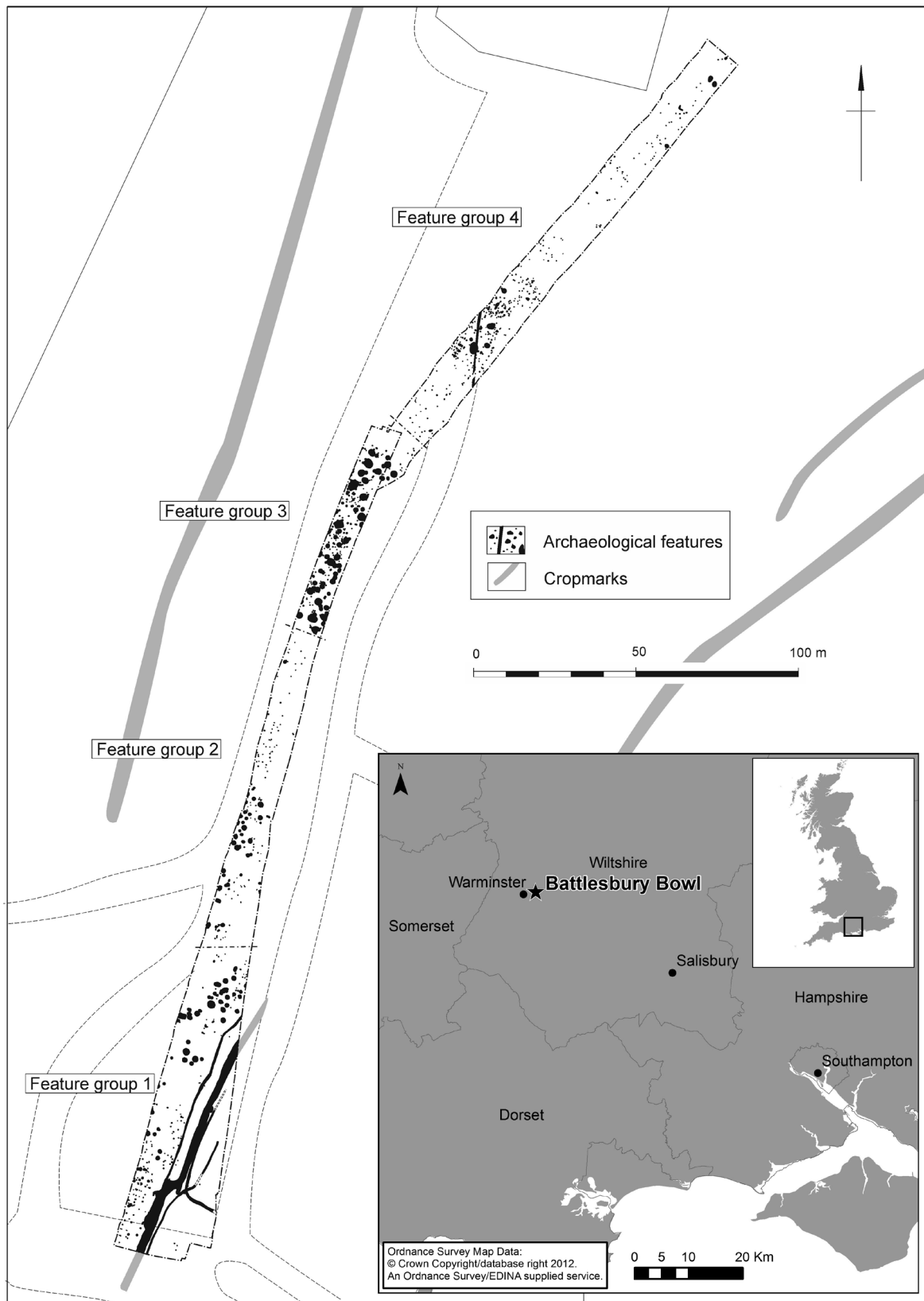


Figure 1. Battlesbury Bowl site plan (© Wessex Archaeology) and location map (inset).

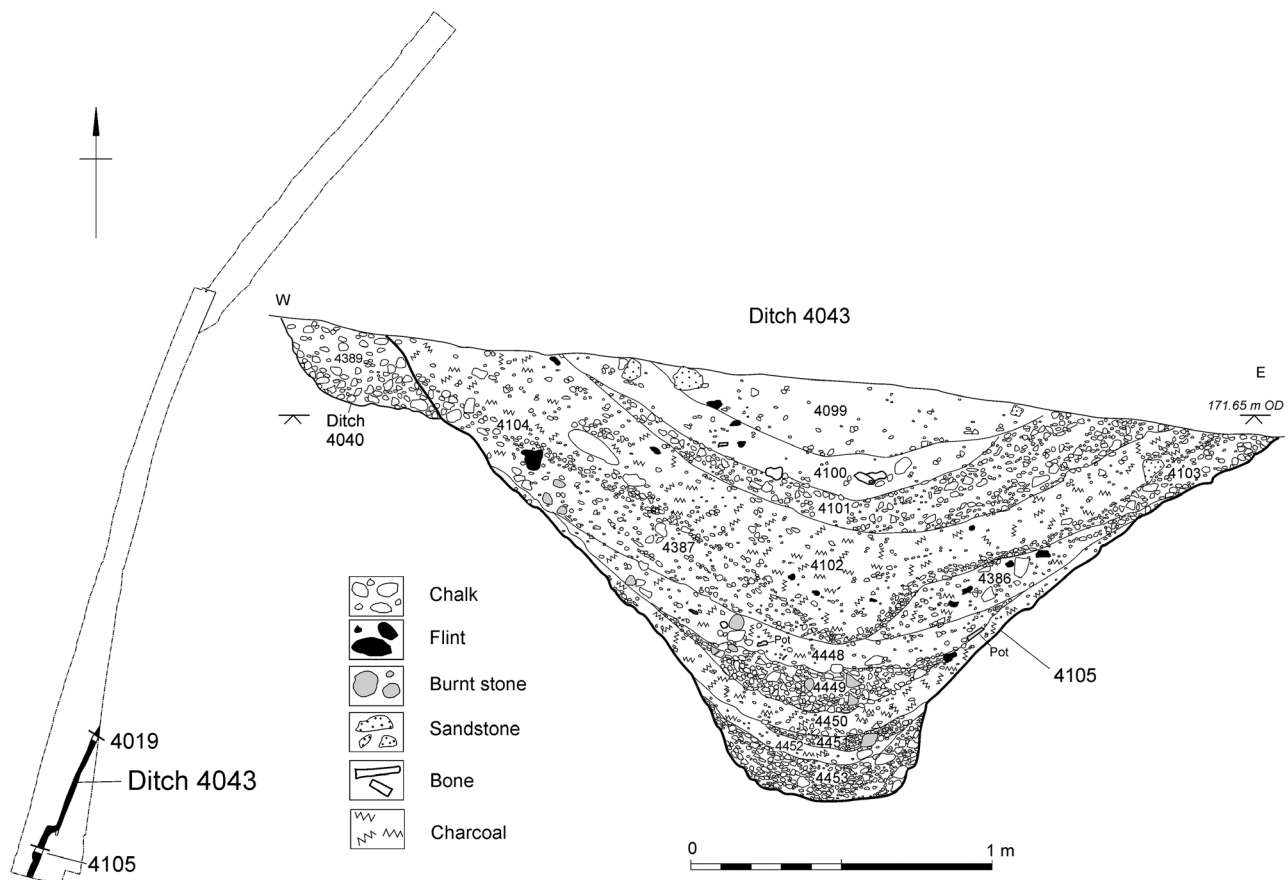


Figure 2. Plan and section drawings showing location of the context (4101) in the excavated area (4105) of the Late Bronze Age–Middle Iron Age ditch (ditch 4043) from which the deposit of cattle and horse skulls were recovered. (© Wessex Archaeology.)

plete postcranial bones recovered from context 4101, including the articulated left forelimb of a sub-adult cow, the right side of a horse pelvis, a sheep metatarsal and juvenile sheep femur. The rest of the faunal assemblage from this context comprised fragmentary remains of cattle, sheep/goat, pig and unidentified bone fragments of medium- and large-sized mammals, probably from the same range of species. Excavation plans and photographs of the skulls indicated that they were all deposited the same way up, with the frontal area of the skull towards the surface, but that they were not uniformly orientated (Fig. 3).

Many of the ditch fills, including context 4101, containing the skulls, and the contexts directly over and underlying the skulls, resulted from dumping of occupation material, rather than slow accumulation or weathering of soil profiles (Ellis & Powell 2008, 22). This suggests the skulls and other faunal remains in the context were deposited fairly rap-

idly, probably as a single event. The cattle forelimb remained articulated, except for the humerus, and had slight evidence of gnawing which suggests this ditch deposit was left exposed and accessible to dogs for a brief period prior to being covered by further dumps. The skulls are located close together in a single group that appears spatially discrete from the complete postcranial bones that were deposited at the same time within the same fill. The stratigraphic section (Fig. 2) shows evidence in the upper part of the ditch of at least one recut that truncated context 4101. Consequently, caution is called for when basing interpretations of structured deposition on the spatial arrangement and composition of the assemblage within context 4101, as some of the original deposit may have been removed.

The excavators established a set of criteria in order to aid their identification of possible structured deposits in the field. High densities of small finds,

pottery and bone were taken to be indicative of structured deposition, as were other assemblage characteristics, including ‘animal skulls appearing alone or in association with a relatively rich artefactual assemblage’ (Ellis & Powell 2008, 12). Although ditch section F4105 had a high density of small finds overall, in context 4101 the pottery and small finds were not considered by the excavators to be particularly unusual or abundant. The on-site interpretation of structured deposition in this particular context was based on the abundance and close spatial arrangement of the skulls.

The large accumulation of a single element type in one place set the deposit apart as unusual, and the fact that these elements were skulls clearly influenced the on-site interpretation that this was a special and potentially ritual deposit. In this instance special or structured was simply another way of saying unusual. Assigning such a label based solely on assemblage composition does nothing to further our understanding of the formation of this deposit, or the behaviour and beliefs that led to this accumulation of skulls. Mundane groups of butchery refuse may appear to be unusual deposits by dint of being particularly well preserved and undisturbed when compared to other faunal remains (Maltby 1985a; Morris 2008b). Instead it is important to understand and explain unusual patterns in detail, rather than simply accept the observation that remains appear unusual as an uncritical short-cut to assigning a label of ritual, structured or special. Further zooarchaeological analysis of the Battlesbury Bowl skulls, taking full account of taphonomic indicators, was undertaken to investigate the history of treatment of the skulls prior to and around the time of burial (Hambleton & Maltby 2004; 2008). This taphonomic history was essential in order to establish which natural and cultural factors had resulted in the accumulation of remains and, if cultural, whether their treatment was different to other skulls from the same site, and if such treatment was indicative of the skulls having had a special significance to the Iron Age occupants of the site.



Figure 3. Cattle and horse skulls in situ in the Late Bronze Age–Middle Iron Age ditch at Battlesbury Bowl. (© Wessex Archaeology.)

The Battlesbury Bowl skulls – detailed observations

The Battlesbury Bowl skulls from context 4101 are described in Figure 4, and Figure 5 provides a guide to the names and location of the anatomical elements of the skull mentioned in these descriptions. The following detailed observations are drawn from the original Battlesbury Bowl zooarchaeological archive report (Hambleton & Maltby 2004).

The Battlesbury Bowl skulls – discussion and interpretation

Attention must be drawn to several features of the skulls that provide an insight into their taphonomic history and treatment prior to burial.

Absence of teeth

Several of the skulls are missing all or some teeth from the maxillae. The sockets indicate that the teeth were lost post-mortem but there is an absence of

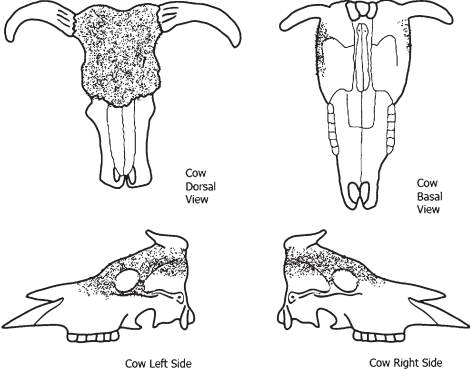
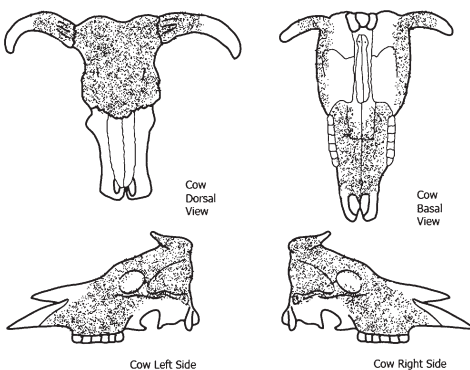
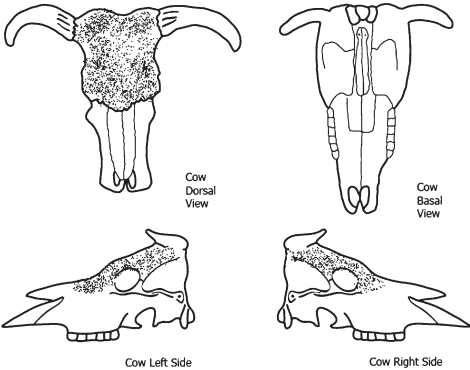
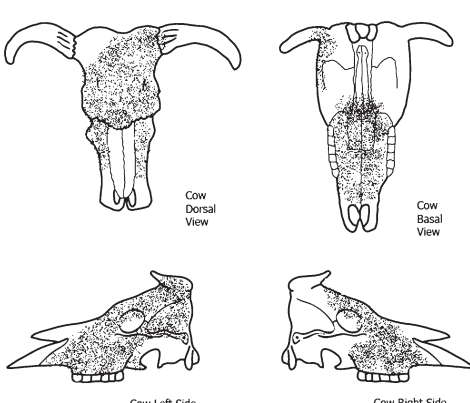
<p>Cattle skull 1 This consists of the slightly fragmented remains of most of both sides of the temporal, parietal and frontal bones of the skull. Also present are parts of the sphenoid, the top of the occipital and one of the zygomatics. The occipital condyles are missing and the brain case is exposed. There is no evidence for the maxillae. There are no horn cores and there are knife cuts on the back of the frontal at the base of both horn cores, indicating that the horns were deliberately removed.</p>	 <p>Cow Dorsal View</p> <p>Cow Basal View</p> <p>Cow Left Side</p> <p>Cow Right Side</p>
<p>Cattle skull 2 This is a more complete skull consisting of the top of the occipital and both sides of the parietal, frontal, temporal, zygomatic and maxillae. Both horn cores are attached. The occipital condyles and most of the sphenoid area are missing, as are the nasals and premaxillae. Slight gnawing damage is evident on the front of the maxillae and there are no surviving teeth. Vertical incisions are visible on the front of the right maxilla and on the left frontal, located just posterior to frontal sinus.</p>	 <p>Cow Dorsal View</p> <p>Cow Basal View</p> <p>Cow Left Side</p> <p>Cow Right Side</p>
<p>Cattle skull 3 This consists only of the top of the skull, including both sides of the frontals and parietals. The brain case is exposed and the back of the skull, horn cores and maxillae are not present. There is no evidence of gnawing but there are a number of fine incisions on the right frontal both in front of, and on the lateral aspect of, the frontal sinus.</p>	 <p>Cow Dorsal View</p> <p>Cow Basal View</p> <p>Cow Left Side</p> <p>Cow Right Side</p>
<p>Cattle skull 4 The surviving areas of this skull include right and left maxillae, frontals and zygomatics, and the left temporal, parietal and horn core base. Most of right side of the skull therefore is missing and there is evidence of gnawing along the edge of the right frontal. There is no occipital or sphenoid bones and the brain case is exposed. No teeth survive in either maxilla, which also bear evidence of slight gnawing. Four fine incisions are visible on the top of the left frontal. The raised central area of the frontal has a shiny polished surface appearance, probably resulting from abrasion.</p>	 <p>Cow Dorsal View</p> <p>Cow Basal View</p> <p>Cow Left Side</p> <p>Cow Right Side</p>

Figure 4. Description of cattle and horse skulls and maxillae from Battlesbury Bowl Late Bronze Age–Middle Iron Age ditch, context 4101 (shaded areas in diagrams show approximate areas of skulls recovered).

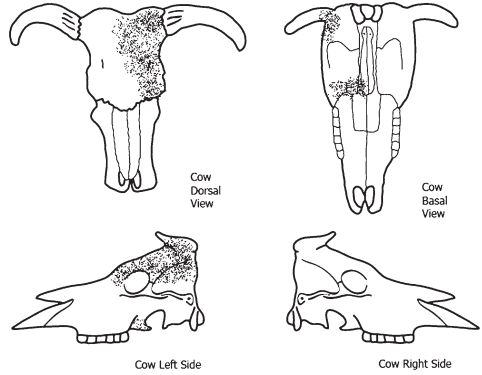
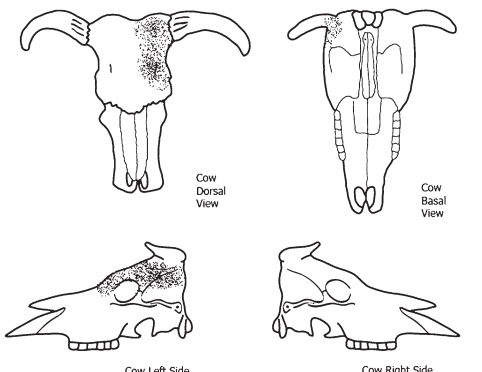
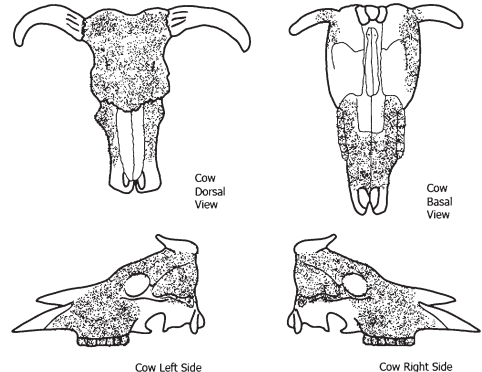
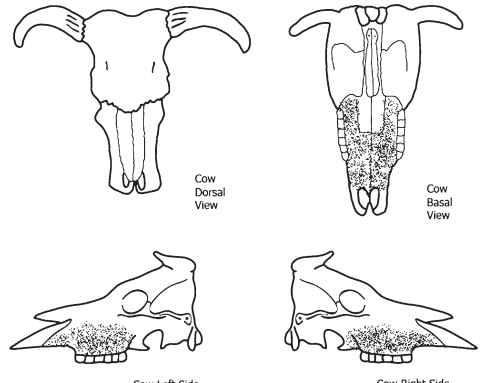
<p>Cattle skull 5 This skull survives in a very fragmented state, with the left parietal, frontal and fragments of the horn core and sphenoid bones the only parts surviving. No butchery or gnawing marks were observed.</p>	 <p>Cow Dorsal View</p> <p>Cow Basal View</p> <p>Cow Left Side</p> <p>Cow Right Side</p>
<p>Cattle skull 6 Only the left parietal and frontal of this specimen survives. There are no horn cores or maxillae and the brain case is exposed. The skull has a slightly shiny, polished surface appearance, perhaps indicative of abrasion.</p>	 <p>Cow Dorsal View</p> <p>Cow Basal View</p> <p>Cow Left Side</p> <p>Cow Right Side</p>
<p>Cattle skull 7 This is a more complete skull with both sides of the temporal, parietal and frontal bones surviving intact along with the right zygomatic. The occipital and sphenoid are missing and the brain case is exposed. The bases of both horn cores survive. Their round cross-section suggests the skull probably belonged to a cow. There are several dark linear marks around the horn cores, which have been interpreted as damage from canid gnawing when the horn sheath was still attached. Both maxillae are present, although the premaxillae are missing. There are some slight gnawing marks on the right maxilla. All the teeth are still in their sockets and are fully erupted and in wear.</p>	 <p>Cow Dorsal View</p> <p>Cow Basal View</p> <p>Cow Left Side</p> <p>Cow Right Side</p>
<p>Cattle maxilla 1 Both sides of the maxilla and the palatine survive intact but there are no teeth in the sockets. There are at least eight horizontal knife cuts above the premolars and two oblique cuts on the right maxilla. There are also some horizontal cuts on the left maxilla. It is possible that this specimen belongs to one of the less complete skulls described above.</p>	 <p>Cow Dorsal View</p> <p>Cow Basal View</p> <p>Cow Left Side</p> <p>Cow Right Side</p>

Figure 4. (cont.)

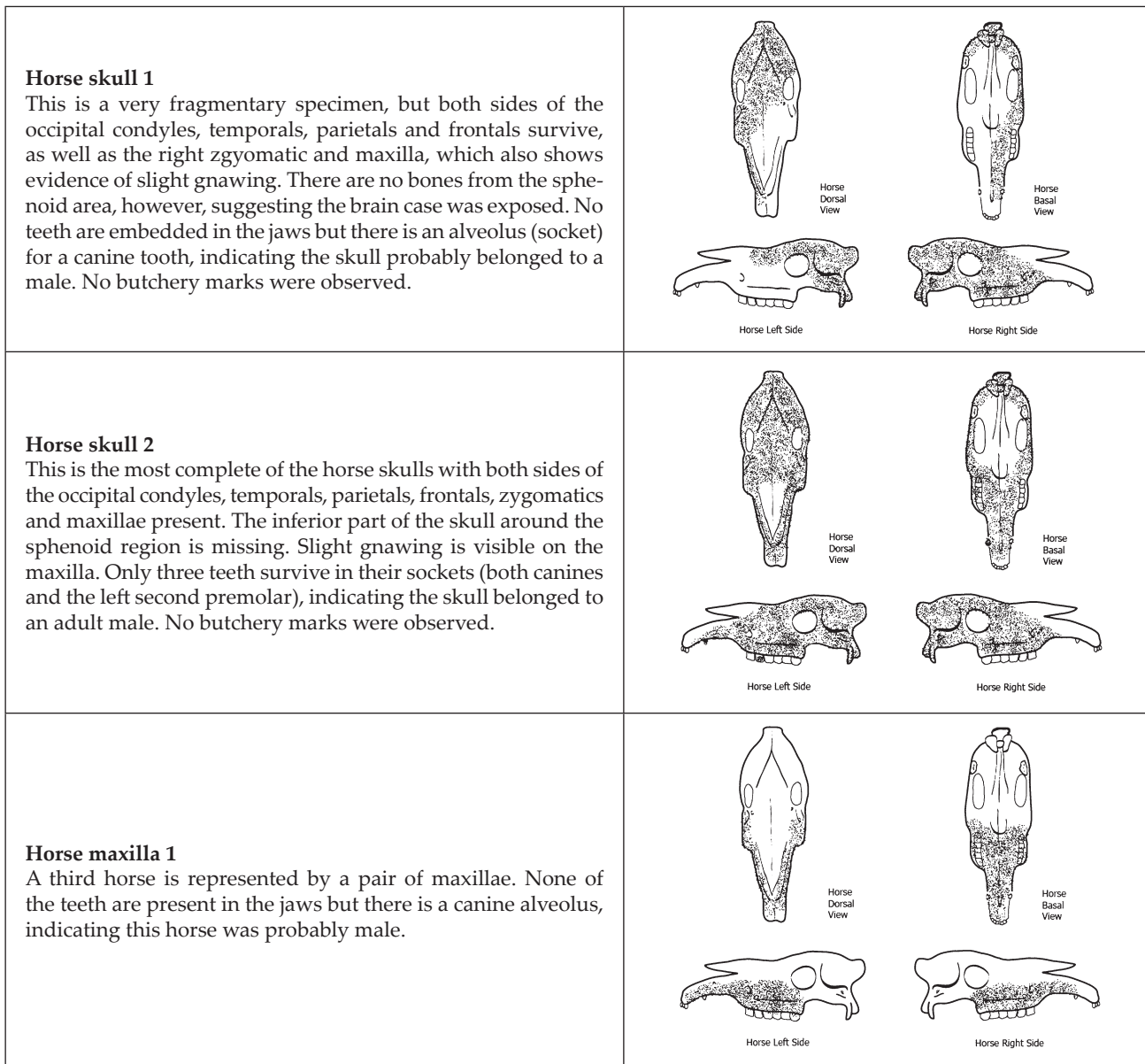


Figure 4. (cont.)

corresponding loose teeth recovered from the context. Both loose teeth and those within jaws preserve well on this site, and the quality of excavation and retrieval was more than adequate to ensure good recovery of loose cattle and horse teeth. Had teeth been dislodged from the skulls during or after their deposition in the ditch, the loose teeth should have been present in the context. We must therefore conclude that the missing teeth were lost prior to the skulls being deposited in the ditch. To account for the tooth loss, there must have been at least sufficient time between death and burial for the soft tissue holding the teeth in place to deteriorate. The time it takes for soft tissue to deteriorate

and for teeth to become dislodged is subject to many variables. For example, differences relating to species or age can affect how securely teeth are held within the jaw, while removal of soft tissue by butchery or boiling could hasten the process of post-mortem tooth loss. Even after soft tissue has gone, teeth can remain in the jaw almost indefinitely if left undisturbed in reasonably stable conditions (as evidenced by intact dry bone specimens of considerable antiquity in museum collections), but movement and handling tends to hasten tooth loss in dry bone specimens (as evidenced by the deterioration of skeletal teaching specimens in regular use!). It is likely that skulls missing their teeth

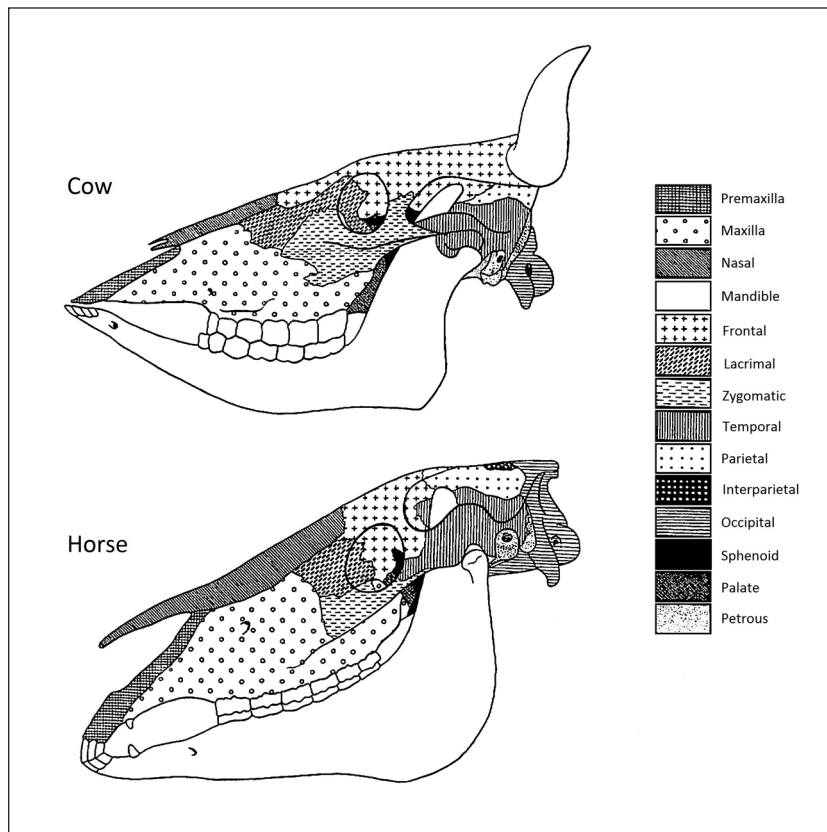


Figure 5. Location of anatomical elements of the skull in cattle (cow) and horse (after Schmid 1972).

must have spent a period of time elsewhere prior to deposition in the ditch, at least in the order of weeks and probably in some cases substantially longer, and that the skulls with teeth present could also have been kept for a considerable length of time elsewhere prior to their eventual deposition in the ditch.

Surface condition

The surface condition of the cranial bone varies. Some skulls have patches of weathering (exfoliation and slight cracking), while others exhibit only minimal degradation of the bone surface. Weathering resulting from sub-aerial exposure causes deterioration of bone, which has been shown to increase in relation to duration of exposure (Behrensmeyer 1978). Behrensmeyer defined incremental stages of weathering, characterized by cracking, exfoliation, splitting and disintegration, and suggested approximate time periods of exposure for each stage. However, there are difficulties in applying this model to the Battlesbury Bowl skulls, since the patterns of cracking and flaking observed do not map exactly onto Behrensmeyer's stage descriptions, and assigning a maximum weathering stage to individual skulls is further hampered

by fragmentation. The presence of gnawing is also problematic in interpreting maximum weathering stage as in some skulls bone degradation is more advanced in the areas where there has also been gnawing damage, but this is not true for all areas of gnawing. Approximate maximum weathering stages observed for some of the larger fragments of skull include stages 0, 1 and 2. Based on modern observations, Behrensmeyer equates these stages to exposure periods of 0–1 years, 0–3 years and 2–6 years since death, respectively, but cautions that the rate of weathering may vary greatly depending on a wide range of environmental variables, such as climate, moisture, shade, fluctuations in temperature, and localized microclimatic differences in exposure (Behrensmeyer 1978). In archaeological assemblages the relation of weathering stages to actual time in years is obscured by many taphonomic variables influencing rate of bone deterioration (Lyman 1994, 374). Thus the observed differences in levels of weathering could indicate that some

of the Battlesbury skulls were exposed for different lengths of time prior to burial, or were subject to different levels of shelter or other environmental conditions, but no firm conclusion can be drawn for individual skulls concerning time frames between death and burial, or location of exposure.

Degree of weathering also differs between areas on the same skull. For example, it was possible to observe on the more intact skulls that the overall condition of bone was typically better on the undersides than on the uppermost (frontal) surfaces. These localized variations in weathering have potential to inform about the formation history of the assemblage, since greater weathering tends to occur on the uppermost (exposed) surfaces of bones than on the surface in contact with the ground (Behrensmeyer 1978, 153; Lyman 1994, 375). The localized variation in weathering observed on some of the skulls matches their orientation within the ditch, which would be consistent with at least some sub-aerial weathering having occurred in the ditch while these skulls remained exposed for a period before being covered over by subsequent ditch fills. However, not all skulls were equally weathered or showed difference of exposure



Figure 6. Cattle skull displaying clustered cut marks on frontal area (detail left), from the Late Bronze Age–Middle Iron Age ditch at Battlesbury Bowl.

between upper and lower surfaces, so it is possible that the weathering may reflect a pattern of exposure that occurred prior to their disposal together in the ditch, or that local variations in the microenvironment of the ditch afforded some skulls better protection from exposure than others.

Two of the cattle skulls exhibited areas of surface polish. This smooth glossy finish is characteristic of physical abrasion, the causes of which are various but most commonly linked to surface exposure (Madgwick 2010, 69). Trampling might account for surface polish and surface scratches (Lyman 1994, 380–84), but would likely also cause extensive fragmentation, and at least one of the abraded skulls survives relatively intact. The polish on the more complete cattle skull is located on the slightly protruding area of the central frontal with no polish on the surrounding areas of shallower topography. Although no experimental data exists to support this speculation, the observed polish could be explained by repeated physical abrasion skimming the surface without direct heavy force, perhaps by humans and animals repeatedly brushing past, producing the sort of polish that one sees on wooden fence and gate posts where animals have frequently rubbed against them.

Gnawing

Where present, canid gnawing damage on the skulls and maxillae is slight, which could indicate that there was not a lot of fresh meat or soft tissue left on them by the time dogs has access to these remains. The presence of a partially articulated cow forelimb in the same context as the skulls, also only with minor

gnawing damage, suggests that gnawing most probably occurred after deposition in the ditch, but that the bones did not remain of interest or accessible to dogs for very long.

Cut marks

Several of the cattle skulls display fine knife cuts on the frontals and maxillae indicating skinning and defleshing. There are some clusters of multiple incisions (Fig. 6). Repeated marks in the same location could result from inexperienced or over-enthusiastic knife work, or simply be the preferred method of the butcher. Equally, repeated knife cuts could indicate particular care in removing any adhering soft tissue, perhaps more so than would be required during routine skinning and filleting. This careful processing could indicate that skulls may have been cleaned in preparation for display. Not all the skulls show signs of having been butchered; in particular there are no cut marks evident on the horse skulls from the ditch, suggesting not all skulls were treated in exactly the same way prior to burial.

Modification

Another feature of the skulls is their fragmentation. None of the cattle skulls have surviving occipital condyles and several lack the sphenoid bones, meaning the rear, underside of the skulls are missing (Fig. 7). Similarly, the horse skulls do not have the sphenoid (underside) area present. Although the sphenoid is relatively fragile in both cattle and horse, the occipital area is not and the condyles are robust elements which, like the teeth, would most likely have survived and

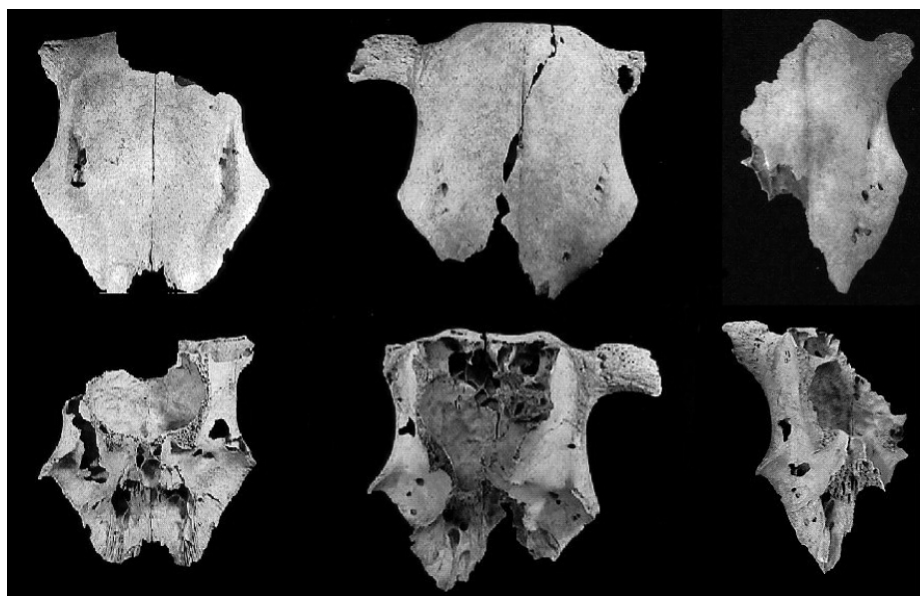


Figure 7. Front and rear views of three of the Battlesbury Bowl skulls from the Late Bronze Age–Middle Iron Age ditch.

been recovered during excavation had this damage occurred in the ditch. The smooth edges of the ancient fractures observed in the occipital and sphenoid regions suggest breakage occurred while the bone was still fresh (Outram 1998, 89). The implication is that not long after death, and prior to their eventual disposal in the ditch, these skulls were deliberately modified in a way that resulted in the brain case being exposed from underneath. The brain may have been removed during preparation of the skulls for display, and/or used for food, or used itself in some other manner, such as the preparation of hides. The cavity left underneath the skull as a result of this modification would comfortably allow a post to be inserted into the base of the skull. Another consequence of removing the occipital condyles of cattle and the sphenoid region of horse is that this allows their skulls to lie flat if mounted on a vertical surface, which is in keeping with the abrasion pattern on at least one of the skulls and the suggestion from the cut mark evidence that some of the skulls may have been carefully prepared for display.

Interpreting the Battlesbury Bowl skulls

Hambleton and Maltby (2004; 2008) drew several conclusions from the above taphonomic observations and interpretations. Substantial parts of at least seven cattle and three horse skulls were deposited in close proximity in the Middle Iron Age ditch. Most of the skulls have post-mortem tooth loss from the maxillae, but the loose teeth were not recovered, suggesting that skulls were left exposed elsewhere for some time before being deposited in the ditch. The different states of preservation of these skulls may reflect different

lengths of time spent exposed prior to burial and/or that they were afforded different levels of protection from the elements and agents of physical abrasion, perhaps in different locations. The skulls had been deliberately modified in a way that exposed the brain case and facilitated mounting or hanging, and several of the skulls may have been carefully cleaned. This combination of taphonomic markers could support the suggestion that these were prepared skulls, which were left exposed for some time, perhaps as objects of display, and may have served as some form of (symbolic) markers before they were finally deposited in the ditch.

The use of the skulls as curated cultural objects of display prior to deposition is by no means the only possible interpretation to be drawn from the detailed observations and taphonomic analysis of this assemblage (see above). The purpose behind the cut marks and other modifications on the skulls is open to debate, as is the nature (deliberate or incidental) of their above-ground collection and curation. Analyses of weathering and abrasion likewise present alternative scenarios of where and for how long skulls were left exposed. This can, of course, be regarded as a ritual deposit based on the unusual accumulation of so many skulls together, all the same way up and apparently deposited in a single event. However, the significance of the taphonomic study is that consideration has been given to the treatment of the skulls prior to their placement in the ditch, and this opens our eyes to the possibility that the major ritual or symbolic use of the skulls was in their display or 'life' prior to burial. Their eventual burial can either be seen as the final act of the ritual process or its abandonment.

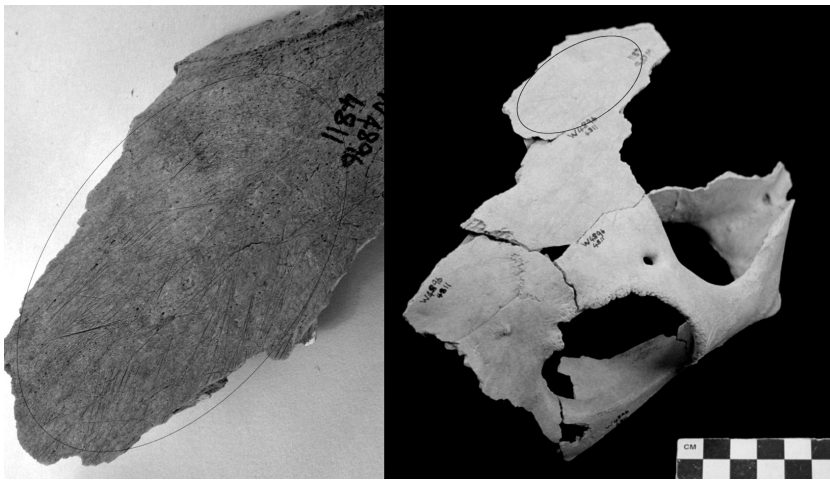


Figure 8. Horse skull fragments displaying multiple cut marks on frontal area (detail left), from a later Middle Iron Age pit at Battlesbury Bowl.

The 'life' of skulls at Battlesbury Bowl and beyond
Hambleton and Maltby (2008) observed that skulls from additional contexts within the Battlesbury Bowl Middle Iron Age ditch shared similarities with the cattle and horse skulls from context 4101 described above. A cattle zygomatic from the layer above the main skull group, and a more complete cattle skull from one of the lower fills of the ditch both displayed multiple fine knife cuts indicating removal of skin and flesh, reminiscent of the butchery and possible cleaning previously described on the other cattle skulls from the ditch. A further similarity is the absence of the occipital area from the cattle skull in the lower ditch fill. There is also a dog skull from the uppermost fill of the ditch with no surviving teeth, which too may not have been immediately deposited in the ditch after death.

There is evidence from Battlesbury Bowl that the skulls in the Middle Iron Age ditch were not the only ones to have been skinned and defleshed: other skulls from around the site may have been cleaned and displayed prior to deposition. Probable examples of cattle skulls treated in this way were found in three pits from the Feature Group 2 area, including one Late Bronze Age/early Middle Iron Age (Phase 1/2) pit, one early/late Middle Iron Age pit (Phase 2/3) and one later Middle Iron Age (Phase 3) pit, plus a fourth pit (Phase 3) from Feature Group 3 further to the north of the site. A portion of horse skull with extensive multiple cut marks (Fig. 8) was also found in a Phase 3 pit located within Feature Group 2. This suggests that the practice was not restricted to a particular phase or indeed a particular area of the site.

There is little doubt that the group of skulls from the Battlesbury Bowl ditch, and from some of the pits, must be regarded as special deposits of some nature. While it may be correct to assign special significance to the acts of selecting and depositing these cattle and

horse skulls below ground in pits and ditches, the evidence suggests the skulls may have had a special significance related to their 'life' as cultural artefacts above ground. After the skulls had been cleaned and their brains removed, they may have hung on walls or posts for some considerable time. They may have been displayed in or around the immediate locality of Battlesbury Camp itself, although their importation from elsewhere cannot be ruled out.

It is important to emphasize that not all the Battlesbury Bowl cattle and horse skulls were treated in the same way. For example, two calf skulls found in a Phase 3 pit from Feature Group 4 at the northern end of the excavation area have evidence of skinning, but not to the extent of defleshing observed on other specimens from the site. These calf skulls appear to have been deposited with their foot bones and are more convincingly interpreted as discarded waste from the skinning process. Several other skulls from pits showed no evidence of having been cleaned, and some bore no evidence of any skinning at all. It is often unclear from the faunal remains themselves whether skulls were deliberately placed in the pits and ditches or more casually discarded into these features (for this we have to rely on the detailed observations in excavation records). In fact, most of the Battlesbury Bowl skulls did *not* show signs of careful and selective deposition, nor did they provide evidence of careful cleaning and display, indicating that only a few of the skulls were afforded special treatment.

What criteria qualified particular skulls for such treatment is also unclear. There is an apparent emphasis on male horses included in the group of skulls from context 4101 in the Battlesbury Bowl ditch, suggesting sex may have been a specific requirement for selection. Cattle skulls were harder to assign to sex, especially in the absence of complete horn cores, and the only sufficiently intact cattle specimen from context 4101

was probably female. This raises the possibility that different selective criteria may have been applied to different species. The cleaned and displayed skulls may have belonged to favoured animals and retained their individual identity after death, or they may have been animals killed on special occasions and therefore chosen to commemorate a specific event. Wilson (1999) suggests a range of different reasons for displaying skulls, citing anthropological examples from a range of cultures. Indeed, one could postulate any number of possible associations with particular individual animals, people or events, or other more general associations with species and communities. The suggestion that there was selection of only a certain (probably very small) proportion of the skulls is interesting in the light of the two hornless cattle skulls (one of which bore cut marks from de-fleshing) found in one of the Phase 3 pits. The unusual nature of these beasts (hornless cattle are rare in the Iron Age) may have been the reason for their selection for special treatment after death.

These results have implications for the analysis of skulls from contemporary sites. Only by careful examination for butchery marks, gnawing damage and other taphonomic indicators has it been possible to demonstrate that the symbolic importance of the skulls extended beyond their deposition. It would be surprising if such treatment of skulls was restricted to Battlesbury: indeed, Wilson (1999, 302) has previously made the case that in the Iron Age, bones, especially skulls, may have been displayed prior to burial, citing as an example a skinned horse skull and mandible found in the entrance terminals of the penannular ditch of a Middle Iron Age round house at Farmoor (Wilson 1979). However, Wilson still focuses much of his discussion of ritual treatment of skulls in the Iron Age on the issue of their final deposition. The significance of the Battlesbury Bowl skulls prior to burial may also have parallels in the probable curation and careful treatment of skulls observed on earlier prehistoric sites. From the Early Neolithic ditch at Windmill Hill, the frontal area of an ox skull was recovered, bearing multiple cutmarks similar to those observed on skulls at Battlesbury Bowl (Grigson 1999, 205). The practice of accumulating large numbers of curated skulls for placement and display has been evidenced on a Beaker burial mound at Irthlingborough, Northamptonshire (Davis & Payne 1993). A re-examination of skulls from other Iron Age assemblages may therefore be revealing. For instance, at Harrow Hill, Sussex, an accumulation of cattle skulls was recorded by the excavator of an early Iron Age enclosure (Holleyman 1937), but in keeping with the times, no detailed taphonomic analysis was undertaken.

Iron Age rituals: special deposit, or special deposit?

In previous studies of Iron Age ritual behaviour, particularly in relation to animal bones, there is an emphasis on the *deposition* aspect of so-called special deposits (e.g. Grant 1984b; Cunliffe 1995; Hill 1995; Wait 1985, 122–53). With Iron Age special deposits in pits, for example, discussion and debate has revolved around two major themes: the significance of the *pit* as a receptacle (e.g. Wait 1985, 152; Cunliffe 1992), and the *placement* or spatial arrangement and combination of objects within the pit (e.g. Cunliffe 1992; Hill 1995; Poole 2000). Given that archaeological data are drawn from excavations, it is unsurprising that interpretations of special deposits have focused on their location and arrangement in archaeological contexts. The archaeologist finds and experiences these objects in the ground; recovered from the bottom of pits, in ditches, graves and other negative features. Furthermore, the nature of the archaeological excavation and recording process is such that the location and spatial arrangement of such deposits is given a great deal of consideration.

As Thomas (1996, 62) notes, ‘One aspect of archaeological analysis must therefore be the struggle to recognise the difference implicit in the artefact in the face of the tendency to recognise it as something familiar’. In the case of the Battlesbury skulls, then, we must struggle to look beyond what we recognize as familiar (i.e. a deposit set apart as special at the point of archaeological recovery based on its similarities in composition, arrangement and location to previously reported structured deposits). We must consider the differences in the skulls that point us towards an alternative, less familiar interpretation where it is the skulls themselves that were perceived and treated as special objects long before they became incorporated in a deposit. An important point is raised in this article about the potential for animal remains to have their own significance and dynamic history of cultural reference and ritual treatment in the period after death and prior to their eventual deposition. It is clearly time for us to look up, above and beyond practices of deposition, and to give equal consideration to investigating the nature and variety of ritual activities that took place above ground in the past.

The Battlesbury Bowl case study has served to highlight a gap in our understanding of human-animal interactions in later prehistoric Britain. It is precisely in this liminal period between death and burial where the discipline has been remiss in exploring the full range of possible meanings and social and cultural significances of animals and their remains and the potential ritual activities associated with them.

Zooarchaeological studies (e.g. Grant 1981; Green 1992; Moore-Colyer 1994) have frequently discussed evidence that people's interactions with *living animals* had a ritual component and that during life, animals had multiple significances to Iron Age communities that were economic, social, symbolic, or a combination of any or all of these. Similarly, archaeological evidence for the symbolic, economic and social significance of animals and associated ritual activities has been discussed in relation to the *deposition* of Iron Age animal remains (e.g. Cunliffe 1992; Hill 1995; Wilson 1999; Randall 2010; Morris 2011). In the case of the Battlesbury Bowl skulls we have the opportunity to consider the actions of people and their treatment of animal remains prior to deposition. In dealing with the transition between the death of an animal and the deposition of its remains, we can speculate many changes in meaning and identity, with parts of the animal taking on roles as commodities for consumption, economic, political or social currency, and as objects of functional and/or symbolic importance. Previously, discussion of human treatment and modification of animal remains after death and before deposition has been largely restricted to issues of consumption, such as carcass processing, butchery and food preparation. The social and symbolic role of carcass processing and consumption has been discussed in terms of food sharing or feasting (e.g. Knight 2003; Ralph 2005), or sacrificial forfeit of whole or partial carcasses (Grant 1984b; Hill 1995, 102) but such studies only consider the treatment of faunal remains as a by-product of the ritual consumption of animals. This article calls for greater exploration of the potential alternative role of animal bones as cultural objects imbued with identity and symbolism in their own right.

Conclusions

This study places the emphasis on identifying and explaining what is special about the faunal remains themselves in the details of their treatment and selection, rather than assuming the special quality of faunal remains is restricted to the nature and location of their final deposition or the inherent symbolic or economic value of the species represented. The detailed analysis of the Battlesbury Bowl skulls shows us that some (but not all) skulls may have had a 'life' as objects of display (Hambleton & Maltby 2008). It is proposed that the skulls had a significance and meaning of their own, prior to burial, and that these skulls and other similar faunal deposits are not necessarily simply (or solely) propitiatory votive offerings (*contra* Cunliffe 1992). Several of the Battlesbury Bowl skulls may

well have had a role of equal, if not greater, cultural importance in ritual events at and above ground level. Rather than the deposition being the 'main event', it may simply have been the final closing stage of a series of events in which the skulls held some special significance. This example forces us to consider what makes an object special and shows that there is a need to consider more carefully how we define special animal deposits and not assume, for example, that all skulls are ritual deposits simply because they are skulls or simply because they are deposited together in the same context. With reference to faunal remains, there is a need to move beyond assigning generalized, meta-level labels of ritual and instead to gain a more detailed understanding of the activities and reasons behind individual deposits. For faunal assemblages, one way to achieve this is by taking a biographical approach to the analysis and interpretation of animal remains, exploring the details of the 'life' of an animal's remains after its death

Acknowledgements

I would like to acknowledge the considerable contribution of Mark Maltby to this research, including collaboration on the original zooarchaeological analysis of the Battlesbury Bowl remains for Wessex Archaeology and his subsequent encouragement and insightful comments on earlier drafts of this paper.

Thanks are also due to: James Morris and Clare Randall for including this research in their Theoretical Archaeology Group conference session, Southampton 2008, and encouraging publication; Rachel Pope and two anonymous reviewers for commenting on this paper and suggesting improvements; Mark Dover for his assistance with preparation of all figures; Zoe Barass for assistance with images for Figure 4; Wessex Archaeology for providing the original images and illustrations for Figures 1, 2 and 3; Devizes Museum for facilitating access to Battlesbury Bowl faunal remains for additional photographs.

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