Upwards at 45 degrees: the use of vertical caves during the Neolithic and Early Bronze Age on Mendip, Somerset.

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Jodie Lewis, Department of Archaeology, University of Bristol, 43 Woodland Road, Bristol. BS8 1UU.

jodie.lewis@worc.ac.uk

Abstract.

The Mendip Hills in Somerset contain geological features known locally as swallets, vertical 'shafts' in the limestone, usually formed by dissolutional activity. In recent years, excavations by cavers have revealed a range of archaeological material placed inside them. The materials are generally of prehistoric date, and seem to indicate a climax of deposition in the Late Neolithic/Early Bronze Age. Using the evidence from two sites, Charterhouse Warren Farm Swallet and Brimble Pit Swallet, it is argued that swallets were being used for deliberate ritual deposition during these periods. A link between swallets and monuments is also made, both in terms of the material placed within them and their spatial relationship in the landscape. The possibility of the chthonic 'cults' of the Iron Age and Roman periods having a much earlier origin is also considered.

Keywords - Mendip, Neolithic, Bronze Age, swallets, deposition, ritual, monuments.

Introduction

The Mendip Hills lie in the northern part of the county of Somerset in southwest England (see Figures 1 and 2).

Figure 1. Location of the Mendip Hills, redrawn by A. Chamberlain from original drawings supplied by the author.

Figure 2. Location of sites, redrawn by A. Chamberlain from original drawings supplied by the author.

To the north they are flanked by gentle undulating land and to the south by the Somerset Levels. The Mendip Hills are largely composed of Carboniferous Limestone and stretch for approximately 56 kilometres from Brean Down in the west to Frome in the east. The central plateau also cuts across Old Red Sandstone, Dolomitic Conglomerate, Lower Lias and Rhaetic beds (Findlay 1965). This plateau averages 8-10 kilometres in width, the highest points being rounded uplands of Old Red Sandstone, attaining heights of 325m OD. Much of the plateau undulates at around 250 - 260m, however. This plateau is cut into along its edges by steep sided coombes and gorges such as Cheddar Gorge and Burrington Coombe and has been heavily utilised for mineral extraction since the Roman period at least. Mendip is a karst landscape and shares the common karst characteristics of a wide range of closed surface depressions, a well-developed underground drainage system and a paucity of surface streams. (GCRIO 2000). However Mendip is a much older karst landscape than the limestone landscapes of the North of England and differs from them in that it has not been recently glaciated and lacks a covering of till (Waltham et al. 1997).

Archaeologically, Mendip is perhaps most famous for its Palaeolithic deposits in caves such as Soldier's Hole and Gough's Cave. Studies of the region during the Neolithic and Bronze Age have tended to see the area as a peripheral part of Wessex, the 'poor neighbour' on the western fringes. Yet recent work shows that Mendip has a rich monumental record, including both megalithic and non-megalithic long barrows, henges, standing stones and round barrows (Lewis forthcoming). Large flint scatters have been discovered over much of the western plateau and the region is rich in axehead finds (Lewis forthcoming). The newly accumulated evidence suggests that Mendip should not be viewed as a sparsely populated, marginal area during the Neolithic and Early Bronze Age.

Mendip also has at least fourteen caves containing material of Neolithic-Bronze Age date. These deposits include human bone, flint, axeheads, pottery, animal bone and bone tools. Many more contain material such as human bone and pottery that cannot be confidently dated but may well belong to these periods. Yet it is not the caves that are the focus of this discussion but features known locally as swallets, defined below. Indeed, it is the swallets that are amongst Mendip's most distinctive features, forming an interesting and unusual landscape.

Swallets: Formation and Description

Swallets are a local name for the closed depressions that are one of the most common karstic features (Taylor 1998). These closed depressions are also known as dolines and sinkholes, though all of these terms have a genetic meaning. This article will refer to closed depressions as swallets, as this is the term by which all features of this type are locally known. However, it should be appreciated that the term "swallet" in this context does not imply uniformity of geological formation.

Swallets occur in their thousands over the Mendip plateau (Figure 3). Upon excavation, many have revealed themselves as vertical shafts in the limestone. It is important to distinguish those closed depressions that are man-made from those that are natural. The man-made examples are a result of mining and quarrying and are usually distinguishable by their irregular form and the presence of spoil around them. Once these are discounted, it is probable that the remaining examples are all natural.

Figure 3. Cuckoo Cleeves: a typical Mendip swallet, photograph by the author.

Swallets are formed by dissolutional activity and sometimes, very rarely, by ground collapse into an underlying cave system (Barrington & Stanton 1977: 222-223). Many swallets occur at the junction of the impermeable Old Red Sandstone and the free-draining limestone; water enters cracks & fissures in the limestone that become enlarged and form swallets. They also form in valley floors, dry valleys and where clay caps the limestone (Barrington & Stanton 1977: 222). In the latter case, water will find leakage points in the clay, eventually causing a depression in the limestone into which the clay slumps. Swallets develop and deepen during warm interglacials but in ice ages they become filled and obliterated (Barrington & Stanton

Figure 4. Ubley Warren: a swallet filled with rubbish, photograph by the author.

Figure 5. Castle Farm Swallet: a swallet converted into a decorative garden feature! Photograph by the author.

1977: 222). However, Mendip itself has never been overrun by ice. Swallets range indiameter from a few metres across to nearly 30 metres. It is difficult to gauge their true depth from surface observation as they become naturally infilled and can appear as shallow depressions, only a few metres or less in depth. Unfortunately, many have also been deliberately filled and levelled, a convenient dump for rusting farm machinery, cars, fridges and, undoubtedly, the ubiquitous shopping trolley (Figure 4). Castle Farm Swallet has even been made into a garden feature (Figure 5). Nonetheless, excavation has shown that swallets can attain depths of at least 20 metres (Levitan et al.. 1988).

This paper will argue that swallets were a distinctive feature of the Mendip landscape during the Neolithic and Bronze Ages and that some were used in very particular ways. Two sites will be discussed here: Charterhouse Warren Farm Swallet and Brimble Pit Swallet.

Charterhouse Warren Farm Swallet

Charterhouse Warren Farm Swallet was excavated between 1972-6 and 1983-6, by the University of Bristol Spelaeological Society (Everton 1974, Everton 1975, Everton & Everton 1977, Levitan et al. 1988). Though originally excavated as part for cave exploration, the discovery of human bones led to archaeological advice being sought. The published report of the work considers exploration, geomorphology, taphonomy *and* archaeology (Levitan et al. 1988).

The swallet is on the west side of a dry valley feeding into Velvet Bottom (Levitan et al. 1988: 172). It was necessary to shore the swallet (known as the Entrance Shaft) as it eventually proved to be 21m deep. In the early Neolithic the shaft would have been open from top to bottom. A side passage was also encountered near the top of the shaft, opening

into a series of chambers, though there is little evidence that these were accessed in prehistory. This whole complex was found to form part of a major system directing water from Black Down to the resurgences at Cheddar (Levitan et al. 1988: 199).

The stratigraphy of the Entrance Shaft (Figures 6 and 7) was not recorded in great detail but the fill *was* divided into two main zones: the upper 6m (subdivided into three horizons) and the lower 15m (subdivided into four horizons).

Description of Archaeological Zones and Horizons at Charterhouse Warren Farm Swallet

ZONE 1

Horizons a - c (0 to -6m): Poorly recorded but known to have contained pottery and the remains of at least 28 individuals of Iron Age and Romano-British date. It should be noted that these remains were recovered in the original area of excavation (to the north of the shoring line); it is uncertain whether the remains extended to the south of the shoring line as there are no records of the excavation of the top 6m (Levitan et al. 1988: 200).

ZONE 2

Horizon 1 (-6 to -14.9m). Largely composed of clean-washed boulders. Again, poorly recorded, although auroch bones at a depth of -11m were noted. These have been dated, providing a date in the range of 1620 - 1430 cal BC. The horncore shows evidence of butchery (Everton 1975).

Horizon 2 (-14.9 to -15.6m). A heavy clay layer, giving way to a stony layer, containing human and animal bone. The human bone was disarticulated and many bones had cut marks near their articulation points. A Beaker vessel, complete up to its neck, and 2 sherds of another Beaker were found at a depth of -15.47m. It would seem that the Beaker was placed upon on a 'ledge'. The upper part of the Beaker was destroyed by the shoring of the shaft.

Horizon 3 (-15.6m to -20.05m). Composed of more clean washed stones and clay bands. At depths of -17.7m and -19.4m cattle bones were recovered. At -18.8m, two sherds of pottery, probably Grooved Ware, were found.

Horizon 4 (-20.05m to -20.79m). Clean washed stones giving way to a clay layer. Juvenile human bones were recovered, along with animal bones, five ‘sponge finger’ stones, a highly polished black pebble, two hammer stones, a bone pin, an antler spatula, a flint dagger and eighteen other flint implements.

Comment on Charterhouse Warren Farm Swallet

The archaeological material poses many interesting questions, the most obvious being how did it get there? If the material derived accidentally (e.g. by erosion or other taphonomic processes) the artefacts and bone would be abraded in some manner and they are not. If the swallet was used as a rubbish pit, the artefacts would show evidence of a 20m drop, most especially the complete beaker vessel. Yet they do not. The conclusion reached by Levitan et al.., supported here, is that the material represents deliberate human emplacement. Interestingly, the archaeological deposits in Horizon 2 and those in Horizon 4 are

typologically of a similar age, yet separated by c.5m of stony deposit (Horizon 3). If such materials were to accumulate naturally, a considerable timespan is implied. Stanton (1989) examined the stone boulders that make up the deposit and argued that these are not boulders that have derived from the sides of the swallet nor did they come from the surrounding field. Rather, he argued, the stones had been collected from elsewhere and deliberately placed in the swallet, sealing Horizon 4. This would also negate the need for a long period to have passed whilst the stones 'naturally' accumulated and explain the apparent similarity in age of the artefacts in Horizons 4 and 2. Dating of material from Horizons 4 and 2 confirmed Stanton's argument showing them to be of similar dates: a human scapula from Horizon 2 produced a date in the range of 2460-2240 cal BC whilst a human femur from Horizon 4 produced a date in the range of 2460-1995 cal BC (Levitan & Smart 1989: 391). As Stanton argued, stones were being collected from elsewhere and used to separate the lower deposits in Zone 2 of the Entrance Shaft. Why this might have happened shall be returned to after discussion of a second site, Brimble Pit Swallet.

Brimble Pit Swallet

Brimble Pit Swallet lies in a closed basin, near the southern flank of Mendip. Such closed basins on Mendip represent former Pleistocene lakes (W.Stanton, pers. comm.). The swallet was excavated by William Stanton between 1991 & 1992 for spelaeological purposes. However, archaeological material was discovered, leading Stanton to separate the deposits he was removing and examine them for archaeological material. As at Charterhouse Warren Farm Swallet, this was not an archaeological excavation so there are no exact details on stratigraphy and context. However, enough information was provided to know approximately from where in the sequence material was recovered and this data is currently being analysed by the author (Lewis et al. forthcoming).

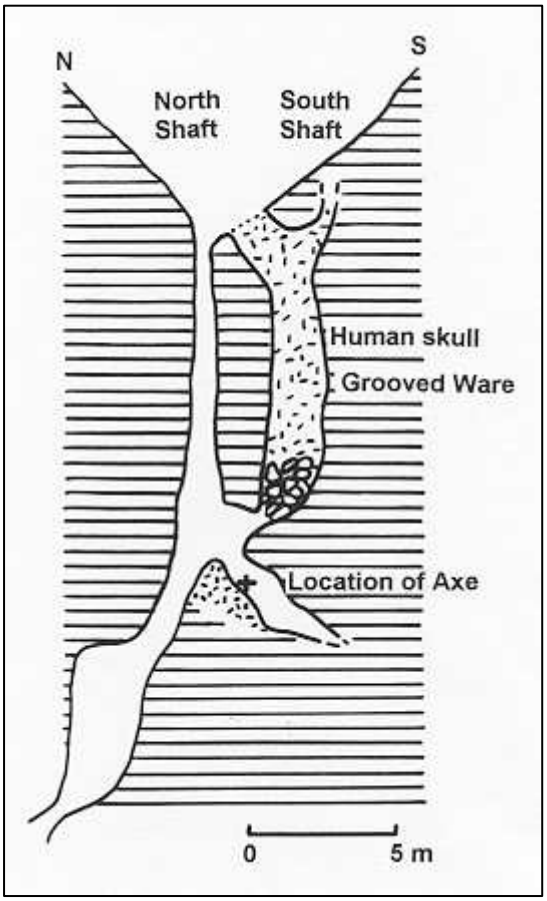

Figure 8. Schematic cross-section of Brimble Pit Swallet, redrawn by A. Chamberlain from original drawings supplied by the author

Brimble Pit Swallet was found to contain two entrance shafts: the northern and southern shafts (Figure 8). The *northern shaft* had been previously excavated in 1957, but there are no records of the discovery of archaeological material. However, a re-exploration by Stanton saw the recovery of a polished greenstone axehead, in perfect condition (Figures 9 and 10). There is little to suggest this object was ever used for practical purposes (Mullin 1998)

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Figure 9. Neolithic polished stone axe from Brimble Pit Swallet, photograph by David Mullin.

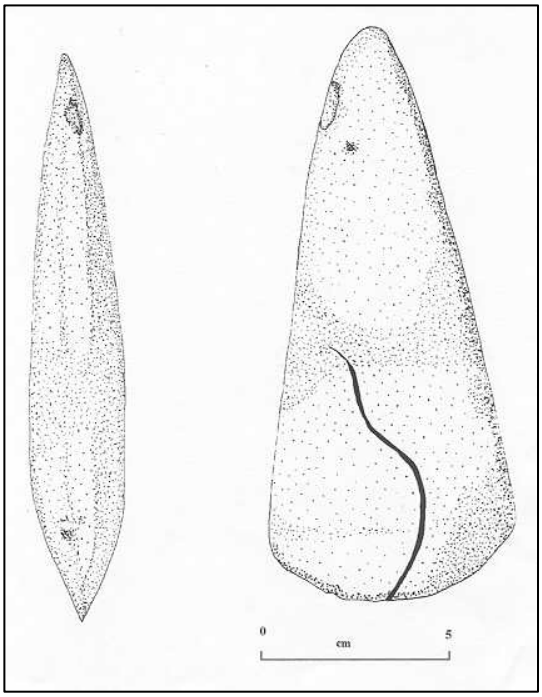

Figure 10. Polished stone axe from Brimble Pit Swallet, drawing by David Mullin.

The *southern shaft* (Figure 11 below) was excavated by Stanton to a depth of -8 metres and found to contain over 200 pieces of flint, animal bones showing evidence of butchery, human bone and 42 sherds of Grooved Ware pottery. The analysis of the site is still underway (Lewis et al. forthcoming) but it would appear that this is another example of a swallet being used as a receptacle for deliberate deposition. It is possible to make preliminary statements about some of the material.

Figure 11. Entrance to Brimble Pit Swallet, photograph by the author.

Description of Archaeological Material from Brimble Pit Swallet

The Pottery

The 42 sherds of Grooved Ware pottery are extremely important to analyses of the Neolithic of Somerset as it is the largest assemblage yet recovered. It would appear two vessels are represented, with one showing a combination of Clacton and Durrington Walls substyles (Lewis et al. forthcoming). This is very rare and will be discussed in the forthcoming article on Brimble Pit Swallet by the author. Although the vessels are not complete the edges of the sherds are very fresh and the surfaces are unabraded. This suggests that they were actually deposited in the swallet, rather than arriving there by weathering or other natural processes. Grooved Ware is often found in special or 'ritual' contexts (Cleal & McSween 1999). Indeed, at Charterhouse Warren Farm Swallet, two sherds of Grooved Ware were found in Horizon 3.

The Human Bone

The human bone is comprised of an adult skull, probably male, and several small fragments of rib and radius (K. Robson Brown pers. comm.). The skull is not complete, most obviously missing mandibular bone. Lord suggests that the skull was placed in the swallet **after** the decay of the tissue attaching the mandible to the cranium, implying prior curation and storage of the corpse (Tom Lord pers. comm.). This also suggests deliberate selection of body parts for deposition as no other human material was present in the swallet and recovery rates of even small fragments of material was very high.

The Axehead

The polished axehead is from the northern shaft, whereas the rest of the material is from the southern shaft. However, more material may have existed in the northern shaft but was not noticed or recorded during the 1957 excavation. The axehead appears to be of polished greenstone and is in perfect condition, showing no evidence of either being used or of damage resulting from being thrown down a 10m deep, narrow, rocky shaft.

The Stones

As at Charterhouse Warren Farm Swallet, Brimble Pit Swallet was found to contain non-local stones; stones **not** derived from the sides of the swallet or from the surrounding field (Lewis et al. forthcoming).

The Flint and Animal Bone

The flint and animal bone from the site are the subject of special reports, not yet complete. However, it is possible to make some preliminary comments.

Two hundred and ten pieces of flint were recovered. The retouched component comprised a barbed and tanged arrowhead, a petit tranchet derivative arrowhead and four retouched flakes, all of which might indicate a Late Neolithic - Early Bronze Age date. Breadth:length ratio analysis has also been carried out on the complete flakes and it has been found that 56% have ratios over 4:5, conforming quite well with the ratios found at the West Kennet Avenue (Smith 1965: 90) and the Late Neolithic Grimes Graves 1971 shaft (Saville 1981: 44).

The following species are represented by the animal bone assemblage: domestic dog, domestic pig, domestic sheep or goat, domestic cattle, aurochs and red deer (Tom Lord pers. comm.). Some of these bones show evidence of butchery and evidence of carnivore damage to the bones is slight. The animal bones are still in the process of being analysed by Tom Lord and the above represent the first preliminary comments.

Comment on Brimble Pit Swallet

The combined evidence from Brimble Pit Swallet - the unabraded pottery sherds, the special nature of the pottery, the pristine axehead, the selection of human body parts and the presence of non-local stones - would once again indicate ‘special’ deposition in a ‘special’ place. It is uncertain at Brimble Pit Swallet if the stone boulders were dumped between artefact rich horizons, as at Charterhouse Warren Farm Swallet, but it is a distinct possibility. The similarities between the two sites are unavoidable: **both** contained human and animal bone, **both** contained Grooved Ware pottery sherds, **both** contained fine flint and stone artefacts and **both** contained non-local stones. It is necessary to explore what the significance of swallets might have been in the Late Neolithic and Early Bronze Age periods on Mendip.

Discussion

The geological make-up of Mendip has led to the formation of a landscape unique in southern England. It is a landscape very different from the neighbouring chalk, containing gorges and combes, caves and swallets. This is a landscape full of special and somewhat mysterious

places. Ritual activity is documented through monuments and also through deposition in some of these 'special places', caves and swallets.

It is difficult to imagine how prehistoric populations would have explained swallets. Not only can they open virtually overnight but many make very strange noises due to water percolation - gurgling, rumbling and echoing. They could not be entered easily. Whereas caves tend to involve a horizontal descent into their depths, swallets have to be entered vertically, probably aided by ropes and ladders. Descending a swallet is truly an entering of the earth, undoubtedly a somewhat unusual experience. Some of the deposits in swallets represent a deliberate emplacement, deliberate intent on the part of prehistoric populations to access these places. The artefacts deposited show no sign of the damage that would have occurred if they had been simply thrown in.

The materials placed in the swallets are significant - human bone, fine artefacts and animal bone. These are types of material that occur in differing combinations in other contexts, such as mortuary monuments, henges and pits. The inclusion of non-local stone boulders is also of interest. It is important to consider where the stone was coming from, as, on Mendip thin soils with readily available stones only occur in limited areas (Stanton 1989). If the stones were uncovered during agricultural activities (clearing land/ploughing) and regarded as 'rubbish', why go to the trouble of carrying them to a distant hole to dispose of them? Stanton (1989) argues it would have made more sense to place them in field corners or along their boundaries if disposal was the only intention. He sees their incorporation into swallets as connected with religious practices rather than agriculture (Stanton 1989: 397). Perhaps depositing these stones in swallets was a way of symbolically returning them to the earth from which they had been taken. There is no record of such stones being found in caves, suggesting that swallets were being utilised in rituals separate from those that might have taken place in caves. It is possible that all the materials placed within the swallets were ‘offerings’, acts of appeasement to mythical gods or ancestors to counteract the necessary removal of things from the earth (stones/crops/timber). In this way, swallets on Mendip could have been fulfilling a very specific function.

Several interesting links may also be made between Mendip monuments and swallets. Stanton noted that a round barrow 1,100m east of Charterhouse Warren Farm Swallet appeared to be formed mainly of stones like those in the Entrance Shaft (Stanton 1989: 397). Research by the author (Lewis forthcoming) shows that many of the round barrows on Mendip contain stone boulders in at least part of their makeup; barrows may be formed entirely of stone, or contain a primary cairn with a turf capping or be earthen mounds with simple stone kerbs. Excavations over the last two hundred years have yielded little evidence of ditches surrounding barrows, suggesting the mound material was derived from elsewhere. The similarities between certain round barrows and certain swallets are intriguing, with both containing human remains and ‘collected’ stones. However, whilst most of the excavated round barrows seem to contain cremations or occasionally, complete inhumations, the human remains within swallets are disarticulated. In the case of Charterhouse Warren Farm Swallet, the human remains even showed cutmarks near their articulation points. Such practices seem more reminiscent of Early Neolithic burial practices than Early Bronze Age ones, a point also noted by Levitan et al. (1988: 233). Yet it may be that the same ranges of materials were being employed in different ways for different rituals; those in swallets concerned with appeasing gods/ancestors and those in round barrows concerned with living/dead individuals. Alternatively, we may be witnessing the exact time of the transition from one type of burial

practice to another, with the manipulation of disarticulated remains gradually becoming obsolete as burial/cremation of complete individuals takes over.

Recently, Tilley has argued how the round barrows of the South Dorset Ridgeway may, in certain ways, be emulating the dolines that occur along the chalk ridgeway (Tilley 1999). In this light it is noteworthy that Mendip has one of the highest concentrations of round barrows in England, comparable to the large nucleations at Avebury, Stonehenge and the South Dorset Ridgeway (Grinsell 1971, Lewis 1996). Most of Mendip's round barrows are clustered on the West Mendip plateau and explanations for this have traditionally focused on the suitability of the area for transhumance; the barrows guarding and perhaps staking a claim to this territory. Yet it is the plateau that also has the highest concentration of swallets on Mendip. At present it appears almost impossible to speculate on the spatial relationship between the two, as swallets occur both accompanied and unaccompanied by round barrows and it is very difficult to be sure whether those close to barrows pre- or post-date the monuments. However, it may yet prove possible to establish links between the two, as this discussion hopefully demonstrates.

This discussion of monuments and swallets on Mendip must finish with the Priddy Circles. These are four very large circular enclosures in a line, probably henge-type enclosures of Neolithic date, located centrally on the West Mendip plateau. The land on which they sit is riddled with holes, long assumed to be mine workings. This assumption probably dates back to at least the early 19th century when the Circles were ‘re-discovered’ by the local antiquarian the Rev. John Skinner, accompanied by Sir Richard Colt-Hoare. Skinner described the hollows as mining and indeed explained all the Mendip swallets in such terms (Skinner 1819). However, a close examination and survey of the hollows by Stanton has shown that in fact nearly *all* are natural swallets and not mine workings (Stanton 1986). Stanton was also able to demonstrate that most of the swallets are of considerable antiquity, being older than the Circles. This has astounding implications as it suggests that the Priddy Circles were constructed in an area with one of the highest concentrations of swallets on Mendip. Why would this be so if the swallets did not have some ‘special’ significance? It is suggested here that the Circles were located where they are **precisely** because of the high density of swallets, the artificial monuments drawing on the associations of a natural 'ritual' landscape. It seems very likely that the swallets would have been employed in rituals taking place within the circles, possibly used for ‘hidden’ ceremonies and/or deposition of artefacts. Certainly, the excavation of swallets within the Circles could well yield very interesting results.

Conclusion

This paper has shown that certain swallets were used for rituals involving the deposition of human remains during the Late Neolithic/Early Bronze Age on Mendip. Other artefacts were also deposited, including animal bone, flint, stone and bone tools and deliberately incorporated stone boulders. The range of materials and the nature of deposition is best paralleled in Neolithic and Early Bronze Age monuments and links between swallets and monuments certainly seem likely. Significantly, it is argued that whilst caves and swallets are thought of as similar geological features today, in prehistory they may have been utilised in different ways. Swallets are natural monuments in the Mendip landscape and appear to have had a very special meaning to prehistoric populations.

The evidence from Mendip may fit into a wider, national, picture of structured deposition within vertical shafts, as evidenced by material recovered from the Ryedale Windypits (Hayes 1987) and other sites. At Slip Gill Windypit a complete Handled Beaker was found on a ledge 20m down a vertical cave and appears to have been deliberately placed there (Hayes 1987). The shaft also contained fragments of two human skulls and animal bones. Human skulls, Beaker pottery and flint tools have also recovered from Antofts, Buckland's and Ashberry Windypits (Hayes 1987). On the chalk of Cranborne Chase, material appears to have been deliberately placed within natural shafts, as at Fir Tree Field, Down Farm (Green 1994). Here Beaker material was recovered from the upper layers of a natural shaft at least 7m deep. Peterborough Ware, polished flint axes and other lithic material was also recovered from lower down the shaft which appears to have been open since the Early Neolithic.

Indeed, it is tempting to link these natural shafts with the construction of artificial shafts. The sinking of artificial shafts is known throughout England and mainland Europe during the Iron Age and Roman periods and these have been interpreted as a means of access to the beings of the underworld (Ashbee et al. 1989: 150). The excavation of Wilsford Shaft, Normanton Down, Wiltshire revealed that the sinking of shafts may well originate in the Early Bronze Age. At Wilsford Shaft, a monument previously interpreted as a simple pond barrow was found to cover an artificial shaft, 30m deep and 1.8m in diameter (Ashbee et al. 1989: 133). A range of deposits were recovered, the earliest being Bronze Age in date, comprising a shale ring, amber beads and bone pins, along with animal bone and organic materials. Ashbee argued that the ring, beads and pins should be interpreted as votive deposits, of a type similar to those found as grave furniture in Wessex in the Early Bronze Age (Ashbee et al. 1989: 137). He stresses that there is a very strong possibility that many shafts may exist adjacent to the major round barrow cemeteries of Wessex and that the chthonic 'cult' of the Iron Age and Roman periods may well have a much earlier origin (Ashbee et al. 1989: 136-137). The comparisons that can be drawn between the use of natural shafts and the construction and use of artificial shafts is very strong indeed.

The use of natural shafts as 'natural monuments' may have been a widespread phenomena in the British Neolithic and Early Bronze Age but has, until now, remained a relatively poorly understood and neglected area of study. The relationship between natural features such as swallets and monuments has also been relatively neglected (but see Tilley 1999) and is an area deserving further investigation. The evidence from Wilsford Shaft may well substantiate the claim made here for a link between round barrows and shafts, be they natural or artificial. The artificial shafts could also have been mimicking natural shafts and it is likely that they were used for similar practices. It appears then that there existed in Britain, from at least the Early Bronze Age, a ritual practice that has gone almost unrecognised; the deposition of artefacts within vertical shafts. That this may be the beginnings of a chthonic cult, previously thought to be of Iron Age origin, is worthy of further consideration.

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