

MESOLITHIC CAVE USE IN SOUTH WESTERN BRITAIN: FROM DYNAMIC COSMOLOGIES TO FOLK TAXONOMIES

by

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ABSTRACT

The karst landscapes of south western Britain are home to many caves, some of which contain Mesolithic archaeology. This comprises human remains, faunal remains, lithics and other artefacts. However, the nature of many of the original (early) excavations and the patchy archive that exists for some of the sites can make interpreting past practices at these sites challenging. Rather than “write-off” those caves with poor or incomplete records, we suggest here that much can be gained by including them in a broader, landscape-scale of analysis. In this paper, based on PhD research by Rosen (2017), we consider caves in southern Wales, the Forest of Dean and the Mendip Hills containing Mesolithic material. We propose that a multi-scalar approach, from the individual cave to the regional landscape, allows for the identification of particular practices in particular places at particular points in the Mesolithic. Such observations allow us to move beyond purely functional interpretations and consider the rich and dynamic cosmologies of this period. We suggest that such an approach may be helpful in identifying folk taxonomies – how Mesolithic communities organised and understood their world – and the central role that caves may have played in this.

INTRODUCTION

During the Mesolithic in Britain, hunter-gatherer communities visited and engaged with caves. The archaeological record suggests that these were not places necessarily visited on a regular basis, nor were they necessarily occupied for long periods of time (Rosen, 2017). The Mesolithic archaeology from caves demonstrates that these were places where human remains were sometimes deposited (Meiklejohn, *et al.* 2011) and were places where dwelling and depositional activity took place, as evidenced by the presence of flint tools and debitage, faunal remains, perforated shells and coarse stone tools (Rosen, 2017). However, as Conneller (2006) has noted, where human remains are present, the caves do not tend to contain contemporary artefactual evidence and, therefore, it would seem that using caves for mortuary practice was set apart from other activities. Some caves also demonstrate multiple phases of use across the Early and Late Mesolithic. In some cases, these were places returned to intermittently over long periods of time, though the meanings associated with these engagements were not fixed (Rosen, 2017).

One of the central challenges with studying Mesolithic cave use, as with other periods, is the incomplete or sometimes absent (e.g., destroyed or lost) nature of the archives; in some cases, a published report is all that survives. Many caves were excavated in the late nineteenth century and the early and mid-twentieth century either unsystematically, or, when a systematic approach was adopted, the excavators often failed to record the level of detail that is expected of modern investigations. In addition, many of the finds from early excavations were selectively retained and those that were retained were often dispersed across different museums or into personal collections. Modern excavations are also not without issue as it is common to encounter high levels of disturbance in the caves from anthropogenic, geomorphological and bioturbation activity, making it challenging to understand the specific depositional context of cultural material.

This situation presents several challenges for scholars who wish to revisit these older archives, or, indeed, for modern excavations where the cave deposits have been heavily disturbed. For caves which are considered to hold important chrono-stratigraphic sequences and/or cultural assemblages, some researchers have returned to sites to identify undisturbed deposits to help reinterpret the incomplete archive (e.g., Gough's Cave: Currant *et al.* 1989). This, however, is not always possible and the researcher is faced with the problem of interpreting prehistoric and historic cave use from artefact assemblages lacking specific context.

In general, the Mesolithic archaeological record from caves in Britain is not extensive. However, it is clear from archives and published reports that Mesolithic communities did engage with caves. A recent gazetteer of Mesolithic human remains in Britain has identified 17 cave sites across the country which contained human bone dating to the Mesolithic (Meiklejohn *et al.* 2011), and a further three sites have been identified since this publication (Smith, *et al.* 2013; Schulting, *et al.* 2019; Clough, this volume). In addition, recent dating of human remains from Greylake, an open-air site on the Somerset Levels, has returned Early Mesolithic dates (Brunning, 2013). Caves also contain lithics, faunal and other artefactual evidence of Mesolithic date. Where cave excavations have been published, these Mesolithic lithic assemblages often only form a minor component of the total cave assemblage and, as such, sometimes receive only a cursory note in the report.

This situation has led some scholars to analyse these artefactual and human bone assemblages independently of the cave context in which they were found. For instance, Jacobi's (1980) analysis of the Mesolithic of Wales draws extensively from the lithic material from the caves of South Wales to develop typo-chronological models. David (2007) conducted a similar, though updated, analysis of the same region and made extensive use of the lithic material from caves. Schulting has dated many of the Mesolithic human bones from the caves in south-western Britain and also conducted stable isotope analysis to better understand the diets of these individuals (e.g., Schulting, 2009a; Schulting and Richards, 2002, Schulting, 2020).

These studies demonstrate that there is much to gain from older archive material, despite the materials lacking specific context. However, investigating why particular caves were selected for use and the potential meaning that these caves had to past hunter-gatherer communities is rarely investigated (but see Conneller, 2006; Rosen, 2017). In the absence of specific contextual data that can be examined and compared across sites, questions such as this require a broader approach which examines the cave's specific and wider landscape context.

This paper will demonstrate how the adoption of a landscape approach to Mesolithic caves can add another layer of interpretation to these often-challenging sites. It is proposed that a multi-scalar approach, moving from the macro to the micro, allows for meaningful connections between broadly contemporary sites to be made. This involves an initial broader identification of the chronologically specific material from each site and an examination of the spatial relationships between broadly contemporary cave sites. This is followed by a more detailed assessment of the specific practices occurring at these sites in order to ascertain if any meaningful connections can be made. Also, as caves with evidence for Mesolithic activity are characterised by both human remains and artefactual evidence, it is argued that in order to develop a more balanced impression of the role caves played in the lifeways of past hunter-gatherer communities, both classes of evidence need to be considered side-by-side. This allows for cave use during the Mesolithic to be considered in relation to folk taxonomies (a system of classification which is ontological rather than epistemological) and moves away from analysing a particular practice (e.g., mortuary practice) in isolation.

It is not the intention of this paper to document each excavation and the subsequent discoveries in detail: readers are directed to the original reports and subsequent studies and

reviews of the material for this information. Instead, it will provide a synopsis of the evidence and consider the use of caves through space and time and how this can be used to interpret the cosmological and mythological place of caves in the lifeways of Mesolithic communities.

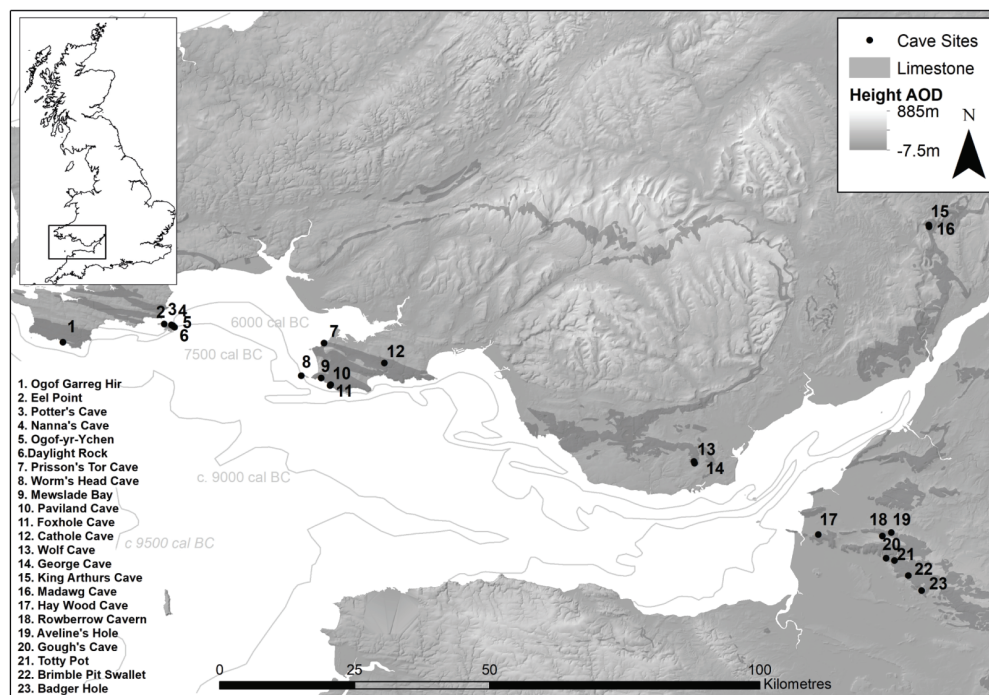


Figure 1. Location map showing the caves with Mesolithic archaeology from south western Britain. Sea-level data from Bell (2007).

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THE MESOLITHIC CAVE ARCHAEOLOGY

The study area of south western Britain includes the Carboniferous limestone landscapes of southern Wales, the Forest of Dean in the southern Wye Valley and the Mendip Hills of Somerset (Figure 1). Mesolithic cave archaeology is also known from Devon (e.g., Three Holes Cave and Kent's Cavern), however these have not been included in this study and generally, the caves in this landscape have been subject to less intensive exploration/excavation. By contrast, the caves from the study area have a long history of exploration and archaeological excavation which presents interpretive opportunities as well as the challenges outlined above. The known Mesolithic archaeology from the caves in this region is relatively rich, with evidence for human remains, small and large lithics collections and a limited quantity of faunal remains. A summary of the archaeology from each cave is outlined below: see Rosen (2017) for a full analysis of these assemblages.

Mesolithic lithics have been categorised into an Early, Late and later subdivisions, based on microlith typology. Early Mesolithic assemblages are characterised by broad blade microliths which appear at the beginning of the Mesolithic, in the second half of the tenth

Table 1. Radiocarbon dates for the Mesolithic human remains from the caves in the study area. Data from Meiklejohn, et al. 2011; Schulting, et al. 2019; Schulting 2020. * This date has probably been affected by ultrafiltration though would still be Early Mesolithic (see Meiklejohn, et al. 2011). See Marshall and van der Plicht in Schulting, 2005 (1) and Schulting, et al. 2019 (2) for the Bayesian analysis of the Aveline's Hole remains. Dates have been calibrated using IntCal20 (95.4%) and specimens which demonstrate elevated levels of $\delta^{13}C$ have been calibrated using Marine20 (ΔR 161 \pm 24). The end points for marine and terrestrial are -12 to -20.5, respectively (after Schulting, et al. 2013a).

Cave	Region	Lab. Code	Specimen	Uncalibrated Date BP	Calibrated Date BC
Worm's Head Cave	Gower, S. Wales	OxA-13131	Scapula	9920 \pm 160	10100-8860
		OxA-11128*	Ulna	9450 \pm 50	9118-8566
		OxA-16607	Cranium	9294 \pm 49	8615-8330
		OxA-19844	Femur	9255 \pm 45	8611-8328
		UB-6817	Tibia	9030 \pm 45	8310-8000
Mewslade Bay	Gower, S. Wales	OxA-19845	Mandible	9235 \pm 40	8565-8311
		OxA-16604	Mandible	9077 \pm 49	8420-8015
Gough's Cave	Mendip, SW England	BM-525, OxA-814 (combined)	Talus, tibia	9094 \pm 84	8562-7996
Badger Hole	Mendip, SW England	OxA-1459	Mandible	9360 \pm 100	9118-8306
		OxA-679	Mandible	9060 \pm 130	8615-7830
Aveline's Hole	Mendip, SW England	23 dates	Various elements	Bayesian analysis has indicated that deposition started in: 1) 8460-8290 cal. BC (95% prob.) and lasted for between 80-130 years 2) 8660-8335 (68.2% prob.) and lasted 410 or 260 years	
Daylight Rock	Caldey Island, S. Wales	OxA-7686	Mandible	8655 \pm 60 7714-7375	
Potter's Cave	Caldey Island, S. Wales	OxA-7688	Ulna	8580 \pm 60	7604-7361
		OxA-7687	Metacarpal	7880 \pm 55	6816-6464
Ogof-yr-Ychen	Caldey Island, S. Wales	UBA-32282	Petrous	8597 \pm 54	7593-7360
		OxA-7741	Mandible	8415 \pm 65	7523-7089
		OxA-22987	Tibia	8465 \pm 38	7421-7128
		OxA-7690	Os coxa	8280 \pm 55	7341-6920

		OxA-7691	Os coxa	8210+/-55	7140-6702
		OxA-7742	Cranium	7880+/-55	6685-6415
		OxA-2574	Mandible	7020+/-100	5914-5784
Totty Pot	Mendip, SW England	OxA-16457	Femur	8245+/-45	7455-7084
		BM-2973	Left humerus	8180+/-70	7451-7048
Paviland Cave	Gower, S. Wales	OxA-23801/2 combined	Humerus	6469+/-27	5470-5219
Foxhole Cave	Gower, S. Wales	OxA-20835	Mandible	7355+/-40	6217-5923
		OxA-8316	Isolated tooth	6785+/-50	5753-5569
		OxA-20838	Lumbar vertebra	6681+/-36	5612-5345
		OxA-26273	Vertebrae	6772+/-38	5659-5466

millennium cal. BC (Conneller, *et al.* 2016). However, in south western Britain the earliest dates for the appearance of broad blade microliths are much later, in the middle to second half of the ninth millennium cal. BC (David, 2007). Late Mesolithic narrow blade microliths, comprising small scalene triangles, first appear at the beginning of the eight-millennium cal. BC (Conneller, *et al.* 2016). Finally, an additional Late Mesolithic chronological division has been included; the ‘later’ Mesolithic microlith assemblages, characterised by micro-geometric forms which date from approximately the middle of the seventh millennium cal. BC (Barton and Roberts, 2004). For the latter, two caves from the study area (Madawg Shelter and Totty Pot), and other sites from the study region more broadly, for example Langley’s Lane (Lewis, *et al.* 2019), Three Holes Cave (Roberts, 1996) and Goldcliff (Bell, 2007), evidence these chronologically distinctive forms. For consistency and to assess broad contemporaneous use of different cave sites across the study region, the dates of these subdivisions, based on microlith typology, have also been used to categorise the radiocarbon dates from human remains in an Early, Late and later sub-period.

SOUTH WALES

The Mesolithic cave archaeology in South Wales largely derives from the caves on Caldey Island and the Gower peninsula. In addition, there is one cave on the southern Pembrokeshire coast and a further two caves in the Vale of Glamorgan. In these areas only three caves have been excavated to modern standards: Foxhole Cave on Gower (Schulting 2009b; Schulting *et al.* 2013a) and George Cave and Wolf Cave in the Vale of Glamorgan (Aldhouse-Green and Peterson, 2012). Heavily disturbed deposits as a result of badger setts were observed at Foxhole Cave (Schulting, *et al.* 2013a). The Mesolithic material from other cave sites in these regions lack specific contextual information. Moreover, at Potter’s Cave on Caldey Island, it is reported that ‘heavy tools’ were employed to break up the flowstone (Davies, 1989; see also Lacaille and Grimes, 1956, 1961).

Table 2. *Mesolithic artefactual and faunal evidence from caves in the study area (after Rosen 2017).*

Region	Cave	Early Mesolithic	Late Mesolithic	Later Mesolithic
Caldey Island, S. Wales	Daylight Rock (cave and open-air site)	Lithics (c. 1993 items)	-	-
	Nanna's Cave	Lithics (c. 324 items), shells	-	-
	Potter's Cave	Lithics (c. 112 items)	-	-
	Ogof-yr-Ychen	Lithics (c. 42 items)	-	-
	Eel Point	Lithics (c. 15 items)	-	-
South Pembrokeshire	Ogof Garreg Hir	-	Lithics (c. 2 items)	-
Gower, S. Wales	Worm's Head Cave	-	Lithics (c. 12 items)	-
	Cathole Cave	Lithics (c. 173 items)	Lithics (c. 85 items)	-
	Foxhole Cave	Lithics (c. 33 items)	Lithics (c. 8)	-
	Prissons Tor Cave	-	Lithics (c. 7 items)	-
Vale of Glamorgan, S. Wales	Wolf Cave	-	Lithics (c. 1 item)	-
	George Cave	-	Lithics (c. 5 items)	-
Wye Valley Gorge, SW England	King Arthur's Cave	-	Lithics (c. 342 items), faunal remains, shells, coarse stone tools	-
	Madawg Shelter	-	-	Lithics (c. 10 items), faunal remains, shells
	Huntsham Hill	-	Lithics (c. 1 item)	-
	Biblins	-	Lithics (c. 1? item)	-
Mendip, SW England	Hay Wood Cave	-	Lithics (c. 53 items)	-
	Rowberrow Cavern	-	Lithics (c. 8 items)	-
	Totty Pot	-	-	Lithics (c. 53 items), faunal remains
	Brimble Pit Swallet	-	-	Faunal remains
	Aveline's Hole	-	Lithics (c. 5 items)	-

The Caldey Island caves comprise Daylight Rock (cave and adjacent open-air site), Nanna's Cave, Potter's Cave, Ogof-yr-Ychen and Eel Point. All of the caves evidence diagnostic Early Mesolithic lithic material; and all, apart from Nanna's Cave and Eel Point, also contain Late and/or later Mesolithic human remains (Tables 1 and 2). The Early Mesolithic lithic material from Daylight Rock (cave and open-air site), Nanna's Cave and Potter's Cave is relatively substantial, comprising formally retouched tools (microliths, scrapers, piercing tools, denticulates and misc. retouched items) as well as a range of debitage including knapping debris and cores as well as blades, bladelets and flakes. The lithic assemblages from Ogof-yr-Ychen and Eel Point are less substantial, comprising only a few formally retouched items and limited quantities of debitage.

Three radiocarbon dates were obtained from the immediately adjacent open-air site at Daylight Rock, indicating use of the site in the second half of the ninth millennium cal. BC (Table 3). This date conforms with the typo-chronology of the broad blade microliths from this site and the other cave assemblages from the Caldey caves (David, 2007; Rosen, 2017).

Table 3. Radiocarbon dates on non-human material from caves in the study area. After David, 2007; Barton, 1997; Murray, 2010. Recalibrated using InterCal20 to 95.4%.

Site	Lab. code	Material	Uncalibrated date	Calibrated date
Daylight Rock (open-air site)	OxA-2245	Hazelnut shell	9040+/-90	8539-7951
	OxA-2246	Hazelnut shell	9030+/-80	8456-7953
	OxA-2247	Hazelnut shell	8850+/-80	8246-7679
Madawg Shelter	OxA-6081	Charred sloc stone	8710+/-70	8162-7588
	OxA-6082	Charred hazelnut shell	6655+/-65	5707-5478
Totty Pot	OxA-12092	Aurochs	6174+/-35	5215-5008

The human remains from the Caldey Island caves have been dated by Schulting and Richards (2002), Schulting (2009a) and Brace *et al.* (2019) (Table 1). The remains are characterised by isolated elements, totalling ten from all of the caves. All the remains date to the Late and later Mesolithic and, therefore, were deposited in the caves later than the lithic material from the same caves. In addition to dating these remains, Schulting and Richards (2002), Schulting (2009a) and Brace *et al.* (2019) also obtained stable isotope values to better understand the relative contributions of marine and terrestrial protein in the diets of these individuals.

There are six caves on the Gower peninsula associated with Mesolithic activity. The lithic evidence indicates visits to caves in both the Early and Late Mesolithic. However, the evidence is more limited when compared to the Caldey caves: only Cathole Cave contained a substantial assemblage, primarily Early Mesolithic but with a Late Mesolithic component (McBurney, 1959, Campbell, 1977, Rosen, 2017), whilst the other caves evidence small lithic assemblages which probably indicate short-term visits (Table 2).

The human remains from the Gower caves are similar in character to those from Caldey Island in that they are all isolated elements. They date from both the Early and later Mesolithic and total 12 elements (Table 1). At Fox Hole Cave, Paviland Cave and Mewslade Bay there is no specific contextual information. At Worm's Head Cave, however, human remains were discovered by Cooper (2004) in 1966. He reports that a newly fallen block of cave breccia had clearly fallen from the northern cave wall near the entrance to the cave. Fragments of bone (human and animal) were protruding from the block, cemented within it, and a few bones were found lying on the cave floor near to the block of breccia. The bones from the cemented block and from the cave floor are considered to be part of the same group, as several pieces of both human and animal bone made contact (*ibid.*). A sample of the human remains were radiocarbon dated, returning an Early Mesolithic date (Schulting, 2009a) (Table 1).

There are two caves in the Vale of Glamorgan which contain Mesolithic archaeology: Wolf Cave and George Cave. Both caves were excavated by Aldhouse-Green and Peterson (2012). The Mesolithic archaeology is characterised by a limited quantity of lithic material,

including narrow blade microliths, and suggests that only short-term visits were made to these caves (Table 2).

FOREST OF DEAN

There are three caves in the Forest of Dean region which evidence Mesolithic archaeology. They all date to the Late and later Mesolithic and the archaeology comprises lithics, faunal remains, coarse stone tools and perforated shells. The three caves (Madawg Shelter, Huntsham Hill and King Arthur's Cave) were excavated by Barton (1997), though only Madawg Shelter was subject to extensive excavation. King Arthur's Cave was also extensively excavated in the early twentieth century (see ApSimon *et al.* 1992). At Madawg Shelter, a small later Mesolithic lithic assemblage, as well as 11 perforated cowrie shells found in a tight cluster, and numerous faunal remains (an analysis of these has not been published) were recovered (Barton, 1994). Barton (1994) also excavated a small hollow/pit which is thought to contain ash deposits from a nearby fire; two radiocarbon dates were obtained from material in the hollow/pit (Table 3), the later date corresponds with the micro-scalene triangle and rod microlith. At Huntsham Hill a single narrow blade microlith was recovered (Barton, 1993).

King Arthur's Cave, excavated in the early twentieth century (ApSimon, *et al.* 1992; Taylor, 1927), contained the most substantial assemblage. Here the Mesolithic archaeology is focused on the Platform area just beyond the entrance to the cave. It is reported that the Late Mesolithic lithic assemblage was associated with coarse stone tools, faunal remains (primarily the dentition of red and roe deer and aurochs) and a hearth (ApSimon, *et al.* 1992). Barton (1995) also opened some small trenches on the edges of the Platform area and recovered further Late Mesolithic lithic material. He also excavated a small niche in the second chamber and recovered perforated cowrie and periwinkle shells which are likely to be Mesolithic in date (Barton, 1997; Barton and Roberts, 2015).

MENDIP HILLS, SOMERSET

There are seven caves on Mendip which evidence Mesolithic archaeology in the form of human remains, lithics and faunal remains. The human remains were recovered from Aveline's Hole, Gough's Cave, Badger Hole and Totty Pot. Apart from Totty Pot, they are broadly contemporary, dating to the second half of the ninth-millennium cal. BC (Table 1). At Gough's Cave an articulated adult male was deposited in a side fissure near to the entrance of the cave (Seligman and Parsons, 1914). A limited quantity of Early Mesolithic lithic material was identified by Jacobi, (2004), including a Horsham-type microlith. At Badger Hole, two juvenile mandible fragments were recovered, with the possibility of a third element (now lost) (Schulting, *et al.* 2019), and no Mesolithic lithic material has been identified amongst the excavated Upper Palaeolithic lithics. The deposits at Badger Hole had also been heavily disturbed by badger setts (Campbell 1977).

Aveline's Hole has had a turbulent history. It was discovered in the late eighteenth century and it is reported that many people visited the cave and removed material (Schulting *et al.* 2019). The first recorded excavations were in the early twentieth century (Davies, 1921) but the war-time bombing of the University of Bristol Spelaeological Society Museum meant that the archive was largely destroyed. What remains of the extant archive was analysed by Schulting and Wysocki (2002), Schulting (2005), Meiklejohn *et al.* (2012) and Schulting *et al.* (2019). Schulting (2005) has estimated that 50 or more individuals would have been deposited in the cave, though only evidence of a minimum of 21 individuals survives. The extant archive

indicates that children, women and men are all represented. Schulting (2005) has suggested that the cadavers were initially placed in an articulated state on the cave floor (as opposed to having been buried in pits/graves) and later became disarticulated, either through geomorphological/bioturbation processes and/or were disturbed by successive internments. Indeed, new aDNA analysis on the Aveline's Hole remains have demonstrated the presence of Neolithic crania (Schulting *et al.* 2019). Limited Mesolithic artefactual material was also recovered: numerous perforated shells were reported on (Davies 1921), but only one survives in Wells Museum and two in the University of Bristol Spelaeological Society Museum. A small Late Mesolithic lithic collection was identified by Jacobi (2005).

The human remains from Totty Pot date slightly later than the others from Mendip caves, being Late Mesolithic in date. These (and other) remains were excavated in the 1960s by the Wessex Cave Club and on discovery some were examined by the Leicestershire Constabulary and subsequently destroyed (Gardiner, 2001). Schulting *et al.* (2010) radiocarbon dated other human remains from the extant archive producing Neolithic dates. As such, it is problematic to determine if the Mesolithic remains were deposited as disarticulated elements or were part of an articulated skeleton.

A later Mesolithic lithic assemblage (Gardiner, 2001) and a radiocarbon dated aurochs element (Table 3) (Troy, *et al.* 2001, Meiklejohn, *et al.* 2011) were also recovered from Totty Pot. The typology of the microliths (micro-geometric forms) and the dated aurochs element correspond and as such are broadly contemporary. At Brimble Pit Swallet, later Mesolithic cut-marked faunal remains were also recovered and have produced radiocarbon dates at the end of the sixth and beginning of the fifth millennium cal. BC (Lewis, *et al.* forthcoming).

Hay Wood Cave and Rowberrow Cavern both contained Late Mesolithic lithic material. The Rowberrow Cavern archive was also destroyed during the war time bombing of the University of Bristol Spelaeological Society Museum, the character of the Mesolithic archaeology can, therefore, only be discerned from the contents of the report published in the early twentieth century (Taylor, 1923). The lithic assemblage is small but does appear to contain narrow blade microliths and two either scrapers or borers.

Hay Wood Cave was excavated systematically in the late 1950s, 1960s and early 1970s and was published by Everton and Everton (1972). Here a small collection of Mesolithic lithics were recovered comprising formally retouched items (microliths and scrapers) and larger items of debitage (core, flakes/blades). The deposits were passed through three sieves (1, ½ and ¼ inch) during the excavation (Everton and Everton, 1972), so it is unlikely that smaller knapping debris was missed. Human remains were also recovered during the excavations and have subsequently been dated to the Early Neolithic (Schulting, *et al.* 2013b).

TAKING THE BROADER VIEW

On the macro level, the evidence indicates that geographically distinct groups of caves were being used by Mesolithic communities for particular types of activity across south-west Britain (Figures. 2 and 3).

During the Early Mesolithic on Mendip, cave use focused on the caves of the gorges and ravines which incise the Mendip plateau. Within these caves (Aveline's Hole, Gough's Cave and Badger Hole), Mesolithic human remains were deposited. Some have argued that these deeply incised gorges would have acted as natural routeways up onto the plateau (Jacobi 2004; Lewis 2011), which might indicate that the caves within them assumed a visual and

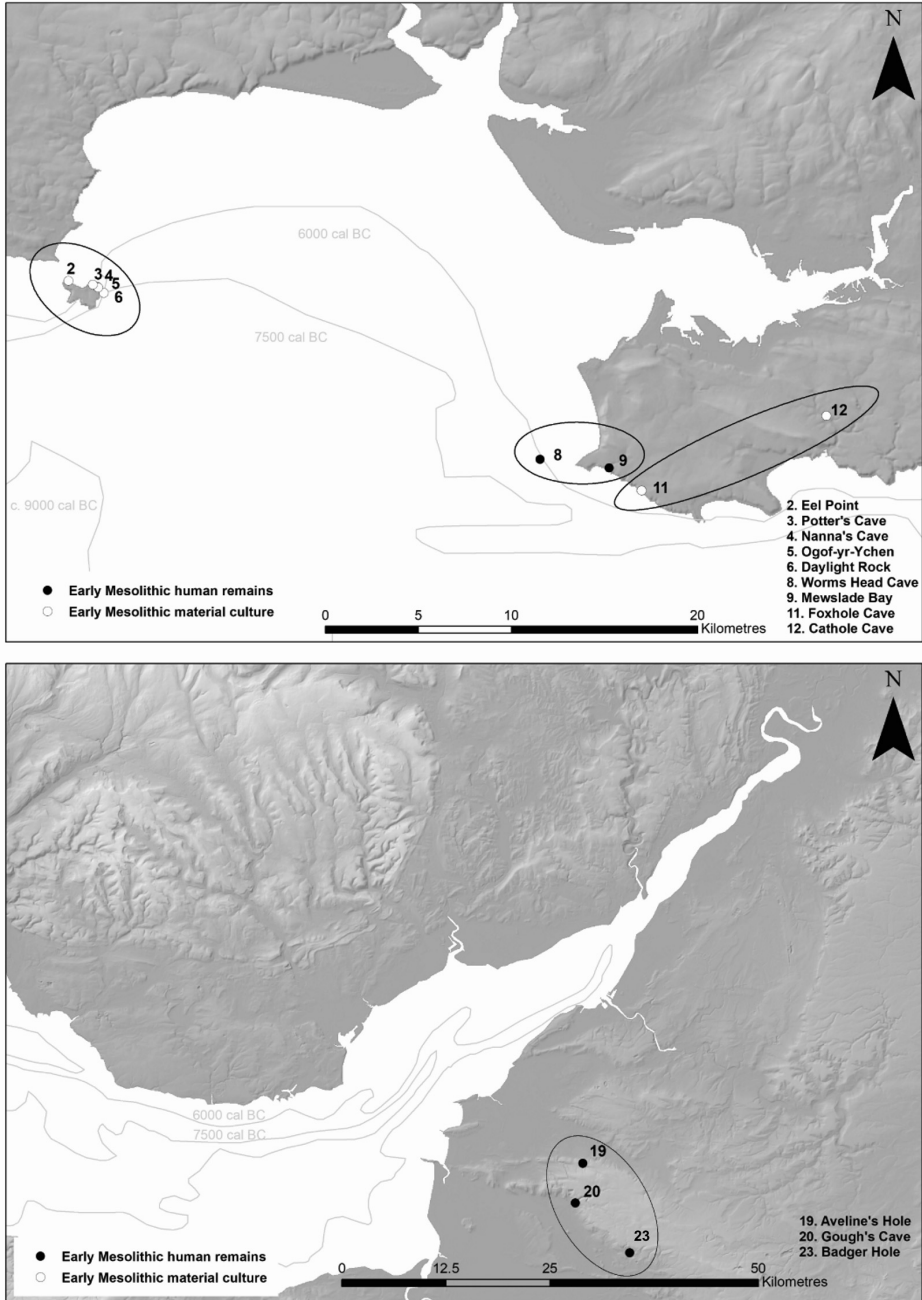


Figure 2. Map showing the spatio-temporal groupings of Early Mesolithic cave use. Sea-level data from Bell (2007). Map created by Heather Taylor. (© Crown Copyright and Database Right (2021). Ordnance Survey (Digimap Licence))

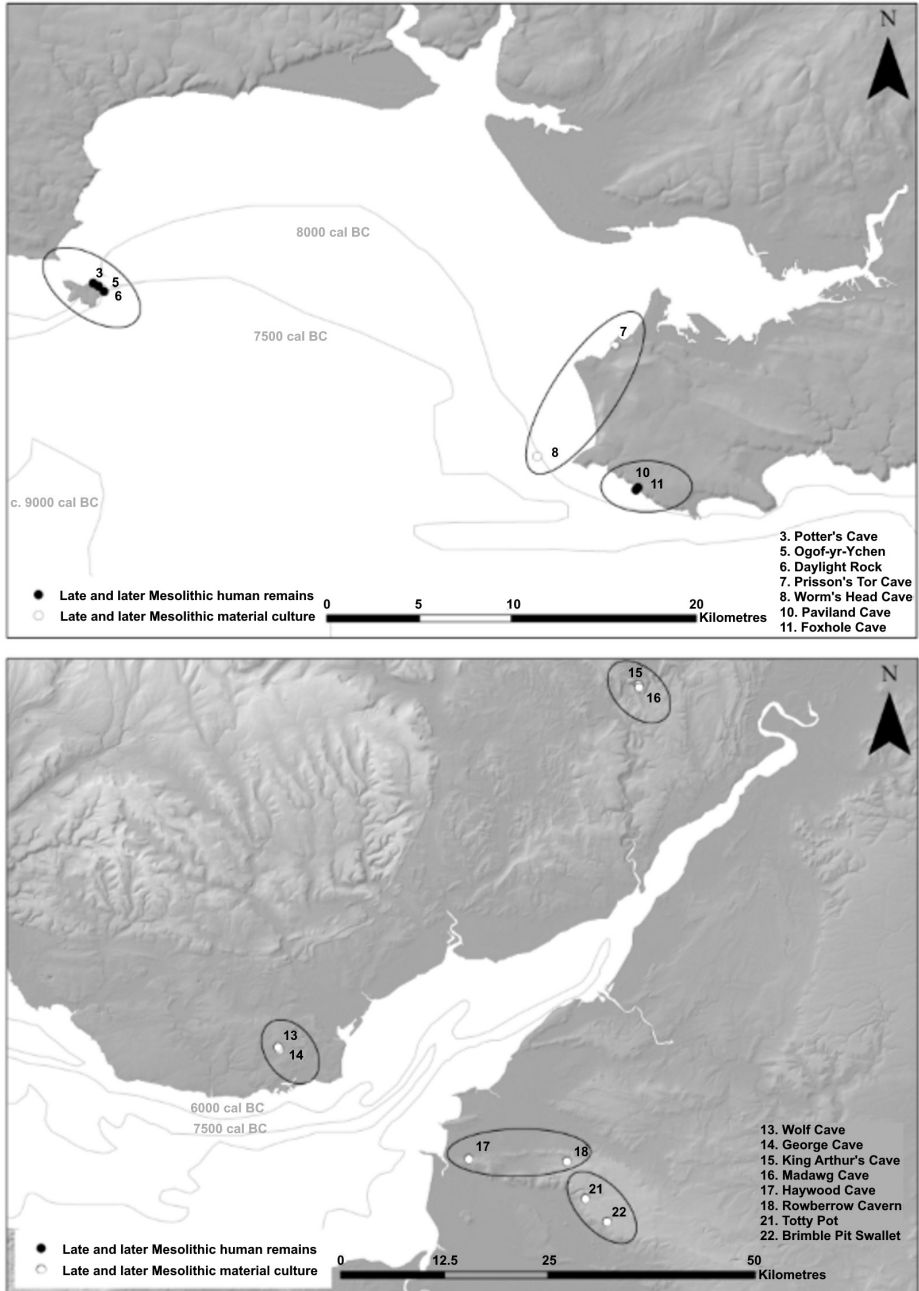


Figure 3. Map showing spatio-temporal groupings of Late and later Mesolithic cave use. Sea-level data from Bell (2007).

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mythological prominence. Indeed, both Aveline's Hole and Gough's Cave are situated near the base of high cliff faces and are easily accessible at ground level

Later in the Mesolithic there seems to be a shift away from the caves of the gorges and ravines towards caves located in more concealed or, at least, less prominent places. Both Hay Wood Cave and Rowberrow Cavern are located on the north-west margins of the Mendip Hills, on gently sloping hill sides. These caves contained Late Mesolithic narrow blade lithic assemblages and likely date from or after c. 8000 cal. BC. Today they are concealed by wooded vegetation and although there are no specific palaeoenvironmental data to reconstruct the immediate Mesolithic environment, it is generally accepted that the upland areas of Britain would have been densely forested at this time (Bell, 2007).

A further two caves dating to the later Mesolithic were used in the Mendip region: Totty Pot and Brimble Pit Swallet. These two caves have associated radiocarbon measurements, placing their use at the end of the sixth millennium cal. BC, and into the beginning of the fifth millennium cal. BC (for the aurochs bone from Brimble Pit Swallet, Lewis *et al.* forthcoming). Both caves are located near to the south-western edge of the plateau. Brimble Pit is a vertical swallet and although Totty Pot also has a vertical entrance, it is believed that during the Mesolithic the cave would have been accessed by a sub-horizontal entrance from the depression (Mullan *pers comm*).

The Mesolithic archaeology from the caves on Mendip demonstrate three temporal groupings: during the Early Mesolithic, communities selected caves in the gorges and ravines to deposit their dead; during the Late Mesolithic they chose caves in less prominent positions on gently sloping hills in the north-west; and, during the later Mesolithic they selected caves near to the south western edge of the plateau. It would seem that at particular times during the Mesolithic, communities engaged with caves in particular landscape settings.

This type of temporally defined landscape grouping can also be seen in the other karst regions of south western Britain. The Mesolithic use of caves in the Forest of Dean region seems to focus on the Wye Valley Gorge. Here, Late and later Mesolithic activity in the form of lithics and some faunal remains is present at three caves: King Arthur's Cave, Madawg Shelter and Huntsham Hill Shelter. King Arthur's Cave and probably Huntsham Hill Shelter evidence Late Mesolithic narrow blade microlith assemblages, whilst Madawg Shelter was used in the later Mesolithic. Caves are also present to the south of the gorge, but these have not been extensively surveyed: as such it is possible that the apparent cluster around the gorge may represent an artificial grouping. Slightly further afield, in the Vale of Glamorgan, two caves contained a limited quantity of Late Mesolithic narrow blade microliths. These two caves, George Cave and Wolf Cave are in close proximity to each other, on Goldslands Hill.

On the Gower peninsula there are two distinct groupings of Early Mesolithic activity within caves. Human remains were recovered from The Worm's Head Cave and Mewslade Bay Cave, both located at the western tip of the peninsula. Early Mesolithic lithic material was also recovered from two caves in the middle region of the peninsula: Cathole Cave and Foxhole Cave. Small quantities of Late Mesolithic lithic material have been found at The Worm's Head Cave and Prisson's Tor Cave, both on the western tip of the peninsula. Late Mesolithic human remains are also evidenced from two caves, Paviland Cave and Foxhole Cave, in the middle of the southern edge of the peninsula. These two caves have radiocarbon dates on human remains dating the cave use to the beginning and into the first half of the sixth millennium cal. BC.

Finally, on Caldey Island four caves on the eastern side of the island contained evidence for Early Mesolithic lithics: Daylight Rock Cave (and open-air site), Nanna's Cave, Potter's Cave, Eel Point and Ogof-yr-Ychen. Apart from Ogof-yr-Ychen and Eel Point, the lithic assemblages from these caves were relatively substantial. During the Late and into the

later Mesolithic most of these caves continued in use, however rather than lithics, the caves were now used to deposit human remains. Daylight Rock Cave, Potter's Cave and Ogof-yr-Ychen all contain Late Mesolithic human remains dating from the middle of the eighth to the middle of the sixth millennium cal. BC.

By adopting this macro-scale approach, it has been possible to show that Mesolithic communities appear to be engaging with caves in particular areas of the landscape at particular times for similar types of activities. Caves which contained broadly contemporary human remains are often situated in relatively close proximity to each other. This also appears to be the case for those caves with evidence for material culture and faunal remains. Moreover, there is no evidence for contemporaneous use of nearby caves for substantially different activities (i.e., deposition of human remains vs material culture/faunal remains).

This broader view also demonstrates that human responses to caves were not fixed across time and space. Early Mesolithic use of caves for depositing human remains is evident on the western tip of the Gower peninsula and on Mendip. During this period, Early Mesolithic communities were also engaging with the caves on Caldey Island and the centre of the Gower peninsula, though this is represented by the use and deposition lithic material. Interestingly, both the caves of Caldey Island (lithics), located in the east of the island, and those on the western tip of Gower (human remains) look out onto Carmarthen Bay, a landscape which would have been a dryland plain during the Early Mesolithic, as sea levels would have been at approximately 20 fathoms at c. 9000 cal. BC (Bell 2007). The radiocarbon dates from Daylight Rock on Caldey and from the Worm's Head Cave overlap, demonstrating two quite different attitudes towards caves in distinctive, yet interconnected (linked by the Carmarthen Bay Plain), landscapes.

During the Late and later Mesolithic, human remains were being deposited in two discrete areas of two distinct landscapes across the study area: Caldey Island and the southern edge of the Gower peninsula. In both locations the rising sea-level would have been evident, having reached the southern edge of Caldey by 7500 cal. BC and southern Gower by c. 6000 cal. BC (Bell, 2007). The shift from lithics to human remains on Caldey could have been a response to this encroaching sea and the concomitant changes to the landscape, situating this emerging island in a liminal position and rendering it an appropriate place to deposit the dead.

In other areas of the study region, during the Late and later Mesolithic, caves are being engaged with differently: the archaeological signature is composed of lithics, shells and faunal remains. On Mendip, Late Mesolithic communities were attracted to the gently sloping hills to the north-west of the plateau and during the later Mesolithic to the south western edge of the plateau. In the Forest of Dean they may have chosen caves associated with the Wye Valley Gorge. In the Vale of Glamorgan, some microliths have been recovered from two caves within Goldslands Hill. Finally, the western tip of the Gower peninsula sees the presence of Late Mesolithic lithics in two caves.

Although the number of caves in each group is small, this emerging pattern does seem to be consistent across the study area. At particular times during the Mesolithic, communities were choosing to engage with caves in particular ways in particular landscape settings, suggesting that these are local responses to a broader interest in caves and their cosmological and mythological significance. In addition, there are also some outliers which do not appear to fit this pattern. The deposition of human remains at Totty Pot is not paralleled elsewhere on Mendip. The use of Ogof Garreg Hir on the south Pembrokeshire coast also seems to be an isolated case. Future cave excavations near these sites may prove fruitful endeavours in recovering Mesolithic archaeology.

MEANINGFUL CONNECTIONS

The argument that Mesolithic communities were engaging with caves for broadly similar activities in particular landscape settings is further substantiated through a site-based level of analysis. Interestingly, where more detailed contextual information is available this analysis also shows some differences in practices between landscape settings. This is particularly achievable for those caves with human remains, due to more precise dating, but does also extend to some caves which contained material culture and/or faunal remains.

The Early Mesolithic deposition of human remains in caves on Mendip are all focused on caves in the gorges and ravines which incise the plateau, as mentioned above. Aveline's Hole and Gough's Cave are both located near the mouth of two of the most prominent gorges (Burrington Combe and Cheddar Gorge respectively), at the base of high cliff faces. Aveline's Hole has a prominent opening which appears to gently descend into the earth. Schulting (2005) has argued that these remains were initially, at least, placed on the cave floor in an articulated state. Gough's Cave also evidences the deposition of an articulated cadaver and there is no reported evidence for a grave cut (Seligman and Parsons, 1914).

In contrast, the human remains from Badger Hole consist only of two juvenile mandibles, though there may be a third, now lost, Mesolithic specimen (Schulting, *et al.* 2019). Although the cave deposits were heavily disturbed by badger setts, nearly all of the cave floor has been excavated at various times in the past (McBurney, 1959; Campbell, 1997). Given the absence of other human remains from the cave (only one other element dating to the Romano-British period (Hedges, *et al.* 1991), it would seem reasonable to suggest that the two (or possibly three) juvenile mandibles were deposited in the cave in a disarticulated state at different times. Badger Hole is also a very different type of cave to Aveline's Hole and Gough's Cave. It is located high up the cliff face of the Wookey Hole Ravine and could be classified more as a rock shelter with its wider, open mouth with much deeper light penetration. Given that cadavers seem to have been laid out on the cave earth at Aveline's Hole and Gough's Cave, it is possible that the loose bones from Badger Hole represent secondary mortuary practices. Moreover, transporting an articulated cadaver to a cave high up a cliff face would have been challenging, perhaps making it more likely that disarticulated remains were deposited.

On the Gower peninsula the deposition of human remains within caves during both the Early and later Mesolithic is occurring in different landscape settings. During the Early Mesolithic human remains were deposited in two caves at the western tip of the peninsula: Worm's Head Cave and Mewslade Bay. The Worm's Head Cave is located at the western most point of a narrow peninsula and commands views across Carmarthen Bay which would have been a dryland plain during the Early Mesolithic. From this plain, The Worm's Head Cave would have been a prominent landscape feature. The recovery of human remains from newly fallen breccia suggests that here human remains were placed on shelves or niches within the cave wall which later became encased in a travertine matrix, securing them in place. This practice is very different to that occurring on Mendip, where articulated cadavers seem to be laid out on the cave floor.

Schulting also dated human remains from Mewslade Bay Cave which returned an Early Mesolithic date which overlap with those from The Worm's Head Cave (Table 1). The Worm's Head Cave and Mewslade are located approximately 3 km apart, the former on the Worm's Head promontory and the latter in the adjacent dry valley. Two caves in close geographical proximity were selected for the deposition of human remains and are broadly contemporary.

This use of neighbouring caves is also evident during the later Mesolithic elsewhere on the peninsula. Foxhole Cave is a small rock shelter type cave located in Foxhole Slade. This cave contained four human elements dating from the beginning through to the middle of the sixth millennium cal. BC (Table 1). At the bottom of this valley approximately 170 m from Foxhole Cave is Paviland Cave. A humerus and a metatarsal were recovered from Paviland Cave both thought to be Mesolithic in date, however a radiocarbon date was only successful for the humerus. This date overlaps with one of the dates from Foxhole Cave (Table 1), showing that these two neighbouring caves were being used at the same time.

Neighbouring caves were also used on Caldey Island for the deposition of human remains. Daylight Rock Cave, Potter's Cave and Ogof-yr-Ychen are all located in close proximity to each other (Figure 3). A mandible from Daylight Rock has dates which overlap with the ulna from Potter's Cave and the metacarpal from Potter's Cave again has overlapping dates to the cranium from Ogof-yr-Ychen (Table 1).

The contemporary use of neighbouring caves from both the Gower peninsula and Caldey Island could suggest that these groups of caves were used as a mortuary complex. As the remains recovered from all of these caves are isolated elements or disarticulated remains it is interesting to speculate whether parts of the same person were being deposited in neighbouring caves. The corresponding elements from Worm's Head Cave and Mewslade Bay have similar $\delta^{13}\text{C}$ values so could feasibly be from the same individual. However, the stable isotope values from Foxhole and Paviland caves and from the Caldey Island caves are different and, therefore, indicate that though they have overlapping radiocarbon dates, the human elements from these neighbouring caves derive from different individuals who consumed differing proportions of marine protein (Table 4).

Table 4. *Stable isotope values for human remains from caves with similar radiocarbon dates. Data from Meiklejohn, et al. (2011) and Schulting (2020).*

Landscape	Cave	Lab. code	Element	Calibrated BC	$\delta^{13}\text{C}$
Gower	Worm's Head Cave	OxA-19844	Femur	8611-8328	-18.8
	Mewslade Bay	OxA-19845	Mandible	8565-8311	-19
Gower	Paviland Cave	OxA-681	Humerus	5470-5219	-18.0
	Foxhole Cave	OxA-20838	Lumbar vertebrae	5612-5345	-16.3
Caldey	Daylight Rock	OxA-7686	Mandible	7714-7375	-15.9
	Potter's Cave	OxA-7688	Ulna	7604-7361	-17.3
Caldey	Potter's Cave	OxA-7687	Metacarpal	6816-6464	-17.5
	Ogof-yr-Ychen	OxA-7742	Cranium	6685-6415	-15.7

It is more challenging to interpret meaningful connections between the groups of caves which evidence artefactual materials, primarily lithics, as opposed to those containing human remains. The spatio-temporal groupings do tend to indicate a similar character of lithic (or

faunal) assemblage (Table 2) and, like the human remains, the fact that these groupings are solely characterised by artefactual and small faunal material supports the observation that caves deemed appropriate for the deposition of human remains were set apart from caves that were being engaged with for other types of activities that involved the use and/or deposition of material culture and faunal remains.

There are, however, some interesting connections between certain caves that help to demonstrate that a range of practices were occurring. At Daylight Rock, on Caldey Island, the cave is a narrow horizontal fissure approximately 0.5 m wide, opening to a maximum of 1 m (Figure 4). This is a restrictive space and not suitable for flint knapping. Yet from within the cave, an Early Mesolithic lithic assemblage which is characterised by formally retouched items and knapping debitage is present. The lithic assemblage from the cave and from the immediately adjacent open-air site are similar in their character. There appears to be no evidence of these lithics washing into the cave from the open-air site, as the concentrations of lithic material are situated further away from the cave and the cave is situated in a slightly elevated position (Figure 4). Rather, it is suggested that lithics from the open-air site may have been gathered and placed within the cave (Rosen, 2017).

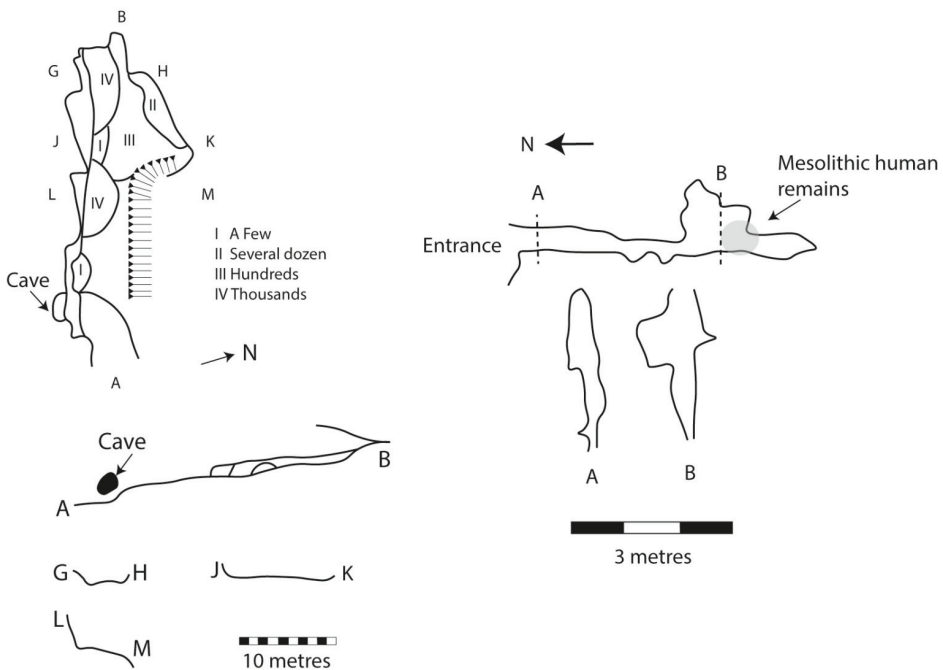


Figure 4. Plan and sections of Daylight Rock Cave, redrawn from Lacaille and Grimes 1961. Plan of open-air site beyond the cave showing lithic concentrations.

Redrawn from Lacaille and Grimes, 1956.

The deposition of artefacts into a cave can also be suggested for another cave on Caldey, Ogof-yr-Ychen. This was a large cave (which has now been destroyed due to quarrying) which had a vertical and a horizontal entrance (Figure 5). The lithic material is reported as deriving from the chambers beneath the vertical entrance. It is unclear how they entered the cave, however. They may have been brought into the cave through the horizontal entrance and carried to the rear and possibly even dropped into Chamber 3, or they entered the cave through the vertical shaft. This latter scenario is the most likely for the Late Mesolithic human remains as some were recovered lodged in the Blowhole. The locations the lithics were recovered from also accord well with entering through the vertical shaft. Vertical entrances, in particular, can act as sediment traps so the presence of the lithics and the human remains at Ogof-yr-Ychen may be the result of natural processes; Early Mesolithic lithic scatters are known from Caldey fieldwalking assemblages (David, 2007). Although this scenario cannot be ruled out, given the presence of broadly contemporary human remains and lithics in other caves on Caldey Island and the long time-spans involved (stretching from the Early to the later Mesolithic), the scenario of purposeful deposition needs to be considered. Three of the elements from Ogof-yr-Ychen cluster around the second half of the eighth millennium cal. BC and the remaining three elements exhibit distinctive dates from the end of the eighth to the first half of the sixth millennium cal. BC. This suggests either a persistent place with multiple depositions occurring over time, or, alternatively, that older bones were curated, and the remains deposited as a single event.

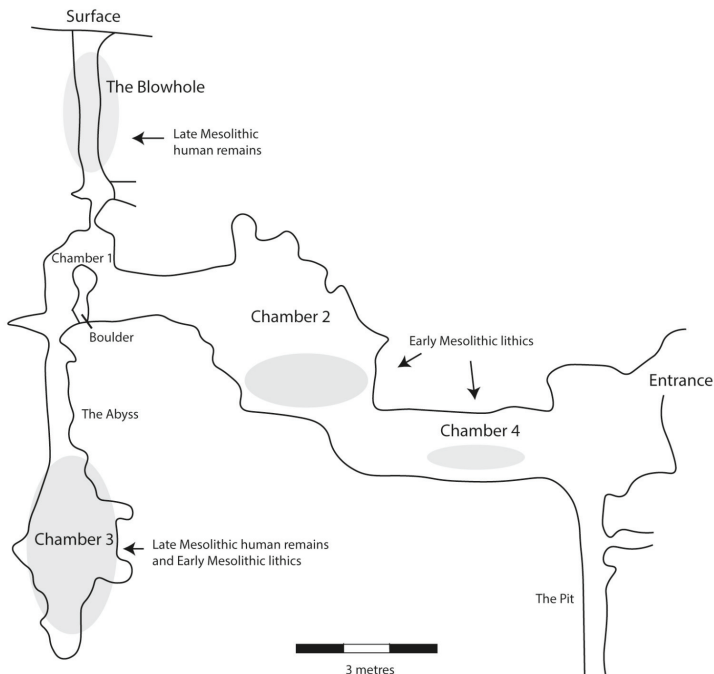


Figure 5. Section of Ogof-yr-Ychen.

Redrawn from David, 2007

At King Arthur's Cave in the Wye Valley, the only Late Mesolithic activity from within the cave is the deposition of three perforated cowrie shells in a small alcove in Chamber 2 (the main Mesolithic activity is beyond the cave on the Platform area). Given the absence of Mesolithic activity from within this cave, the presence of these perforated shells in an alcove at the back of the cave would seem to indicate a meaningful deposit. At Madawg Shelter, located in close proximity to King Arthur's Cave, a cluster of similar perforated shells was also recovered, thought by Barton (1997) to represent a string of 'beads'. It would appear that these shells experienced minimal disturbance or fragmentation and, therefore, it seems likely that they were buried rapidly, perhaps intentionally, and may also represent meaningful deposition.

At Hay Wood Cave on Mendip, Late Mesolithic lithics were deposited in a rock shelter-type cave with a steep funnel-like floor resembling a vertical shaft (Fig. 6). Like Daylight Rock Cave, this was not a place suitable for 'dwelling' activities. The lithic assemblage is characterised by retouched items and larger pieces of debitage (e.g., flakes and blades), with no evidence of knapping debris despite the sieving of deposits (Everton and Everton 1972). As such, the lithics from Hay Wood Cave could also represent a meaningful deposit into the earth.

Finally, it is also possible that meaningful deposits into the earth were occurring at Totty Pot and Brimble Pit Swallet on Mendip. From each cave, later Mesolithic material was recovered. At Brimble Pit, a cut-marked aurochs and red deer element was recovered, and radiocarbon dated to the later Mesolithic (Lewis, *et al.* forthcoming). These faunal remains could represent a meaningful deposit into the earth through a vertical shaft. At Totty Pot the microliths are reported to have been recovered from a small side chamber (Gardiner, 2001) and could represent a deliberate deposit, akin to the deposition of perforated shells at King Arthur's Cave.

These observations start to suggest that some caves were used for the deliberate deposition of material over the course of the Mesolithic. The challenging nature of the archive records means that drawing any firm conclusions is not possible. However, it is well known from the ethnographic literature and from archaeological evidence from later prehistoric periods that caves are often used as places for making votive or other meaningful deposits (see Moyes, 2012).

Meaningful depositional practices of material culture and faunal remains have been recognised at other Mesolithic sites in Britain. At the later Mesolithic site of Langley's Lane in south-west Britain, lithics and butchered faunal remains were deliberately deposited in and around a tufa depositing spring (Lewis, *et al.* 2019). At Star Carr, in North Yorkshire, culturally appropriate modes of deposition into palaeo-lake Flixton have been identified (Taylor, *et al.* 2017). Thus, it would not be surprising to find that Mesolithic communities were also making meaningful deposits at selected caves, particularly given that some were used to deposit human remains. Such deposits need not be viewed as distinct from potential dwelling activities at or near some of the caves, but part of a complex interaction that involved both prosaic and ritualised actions.

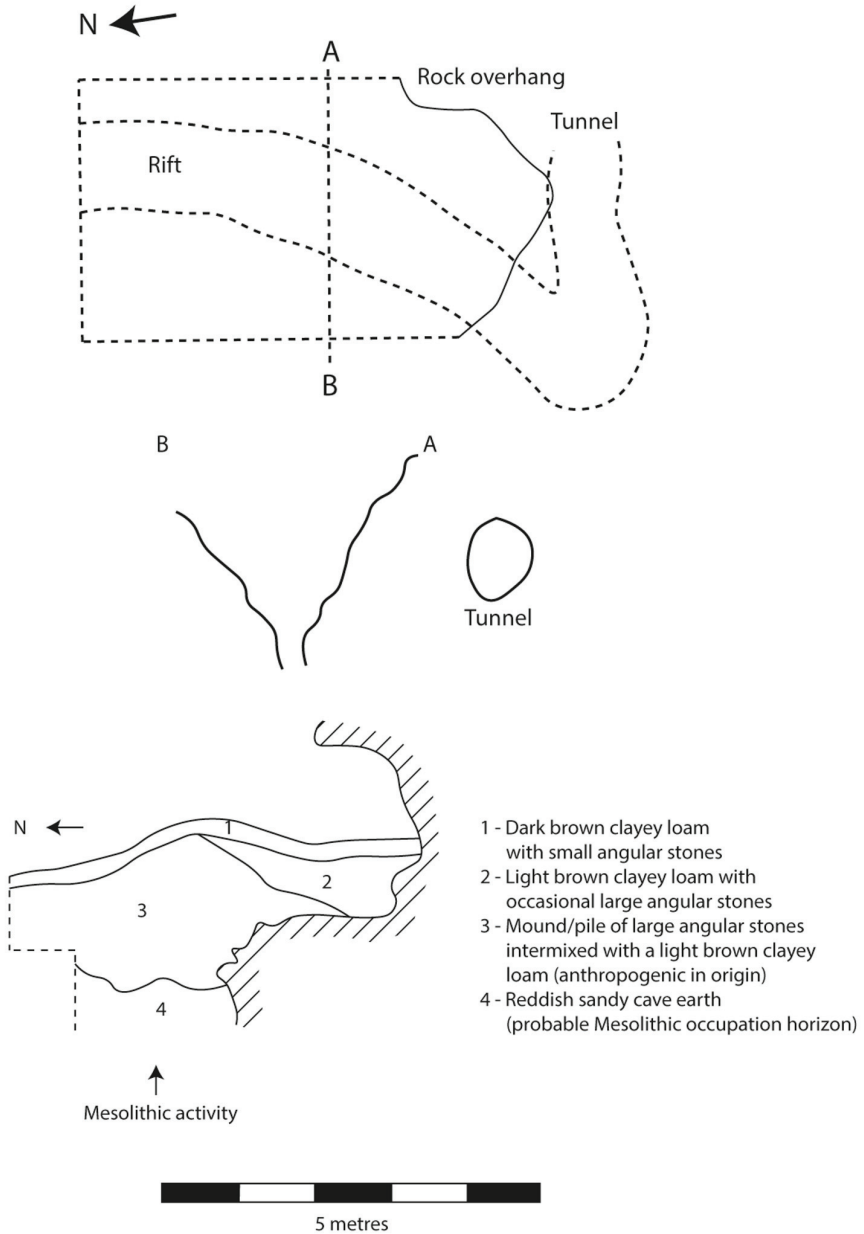


Figure 6. *Plan, section and profile of Haywood Cave.*
 Redrawn from Everton and Everton, 1972

DISCUSSION

The study area of south-western Britain has a long history of cave exploration. This has resulted in a large body of evidence for cave use spanning the Palaeolithic through to the modern era. However, this long history of exploration has also resulted in a patchy archive, which presents challenges in analysing and interpreting the role that caves played in the lifeways of past communities. By adopting a multi-scalar landscape approach, it is argued that caves which may have only received a brief mention, due to their incomplete or absent archives, can now be interwoven into a more meaningful narrative.

The analysis conducted above demonstrates that the selection of caves during the Mesolithic was not necessarily *ad hoc*. Cave use at particular times in particular regions appears to be geographically grouped and focused on particular landscape settings. This is perhaps most striking for the caves which contain human remains, and the suggestion is that these were being used as part of a mortuary complex. There are also some indications that meaningful depositions of material culture and/or faunal remains may have been occurring.

Caves are openings to the earth which take various physical forms. During the Mesolithic in south-western Britain, it would seem that communities engaged with a variety of cave types, for example larger horizontal caves (e.g., Aveline's Hole); vertical shafts (e.g., Brimble Pit Swallet); and narrow horizontal rifts (e.g., Daylight Rock Cave). An engagement with a variety of cave types is also reflected in other cultures. The Maya, for example, considered caves to be a conduit to an underworld and the Mayan word *ch'en* or *ch'een* can be translated as 'cave' but can also include springs, waterholes, sinkholes, crevices, rockshelters or any hole in the earth (Moyes and Brady, 2012). This type of classification is reflective of 'folk' taxonomies, which are ontologically rather than epistemologically based and characteristic of non-Western, non-modern societies.

Folk taxonomies are non-scientific forms of classification through which groups organise and understand their world. They structure too how groups understand their place in this world and guide how to act and interact with it. The caves considered in this paper may offer us a partial insight into Mesolithic folk taxonomies, though this is not to suggest such taxonomies remained unchanged throughout the period. The selection of particular caves suggests an ordering or understanding of the world in which some caves, or indeed cave locations, were appropriate for specific activities. Both the materials deposited, and the caves themselves, were transformed through these activities, however.

Research by Zedeño (2009) is pertinent here. She has considered how hunter-gatherer world-views shape how folk taxonomies come into being and take form. In order to appreciate this dynamic, the spatial, temporal and contextual dimensions of objects need to be considered as the ordering of the world is based on relationships; she terms this a relational taxonomy. Zedeño notes that in Native North American world-views certain objects are indicators of animacy and "...can transform the properties and interactive capabilities of any other object in their proximity, they can change the character of ordinary places and they can enhance human power" (Zedeño, 2009, 41). She terms these 'index objects'. These index objects can affect non-animate objects, places and activities/contexts through a spatial association, therefore animating ordinary objects/places/activities. Further, from an archaeological perspective, she argues that objects which are prevalent through space and time are ideal index objects.

In the context of this study, the category of index objects could be broadened to encompass caves and other distinctive natural places. Many ethnographic studies highlight the animacy of caves (and other distinctive natural landscape features), either directly or by association, in the cosmologies of traditional societies. Dowd (referencing Clottes, 2012, 25)

reiterates that the use of caves for ritual activities is the oldest and most enduring religious tradition in the human history of the world (Dowd, 2015, 1). Caves are often intrinsically linked with origin myths, being places where the first people emerged; they can be the home of supernatural beings and spirits and they can be portals to another world. Caves are anything but ordinary and their “otherness” is in powerful contrast to the overground world (Dowd, 2015, 9).

We have shown that the broad use of and engagement with caves across the study region is relatively constant and that these caves have a relational association with human remains, material culture and faunal remains. Lithics, for instance, are a ubiquitous material on Mesolithic archaeological sites and would have been used in everyday, prosaic tasks. When associated with an index object (e.g., caves) this relational association animates these materials, generates new meanings and creates a new or distinctive place in the dynamic folk taxonomies of Mesolithic communities.

The use of neighbouring/closely spaced caves for broadly contemporary and similar activities generates another layer of complexity to relational associations. Depositing the dead, for example, into closely located caves may suggest a belief in an interconnected underground network. For instance, both Foxhole Cave and Paviland Cave provide entrance into the same hillside. Paviland is a larger deeper cave, whilst Foxhole is more akin to a rock shelter, with a small tunnel-like passage at its rear. During the later Mesolithic, both caves were used to deposit human remains. These caves may have been powerful entities in their own right, but together, through their relational association to each other, the hillside and a shared subterranean world, their significance may have been intensified.

The other landscape settings identified afford different possibilities. The Early Mesolithic deposition of human remains on Mendip and the Late Mesolithic deposition of human remains on Caldey Island might indicate the entirety of these upland areas and the cave networks beneath them were important. It is worth noting that for Caldey Island there is little evidence of Late Mesolithic lithics from fieldwalking assemblages (which tend to be Early Mesolithic and correspond with lithic evidence from the caves) (David, 2007). As such, the island and its caves seem to have been largely reserved for depositing the dead. Equally, on Mendip there are few sites which indicate an Early Mesolithic presence on the plateau (here Late Mesolithic lithics tend to dominate) (Rosen, personal observation), with Early Mesolithic archaeology in the form of lithics scatters more prevalent immediately to the south on the Somerset Levels (see Bell, *et al.* 2015 for an overview).

From the available evidence, it seems that for each grouping there is one cave which evidences multiple depositions of human remains through time. However, some caution must be applied here as, where dates overlap, these could be from potentially the same individual (see Schulting, 2020) and some of the caves were also excavated unsystematically and with ‘heavy tools’. On Caldey Island, Ogof-yr-Ychen contained six elements, whilst the other caves on Caldey containing human remains only have one or two elements. On the Gower peninsula, the Worm’s Head Cave has five elements, and the nearby Mewslade Bay site only contained two elements. Also, on the Gower peninsula, Foxhole Cave had four elements, whilst the neighbouring Paviland Cave had only one element. On Mendip, it has been estimated that Aveline’s Hole was used to deposit 50 or more individuals (Schulting, 2005), whilst Gough’s Cave contained only one individual and Badger Hole contained two (or possibly three) elements.

As such, within these groupings, it seems possible that one cave acted as an enduring and persistent place that was regularly engaged with for mortuary activity, whilst the neighbouring or associated caves may have been used as secondary depositional contexts. If this is indeed the case, it is interesting that these primary caves are not always the most visually

prominent of the group. Paviland Cave, with its large opening, has a more commanding presence in the landscape than Fox Hole Cave. At Ogof-yr-Ychen, the human remains are thought to have entered the cave through a small vertical shaft: contrast this with Potter's Cave and Daylight Rock Cave, both more visually prominent horizontal caves in cliff faces.

That these geographical groupings also extend to caves which contain artefactual material may suggest that engaging with caves for activities other than the deposition of the dead was also structured along similar principles. An interpretation of the activities taking place within these caves is more challenging. However, there is evidence for depositional practices at a number of caves across the study region, many of which could also have been perceived to be part of an underground network. Although the evidence for intentional deposition is not extensive, due in part to the challenging nature of the sites, it offers an insight into complex practices and is an alternative to the long-held (and rightly challenged) notion that caves were used simply for shelter and/or dwelling.

Caves are unique spaces and occupy a central position within many non-Western/pre-Modern cosmologies (see Dowd, 2015 for an overview of the how caves have been used/perceived through space and time). We should expect a plurality of cave practices during the Mesolithic, not simply 'burial' or 'habitation'. Further, the fragmentary, sometimes problematic nature of the evidence should not mean that we simply write it off. This paper has shown that by taking a broader, comparative approach, some of the problems inherent with individual sites can be overcome and patterns of practice on a regional level tentatively identified. Mesolithic lives, actions and beliefs were undoubtedly complex and ordered: the use of caves offers a glimpse into the dynamic, relational folk taxonomies that may have structured their worlds.

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