

A PRELIMINARY REPORT ON THE 2010 EXCAVATIONS AT READ'S CAVERN

by

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ABSTRACT

This paper describes the preliminary results and conclusions from the excavations which took place in Read's Cavern during April and May 2010. The excavation revealed intact Iron Age archaeological deposits consistent with the UBSS excavations from the 1920s. Multiple phases of use were identified from a combination of the excavation and reports on previous fieldwork. A consequence of the 2010 excavations is a reinterpretation of the Iron Age use of Read's Cavern.

INTRODUCTION

Read's Cavern is located near Burrington Combe in the Mendip Hills, Somerset (NGR ST4682 5884). It is one of a number of caves within the region as well as one among a significant group that contain Iron Age material. Two entrances to the cave are currently accessible. The first was opened by The University of Bristol Spelaeological Society (UBSS) in 1919, while the second entrance, the entrance most often used today, opened naturally sometime after 1968 in the area of the presumed prehistoric entrance. This is currently where the seasonal watercourse enters the main chamber. When UBSS opened an entrance to Read's Cavern in 1919 it was soon recognised that the recently discovered cavern had a significant archaeological deposit (Palmer, 1920). This realisation led UBSS to begin five consecutive seasons of archaeological investigations from 1919 to 1924, followed by a sixth season in 1929 when the society excavated the exterior of what they believed to be the Iron Age entrance to the cave. The conclusion reached at the end of this series of excavations was that Read's Cavern had been used as a temporary habitation site, and possibly also as an industrial site (Langford, 1922; 1923; Palmer, 1920; 1921a; 1921b; Tratman, 1924; 1931).

In the autumn of 2009, the curator of the Woodspring Museum noticed a collapse in the main chamber of Read's Cavern. The crevice that opened as a result of this collapse exposed a layer of black material with charcoal inclusions which was identified as being the result of burning. Aware that Iron Age material, including evidence for hearths, had been excavated from Read's Cavern previously, it was thought that the material which had been exposed by the collapse could be of archaeological significance. The University of Bristol Department of Archaeology and Anthropology was eventually contacted through the UBSS with the intention of having this area of the cave excavated before damage could be done to any possible extant Iron Age deposits.

The subsequent excavation of Read's Cavern took place during April and May of 2010. The excavation was conducted on a volunteer basis, and led by the authors. The excavation team consisted of undergraduate and postgraduate students from the University of Bristol Department of Archaeology and Anthropology, as well as alumni and interested members of the public. A phase of this excavation was run as an undergraduate field school, so a majority of the funding for this project came from the University of Bristol Archaeology and

Anthropology Department. Additional funding was provided by the Oliver Lloyd Memorial Fund and by the authors.

Excavating in Read's Cavern presented the opportunity to confirm and enhance the results of previous excavations within the cave. Although the previous excavations were well recorded for their time, there was still information about the archaeology within Read's Cavern that was not mentioned in the site reports. Additionally, all of the surviving artefacts from these original excavations were re-fired when the UBSS museum was bombed during WWII. The initial objective of this project was to function as a rescue dig, aiming to excavate and record any archaeology threatened by the recent movement within the cave.



Figure 1. *Trench 1 Pre-Excavation Overview looking West: this shows the main area of excavation before excavation commenced. In the middle of the frame the crevice is visible. This photo also shows some of the more recent collapse within the cavern as the large boulder in the middle of the frame was part of the southern wall (left of frame) during the 1920s excavations.*

The 2010 excavation took place on the eastern end of the main chamber of the cave. The main focus of the investigation was the area of the natural crevice opening within the boulder choke that makes up the floor of the chamber. Two trenches were opened during the excavation (see Figure 2). Trench 1 was opened directly over the crevice that had opened in 2009. The area in which Trench 2 was located was targeted because of its sheltered location as well as the presence of a large number of metallic objects identified by the metal detectorist working with the project. The purpose of Test Trench E was to determine whether there was an intact Iron Age deposit sealed by flowstone beneath the protective talus debris.

The preliminary results from this excavation are based on observations made during the excavation and on an initial review of the material collected. A detailed post-excavation

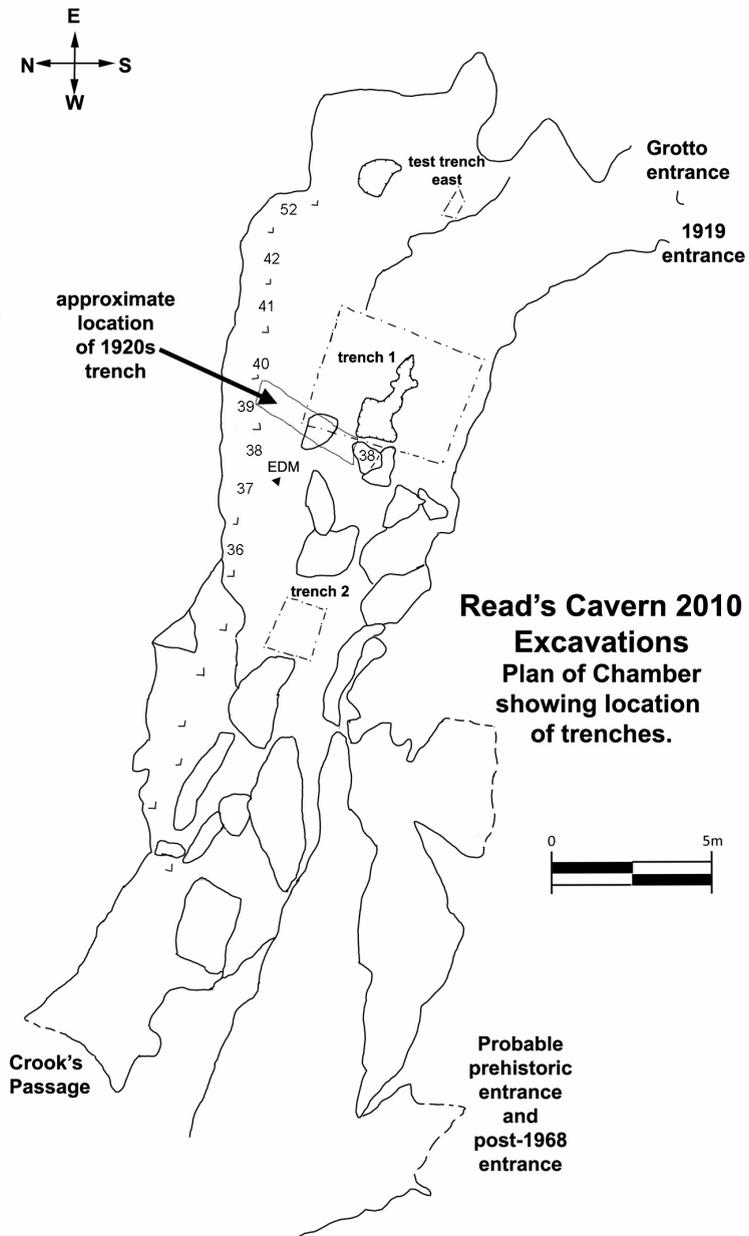


Figure 2. Survey Plan of Read's Cavern and 2010 Excavations: The plan indicates the location of the 2010 trenches within the main chamber of Read's cavern. The survey of the cavern was incomplete and cannot be tied into the Ordinance Survey Grid. The location of the 1920 trench is indicated on the plan as well as the numbers and divisions painted on the northern wall during the 1920s excavations.

analysis has yet to be completed. Some of the observations that were made during the course of the excavation can be directly related to a reinterpretation of the site. In particular, the differences and similarities noted in the stratigraphy of the cave, when compared to what was recorded during the original excavation, allow new insights into the cave's use during the Iron Age. The more detailed understanding of the stratigraphy raises questions regarding the original conclusions that Read's Cavern was a site of habitation, and that this phase of use included the lighting of multiple fires within the main chamber of the cave. Additionally, the possible uses of the cave have been reconsidered through a comparison to Iron Age cave use outside of Mendip as well as through a comparison of the archaeology found within the cave to similar deposits found in very different locations. Though more detailed research needs to be completed in order to fully understand the implications of the results of the 2010 excavation, the investigation revealed that Read's Cavern was not, as originally thought, used as a domestic and industrial site.

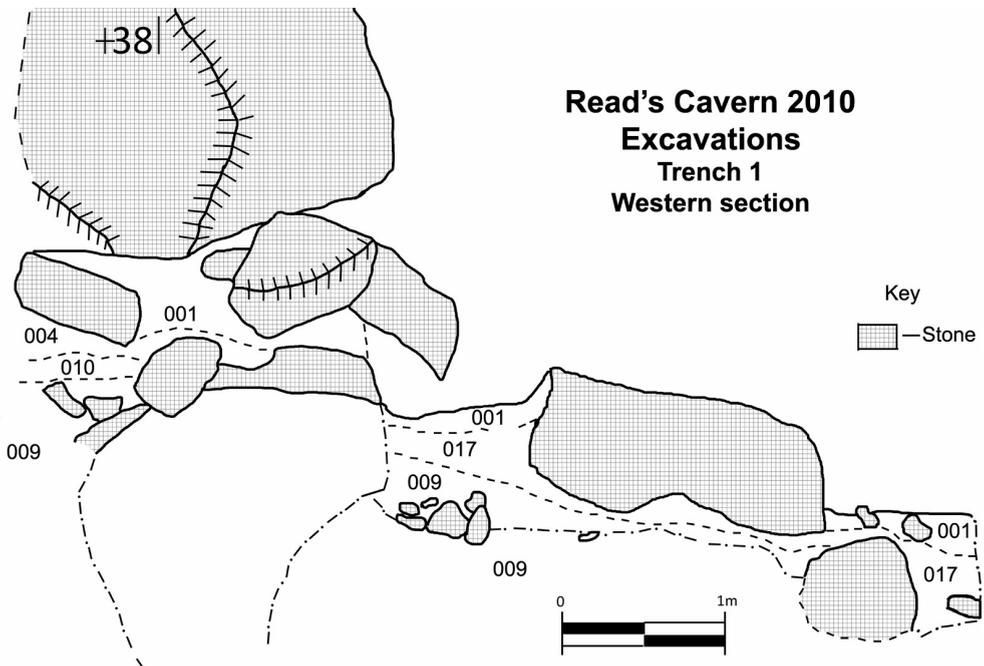


Figure 3. Section Drawing of the Western side of Trench 1: This drawing indicates the stratigraphy identified in the western half of Trench 1. Context 009 corresponds to the 'cave-earth' deposit; Contexts 010 and 017 correspond to the charcoal rich Iron Age deposit; Context 004 corresponds to recent 'social' activity recorded in the area of the crevice, including burning, which contained finds from the 1980s-1990s; Context 001 is a light brown silty clay similar to the 'cave-earth' deposit, representing deposition since the opening of the cavern in 1919. Note that the recently opened crevice beneath Boulder 38 did not have an identified bottom, and also extended as an open space further west beneath Boulder 38.

PREVIOUS FIELDWORK

The method used by UBSS during the first season of archaeological investigation in Read's Cavern seems to have consisted mostly of surface collection by candlelight, though at least one trench was opened with the intention of testing the depth of the Iron Age deposit (Palmer, 1920 p.9). Surface collection included the recovery of objects visible as well as those objects encased in upwards of an inch of flowstone (Tratman, 1968). Based on the content of later reports it is likely that a majority of the main chamber was excavated during the later seasons, although there is no clear indication of the areas in which excavation took place (Langford, 1922; 1923; Tratman, 1924; 1931). As the full extent of the 1920s excavations is unclear, it is important to note that Tratman (1968) indicated that some intact archaeology existed beneath the talus near the 1919 entrance to the cave. The plan of the excavations indicates two trenches, along with the location of both human and animal remains, as well as areas where there was evidence of human activity. From the records of the excavations a sequence of deposits can be pieced together. The principle stratigraphy, as observed in the 1920 trench, consisted of a base layer of 'cave earth' covered by a 'black mud' which was capped with 1/8 to 1 inch of flowstone (Palmer, 1920). All of the finds were from the surface or within the 'black mud' layer (Palmer, 1920 p.12).



Figure 4. *Photo of the Western Section in Trench 1: This photo was taken prior to the completion of the section drawing Figure 3 and is a supplement to it. The crevice is shown clearly on the southern (left) side of the photograph, and continued to expand after this photo was taken. The relatively recent collapse of the southern wall that included boulder 38 is also shown in this photograph.*

The prehistoric entrance was almost completely excavated in 1929 (Tratman, 1931). Based on the description and the location of this entrance, the entrance that reopened after 1968 seems to correspond to the entrance excavated by UBSS in 1929. The excavation of the prehistoric entrance may be partially responsible for the later reopening of this entrance. Tratman (1931; 1968) indicates that the postulated prehistoric entrance may have had a door in place as well as steps in the passage to aid with access to the main chamber of the cavern. Just inside the main chamber from the postulated prehistoric entrance a more complex stratigraphic sequence was observed within a rather confined space. In this area the uppermost deposit consisted of a black surface layer over the top of a greyish-white material containing charcoal. Below this was a reddish-brown layer overlying another layer of grey, and then black material. The deposit bottomed out over a layer of clay and tightly packed boulders (Palmer, 1921a p.90). This area was interpreted as possibly relating to a blacksmith's workshop. The reddish brown layer described by Palmer (1921a) may correspond with the gravelly clay layer described by Langford (1922) as covering a large area centered on the presumed prehistoric entrance to the main chamber. The gravelly clay layer contained a number of human remains and was interpreted as representing a later phase of use of the cave separate from the main habitation (Langford 1922).

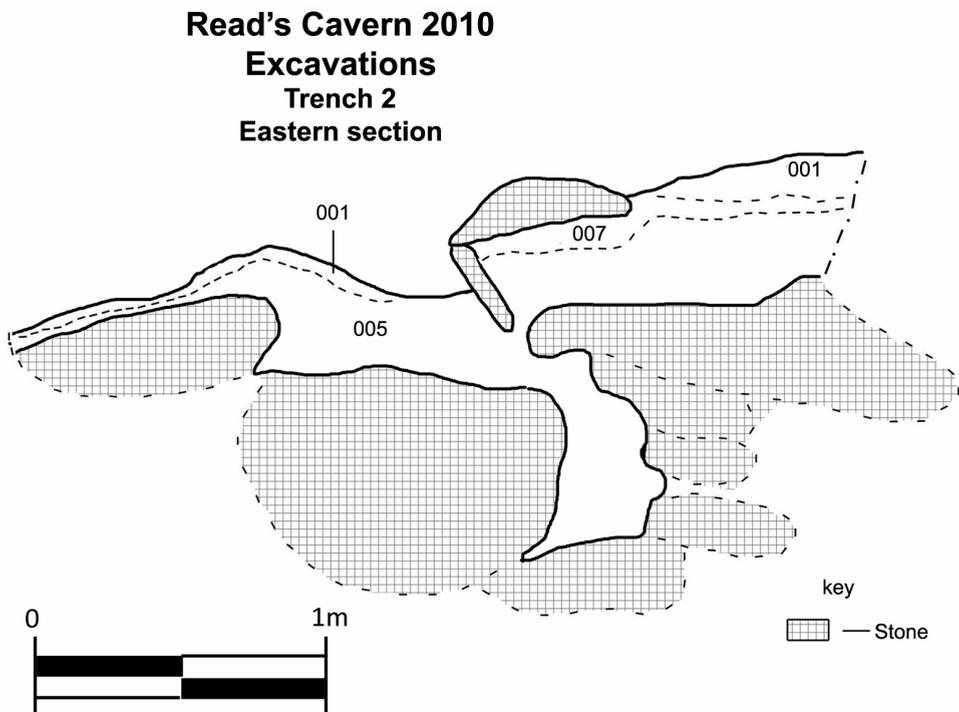


Figure 5. Section Drawing of the Eastern side of Trench 2: This drawing indicates the stratigraphy identified in the eastern half of Trench 2. Context 005 corresponds to the 'cave-earth' deposit; Context 007 corresponds to the charcoal rich Iron Age deposit; Context 001 is a light brown gravelly clay similar to the 'cave-earth' deposit except for the higher percentage of limestone gravel indicative of erosion and deposition processes taking place in this area of the cavern.

During the course of the 1920s excavations at least 13 fragments of human bone were recovered representing the remains of at least four individuals (Langford, 1922; 1923; Palmer, 1920; 1921; Tratman, 1924). The human remains were recovered from various stratigraphic deposits, including the charcoal rich deposit, the gravelly clay deposit found only near the presumed prehistoric entrance as well as on the surface of the cave floor. The recovery of human remains on the surface of the cave floor as well as the movement of human remains into the cave during the course of the excavations convinced the 1920s excavators that the human remains represented occupants killed in the collapse of the cave (Langford, 1923 p.136; Tratman, 1924 p.125). The recovery of a human fibula with evidence of butchery led the 1920s excavators to postulate the occurrence of cannibalism (Langford, 1922 p.136; Tratman, 1968).



Figure 6. *Post-Excavation of Trench 2 looking North: The photo shows Trench 2 after being fully excavated. The boulder choke which makes up the floor of the main cavern is clearly visible as is the empty space once occupied by Context 005, the cave-earth deposit.*

The charcoal rich deposits uncovered during the 1920s investigations were interpreted as evidence of hearths within the cave. This deposit combined with the area interpreted as a blacksmith's workshop was the foundation for the interpretation of the site (Palmer, 1921a p.90). The conclusion drawn from the 1920s investigations was that the cave was used as a temporary shelter or refuge during the later Iron Age and may have included some industrial activity.

Since the series of excavations completed at Read's Cavern by UBSS in the 1920's, very little research has been conducted on the cave and no further excavation has been completed. Based on the reports from the 1920s, Balch (1948 pp.81-84) suggested that Read's Cavern was in use for some 200 years and that it was primarily a temporary defensive refuge, similar to a castle keep, for a population living nearby. Balch (1948 p.84) believed that Read's

Cavern “would not have been used a day longer than was necessary” as a shelter. Corcoran (1954) reinterpreted an iron handle and the bronze bands recovered in 1919. Corcoran’s reinterpretation of the iron handle generally extended the proposed time frame of the Iron Age use of the cave and the conclusion reached regarding the bronze bands was that it was unlikely that they were used as chariot nave-bands unless used in conjunction with iron bands (Cocoran 1954). Read’s Cavern has also been discussed in regards to the single roman coin recovered in 1920, identified as a coin of Magentius, which has continued to be regarded as “an accidental contamination of the site” (Branigan and Dearne, 1991 p.150).

A review of Iron Age cave use in the Mendips has recently been completed and mainly drew from previous excavation reports (Bryant 2011). The conclusion reached in the review was that Iron Age use of the more accessible caves, including Read’s Cavern, was primarily for industry, particularly metal working, while a secondary use was as domestic sites. Concluding her review of Iron Age cave use on the Mendips, Bryant (2011) states that “If caves were perceived as ‘places apart’ in the landscape then perhaps the use of these natural features for the smelting of iron goes further towards suggesting that they held a significance beyond the profane and pragmatic and may have formed part of a web of metaphor which linked transformative processes such as life, death and the production of metal.”

PRELIMINARY RESULTS

Stratigraphy

As described by Stanton (1968) ‘Read’s Cavern is more boulder-choked pot than a cave’ formed at the junction of the Limestone Shales Formation and the Mountain Limestone Formation. Along this junction a number of other swallets and depressions have been recorded (Davies, 1920 p.22). Consequently, the stratigraphic sequence within Read’s Cavern is complicated by periods of roof collapse, downward movement of the boulders forming the floor of the main cavern and both fluvial and colluvial deposition and erosion processes. According to Palmer (1921b: 202) the cave was formed by ‘earth movements [*rather*] than by water action.’ The floor of the main chamber is made of large boulders that have built up some 50 m in elevation from stable bedrock at the base of the limestone rift.

Directly above the boulders, making up the floor of the main cavern, is a red-brown clay deposit that ranges in thickness from under a centimetre to almost a metre. For the most part this red-brown clay deposit was sterile. However, within both Trench 1 and 2, a few possible lenses of charcoal were observed, and a very small number of faunal remains were recovered. The charcoal and faunal remains have yet to undergo absolute dating. It is possible that these charcoal lenses and faunal remains may correlate with unsubstantiated reports of a number of flints having been recovered during the 1920s excavations. The analysis of flint was not mentioned in any of the official reports, despite the record of a small flint flake deemed to be unimportant (Langford, 1923).

The red-brown clay correlates directly with what Palmer (1921b p.204) described as ‘a stratum of cave earth intermingled with boulders.’ The ‘cave-earth’ deposit was recorded as being completely sterile during the 1920s excavations (Langford, 1922; Palmer, 1921a). This deposit seems to be the only contiguous deposit within the cave. In some areas of the excavation, flowstone occurs directly above the ‘clay earth’ deposit, while in others evidence of roof collapse or the charcoal rich Iron Age deposit is present directly above it. Where flowstone occurs directly above the ‘cave earth’ deposit, the Iron Age deposit occurs directly above the flowstone. This may indicate that between the initial development of the ‘cave earth’ deposit

and the Iron Age use of the cave, the cave was sufficiently sealed to allow the development of flowstone.



Figure 7. Post-Excavation of Test Trench East (TTE): The photograph shows Test Trench East after being fully excavated. The charcoal rich deposit found in this Test Trench was in-between two layers of intact flowstone and covered by a significant amount of talus. Ceramic fragments and faunal remains were recovered from the charcoal rich deposit. The flowstone beneath the deposit did not display any indication of having been exposed to fire, despite the charcoal staining evident in the photograph.

The Iron Age use of the cave is represented by a charcoal rich deposit. This deposit directly correlates with what Palmer (1921b p.204) described as ‘a layer of black mud’ in which the majority of Iron Age material was contained. During the 2010 excavation this deposit contained a majority of the finds recovered, none of which showed evidence of exposure to fire. Also within this deposit were small and large fragments of completely carbonised wood, indicating that the deposit had not washed in as these fragments would not have survived such movement. Furthermore, during the 2010 excavation there was no indication that burning had taken place within the cave in association with this deposit. During the 1920s excavations burning was suggested to have taken place on the stone floor of the cave and only one ‘made’ hearth was recorded (Tratman, 1924 p.125). The ‘made’ hearth was interpreted as such based on a large flat stone, 50- 60 cm in diameter, “surrounded and continued in the same plane by a layer of reddish clay...the black charcoal layer was above and below this slab, which from its arrangement appeared to be a hearthstone” (Langford, 1923 p.51). The so-called hearthstone was recovered within a few metres of the 2010 excavation at the northern edge of Trench 1.

The extent of the charcoal rich deposit covered the entire main chamber as well as extending outside the cave in the area of the presumed prehistoric entrance (Tratman, 1931 p.8).

The charcoal rich deposit was in places, such as Test Trench E and parts of Trench 1, sealed by flowstone, aiding preservation. In other areas of Trench 1, the Iron Age deposit was only covered in fragmentary remains of flowstone. In these circumstances it became obvious that ceiling collapses had fractured the flowstone or that subsequent erosion of the cave had disturbed the flowstone and the underlying Iron Age material. Trench 2 contained evidence of a significant amount of erosion. It is also possible that the area in which this trench was located was excavated during the 1920s. However, a thin charcoal rich deposit containing Iron Age material was still identified within this trench. Overall, the charcoal rich deposit is considered to be a secondary deposit of midden-like material dating from the Iron-Age.



Figure 8. *Cut-marked Rib Bone within the Charcoal Rich Deposit: This bone, recovered from Trench 1, did not show any indication of having been exposed to fire despite being emplaced in the middle of the charcoal rich deposit. The charcoal rich deposit in this area of Trench 1 was sealed under a thick layer of flowstone and contained intact fragments of carbonized wood.*

The uppermost stratigraphy consisted almost entirely of stones and boulders that had collapsed or shifted since the opening of the cave in 1919. Mixed in with the modern deposit was a light brown silty clay, similar in consistency to the ‘cave earth’ deposit that formed near the bottom of the stratigraphic sequence. Within this stratigraphic layer was a significant amount of what was clearly washed in modern material, including Victorian drainage pipe, and candle stubs that are likely to be from the 1920s excavations and early explorations within the cave. If the similarity between the uppermost deposit and the ‘clay earth’ deposit reflects similar formation processes and environment then the lowest stratigraphic clay deposit may represent a period of hundreds, if not thousands, of years in which the cave was accessible.

There is also then likely to have been a period of time in which the cave was sealed prior to the Iron Age activity within the cavern.

The natural opening of the crevice in Trench 1, which was the initial focus of the excavation, provided a challenge in interpreting the stratigraphic sequence as it removed a large amount of material. This was further complicated by cavers digging into the crevice in an attempt to open up a navigable passage. This material was deposited on the surface with the upper level of stratigraphy. Unfortunately this material was, for the most part, nearly indistinguishable from the 'natural' modern deposition within the cave. The only indication was an obvious 'spoil' heap in the middle of what became Trench 1. Eventually, the sequence of events which created this deposit was made clear. Sometime in the 1980s or 1990s, based on the material recovered from the spoil and parts of the modern stratigraphic deposit, a large social event took place that included a fire. In order to put out the fire at the end of the event, dirt was removed from the area directly above the crevice. This event dug into the Iron Age deposit in the area of the crevice, mixing up the material within the area and leaving a depression filled with a charcoal deposit. Further deposition within the cave hid the evidence of this event until the natural opening of the crevice once again exposed it, along with the Iron Age deposit, while at the same time eroding the stratigraphic sequence in this area. Consequently the relationship between the 'social event' and the Iron Age material was nearly impossible to work out until very late in the course of the 2010 excavation.

Faunal Remains

As with the 1920s excavations, faunal remains dominate the assemblage of material recovered during the 2010 excavations. A total of 128 pieces of faunal bone were collected and recorded during the 2010 excavations including complete and fragmentary bones as well as fragments of shell. Ribs and long bones dominated this assemblage. Of the faunal remains collected only 3% were recorded as having evidence of butchery, however many more show evidence of cut marks. A large amount of faunal material was collected from the surface in various parts of the cave representing a sample of material which is likely to have washed in to the cave since the 1920s excavations. A majority of the faunal assemblage is from the Iron Age charcoal rich deposit, though a small percentage of the assemblage was recovered from the 'cave earth' deposit. Just 3% of the faunal assemblage was recorded as having evidence of having been burnt, however after processing it appears that none of the assemblage has any clear evidence burning. This is significant as a majority of the assemblage was recovered from within a charcoal rich deposit. Overall, this contributes to an interpretation that the charcoal rich Iron Age deposit was a secondary deposition, and that burning did not necessarily take place within the cave. However, some of the faunal remains recovered during the 1920s excavations were considered charred by fire (Langford, 1922 p.137).

Detailed recording and analysis of the faunal remains is still taking place and specific species have yet to be identified. If the assemblage from the 1920s excavations can be taken as representative, the 2010 faunal assemblage is likely to have been dominated by domesticates which would then possibly include sheep, pig, dog, goat, ox and horse (Jackson, 1923; Palmer, 1920). In addition, also based on the 1920s faunal assemblage, there is likely to be at least some wild animals represented within the 2010 material. This could include roe and red deer, wild boar, badger, hare, fox, wild cat, field mouse, rat, bat, pigeon and other bird bones (Jackson, 1923; Langford, 1922; Palmer, 1920). Only a small percentage of the recovered faunal remains from the 2010 excavations showed evidence of butchery in the form of cut-marks. A majority of the remains with evidence of cut-marks are rib bones. Rib bones also appear to be over represented within the assemblage. All of the faunal remains recovered in the 2010 excavations

were disarticulated. Toe bones represented an unexpected proportion of the assemblage. The proportion of toe bones recovered may indicate that most of the skeleton was removed after decomposition/butchery. This observation further supports the conclusion that the Iron Age material within the cave represents a secondary deposit.



Figure 9. *Worked Bone Toggle: This toggle, identified as a fragment of a wild boar tusk, has a single perforation. Cut-marks from the shortening of the bone are visible on the left side of the artefact, while it appears that the right side has been broken. This artefact was recovered from the charcoal rich deposit in Trench 2.*

Human Remains

The 2010 excavations recovered two human teeth, and no other easily identifiable human remains. These teeth were complete and in very good condition likely indicating that they had been removed, whether naturally or culturally after decomposition, rather than being lost through trauma. This also indicates that the teeth had not naturally moved a large distance from their point of deposition and that they may have been part of disarticulated remains. During the UBSS excavations from the 1920s disarticulated and fragmentary human remains were recovered (Langford, 1922; 1923; Palmer, 1920; 1921; Tratman, 1924). This included a human fibula with ‘butchery’ cut-marks, interpreted as evidence of cannibalism as well as a portion of a maxilla missing all of the teeth (Langford, 1922; 1923). The 1920s excavations also recovered some human teeth including a ‘well worn upper bicuspid’ (Langford, 1922). The two teeth recovered during the 2010 excavation were found within the interface between the Iron Age charcoal rich deposit and the thin broken up flowstone within Trench 1. This correlates well with the description of the context of the human remains from the original excavations of the 1920s. Many of the human remains were recovered from the surface or covered in a thin layer of flowstone (Palmer, 1920; 1921; Langford, 1923; Tratman, 1924). Others were recovered from a gravelly clay deposit, which Langford (1922) identifies as being deposited

after the Iron Age charcoal rich deposit. The gravelly clay deposit was only found near the supposed prehistoric entrance to the cave (Langford 1922). All of the human remains recovered during the 1920s excavation were concentrated in the area nearest to the presumed prehistoric entrance. The original interpretation of most of the human remains was that they were from those who had been within the entrance at the time it collapsed and were subsequently washed into the cave (Langford, 1923; Tratman, 1924). This seems to indicate that all of the human remains were deposited within the cave after the deposition of the Iron Age charcoal rich deposit, and possibly indicates that the cave had an additional phase of use. As a majority of the human remains recovered during the 1920s excavations were recovered within an area consistent with material washed in from the prehistoric entrance, it may be that these remains were deposited within a swallet like depression after the entrance collapsed and subsequently deposited within the cavern through natural cave movement (Langford, 1923 p.136; Palmer, 1920; Tratman, 1924 p.125). This possibility counters the 1920s interpretation that the human remains represented people caught in the collapse of the entrance and subsequently washed in. Instead, this may reflect practices similar to those observed at Fishmonger's swallet in Gloucestershire, where remains of both humans and animals were deposited in a swallet and only later deposited within a small cavern at the base of a cone of debris (Horton *pers. comm.*). However, the teeth recovered from the 2010 excavation are unlikely to have been wash-in from the presumed prehistoric entrance as it would have required significant lateral movement instead of vertical movement. Therefore, some of the human remains could have been deposited in a number of theorised swallet like entrances to the cavern at any point prior to the 2010 excavation, including before and after the Iron-Age use of the cavern.

Special Finds

Distinct artefacts were a rarity in the 2010 excavation, with only a small handful of what can be described as artefacts. The artefacts found include a few metal finds, a small assemblage of fragmentary ceramics and a toggle made out of a pierced and polished boar tusk. This toggle is similar in design to those found during the 1920s excavation (Palmer, 1920). These pieces were originally catalogued as cheek pieces, though it has been suggested that these pieces are more likely toggles (Balch, 1948 p.83; Palmer, 1921a p.88). Even when complete the toggle recovered in the 2010 excavations would have been significantly smaller than those found during the 1920s (see Figure 9). A total of 23 fragments of Iron Age pottery were recorded during the 2010 excavations with no fragment larger than five centimetres. In comparison, fragments representing nearly 100 vessels, some nearly complete, were excavated during the 1920s (Tratman, 1924). Within the 2010 assemblage one rim fragment and one decorated fragment were recorded (see Figure 10). The cross hatch pattern from this decorated fragment is similar to the decoration recorded on the pottery found during the original excavations which were identified as Glastonbury ware (Langford, 1922). The entire ceramic assemblage from the 2010 excavations was recovered from the charcoal rich deposit within Trench 1 and Test Trench East. The most significant find from the excavation was the recovery of an Iron Age brooch. A preliminary identification of the brooch is early La Tene with striking similarities to some continental brooches. The brooch is quite well preserved, and even includes a working pin. In comparison to the brooches recovered from the 1920s excavations, the brooch is quite distinct and shares few similarities.

In terms of understanding the chronology and phasing of the site, these artefacts are important. The presence of the brooch along with the fragments of Glastonbury ware places the charcoal rich Iron Age deposit, in which they were found, firmly within the La Tene period (450-20 BC) (Bradley, 2007 p.269; Haselgrove, 1999). More importantly the condition of the

brooch and its recovery from the charcoal rich deposit further supports the notion that the charcoal rich deposit is a structured secondary deposit of midden-like material. The brooch is also unlikely to have been deposited as a result of a chance loss. Furthermore, the charcoal rich deposit containing the brooch may instead share similarities with Iron Age votive deposits yet is deposited within a unique setting (Bradley 2005).

Summary

The research objective of the 2010 excavation of Read's Cavern was to enhance the understanding of the Iron Age deposit. The excavated Iron Age material came from a clayey black, charcoal rich deposit. This deposit included a significant amount of faunal remains as well as a small amount of ceramic and metalwork. It also included fragments of carbonised wood which would have been destroyed had the deposit been washed into the main chamber. Despite the high charcoal content of the deposit there was no evidence of in-situ burning associated with the deposit and the artefacts contained within it did not show evidence of having been exposed to fire. Overall, this has led to the conclusion that Read's Cavern was not used as a temporary habitation or industrial site. Instead, the deposit shares similarities with both midden deposits and votive deposits, but may represent a different unrecognised social practice. Additionally, the 2010 excavations revealed small charcoal lenses containing faunal remains within the 'cave-earth' deposit previously recorded as sterile. Combined with evidence that the human remains represent a separate undated phase of use in the cavern, it can be concluded that Read's Cavern contains a larger archaeological record than previously understood.

DISCUSSION

The excavation of Read's Cavern by UBSS from 1920 – 1924 collected a wealth of valuable material, and was significantly well recorded for the time. These investigations were hampered by the techniques available at the time as well as a lack of methods of interpretation. When discussing interpretations of the site in 'The Keltic Cavern' Palmer (1920) created four categories that provided possible interpretations of the site: a hoard of goods, a settlement, a battlefield, and a cemetery. Palmer then goes on to conclude that Read's Cavern was used as a temporary habitation, and possibly as a site for iron working. Palmer chose the option that corresponded best to the archaeology uncovered in the cave but this interpretation is seriously limited by the number of possibilities that Palmer considered reasonable for an Iron Age site.

During the course of the 2010 excavation the nature of the geology of Read's Cavern combined with the location of previously recorded archaeology led to the conclusion that the site was inappropriate for habitation. The absence of slag in the assemblage from the previous excavations combined with the challenges in ventilation and structural integrity that would have been faced if using fire within the main chamber indicated that the cave was not utilised for industrial purposes. The combination of natural cave collapse and the presence of a contiguous charcoal rich deposit seem to have artificially created what appeared to be individual hearth features during the 1920s excavations, further supporting the conclusion that the cave was not used for habitation, even temporarily.

It became evident during the 2010 excavation that the possibility that Read's Cavern went through multiple phases of use needed to be considered. The presence of charcoal lenses and faunal remains within the mostly sterile layer of clay forming the cave's floor, as well as the possibility of flint having been found in the cave in the past, suggested an earlier phase of

use. Confirming this possibility would require having some of the faunal remains found within the 'cave earth' stratum dated, as unfortunately the worked flint associated with the site cannot be located. A later use of the cave has also been acknowledged as a possibility. As noted previously many of the human remains found during the original excavations of Read's were surface finds, or covered in a very thin layer of flowstone. Despite some of the human remains having been found in the black, charcoal rich Iron Age deposit it is clear that the majority were found on the surface or within a later deposition. The implication is that these bones were deposited during a separate event occurring after the main Iron Age deposit and subsequently deposited into the main cavern by natural processes. No dates have been produced for any of the human remains from Read's Cavern, and dating would be required in order to confirm this later phase of use.

The discovery of Read's Cavern was through the excavation of the cliff face near what was then called swallet 'E' (Palmer, 1920). This suggests that swallets and swallet like depressions form at the cliff face outside Read's Cavern when the cavern is sealed and the seasonal water-course does not enter directly into the cavern itself. A number of swallets, swallet like depressions and swallet like caves in the Mendip Hills and the surrounding region contain deposits of human remains from various ages spanning from the Mesolithic to the Medieval period (Clark and Levitan,



Figure 10. *Decorated Ceramic:* This fragment of ceramic was recovered from the charcoal rich deposit in Trench 1. The decoration is consistent with decoration on pottery found during the 1920s excavations which was identified as Glastonbury ware.

1987; Levitan and Smart 1989; Ellis, 1988; Mark Horton *pers. comm.*; Mullan and Boycott, 2004; Murray, 2010). In general these swallets have relatively vertical shafts that have filled up with debris which includes both natural and intentional deposits. The human remains recovered from Read's Cavern may be the result of a similar geological and depositional process. Fishmonger's Swallet, a swallet similar to those on Mendip, shares some important characteristics with Read's Cavern. The swallet has a relatively vertical drop down to the cave floor which has been filled up with debris over the course of two thousand years. The interpretation of the site was that items, including human and faunal remains, were deposited into the swallet, where eventually natural cave actions transported them to the bottom of the shaft and a small cavern (Mark Horton *pers. comm.*). The assemblage at Fishmonger's contained both human and

animal remains with a striking number of recorded canines dated to the Iron Age. The human bones showed evidence of trauma and disease as well as multiple butchery marks, interpreted as possible evidence of cannibalism (Mark Horton *pers. comm.*). At Read's Cavern evidence of trauma and disease was recorded within the faunal assemblage including evidence of healed fractures as well as disease in the form of low bone density and deformation. Langford (1922)



Figure 11. *La Tene Style Brooch* – This is a top view of the brooch recovered from the charcoal rich deposit in Trench 1. Preliminary identification of the brooch suggested that the brooch shared similarities with some La Tene continental brooches.

claimed that one human fibula from Read's Cavern showed evidence of butchery, however this was from the Iron Age charcoal rich deposit. The human remains at Read's Cavern also included those of a child (Langford, 1922). The similarities between the assemblage of human remains found in Read's Cavern and that recovered from Fishmonger's Swallet, excluding evidence of butchery, in conjunction with the location, condition and disarticulation of the human remains leads to the conclusion that similar depositional practices were taking place at both sites. It is likely that some of the human remains at Read's cavern represent

bodies deposited into a swallet when the cave was inaccessible most likely during the Late Iron Age.

The Iron Age deposit within Read's Cavern has been recognised as a layer of black, charcoal rich material. The deposit in general contains a large amount of animal bone, as well as a small amount of pottery and a few metal artefacts. None of the area investigated around the charcoal rich deposit displayed evidence of concentrated burning, including no evidence for the oxidation of the clay layer below the charcoal deposit. However, modern fires recorded in the cave have left a clear area of oxidation where coming in contact with the natural stratigraphy. Additionally, only a very small number of the faunal remains and artefacts from this deposit showed possible evidence of having been exposed to fire. It has been considered that this deposit shows some characteristics with the large midden deposits from the Late Bronze Age and Early Iron Age transition in the Vale of Pewsey, referred to as 'black earth' sites (Tubbs, 2009 p.106). However, there are also some differences that indicate that the deposit within Read's Cavern represents an alternative activity, rather than classic middening. At present there

is no permanent Iron Age settlement linked with Read's Cavern, while Late Bronze Age/Early Iron Age (LBA/EIA) midden sites are often linked to settlement (Bradley, 2007 pp.232-233). Though the black deposit in Read's contains substantial amounts of charcoal and large amounts of animal bone, the deposit does not share the humic quality of the midden material found at the LBA/EIA 'black earth' sites, nor does it seem to contain the stabling waste (Tullet, 2008 p.12) Further analysis will need to be completed on the charcoal rich deposit from Read's to determine its exact nature. The other important characteristic of the large LBA/EIA 'black earth' midden deposits is the occurrence of pottery spreads (Waddington, 2008 p.121). There was no evidence for such spreads during the 2010 excavation, though this is possibly due to the small amount of pottery recovered.

A significantly larger pottery assemblage was recovered during the 1920s excavations, large enough that UBSS was able to reconstruct a significant number of vessels (Tratman, 1924). The information provided by the original excavation reports does not provide adequate information to determine how many vessels, if any, were found complete, if any were broken in-situ within the cave or if there were any pottery spreads. The reports seem to imply that the vast majority of the pottery was recovered in fragments and then reconstructed (Langford, 1922; 1923; Tratman, 1924). Similarities and differences



Figure 12. *La Tene Style Brooch:* This is a side view of the singular brooch recovered from the charcoal rich deposit in Trench 1. No comparable British brooch has been identified based on its small size and seemingly unique construction techniques.

between the charcoal rich deposit at Read's Cavern and the large midden deposits in the Vale of Pewsey aside, what remains significant is that placing midden-like material within a cave, like compiling extremely deep and extensive middens, potentially represents more than just the daily refuse practices of a community (Tullet, 2008 p.17).

The charcoal rich deposit at Read's Cavern seems to be the result of symbolic structured depositional practices taking place over a relatively unknown period of time. Considering components of this deposit individually may give further insight into the meaning and significance placed on the materials and the cavern itself (Needham and Spence, 1997 p.86). The charcoal and ash is the main component of the deposit. This may be the result of a number of activities including: cooking, heating, industry, land clearance, soil preparation or specific ritual which may call upon metaphors of transition and transformation and include concepts such as fertility, cleansing, rites of passage and funerary beliefs. The symbols and metaphors related to fire and burning are broad and encompassing. However, the charcoal and ash within the deposit

are also key in identifying it as possible midden material. The faunal remains also have numerous social interpretations. Those remains which show evidence of butchery may be the result of dietary consumption, conspicuous feasting or even ritual sacrifice and butchery. The ceramic assemblage on its own may reflect simple refuse or it could have greater symbolic and metaphoric meaning as a votive deposit, a decommissioning or as containers for physical or metaphysical material. The original excavations of Read's Cavern recovered a number of metal artefacts which could be considered agricultural implements including a sickle (Palmer 1921a). Though many of the metal objects from the 1920s excavations seem to be associated with industry and agriculture, objects such as the brooch are often included in votive deposits. Individually the metal objects may have had specific symbolic meaning, or some of them could reflect a cache or hoard of tools. What is missing from the deposit are the organic materials such as cloth, which may have been present and have not survived. On their own, the specific materials contained within the Iron-Age deposit can be explained by relatively mundane social practices. However, taken as a whole, the deposit is difficult to explain through such practices. Therefore the terms midden or middening seem to be highly inadequate to describe the deposit in Read's Cavern.

When placing the Iron-Age charcoal rich deposit within its natural setting an alternative explanation to the deposit representing middening practices becomes plausible. In considering the significance of an underground and separated space combined with a possible door on the entrance, it may be that the cavern was utilised to contain and/or negate the truly profane. The profane is quite different from the mundane and is generally defined by what it is not. Profane things are those things which social interdictions protect sacred things from and which also must remain separate (Durkheim, 1972 p.13). Taboos, certain rituals and mediators provide the enactment of the separation between the sacred and profane. Objects that become contaminated, polluted or unsanitary through social interactions may socially require cleansing, negating or separation and containment. Therefore objects may have been placed within a cavern as a way of securing and negating the effects of contamination. Charcoal and ash may have further negated and contained such contamination. Avoidance rituals, taboos and spatial or object mediators, in this case the cavern and charcoal, can be behavioural responses to perceived danger, both physical and metaphysical, and are not only psychological coping methods, but also a means of reducing anxiety and uncertainty (Poggie Jr. *et al.* 1976 p.68; Van Ginkel, 1990 p.74). Concepts of contamination and cleanliness are often associated with the disposal of refuse, and should be considered directly associated with avoidance rituals and taboos (Perry *et al.* 2010). Therefore the activities that took place within Read's Cavern may have interacted with metaphors related to life, death, fertility, sanitation and transformation.

The defining aspect of Read's Cavern as a space is its lack of visibility, as both a feature in the landscape and as a place in which it is difficult to penetrate the darkness. Attempting to understand the use of Read's Cavern going forward it will be important to explore the possibility of Read's as a place, not for domestic or industrial use, but as a space on the periphery of perception. Further, small scale, excavation may be required not only to record the archaeology within the cave should the crevice continue to expand, but also to refine our understanding of the cave's phases of use. However, to truly get to grips with the use of Read's Cavern a more transparent connection between Read's Cavern and the Iron Age landscape surrounding the site will have to be established in order to understand the connections to the cultural practices creating the metaphors in which Read's Cavern was operating.

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APPENDIX

TESTING OF BONE SAMPLES FOR
MYCOBACTERIUM TUBERCULOSIS DNA

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Two samples of rib from the 2010 Read's Cavern excavations which showed pathological changes possibly associated with TB were submitted for testing. Unfortunately they were negative for *Mycobacterium tuberculosis* DNA. There are several possible reasons for this.

1. The samples were genuinely negative.
2. The samples were positive, but were not sampled from the correct site on the bone (in an infection bacteria are not distributed evenly but are localised).
3. The samples were positive but sufficient amplifiable MTB DNA has not survived.

In order to detect MTB DNA it is necessary to perform a polymerase chain reaction (PCR) which uses short lengths of specific oligonucleotide primers, plus DNA polymerase and all the necessary reagents to synthesise millions of copies of a targeted MTB DNA sequence. Only a small amount of a sample is used. This is because if a larger amount of sample is extracted, this can lead to PCR inhibitors co-extracting alongside the DNA. These can be inhibitory. In normal use, it has been found that the best results come from taking 20-50 mg of bone scrapings. For the Read's Cavern sample 10, 25 mg from T2C4 rib section was taken, and for TR2 C5 bone, 42 mg.

Four extracts were produced from each sample: a silica eluate with or without pretreatment with PTB (N-phenacylthiazolium bromide, which facilitates DNA strand separation in old DNA that may have become chemically cross-linked); and an isopropanol precipitate of the silica supernatant (large and small volume tubes).

The extracts were examined using the Corbett RotorGene platform for real-time PCR. The *Mycobacterium tuberculosis* complex-specific target region used in specific fluorescent

probe assays was a 72 bp IS1081 locus (6 copies/cell). All were negative, although some other samples examined using the same PCR mix were positive, so the reaction was working. These have not been rechecked, because the first set of results are normally the best as stored samples have to be frozen and thawed and this damages the old DNA.

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