# GETTING IT RIGHT: NO MIDDLE PALAEOLITHIC AT KING ARTHUR'S CAVE!

by

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## with an Appendix by R.M. Jacobi

## ABSTRACT

In a reassessment of the site published a decade ago, the suggestion was made that King Arthur's Cave had been visited by hunters during the Middle Palaeolithic (ApSimon, *et al.* 1992). The purpose of this note is to withdraw that suggestion; the sealing of artifacts below stalagmite on which it relied is shown to be doubtful and the faunal and archaeological evidence is against it. It is alternatively suggested that the putative Middle Palaeolithic artifacts are Late Upper Palaeolithic. A firm suggestion for the location of the critical context is made, with the implication that doubts about the original excavator's account were unwarranted, and that potential exists for further investigation and recovery of speleothem samples for dating.

## INTRODUCTION

King Arthur's Cave, a well-known palaeontological and archaeological site, is located in the Wye Valley, in Herefordshire, about 21 km south-south-east of Hereford and 5 km northeast of Monmouth (NGR SU5458 1558). The topographic and geological aspects of the site are dealt with in the 1992 paper of ApSimon *et al.* and it is sufficient to note here that the cave lies at about 110 m above OD, roughly 90 m above the present valley floor, and that it is situated on the side of a short dry valley which ends in the steep cliffs and bluffs of the Wye Valley gorge.

The suggestion of a Middle Palaeolithic presence at King Arthur's Cave made in the 1992 paper relied on the account of the stratification of the cave given by the original excavator, the Rev. William Symonds (Symonds, 1871; 1872a; 1872b). He claimed to have discovered flint implements and the remains of extinct animals in a deposit of cave earth (his Cave Earth, No. 2), sealed beneath a floor of stalagmite about 2 ft (0.6 m) thick. The full stratification, as described by Symonds, is summarised below, using the unit numbering adopted in our 1992 paper.

- Unit 1: Superficial soil and rock debris.
- Unit 2a: Thin band of decomposed stalagmite.
- Unit 3a: Cave Earth No. 1, with flint knife and flakes, cores of chert and Silurian quartz rock and remains of extinct animals, about 3 feet thick (2 feet Symonds 1872), (c. 0.6-0.9 m).
- Unit 3b: Thin stalactitic (sic) floor.
- Unit 4: Stratified red sand and silt [Red Silt], containing rolled pebbles, 3 or 4 feet thick, (c. 0.9-1.2 m).

(>0.6 m).

- Unit 5: Thick stalagmite floor, more than 2 feet thick,
- Unit 6: Cave Earth No. 2, separated every few feet by layers or thin floors of stalagmite, containing several flint flakes and remains of extinct animals, quarried to depth of 17 feet, bored to the depth of 20 feet, (c. 5.2 6.1 m).

Units 5 and 6 were in a 'deep pit'; in this context 'bored' probably meant probing with a steel bar, hammered into the deposit. Borers, as used in Cornish tin mines, were "... steel bars two feet long sharpened at one end ..." (Hind, 1907, p. 134). Symonds' depth measurements for Unit 6 were probably taken from the top of the stalagmite, since one source (Anon., 1872a, p. 75) refers to excavation to a depth of about 24 feet.

The "thin band of decomposed stalagmite", Unit 2a, can be equated with the tufaceous speleothem, Unit 2g, present in the Alley (ApSimon *et al.* 1992, p. 198, Table 3). Symonds' Cave Earth No 1, our Unit 3a, is now represented by traces on the cave walls at the southern end of the Main Chamber; the Red Silt, our Unit 4, is present in holes and pipes at the back of the Main Chamber and in traces on the walls, where it underlies the upper cave earth. None of Symonds' other layers can now be identified there.

The excavations by the Society in 1925-9 (Hewer, 1926; Taylor, 1928), identified the continuation of Symonds' Cave Earth No. 1 outside the cave, where our Units 3c and 3d contained a fauna, including hyaena, woolly mammoth, horse and woolly rhinoceros, which together with radiocarbon dates in the range, 34,000 to >39,500 BP (Hedges, *et al.*, 1989; 1991; ApSimon, *et al.*, 1992, p. 203, table 5), indicated that it was attributable to the middle stage of the last glaciation - the mid-Devensian, Oxygen Isotope Stage (OIS) 3.

From this it followed, if Symonds' observations were correct, that with time allowed for the formation of the intervening stalagmite floor, the artifacts from the lower cave earth, Symonds' No. 2, our Unit 6, must have been significantly older than 40,000 BP, and must have been Middle Palaeolithic, left there during a visit to the cave by Neanderthals.

ApSimon, having identified two flint flakes and three chips in Gloucester Museum which fitted Symonds' description of the flints that he found in the lower cave earth, described and illustrated the flakes in the 1992 paper, assessing their character in terms of known patterns of Middle Palaeolithic lithic production. However, there was nothing about them which would in itself have prompted a Middle Palaeolithic attribution, and because they were not marked as coming from the lower cave earth, ApSimon had initially passed them by.

# WHERE WAS SYMONDS' DEEP PIT?

The immediate problem with this conclusion was that it depended on Symonds' account of the stratification, which could not be verified because the site of his 'deep pit' was not apparent and subsequent investigators had been unable to find any trace of the stalagmite floor, or of his lower cave earth.

Taylor's 1928 paper (p. 63, figure 1), potentially located the deep pit at the mouth of the Passage, corresponding to Pit 2 of the 1992 paper (Figure 1). Taylor stated that 8 ft (2.4 m) of back-filled spoil had been excavated there before reaching apparently intact material, but did not claim to have identified either the stalagmite layer or the lower cave earth. Taylor's notes (archive) suggest that in 1929 he excavated a further foot or more, in barren brown sandy silt, to a total depth of about 2.7 m, at which point Pit 2 had become a narrow rift. As re-examined by Taylor and ApSimon in 1952, Pit 2 appeared as a vertical pot, about 4 m long by 2 m broad, abutting the northern side of the cave mouth, but no evidence of a stalagmite floor or of remnants of one was observed, either then or later, though after 1959 the pit was full of spoil and inaccessible.

Correlation of Pit 2 with Symonds' deep sounding was however ruled out on two counts: one, that the depth recorded in it was clearly insufficient to accommodate the depth



**Figure 1.** King Arthur's Cave: General Plan of excavations by U.B.S.S. (modified from ApSimon et al., 1992). 'X' marks the probable site of Symonds' 1871 'Deep Pit'; Pit 1 was probably dug by Symonds in 1872 in an attempt to excavate more of his 'Cave Earth No. 2'.

reported by Symonds; and, two, that Pit 2 is in the cave mouth, whereas Symonds stated that the excavation of his deep pit was carried on by candlelight, with "every barrow-full of earth and debris carefully examined by daylight at the entrance." (1871, p. 435).

In 1959, Taylor re-excavated most of the western half of the Main Chamber in an unsuccessful attempt to find Symonds' deep pit. The only substantial area left uninvestigated was at the mouth of the Alley (H on Figure 1), which Taylor believed he had already examined in 1929. The failure to find the deep pit led to the abandonment of Taylor and ApSimon's draft report, since Taylor was quite clear in his own mind that in 1929 he had investigated the other possible site, the Second Chamber, finding only a shallow depth of barren silty sand above a rock floor.

When ApSimon returned to the site in the 1980's to re-survey and examine features of the cave, in preparation for the 1992 paper, he was influenced by a report of a visit to the cave by the Cotteswolds Naturalists' Field Club on 19 June, 1872 (Anon., 1872b, p. 274), which erroneously located the deep pit somewhere within the eastern arm of the cave, the Passage and Second Chamber of UBSS publications, then nicknamed 'the Bear's Den'. Thus, other possibilities having apparently been excluded, the site of the deep sounding had to be in the Second Chamber, the only other place where excavation would have had to be carried on by candlelight. Unfortunately, except for a small area of what seemed to be solid rock at its southern end, he found the floor of the chamber inaccessible, buried beneath sandy earth and rock debris, derived from clandestine excavation of the previously unknown alcove in its north-west corner. Traces on the walls of the chamber suggested that there had never been more than 2 m thickness of deposit in it; too shallow to match the depth in the 1871 report, for which a further 11 ft (3.3 m) of deposit would be needed. Pending further excavation, the 1992 paper retained this hypothesis of the site of the sounding, noting that the abundant calcite in the walls of the chamber might possibly have been mistaken for stalagmite and the matter was only finally settled by Prof. Barton's excavations at the cave in 1996 (Barton, 1996), when removal of the sandy fill of the Second Chamber showed that Taylor had been right, the rock floor of the chamber was continuous at a depth which showed conclusively that this was not the site of the deep sounding.

At this point it should have been obvious to ApSimon that the site of Symonds' deep pit must have been the area at the mouth of the Alley, centred on co-ordinates of about 16 m east and 9-10 m north on the plan (Figure 1), the only possible area in which he had not seen the rock floor exposed; in this case Taylor also had been mistaken. Support for this conclusion is provided by a contemporary photograph taken looking into the Main Chamber which shows a labourer loading angular blocks, probably stalagmite, into a wheelbarrow for removal to a dump at the cave mouth. Behind him is a heap of rubble, in front the irregular edge of a shallow excavation sloping towards the east wall of the cave, just at the supposed position of the deep pit (Helme, 1989, p. 128; Figure 2). This photograph was probably taken in July 1871, after the breaking up of the stalagmite floor by gunpowder (Sockett, 1960) or dynamite (Helme, 1989); if true, state-of-art technology since dynamite was invented only in 1867. It may be noted that the adjacent Alley is the only place in the cave where speleothem is conspicuously present today.

Further support comes from the report of the visit by the Cotteswolds Naturalists in 1872 (Anon., 1872b), when Symonds showed them an excavation 10 ft (3.0 m) deep, exposing the sequence of upper cave earth and Red Silt, evidently the trench dug by him in 1871, "to discover its [the Red Silt's] physical position to the cave earths." (Symonds 1871, p. 436). The report adds that the underlying formation, i.e. the stalagmite, "had not yet been opened but will be .... in the ensuing season." Probably the 1871 deep sounding had already been back-filled for



**Figure 2.** King Arthur's Cave: Excavation in progress, 1871. The broken blocks that the workman standing in the Main Chamber is loading into the wheelbarrow are probably from Symonds' stalagmite floor. The edge of the deep pit may be to the left of him. Photograph: © Monmouth Museum, Monmouthshire.

safety's sake, perhaps with the blocks of stalagmite which later investigators have signally failed to find; while Pit 1 in the cave mouth should represent the 1872 attempt to break through the stalagmite again.

#### PROBLEMS IN INTERPRETATION

Though these suggestions, if proved correct, provide a satisfactory answer to a longstanding question, there are still problems to resolve. The suggestion in our 1992 paper that formation of the stalagmite might possibly be correlated with recorded speleothem growth frequency peaks at c. 40 ka and from 48 to 60 ka BP, which would allow a substantial period for formation of the stalagmite, may still be valid, but the consequential hypothesis that the stalagmite separated a much older deposit from a much younger one can no longer be entertained. There are three reasons for this. The first reason is that the faunas from the upper and lower cave earths are essentially similar, with hyaena, lion, mammoth, horse and woolly rhinoceros occurring in both. The only differences are that cave bear was reported from the upper cave earth, but not the lower, and giant deer, red deer and bison from the lower cave earth, but not the upper. The common elements identify this fauna with Currant and Jacobi's Pin Hole mammal assemblage, which appears in the Mid-Devensian, OIS 3 (Currant and Jacobi, 2001). The second reason is that the hypothesis would push back the age of the lower cave earth to OIS 4, whereas present evidence is that Britain was uninhabited by humans from OIS 6 to the beginning of OIS 3 (Currant and Jacobi, 2001; Ashton and Lewis, 2002). The third reason is that Dr Roger Jacobi now identifies the putative Middle Palaeolithic flakes as Late Upper Palaeolithic core-trimming flakes (see Appendix, below).

The unavoidable conclusion is that the evidence does not require artifacts found 'beneath' the stalagmite to be Middle Palaeolithic; therefore the suggestion made in the 1992 paper must be withdrawn. Although Middle Palaeolithic artifacts could have been present in Unit 3, given the dates from it, there is nothing in the recorded material for which such attribution is plausible (see Appendix below).

The interpretation of the deposits in the Main Chamber was thoroughly discussed in our 1992 paper; the reappraisal above requires some further brief comment. Due to the presence in the Red Silt of pebbles deriving from Lower Silurian and igneous rocks from around Rhayader and Builth, Symonds thought that it had been deposited by a high-level predecessor of the Wye or a tributary; W.C. Lucy (quoted in Symonds, 1871, p. 438), thought that the deposit might have been washed in by melting snow and ice and the pebbles derived from older gravels, an interpretation close to that in our 1992 paper. This, the oldest deposit in the Main Chamber, had probably been already largely eroded before deposition of the lower cave earth began, traces of it on the walls do not extend beyond 6 m N, 2 m short of the putative site of the deep pit (see, 1992, fig. 6). Though Symonds did not observe one, there must have been a break or hole in the stalagmite floor through which material of the upper cave earth could pass down to a void below it, probably through water draining to a lower level since the pit will have been at about the lowest point of the cave floor. The reported presence of thin layers of stalagmite in the lower cave earth suggests that the process was discontinuous, while the presence in it of Late Upper Palaeolithic flakes, even if "principally from the upper layers" (Symonds, 1871, p. 434) shows that the final stage of filling was no older than Late Devensian; these flints must have been derived from the 'internal' equivalent of Units 2c and 2d on the Platform outside, which was not recognised by Symonds because of previous disturbance by iron miners. Figure

8 of the 1992 paper shows the pit close to its probable position, though the label should read, "Symonds' deep pit (Main Chamber)".

One concluding point, Symonds was disconcerted by the discovery in his deep pit of a hone or whetstone (not so far located), which the leading expert of the day, John Evans, judged neolithic rather than palaeolithic and probably used for grinding the edges of polished stone axeheads. Symonds' response noted that it had not been seen in situ, but had been mistaken by the workmen for a piece of stalagmite and thrown up from the deep pit in the presence of his assistant, just before Symonds' arrival on that day. This "was directly after I had directed the removal of a quantity of debris from the side of the fissure, [to] outside the cave, in order to get at more relics from the upper cave earth, on which a mass of rock had fallen. The pit ... lay right in the way of the fall of some of this upper debris from the side of the cave, and this whetstone may have fallen in from the debris." (1871, p. 436). Now, as then, this raises the question of a hoax or of disturbance, with possible implications for other finds. While Symonds was reluctant to accept either possibility, there is now no way of determining the truth, but his explanation is a possible one.

## THE PLATFORM

The excavations by Prof. Barton on the Platform in front of the cave yielded substantial new information (Barton, 1995; 1996; 1997), which it would be inappropriate to discuss in advance of his definitive report. It should, however, be noted that his discovery in the 1995 excavations of deep layers of redeposited material in an area corresponding to the outer limit of the UBSS excavations on the Platform (Figure 1), shows that ApSimon was wrong in believing he had located undisturbed deposits there in 1952. Taylor doubted this and the exploratory trench was very narrow. This means that the northern end of the reconstructed section A-B (1992, fig. 5), is unsupported by height data, and the outward slope of the deposits may have been steeper than shown.

## CONCLUSIONS

While the principal conclusion, that there was no Middle Palaeolithic visit to King Arthur's Cave is a negative one, the discussion has a positive aspect in that the probable site of the intriguing deep pit has been identified, opening the way for its reinvestigation (Taylor and ApSimon's cross-section drawing (archive) suggests about 0.9 m of old spoil covering its site), and for recovery of samples of stalagmite for dating. The Society has among its members the necessary expertise in all the specialities needed for this and it is to be hoped that it will be done.

The discussion has also vindicated Symonds' account and shown that doubts entertained about it were unwarranted, a welcome conclusion. Symonds was an experienced geologist, a Fellow of the Geological Society, with published geological papers to his name. His assistance is acknowledged by Sir Roderick Murchison, Director of the Geological Survey, in the 3rd edition of his monograph, Siluria (1859), for which Symonds compiled the index, and perhaps also for previous editions, from 1839 on. In 1874 he seems to have been considered for the Wollaston Chair of Geology at Oxford (Guise, 1874, p. 72). He had visited cave sites and excavations in Britain, at Gower with Lyell; in Belgium, visiting caves at Lesse including the Trou de la Naulette, site of the 1866 discovery of a neanderthal jaw (Guise and Symonds, 1866; Guise, 1867; Boule and Vallois, 1957, p. 198), and where he also interpreted cave sediment as fluviatile; and France, with visits to the Baoussé Roussé caves, at Grimaldi, near Mentone, site of sapiens fossil discoveries from 1872 on (Cornewall, 1874; Boule and Vallois, 1957, p. 275-6). His publications show his breadth of knowledge and it was fortunate that he investigated King Arthur's Cave, recovering evidence which might otherwise have been lost to casual digging.

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# APPENDIX: Notes on three flint artifacts from King Arthur's Cave by Roger Jacobi

# ApSimon et al., 1992, fig. 12.1: from Unit 6, the Lower Cave Earth?

This is a flake from rejuvenating the striking platform of a large core. This had been (in part at least) facetted and the stepped and hinged terminations left by the removal of secondary platform preparation flakes and chips are clearly visible in the drawing. This flake can be matched in Late Upper Palaeolithic (Creswellian) collections from Kent's Cavern, Gough's Cave and Robin Hood Cave, and this is its most probable age. The piece is of interest in showing the size of cores still available to Creswellian knappers, even far from the flint source (*cf.* Creswell Crags).

# ApSimon et al., 1992, fig. 12.2: as 12.1.

This is also a platform preparation flake (cf. core tablet) from a core with a partially facetted platform. There is no reason why this should not also be Late Upper Palaeolithic.

ApSimon et al., 1992, fig. 10.38: from Unit 3c, the Mammoth Layer.

This is a flake (believed destroyed during World War II) extensively damaged by processes most likely to be associated with debris flows or cryoturbation. From its condition and context this piece might be Early Upper Palaeolithic or Middle Palaeolithic. Without a longitudinal profile, it is impossible to confirm it as a biface thinning flake. While this piece, from its stratigraphic position is highly likely to be the oldest piece from the site, drawing any conclusions from a single poorly preserved (and now lost) flint would be foolish.

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