# BEAKER AGE DEPOSITS ON MENDIP AT CHARTERHOUSE WARREN FARM SWALLET AND BOS SWALLET

#### by

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#### ABSTRACT

The unusual nature of the stone deposits that filled the lower part of the Entrance Shaft of Charterhouse Warren Farm Swallet (clean more or less rounded stones, mostly less than 10 kg weight, with more void than matrix between them) demands that they were emplaced by human agency. It is argued that the local Beaker and/or Neolithic people collected the stones from their fields and dropped them into the shaft, either for agricultural improvement or in connection with ritual burials, or both.

The stratigraphy of the Beaker Age deposits at Bos Swallet is reviewed. It is concluded that a group of Beaker 'hearth layers' on the lower slopes of the surface depression was in part disturbed by burrowing animals, not by miners.

The report in these *Proceedings* on Charterhouse Warren Farm Swallet (Levitan *et al.*, 1988) deals comprehensively with deposits in the cave system, but is necessarily somewhat tentative with regard to the stratigraphic sequence in the Entrance Shaft. Excavation of the Entrance Shaft had begun in 1972 as a simple cave dig; fortunately the diggers realized the archaeological importance of the site and kept increasingly careful records, as well as preserving half of the deposit undisturbed for future examination (Audsley, 1974a, 1974b; Chappell, 1976; Everton, 1975). They stopped work at 21 m depth in a rich bone-bearing deposit. The shaft was largely backfilled before the comprehensive study began in 1984.

The prehistoric layers in the Entrance Shaft extended from 6 m to 21 m depth, forming four units of which Horizons 2 and 4 were rich in bones and artefacts. Horizons 1 and 3 (numbered from the top down) comprised all but 2 m of the 15 m total thickness and were archaeologically almost sterile. All the accounts of Horizons 1 and 3 allude to their remarkable texture: 'medium-sized, loosely packed cobbles' (Audsley, 1974a, p. 9); 'the clay and cobble fill, with occasional pebbles of Old Red Sandstone, had continued unabated' (Audsley, 1974b, p. 83); '... clean limestone cobbles. This well washed deposit ...' (Chappell, 1976, p. 61); 'coarse angular limestone boulders throughout, the interstices of which were either clean washed or partially filled by sediment' (Levitan *et al.*, 1988, p. 178); 'generally clean-washed stones passing into a distinct ''clay layer'' ' [Horizon 4] (Levitan *et al.*, 1988, pp. 200–1).

I visited the dig on 11 September 1976, when it was at maximum depth, before backfilling had begun. Later that day I recorded that at the bottom 'the fill was largely clean stones, with much more void than clay between them. Limestone greatly exceeded chert and sandstone was very rare. Bones

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appeared more common than either chert or sandstone, an antler (shattered but complete) was awaiting collection, and at least 20 other bones, at least half of them complete, were visible. Most stones showed subsoil-rounding features, and almost all were less than 10 kg weight. No sign of layering . . . There was no sign of water deposition of the fill. This kind of fill has apparently been typical all the way down. The nature of the field above is such that a freak flood, or solifluction, would send far more mud than stones down the hole. I suggested therefore that the stones had been collected locally and thrown down—associated with agriculture or with ritual burials? This would fit with the very rapid filling rate in Bronze Age times. Pete [Cousins] suggested that an original large mud component had been washed on down, but this would cause internal collapse and the archaeological finds haven't shown signs of disturbance'.

On the extensive dumps of material dug from the shaft before 1977 clean limestone cobbles, often showing rounding, were the dominant component. Levitan *et al.* note that Debris Cone 1, which entered Bone Chamber from the Entrance Shaft, 'is made up of a different material [to that in the rest of Bone Chamber] as there is an observable change in the size of clasts in the two deposits (FIG. 29)'. Debris Cone 1 is described as consisting of 'coarse angular grey limestone [clasts]' but the detailed FIG. 29 shows convincingly that it comprises closely packed pebbles, cobbles and small boulders, many of which (as illustrated in the photograph FIG. 16) have rounded shapes. There is little or no interstitial mud. Debris Cone 1 is, therefore, very similar in composition to the clean stone deposits of Horizons 1 and 3 in the Entrance Shaft.

Several lines of evidence combine to demonstrate that the stone deposits of the Entrance Shaft did not accumulate there by natural means. The authors suggest (p. 199) that they appear 'to be the result of freeze-thaw activity', and that much of the fill 'is presumably weathering and collapse of the limestone of the shaft'. This is unlikely because: a) the Bronze Age is not known as a period of particularly active frost weathering; b) *in situ* breakdown of limestone produces sharply angular debris with a wide range of clast sizes, not a deposit of partly rounded cobbles; c) the shaft walls, I noted on my 1976 visit, exhibit 'vertical fluting mildly developed except on the overhanging bits, which are scalloped . . .', and are thus unlikely to have suffered major collapse since the shaft was last an active phreatic conduit; d) few if any natural processes would be capable of filling the lower 24 m of the Entrance Shaft with clean stones, of particular forms and restricted size range, largely unaccompanied by the soil and clay that is the dominant constituent of the ground surrounding the shaft mouth, during the geologically short duration of, at most, 'much of the Neolithic and Bronze Age periods, potentially more than 2,000 calendar years' (Levitan *et al.*, p. 230).

On the other hand, the restricted size range of the clean stones is precisely the size range of stones that are easily collected and carried by people. Handpicking of stones from arable fields was a common practice on Mendip until recently (sinkholes in some areas have scree-like slopes where loads of stone have been tipped into them) and it is a practice still favoured by gardeners. Once collected, the stones are typically piled into a heap (sometimes based on a rock outcrop) or dumped into a hole. With determined effort, large deposits of stones can be accumulated in a short period of time.

Levitan *et al.* refer several times to chronological problems created by the assumption that the placement of artefacts separated vertically by thick stone deposits necessarily spans a long period of time. In one case (p. 208) such a problem would vanish if it could 'be supposed that the intervening deposit

(Horizon 3: see FIG. 8) accumulated extremely quickly (and this seems unlikely)'. On pp. 231–3 the authors do not rule out the possibility that some of the Entrance Shaft fill was deliberately emplaced as one or more 'closures' at the end of burial rituals. Such an origin for the stone deposits would accord with my interpretation of their nature.

I conclude that the Entrance Shaft was open from top to bottom, and largely empty, in early Neolithic times. Given its position in a dry valley floor, the fact that it did not become filled with Devensian head points to it first opening to the sky in the Holocene, perhaps following collapse of a boulder blockage coupled with dissolutional lowering of the soil/limestone interface. If the unroofing event actually occurred in the early Neolithic, it could well have had mystical significance for the local inhabitants.

Could the stones have been collected and thrown down the shaft simply to improve agricultural land? The considerable labour of picking up stones and removing them is commonly undertaken by the occupier of a permanent enclosure as an investment in its future. However, on the Mendip plateau, thin soils with readily won stones only occur in certain areas, such as steep slopes,\* so that finding enough stones to fill the Entrance Shaft was not necessarily a simple task. If agricultural improvement was the only aim, stones could easily have been dumped along enclosure boundaries or in odd corners. There would have been no need to carry them to a distant hole. Thus the incentive is more likely to have been religious than agricultural. It may be relevant, in this context, that a round barrow 1,100 m east-southeast of the cave (ST 50365421) appears to be formed mainly of stones like those in the Entrance Shaft.

It follows from the above arguments that Debris Cone 1 consists of the first stone deposit to have been thrown down the Entrance Shaft. Before it was emplaced, Bone Chamber would have been accessible from the ground surface. Neolithic and Beaker people were quite capable of exploring and even living in vertical caves, as they did in the Ryedale Windypits (Hayes, 1987) but it seems improbable that they would have visited Bone Chamber without breaking off some of the tall delicate stalagmites. On the other hand an animal could survive for some time at the foot of the Entrance Shaft, especially if carrion was available, and such an occupation could have affected the distribution of bones in Bone Chamber.

Discussing the wider significance of the Charterhouse Warren Farm Swallet deposits, Levitan *et al.* refer (p. 232) to the Beaker artefacts of Bos Swallet near Burrington Combe. Following Taylor and ApSimon (1964) they regretfully dismiss the site as of little value because 'Although the material was found in a ''swallet'' shaft, it was very obviously dumped in the shaft and the vessels were incomplete, having originated elsewhere.' The excavations described by Taylor and ApSimon were carried out, 1954–8, on the east bank of the Bos Swallet closed depression, which was about 5 m deep. The Beaker artefacts occurred in two 'pseudo-hearths' that were interpreted as 'a miners' spoil heap as there was mining debris above and below the hearths, and mining activity had extended downwards for at least 30 ft. before the spoil containing the Beaker material was tipped in from the west' (Taylor and ApSimon, 1964, p. 99). No map of the excavations is given, nor is the nature of the 'mining debris' specified.

<sup>\*</sup>Recent developments in pig farming at Kingdown Farm (ST 508541) illustrate the fact that pigs rooting on steep hillsides can unearth quantities of stones having all the characteristics of those in the Entrance Shaft deposits. Levitan *et al.* speculate (p. 226) that 'the Mendip farmers relied mainly on cattle and pigs' in Neolithic and Bronze Age times.

Beaker artefacts were first noted at Bos Swallet during the original cave dig, 1946-48, by boys from Sidcot School including myself. The unshored shaft that was dug at the lowest point of the depression collapsed and was re-excavated and widened, until it was about 5 m in diameter at ground level. Between 16 June and 12 July 1947 the widening operations in the south-east part of the shaft encountered, beneath c. 1.2 m of earth, a black charcoalrich layer about 0.1 m thick containing whitened bone fragments, flints and pottery. I recorded that 'the pottery was probably Bronze Age and was very crude. One piece was decorated with a toothed wheel . . .'. Seven sherds, 3 worked flints and several flint chips were collected from the black layer and eventually were passed to Dr E. K. Tratman. Some of the black layer collapsed into the shaft before it could be examined, but I estimated it to be broadly oval, about 2 m in length, sloping down gently north-west, roughly parallel to the smooth depression floor. Its approximate position in relation to the cave excavation is shown in the survey accompanying the cave description (Stanton, 1951). It faded or thinned out in every direction.

From 1948 onwards the clay walls of the shaft suffered successive collapses exending up the depression sides. The fact that in 1958 'one hearth level, 6 in. thick, was exposed in part of the eastern face of the pit . . .' (Taylor and ApSimon, 1964, p. 98) does not prove continuity with the original black layer. In retrospect I have no doubt that the 1947 black layer, continuous and sharply defined, was *in situ* and undisturbed. Parts of the 'pseudohearths' were evidently equally well defined. Lacking evidence to the contrary, they could have been disturbed by animals such as badgers, which often burrow into the sides of closed depressions, as, for example, the Tynings Farm Swallet depression (ST 476562) at the present time.

The assumption of mining disturbance seems purely speculative. Miners would seldom go to the trouble of tipping excavated hearth material, unmixed with soil, 50 m away from their mine on the far side of a depression, covering it with a thick layer of earth and then reconstructing the smooth curves of the depression which, contemporary photographs show, were uninterrupted by heaps and hollows before digging began in 1946. The assertion by Taylor and ApSimon that mining activity went down at least 30 ft. is puzzling. There was no evidence of such activity in the cave or its entrance shaft.

My interpretation of the original hearth, on 12 July 1947, was that it represented 'just a hut or hearth built in the depression because it was more sheltered there'. The importance of shelter would depend on whether the surrounding land was bare, as now, or wooded, but otherwise I see no reason to qualify that interpretation. On this basis the Bos Swallet artefacts accumulated at a Beaker occupation site with few if any similarities to the Entrance Shaft deposits at Charterhouse Warren Farm Swallet.

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## Note added on 20 May 1989

The above paper was written before the radiocarbon dates obtained by Levitan and Smart (this volume, pp. 390–394) were available. It is gratifying that the two different lines of investigation, namely reasoning based on field observations, and radiocarbon dating, led to the same conclusions. The only significant divergence concerns Horizon 1. In my view, the fact that it was apparently no different from the other clean stone deposits indicates that it too was an artificial filling, rapidly emplaced, but the radiocarbon date on a bone in the middle of Horizon 1, if reliable, demonstrates a slower emplacement rate for this horizon than for the lower ones. Even so, Horizon 1 would have accumulated much faster than the overlying 6 m of post Bronze Age fill, which was not clean stone material.

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