

The Late Pleistocene archaeology of Somerset

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The Late Pleistocene began 130,000 years ago at the beginning of the Last Interglacial complex and ended only 10,000 years ago at the close of the Last Cold Stage. About 20,000 years ago ice reached the Gower coast. It was a time-span during which humans were mostly absent from the British Isles and settlement has been speculated as corresponding to periods of interstadial warmth.

Interglacial faunas may have been present in Britain up to as recently as 80,000 years ago (Stringer *et al.* 1986). As yet, no evidence for human activity has been found associated with these.

By about 74,000 years ago (Mabs Gilmour, pers comm) there had been an abrupt change in fauna to one dominated by bison and with wolf, red and arctic fox, brown bear, wolverine and reindeer (Currant and Jacobi 1997). This mammal assemblage is best documented from Banwell Bone Cave (Rutter 1829) and has been recognised from at least twenty localities in England and Wales as far north as Yorkshire. Again, there is no proven association of human artefacts with this mammal assemblage even though Britain was almost certainly joined with mainland Europe.

By sometime after about 64,000 years ago (Jacobi *et al.* 1998) there had been another change in fauna. Including spotted hyaena, lion, mammoth, woolly rhinoceros, wild horse, giant deer and reindeer, this mammal assemblage is particularly well known from English and Welsh hyaena dens of which one of the most famous is that in the east side of Wookey Hole ravine (Dawkins 1863b).

Human fossils and/or artefacts have been found in apparent association with this mammal assemblage at, at least, thirty localities. The artefacts are Middle Palaeolithic and Early Upper Palaeolithic and settlement was probably encouraged by a sequence of closely spaced interstadials some of which may have allowed the establishment of woodland in south-western Britain.

Middle Palaeolithic artefacts are recorded from three Somerset caves – the Hyaena Den and Rhinoceros Hole (Proctor *et al.* 1996) at Wookey Hole and the lower of two caves exposed at Uphill quarry in the years following 1898 (Wilson and Reynolds 1902; Harrison 1977). Probable Middle Palaeolithic artefacts come from a fourth cave – Picken's Hole at Compton Bishop (Tratman 1964; ApSimon 1986). All these localities are in the Axe valley.

Investigations at the Hyaena Den began as early as 1859 (Dawkins 1862) and have continued to the present day. It was one of the first British localities where an undoubted association between human artefacts and a Pleistocene fauna could be demonstrated. Recent research (Jacobi and Hawkes 1993) suggests that two major depositional units are present in the cave. The older consists of water-laid sediments from which has been collected a fauna of wolf, fox, bear, reindeer and bison. It is tempting to correlate this fauna with that from Banwell Bone Cave. The younger is a subaerial cave-earth and it is this which contained both artefacts and hyaena den.

Most artefacts were found on the north side of the

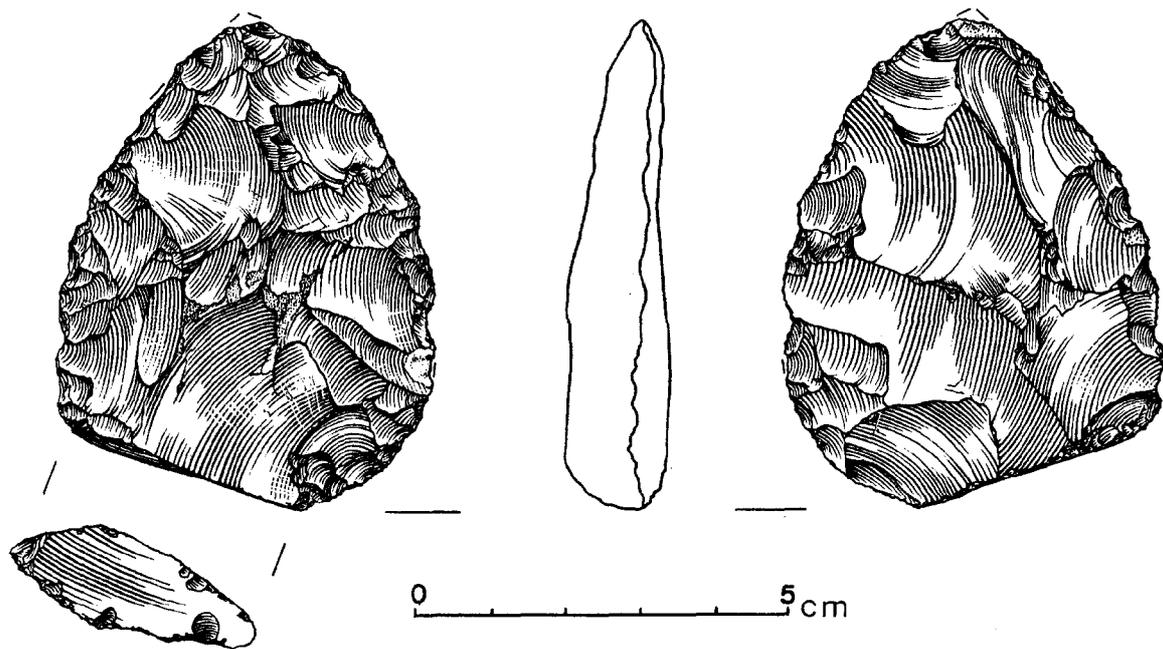


Figure 8.1: Cordiform biface found in the Hyaena Den at Wookey Hole in 1860. Bristol City Museum and Art Gallery. Drawing by Joanna Richards.

cave just inside the present drip-line. This is the driest and sunniest part of the cave. Recent work has recovered chips of humanly modified flint and Carboniferous chert from here. As all the artefacts known from the cave and made from this local chert appear to be Middle Palaeolithic it seems a reasonable extrapolation that the chippings recently found in this part of the cave are also of this age. An incisor of red deer found in association has cut-marks just below its crown inflicted during butchery with a stone tool. It has been dated to $40,400 \pm 1600$ radiocarbon years ago (OxA - 4782; Hedges *et al.* 1996). Middle Palaeolithic artefacts from the Hyaena Den include small bifaces (Figure 8.1) and notched and denticulated flakes. There is only one fragment interpretable as from a scraper and this had been broken into more than three parts by an earlier explorer of the cave. There are many sharp unretouched flakes and intuitively the lithics could be interpreted as well adapted to butchery and the working and repointing of wooden tools such as spears and digging sticks. Abundant bone charcoal indicates the former existence of hearth-spots. The Middle Palaeolithic users of the cave were almost certainly Neanderthals.

With the notable difference that the chert used at Uphill came originally from the Cretaceous Lower

Greensand (most probably by way of a marine or fluvial intermediary) the Middle Palaeolithic artefacts at Uphill and the Hyaena Den are remarkably similar raising the serious possibility that the same human group was using both localities and the intervening Picken's Hole with the Axe valley as a common link (P Pettitt, pers comm). The flint used at the Hyaena Den is, however, from a more distant source. This source remains to be established, but would imply a larger territory than just the Axe valley.

The box-like form of Wookey Hole ravine makes it a natural trap for hunting and the knolls above both the Hyaena Den and Uphill quarry offer wide panoramas to anyone monitoring game. Perhaps these were the features which also attracted the earliest Upper Palaeolithic hunters to the same localities.

A number of bifaces from Somerset which occurred as single finds have been suggested as Middle Palaeolithic on the basis of shape (Roe 1981; Tyldesley 1987). Most convincing as a triangular biface is that from open ground above St Audries, West Quantoxhead. While its shape would fit a date within the Last Cold Stage its condition more resembles that of a river gravel or beach find than one from

open ground (C Norman pers comm).

It seems probable that in north west Europe technologies at the boundary between the Middle and Upper Palaeolithic were characterised by leaf-shaped points almost certainly originally hafted as spear-heads. Some were fully bifacial – such as those from Soldier's Hole, Cheddar Gorge (Parry 1930). Others were only partially bifacial and made from blades – as at Uphill, the Hyaena Den and Badger Hole, also in Wookey Hole ravine. It is uncertain what the significance of this difference might be, but it has been suggested that fully bifacial leaf points may be older than those so clearly made from blades (Otte 1981). Who their makers were also remains an unknown, but it is a real possibility that these leaf points are parts of the last Neanderthal tool-kit to be used in the British Isles.

The largest sample of Early Upper Palaeolithic artefacts from Somerset comes from the Badger Hole and probably numbers only twenty-one pieces – identified on the basis of typology and preservation type from amongst a lithic collection much of which is clearly post-Pleistocene. These twenty-one pieces include flakes, blades, a retouched blade and four leaf points (Figure 8.2 on the next page). The majority have their edges damaged in a way characteristic of disturbance by cryoturbation or sediment transport. Therefore, it remains an open question whether these artefacts were left behind by occupants of the cave mouth or have travelled down slope from above it. Bone fragments, thought to identify a hearth-spot in front of the cave (Campbell 1977), are stained not charred and human bones once thought to be Early Upper Palaeolithic (Oakley *et al.* 1971) have been shown by radiocarbon dating to be Mesolithic (Gowlett *et al.* 1986; Hedges *et al.* 1989).

The earliest European Upper Palaeolithic technology to be clearly associated with anatomically modern humans is the Aurignacian. Its lithics are characterised by nosed and keeled scrapers and burins including a distinctive beaked form (*burin busqué*). Bonework includes lozangic points with or without a split base to aid in hafting. British Aurignacian find-spots are few with the richest being Paviland on Gower (Sollas 1913). Their distribution in western Britain is strongly suggestive of a spread along a littoral which, with greatly lowered sea-levels, extended unbroken from the French Atlantic coast along the eastern margin of the Irish Sea. Not surprisingly, if we are to imagine anatomically modern humans spreading across Europe from an

entry point in the south east of the continent, the British Aurignacian is clearly late in the evolutionary sequence of such technologies. Arguably, Britain was one of the last areas where modern humans displaced aboriginal populations (Pettitt 1999).

The only artefact from Somerset which can confidently be linked to the Aurignacian is the forepart of a flat lozenge-shaped bone or antler point which forms part of the Uphill collection at Bristol City Museum. Nothing beyond provenance is recorded and a literature search has failed to reveal any mention of this object. It is an unique British find and it is hoped that a radiocarbon date will soon be available for it.

At the beginning of this chapter it was suggested that the record of Late Pleistocene human activity in Britain is one with many gaps. A gap in settlement which has been apparent for many years (Campbell 1977) is contemporary with the ice advance which reached its maximum extent about 18,000 radiocarbon years ago. How late before this ice maximum settlement took place has recently been discussed in the context of radiocarbon dates from Paviland which suggest use of that cave as recently as 22–20,000 radiocarbon years ago (Aldhouse-Green and Pettitt 1998). From Somerset there is a date of 24,600±300 radiocarbon years ago (OxA – 3451: Hedges *et al.* 1996) for the basal portion of a bone or antler point found in the 1890s at the Hyaena Den and now preserved in Wells Museum (Tratman *et al.* 1971, plate 22c). There are no associated lithic finds and it seems probable that this object was collected from slope deposits which fill a fissure or unroofed passage at the back of the cave.

The gap in settlement contemporary with the last ice maximum appears to have lasted at least seven thousand radiocarbon years with the earliest resettlement taking place just after 13,000 years ago. It took place in the Late Glacial and contemporary with a sudden rise in both summer and winter temperatures to interstadial conditions (Lowe and Walker 1997). While woodland may have developed in areas of sheltered topography with early soil formation and sufficient rainfall (Coope and Joachim 1980) landscapes were predominantly open. Some of the best evidence for resettlement, together with the earliest radiocarbon dates, comes from Gough's Cave which opens at road level on the left hand (southern) side of the entry to Cheddar Gorge and just above the source of the Cheddar Yeo.

Finds were first made here in 1880 (Sollas 1880)

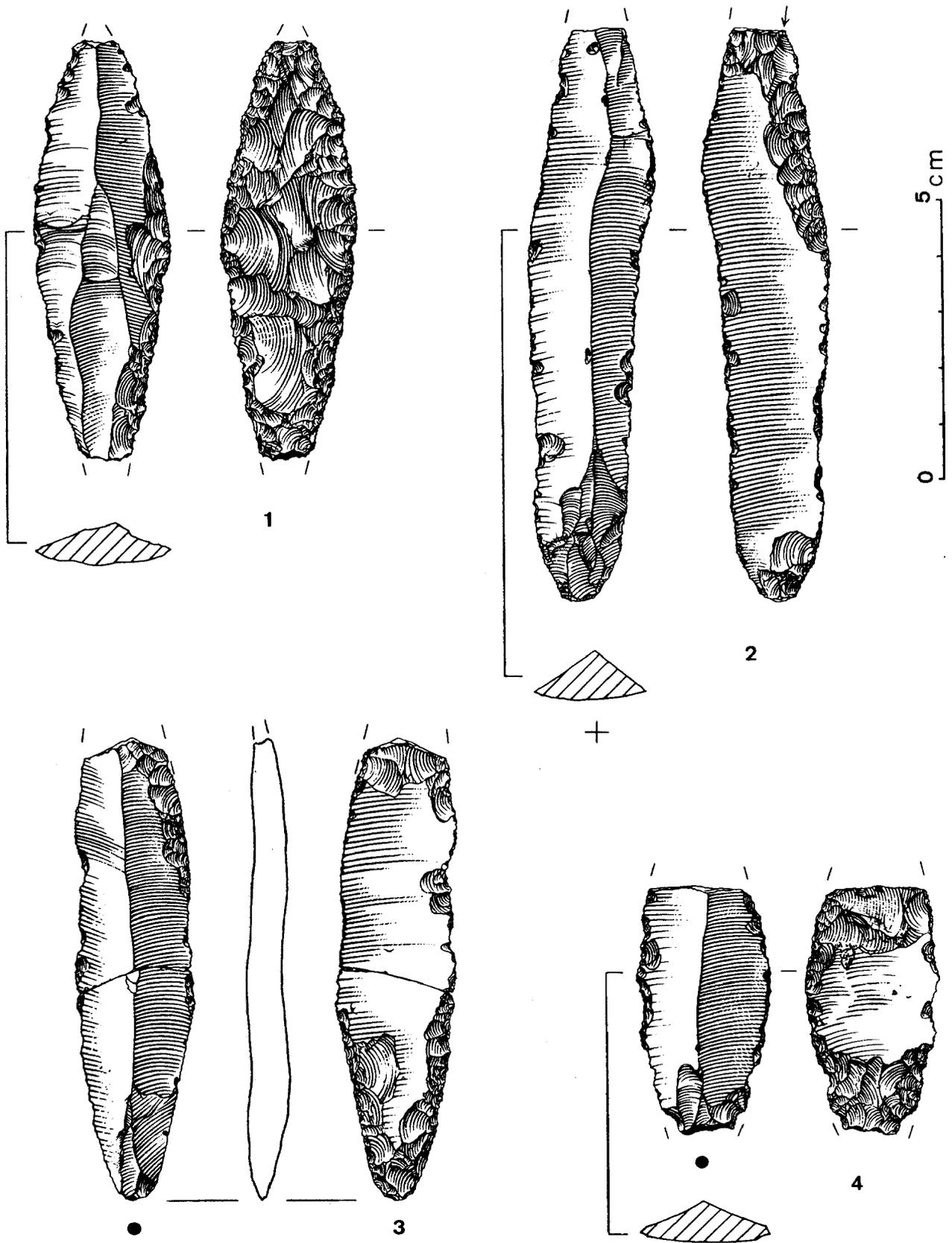


Figure 8.2: Leaf points from the Badger Hole at Wookey Hole. Wells Museum. Drawings by Joanna Richards.

and archaeological interest in the cave was stimulated by the finding about Christmas 1903 of a male human skeleton (Jex-Blake 1904; Davies 1904; Gray 1904) now known to be Mesolithic and to date from about 9,000 radiocarbon years ago (Burleigh 1986). The discovery of “Cheddar Man” was coincidental with the development of the cave as a tourist attraction and it was this ongoing development which led to major excavations over four winters (1927–1931) by R F Parry, then agent for the Marquess of Bath. These resulted in the recovery of what is still the largest artefact collection from any British cave used in the Late Glacial (Parry 1928; 1930). Removal of sediment and recovery of archaeological and palaeontological material have continued since (Jacobi 1986) with the most recent formal excavation headed by staff of the Natural History Museum between 1986 and 1991 (Currant *et al.* 1989).

Late Upper Palaeolithic human use of Gough’s Cave appears from radiocarbon evidence to have spanned a millennium (Table 8.1 on page 51). If, as seems probable, there are “compressions” in the radiocarbon record for this period (Kitagawa and van der Plicht 1998) the actual time-span over which the cave was used would have been longer.

The majority of the Palaeolithic flint and chert artefacts clearly belong to a technology termed the “Creswellian” after cave sites in Creswell Crags on the Derbyshire/Nottinghamshire border, south west of Worksop (Jacobi 1991; 1997). This is identified by its combination of trapezoidal backed blades (“Cheddar points”: Bohmers 1956), long end scrapers, burins (principally on prepared truncation), piercers and blades with worn ends and lateral damage consistent with use as reamers. Also apparently associated with the Creswellian is the *en éperon* technique of butt preparation (Barton 1991). Together, these features allow identification of thirty-one probably Creswellian find-spots in England and Wales of which those at Creswell Crags are amongst the most northerly. For Somerset, Creswellian artefacts have been recognised from Soldier’s Hole (Parry 1930) and Sun Hole (Figure 8.3 on the next page, Tratman 1955) slightly higher up Cheddar Gorge; Aveline’s Hole in Burrington Combe (Davies 1921, 1923) and Badger Hole (Campbell 1977).

Over 95% of the lithics from Gough’s Cave are made from black Upper Cretaceous chalk flint. Its source appears to have been the southern side of

the Vale of Pewsey (C Clayton pers comm). This sourcing allows an appreciation of the scale of wandering by the Palaeolithic groups who used the cave. Its treatment at Gough’s seems so wasteful that procurement was almost certainly co-incidental to other subsistence activities.

Gough’s cave is also the source of the largest sample of bone, antler and ivory artefacts from a British Late Glacial find-spot. Sewing equipment is represented by the shank of a bone needle and by awls mainly made from the proximal tibiae of mountain hares. Cores of swan and hare bone have had needles cut from them and a deeply grooved fragment of reindeer antler, the left-over from some other craft activity, has been made into a thick point. Three pierced reindeer antler *bâtons* were most probably tools for controlling ropes (A P Currant pers comm). Two cylindrical javelin heads made from mammoth ivory are the only obvious weapons from the cave.

Wild horses were the principal human prey at Gough’s Cave (Currant 1986). Cut-marks left by stone tools during butchery are particularly clearly preserved on many of the horse bones as they are on bones of mountain hare, lynx, red deer, whooper swan and ptarmigan. For horse and deer they document skinning, disarticulation and filleting including removal of the tongues. Cut-marks on the phalanges are consistent with removal of tendons and ligaments for sinews and the separation of the hoof from the hoof-core perhaps for the extraction of glue (Parkin *et al.* 1986). Sinew would be of particular importance at a time when there were few plants suitable for the manufacture of fibre. It would have been used for sewing boots and clothing, the ligatures of weapon heads and the netting and snares used to trap birds and small game (*ibid.*) Incremental banding of wild horse and red deer teeth indicates summer hunting (Beasley 1987).

Bones and teeth of between four and eight human individuals (C Stringer pers comm) have been recovered from the Palaeolithic levels at Gough’s Cave. Many of the bones display clear evidence for dismemberment with stone tools (Cook 1991) and their deliberate fragmentation resembles that of the non-human bones split for their marrow content. Some human bones also appear to have been heated. There is no evidence for the separate disposal of human and non-human bone. Both ended up in mixed dumps under the cave wall.

The human finds are particularly important in that

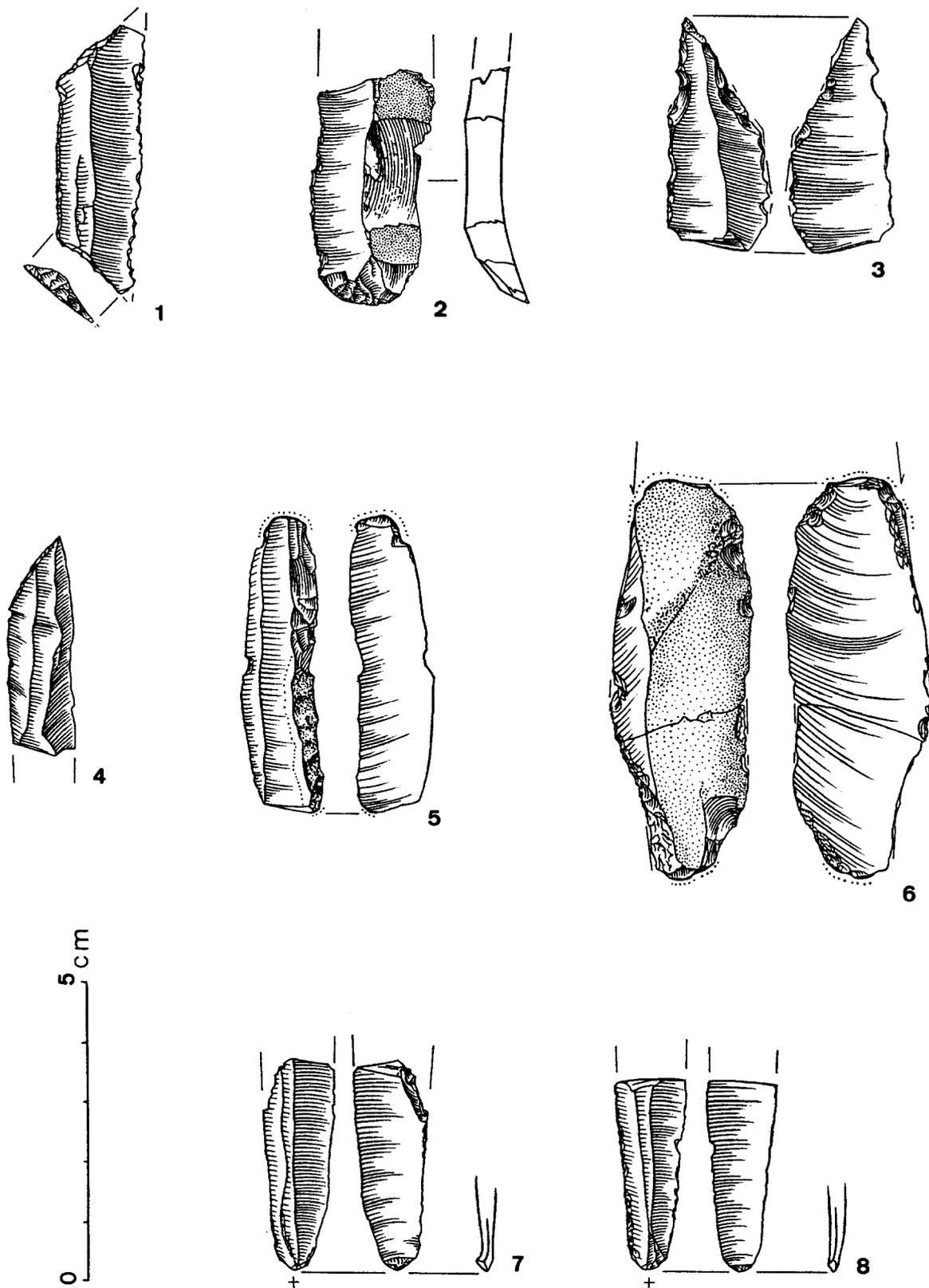


Figure 8.3: *Creswellian artefacts from Sun Hole, Cheddar Gorge. 1 = Cheddar point; 2 = end scraper; 3 = piercer; 4 = truncation; 5-6 = blades with worn ends and lateral damage suggestive of clockwise torsion; 7-8 = blades with en éperon butts. Museum of the University of Bristol Spelaeological Society. Drawings by Hazel Martingell.*

OxA – 2795	human frontal	11,820 ± 120 BP
OxA – 2797	reindeer antler <i>bâton percé</i>	11,870 ± 110 BP
OxA – 1071	cut red deer phalange	12,300 ± 180 BP
OxA – 589 *	cut wild horse atlas	12,340 ± 150 BP
BM – 2183 R *	”	12,350 ± 160 BP
OxA – 590 *	”	12,370 ± 150 BP
OxA – 465	cut wild horse phalange	12,360 ± 170 BP
OxA – 2796	human calotte	12,380 ± 110 BP
OxA – 3452	cut wild horse phalange	12,400 ± 110 BP
OxA – 464	cut wild horse metapodial	12,470 ± 160 BP
OxA – 3412	cut red deer tibia	12,490 ± 120 BP
OxA – 4107	arctic hare tibia awl	12,550 ± 130 BP
OxA – 3414	cut rib	12,570 ± 120 BP
OxA – 3411	cut lynx femur	12,650 ± 120 BP
OxA – 4106	cut wild horse vertebra	12,670 ± 120 BP
OxA – 466	cut red deer metapodial	12,800 ± 170 BP
OxA – 3413	cut wild horse vertebra	12,940 ± 140 BP

Table 8.1: *Gough’s Cave: radiocarbon dates for Palaeolithic human presence (from Jacobi 1997, * indicates repeat date on same sample)*

stable isotopes in bone collagen can tell us about long term protein sources. From these it seems that the Gough’s Cave humans were consuming mainly animal meat, but that this meat was mainly wild cattle, red deer or reindeer rather than horse (Richards *et al.* 2000). Sites whose prey is dominated by these species remain to be found and, given the non-local source for most of the flint used at Gough’s Cave, it is quite possible that the localities which provided the bulk of this diet are outside Somerset.

The next thousand radiocarbon years (11,800 – 10,800 BP) saw birch woodland develop as climate cooled and it may be that the filling of the mouth of Cheddar Gorge with trees spoiled its effectiveness as a natural trap and led to the eventual abandonment of Gough’s Cave. However, horse, the principal prey at the cave, is sparsely represented by radiocarbon dates during this period (L Kaagan, pers comm) and may genuinely have become a rare component of the contemporary fauna. Presumably Gough’s was also not optimally placed for the exploitation of red and roe deer, elk and wild cattle the species recorded from Britain for this time.

Markers of human activity are backed blades known either as “Azilian points” or “*Federmesser*”. These first appear about 12,000 years ago (Bodu and Valentin 1997). There is some evidence that

early on these take the form of bi-points, not unlike orange segments, while later they become mono-points frequently with a constricted base to aid in hafting as arrow-tips – so called “penknife points” (Pion *et al.* 1990; Bodu and Valentin 1997; Célérier *et al.* 1997). A complete bi-point was found at Aveline’s Hole (Davies 1921, Fig. 10, no 5) and there are broken examples from Gough’s Cave. Two penknife points are surface finds from Callow Hill, near Axbridge (Campbell 1977, Fig. 130, nos 3–4) and there was a probable third from Aveline’s Hole (Garrod 1926, Fig. 14, no 13).

The period 10,800 to 10,000 radiocarbon years ago was one of cold climate and open landscapes. There are numerous radiocarbon dates for horse and reindeer and it is to this period that the fauna from Chelm’s Combe at the mouth of Cheddar Gorge principally belongs (Currant 1991). There is no archaeology in Somerset likely to represent this time and it is quite possible that at its coldest Britain, like the northern Netherlands (Lanting and van der Plicht 1996) and parts of Scandinavia (Larsson 1996), was deserted by humans. For Somerset the apparent gap in the archaeological record appears to last until about 9,200 radiocarbon years ago, within the Post Glacial, when microlithic technologies of Middlezoy type appear (Wainwright 1960; Norman 1982) and human bodies were left in Aveline’s Hole, Badger

Hole and Gough's Cave (Burleigh 1986).

Somerset is a large county and it is obvious how few find-spots contribute to our understanding of the Late Pleistocene. Almost all are caves and all are on Mendip. It is impossible to believe that other topographies and environments were not exploited, even if intermittently, over such a long time-span and it is clearly a major requirement to attempt to fill some of the massive geographical and chronological gaps which exist in the archaeological record for Somerset.

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