Upper Palaeolithic and Mesolithic Buckinghamshire c 38,000-4000 BC

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Introduction

Archaeological investigations in Buckinghamshire have to date had little impact nationally on understanding of the Upper Palaeolithic or Mesolithic. Such evidence as there is comes principally from sites associated with watercourses. There has been one preliminary investigation of a late Upper Palaeolithic site and only a few relatively small-scale investigations on sites of Mesolithic date. Not surprisingly the principal artefactual material recovered has been flint and there are fewer instances where organic materials have been either retrieved or investigated for environmental evidence. In view of the paucity of identified Upper Palaeolithic material, unless specifically stated all of the comments which follow refer to finds of Mesolithic date.

Owing to the relatively limited amount of research work undertaken on these periods in the county, it has seemed most convenient to describe discoveries sequentially in order of discovery so that it is apparent how study of the period has developed in the county, and then to provide brief conclusions.

The sequence of discoveries

In 1955 Jack Head published a survey of Chilterns archaeology. Apart from a few individual Mesolithic finds, he could only muster two 'sites' of the period; an early description by Peake (1917) of surface finds (apparently) on land at Kimble Farm, Turville close to the Oxfordshire border and the work of Lacaille at Iver. Had his survey included the whole of the county he would have found no other investigated sites at that date despite the fact that the County Museum-based record of archaeological finds (later to become the basis of the County Sites and Monuments Record) to which Head would probably have referred, had begun to take formal shape as early as the 1930s, so in that respect Buckinghamshire's record of archaeological finds and investigations was at that time potentially more comprehensive than was the case in many other counties. Subsequent changes in local government areas, in particular the creation of Milton Keynes have meant that two SMRs now cover the historic county; three if the area now in Berkshire is included.

A little over twenty years after Head's survey, Wymer's Gazetteer of Mesolithic sites and finds for England and Wales was published (Wymer 1977). By that date Lacaille's work at two sites in Iver in the Colne valley had been published (1963), Millard had studied an assemblage from Marline's Sandpit - a Chiltern upland site at Bolter End (1965), Barfield had reported on work at Oakend, Gerrards Cross, and Farley (1978) on finds made during the excavation of a medieval site in the Alderbourne valley beside the mere at Fulmer. Wymer further recorded individual or small groups of Mesolithic finds from an additional 40 or so locations (excluding Thames finds). Many of these were poorly located surface finds noted in museum collections. It is interesting to note, however, that only seven of these reported finds/sites were north of the Chilterns, despite the fact that the County Museum at Aylesbury is fairly centrally located in the county.

The first Buckinghamshire Mesolithic site to be noted as such was Peake's recording work at Kimble Farm, Turville (1917). Although he does not provide a precise location, Peake notes that

the site is ‘on the high ground of the Chilterns’ at about 600 feet and on clay-with-flints. He has problems with cultural attribution of the finds, describes the site as of a ‘cone culture’ on account of the numerous cores (130 plus); he illustrates what is certainly a blade core, several tranchet axes, and illustrates and notes some non-geometric microliths. The site was included by Clarke in 1932 in his definitive early work on the Mesolithic.

Lacaille’s investigations took place in the Colne valley, which forms the south eastern border of Buckinghamshire, and an area which has dominated all subsequent investigations. The river, braided in its lower course, is fed from the western Buckinghamshire side by the Chess, Misbourne and Alderbourne rivers which cut through the chalk and themselves contain infilled late and post-glacial sediments. Due to its proximity to London, the Colne’s gravel and sand deposits were worked early by dredging. These workings were monitored during the first half of the twentieth century by among others, FN Haward and subsequently JG Marsden who recovered much archaeological material from working pits. Lacaille published some of the previously recovered finds from the by-then worked out ‘100 Acres’ or Boyer’s Pit, at Denham and was able to carry out limited field investigations himself at Sandstone, Iver. The two pits were a mile apart but produced similar Mesolithic material. At Sandstone he obtained samples for pollen analysis by GF Mitchell, the first site in Buckinghamshire where this technique was used. At Sandstone he observed basal floodplain gravels and sands at about a metre depth on which lay struck flint overlain by peat. This peat contained pollen predominantly of hazel and pine; within it were ‘pieces of tree’ and a red deer tine, the whole defined as Late Boreal. This in turn was overlain by a mud formed in open water with some oak pollen, molluscs and some tufa, thought to be the sediments of a local pond or lake . The presence of tufa, either *in situ* or derived, had been noted in at least three places in the Misbourne valley (see on). Peat was also recorded by earlier collectors at the ‘100 Acres’ pit.

The flint assemblages from both sites were, in more recent terminology, ‘broad blade’, that is earlier Mesolithic. Although Lacaille’s work illustrates many pieces from both sites, he does not list them all, whereas Wymer (1977) does so. To give an idea of quantity, Wymer notes 1698 blades or flakes from ‘100 Acres’ and 250 from Sandstone. From ‘100 Acres’, Lacaille illustrates 17 microliths, mainly obliquely blunted, a graver, a tranchet axe and sharpening flake, 4 blade cores and a ?tanged point indicating a possible late Upper Palaeolithic element. From Sandstone he illustrates *inter alia*, 5 blade cores, 6 scrapers, 2 gravers, 15 microliths, some obliquely blunted, 1 crescent but no certain narrow blade forms, 1 tranchet axe and a sharpening flake.

From a different environment, Smith and Wymer in 1964 reported on finds collected in the 1920s and 1930s by Treacher from a brickyard near Great Marlow. Finds of all periods were recovered including ‘30lbs’ of flint which included a palaeolith, a Levallois flake, a tranchet axe and sharpening flake, blade cores etc. All of this material apparently came just above or within the top part of a layer of brickearth, present to a depth of about 10 ft., below which was a similar depth of gravel. The men ‘cut their hands on the sharply flaked flints’.

In contrast to this and to the fluvial sites of Lacaille, in 1965 Millard reported on flints collected over a period of time by a dragline operator at a sandy upland site at Bolters End. The assemblage of 391 flints apparently derived from a ‘thick dark level’ some two feet below the surface and itself overlain with sand. The assemblage included 21 blade cores, and using a length = 2x width criterion, 144 blades together with 3 obliquely blunted points, 2 backed blades, 2 scrapers, perhaps insufficient pieces to date the assemblage more closely than ‘Mesolithic’. This preserved ‘upland’ site like Peake’s earlier find at Kimble Farm, provided a useful counter-balance to the dominant ‘waterside’ perception of the Mesolithic in Buckinghamshire.

The Misbourne valley near Gerrards Cross had been early recorded by geologists to contain tufa. This was noted again in a small-scale trenching exercise by Barfield in 1966/7 following discovery of struck flints during road construction (Barfield 1977, Site 1). Here the tufa seems to have been secondary (Evans, in Barfield) within a colluvial deposit, a grey calcareous loam which apparently overlay a 'working floor'. This calcareous loam contained 17 prehistoric sherds, largely undated but one (from an illustration) possibly Neolithic. Although there is a substantial amount of worked flint from Barfield's site (over 1800 pieces) there are problems with the report since the writer apparently treats the finds from more than one layer as a single stratigraphic unit. He notes the 'Mesolithic working floor' (presumably within layer 6 as shown on section although neither the floor or its matrix is actually described), which apparently rested directly on layers 7 and 8. The latter layers (not numbered in the author's text) are apparently flint-rich gravels and fluviatile clays. The author apparently conflates finds from the 'working floor' with material later described as colluvial from the overlying? grey calcareous loam (layer 5) and possibly also material described as 'embedded' in a higher flint nodule layer (4). There is certainly some Mesolithic material present including 2 core axes, 4 axe sharpening flakes and 3 obliquely blunted microliths but the status of the 27 cores 'only one a blade core' raises some doubts about the assemblage as a whole which also contains ceramic, and it is not unfortunately possible from the report to separate out the Mesolithic 'working floor' material. Although the author's conclusion that the site might have been 'primarily concerned with the production of core axes and may be regarded as an axe factory with raw material quarried in situ' might be valid, it seems to disregard the secondary nature of a proportion (unspecified) of the finds which would fit happily into a Neolithic date and it is difficult to re-assess the evidence as presented. The tufaceous layer was encountered again in other road works very close to this site, this time during construction of the M25 (Farley 1983 unpublished).

In 1969 the Chess Valley Archaeological Society carried out a small-scale training excavation on the site of a demolished cottage in East Street, Chesham to one side of the Chess valley. Unexpectedly this encountered struck flint in some quantity commencing c.0.70 below ground level. Most of this was Mesolithic in date and it appears that an in-situ site (from the description, possibly a buried soil) had been buried beneath hillwash. About five horizons were defined resting on river gravels. The report on the excavation was prepared by B.Stainton (1989) who was not the site director and in the intervening period some finds had been lost. Mrs Stainton later carried out a keyhole excavation here, took samples, wet sieved spoil and observed ongoing building works. Some 49 microliths including scalene triangles, rods etc of the narrow-blade tradition, scrapers, a tranchet axe and two sharpening flakes, over 34 cores - mainly blade cores - and an unspecified amount of struck flint but in excess of 300 pieces, were recorded. Although study of charred plant remains indicates some downward contamination, the site is important as it was the first in Buckinghamshire to produce preserved animal bone demonstrably of Mesolithic date (Grigson in Stainton 1989). Minimum numbers of individuals were: wild cattle 1, red deer 2, wild pig 1, roe deer (no minimum number of individuals given for the latter). It was noted that a few bones had been split vertically and one ox bone had a cut mark. The floated samples included small fragments of hazel shell consistent with other Mesolithic deposits. A radiocarbon date of 3940 +/- 100 bc was obtained on a *bos primigenius* bone. In 1989 a further excavation adjacent to this site was carried out in advance of development by M.Collard (1990) for the County Museum. As at the previous excavation there was 0.5m of overburden. Beneath this was a calcareous hillwash and beneath this about 0.3m of archaeological deposit, possibly in turn sealing a tree pit. Within the archaeological deposit was plentiful Mesolithic flint, burnt flint and also animal bone but a few

small sherds of prehistoric ceramic also suggesting, as at the adjacent, some downward contamination.

In 1972 excavation of a medieval site on a gravel spur adjacent to a mere at the eponymous Fulmer on the floor of the Alderbourne valley in advance of gravel extraction, produced Mesolithic material (Farley 1978). Although thinly distributed over the whole area of the excavation (c900 sqm) a local concentration was noted where apparently undisturbed material survived even though it lay only c.0.30m below ground level. From the site as a whole, apart from diagnostic artefacts including 3 tranchet axes, 5 microliths (rods and crescents) and 21 blade cores, measurement of the 486 intact waste flakes from the site showed that 27% had blade proportions (at ratio 2:5 or less) rising to 60% at 3:5 or less. No scrapers were recorded. The flint was generally sharp and unabraded, made from selected river pebbles and quite frequently reddish in colour, although whether due to iron staining of the nodule or heat treatment was not determined.

In 1981 and 1983 two sites, both unpublished, were examined in connection with construction of the M25. The first at Mansfield Farm, Iver (Allen 1982), was a trial excavation of two areas close to the banks of the Alderbourne, 400m from one of Lacaille's sites. Although the main excavated area did contain a few Mesolithic flints including a core, tranchet sharpening flakes and retouched flakes (total flints 89), the whole deposit was only 0.3m deep below ground level and unlike Fulmer, appeared to have been plough disturbed. Peat revealed close to the river margin had dried out. Subsequently in 1983 a watching brief during re-channelling of the river adjacent to the site showed three-metre deep organic infills which were sampled (Farley, report not completed CASS 5053, sampling M Robinson). A wooden, driven stake-end in the lower bank of the infill produced a post-Mesolithic radiocarbon date (date not to hand).

The second M25 investigation was the limited excavation of a few metre squares following discoveries of surface flint by Hilary Bridbury in 1983 in the centre of the construction corridor on the floor of the Misbourne near the Misbourne railway viaduct (Farley 1983), not far from Barfield's previously noted work. This site again produced a substantial tufaceous deposit which here incorporated Mesolithic flints. A simple three 'layer' sequence was established on site (601-3 descending). All layers produced unabraded Mesolithic flint in small quantities, the basal layer (603) with a scalene triangle; from other layers edge-blunted microliths, axe trimming flakes, many snapped blades etc. Animal bone was present although poorly preserved. This was studied by Dr R Wilson. Cattle from the upper layer included cattle 'almost certainly aurochs', red deer and pig. From the deposit as a whole 35% were aurochs, 25% red deer, 22% wild pig, 11% roe deer, the other 7% including beaver, wild cat, otter, badger and a possible pine marten. Charcoal of ash and oak came from the lowest level indicating a climax vegetation. An adjacent profile through the tufa sequence was studied by Richard Preece and the same sequence examined for pollen by JD Scourse who found little present and that weathered. There were seven radiocarbon determinations on bone (OxA 601-3 and 618-21) . Of these three dates from the two lower layers were as might be expected for a later Mesolithic date, namely 4020 +/- 100 bc, 4150 +/- 120 bc, 4240 +/- 90 bc; the remainder of the dates being in one case 'too early' 10,580 +/- 200, and in the case of the other three, too late. Tufa formation has been studied on a number of occasions elsewhere and appears broadly to be associated with periods of climatic warming.

In 1994 the Chiltern area of Buckinghamshire's Mesolithic was briefly reviewed by Stainton. She noted in addition to the sites recorded above other finds made along the Chess valley. The next investigation in the county, again in the south, was at Little Marlow where c1995, investigations were carried out on burnt mound deposits prior to mineral extraction. In the course of this work a

long section was cut through peat about 1.4m deep adjacent to a Thameside stream, (Richmond et al 2006). Pollen analysis showed an interruption in the sequence about 1.20 below gl., between lower zones (Mar 1-3) and the upper ones (Mar 4-5). This 'hiatus' was radiocarbon dated to 5230-4915 cal BC at 2 sigma. Scaife writes that the lowest zone (Mar 1) 'is enigmatic being either (a) the Late-Devensian/ Holocene transition at c.10,000 BP evidenced by the expansion of *Juniperus* and *Filipendula* responding to temperature amelioration or (b) of earlier, possibly Windermere interstadial date (c. 11,000-10,000 BP) which also supported birch, pine and juniper scrub woodland.' Mar 2 demonstrated the early Holocene with dominance of pine, and Mar 3 a substantial reduction in pine and prevalence of hazel. A date obtained from Mar 2 of the lower sediments gave 8300 to 8190 cal BC at two sigma. The possibility of a hiatus between zones 1 and 2 was noted. This site has produced the best published early Holocene sequence for the county.

Two further riverside sites were found by evaluation trenching in connection with the Eton College Dorney Rowing Lake, but as both lay outside the construction footprint investigation has been limited (Allen and Walsh 1996) and publication of the excavations as a whole are awaited.

Two further pieces of fieldwork have recently taken place in the lower Colne river system. The first an evaluation, watching brief and excavation, was carried out between the Colne and Colnbrook by the Museum of London Archaeology Service at the former Sanderson factory site, close to earlier work by Lacaille (Lakin 2006). This work has only reached a post-excavation assessment stage. (e.g. reportedly ,finds not yet washed). Just over the county border in 1986-1988 in former Middlesex, an important piece of work which has informed much of the subsequent Buckinghamshire work, had been carried out the Museum of London Archaeology Service at Three Ways Wharf, Uxbridge. This will be referred to later. At the Sanderson factory site evaluation trenches produced a complete sequence, from late Devensian gravels with an immature soil, through peat to grassland etc. of the Holocene, but apparently with no directly associated finds. The upper part again produced some tufa. In contrast work on a flood relief channel a distance south of the former factory, produced a fairly dense distribution of worked flint, burnt flint, some bone and a nearby hearth (Fig 5; but nb. scale incorrect). The dating of this deposit has not been fully assessed although early Mesolithic material is referred to and a group of relatively large flakes ?Upper Palaeolithic technology, were noted to be present. A sequence of radiocarbon dates were obtained but their relationship to the artefactual material requires future clarification.

The second recent investigation in the lower Colne was an evaluation of a 'preferred mineral extraction area' (Wessex Archaeology 2005). This multi-hectare area at Denham falls in a Mesolithic 'hotspot' being almost contained by sites earlier noted: Mansfield Farm, Sandstone, Three Ways Wharf and the above mentioned Sanderson site. It is also bordered by the Alderbourne and the Colne and traversed by Rusholt Brook, being in effect divided up into a series of bars and islands. A substantial number of test pits and evaluation trenches have located to date, (apart from a series of environmental sequences) three finds focii. One contains an in-situ long blade industry sealed by peat dated 9300 +/- 50 bp; a second early Mesolithic flint and some animal bone (wild boar) 9131 +/- 45 bp, and a third, undated but probably Mesolithic. Not surprisingly peat up to 2m deep is present in deep channels thinning at the 'island' shores. Pollen samples from boreholes show a late cold stage indicated by a herb/ juniper assemblage. The whole has considerable research potential.

As mentioned previously, the results from these Colne and Alderbourne valley sites must inevitably be referred to the preliminary results from Three Ways Wharf, Uxbridge just over the

Buckinghamshire border. Unfortunately although two interims were produced some years ago (Lewis 1991 and Lewis et al 1992) this site remains effectively unpublished. It produced two important flint scatters. The earliest (Scatter A) within a grey clay loam at about a metre depth, contained an in-situ (late) long-blade industry, with refits, associated with some 100 animal bone fragments including horse and reindeer, indicating open steppe conditions, and possibly inconsistently, pig. There were two radiocarbon dates on the horse bones, 10,270 +/- 100 BP and 10,010 +/- 120 BP, placing the scatter during the late Dryas/ Loch Lomond stadial. The second scatter produced early Mesolithic flint (7000) and animal bone including red deer, some bones charred.

It will be apparent that the bulk of the information about Buckinghamshire's Mesolithic period and all of its Upper Palaeolithic comes from the river valleys of the Chilterns, however other finds have been made on the higher land of the Chilterns themselves and in central and northern Buckinghamshire. North of the Chilterns the area which has received the most intensive archaeological investigation is Milton Keynes. In 1993, at the end of a programme of work extending over more than a decade, Williams (in Croft and Mynard 1993, 5-10 and Fig.3) notes the discovery of 'significant quantities of Mesolithic flints, including microliths and large numbers of narrow blades … in both the Ouse valley and its tributaries, the River Ouzel and Loughton Brook', Mesolithic flints were recorded during excavations at the Bancroft Roman villa site, a large concentration of 'narrow blade industry flints in ploughsoil al Little Woolstone by the Ouzel, two concentrations located during the construction of Caldecotte Lake – one with 'fragments of bone, burnt stones and numerous flint cores'. Although no specifically Mesolithic 'sites' appear to have been excavated or published from the Milton Keynes area, at Gayhurst some of the probable 'tree holes' examined on Ouse sediments (Chapman 2007) contained flint blades and have been suggested to indicate either clearance, or at least that they arrived in the hollows at a time of local Mesolithic exploitation.

Apart from the Chilterns and Milton Keynes area so far discussed, numerous individual finds of Mesolithic flints have been recovered across a range of geologies in the county, whether from the clays of Aylesbury Vale or areas of Jurassic limestone. Aylesbury Vale is one area which has seen a good deal of organised fieldwalking and individual Mesolithic flint finds are common here , although only a few clusters of material have been noted (e.g. at Cuddington SMR 4981). Some material, such as microliths, are likely to have been be overlooked during fieldwalking. Aylesbury Vale District Council area contains 84 parishes by no means all of which have been fieldwalked but even allowing for this the County SMR includes records of finds from 37 of them. In some parishes where fieldwalking has been carried out, such as Haddenham, or where there are known to have been informed observers such as Stone and Aylesbury, there are between 4 and 7 findspots. Although this is obviously raw data, it does point up the fact that utilisation of major river valleys is, of course, only part of the story.

The writer has, it will have been noted, been strangely silent on the Upper Palaeolithic. This is because no finds feature in the respective SMRs, nor the CBA's 1977 *Gazetteer* (Wymer and Bonsall). From brief notes above it will be apparent that due to recent discoveries the period is not totally absent from the county and its presence will be further noted below.

Summary

The research framework guidelines suggest headings for framing the resource assessment text. In the case of Buckinghamshire's Upper Palaeolithic and Mesolithic this approach would leave many blank spaces. For economy it has been thought more useful to summarise what there is, and what there is not.

- Known or potential Upper Palaeolithic material is confined to two recently examined sites in the Colne Valley, the proposed Denham mineral extraction area and the Sanderson site: there are a few 'stray' finds elsewhere. At Little Marlow there is a pollen sequence which might cover the Loch Lomond stadial.

- A good deal of Mesolithic worked flint has been discovered across the county but only a small proportion of this has been reliably divided into, for example, 'early' or 'late' periods. A range of flint artefact types have been recorded, with the exception of probably Mesolithic bored pebbles, there are no other artefact types.

- Several sites either have produced, or have the potential to produce, good associations with well-preserved environmental sequences. In-situ material has apparently been located within brickearth (both at Great and Little Marlow), beneath colluvial material (Chesham), in tufaceous deposits (Misbourne valley) and of course in association with peat. There are a few other localised deposits such as sand at Bolters End, which bring to mind the geology of some Wealden sites or North Downs sites such as at Sanderstead, Surrey on Thanet sand.

- Only one site (Sandersons) has at present produced a structure possibly related to a flint scatter – a hearth. None has yet been claimed to contain a 'placed deposit'.

- The best animal bone assemblages recorded so far come from Chesham and the Misbourne valley. Only Chesham has produced bone with evidence of human use, cutting and breaking. No human remains have been discovered, which is not perhaps surprising as only two Mesolithic human bones are recorded from the whole off south-east, east and northern England (Conneller 2006).

- The record is at present dominated by south-east Buckinghamshire waterside sites but there are numerous other reports of surface material from other areas which would repay further assessment..

Some wider thoughts

Rising and falling sea levels and substantial climatic variation caused dramatic changes to the British landscape over the period covered by this paper. Opportunities to track these changes on a local scale are rare but precious. The massive low-lying area of land which once joined Britain and northern and north eastern Europe 'Doggerland' (Fleming 2004) is now beneath the sea but this land did not exist in isolation from the surviving 'mainland' and its feeder river valleys, such as the Thames and Ouse and their tributaries, were massively affected by its drowning in terms of water level, depositional activity and their attractiveness for human and animal utilisation. Given the county's distance from the sea it is easy to overlook this distant landscape, but a reminder is provided by the fact that even given modern containment of the river, the mouth of the Colne

confluence near Runnymede (see on), is only 17 miles distant from the limit of the present tidal influence at Teddington Lock and it would once has been higher upstream.

Apart from the well-known discoveries of freshwater peat deposits beneath the North Sea and the occasional artefact, there are areas of the North Sea bed which are littered with bones of mammoth and other mammals. Radiocarbon dating of submerged tree stumps buried by rising waters off the Danish coast has charted the rapid rise. As one writer has noted 'when swimming up the slopes of the Danish sea floor, divers pass the stumps of progressively later forests'; between 7000 and 6200BC (calibrated) 'the sea rose around 27m to 9m below present sea level, implying an average rise of 2.3m per hundred years' (Fischer 2004). As one knock-on effect amongst several potential others, this means of course that the lowest lying land which once bordered, for instance, the Thames, may also have been inundated by backing up fresh water. These lowest levels of channel, some of which may survive in the infilled palaeochannels common on the Thames floodplain (from which well-preserved later prehistoric material was excavated from upper levels at Dorney for instance) are commonly removed by dredging when mineral extraction takes place, but may well adjoin some of the earliest river 'shorelines'. [Occasionally, even where 'basal' glacial gravels are reached, organic interglacial survivals occur beneath them, as seen by the writer in 1972 at Fulmer.] The work of Needham (2000) at Runnymede, sited on the south bank of the Thames-Colne confluence is relevant here.. An extensive series of environmental studies were carried out on the Thames fluvial regime here and amongst the conclusions were the observation that 'After the formation of marl in the Boreal period, probably due to extensive ponding in the Egham-Staines basin, there was a period of marked incursion, the creation of channels and nascent islands'. The rise of alder woodland at this site is dated to the early/mid seventh millennium BC.

No artefacts of Mesolithic wood have yet been recovered from Buckinghamshire, but in theory there is no reason why they should not be in the future be retrieved, either from sediments or peat deposits. In this connection it is worth noting that a number of monoxylous boats have been recovered in the past from the Thames – including at Hedsor. With the exception of the probable paddle remains from Starr Carr in Yorkshire, few claims have been made for Mesolithic water transport nationally although from fish bone evidence use of boats could be expected to be common. Monoxylous boats apart, coracle-type boats are just as likely to occur and these would be represented in the archaeological record by interwoven wattles.

On a completely different track, each generation of archaeologists has to come to terms with new techniques fundamental to advancing the study of their period. To the writer's generation it has been radiocarbon; to a generation before it was probably pollen analysis. To the present generation it may be genetic information. This is being derived principally not from ancient bone material but instead from time 'units' developed by geneticists from statistically-predictable gene mutations that enable specific date ranges be inferred for human population migrations. It is therefore something of a surprise to read Oppenheimer utilising traditional archaeological evidence but talking of 'fresh gene lines' deriving from the Iberian peninsula, arriving in Britain during the Mesolithic (Oppenheimer 2006, 144).

Finally, as a recent writer noted 'to the browsing archaeological reader, accounts of Mesolithic hunter-gatherer communities tend to be quite predictable, if not rather dull' (Jordan 2006 in Conneller). However, there are encouraging signs of a revival in thinking leading to broader discussions about subsistence strategies, ritual, landscape and even gender.

Research Suggestions

- Mesolithic utilisation of the land has been demonstrated in the county on a variety of geological situations. There is scope for a project assembling a detailed predictive analysis of locations likely to either provide good preservation (e.g. peat, palaeochannels, colluvial deposits etc) or which raise particular questions (e.g. at sand and brickearth sites). It is the writer's impression, possibly erroneous, that less is understood of the Ouse and Ousel river systems in general than of the Thames and its tributaries.

- In one instance, the Denham 'preferred mineral area', a whole preserved Upper Palaeolithic and Mesolithic landscape may be affected by development. If mineral extraction is to go ahead here then there is scope for a major research project at this important confluence.

- It is a long time since an assessment has been made of the extensive lithic material collections which have been retrieved in the distant past, for example from the Hambleden valley, or which have been assembled by various hands during more recent structured fieldwalking e.g. in Milton Keynes and the Vale of Aylesbury (discussed above). There is considerable scope for re-examining this material much of which may come from plough-damaged sites in order to localise potential clusters of Mesolithic material and also to seek for the elusive Upper Palaeolithic open-air deposits (e.g. Barton 1992). Much of this material has to date been classified by non-specialists.

- There are certainly two unpublished excavated Mesolithic sites (Chesham and Misbourne Valley) and possibly others. It would be helpful if these could be brought to publication.

- Although the southern half of the county has ready access to flint as a resource this is less true of the north where glacially-derived material is generally more accessible. There is scope for assessing the use of non-flint material for artefacts.

- The excavation of at least one Mesolithic site in the Ouse/ Ousel valley in the north of the county would be informative.

- Finally, the writer has rightly been urged (by Simon Collcutt) to stress that on-site recording of lithic scatters should always be sufficiently precise to allow detailed interpretation of on-site processes, since even where disturbance may have occurred spatial structuring may survive, albeit in ''fuzzy' form.

Bibliography

Allen D WH 1982 Iver, Mansfield Farm *CBA Group 9 Newsletter* 12, 26 and archive CASS 5053

Barfield LH 1977 The excavation of a Mesolithic site at Gerrards Cross, Bucks, *Recs Bucks* 20, part 3, 308-336

Barton RNE 1992 *Hengistbury Head, Dorset. Vol 2: The late Upper Palaeolithic and early Mesolithic sites.* Oxford University Committee for Archaeology Monograph No 34.

Chapman A 2007 A Bronze Age barrow cemetery and later boundaries, pit alignments and enclosures at Gayhurst Quarry, Newport Pagnell, Buckinghamshire. *Recs Bucks* 47 (Part 2), 81-211.

Clark JGD 1932 The Mesolithic Age in Britain. Cambridge Univ. Press

Collard, M 1990 East Street, Chesham: interim report. *South Midlands Archaeology* 20, 18

Conneller C and Warren G 2006 *Mesolithic Britain: a new approach*. Tempus

Croft RA and Mynard DC 1993 *The Changing Landscape of Milton Keynes*. Bucks Arch Soc Monog. 5

Farley ME 1978 Excavations at Low Farm, Fulmer, Bucks. 1: The Mesolithic occupation. *Recs. Bucks*. 20, 601-616.

Farley 1983 Archive Notes and finds. CASS 5276: Bucks County Museum 417.1983

Fischer A 2004 Submerged Stone Age – Danish examples and North Sea potential, in Flemming NC 2004

Flemming NC 2004 *Submarine prehistoric archaeology of the North Sea*. CBA Research Report 141

Head JF 1955 *Early Man in South Buckinghamshire: an introduction to the archaeology of the region.* John Wright and Sons Ltd, Bristol

Lacaille AD 1963 Mesolithic industries beside Colne Waters in Iver and Denham, Buckinghamshire *Recs Bucks* 17 part 3, 143-181

Lakin D 2006 The former Sanderson site, Oxford Road, Denham, Buckinghamshire; an archaeological pot-excavation assessment and updated project design. Site Code BM-SSU02. Museum of London Archaeology Service 2006;

Lewis J 1991 A late Glacial and early post-glacial site at Three Ways Wharf, Uxbridge, England: interim report in Barton N, Roberts AJ and Roe DA *The Late Glacial in North-West Europe*. CBA Research Report 77, 246-255.

Lewis JSC, Wiltshire P, MacPhail R 1992 A late Devensian/ early Flandrian site at Three Ways Wharf, Uxbridge; environmental implications. In Needham S and Macklin MG *Alluvial Archaeology in Britain*. Oxbow Monograph 27, 235-247

Millard L 1965 A Mesolithic Industry from Bolter End. *Recs Bucks* 17, 343-9

Oppenheimer S 2006 *The origins of the British; a genetic detective story*.

Peake AE 1917 A prehistoric site at Kimble S.Bucks, *Proc. Prehist. Soc. East Anglia* II, part 3, 437-58

Richmond A, Rackham J and Scaife R 2006 Excavation of a prehistoric stream-side site at Little Marlow, Buckinghamshire. *Recs Bucks* 46, 65-101

Smith IF and Wymer JJ 1964 The Treacher Collection of prehistoric artefacts from Marlow. *Recs Bucks* 17, 286-300

Stainton B 1989 Excavation of an early prehistoric site at Stratford's Yard, Chesham, *Recs Bucks* 31, 49-74

Stainton B 1994 The Ice Age and after, in Branigan K ed. *The Archaeology of the Chilterns from the Ice Age to the Norman Conquest*. Chess Valley Archaeological and Historical Society

Wessex Archaeology 2005 Preferred Area 4, Denham, Buckinghamshire. Archaeological Evaluation Report. Report 50692.08

Wymer JJ and Bonsall CJ 1977 *Gazetteer of Mesolithic sites in England and Wales*; *with a Gazetteer of Upper Palaeolithic sites.* CBA Research Report 22

Zeepvat RJ 1991 The Milton Keynes project. *Recs Bucks* 33, 49-63.