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SOME MESOLITHIC SITES IN SOUTH-WEST BERKSHIRE

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SUMMARY

The discovery of a large number of mesolithic sites is reported and the flint industries associated with five of these are described in order to demonstrate the range of variation present. Both Maglemosian and Wealden industries are indicated at different sites together with other less well characterised industries. A preliminary account also appears of an important stratified mesolithic sequence.

INTRODUCTION

The writer began investigating the existence of mesolithic sites in the Hungerford area in 1956. The result has been the discovery of a large number of assemblages of worked flints usually of typical mesolithic character. The great majority of these are associated with the River Kennet. Originally the investigation was confined to surface collection but, as it progressed, some sites were further explored, usually by means of small scale trials. In the last fifteen years almost all the cultivated fields on or near the Kennet floodplain have been visited. There remain, however, considerable areas here which are never ploughed and many sites must still await discovery by chance. For this reason it may now be a convenient opportunity to attempt some general review.

THE KENNET VALLEY AND ITS SURROUNDING AREA

(1) *General:* west of Newbury the River Kennet has cut its valley into upper chalk. In this region, north of the valley proper, much of this upper chalk is capped by clay with flints and tertiary debris. Beyond this lies the chalk downland towards Lambourn. North of Newbury there are areas of eocene deposits, particularly Reading Beds, which are sometimes capped by plateau gravels, while to the south of the valley there is an area of eocene deposits of considerable size. Still further south is the high chalk ridge.

The north side of the valley, west of Newbury, is partly covered by pleistocene gravels which appear to be bedded directly on to the chalk. On the southern side the gravels are much less extensively developed.

There are, then, a variety of natural zones in south-west Berkshire which could have supported a number of distinct habitats. As a result a variety of food sources, in addition to the river and its surroundings, must have been available to the hunting-fishing-food gathering peoples of the mesolithic.

(2) *The floodplain and adjacent areas:* west of Avington (SU 370680), the Kennet valley is between 1,000 and 1,400 metres wide, while the floodplain in this region varies in width from 300 to 450 metres. East of Avington the valley and floodplain widen considerably to some 2,000 to 2,500 and 600 to 900 metres wide respectively.

The lower northern slopes of the valley are normally covered with gravel, most probably of pleistocene date, but the lower southern slopes are more varied, with occasional spreads of gravel interspersed with large areas of upper chalk. In some areas, notably in the Wawcott district, the gravel is capped by considerable deposits of sandy flood loam. The surface of this deposit is several feet above the current level of the floodplain, and this suggests a

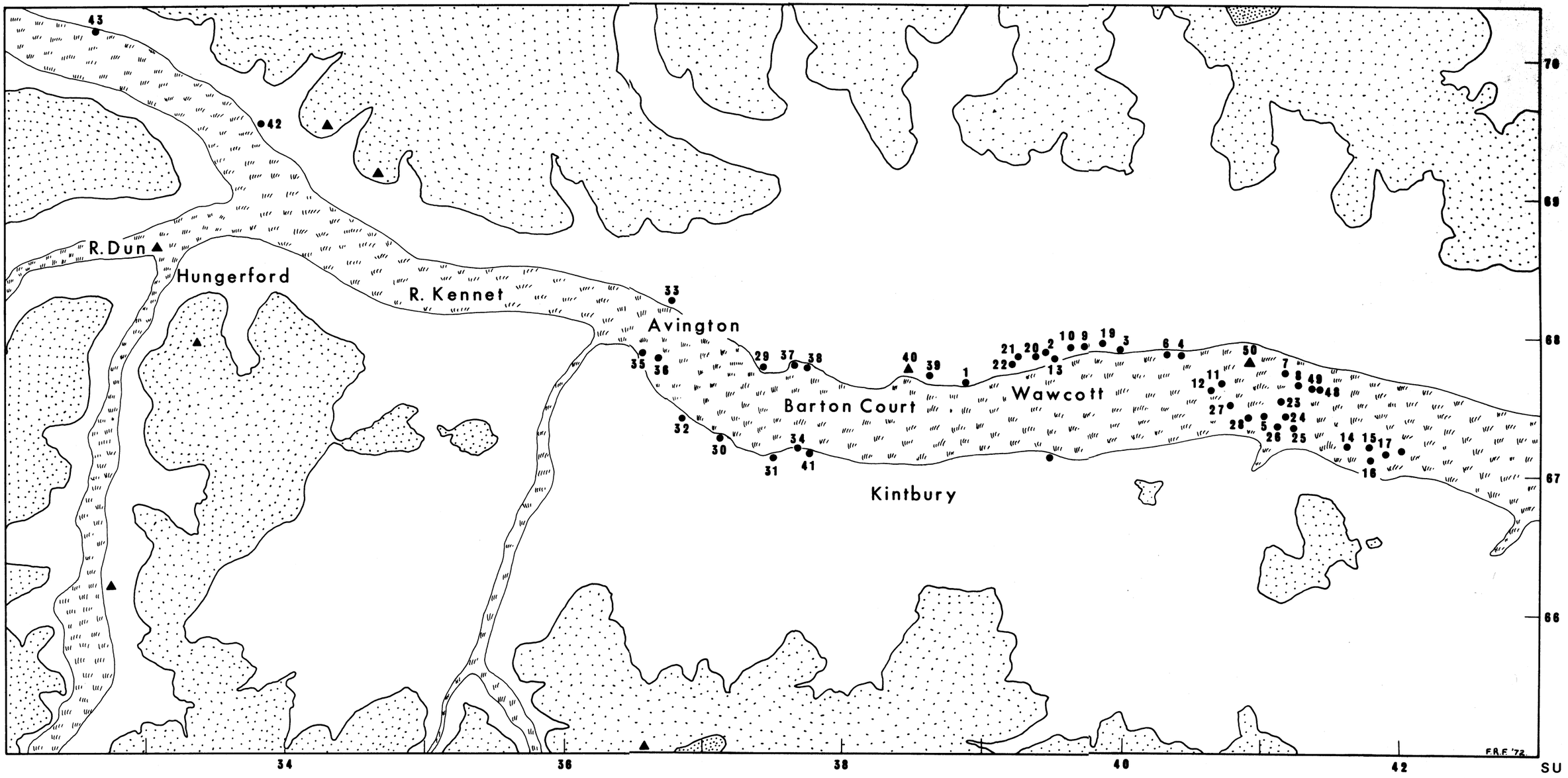

Fig. 1. Distribution map. Above 400 ft O.D. lightly stippled (above 500 ft heavily stippled); probable floodplain/marshy areas hatched. The Kennet floodplain is 270 ft O.D. at the eastern end, 330 ft O.D. at the western end, as shown in the map. In addition to the rivers Kennet and Dun, there is a permanent stream entering the Dun west of Hungerford, and less certain smaller streams entering the Kennet at approximately SU 360; 410; 430 from the south; and at SU 385 from the north. Solid circles indicate reasonably definite sites, triangles represent less well characterized occurrences of material.

higher water level than at present. This need not have been due to any climatic variation and could have resulted from enhanced flow in the feeder streams, especially those to the south of Kintbury and Hungerford which drain a large area of eocene deposits and could easily supply the sands and clays. This enhanced flow could have been due to river capture. Another factor to be considered is the development of obstacles in the channels of the Kennet which could raise the level locally by several feet. These areas of slack water would cause floods to deposit their load.

The present floodplain offers some complexity. The basal deposit is gravel, but this is often covered by up to a metre or more of other deposits, frequently clays and marls. Resting on these may be found a variety of buried soils, peats and sandy alluvial deposits, including further marls, either *in situ* or redeposited. Since individual deposits frequently extend only a few hundred metres it is obviously difficult to obtain a detailed structure from a few sections. An extensive programme of investigation is required.

On this basis it is possible to divide the sites into broad groups. In Group 1 are those on the lower slopes of the valley bordering the floodplain. It is likely that parts of these areas have always been above the normal river level and available for occupation. In Group 2 are those sites associated with the flood loam which covers certain areas of the lower terrace. It is tempting to suggest that they correspond to a single phase of unspecified duration. In Group 3 are those sites found on the floodplain itself. These should be earlier or later in date than the high water level suggested above. Although the floodplain was eventually covered by considerable deposits of peat, largely removed in the 18th and 19th centuries, this process was not apparently simple. It appears that peat was forming in Zone VIIa but that at a later date a dry phase intervened before peat formation was resumed (Peake 1935; Churchill 1962). The period of occupation of floodplain sites could therefore vary widely. Finally there are a number of sites not directly associated with the river valley and a great many others may await discovery in these areas. Such a site was reported by Mr D. B. Connah associated with sandy deposits at Woolton Hill near Newbury and others have been discovered by the writer.

THE SITES (Fig. 1)

The sites so far recognised are listed by group in an appendix (p. 20). Since the assemblages have usually been recovered either by surface collection or by very small scale exploratory excavation, detailed accounts would not be useful at this stage. It is unlikely that these assemblages will reflect their parent industries with any accuracy or that they can form the basis of any sound conclusions. In any event the majority of these sites have already been published elsewhere (Froom 1963, 1965 and 1970). In this paper the main outlines of only five industries will be described in order to set out the range of variation so far discovered. Four of these sites are in the floodplain (Group 3), while the fifth is associated with the high level flood loam (Group 2). The excavation of a sixth site, on the loam-gravel terrace, is the subject of a separate paper.

Wawcott XV (SU 418672)

This site lies on the southern edge of the floodplain. Trial excavation indicated that it was covered by only a thin layer of peaty soil and that the site had been severely damaged by agriculture. Typologically the industry appears to lie within the Maglemosian tradition. Details are as follows. As elsewhere in this paper terms used here are defined in a glossary on page 43.

Cores The cores may be classified as follows: single platform with blades struck part way round—20; two platforms with blades struck part way round—19.

These cores are on the nodules ranging in length from 4 to 7 cm and in weight from 30 to 150 gm. Fifteen single platform and 4 two

platform cores seem to have been made of nodules of their own approximate size. With these were found 28 core trimming flakes struck off parallel to the existing platforms.

Flakes Over 1,500 waste flakes were recovered from the surface of the field but coming from such a context no close analysis would be reliable or useful.

Blades Approximately 350 true blades are represented in this collection ranging in length from 2 to 8 cm and in width from 0·5 to 2·5 cm. When the triangular co-ordinates of the lengths, breadths and thicknesses of these blades are plotted the centre of dispersion is 0·750–0·055–0·195, the significant limits being 0·85–0·66, and 0·02–0·09, 0·11–0·29. The method is set out in detail on p. 21. One fine example from this group shows a pattern of 'squilling' on its platform noted on the long blades from other local sites (Fig. 4, No. 8). There was abundant evidence too for the segmenting of blades.

Implements Details of the implements in this group are as follows:

Microliths (Fig. 2, No. 1–7). The microliths have been grouped according to Clark's typology. The results are given below.

Type	*Complete examples*	*Probable examples*	*Total*
A1a	10	5	15
A1d	4	2	6
A2a	1	—	1

Unclassifiable : 6 Few comments are necessary on this group. In length they range from 35 to 50 mm and in width from 6 to 10 mm with the majority between 8 and 9 mm. Even in spite of the difficulties of classification it is likely that the microliths on this site were mainly, if not wholly, simple blunted points.

Microburins Two bulbar microburins are included in this group.

Axe A particularly well made tranchet axe was found, 13 × 3·2 × 5·9 cm. See Fig. 2, No. 34.

Scrapers Fig. 2, No. 35–38. Twenty scrapers are represented of which six use largely cortical flakes. The majority are end scrapers. Though the edge is usually finely prepared, some show signs of considerable 'crushing'. Two unusual examples are of note partly because of their considerable thickness and partly because their butts have been trimmed (e.g. Fig. 2, No. 38); lengths, thicknesses and breadths respectively are 74 × 29 × 32 mm and 56 × 20 × 32 mm.

Gravers The 16 gravers vary from well made examples on flakes, to much cruder examples either made on very thick flakes or odd pieces of flint. As is invariably the case the line between genuine graver and core is hard to define. In five cases the graving edge is formed by the intersection of two series of graver spalls (Fig. 2, No. 39–41); in four cases the graver spall(s) intersect a plane surface. There are three angle gravers, two in which the graver spalls were struck approximately at right angles to the retouched edge and a third where an oblique angle was constructed, one graver was double ended. The working edge is generally between 10 and 20 mm in width. (See also Trans. Newbury Dist. F.C. 1970, No. 16 (angle graver) and No. 22).

Saws Eleven examples were represented with serrations ranging from 8 to 16 per centimetre. The normal was about 13 or 14 per centimetre. One example made use of a backed blade.

Wawcott IV (SU 404679)

This site, on the north side of the floodplain, was briefly excavated in 1962 (Froom 1963). When the field was recently ploughed again, a thorough survey was carried out by surface collection and by small trials based on a grid covering the whole field. This account is of the surface material but some reference will be made to the excavated finds. Since it is hoped to carry out a major excavation of this site only the broad outlines of the industry will be described here. The site covers a large area, it remains a possibility, therefore, that more than one tradition might be present within this assemblage. Details of the material are as follows.

Cores The cores from the site may be classified in the following way (definitions

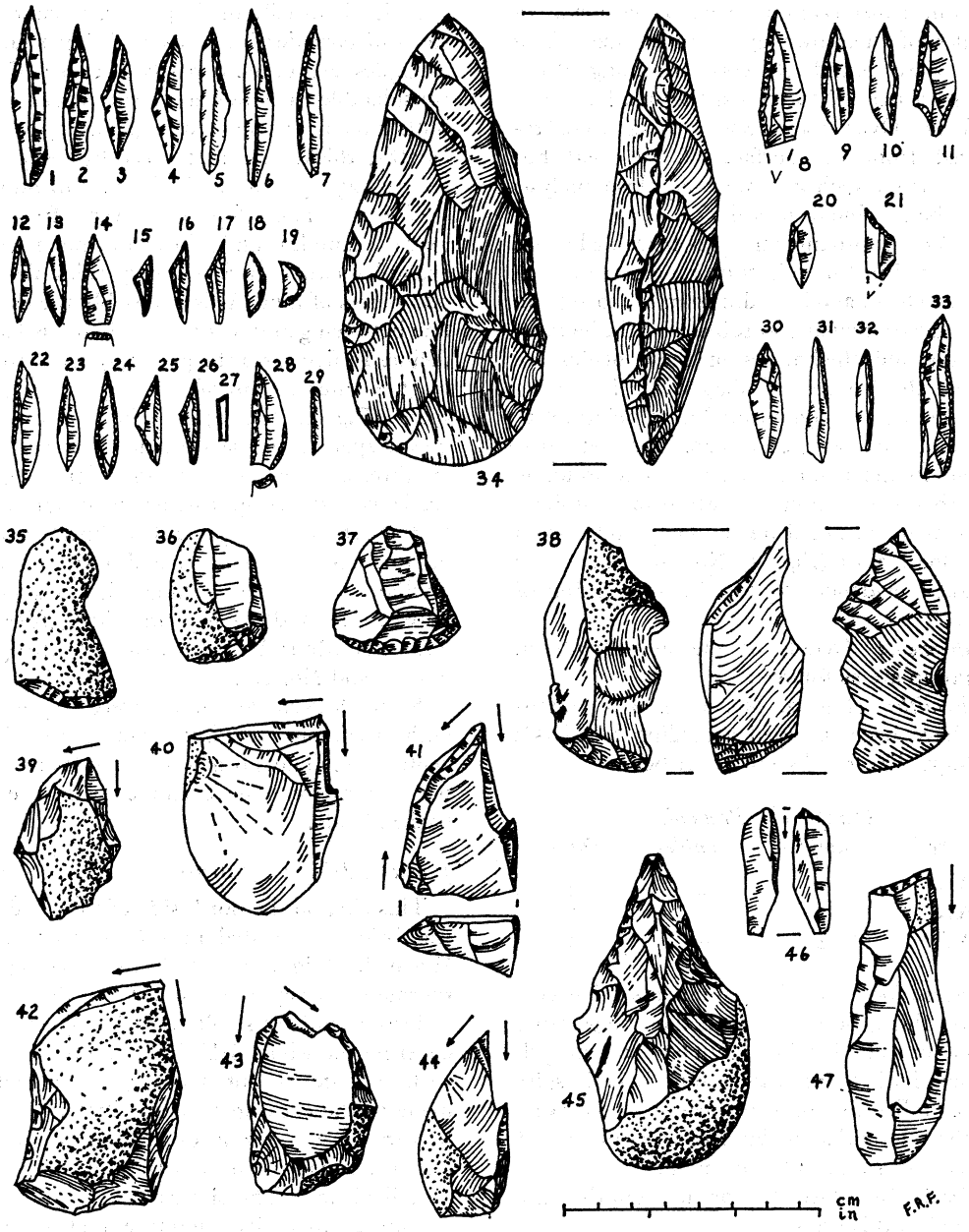

Fig. 2. No. 1–33 Microliths; No. 1–7 Wawcott XV; No. 8–11 Wawcott IV; No. 12–19 Wawcott XXIII; No. 20–21 Wawcott XII; No. 22–29 Wawcott III; No. 30–32 Avington VI (long blade site); No. 33 Wawcott XXX; No.34 Tranchet axe, Wawcott XV; No. 35–38 Scrapers, Wawcott XV; No. 39–41 Gravers, Wawcott XV; No. 42–44 Gravers, Wawcott IV; No. 45 'Hand pick', Wawcott IV; No. 46, 47 Gravers, Wawcott XXIII.

appear as a glossary on p. 43): Single platform struck part way round—22; Single platform struck all round (conical)—2; Two platforms —9; paraboloid—1.

In addition to these types cores had previously been found with two platforms at right angles. These examples generally ranged from 3·5 to 7·5 cm in maximum dimensions but seemed to show greater variety in geometry and technique than those from Wawcott XV. Core trimming flakes were also represented and the size of several examples suggests the existence of a further class of large cores which was not recovered.

Blades Few blades were recovered from the site but a sample of fifty has been examined in detail. These examples are essentially parallel sided with lengths ranging from 3·0 to 7·5 cm and breadths between 0·8 and 2·2 cm. When these are plotted using the triangular co-ordinates discussed on p. 21 a dispersion centred 0·71–0·06–0·23 is obtained, the significant limits being 0·76–0·65 (length) and 0·08–0·04 (thickness) 0·18–0·29 (width). Thus the blades are rather broader and thicker in relation to length than those from Wawcott XV (above p. 13). It is clear that some examples were again segmented.

Microliths As work proceeds it is becoming evident that the material from this site is again more varied than that from Wawcott XV. In addition to type B, rods; microliths of Clark's type A, B and E (F?) have been recorded, though no true geometrics have been found so far. These examples are generally small and frequently under 30 mm in length. Several show areas of inverse retouch. See Fig. 2, No. 8–11.

Scrapers A small group of amorphous end scrapers is present but so far do not form a coherent group.

Gravers Three gravers are represented with the working edge formed by the intersection of two or more facets. Each shows some retouch about the distal edges. Two other examples have facets at right angles to the plane surface. Fig. 2, No. 42–44.

Axes Fig. 3, No. 4. A single medium size tranchet axe comes from the site together with four axe sharpening flakes.

Core Tools Four rather unusual core tools were found on the site and might be described as heavy or hand picks. They are basically pear shaped with strong pointed ends, the butt retaining areas of cortex. In length they range from 7·5 to 11·5 cm. They are not represented on other sites within the survey area. Fig. 2, No. 45.

Miscellaneous Two small finds from trial trenching are of note. The first is a fragment of rock best matched in the Culm measures of south-west England, while the second is a flint flake, the dorsal surface of which displays the characteristic finish of a ground axe. The site is without any later admixture and it must be emphasised that there is no compelling reason to assume that it is not associated with the other material.

Again fragmentary organic remains were recovered from the site and they were provisionally identified as wild cattle, pig and red deer.

Wawcott XXIII (SU 410674)

This site is on the southern side of the floodplain and has yielded virtually no surface material, since it is almost certainly sealed beneath 50 cm or more of alluvial deposits. Organic remains and hearths are both present and the area appears to be virtually undisturbed. The sample of the industry is small and comes from a limited series of trial trenches cut merely to characterise and delimit the site. It is hoped to carry out a definitive excavation before long. Only a brief summary of the industry is therefore required.

Cores It is considered that an unrepresentative sample has so far been obtained in which only small blade cores are found and so full discussion must await a larger sample.

Blades Thirty blades have been recovered ranging in length from 2 to 7 cm with the majority under 4·5 cm. When plotted using triangular co-ordinates a dispersion centred on 0·71–0·06–0·23 is obtained.

Microliths Fig. 2, No. 12–19. All the micro-

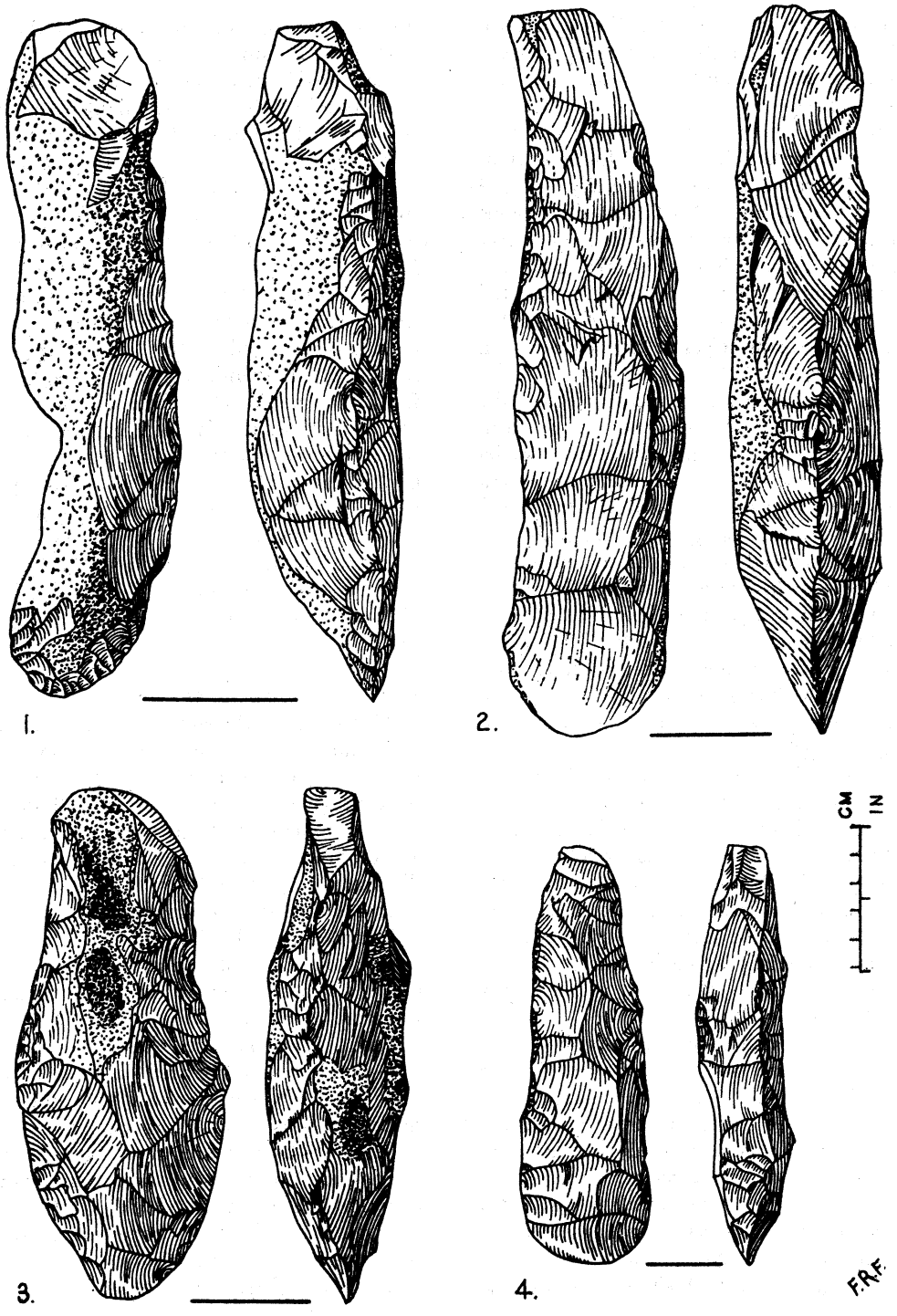

Fig. 3. *No.* 1 *Heavy pick, Wawcott XIX ; No.* 2 *Heavy tranchet, Wawcott XI ; No.* 3 *Heavy tranchet, Wawcott XX ; No.* 4 *Medium tranchet, Wawcott IV.*

liths found so far are less than 3 cm in length and some are considerably less than 2 cm. The following types are represented to date: A.C.E. and D1b.

Microburins These have also been found and include both bulb ends and tip ends of blades removed in this characteristic fashion.

Gravers Six examples are represented, four angle gravers and two formed by the intersection of two or more facets. Fig. 2, No. 46, 47.

Scrapers Only one example is present to date.

Axes Though no axes have been found at least one clear sharpening flake is present.

Again a very few organic remains appear and so far the following species have been recognised: red deer and wild ox.

(The following was 'written in' just prior to publication).

Wawcott XXIII was the subject of a major excavation in July–August 1971. Some 12,000 pieces of worked flint were recovered. The previous results have been confirmed, and although the detailed analysis is not complete the following notes are offered: the most common microlith type is the scalene triangle (D1b); there are also a few crescents (D2). Horsham points are absent; and simple points rare. Scrapers are abnormally rare, but small flake/blade gravers are fairly well represented. Blade cores are generally small and not well made, similarly the blades. A detailed report will appear in due course, together with radio carbon dating.

Wawcott XII (SU 408675) Fig. 4, No. 1–5

Although this site was only a few hundred metres west of site XXIII it was covered by only a few centimetres of peaty soil, ploughing having destroyed apparently all stratification. The artifacts were probably deposited in a very thin layer of silt, usually resting on marl but occasionally on gravel. The assemblage has been collected by surface examination augmented by a few small trials. This industry is rather sparse with few finished forms and gives the impression that the site was perhaps no more than a small knapping area. Separate fragments from the group can sometimes be pieced together.

Cores Most of these examples are two platform types with evidence of particularly skilled work. In 10 cases the maximum length of blade possible could be measured with the following results: 10 cm (three examples), 11 cm (three examples), 12, 15, 18 and 25 cm. In addition to these, cores in the normal size range discussed above were also represented.

Waste A large quantity of flint waste was collected, including some flakes with maximum dimensions of 15 cm and weights of up to 425 gm. It is suggested that this site represents the exploitation of a source of especially large and fine nodules.

Blades Despite the evidence of the cores no fine long blades remained on this site, although specialised waste associated with the production of blades between 15 and 20 cm long has been found. Blades up to 10 cm in length do appear on this site but there are too few of them for metrical analysis. Once again some of the blades were segmented.

Microliths Fig. 2, No. 20, 21. As if in confirmation of the specialised nature of the site only two microliths were found. Bulbar microburins were also present. No other implement types were found.

Wawcott III (SU 400679)

This is a complex site associated with clay and loam deposits which cover the edge of the gravel terrace bordering the floodplain. The present surface of these deposits is about 1·75 metres above the present level of the floodplain. The artifacts are usually stratified in the upper part of these deposits to a depth of approximately 60 cm. There is evidence that a stratified succession is represented. Much time and effort has already been devoted to this site and excavation has for the moment been completed. An assemblage of 80,000 flints is now being analysed and already promises important results. Initially the majority of these flints

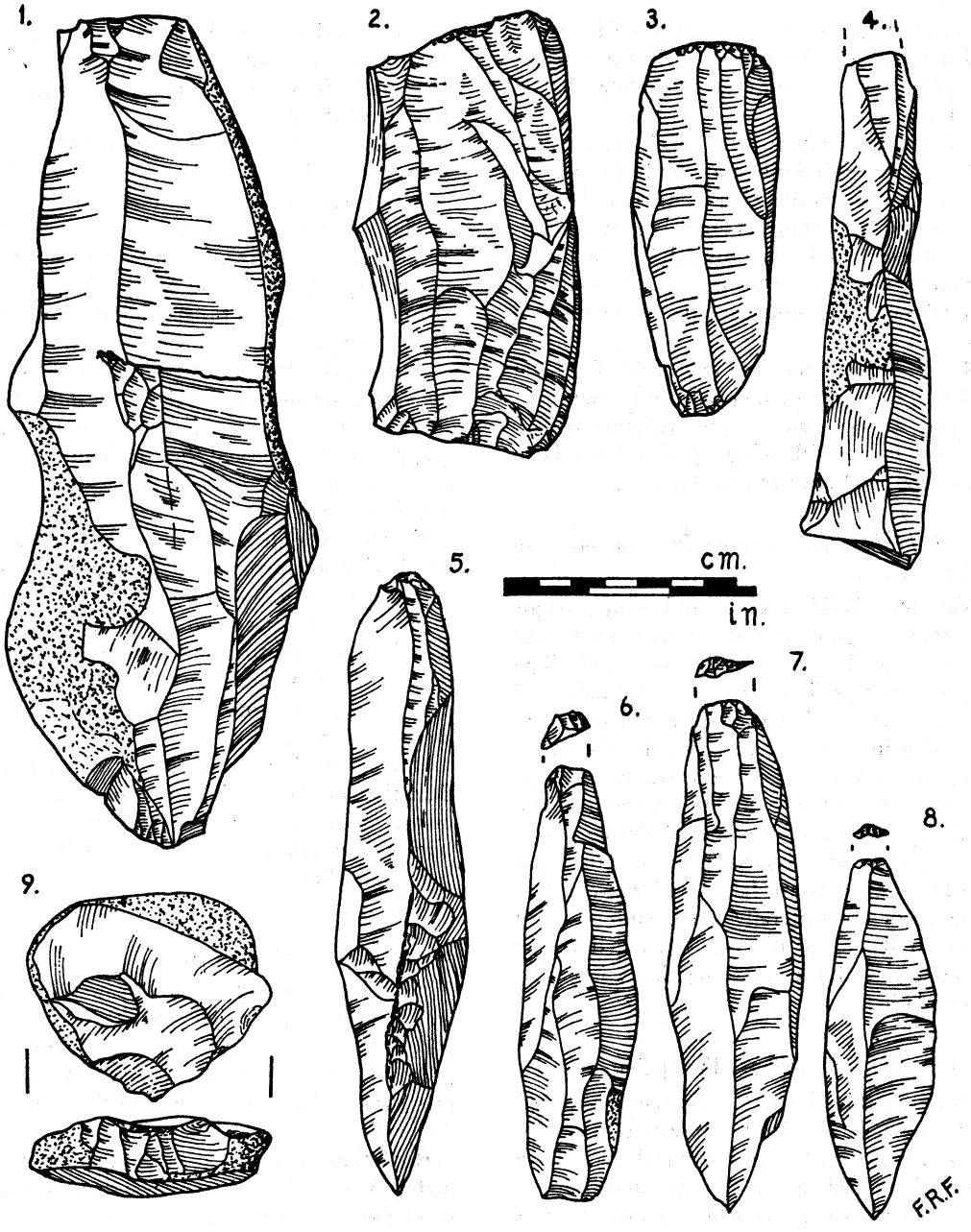

Fig. 4. No. 1 Very large two platform core, Wawcott XII; No. 2, 3 Large blade cores, Wawcott XII; No. 4 Large 'keeled' blade-like flake from Wawcott XII; No. 5 Similar to No. 4 but more refined. Both No. 4 and No. 5 may be regarded as blade production rubbish associated with long blades; No. 6, 7 Long blades, Avington VI; No. 8 Blade, Wawcott XV, note the squilling on No. 6–8 platforms; No. 9 'Basal disc' core rejuvenating flake, Avington VI.

have been separated into twelve groups, each representing one 5 cm horizon. For the present the industry will only be described where it extends the general pattern and then only in provisional terms.

Cores Preliminary analysis suggests that these fall within the pattern already established on other sites with a predominance of one and two platform types of normal size.

Waste Full details of the waste flakes will appear in due course but for the present they seem to confirm that only one industrial tradition is represented in this site.

Blades Roughly half the blades from the site have now been examined and the analysis is still in progress. Already there are signs that the blades in the higher levels have triangular co-ordinates of 0·70–0·06–0·24 and that these values change evenly until in the lowest levels they are 0·74–0·05–0·21. In other words the blades become narrower and thinner in proportion to their lengths as they get older. At the same time there seems to be a tendency for the earlier blades to be longer than the others. More generally the absolute frequency of blades falls off with the passage of time. In the uppermost levels blades account for approximately 1% of all worked flints while this figure is more than doubled towards the base of the section. Segmentation of blades is another characteristic of this industry and in the upper levels blade segments proper are more common than unaltered blades.

Microliths The microliths include most major types: A1, A2, B, C, triangles including types D1a and b, ultra long narrow trapezes, rods, and Horsham points (Fig. 2, No. 28). Tanged forms appear. Work currently in progress indicates that some of these forms are associated with particular horizons. Fig. 2, No. 22–29.

Axes Tranchet axes and a 'pick' have been recovered in addition to axe sharpening flakes.

Other implement types Other finished forms have not yet been examined in detail but superficial examination does not suggest that these are typologically different from the material described from the other four sites.

Miscellaneous Two fragments of non local rock have been recovered. One is of a brown chert probably from the western end of the Vale of Pewsey and the other is a fragment of slate probably from north Devon or Cornwall.

Organic remains did not survive on this site.

CONCLUSIONS

The discovery of about fifty sites in a six mile length of the Kennet Valley indicates a considerable occupation, particularly since many more groups may well await discovery. Equally other sites must exist in areas beyond the valley for it is unlikely that mesolithic hunter gatherers would ignore such large potential food resources. It is more likely that the low lying valley sites were simply base camps with the river providing access to other areas. In addition to these there may well be many more outlying sites, perhaps the temporary stopping places of food gathering groups on sorties from the base camp.

The geographical position of the Kennet Valley should also be considered. Upstream lie the northern borders of Salisbury Plain, the watershed of the Bristol Avon and the river system of Dorset. Indeed much of south-west England could have been reasonably accessible. The sources of the four pieces of foreign stone (p. 5, 9, 13) are not without interest in this context. On the other hand, leaving the Kennet at Hungerford and moving southwards one soon reaches the source area of the main Hampshire rivers. Downstream the Kennet enters the Thames and the latter with its main tributaries opens up large areas of central southern and south-east England including the Weald. In fact it is not difficult to envisage movement between this part of the Kennet Valley and almost any area of southern England.

Time is the remaining dimension to consider. From the radio carbon dates for Thatcham and Wawcott I the mesolithic in this area should span some five thousand years between roughly 8,000 and 3,000 B.C. In this context fifty sites is not of course such a large number. Within this period it is likely that a variety of

communities visited the area. The industry at Wawcott XV, like that at Thatcham five miles downstream, suggests maglemosian contacts. Wawcott XXIII and especially Wawcott III, with their geometric industries and with the Horsham points on the latter site, could suggest a relationship with the Wealden industries. It is to be hoped that future work will shed some light on relationships between these two aspects of the mesolithic. At the same time Wawcott IV and Wawcott XII indicate the existence of other groups. No doubt still further variants will appear as work moves on from this preliminary survey.

APPENDIX I

GAZETEER OF SITES

A list of mesolithic sites located by the author in south-west Berkshire. The separation into groups 1–3 is largely provisional since only excavation can definitely establish the stratification.

Group 1 sites (associated with low lying gravel terrace bordering Kennet floodplain)

Trivial name	*N.G.R. (all SU)*	*Reference No.*	*Previous publication (if any)*
Leverton	327 702	43	Froom 1965
Black Barn	338 679	42	Froom 1965
Avington I	374 678	29	Froom 1963
Avington II	371 673	30	Froom 1963
Avington III	375 671	31	Froom 1963 and 1970
Avington IV	369 675	32	Froom 1963 and 1970
Avington V	368 683	33	Froom 1963
Kintbury II	378 672	41	Froom 1963
Barton Court III	387 677	39	Froom 1970
Barton Court IV	385 677	40	—
Wawcott I	389 676	1	Froom 1963
Wawcott II	395 678	13	Froom 1963 and 1970
Wawcott XX	394 679	20	Froom 1970
Wawcott XXI	393 679	21	Froom 1970
Wawcott XXII	392 678	22	Froom 1970

Group 2 sites (probably associated with flood loam covering lower parts of gravel terrace bordering the Kennet floodplain)

Avington VII	366 679	35	Froom 1970
Avington VIII	367 679	36	Froom 1970
Wawcott III	400 679	3	Froom 1963
Wawcott V	398 679	19	Froom 1963 and 1970
Wawcott VI	397 679	9	Froom 1963 and 1970
Wawcott VII	396 679	10	Froom 1970
Wawcott IX	412 674	24	Froom 1970
Wawcott X	412 674	25	Froom 1970
Wawcott XI	411 674	26	Froom 1970
Wawcott XVIII	394 680	18	Froom 1970
Wawcott XIX	395 679	2	Froom 1970

Group 3 sites (associated with present floodplain of River Kennet)

Trivial name	*N.G.R. (all SU)*	*Reference No.*	*Previous publication (if any)*
Wawcott IV	404 679	4	Froom 1970
Wawcott VIII	411 675	23	Froom 1970
Wawcott XII	408 675	27	Froom 1970
Wawcott XIII	409 674	28	Froom 1970
Wawcott XIV	416 672	14	Froom 1970
Wawcott XV	418 672	15	Froom 1970
Wawcott XVI	418 671	16	Froom 1970
Wawcott XVII	419 672	17	Froom 1970
Wawcott XXIII	410 674	5	Froom 1970
Wawcott XXIV	407 677	11	Froom 1970
Wawcott XXV	406 676	12	Froom 1970
Wawcott XXVI	403 679	6	Froom 1970
Wawcott XXVII	412 678	7	Froom 1970
Wawcott XXVIII	412 677	8	Froom 1970
Wawcott XXIX	414 676	49	—
Wawcott XXX	413 676	50	—
Wawcott XXXI	409 678	48	—

Group uncertain (sites not included in the above groups but otherwise associated with low terrace or floodplain)

Avington VI	377 672	34	Froom 1970
Barton Court I	378 678	38	Froom 1963
Barton Court II	378 677	39	Froom 1963

Group 4 (sites not associated with the River Kennet)

Folly Hill I	347 692	51	—
Folly Hill II	344 695	52	—
Standen I	327 662	53	—

APPENDIX II

DISPERSION DIAGRAMS

The two axis dispersion diagram requires little comment. It allows any two variables to be plotted for virtually any number of objects. It is a treatment applicable to many types of worked flint.

However, many artifacts may have three significant and perhaps inter-related variables. The use of three diagrams is clearly unsatisfactory, (x–y, x–z, y–z). A single diagram containing all three variables is much more useful. Triangular co-ordinates are one solution. A point is constrained within an equilateral triangle if the sum of the perpendicular distances from the adjacent sides is equal to the height of the triangle, which remains a constant. For simplicity we can make this height unity. Any blade can be made to fulfil this condition as follows: (i) measure length l; width w; thickness t; (ii) add these quantities; (iii) calculate

$$\frac{l}{l+w+t} \text{ and } \frac{w}{l+w+t}$$

since

$$\left(\frac{l}{l+w+t}\right)+\left(\frac{w}{l+w+t}\right)+\left(\frac{t}{l+w+t}\right)=\frac{l+w+t}{l+w+t}=1$$

Two variables locate the point. When all the blades have been measured, and the values of

$$\frac{l}{l+w+t} \text{ and } \frac{w}{l+w+t}$$

have been calculated, mean values for these should be derived by adding the individual values and dividing by the number of blades. A plot, such as

those figured, can be made from the tables of values, demonstrating the actual dispersion limits,* the centre of which can be taken from the plot. (This is not necessarily the arithmetic mean indicated above). It may be pointed out that the length–width two axis diagram retains absolute sizes, the triangular diagram deals with relative proportions of width, and thickness and length. Finally a simple example may be useful.

Consider a blade: $70 \times 24 \times 6$ (mm): then $70+24+6=100$ (mm) therefore

$$\frac{l}{l+w+t} = \frac{70}{100} = 0{\cdot}70$$

and

$$\frac{w}{l+w+t} = \frac{24}{100} = 0{\cdot}24$$

*Significant limits might be defined as those enclosing *at least* 90% of the blades, this would be more useful than the extreme limits (standard deviation is more precise but involves a lengthy calculation).

APPENDIX III

Further flint drawings may be found in the *Trans. of Newbury District Field Club* 1970, Vol. 12, No. 1, page 66, unfortunately no key was printed due to a printers error. The drawings are as follows:

No. 1, 2, microliths, Wawcott XII; No. 3, microlith, Wawcott XXVIII; No. 4–8, microliths, Wawcott XV; No. 9, microlith, Wawcott XIX; No. 10, microlith, Wawcott V; No. 11–13, microliths, Wawcott XXIII; No. 14, microlith, Wawcott III (Horsham point).

Gravers, No. 15, Wawcott XVI; No. 16, 18, 22, 23, Wawcott XV; No. 17, Avington VIII, No. 21, Avington VII; No. 19, Wawcott X; No. 20, Wawcott VI.

Scrapers: No. 24, Avington VIII; No. 29, Avington VII; No. 25, 26, Wawcott XIX; No. 27, 28, 31, Wawcott XV; No. 30 Wawcott XI.

Flint punch: No. 32, Avington VI (long blades).

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