The Archaeology of the London area: Current knowledge and problems

London & Middlesex Archaeological Society

Special Paper No.1
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HUGH CHAPMAN

THE LONDON AND MIDDLESEX ARCHAEOLOGICAL SOCIETY

incorporating the

MIDDLESEX LOCAL HISTORY COUNCIL

Bishopsgate Institute, Bishopsgate, London, E.C.2
The Archaeology of the London area: Current knowledge and problems

Desmond Collins
Jean Macdonald
John Barrett
Roy Canham
Ralph Merrifield
John Hurst

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## CONTENTS

Foreword, *Brian Davison*  
Palaeolithic and Mesolithic, *Desmond Collins*  
Neolithic, *Jean Macdonald*  
The Bronze Age, *John Barrett*  
The Iron Age, *Roy Canham*  
Roman, *Ralph Merrifield*  
Anglo-Saxon and Medieval, *John Hurst*
FOREWORD

This survey of the archaeology of the London area has been written at a time of increasing awareness of the destruction of the physical traces of our past. Ironically, it relies heavily on information derived from watching the process of destruction—and in an agora. Of course, it emphasises the value of such work. Yet our store of archaeological remains is finite, and from this must come two immediate conclusions: firstly, that we must do more to preserve those sites and buildings which are either too valuable to let go or too complex for us to understand with the techniques currently available; and secondly, that we must do more to record properly those buildings and sites which, for one reason or another, it is not possible to preserve. The former is perhaps outside the scope of this survey. The latter lies at the heart of it.

The several writers whose work makes up this survey—each an authority in his or her field—take pains to show us the gaps in our knowledge of the archaeology of the London area, and thus point the line for further research. Given the current rate of destruction, the research programme must be worked out primarily on the basis of those sites which are threatened with destruction.

The London and Middlesex Archaeological Society has an honourable record of promoting excavation in advance of destruction, and it is fitting that this survey should similarly have been initiated by the Society. Yet it is clear that what is now needed lies beyond the resources of any single group, no matter how dedicated its members may be. The time has come to co-ordinate all the elements of London’s archaeological work force—the part-time site watchers and excavators whose efforts over more than a century have made this survey possible, full-time workers in museums, universities and laboratories, local planning authorities—all who can make a positive contribution to the complex business of reconstructing the patterns of the past.

The President of the London and Middlesex Archaeological Society, Ralph Merrifield, once compared London’s archaeology with the Sybilline books. We have already lost much, and the price we must pay for what remains is mounting steadily. Ignorance of what was at stake may explain our past failure: this excuse can no longer be put forward. With the appearance of this survey we can see clearly what needs to be done. Action—concerted action—must follow.

B. K. Davison,
Inspector of Ancient Monuments.
PALAEOLITHIC AND MESOLITHIC

DESMOND COLLINS

(N.B. This text was submitted in 1973, and has not benefitted from recent publications by John Wymer and others.)

It is more than a coincidence that the earliest recorded discovery of a Palaeolithic tool in the world was from London, for early Palaeolithic sites in the Thames valley are among the richest in Europe, rivalled only by the Somme and East Anglia. It was unusual that the handaxe found in 1690 near “Grays Inn Lane, opposite to Black Mary’s” should have been recorded at all (in 1715), and in the context of knowledge at the time, inevitable that its full significance should not have been realised.

Modern researchers on the Palaeolithic increasingly try to place the main archaeological sites in a geologically constructed time scale, and in the process they gather much useful environmental data. This first section examines the Pleistocene (ice age) sequence, with its fauna and flora.

THE PLEISTOCENE SEQUENCE OF THE LONDON REGION

Fig. 1 shows the sequence of warmer and colder divisions of the Pleistocene of north west Europe (provisionally adopted as the standard for Europe) and of Britain. Only the later cold divisions are associated with evidence of true continental glaciation in northern Europe. The Thames valley is adjacent to East Anglia, where the British type localities are mainly situated, but it is by no means certain how the Thames deposits are to be fitted into the British sequence. An independent sequence, based mainly on the successive terrace levels, river and occasionally marine, has been constructed1 as in Table 1. King and Oakley established a more comprehensive sequence, integrating the fine stratigraphic evidence of the Swanscombe area, and many archaeological sites.2

The Netley Heath stage, around 600 ft. O.D. (180 m.), with marine mollusca like those of the Red Crag in East Anglia, is the earliest and should equate roughly with the Waltonian or Ludhamian. The type locality is near Guildford, and the whole of Greater London is at a lower altitude. The Pebble Gravel stage, around 400 ft. O.D. (120 m.), follows after a down cutting of some 200 feet and is represented by patches of gravel on Hampstead Heath and widely along the hills from Oxhey, Bushey, Arkley and Totteridge to Barnet. We know that the Thames flowed mainly north of these gravels, for they contain Greensand chert from the Weald, brought from the south by tributaries flowing across the present river course. These deposits are probably equivalent to the Westleton beds of East Suffolk, which seem to date from the Pliocene. The latter beds are marine, and the Pebble gravels may be marine or estuarine.

The Higher Gravel Train stage, around 300–350 ft. O.D. (100 m.), is found near Rickmansworth and Leavesden in Herts., on a line passing through the St. Albans vale to the North Sea near the Blackwater. But at Leavesden it is tilted back from St. Albans towards Staines. Apparently this is because the Thames was diverted at this stage southwards across
Middlesex and out through the Finchley gap to Essex. This diversion is associated with the first glaciation of the Thames basin, the Chiltern Drift. Clearly this stage is complex; possibly the river deposits continued seawards during the Cromerian, past St. Albans, but early in the succeeding cold period the Chiltern glaciation blocked this course and the outwash flowed back the other way. Little is known about the Lower Gravel Train stage, around 270–290 ft. O.D. (85 m.); possibly its river flowed through the Finchley gap during a new warm period (between the Cromerian and Hoxnian). A distinct river terrace, the Harefield terrace, belongs to this complex and is well represented at Harefield and Horsenden Hill, near Wembley. Once again the main Thames flowed north of Horsenden, for its gravels have Greensand chert.

<table>
<thead>
<tr>
<th>North West Europe</th>
<th>Britain</th>
<th>Thames terraces</th>
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</thead>
<tbody>
<tr>
<td>Holocene</td>
<td>T</td>
<td>Flandrian</td>
</tr>
<tr>
<td>Weichsel</td>
<td>K</td>
<td>Devensian</td>
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<tr>
<td>Eem (Warthe)</td>
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<td>Ipswichian</td>
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<td></td>
<td>K</td>
<td>Taplow</td>
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<tr>
<td></td>
<td>T</td>
<td>levels</td>
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<td>Saale (Domnitz)</td>
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<td>Wolstonian</td>
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<td>levels</td>
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<td>K</td>
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<tr>
<td>Holstein</td>
<td>T</td>
<td>Hoxnian</td>
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<td>Elster</td>
<td>K</td>
<td>Anglian</td>
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<td>Lynch Hill</td>
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<td></td>
<td>K</td>
<td>Stoke Park</td>
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<td></td>
<td>T</td>
<td>Boyn Hill</td>
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<tr>
<td>'Cromer'</td>
<td>K</td>
<td>Black Park</td>
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<tr>
<td></td>
<td>T</td>
<td>Winter Hill</td>
</tr>
<tr>
<td>Menap</td>
<td>K</td>
<td>Lower Gravel Train</td>
</tr>
<tr>
<td>Waal</td>
<td>T</td>
<td>Higher Gravel Train</td>
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<tr>
<td>Eburon</td>
<td>K</td>
<td>Pebble Gravel</td>
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<tr>
<td>Tegelen</td>
<td>T</td>
<td>Netley Heath</td>
</tr>
<tr>
<td>Praetegelen</td>
<td>K</td>
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</tr>
<tr>
<td>Reuverian (Pliocene)</td>
<td>T</td>
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</tbody>
</table>

Fig. 1 Pleistocene sequences.

The sequence for north west Europe was proposed as a standard for Europe by the sub-commission for European Quaternary stratigraphy. The British sequence in mainly from West and Shotton, and the Thames terraces from Wooldridge and Hare. T signifies temperate period, and K signifies cold or glacial period.
The Winter Hill terrace stage has a surface level about 260 ft. O.D. (78 m.). The river flowed through the Finchley gap for the last time, and its diversion south past London is well documented. A lobe of boulder clay was deposited in the old valley at Finchley. Outwash gravels are difficult to separate from the river terrace. The glaciation responsible was the Lowestoft or late Anglian.

The Black Park terrace, around 188 ft. O.D. (56 m.) at Hillingdon, was the first to follow the present lower Thames. The next two surfaces are the Boyn Hill at around 160 ft. (48 m.) and the Stoke Park cut at 130 ft. (39 m.). The former is difficult to trace east of the Colne. The latter is traditionally regarded not as an independent terrace, but an erosion in the higher terrace. At Yiewsley however it appears to be a distinct terrace. The presence of Clactonian tools and the very steep gradient would be consistent with a continuation of this feature to the lower gravels at Swanscombe. The Lynch Hill terrace with a surface level around 115 ft. O.D. (34 m.) at Yiewsley was formerly grouped with the two higher terraces under the general name Boyn Hill or 100 ft. terrace, and the Swanscombe high terrace obviously belonged to this group. But there is no evidence that the true Boyn Hill terrace is found at Swanscombe. Instead the Lynch Hill terrace seems more likely to be the terrace to which the Swanscombe middle gravels belong. The problem needs further investigation, especially in Middlesex. Probably two Taplow terraces, joining at Harmondsworth at 80 ft. O.D. (24 m.), and two Floodplain terraces at about 40 ft. O.D. (12 m.) and 25 ft. O.D. (7 m.) exist in Middlesex.

<table>
<thead>
<tr>
<th>Stages from King and Oakley (1936)</th>
<th>Nine depositional stages</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (Plateau)</td>
<td>A</td>
</tr>
<tr>
<td>II (Erosion)</td>
<td>B</td>
</tr>
<tr>
<td>III FINCHLEY–HORNCHURCH till</td>
<td>C</td>
</tr>
<tr>
<td>IV (Erosion)</td>
<td>D</td>
</tr>
<tr>
<td>V LOWER BARNFIELD</td>
<td>E</td>
</tr>
<tr>
<td>VI (Erosion)</td>
<td>F</td>
</tr>
<tr>
<td>VII CLACTON–GRAYS</td>
<td>G</td>
</tr>
<tr>
<td>VIII MIDDLE BARNFIELD</td>
<td>H</td>
</tr>
<tr>
<td>IX (Erosion)</td>
<td>J</td>
</tr>
<tr>
<td>X BAKERS HOLE</td>
<td></td>
</tr>
<tr>
<td>XI TAPLOW (+Endsleigh)</td>
<td></td>
</tr>
<tr>
<td>XII CRAYFORD</td>
<td></td>
</tr>
<tr>
<td>XIII (Erosion)</td>
<td></td>
</tr>
<tr>
<td>XIV PONDERS END</td>
<td></td>
</tr>
<tr>
<td>XV (Erosion of buried channel)</td>
<td></td>
</tr>
<tr>
<td>(Slades Green)</td>
<td></td>
</tr>
<tr>
<td>XVI (Halling and buried channel fill)</td>
<td></td>
</tr>
<tr>
<td>XVII (Erosion)</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 2 Pleistocene sequence in the lower Thames.

The 17 stages of King and Oakley are shown in Fig. 2. Stage I seems to be a complex of all the terrace stages above the Winter Hill. Five stages are simply erosions between the stratigraphic stages; and stages XV and XVI probably need revision. Here we can use a simplified and modified version of nine genuine stratigraphic stages, lettered A–J.
Stage A is the Lowestoft till of Finchley and Hornchurch. B, C and D (Lower Barnfield, Grays–Clacton and Middle Barnfield) span the Hoxnian interglacial. E and F (Bakers Hole and Taplow–Endsleigh) must be the Wolstonian–penultimate glacial. Stage G (Crayford) is the Ipswichian interglacial, and seems to be a distinct terrace, the Upper Floodplain or Ilford terrace. Stage H (Ponders End) has been dated at Edmonton by C 14 to about 20,000 B.C. (Birm. 238 19,580 B.C.). The alluvial silts and peats of stage J (Tilbury) are Flandrian (post glacial).

Mammals and molluscs are known from the Swanscombe Lower Gravels, Lower Loam and Middle Gravels (Fig. 3). The Grays sites have large faunas too, but with the stratigraphy in doubt, there remains disagreement over whether the date is Hoxnian, Ipswichian or part of each. There are faunas in the Bakers Hole–Ebbsfleet series (Fig. 3), but little has been published. Ipswichian interglacial vegetational sequences have been studied by pollen analysis at Ilford3 and Trafalgar Square.4 Faunas come from these sites and also from Brentford and Crayford. Some of the latter fauna may be as old as the end of the Wolstonian. Plant remains are known from Endsleigh Gardens. Plant and wood remains were abundant at Stoke Newington, and mollusca and some mammals were found; these and their dating are discussed later. The Ponders End peats have produced plants, mollusca and mammals including reindeer, woolly rhino, mammoth and arctic voles. Other occurrences of last glacial mammals are at Twickenham with reindeer and saiga, and in Leadenhall Street with woolly rhino dated by C 14 to 29,450 B.C. (GrN 4630). Sporadic discoveries of fauna have been made at many localities in London and Middlesex, but rarely above the level of the Taplow terrace. Mammoth has been recorded in this terrace at Churchfield in Acton, at Norwood Green, at Endsleigh Gardens and elsewhere, but none of the faunas are rich. This would fit a glacial date. Faunas are most abundant at the Floodplain levels.

THE PALEOLITHIC SITES OF THE LONDON AREA

This account has benefited from two most useful recent works. First is the C.B.A. gazetteer of Lower and Middle Palaeolithic sites,5 compiled by Derek Roe, which has made it possible for the first time to assess within reasonable limits the relative richness of various sites. Regional supplements and corrections would now be most valuable. Second is John Wymer’s detailed coverage of the Thames valley sites in Lower Palaeolithic Archaeology in Britain.6

Swanscombe, the richest earlier Palaeolithic site in Britain and probably in Europe, will be considered first, because it is the key to most interpretations; but this will only be a tabular summary because it lies on the periphery of London, close to Gravesend. The unrivalled sequence of strata, faunas and archaeological levels is shown in Fig. 3 (mainly from Ovey).7 The taxonomic scheme to which the assemblages are attributed is modified from Collins (my 1969 paper).8 Several of the main strata are also stages of King and Oakley,9 and here they are correlated with the standard British stages, and less localised stages used on the continent.

Although several recent workers10 have thought it possible to equate the main pollen zones of the Hoxnian with parts of the Lower and Middle Barnfield stages, this correlation itself is not immune from criticism. Recently it has been claimed that the Hoxnian and Ipswichian are separated only by a short cold phase instead of a glaciation, and are together equivalent to the last (Eem) interglacial on the continent; this negates the correlation Hoxnian = Holstein, and might call into question the correlation Barnfield = Hoxnian. Personally I can see no
<table>
<thead>
<tr>
<th>Stratum</th>
<th>Thickness ft. m.</th>
<th>Local stage see Fig. 2</th>
<th>British stage</th>
<th>General stage</th>
<th>Archaeological data</th>
<th>Traditions and characteristics</th>
<th>Mammals</th>
<th>Molluscs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Springhead peats</td>
<td>6 1.8</td>
<td>Tilbury XVII (j)</td>
<td>Flandrian</td>
<td>post glacial</td>
<td>MISOLITHIC, NEOLITHIC</td>
<td>AND ROMAN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alluvium of Ebbfleet valley near Springhead nursery.**

**Top of Northfleet-Ebbfleet horizon.**

<table>
<thead>
<tr>
<th>Top solifluxion</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>(ACHEULIAN) Handaxe</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Uppermost loam</td>
<td>6 1.8</td>
<td>Devensian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Solifluxion</td>
<td>3 1.5</td>
<td>Devense or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperate Bed + Soil</td>
<td>1 1</td>
<td>Ipswichian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Middle</td>
<td>1 2</td>
<td>Taplow XI (f)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loam (boasie)</td>
<td></td>
<td>Wörlund</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ebbfleet</td>
<td>3 1</td>
<td>Riss 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Gravel</td>
<td>1 2</td>
<td>Bakers Hole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ebbfleet</td>
<td>1 2</td>
<td>X (E)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Bank of Ebbfleet channel, c 15 ft. (4 m) O.D.**

**Top of high terrace**

| Upper Gravel          | 3 1              | Wolfstonian             |               |               | (ACHEULIAN) Caxton II, Pointed |                                |          |         |
| Upper Loam            | 4 1.2            |                         |               |               | handaxes in microliths (Ha 25)  |                                |          |         |
| Solifluxion           | 1 1              | (Fulmen)                |               |               | Ovates—limulidae common        | (fool oving voke)              |          |         |
| Top of middle         | 1 1              |                         |               |               | (ACHEULIAN) Caxton I, Pointed |                                |          |         |
| gravel                |                  | handaxes in microliths  |               |               | handaxes in microliths (Ha 40) |                                |          |         |

**Bank of terrace, Thanet Sand or Chalk at 75 ft. (22 m) O.D.**

**Fig. 3.** Tabular summary of deposits and contents of the Swanscombe and Ebbfleet sequences.
arguments in favour of the revised scheme, and a great deal in favour of the correlation used here; but it does illustrate the often misunderstood fact that all scientific findings, including geological correlations, are hypothetical. Actually a more likely modification would be the discovery that the Hoxnian like the Holstein included a second minor interglacial, or that the penultimate glaciation was interrupted by one or two minor interglacials.

A second key locality south east of London is Crayford, where stages F, G and H are found in sequence: “Taplow” gravels (late Wolstonian); Crayford brickearths (Ipswichian); Slades Green trail gravels (Devenian–Ponders End). The main archaeological and faunal horizon is from the base of the brickearth, and may be early Ipswichian or late Wolstonian. Its typological characteristics are described in connection with Creffield Road, Acton (p. 9). Several nearby Dartford localities have been rich in Palaeolithic tools, but they are not important in the present context.

Within London and Middlesex proper, there are three rich and important Palaeolithic sites. 1. Stoke Newington (E40868) and adjacent Clapton and Stamford Hill; 2. Yiewsley (O80800) and adjacent West Drayton and Dawley; 3. The Acton–Ealing sites, especially Creffield Road (144808) and Hanwell. The first two are being re-investigated and the third is due to be restudied.

Stoke Newington. Pleistocene deposits near Stoke Newington in North London have yielded mollusca, plant remains, stone tools and according to Evans,11 about ten species of mammals; either there are misidentifications in the list or it covers several periods, for two elephant species, three rhino species, lion, hyena, giant deer, saiga and reindeer are listed. In the nineteenth century Clacton fallow deer was frequently misidentified as reindeer. Over 50 species of mollusca have been listed from the various localities. Kerney10 has suggested a date contemporary with the Swanscombe lower middle gravels, as the two faunas share Sphaerium rivicola. This would accord with the scheme of King and Oakley, in which the Stoke Newington fluviatile deposits were placed early in the Middle Barnfield stage.

Perhaps the most remarkable thing about the deposits was the preservation of wood and other plant remains: birch bark, pine, elm, hazel nuts, alder and yew. The latter (Taxis baccata) argues for a Hoxnian date, as it is unknown in the Ipswichian. At a locality given as Bayswater Road, W. G. Smith12 found two 5 ft. (1.5 m.) long stakes of birch with sharpened ends stuck in the ground; these were interlaced with fern (Osmunda regalis) and woven with Clematis. It seems to have been a windbreak or shelter, possibly even a hut. These finds were made in foundation trenches and the failure to plan and excavate the area with precision, or to record the archaeological association, makes it difficult to assess the significance. If such a discovery could be repeated, it might take Palaeolithic research beyond the level of stone tools and into the realm of perishable material culture and habitation types. Preliminary results of pollen work at Stoke Newington common indicate a temperate forest vegetation as in the Swanscombe lower loam.13

Worthington Smith observed the strata in foundation trenches at many localities in north London,14 and believed that they could be described in terms of a single sequence: gravels, followed by a land surface or ‘floor’, overlain by ‘trail’, an ill defined solifluxion deposit. The floor was believed to extend across north London and out to Bedfordshire, no account being taken of the terrace system. One must remember that at the time the Palaeolithic was often regarded as relatively short in duration, and Smith’s simple sequence seemed to plausibly span the entire lower and middle Palaeolithic. We have a more detailed drawn section for the area north of Stoke Newington Common between Alkham and Kyverdale Road south
of Cazenove Road. The soil and trail above the floor was 4 to 5 ft. (1.5 m.) thick. There were two 'floors' separated by a foot (0.3 m.) of deposit; then came 6 ft. (1.8 m.) of sands with molluscs such as Unio (Potamida) littoralis; deepest was a thin layer of gravel and implements resting on the London Clay, with molluscs such as Corbicula. Both Corbicula and Unio usually indicate climate warmer than today's.

Large numbers of handaxes were found in the gravel and on the floor. Over 600 handaxes have been found in the Stoke Newington area, probably mainly from these levels. It is difficult to separate out the different assemblages, but it seems clear that both the main levels had a preponderance of pointed handaxes. A rough approximation to the percentage of pointed handaxes (my index HaP) based on figures from Wymer is 86 for the gravel (calculated on 161 handaxes) and 60 for the floor (75 handaxes). A series of 120 handaxes from Lower Clapton had HaP 71. These values are consistent with an early (Barnfield) stage of the Acheulian. The handaxes from higher deposits at 85-100 ft. (25-30 m.) O.D. at Stamford Hill have a minority of pointed handaxes, with HaP 47 or less on a sample of 75. This is probably a later stage (Cuxton I).

Contrary to some statements about Stoke Newington, Levallois flakes seem to be rare at all levels. The floor included a number of racloirs (so called side scrapers): 33 with 75 handaxes. This has often been compared to High Lodge. However it is now known that the classic High Lodge assemblage has no handaxes; further the typical Quina racloirs are not common at Stoke Newington. The similarity may be coincidental, or there may be a High Lodge type assemblage mixed on the floor with the Acheulian at Stoke Newington.

Recent excavations on the present Common have revealed the strata beneath a ground surface of only 69 ft. (20.7 m.) O.D. I am grateful to Dr. J. Campbell for a summary of his findings in advance of full publication. Three layers were found over the London clay at about 62 ft. O.D. (18.7 m.): 1. A gravelly sand 1½ ft. (0.5 m.) thick; 2. a sandy gravel 1½ ft. (0.5 m.): 3. a 'brickearth' with pebble band 1 ft. (0.3 m.) up to about 67 ft. (20 m.) O.D. The remaining 2 ft. (0.7 m.) were made up of recent tip and disturbance.

The lowest level seems to contain a Clactonian, but only 38 artefacts are known. The level above this was probably Acheulian, with one pointed handaxe and some roughouts. The third level up may be equivalent to Smith's floor, but no handaxes were found.

Because some of the north London gravels rest on a bench under 50 ft. (15 m.) O.D. at Shacklewell for instance, and others extend to over 100 ft. (30 m.) O.D. at Stamford Hill, it is an important question whether they could all belong to a single terrace aggradation. If it could be shown that two or three terraces were represented, say at 60 ft. (18 m.), 80 ft. (24 m.) and 100 ft. (30 m.) O.D., with bluffs due to downcutting following each terrace and separating the gravels, this would provide a most useful piece of dating. In fact no such bluffs seem detectable. Furthermore there is some evidence to suggest that the highest gravels at Stamford Hill contain a later (Acheulian) assemblage than the lower gravels at Stoke Newington Common (65-80 ft. (20-24 m.) O.D.), or the Clactonian at 62-64 ft. (18-19 m.) O.D. This is consistent with a continuous aggradation up to the 100-110 ft. (30-33 m.) O.D. of the Lynch Hill terrace and Middle Barnfield stage.

The crux of the matter is whether one accepts an inter-Barnfield erosion to below 0 ft. O.D. at Clacton, followed by a period of aggradation leaving river deposits between 15 and 50 ft. (5 and 15 m.) O.D. at Grays and subsequently as high as the top of the Swanscombe middle gravels at over 100 ft. (30 m.) O.D., as envisaged by King and Oakley. On this theory, one could best interpret the whole Stoke Newington series as fluvialite deposits of a river rising
from below 50 ft. (15 m.) O.D. to over 100 ft. (30 m.) O.D. at the end of the aggradation. The alternative view that several terraces are represented might equate the lower deposits at Shacklewell and Stoke Newington Common with the Taplow or even Upper Floodplain terrace. But the archaeology, flora and fauna of these (at Euston and Trafalgar Square for example) seem to be significantly different from anything in the Stoke Newington series.

*Yiewsley.* A series of pits in west Middlesex near Yiewsley (around O80800) yielded abundant Palaeoliths between 1890 and 1930. Some localities are still available for study, and this account includes data from an ongoing reinvestigation of the area under my direction, due to be published by the Museum of London. The principal localities are Eastwoods pit, Yiewsley (O78800), Boyers pit, West Drayton (c. 075795) and Maynards pit, Dawley (O848000). Although often treated as separate sites, the Yiewsley and Dawley pits are continuous, and the West Drayton sites are not far away. The biggest collection, made by R. Garraway Rice, referred to all the sites as Yiewsley, and hence the figures for Yiewsley in Roe include all these localities. The main implementiferous pits were all in the Lynch Hill terrace, close to the Grand Union Canal and the main line western region railway. From Middlesex up to the Reading area, it seems that the richest sites are on this terrace; certainly on available figures the seven richest sites conform to this rule.

The total count of Palaeoliths from the Yiewsley group comes to over 4,200, about a third being waste flakes, and figures taken from the C.B.A. gazetteer make it one of the richest sites in Britain after Swanscombe. The handaxe total, about 2,100, is the third largest in Britain. In terms of typical Levallois flakes, the second and third richest localities after Swanscombe are Creffield Road (732) and Yiewsley (425). Yiewsley is thus on several criteria among the three richest earlier Palaeolithic sites in Britain (and perhaps fifth richest in Europe), but in spite of this, few Palaeolithic archaeologists have heard of it.

The stratigraphy of Eastwoods and Pipkins pits close to the canal was given by J. Allen Brown. Resting on London clay at 90-95 ft. (27-29 m.) O.D. was 8-13 ft. (2.4-4 m.) of stratified fluvial gravel; over this was 7 ft. (2 m.) of unstratified (probably solifluxion) gravel, and a chalk mass which may have been a Coombe rock; over this was 5 ft. (1.5 m.) of brickearth, sometimes stony and disturbed, with a surface about 110-115 ft. (33-35 m.) O.D. Further north a series of strata at the extreme upper edge of the same terrace is now exposed in Warren Lake. Here the fluvial gravel is some 20 ft. (6 m.) thick between about 95 and 113 ft. (28 and 34 m.) O.D., and is capped by a loam up to about 117 ft. (34 m.) O.D. Then comes a solifluxion gravel, probably equivalent to Brown’s unstratified deposit, up to about 121 ft. (36 m.) O.D., and a top loam rises to 123 ft. (37 m.) O.D. The ground surface of the terrace is around 122-124 ft. (37 m.) O.D. The section drawn in 1972 showed that north of the bench of the Lynch Hill terrace at 90-95 ft. (27 m.) O.D. was a distinct bluff and a higher bench about 120 ft. (36 m.) with gravels up to 130-132 ft. (39 m.) O.D. with a ground surface around 133-135 ft. (40 m.) O.D. This appears to be a downstream continuation of the surface which Hare called the Stoke Park Cut; it is certainly a different terrace from the main Yiewsley terrace near the canal, which is evidently the Lynch Hill terrace.

Stone tools seem to have come from several levels, but it is difficult to attribute most of the large collections with any reliability. Only one patination group can be easily distinguished from the collection as a whole, which is mainly of yellowish to brown colour. This special group is bluish-white, sometimes with “basket” patina. It is very characteristic typologically; there are typical cordiform handaxes and some with flat angled butts of Paxton type. Brown wrote on Paxton handaxe no. 2193 that it came from the loam over the gravels, and
on several of the bluish series he recorded depths of 2–5 ft. (0.6–1.5 m.); the remainder of the handaxes are from deeper in the gravels. There are Levallois points and blades in the white series. It clearly belongs to the Mousterian of Acheulean Tradition in Bordes' sense, and specifically my Paxton stage, dated at sites like Le Tillet, Little Paxton and Bramford Road, Ipswich to the early part of the last glaciation. A dating to the previous (Wolstonian) glaciation seems unlikely.

Brown recorded handaxes from some 20 ft. (6 m.) down near the base of the gravels, and from up to 12 ft. (3.6 m.) probably near the base of the unstratified gravel. Most of the handaxes from 18–20 ft. (5–6 m.) were pointed types. Levallois cores and flakes on the other hand came mainly from 9–15 ft. (2.7–4.5 m.) down. This should be compared with Brown's statement that these "later types" came from the base of the unstratified gravel. Since this series includes tortoise cores like those of Bakers Hole, and since the unstratified gravel included a chalk mass, which sounds like Coombe Rock, it is tempting to equate the Bakers Hole Coombe Rock and Yiewsley tortoise core assemblages. In both cases, handaxes seem to be associated with the Levallois types, but the large well excavated assemblages necessary to demonstrate this beyond doubt are not available. Marsden recorded Levallois flakes from 7–9 ft. (2–3 m.) down.

Since 1950 six handaxes have been found in the fluviatile gravels in Warren Lake (079806); they came from below water level and probably well down in the gravels. All but one were typical pointed handaxes, indicating high HaP index, perhaps over 80. For the handaxe collection in general, HaP is much lower: Garraway Rice collection, Eastwoods 35.3 on 289 handaxes; Boyers 33.6 on 204 handaxes; and Claytons 36.6 on 30 handaxes. This suggests that many handaxes did not come from the same level as the recent Warren Lake finds, probably higher in the fluviatile gravel or in the overlying unstratified gravel. Finally in or on the higher terrace gravel near Gouldsgreen, several Clactonian flakes and a core have been found. The following seems to be the local sequence:

1. Higher terrace (Stoke Park) gravel—Clactonian; 2. Lynch Hill fluviatile gravel, lower part—Acheulean with pointed handaxes; 3. fluviatile gravel higher part—Acheulean with fewer pointed handaxes; 4. unstratified gravel, lower part—Acheulean with Levallois types and rarer handaxes; 5. top loam/brickearth—Mousterian of Acheulean tradition, Paxton stage.

_Ealing—Acton; Creffield Road._ This site was investigated in the late nineteenth century by J. Allen Brown. Some small pits (194808) produced over 700 Levallois flakes, 15 Levallois cores and two atypical handaxes. They are mostly unrolled and come from a single level beneath 6–9 ft. (1.8–2.7 m.) of trail, brickearth and loam; these rest on gravel some 7 ft. (2 m.) thick. The gravel resting on London clay around 85 ft. (25 m.) O.D. is possibly Lynch Hill, but the age of the main artefact horizon cannot be fixed, pending further work.

Typologically Creffield Road is similar to Crayford. As with the Bakers Hole—Yiewsley assemblage type, Levallois flakes are the commonest element, but there are several differences. The Crayford—Creffield Road assemblage type has no tortoise cores, very few handaxes and relative to Bakers Hole the large oval Levallois flakes are rare and blades are common; it has true Levallois points and backed knives. Finally the Levallois flakes have thin, highly faceted, 'bow-shaped' butts of the 'Chapeau de Gendarme' type; this is not found at Bakers Hole, and the rare occurrences at Yiewsley may indicate the presence of a small Crayford type assemblage.

Levallois points and well made backed blades appear in the French sequence just before the last interglacial. A fine assemblage of Crayfordian type from Montiègres in the Somme
(Commont's Moustérien chaud) seems to date from the last interglacial. Crayfordian type Levallois points or chapeau de gendarme flakes and blades are found usually in small numbers in many Ipswichian sites: Ilford—Cauliflower pit, Stone and Selsey on the south coast, Burstwick in Yorkshire, Lavenham and Barrington in east Anglia, and Whittlesey and March in the March gravels of the Fenland.

Hanwell. Swards pit (160790) and Macklins pit were prolific of handaxes, and over 200 come from Hanwell. Most are very rolled and come from gravels between 30 and 75 ft. (9–22 m.) O.D. This seems to be the Taplow terrace level, but the gravels may be colluvial or solifluxion rather than fluviatile. The problem is to decide if handaxe makers were living in Hanwell during the time of the Taplow river level, or whether the collections are the rolled and derived contents of the locally destroyed Lynch Hill terrace. From elsewhere in Ealing and Acton, over 70 rolled handaxes have been recovered, not in concentrations but scattered as one might expect if they were derived. Pointed handaxes are near to or over half the total, as in the Lynch Hill terrace in general.

Norwood Green. A remarkable find by J. A. Brown deserves special mention. Parts of the skeleton of a mammoth were found in 1887 in Norwood Lane (139793) in drainage trenches 13 ft. (4 m.) below the surface of 88 ft. (26.4 m.) O.D. These deposits are clearly post Lynch Hill. The bench level below 75 ft. (22 m.) O.D. is probably the Taplow, and the site might date from the end of this stage. Several rolled handaxes were found in the area, but a fresher Levallois point was stated by Brown to have been in contact with the mammoth. Several other flaked were found near. This sounds like a kill site, and the point, 4\(\frac{1}{2}\) ins. (120 mm.) long, may have been the spear tip which brought the mammoth down.

It is often asked why few or no kill sites are found in the European Palaeolithic, and why the better known sites do not fall in this category. Indeed recent attempts have been made by the functionalist school to argue that the assemblage-types of the Mousterian for example are special activity variants like kill sites. No doubt the truth is that special activity sites are numerous but very poor, like Norwood Green; here, because of the small number of tools, the site has attracted little attention. Almost by definition, the rich, long occupied sites cannot be isolated special activity sites.

Stretching up the Thames from the Colne valley are a series of rich handaxe sites: Iver, Farnham—Britwell, Burnham—Lent Rise and the very rich sites of Maidenhead—Furze Platt. Close to Rickmansworth in the Colne valley are the sites of Mill End and Croxley Green. The stratigraphic and faunal evidence from these sites, all falling outside Greater London, is rarely good.

Opposite Swanscombe, in Essex, is the important group of sites at Grays, Little Thurrock, Chadwell St. Mary and Purfleet. These sites, also just outside Greater London, have important faunal and floral evidence, but although they make interesting comparison with Swanscombe, the stratigraphic evidence is poor. A little east of Swanscombe are rich sites in the Medway: Cuxton, Aylesford—New Hythe, and Twydall.

Worthy of mention within Greater London are a group of sites in south west Essex: Leytonstone, Wanstead and Barkingside. Over 200 handaxes have been recorded from these sites, mainly from a terrace about 100 ft. (30 m.) O.D. This is too high to be the Taplow and may be the Lynch Hill. A number of findspots from altitudes down to below 20 ft. (6 m.) O.D., at Plaistow and on the Thames foreshore for example, can be regarded either as derived, or a genuine low terrace period occupation; but there are no distinctive features.
The last of the rich sites in London is around Wandsworth. Rather over 50 handaxes come partly from gravels around 100 ft. (30 m.) O.D., partly from lower levels, presenting a familiar problem. No other sites in Greater London have 50 handaxes or more. A weak concentration in the area of Oxford Street is perhaps worthy of mention, usually near 75 ft. (22 m.) O.D., but the significance is not clear.

INTERPRETATION OF THE PALEOLITHIC: SOME EXISTING SCHEMES

Most workers would agree that with the advent of the assemblage approach to the Palaeolithic, older schemes based entirely on attribution of individual artefacts (as in the case of the Levalloisian and Acheulian stages of Breuil) are no longer relevant. Roe divided 38 handaxe assemblages into seven major groups.²⁶ Personally I find these suggestive in building a theory of Acheulian evolution, but it is disappointing that no new scheme of the lower Palaeolithic was offered, and accordingly little evaluation is possible here. Wymer has offered several synthetic schemes which take account of not only handaxes but Levallois types and other components as well.²⁷ Although several other workers have been concerned with the earlier Palaeolithic recently, the only other relevant British schemes are Waechter²⁸ and Collins.²⁹, ³⁰

In the 1938 Swanscombe Skull monograph, it was noted that the middle gravels had few ovate or cordiform handaxes, whereas in the upper loam these became frequent, along with the ‘S-twist’. The first stage, Swanscombe middle gravels (hereafter SMG) was called early middle Acheulian, and the Swanscombe upper loam (SUL) was called late middle Acheulian. R. A. Smith in 1914 had recognised the same two stages, but following Commont he called them Chellian (with pointed handaxes) and St. Acheul I (with ovates and S-twist).³¹ In the period 1900–14 Commont and several contemporaries took the view that ovate and other forms replaced the pointed handaxes. Only later did it become axiomatic that well made pointed handaxes came at the end of the sequence. As will be seen, all recent schemes incorporate the sequence SMG—SUL; the disagreements are more concerned with the problem of an early Acheulian and a late Acheulian.

The idea that early handaxes should be crudely made, with a jagged profile edge and much cortex on the butt, and that therefore better made handaxes belonged not to the beginning but to the end of the development is already to be found in Commont’s work. It is a natural extension of de Mortillet’s influential theory of progress through successive epochs, the ruling dogma of the nineteenth century. But this, probably mistaken, notion became commoner later. Marston, for example, claimed that crude handaxes (now often called Abbevillian) characterised the Swanscombe lower middle gravel. Excavation in 1937 showed exactly the reverse,³² and therefore adherents of the theory have tried to make Swanscombe later and later in the sequence. It was Chellian for Smith in 1914;³³ Early Acheulian for Smith in 1926;³⁴ Early Middle Acheulian for the Swanscombe Committee in 1938;³⁵ Middle Acheulian for Wymer in 1961;³⁶ and even Late Acheulian for Vaufrey in 1939.³⁷ But assemblages of primitive handaxes have always proved rarer than the people who believed they ought to exist.

Waechter³⁸ proposed four stages (two of Acheulian followed by two of Acheulio–Levallois) as follows: 1. Swanscombe MG and Furze Platt; HOXNIAN. Lanceolate handaxes; 2. Swanscombe UL (2a) and Elveden (2b); late HOXNIAN or early WOLSTONIAN/PENULTIMATE. Ovates, sometimes twisted; 3. Yiewsley and Farnham terrace C; IPSWICHIAN. Lanceolates and Levallois flakes; 4. Brndon and St. Neots/Little Paxton (+ Bakers Hole); late IPSWICHIAN. Ovates–Cordates (thick butted) and Levallois flakes.
It would be easier to test this scheme if the stages had been defined more quantitatively and if more assemblages had been nominated. Provisionally one might doubt the dating of stages 3 and 4, and the grouping in stage 4.

Wymer was the first of the contemporary workers to use the scheme SMG—SUL, and he illustrates well the problem of placing the second stage in the time scale. It has usually been accepted that SMG (Wymer’s Middle Acheulian) goes in the Hoxnian. In 1961 Wymer put SUL (Late Middle Acheulian) at the close of the Hoxnian, because it was generally thought to belong to the last stages of the aggradation of the river terrace to the 100 ft. (30 m.) high sea level of that interglacial. In 1968, Wymer made SUL into a Wolstonian interstidial, separating the two main phases of the penultimate glaciation. This was probably because the undoubted evidence of cold climate at the top of the middle gravels was by then equated with the first phase of the Wolstonian.

Wymer’s 1968 sequence runs: ? Early Acheulian; Clactonian, Early HOXNIAN; ? Early Acheulian; Middle Acheulian, HOXNIAN; Late Middle Acheulian, WOLSTONIAN interstidial; Levalloisian (Bakers Hole and West Drayton), late WOLSTONIAN; Deserted; Acheulian (late) ? Stoke Newington, IPSWICHIAN; Levalloisian (Crayford, Acton, Iver, Ebbsfleet lower gravel), IPSWICHIAN; Later Levalloisian (Ebbsfleet upper loam, Ponders End), LAST GLACIAL; Deserted. Several of these stages are on the author’s own admission poorly represented; the dating of Ebbsfleet and some other minor points might be criticised.

My scheme distinguishes a Clactonian tradition with two stages represented in Britain, the Rickson stage, Swanscombe lower gravel, Early HOXNIAN, and the Jaywick stage, Clacton, Little Thurrock and the Swanscombe lower loam surface, Middle HOXNIAN. Secondly it distinguishes an Acheulian tradition of different origin, with three main stages in an unbroken developmental sequence, and a problematic fourth. All have handaxes; the main variables are: 1. HaP, the straight and concave sided handaxes, Lanceolate–Micoquian–Ficon of Bordes, as a percentage of all the typical handaxes; 2. HaLi, the limandes or long ovates as percentage of HaR, the convex sided handaxes; 3. Levallois flakes (DL) as a percentage of DL+Ha, the handaxes; 4. Twists, handaxes with profile twist (S or more often reverse S) as percentage of all handaxes. A provisional characterisation of the stages, almost certain to need modification, is as follows:

<table>
<thead>
<tr>
<th>Stage</th>
<th>HaP</th>
<th>HaLi/HaR</th>
<th>DL/Ha+DL</th>
<th>Twists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnfield I</td>
<td>Over 60</td>
<td>0–10</td>
<td>Under 10</td>
<td>Under 5</td>
</tr>
<tr>
<td>Barnfield II</td>
<td>60–50</td>
<td>0–15</td>
<td>„</td>
<td>„</td>
</tr>
<tr>
<td>Cuxton II</td>
<td>25–10</td>
<td>Over 25</td>
<td>15–50</td>
<td>5–20</td>
</tr>
<tr>
<td>Northfleet I</td>
<td>20–10</td>
<td>10–25</td>
<td>Over 75</td>
<td>5–20</td>
</tr>
<tr>
<td>(tortoise cores)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northfleet II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(bipolar cores)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elveden</td>
<td>15–0</td>
<td>0–15</td>
<td>5–50</td>
<td>15–50</td>
</tr>
</tbody>
</table>

The dating and attribution of key assemblages is as follows: Barnfield I, HOXNIAN Vegetation zones late II and III, Swanscombe lower middle gravels, Hoxne interglacial levels, Stoke Newington and Clapton gravels; Barnfield II, HOXNIAN Vegetation zone IV, Swanscombe skull level, Dovercourt, Stoke Newington floor; Cuxton I, early WOLSTONIAN (or cold stadial between HOXNIAN and second ‘DOMNITZ’ temperate
period), Swanscombe top of middle gravels, Cuxton, Furze Platt/Cannoncourt Farm; Cuxton II, proto/early WOLSTONIAN interstadial, or new 'DOMNITZ' temperate period, Swanscombe upper loam, Wansunt channel gravel. Northfleet I, first main WOLSTONIAN glacial, Bakers Hole, Bapchild, New Hythe, Yiewsley unstratified gravel; Northfleet II, first main WOLSTONIAN, Ebbsfleet lower gravel; Elveden, WOLSTONIAN interstadial, High Lodge sands, Westley, Elveden gravels, ? Bowmans Lodge.

One of the principal differences between this scheme and previous schemes is that three substages are recognised within the SMG; otherwise it resembles other schemes in following the Swanscombe strata. Incidentally the tortoise core assemblage type is dubiously stratified above the SUL at Craylands Lane pit.

Evidence of later stages of the Acheulian is poorly represented in Britain, and in Europe in general. Of the following five stages proposed by me in 1969,42 only the last two are readily identifiable in Britain: 1. Orgnac, late 'Riss' = Penultimate glacial cave layers, France and Italy; 2. (± Taubach, earlier last interglacial, ? north west Europe); 3. Chaudon, later last interglacial (Houppeville, le Tillet, so called 'Micoquian'); 4. Paxton, end last interglacial and early last glacial, (le Tillet, Little Paxton, Yiewsley top loam, Kents cavern); 5. Mousterian of Acheulian tradition, early last glacial, (many rich Dordogne caves, Oldbury). Contrary to the usual view, I think stages 3, 4 and 5 form a convincing developmental sequence. It is quite possible that separate branches of the Acheulian existed during this time but none are well established; the Crayfordian is probably best classified outside the Acheulian in the narrow sense.

Two related aspects of the main Acheulian scheme43 need comment: 1. The dating of the Northfleet stage to early Wolstonian rather than late Wolstonian; this depends to some extent on the model of the Wolstonian (and continental equivalents) adopted, i.e. single, twofold, threefold, etc., cold maxima; 2. The separation of Cuxton II and Elveden by the Northfleet stage, partly dependent on the first point. An alternative which is at least superficially simpler, and more like Wymer's 1968 scheme44 is the sequence Barnfield; Cuxton (+ Elveden) EARLY + MIDDLE WOLSTONIAN; Northfleet LATE WOLSTONIAN; Crayford WOLSTONIAN/IPSWICHIAN. In favour of this, two points could be made. Cuxton II and Elveden with relatively few Levallois flakes but high frequency of S-twist, ovates, cleavers, etc., are in some respects more similar than either is to Northfleet and could be combined; second Northfleet and Crayford are both assemblage-types with high Levallois index, and might be thought to make a good sequence.

This alternative scheme is worth careful evaluation in future, but I feel that several, admittedly technical, points argue against it. Geologically the Elveden type seems to be Mid Wolstonian at sites like High Lodge, while the Northfleet type seems to be Early Wolstonian. The latter dating may prove to be wrong, but as King and Oakley's scheme indicates, there are a number of Wolstonian strata (five at Ebbsfleet alone) after the Bakers Hole Coombe Rock, both loessic and solifluxion, but there are no known Wolstonian deposits before it, except possibly the minor solifluxion under the Swanscombe upper loam. Twisted handaxes are found at Hoxne where Hoxnian and early Wolstonian are present, but on West's interpretation,45 no handaxes are as late as the first main Wolstonian cold phase; i.e. the Cuxton II stage here is early. On the continent, the St. Acheul 'Atelier Commont' of Cuxton II type is early or proto 'Riss' (= Wolstonian); and the Markkleeburg assemblage of Northfleet type is early Saale = early Wolstonian, not Warthe = late Wolstonian. Finally the Orgnac assem-
blage type is quite unlike Northfleet, and while it is not impossible, it is uneconomical as a hypothesis to make them contemporary. Any of these arguments may prove inadequate, but as a whole I think they are the strongest case.

An alternative approach to the question of the first arrival of man in the Thames Valley is to look for the highest terrace with artefacts. In fact the Lynch Hill terrace is the highest containing undoubted artefact assemblages, though the Stoke Park terrace which is perhaps no earlier than the Swanscombe lower gravels, seems to have some Clactonian. Two doubtful occurrences further upstream may be briefly discussed. Numerous handaxes from the Winter Hill level in the Caversham channel near Henley, are now usually regarded not as contemporary with the river deposits, but as belonging to colluvial or resorted gravels of later but unknown age. Two pits near Burnham Beeches (Cooper's and Deverill's) at the Boynt Hill level have produced numerous handaxes. If the Caversham channel finds can be redated, then so can Burnham Beeches, especially as there is no evidence that it is different or earlier than other handaxe assemblages. But the matter needs more investigation. In Middlesex itself two localities higher than the Lynch Hill terrace were quoted by J. A. Brown as producing Palaeoliths; but there is no guarantee they came from river deposits and it is not even known which tools were involved. Castlebar Hill in Ealing is about the level of the Boynt Hill, but little was found here; Town pit Hillingdon is actually at the level of the Black Park terrace, which is not a very likely provenance for in situ Palaeoliths.

A Suggested Scheme for the London Area

The following is a provisional narrative of the culture sequence in the region, using the scheme outlined above, with a few modifications; it is offered for testing. The first well documented occurrence of Palaeolithc man in the area is from the Swanscombe lower gravels in Rickson's and Barnfield pits; it is early Hoxnian, and belongs to the Rickson stage of the Clactonian. Sporadic finds from the gravels at Goulds Green (082808) just north of Warren Lake, Yiewsley and from the adjacent Chapel Lane area (072810) may be the Middlesex equivalent. The next stage of the Clactonian of early to middle Hoxnian date, is the Jaywick stage (type site Jaywick Sands, Clacton); it is well represented at Little Thurrock, Grays. Other possible occurrences are the lowest level of Campbell's 1972 excavation on Stoke Newington Common, some Clactonian flakes from Normer Hill, Denham, and a series of Clactonian flakes from Britwell (SU 957814, north west of Slough at Farnham) stratified under a handaxe level.

Following immediately after the Clactonian and possibly overlapping with it, the main Acheulian tradition runs from the middle Hoxnian into the succeeding Wolstonian glacial period, but it is not traceable in Britain in late Wolstonian or Ipswichian times. The Barnfield stage with pointed handaxes dominant is found in the Stoke Newington gravels and floor, paralleling Barnfield I and II of the Swanscombe middle gravels. This stage may also be represented in the lower part of the Lynch Hill fluvialite gravels, though the majority of the handaxes are later. The Barnfield stage is represented opposite Swanscombe at Chadwell St. Mary in a 100 ft. (30 m.) terrace gravel. The rolled series from Hanwell has predominantly pointed handaxes, and it is suggested that they are a derived Barnfield assemblage from the eroded Lynch Hill terrace. Most of the other handaxe series in the area have pointed handaxes in majority or near equality with the others: Wandsworth, Leytonstone, Wanstead.

Handaxe assemblages of the Cuxton stage with pointed handaxes in a minority are common in Britain, but rare in our area. The majority of handaxes from Yiewsley (from Brown's
12–18 ft. level) may belong to the Cuxton stage, and since a small number of twisted handaxes are present, the Cuxton II stage may also be represented here. The Cuxton I stage seems to be found in the higher gravels of the Stoke Newington area at Stamford Hill. Barkingside and Becontree Heath may be Cuxton assemblages with pointed handaxes in a minority. The Northfleet stage, formerly called Levalloisian, is provisionally synchronised with the first maximum of the Wolstonian. The best sites are Bakers Hole and Yiewsley, both outstandingly rich in Levallois flakes and tortoise cores. The remainder of the Wolstonian may represent a blank in the occupation sequence.

The Crayfordian, an Acheulian related tradition of western Europe and perhaps the Mediterranean, is best known from Crayford and Crefield Road, Acton, the latter unfortunately not dated. Levallois flakes from Addison Road, W.4. may belong to this culture. The likely date is early to middle Ipswichian, and a few Crayfordian type tools are found with the Ilford fauna. An as yet unidentified assemblage (perhaps “Taubachian”) is found in the Ebbfleet temperate bed of probable late Ipswichian date.

The last major Palaeolithic culture in south east England is the Paxton stage of the late Acheulian or Mousterian of Acheulian Tradition. It is found in the top loam at Yiewsley, and further upstream a Paxton handaxe and backed knife from early last glacial deposits in Marlow brickyard are likely to be of Paxton stage. There is a series from the Thames foreshore at Erith with handaxes of cordiform and Paxton type. Other isolated Paxton handaxes come from the Thames at Wandsworth, Hammersmith, Isleworth, Putney and Tilbury. It seems likely that they come from deposits formed below O.D. in the buried channel of the Thames early in the last glaciation. At Ham Hill in the Medway, such handaxes came from deposits below O.D. Nearby the last glacial fauna of Halling was found at about O.D. A single Paxton handaxe was found at Bermyead Priory, Acton (205794) 13 ft. (4 m.) down at 45 ft. (13.5 m.) O.D.

A later stage of the true Mousterian of Acheulian Tradition is known from Oldbury near Sevenoaks, and possibly from Martins, Hornchurch (566890) where a cordiform and retouched flake were found. The existence of an Upper Palaeolithic in the area is dubious. A Chatelperron-like point from Sion Reach may be relevant here, and some blades and flakes from St. Mary’s Cray have Chatelperron-like features. A poor foliate of possibly Szeletian affinities was found in the last glacial gravels at Rikof’s pit, Broxbourne. But as in Britain in general, the Upper Palaeolithic is badly represented.

**Mesolithic Sites**

A major Mesolithic site is known from Broxbourne in the Lea valley about 4 miles (6 km.) north of the Middlesex boundary. It was sealed by late Boreal peat, and probably dates from the seventh millennium B.C. Typologically it is characterised by core axes and sharpening flakes, by microliths (both obliquely blunted points and fully dorsally backed points reminiscent of the Azilian point and “federmesser”) and microblade cores. It is often regarded as the English type site of the Maglemsean.

The site of Sandstone (046836) near Mansfield House, Iver Heath, a hundred yards (100 m.) from the Colne and the Middlesex border at Uxbridge, is also significant. The small group is essentially like Broxbourne with both dorsal and oblique points. The tranchet axe is present and the blades and cores are like Broxbourne. The peat has given a late boreal pollen spectrum resembling Broxbourne. A richer site with fewer microliths, often called Uxbridge, but actually in Boyers pit, Willowbank just east of the Colne (053853), has oblique points
among a few broken microliths.\textsuperscript{48} The orange brown patina is almost identical to Sandstone, and the assemblages are probably the same age. Part of a probable core axe of this patina comes from Staines Reservoir (050730).

Lacaille has described small series from Dewe’s Farm (055878), Dewe’s pit (053881) and West Hyde (035911).\textsuperscript{49} All seem similar, but typical microliths are lacking from all and only Dewe’s Farm has a core axe. A series from Hackney Brook (c. 367847) may be Mesolithic, but only a countersunk pebble is at all typical.\textsuperscript{50} Blades from Ealing Common are supposedly Mesolithic but these are far from conclusive. Unfortunately blades from late Palaeolithic through to the end of regular flint working all look much alike. To the north east of London, a large series of Mesolithic types come from High Beach in Epping Forest, but there are few details. For the rest, evidence for Mesolithic occupation takes the form of isolated finds of highly characteristic artefacts, usually without any context or association.

Two fragments of barbed bone points like those of the Maglemosean (in the wide sense) of Scandinavia were recovered from the Thames at Wandsworth and Battersea.\textsuperscript{51} These probably date from 5500–8000 B.C., but a late glacial date is possible; they are in the Museum of London. A second characteristic type is the perforated bevelled antler shaft. Perforated antlers were of course very typical of the Upper Palaeolithic, but the Mesolithic specimens seem to have the perforation designed for hafting. The beveling of an antler tine is first found in the Lyngby axes, which belong to the Ahrensburgian or related tanged point cultures. The perforated form seems to have a wooden shaft replacing the old antler shaft to which the bevelled tine was attached. These are found in the Obanian, but their context in Britain is not well fixed. Typical examples come from the Thames at Twickenham and Hammersmith, from New Scotland Yard and from Finsbury Circus. Three other Thames examples have been quoted by Lacaille.\textsuperscript{52} One probably from the Kew Bridge area has yielded pollen from an adhering limey deposit; it seems to be a boreal spectrum. The Finsbury Circus example was allegedly found with a flint axe.\textsuperscript{53}

Other perforated pieces are a Bos primigenius bone from Kew, and at least four decorated perforated pieces from Hammersmith, Teddington and Brentford.\textsuperscript{54} The decorations are zigzags and a lattice of lozenge shapes. These are typical of Maglemosean decoration in Denmark, and unlike Palaeolithic art. These Maglemosean motifs are echoed in Beaker and Megalith designs.

Thames picks, usually rough core axes with tranchet ends, are so numerous from the Thames that they have acquired their name from it. Some of the main localities are Erith, Westminster, Brentford, Teddington and Staines. Probably most are Mesolithic, of the Broxbourne ‘Maglemosean’ or its poorly understood successors, the Lower Halstow and Horsham cultures; but some may be roughouts of Neolithic date. Not unfortunately properly dated, but potentially of great interest, is the dugout boat found in 1935 at Sewardstone (375970) in the Lea valley. The peat overlying the marl in which it was found may have been Boreal or at latest Atlantic. It was about 13 ft. (4 m.) long and made of a single oak trunk.\textsuperscript{55}

(Prospect for) Future Work

It seems to me that we badly need more precise and carefully elaborated competing schemes of the earlier Palaeolithic of this rich area. At the same time, a careful evaluation of existing schemes by as many impartial workers as possible is desirable. Also beneficial would be the re-investigation of important older sites, as has already begun at Stoke Newington and Yiewsley.
Probably the most practicable test of existing theories comes in the form of dating. Precise or even generalised dating which is reliable will help to refute or corroborate existing theories. Normally this is likely to take the form of dating existing assemblages, but new dated assemblages would be better still. In studying old collections, major advances would be made by attributing assemblages to their correct strata, or isolating assemblages. Often vague indications like patina or depth will be the best we can do.

At the same time as refining notions of date and typology, no doubt much is to be gained by a study of local and regional environment of occupied sites. An obvious line of research is to try to generalise why some periods have rich occupation, some leave few traces and some none at all. The periods of human absence seem paradoxically a very fruitful study.

Much of the improved knowledge of dating and environment will come from more or less standard geological methods, not yet tried. But in view of the shortage of molluscan and mammalian faunas, I suspect our main line of evidence will be pollen. New techniques of preparation being employed by Hubbard are most promising. A relatively short programme of investigation of the Thames terraces for pollen could lead to a good correlation with East Anglia, and a reasonably complete sequence. A start has already been made at Yiewsley and Swanscombe. Another line of evidence which could come from such a programme is the recovery and study of insect remains. A combination of palaeobotanical and palaeozoological studies with the remarkable terrace sequence and its lithology seems most promising.

Absolute dating will be difficult for all but the last glaciation. The Arctic bed of Ponders End and glacial fauna from the lower terraces has already been radiocarbon dated, and the age of the filling of the buried channel should be fixable by this method. For earlier periods potassium–argon dating is unlikely to work, but uranium series dating applied to the fossil bones for example seems promising. Thermoluminescence might be used on burnt levels.

Excavation of undisturbed occupation surfaces may yield information on the social structure of early man, and even 'hut' plans are now known to be commonly preserved. But this sort of evidence, like burials and art objects, is found only with great luck, and our research programmes should not rely too heavily on being fortunate in this respect.

NOTES


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37. Waechter op. cit. in n.28.
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39. Wymer op. cit. in n.6.
40. Wymer op. cit. in n.8.
41. ibid.
42. Ibid.
43. Ibid.
44. Wymer op. cit. in n.6.
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NEOLITHIC

JEAN MACDONALD

Until about 30 years ago, the Neolithic phase in the London area\(^1\) was known almost entirely from chance finds, predominantly flint and stone tools, many of which had been recovered from the Thames during nineteenth century dredging.\(^2\) Since the end of the war, however, excavations have revealed a series of occupation sites. No tombs are known, unless the Queens Butt earthwork on Wimbledon Common is a long barrow.\(^3\)

Most of the known Neolithic settlement sites are on the easily-cultivated river-terrace gravels and brickearths favoured by all prehistoric farming peoples round London. The most popular district was apparently the low-lying gravel and brickearth plain in the south west of the old county of Middlesex. The Lea valley was well used, but the heavy clay lands of north Middlesex were evidently shunned. Near the south-eastern border of the G.L.C. area, a series of upland sites is emerging, along the northern fringes of the North Downs, where abundant flint is available from the Chalk and overlying pebble beds.

Neolithic settlement began here in the first half of the Neolithic era, perhaps in the late fourth millennium B.C. by uncorrected radiocarbon dates. The settlers are usually thought to have come from elsewhere in Britain.\(^4\) The two main conventional divisions of southern British Neolithic cultures are represented, recognizable by the pottery used: Windmill Hill or Primary Neolithic, descended from the earliest British types, with almost plain, round-based vessels; and the later Peterborough or Secondary Neolithic, with pottery that becomes profusely decorated, collared and flat based. A little of the more obscure late Neolithic Grooved Ware has also been found.

Primary\(^5\) Neolithic occupation in the London area, unsuspected until the 1960's, seems to have been comparatively short lived. In the west of the region four sites are known, at Staines, Kingston, Twickenham and Brentford, some revealing Wessex and East Anglian traits; in the east a mysterious site existed at Rainham; and in the south east a site at Baston Manor, Bromley, may have had Sussex affinities. Early Peterborough-type cultures apparently emerged in the London region about the same time as the Primary, probably about 2700 B.C.\(^6\) (see below, p. 21) but the Peterborough group survived much longer, developing for a thousand years or more,\(^7\) and is represented by more numerous, widely-dispersed sites.

**Primary Neolithic**

The outstanding Neolithic monument near London was Staines\(^8\) causewayed enclosure, excavated in the early 1960's by the Ancient Monuments Inspectorate under the direction of Mr. R. Robertson-Mackay and since destroyed by gravel digging. The enclosure had been built on a spit of Flood Plain gravel between two brooks in the marshy, alluvial Colne delta, about half a mile (c. 800m.) north of the Thames (TQ 025 725). Apart from the unusual river-valley setting and gravel soil,\(^9\) paralleled only at Abingdon (Berkshire)\(^10\), Staines seems to have been a typical causewayed enclosure or camp,\(^11\) intensively if intermittently occupied. Its two roughly concentric, interrupted ditches, with the remains of a slight, probably
palisaded, gravel bank inside each, enclosed some five and a half acres (c. 2·3 ha.) In the interior were pits, post-holes and long wall-slots or palisade trenches; in the ditches apparently ceremonially buried dumps of pottery and meat-bone refuse, including ox shoulder-blades and beaver. Human bones in the outer ditch have been interpreted as an inhumation burial.\textsuperscript{12}

Staines yielded much Primary Neolithic pottery. Some seems to be Abingdon ware,\textsuperscript{13} but more is thought to resemble pottery from Hurst Fen (Mildenhall, Suffolk)\textsuperscript{14} enclosure. Fine wares may have been imported.\textsuperscript{15}

 Superior quality flint nodules were imported and knapped on the site. Flint implements found include fully and partly polished axes, many round scrapers, saws, leaf-shaped arrow-heads, a petit-tranchet derivative or transverse arrow-head and a plano-convex knife—the last two usually considered late Neolithic forms.\textsuperscript{16}

Stone artefacts include saucer querns; and a fragmentary polished axe from Great Langdale (Westmorland), the source that also supplied Hurst Fen, Abingdon and Windmill Hill (Wiltshire) causewayed enclosure.\textsuperscript{17}

Worked bone and antler, plentiful at most causewayed camps, were curiously scarce.

The excavator reports that the whole enclosure is firmly dated to the Primary Neolithic, most of the ditches having silted up before the end of that occupation.

Bones from Staines are being tested for radiocarbon dates, but meanwhile the enclosure is assumed to be roughly contemporary with Windmill Hill causewayed camp, i.e. 2570±150 B.C.\textsuperscript{18}

The other Primary Neolithic sites were humble affairs compared with Staines.

At Kingston,\textsuperscript{19} beneath the car park in Eden Street (TQ 181 692), in a former, buried channel of the Hogsmill river, students of Kingston-upon-Thames College of Technology found, in 1965, fragments of Primary Neolithic pottery, red deer antler and \textit{Bos primigenius} bones, stratified below flint pot-boilers and more bone fragments, including a sheep or goat skull, all thought to be rubbish thrown into the Hogsmill by people living on higher, drier ground nearby. Further exploration failed to reveal the actual dwelling place. The pottery, not yet assigned to a particular Primary Neolithic group, is coarse, thick and gritty, similar to that from Twickenham (below p. 20), but includes a rim sherd with incised decoration. Tree-pollen analysis places the Kingston archaeological remains at a time of mixed oak forest and elm decline, that is the Atlantic/sub-Boreal transition, giving, in conjunction with the pottery, a suggested date of about 3000–2500 B.C.\textsuperscript{20} Radiocarbon dating of the bones will, if possible, be undertaken in the future.

The site at Twickenham\textsuperscript{21} was almost a twin to that at Kingston. The Twickenham Local History Society, excavating in Church Street (TQ 165 733) in 1966, came upon a buried, flooded watercourse, in which sherds were associated with over 200 struck flint flakes, ox bones and a sheep or goat mandible. The rather clumsy, flint-gritted sherds represent at least 12 Primary Neolithic pots and bowls, probably plain and somewhat similar to pottery from Marlow (Buckinghamshire).\textsuperscript{22} The flints—all small and including, among much waste, a few cores and tools—were apparently made from river-gravel pebbles. Attempts to date the site by pollen analysis were unsuccessful. Mesolithic flints and a Beaker sherd found with the Neolithic material suggest the locality was frequented over a long period.

The finds from the Kingston and Twickenham excavations are in Kingston Museum.
At Brentford,\textsuperscript{23} on the site of 184–7 Brentford High Street (TQ 174 773), Mr. Roy Canham, then London Museum Field Officer, found, in 1967, Neolithic pottery and flints in the brickearth about 18 inches (\textit{c.} 457 mm.) beneath Roman strata. Associated with some 180 struck flints, mostly waste but including a few cores and flake tools, were over 100 heavily flint-gritted sherds, plain except for one piece with a thumb impression on the shoulder. The pottery appears similar to that from Broome Heath (Norfolk)\textsuperscript{24} enclosure (provisionally given a date range from 3474±117 B.C. to 2217±78 B.C.).\textsuperscript{25} In a Neolithic gully nearby was a fragment of worked sandstone, possibly part of a quern.

An enigmatic site in a gravel quarry at Launder’s Lane, Rainham, London Borough of Havering (TQ 542 818), was excavated by Dr. I. F. Smith and Mr. D. D. A. Simpson in 1963 in advance of destruction by gravel digging. It consisted of an uninterrupted circular ditch of about 50 ft. (\textit{c.} 15·24 m.) internal diameter and a pit about 4 ft. (\textit{c.} 1·21 m.) in diameter in the centre of the area enclosed. The fill of the ditch had been deliberately introduced from the inner side and incorporated numerous large fresh sherds of Primary Neolithic pottery and many worked flints, mainly flakes and cores. The pit, apparently undisturbed, contained sherds comparable with those from the ditch, a few worked flints and fragments of beakers (see below, p. 21). The pottery, not precisely matched elsewhere, belongs in the same general category as that from Staines and Twickenham. The nature of the site and the relationship of pit to ditch are at present unknown.\textsuperscript{26}

About half a dozen fragments of plain pottery found at a disturbed site at Baston Manor, Bromley, in the middle 1960’s (below, p. 24) have been tentatively identified as Primary Neolithic, with affinities, unlike those of the Thames-side sites, with pottery from Sussex causewayed enclosures such as Whitehawk and The Trundle.\textsuperscript{27}

In the Museum of London are a few pieces of pottery from the Thames between Syon Reach and Mortlake, including a plain bowl from Kew Bridge, that seem to belong within the Primary Neolithic category.

**Peterborough Neolithic**

Despite the recent disclosure of Primary Neolithic penetration here, the characteristic Neolithic pottery of the London region as a whole remains that of the Peterborough group;\textsuperscript{28} lightly decorated Ebbsfleet, usually considered a development from early Primary Neolithic styles; and its late Neolithic derivatives, heavily decorated,\textsuperscript{29} collared and increasingly flat-based Mortlake and Fengate wares, ultimately merging into Bronze Age styles.\textsuperscript{30}

The eponymous collection of Ebbsfleet pottery from the Ebbsfleet stream at Northfleet, Kent,\textsuperscript{31} a few miles down river from the G.L.C. area, has a probable radiocarbon date of not later than 2710±150 B.C.,\textsuperscript{32} roughly contemporary with the proposed dates for Primary Neolithic sites here. Thus early Ebbsfleet and the London Primary Neolithic wares seem to have overlapped chronologically, and probably spatially in some places such as Staines (below, p. 23) and Baston Manor (below, p. 24), but clear evidence of the relationship between them is lacking. It has been suggested that the Ebbsfleet style developed in and around the lower Thames valley.\textsuperscript{33}

Except for Ebbsfleet itself, London Peterborough sites, slighter and less informative than the Primary Neolithic sites, are so far dated by inference only. One guide is the influence on the Neolithic pottery of the ceramic fashions of the intrusive, metal-using Beaker peoples, who were entering Britain from north-west Europe, largely by way of the Thames, probably
between about 2100 B.C. and 1700 B.C.\textsuperscript{34} The evidence suggests that the London basin became a Neolithic survival area, where late Ebbsfleet and Mortlake pottery flourished after Beaker people had settled south and north of the Thames.\textsuperscript{35}

At Baston Manor, Bromley (below, p. 24), sherds typologically indistinguishable from some at Ebbsfleet\textsuperscript{36} were found near Primary Neolithic pottery, but the disturbed nature of the site made it impossible to relate the two types to each other.

In the Lea valley, a rim sherd of Ebbsfleet pottery, in the British Museum, was found at Walthamstow over a hundred years ago.\textsuperscript{37} Further up the valley, just outside the G.L.C. area, an excavation in 1955 in the grounds of Waltham Abbey (TQ 383 007)\textsuperscript{38} produced, in a shallow pit, calcined flint pebbles and the fragmentary remains of two Ebbsfleet bowls, which the excavators considered similar to the Ebbsfleet ware from Windmill Hill.\textsuperscript{39} Possible post-holes near the pit might represent a small hut or windbreak.

In the west London district, at Sefton Street, Putney (TQ 232 760),\textsuperscript{40} Mr. Stan Warren excavating a bombed site in 1969–70, found one rim fragment of Ebbsfleet ware at the bottom of a medieval rubbish pit. The site, on Flood Plain sand and gravel near the present Thames shore, also produced, among small sherds, a scrap of pottery that appears to be Grooved Ware (below, p. 25), some 3,000 struck flints, mostly made from pebbles from the local gravels, and many pot boilers. The flints, apparently of Mesolithic and Neolithic forms, include many arrow-heads, leaf-shaped and petit-tranchet, and snapped wasters from composite implements, suggesting, with the pottery, use of the locality over a long period, perhaps by hunters exploiting nearby heaths like Barnes Common.

At Staines causewayed enclosure, a small amount of Ebbsfleet\textsuperscript{41} pottery occurred in one part of the ditches.

Ebbsfleet pottery that is presumably late in the sequence came from Mixnam’s Pit, Thorpe (Surrey) (TQ 040 692),\textsuperscript{42} about 2½ miles south east of Staines. Here, in 1944–5, Professor W. F. Grimes discovered Ebbsfleet sherds representing about 10 bowls lying, apparently undisturbed, on the original surface of the brickearth. A ground and polished flint axe in an Iron Age ditch nearby no doubt belonged with the Neolithic pottery. Most of the pottery closely resembles that from Ebbsfleet, but on some pieces the decoration shows the beginning of the change into Mortlake styles, which Professor Grimes suggests may have occurred within the west London district. This transitional Ebbsfleet/Mortlake pottery may represent the influence of waves of Beaker intruders who travelled up the Thames to Wessex without settling in any numbers in the London area.\textsuperscript{43} The Neolithic finds from the Thorpe site, now destroyed by gravel digging, are in Weybridge Museum, on loan from the Museum of London.

Mortlake pottery proper came from Heathrow (TQ 084 766),\textsuperscript{44} some five miles north west of Thorpe and Staines. Inside the perimeter of an Iron Age settlement, on a low-lying plain of Taplow Terrace gravel thinly covered with brickearth, Professor Grimes in 1944 uncovered two small pits of the kind that in lowland Britain are commonly the only structural evidence of later Neolithic domestic-type\textsuperscript{45} occupation. The pits, without traces of specialized use, were filled with dark, charcoal-flecked soil in which unusually varied Mortlake pottery and flints, mostly waste, were scattered. Pit I contained the remains of more than 5 pots and about 12 flints, including part of a polished axe; Pit II, a few flints, sherds from about 14 pots and the remains of an open pottery bowl, probably a lamp, more closely matched in the Baltic Neolithic than in Britain.\textsuperscript{46} The occupation seems to have
been quite late. Dr. I. F. Smith has recently pointed out that the horizontal ridged decoration on 5 vessels from Pit II appears to have been copied from beakers, probably Barbed-wire and East Anglian types, which at Lion Point (Essex) have a radiocarbon date of 1800±150 B.C. ⁴⁷ These are the earliest beaker forms strongly represented in the lower Thames valley. ⁴⁸ Mortlake pottery ridged in Heathrow style has come to light at other places within the London area (below, p. 24) and elsewhere in the Thames valley. ⁴⁹ One Heathrow bowl, open and ridged, is also remarkably similar to beaker pottery from Hampshire tentatively dated as late as about 1600–1500 B.C. ⁵⁰

In Croydon, a fragment of cord-impressed Peterborough pottery was found in a gravel-pit near Beddington Lane, a Taplow Terrace area. ⁵¹

At Baston Manor, Bromley (TQ 4088 6456), ⁵² on the edge of the North Downs, is a predominantly late Neolithic site. It was found to be disturbed when partially excavated by the West Kent Border Archaeological Group under the direction of Mr. Brian Philp in the middle 1960’s but might be crucially important because of the wide range of pottery represented.

The Neolithic material was half-way up a slope, at about 280 ft. (c. 85 · 33 m.) O.D. in two disturbed layers of sandy loam, lying on a patch of brickearth and buried by pebble hill-wash from higher up the slope that had swept over the site in post-Neolithic times. In the excavated area of about 1100 sq. ft. (c. 101 sq. m.) were found sherds derived from at least 50 vessels ranging in style from probable Primary Neolithic and early Ebbsfleet (above p. 21) to Mortlake, Fengate and beaker; over 3,000 pot-boilers; and over 2,000 worked flints, comprising 81 implements, twelve hammerstones and 96 per cent waste. Among the pottery, at least six Mortlake and 28 Fengate vessels are represented, five of the Mortlake bowls with horizontal ridging similar to that on some Heathrow pots (above p. 24). The Fengate vessels are the only large group known in the London area. ⁵³ Fengate pottery, typologically the latest of the Peterborough group, is believed to have developed, like the ridged Mortlake ware, from Mortlake or Ebbsfleet pottery under the influence of Barbed-wire and East Anglian type beakers, ⁵⁴ so the Baston Manor Fengate pieces presumably fit into the same spectrum of dates as the ridged Mortlake examples. Interestingly, Baston Manor also produced two fragments of Barbed-wire beaker and an unclassified sherd thought to be an attempt by a native Neolithic potter to copy Beaker pottery. The flint implements, closely associated with the pottery and apparently made from local material, include scrapers like those at Hurst Fen, ⁵⁵ and a polished knife and other implements that could belong to the late Neolithic period. A polished flint axe may have been imported. Close to the axe was a sandstone object, possibly a burnisher, similar to a pair found in a bowl barrow at Winterbourne Stoke (Wiltshire). ⁵⁶

As the site had been disturbed, it was impossible to determine the relationship of all these objects to each other. The dating range suggested by the pottery is in the nature of 2700–1800 B.C., but the excavator suggests that only a fairly short occupation, round about 2000 B.C. may be represented. ⁵⁷

The Thames where it flows through the west London area of copious land finds has yielded an assortment of Peterborough-type pottery, most of it in the British Museum and Museum of London. ⁵⁸

From Weybridge came a fragment, ⁵⁹ in Weybridge Museum, of ridged Mortlake ware like that found at Heathrow. ⁶⁰

Mortlake, the most prolific stretch, has produced some 15 pieces of Ebbsfleet ⁶¹ and Mortlake ⁶² pottery, including the bowl in the British Museum from which the Mortlake type is
named$^{63}$ and sherds in the Museum of London of an open bowl with horizontal, cord-impressed grooves.$^{64}$ Fragments of an unusual large jar,$^{65}$ similar to one from West Kennet (Wiltshire) long barrow,$^{66}$ have been classified as Fenridge ware.$^{67}$ A little further downstream at Hammer-smith, about three Ebbsfleet sherds were collected.$^{68}$ Some of the pottery from Mortlake and Hammersmith closely matches the transitional Mortlake/Ebbsfleet styles found at Thorpe (above p. 23).$^{69}$ As Mortlake and Hammersmith are the only places along the London reaches of the Thames where concentrations of pottery and Neolithic axes coincide (below p. 27), there is some reason to suppose settlements existed on the adjacent banks.$^{70}$

At Wandsworth, a Fenridge vessel with small flat base was found (Layton Collection on loan to the Museum of London).$^{71}$ Barbed-wire and East Anglian type beakers from the Thames at Mortlake, Hammersmith and Putney neatly fit the theory that such beakers influenced the development of Fenridge pottery (above p. 24).$^{72}$

Between Battersea (below p. 25) and Ebbsfleet, no Neolithic pottery seems to have been recorded from the Thames or its immediate hinterland.$^{73}$

Grooved Ware Neolithic

The rather nebulous late Neolithic culture named after Grooved Ware pottery seems to have played a minor part in the Neolithic of the London area.$^{74}$ A probable Grooved Ware sherd was found at Sefton Street, Putney (above, p. 23); and the Museum of London has a few sherds that seem to be Grooved Ware, from the Thames between Strand-on-the-Green and Battersea. The non-ceramic stray finds from the region include objects sometimes associated elsewhere with Grooved Ware pottery (below, p. 26).

Indeterminate Sites

The presence of pottery at the sites already mentioned enables them to be classified to some extent. Other sites and finds have been reported in the London area that are probably Neolithic but, lacking pottery, cannot yet be so classified or in all cases firmly dated to the Neolithic era.

The best recorded is a belt of upland sites excavated during and after the 1939–1945 War, stretching from Orpington to Coulsdon along the northern fringe of the North Downs, where the Chalk and overlying pebble beds are rich in flints. Here there is evidence of intensive flintworking and possible occupation during the Mesolithic, Neolithic and early Bronze Ages. In Bromley, such sites include St. Paul’s Cray, Orpington (TQ 4715 6885);$^{75}$ Goddington Park, Orpington (TQ 478 650);$^{76}$ Hayes Common (TQ 4047 6520);$^{77}$ Mill Hill, Farnborough (TQ 4394 6390)$^{78}$ and Fox Hill, West Wickham (TQ 3860 6410), where local flint-mining is suggested.$^{79}$ In Croydon, there are Waddon Park (about TQ 31 64);$^{80}$ Addington Hills (TQ 351 646);$^{81}$ Croham Hurst (TQ 3385 6315);$^{82}$ South Croydon (TQ 318 631);$^{83}$ Whyteleafe, where an accompanied inhumation burial was found (TQ 335 584);$^{84}$ and Farthingdown, Coulsdon (about area TQ 30 57).$^{85}$

Flint implements found on St. George’s Hill, Weybridge (area TQ 0830 6303), before 1938$^{86}$ are in Weybridge Museum.

Three hoards of flint axes, perhaps ceremonially buried, were excavated in our area in the nineteenth century: by the Lea at Temple Mills, Stratford (about TQ 375 855);$^{87}$ at Clarence Road, Teddington (about TQ 156 702);$^{88}$ and at Upton, Bexley Heath.$^{89}$ The hoard from Bexley Heath is made of non-local flint believed to be matched in Lincolnshire and Belgium.$^{90}$
In London, possible Neolithic relics are reported to have been found in the nineteenth century at Stoke Newington (about TQ 33 86); very dubiously at West Smithfield (about TQ 317 816); and at the Royal Albert Docks (about TQ 42 86). In the Erith marshes, close to the Thames (area TQ 50 79), a wooden dug-out canoe containing a polished flint axe and a flint scraper was cut through in the nineteenth century.

**Chance Finds**

The hundreds of often vaguely recorded non-ceramic Neolithic stray finds from the London area have never been studied comprehensively.

Apart from axes, the region has produced, from land and from the Thames, good examples of Neolithic flint tools, like arrow-heads, polished knives and sickles. Arrow-heads and scrapers seem to be the two main types where land finds predominate over Thames finds.

Small struck flints are plentiful from open spaces south of the Thames, such as Barnes and Wimbledon Commons, Richmond Park and, particularly, Ham Fields and Common. The Thames in west London has been prolific in all kinds of chance finds; stone and flint tools have been reported further downstream than pottery. This west London stretch of the Thames has produced one of Britain’s richest concentrations of stone and flint mace-heads, objects sometimes associated elsewhere with Grooved Ware and Fensgate pottery.

The same reach of the Thames and its hinterland have also yielded an antler skin-dressing comb, upwards of 30 antler hammers or mace-heads, perhaps forerunners of the stone versions, and two ivory pins. The first is a type commonly found in Primary Neolithic causewayed enclosures; the others, often associated elsewhere with Grooved Ware and other late Neolithic pottery, seem to be later.

Flint and stone axes have tended to be treated separately from chance finds of small flint artefacts. At a rough and incomplete count, excluding excavated sites and hoards, there are known from the London area something over 310 flint axes (about 140 land finds and about 170 from the Thames) and nearly 200 stone axes (about 40 land finds and over 150 from the Thames). There seems no obvious distinction in distribution between flint and stone axes, except for the higher proportion of stone axes from the Thames. Some flint and stone axes from the Thames, shaped to imitate the desirable early metal axes which are seldom found here, fit the theory, suggested by pottery types (above, p. 23), that the London area was relatively poor and backward in the late Neolithic and early Bronze periods.

Reservations may be felt about accepting all these axes as relics of London’s Neolithic phase, because Neolithic axes are known to have been collected in later times for their beauty and supposed magic, and the distribution pattern, running along the Thames from Hampton to Erith and, on land, including old built-up areas like Westminster, Holborn and the City of London, does not correspond to any other known prehistoric distribution.

Some of the distribution, though, seems feasible in terms of likely occupation areas and proximity to other Neolithic finds. On land, more axes have been found north than south of the Thames, a discrepancy possibly due to chance of discovery but seeming to correspond to the greater extent of river-terrace gravels on the north. North of the Thames, axes have been found in the Colne and Lea valleys, near Heathrow and scattered across west Middlesex and west London. On the south, axes have come from Egham (opposite Staines), Weybridge, Kingston and Ham. A faint trail of axes seems to follow the gravel strip leading from the Thames to Croydon and the North Downs, a thicker distribution appears to run from Erith southwestwards along the pebble-gravels, often near the Cray, towards
the sites in Bromley. In the Thames, most axes come from the western reaches: near the mouth of the Colne at Kingston, Teddington–Brentford, Mortlake, Hammersmith Barnes, Putney, Wandsworth, Chelsea and Battersea. Eastwards, groups at the mouth of the Lea and at Erith are acceptable.

Stone Axe Petrology

Some of the stone axes found in the London area have been sectioned and grouped, giving the following results:

Group I (greenstone; Cornwall? submerged off Penzance area?)

10: Thames, Battersea
    Thames, Brentford
    Thames?, Chiswick
    Thames, Hammersmith
    Thames, Staines (2)
    Thames, Surbiton
    Thames, Twickenham
    Thames, Westminster, off Houses of Parliament
    Thames

Group Ia (greenstone; Cornwall?)

6: Camden?, University College Hospital extension
   Thames shore, Fulham
   Thames, between Laleham and Hampton Court
   Thames, Richmond
   Thames, Syon Reach
   Thames, Wandsworth

Group III (greenstone; Cornwall, Marazion or Trenow)

1: Thames, Kingston

Group IV (picrite greenstone; East Cornwall, Balstone Down)

1: Thames, Barn Elms

Group VI (tuff; Westmorland, Great Langdale)

8: Staines causewayed enclosure
   Bromley-by-Bow, Lea alluvium
   Thames, Barnes
   Thames, Egham, Bell Weir Lock
   Thames, Teddington
   Thames, Twickenham
   Thames, probably London area (2)

Group VII (augite granophyre; Caernarvonshire, Graig Lwyd)

2: Thames, Hammersmith
   Thames, Syon Reach

Group VIII (tuff; Pembrokeshire area?)

2: Thames, Staines (2)
Group IX (procellanite; Co. Antrim, Tievebulliagh)
  2: City of London, Queen Street\textsuperscript{129}  
      Stratford (presumably Newham)\textsuperscript{130}

Group XIV (camptonite; Midlands or north England; probably Bronze Age)
  1: Tilbury (axe hammer)

Group XVI (amphibolite; Cornwall, Camborne area?)
  1: Thames or Surrey, Thames Ditton

Group XVIII (quartz dolerite; Northumberland, Whin Sill; probably Bronze Age)
  1: Thames Ditton (battle-axe)

Group XX (markfieldite; Leicestershire, Charnwood Forest)
  1: Thames foreshore, Wapping

‘Greenstone: Cornwall’
  2: Keston (2)\textsuperscript{131}

Jadeite (foreign; Piedmont, Swiss side of Alps or Brittany?)
  3: City of London, King Street, Cheapside (not examined)
      Thames, Mortlake (examined, not sectioned)\textsuperscript{132}
      Thames, Vauxhall Bridge.\textsuperscript{133}

Three axes, from the Thames at Brentford, Strand-on-the-Green, and Tower Bridge, have
turned out to be of New Zealand rock and so clearly recent imports.

RESEARCH

Thanks to the fruitful excavations of the last 30 years, a framework for the history of the
Neolithic period in the London area is beginning to emerge, but is still far from complete.
The role of the Mesolithic people and the origins of the Neolithic inhabitants are still
uncertain. To clarify Neolithic origins, watch might usefully be kept for the inconspicuous
plain pottery that denotes early Neolithic settlement.

Within and near the London area, the possible causewayed enclosures at East Bedfont and
Orsett call for investigation. A new site at Horsenden Hill, Ealing, may provide
valuable information.\textsuperscript{134} Further excavation of the Baston Manor site would probably be
rewarding. Systematic surveys seem desirable of districts like Ham and Erith, where many
chance finds have been made, and of the prolific south west corner of Middlesex.

For objects already collected, the stone and flint identification programmes already in
progress should in time supply more facts on trade patterns and probably on dating, as the
production dates of axe factories\textsuperscript{135} and flint mines\textsuperscript{136} are worked out.

Apart from these large-scale programmes, Dr. I. F. Smith’s dissertation on Neolithic
pottery nearly 20 years ago,\textsuperscript{137} and Mrs. Fiona Roe’s work on mace-heads,\textsuperscript{138} there seems to
have been little attempt to study intensively the hundreds of chance finds of Neolithic-type
artefacts. They are so numerous that though some provenances may be questionable, large-
scale study might well produce results, perhaps even throwing light on the fate of the Meso-
 lithic inhabitants. Flint implements might be examined statistically after the manner of the
Durrington Walls report.\textsuperscript{139} Mr. R. P. J. Jackson has made a start with flint and stone axes
from the Thames in the Museum of London,\textsuperscript{140} but smaller objects like scrapers do not seem
to have been tackled. The great Sturge collection of stone and flint implements in the British Museum is little known. The Museum of London\textsuperscript{141} has collections of small flints, probably of various periods, gathered from places like Yiewsley, Wimbledon Common, Barnes Common and Ham Common and Flax Fields that have not been properly studied, and there are sizable collections of Neolithic-type material in Hackney Public Library and Uxbridge Local Museum. Possibly a close examination of available pottery, particularly the crucial Ebbsfleet ware, in the light of recent additions to knowledge would enable it to be arranged in closer chronological order and suggest population movements and contacts.

The pottery in the British Museum from Iver, Buckinghamshire,\textsuperscript{142} habitation site, including possibly Abingdon type Primary Neolithic\textsuperscript{143} as well as Mortlake ware,\textsuperscript{144} seems worth comparing with London region pottery. Detailed plotting on a map of the various types of Neolithic objects might also be illuminating.

\textbf{NOTES}

1 For this purpose, the London area is taken to be, roughly the G.L.C. area plus the south-western corner of the former county of Middlesex, now administratively part of Surrey.

2 See, for instance, Lawrence G. F. in \textit{Archaeol. J.} 86 (1929) 69-74.

3 Whimster D. C. \textit{The Archaeology of Surrey} (1931) 62, 69; Merrifield R. \textit{The Archaeology of London} (1975) 91. Marked on Ordnance Survey map 1:2500 (TQ 2271 1953) at (TQ 2255 7175). Mrs. Joanna Bird has kindly told me of two other possible long barrows in the area: at Ham Bottom, Richmond, (TQ 189 722); and at Tooting, south London, about (TQ 288 735) (\textit{The Antiquary} December 1897). These will be recorded in the forthcoming Survey of Archaeological Needs in Greater London.


5 The word is used, for want of a better, in the sense of the previous paragraph, not to imply that London was necessarily an area of early Neolithic settlement.

6 Radiocarbon V (1963) 105; C.B.A. \textit{Archaeological Site Index to Radiocarbon Dates} 3B.2 Neolithic, Ebbsfleet. Radiocarbon dates in this article are stated as in the original publication or in the C.B.A. publication. Tree-ring calibrated versions appear in Smith op. cit. 4, 128-136.

7 Clarke op. cit. 4 above, fig. 14.


9 The isolation of Staines from other known causedway enclosures is brought out vividly in Smith I. F. \textit{Windmill Hill and Avebury: Excavations by Alexander Keiller} (1965) fig. 1. Some writers suggest that Staines and Abingdon will turn out to be part of a complementary pattern of Neolithic causedway enclosures awaiting discovery in riverine instead of upland situations: Smith op. cit. 8 above, 90-91. A crop mark at East Bedfont, Middlesex (TQ 080 739) once believed to be a causedway enclosure is now thought to be some sort of henge, perhaps related to the causedwayed camps: \textit{Antiquity} 40 (1966) 145, Pl. 25; \textit{London Archaeol.} 1 no. 13 (1971) 305-309, fig. 2. Riverine sites near London proposed as possible causedwayed enclosures are: at Chalk, near Gravesend, Kent (site destroyed): Jessup R. \textit{South East England} (1970) 73; and south of Orsett, Thurrock parish, Essex (TQ 6515 8055) (crop mark): \textit{Antiquity} 47 (1973) 236-238, Pl. 31, fig. 1.

10 \textit{Antiq. J.} 7 (1927) 436-464; ibid. 8 (1928) 461-477; ibid. 9 (1929) 11-10.

11 Professor Stuart Piggott provides a summary of the characteristics of Neolithic causedwayed enclosures in \textit{Victoria County History: Wiltshire} pt. 2 (1973) 293-299.

12 Smith, op. cit. 8 above, 96.

13 See 10 above.


15 cf. Smith, op. cit. 8 above, 102-104.


17 Smith op. cit. 8 above, 103.

18 \textit{Atti del VI Congresso...} as 8 above, 320; Smith I. F. op. cit. 9 above, 11, 28. The date for the primary silt of the Windmill Hill ditch has now been revised to 2580 ± 150 B.C.: \textit{Radiocarbon} 3 (1961) 42; C.B.A. op. cit. 6 above, 3A.1 Neolithic. Radiocarbon dates for Abingdon causedwayed enclosure seem compatible with that for Windmill Hill though tending to be earlier: Ministry of Public Building and Works, \textit{Excavations: Annual Report} 1963 (1964) 9-10; Radiocarbon 13 (1971) 170-171; C.B.A. op. cit. 6 above, 3A.2 Neolithic. Tree-ring calibrated dates in Smith op. cit. 4 above, 135.
45 Mclnnes I. J. "Settlements in later Neolithic Britain", in Simpson D. D. A. ed. 8 above, 118-123, 126, 128. It is suggested that late Neolithic people may have moved seasonally, for example following livestock. See also Smith in Renfedr ed. 4 above, 123-124.

46 Grimes op. cit. 42 above, 193, 197, fig. 78. Some lamp-like bowls have been found with British beaker pottery: Clarke op. cit. 4 above, 58, 122; vol. 2 (1970) figs. 34-35a-b, 35b, 192.

47 Smith in Philip op. cit. 27 above, 13. On indirect evidence Dr. D. L. Clarke suggests a date range of c. 1700-1500 B.C. for the two Beaker groups in Britain: op. cit. 4 above, 144, 152. Tree-ring calibrated dates in Colin Burgess in Renfedr ed. 4 above, 244.

48 Clarke op. cit. 4 above, 137, 148.

49 The most striking and geographically closest analogue was at Iver (Bucks.) where such pottery was found in a pit, with a saucer-like bowl comparable to the one at Heathrow: Records of Bucks. 13 (1937) 287-289 Pl. 1, 5. For other Thames valley parallels, see Smith in Philip op. cit. 27 above, 13.

50 Grimes op. cit. 42 above, 191, no. 12, fig. 77, 12; Smith in Philip op. cit. 27 above, 13; Clarke op. cit. 4 above, 215, 223; vol. 2, figs. 921, 923.

51 Antiq. J. 5 (1923) 431-432 fig. on p. 432; Archaeol. J. 88 (1931) 152.

52 Philip op. cit. 27 above, 4-19.

53 According to Dr. D. L. Clarke’s scheme, the Thames valley should be an area of early development of Fenge pottery: op. cit. 4 above, 268.

54 Ibid. 133-134, 268, 278, 280, fig. 14.


57 Philip op. cit. 27 above, 8-9.

58 Details of much of this pottery can be found in Dr. I. F. Smith’s London University thesis, The decorative art of Neolithic ceramics in S.E. England and its relations (1956).

59 Antiq. J. 5 (1923) 431-432; Archaeol. J. 88 (1931) 152; Smith in Philip op. cit. 27 above, 13.

60 A few miles up the Wey at Wisley, Peterborough pottery in pits Antiq. J. 4 (1924) 40-42; Surrey Archaeol. Collect. 60 (1963) 10; Jessup op. cit. 9 above, 87; and Neolithic flints (Ordnance Survey Index card) have been reported.

61 Two pieces are illustrated in Archaeol. J. 86 (1929) 84, fig. 1, 1, 2.

62 Ibid. 84; ibid. vol. 88 (1931) 122, 153.

63 Archaeologia 62 (1910) 340, Pl. 37, fig. 3; Archaeol. J. 86 (1929) 82; 88 (1931) 112, 153; Vuillamy C. E. The Archaeology of Middlesex & London (1930) 81-82, Pl. 3; Later Prehistoric Antiquities of the British Isles (British Museum 1939) 9, Pl. 2, 2; Piggott op. cit. 16 above, 209, Pl. 10, 5; Grimes op. cit. 42 above, 185. A piece of another Mortlake bowl in the British Museum was found at the same site: Archaeologia 62 (1910) 340; Vuillamy op. cit. 63 above, 81; Archaeol. J. 88 (1931) 122, 153, fig. 18, 2; Later Prehistoric Antiquities of the British Isles op. cit. 63 above, 9, Grimes op. cit. 42 above, 195.

64 Archaeol. J. 86 (1929) 84, fig. 1, 4; c.f. Archaeol. J. 88 (1931) 115, fig. 14, 13.

65 Archaeol. J. 86 (1929) 84, fig. 1, 3; Vuillamy op. cit. 63 above, 82, Pl. 3.

66 Piggott S. The West Kent Long Barrow (1962) 40, fig. 12, no. P.15.

67 Smith op. cit. 58 above, II, fig. 97. The sherds are in the Museum of London.

68 Archaeol. J. 86 (1929) 86; Vuillamy op. cit. 63 above, 82.
69 Grimes op. cit. 42 above, 185.
70 Ibid., Vulliamy op. cit. 63 above, 82; *Archaeol*. J. 88 (1931) 122; London *Archaeol*. I no. 13 (1971) 292.
71 *Archaeologia* 69 (1920) 11-12, figs. 9, 10; *Antiq.* J. 2 (1922) 237; Grimes op. cit. 42 above, 185; *Archaeol*. J. 86 (1929) 91; ibid. 88 (1931) 114, 118-119, 153.
72 Clarke op. cit. 4 above, 2 (1970) figs. 344, 345, 376.
73 A "fragment of decorated Neolithic pottery from the Thames at Silvertown (London Borough of Newham)" is entered in the Museum of London accessions register for 1912 but cannot now be identified.
74 The main distribution of Grooved Ware in southern Britain is from Wessex to East Anglia, west and north of the London area. Grooved Ware pottery and its associations are discussed in Wainwright & Longworth *op. cit*. 16 above, 235-306. See also Merrifield *op. cit*. 3 above, 24; Smith in Renfrew *op. cit*. 4 above, 117-120.
75 Information kindly supplied by the West Kent Border Group, through Mrs. Joanna Bird, December 1974.
76 *Archaeol*. Cantiana 83 (1970) 202. Mrs. S. L. Palmer of Bromley Museum, Orpington, has kindly informed me that three sherds of Danish Neolithic pottery said to have been dug up in a field near Orpington "many years ago" were in fact lost from the Avebury Collection and have no connection with the British Neolithic. *Archaeol*. Cantiana 49 (1937) 284 Pl. opp. p. 284; Piggott *op. cit*. 16 above, 321; Palaeohistoria 9 (1963) 194.
77 Philop *op. cit*. 27 above, 30-52.
78 Ibid., 24-27.
79 Ibid., 20-23.
80 Information kindly supplied by Mrs. Joanna Bird, December 1974.
83 As 81, 83, fig. 3.
84 Ordnance Survey Archaeological records, through Mrs. Joanna Bird.
86 Ordnance Survey index card.
87 In the Ashmolean Museum. Smith W. G. *Man the Primordial Savage* (1894) 309-311, fig. 224; Evans J. *Ancient Stone Implements* (1897) 100.
88 Proc Soc. *Antiq*. 2nd S., 10 (1884) 34; Evans op. cit. 87 above, 76. The finding place "about a hundred yards distant from what is known as the "Burrow Mound"" was presumably near the Bronze Age barrow excavated in 1834: *Archaeologia* 36 (1833) 175-176; *Surrey Archaeol. Collect*. 1 (1858) 74-75; *Trans. London & Middlesex Archaeol. Soc*. 1 (1860) 140, fig. opp. p. 140; ibid. 24 (1972) 132.
89 *Archaeol*. J. 48 (1891) 416; Evans op. cit. 87 above, 103; *Archaeologia* 77 (1921) 117 ff., Pl. 5; *Stone Age Guide* (British Museum, 1926) 103, Pl. 6; Jessup R. F. *The Archaeology of Kent* (1930) 52-54, fig. 9; *Antiq*. J. 18 (1938) 283; Piggott *op. cit*. 16 above, 45.
90 Jessup *op. cit*. 9 above, 90, fig. 28.
91 Smith W. G. *op. cit*. 87 above, 314-315, fig. 227. In the Lea valley, in brick-earth, this seems a feasible site for Neolithic remains.
93 *Essex Naturalist* 6 (1892) 143; ibid. 18 (1915) 10-11.
94 Jessup *op. cit*. 9 above, 65; *Archaeol*. J. 42 (1888) 302, map. Another polished axe was dredged out of the same peat bed in the Thames close by.
95 The account of stray finds is based on an incomplete card index in the Museum of London of Neolithic-type objects in the Museum's collections and reports of similar objects from the London area not in the Museum. An impression of Neolithic chance finds in the London area can be obtained from publications such as: *Archaeol*. J. 86 (1920) 69-98 passim.; Vulliamy op. cit. 63 above, 65-84; Whimster *op. cit*. 3 above, 48-60; Merrifield *op. cit*. 3 above, 24-25.
96 A selection is shown in Thomas S. *Pre-Roman Britain* (1965) Pl. 81. The earlier leaf-shaped arrow-heads are also known from the region, particularly from Ham.
97 Fiona Roe in Coles J. M. and Simpson D. D. *A. Studies in Ancient Europe* (1968) 143-172, fig. 34.
98 Piggott *op. cit*. 16 above, 83-84, fig. 13, 1, 2.
100 Bulbed pin in British Museum from Thames at Wandsworth: Wainwright & Longworth *op. cit*. 16 above, 263. Skewer pin in Museum of London from Thames at Putney: recently identified by Dr. Roger Jacoby. Cf. Piggott *op. cit*. 16 above, 334, 360 figs. 55, 62, 63; Roe *op. cit*. 97 above, 123.
101 *Archaeol*. J. 86 (1929) 79, Pl. 48; Thomas S., *Pre-Roman Britain* (1965) Pl. 81; *Proc. Prehist. Soc*. 4 (1918) 80-81, fig. 16; Clarke *op. cit*. 4 above, 123, 139. On the other hand, Dr. I. F. Smith has drawn attention to the dynamism of the contemporary Peterborough pottery tradition of the Thames valley: Smith in Renfrew *op. cit*. 4 above, 113.
102 Evans *op. cit*. 87 above, 56-65; *Proc. Prehist. Soc*. 17 (1951) 104-105. Mr. Ralph Merrifield has often emphasised the part post-Neolithic collecting must have played in preserving the present distribution pattern of Neolithic axes, a striking instance being the discovery in 1963 of a polished flint axe on the floor of a Saxon building on the site of the old Treasury building, Downing St., Westminster: *Illustrated London News* 29 June 1963) 1004, fig. 4; Merrifield *op. cit*. 3 above, 25. A jadeite axe in the Museum of London, from King St., Chesham, City of London, has been mutilated by re-use. A small stone axe at Brockley Hill (Sulloniacae), now in the Museum of London, seems anomalous, but prehistoric finds of various dates have been found in the vicinity of the Roman site: *Trans. London & Middlesex Archaeol. Soc*. 19 (1956) 73; ibid. 23 (1972) 158.
103 Neolithic pottery and axe hoard found in Lea valley: above, 23, 25. East of the Lea, polished flint axes are said to have been found with the Mesolithic and other flints at Loughton Iron Age Camp, Epping Forest: *Essex Naturalist* 22 (c. 1928) 130, no. 7, 135.
104 Neolithic occupation site: above, 23.
105 A flint "hatchet-head" was found in the Bronze Age barrow at Teddington, not far from the finding place of the flint axe hoard: above, 25, no. 88.
106 Neolithic occupation site: above p. 19.
107 Possible Neolithic occupation site: above p. 24.
108 Neolithic occupation site: above, p. 20. Mr. Ralph Merrifield, however, suggests that the axes are likely to be collectors' pieces, as Kingston is an old built-up area.
109 Other Neolithic flints found at Ham: above, p. 26.
Erith, on a spur of gravel and brick earth amid marsh and alluvium, seems a possible occupation area, where a dug-out boat (above, p. 26), Neolithic axes and, for a somewhat later period, two beakers (Clarke *op. cit.* 4 above, ffs. 394, 403) were found.

Above, p. 24, 25.

See 108 above.

Concentration of Neolithic pottery found in the Thames at Mortlake; above, p. 24. One polished flint from the Thames at Mortlake is in the form of an axe-hammer, with natural perforation and flaked, hammer-like butt: *Archaeol. J.* 86 (1929) 82, 84.

Group of Neolithic pottery found in the Thames at Hammersmith, above, p. 25.

Probable Neolithic occupation site: above p. 23. Putney-Fulham has been suggested as the route of an ancient ford over the Thames, part of a trackway leading from western Surrey to the river Lea at Old Ford, with which the Putney Neolithic site may have been connected; Grimes W. F. *Excavation of Roman and Medieval London* (1968) 44, fig. 8; *London Archaeol.* 1, no. 12 (1971) 276–379; *ibid.* 1, no. 15 (1972) 344–347; *ibid.* 1, no. 16 (1972) 368, *ibid.* 2, no. 1 (1972) 18–21.

Neolithic pottery from the Thames at Wandsworth: above p. 25. Wandsworth is thought to have been an Iron Age and presumably also older crossing of the Thames; *Antiquity* 21 (1947) 6, n. 21; Megaw J. V. S. *Art of the European Iron Age* (1970) 148, no. 247, n. 1.

Other Neolithic flints have come from the Thames at Chelsea. The filling of Ham gravel-pit, which yielded a number of Neolithic flint tools, is said to have come from Chelsea Reach: Orrell Knowles Collection, Museum of London.

Some of the Neolithic-type antler tools came from the Thames at Battersea: above, p. 26.

As 110 above.

This list was compiled from published sources and from notes made by Dr. Francis Celoria, Keele University, former Field Officer at the London Museum, who had some of the Museum’s axes sectioned. Dr. Celoria has since published a detailed list in *London Studies* no. 1 (1974) 87–92.


*Vulliamy op. cit.* 63 above, 74.


*Atti del VI Congresso...* as 8 above, 320; Smith in Simpson *op. cit.* 8 above, 104, Table 2.


As 126 above.


*ibid.* 38 (1972) 146, 153, Ex. 38.

*Archaeologia Cantiana* 66 (1953) 161–162, K.1; Philp *op. cit.* 27 above, 5.


e.g. *Proc. Prehist. Soc.* 28 (1972) 248–257; C.B.A. *op. cit.* 6 above, 3F. 1–3 Neolithic; Smith in Renfrew 4 above, 130. The sources of some flint axes brought to the London area can now be suggested: Merrifield *op. cit.* 3 above, 24.


Smith *op. cit.* 58 above.

Roe *op. cit.* 97 above, 145–172.

Wainwright and Longworth *op. cit.* 16 above, 156–181.

Jackson, R. J. P. An illustrated corpus of the stone artifacts from the Thames below Teddington Lock in the possession of the London Museum and some suggestions as to their significance (undergraduate dissertation, Department of Archaeology, University College, Cardiff, 1970–1972; now (1973) being expanded and prepared for publication).

The Museum of London study collections will not be available again until, at the earliest, 1977.


Smith *op. cit.* 58 above, 12, 13, 23.

Grimes *op. cit.* 42 above, 195; Smith in Philp *op. cit.* 27 above, 13.
THE BRONZE AGE

J. C. BARRETT

It has been suggested that the archaeological record of the Bronze Age in Middlesex is 'unusually difficult to interpret'.¹ It is intended to discuss some of these difficulties here in an attempt to outline possible lines of research into the period and to give some indication of our present state of knowledge of the Bronze Age in the London region. A summary of the period in the British Isles has recently been published² and reference should be made to this in order to place this discussion within a national setting.

Distribution

The distribution of archaeological evidence known to us is dependent not only upon its original 'actual' distribution but also upon the nature of the land and its usage in the intervening period. Stevenson has recently introduced a greater degree of logic into the discussion of this problem³ by suggesting that emphasis should be placed upon the 'survival factor' and 'discovery potential' of sites, or objects, before generalisations concerning geographical distributions are made. These factors can explain the present gross unevenness of the data in the lower Thames region. For example; bronze implements deposited in, or lost to, the Thames have a high survival factor and, with the continual dredging of the river and the activities of known, interested collectors, a high discovery potential. On the other hand, occupation sites on the river terraces will have suffered erosion by ploughing and destruction by commercial activities such as gravel quarrying. The region lacks any extensive cover by aerial photography and, on the ground, the ditches, pits and postholes belonging to these sites are often difficult to see on the cleared gravel subsoil and can be lost completely in areas of dry brickearth. The sites themselves often produce fragments of very coarse pottery and basic stone implements. Is it surprising that such sites are 'few' in number in our region? The occurrence of round barrows offers an interesting example of differential survival. These sites, when built on the largely pastoral chalk downland have a high survival factor and, along with being in an area heavily investigated by archaeologists, a high discovery potential. Similar sites on the terraces of the lower Thames will have been denuded by ploughing; in other words, the mounds will have had a low survival factor. The lack of aerial photographs and past investigation also results in a low discovery potential. The recent comparison made between the barrow distribution found on the Wessex downland and that in the London region⁴ is, therefore, untenable.

These complexities suggest that we should compare like region with like, as has recently been attempted in two papers concerned with barrow distribution.⁵ If a fairly homogeneous region such as the chalk downland of Wiltshire and Dorset is selected, and the distribution of barrows analysed, then any non-random distribution recognised is meaningful.⁶

Potential

Aerial photography in the Oxford region, undertaken by Allen and Riley in the thirties and forties,⁷ demonstrated the density of ancient settlement which could be expected to have
occurred on the river terraces of this country. This pattern of settlement evidence has been extended to other river terraces and recently an important survey of the river gravels of the upper Thames has been published. There is every reason to expect that the concentration of settlement found in the Oxford region extends to the lower Thames region. Although the Oxford region displays a high density of archaeological landscapes it must be emphasised that this is not a simple random pattern. The prehistoric organisation of the landscape which is seen on the chalk downland can also be postulated for the terraces. In the Neolithic this organisation would have produced the area containing the concentration of ritual monuments near Dorchester, Oxfordshire, and, in the Bronze Age, barrow cemeteries such as that at Radley, Berkshire. The recognition of ritual, and probably secular, organisation of the landscape is important. It must also be emphasised that although we shall be mainly concerned with settlement on the gravel terraces in the London region, terraces which themselves bear soils of high agricultural potential, this settlement pattern cannot be divorced from the adjacent chalk downs and clay soils. The clay lands, if uncleared, would have provided forest grazing for cattle and pigs and the chalk downs and scarp slopes, pastural and arable land. The Bronze Age mixed farming economies of the region could therefore be expected to exploit a wide range of soil types. Previous exploitation of some of the lighter, sandy soils, for example those derived from the Bagshot and Blackheath Beds, may have caused a breakdown in the soil structure resulting in the formation of heathland by the Bronze Age. However some of the sandy soils were under cultivation in the Late Bronze Age although the Early Bronze Age barrow at Wotton, Surrey, on the lower Greensand series, seems to have overlain a podsol.

**Pottery, Settlement and Burial**

Burgess has emphasised that the chronological divisions of the Bronze Age remain those proposed by Hawkes in 1960. Further work on the bronze industries and the accumulation of radiocarbon dates have resulted in modifications to, rather than the rejection of, this scheme. Beaker settlement, which would now seem to begin in Britain by the end of the third millennium B.C., is difficult to assess in the London region. The dominant beaker burial rite was inhumation, normally under a round barrow, although the variety of sepulchral evidence is greater than is often allowed. Clarke lists only seven beakers from Middlesex although eight finds come from the Thames on the Surrey side. No definite beaker burial has been located in the region but Merrifield suggests that the two complete vessels from Erith, Kent may be from burials; the isolated beaker from Victoria Park, Bow could be from a similar context. One piece of beaker metalwork from the London region is a small tanged and rivetted knife. A large number of flint daggers also comes from the region and three bone copies of daggers have come from the Thames. Although flint daggers have been found associated with beakers of Clarke's Wessex Middle Rhine group and Southern series they could have been used by other late Neolithic groups in eastern England. Stone battle axes, whose earliest associations in this country are with beakers of Clarke's Southern series are also found in the region. No beaker settlement has been located, although elsewhere in lowland Britain, for example East Anglia, domestic deposits have been found. Slight traces of beaker structures have also been recorded. Clarke saw the beaker settlement of the British Isles in terms of a series of scattered migrations which resulted in the development of the indigenous Southern and Northern series and East Anglian beakers. Lanting and van der Waals have, however, placed the emphasis upon the recognition of regional foci of beaker settlement and
development. This approach highlights the probable stability of this settlement. One such focus occurs in the Oxford region\textsuperscript{33} which Lanting and van der Waals incorporate within their Wessex Area. Accepting that the amount of beaker pottery from the lower Thames may be unrealistically small, and that a number of barrows could well have been lost, it still seems possible that the main area of beaker settlement in the Thames valley was to the west of the Goring gap.

Collared urns form a major group of Early Bronze Age ceramics which developed indigenously from the late Neolithic Fengate ware.\textsuperscript{34} There is no evidence to suggest that this type of pottery continued in use after c. 1400 B.C.\textsuperscript{35} The Thames in the London region has produced several fragments of such urns\textsuperscript{36} whilst others occur in Surrey.\textsuperscript{37} Of these some, for example those from the cemetery at Walton on Thames,\textsuperscript{38} may have come from denuded round barrows.

The destruction of round barrows on the river terraces has already been discussed. Denuded mounds are often represented in the upper reaches of the Thames as ring ditches on aerial photographs.\textsuperscript{39} Attention must be drawn to the surviving barrows in the region. The mound at Teddington was opened in the last century\textsuperscript{40} and produced an early Bronze Age ogival dagger.\textsuperscript{41} Another barrow may have existed on Brockley Hill\textsuperscript{42} but the well known mound on Parliament Hill in north London is of somewhat doubtful date.\textsuperscript{43} A scatter of early Bronze Age mounds is found to the south in Surrey.\textsuperscript{44}

The largest body of evidence regarding Bronze Age pottery, burial and settlement comes from material assigned to the Deverel Rimbury culture.\textsuperscript{45} Similar material is well represented in Hampshire and Dorset with a high concentration of cemeteries in the Stour and Avon valleys.\textsuperscript{46} The distribution also continues into Sussex\textsuperscript{47} and onto the coastal plain of Essex and Suffolk.\textsuperscript{48} The burial rite is cremation with the ashes often contained in, or covered by an urn. At least four cemeteries are known from Middlesex and an interesting concentration of sites occurs in the lower Thames valley.\textsuperscript{49} A variety of cemetery types is known. The Ashford cemetery in Middlesex may have been a flat cemetery with the urns arranged in rows \textsuperscript{50} while at Worpswold, Surrey,\textsuperscript{51} five urns came from two small round barrows. Larger cemeteries developed in large, low round barrows\textsuperscript{52} whilst others may have occurred as secondaries in earlier barrows.\textsuperscript{53} The possibility remains that many of these finds may have come from beneath denuded mounds and the scatter of urns at Walton on Thames could well represent a barrow cemetery.\textsuperscript{54}

Settlement, related to these cemeteries by virtue of the associated pottery, has also been located. At Thorpe, Surrey\textsuperscript{55} small, post built round houses, hearths, ditches and a palisade trench were located. The finds also included saddle querns. A second site, which may again have been enclosed by a palisade, has been found nearby.\textsuperscript{56} Related settlements are known from elsewhere in southern Britain but are mainly restricted in distribution to the chalk downs. Palisaded enclosures\textsuperscript{57} and ditched semi-rectangular enclosures\textsuperscript{58} occur and a picture of the agricultural organisation on the downs is being defined.\textsuperscript{59} Recently, extensive contemporary field systems have been located on river gravels at Fengate, Peterborough\textsuperscript{60} and similar evidence could occur in the London region.

In the late 1950's the chronology then established for the urn series of southern Britain underwent dramatic revision,\textsuperscript{61} and the current view is to regard the Deverel Rimbury culture as a feature of the Middle Bronze Age, c. 1400–1000 B.C. The position is, perhaps, rather more complex. The scarcity of Early Bronze Age burial and ceramic evidence has been discussed and this may reflect inadequate recording of past finds. However the discovery of coarse, Deverel Rimbury bucket urns was sometimes noted and the decorated collared urns
and beakers are inherently more likely to receive attention. It would also appear that the imbalance in the material record is not being rectified by recent field work. At the same time Case in discussing Bronze Age pottery from the Oxford region, drew attention to the small amount of Deverel Rimbury material recovered which compares with the larger quantity of collared urn and beaker finds. A similar geographical distribution has also been noted in Essex and Suffolk. Here the cremation cemeteries are found along the coastal belt and up the inland valleys whilst collared urns are well represented on the chalk. In Wessex large Deverel Rimbury cemeteries occur around the Stour Avon estuary and the concentration of material becomes markedly thinner as one moves north. Indeed, on Salisbury Plain, an area of high barrow concentrations, there is a marked paucity of Deverel Rimbury cremations. The complementary distribution of burials may reflect a greater chronological overlap between the groups concerned. This would support the view of those who suggest that Deverel Rimbury material represents the continuation of late Neolithic cremation traditions, stemming ultimately from the 'grooved ware' communities of southern Britain. A few radiocarbon dates and associations would support this extended view of the Deverel Rimbury culture. A long record of settlement activity could therefore exist in the London region, covering the Early and Middle Bronze Ages.

The opening of the Middle Bronze Age is marked by a distinct hiatus in the burial and pottery traditions as well as in the metal industries. Only the Deverel Rimbury 'culture' continued. Emphasis has been placed upon the potential effects of a climatic deterioration over this period, producing marked economic and social change, and an increasing population which may also have had its effects. Although some enclosures are found on the chalk downlands which may be assigned to the earlier period, a feature of the Wessex Deverel Rimbury enclosures is that they occur on the chalk away from the main cemetery concentrations. Two settlement sites, Shearplace Hill, Dorset, and Itford Hill, Sussex, have given radiocarbon dates of 1180±180 b.c. and 1000±35 b.c. respectively, dates which, if the proposed longer chronology is accepted, are late in the sequence. Although it may be an over simplification to equate Deverel Rimbury settlement and cemetery distributions, it is possible that some of the settlements along the edge of the chalk reflect increased pressure on land resulting in a late shift into previously marginal areas. Such problems require examination not only on the downland but also in areas of probable intensive occupation such as the Thames valley.

After c. 1000 B.C. in southern Britain, the practice of cremation either ceases or is no longer accompanied by the ritual of placing the ashes, together with an urn in the ground. The archaeological record of Bronze Age burial effectively comes to a halt and with it much of the information regarding settlement activity in the London area. Finds of pottery, either from the Thames, or from the river foreshore hint at the occurrence of Late Bronze Age settlement sites in the region. Sites of this period have been located in Surrey. A large quantity of Late Bronze Age metalwork has been recovered from the Thames, and this reflects a certain amount of local production (below). Such production would be difficult to envisage within a settlement vacuum; a local population would be required to support these industries and provide a demand for the products. Once again the lack of settlement evidence reflects more on the inadequacy of previous work than on the reality of the situation.

Metalwork

A considerable amount of work has been undertaken and published on the Bronze Age metalwork of Britain and Europe. Reference to distribution maps of the British material...
The Bronze Age

is all that is required to emphasise the importance that the middle and lower reaches of the Thames achieve in these metalwork studies. The most immediate requirement remains the publication of this material and no attempt can be made to give anything other than a brief survey of the evidence.

Most of this material has been recovered from the Thames and may in part reflect the erosion of river bank deposits. However a large element of ritual deposition may be postulated. Burgess has talked in terms of a "wet religion" starting in the Middle Bronze Age, and related practices may be traced through to the well known Celtic religious emphasis upon wet places. Other rivers have also yielded a high concentration of Bronze Age metalwork and the relinquishing of a substantial quantity of material wealth to rivers and bogs has to be accepted for proto-Celtic and Celtic society. A problem which must now be mentioned is the extent to which large ritual deposits reflect local production. In other words, did the Thames take on a socio-religious importance, the archaeological record of which could lead us to over emphasise the economic importance of the area? The restricted distribution of certain indigenous types would seem to point to local production, but these problems deserve fuller consideration.

Beaker metalwork is represented by the single copper knife from Mortlake. The period which saw the earliest metalworking elsewhere in the British Isles would seem to be characterised in the London region by the continued exploitation of flint and stone sources (above). Beaker and central European influence in Ireland, the "impact phase", introduced forms such as the halberd. Irish/European contact via the Thames valley may be indicated by the find of a halberd at Lambeth (Fig. 5.1). An Early Bronze Age, development of Ireland, namely the production of decorated axes of Ballyvalley and Derryvinggan type may also have reached the continent by the same route. In southern Britain, the period known classically as Wessex II, c. 1500-1400 B.C., saw the development of the Arreton tradition which produced flanged axes (Fig. 5.4), ogival daggers and tanged spearheads. The upper and middle Thames emerge as one of the main centres of this tradition.

The hiatus which Burgess sees as occurring at the end of the Early Bronze Age, results not only in a development of metal types, but also in a realignment of areas of wealth and influence. For example, the importance of Wessex declines and the middle/lower reaches of the Thames emerge as a centre of bronze production and trade. Rowlands has shown that the Thames valley, extending from the Oxford region to the estuary, is one of the four major Middle Bronze Age provinces in southern Britain, and only here and in East Anglia can metalworking of the earliest Middle Bronze Age be located. These metal types have clear Early Bronze Age antecedents and include forms such as stop ridge flanged axes and the earliest dirk and rapier developments. These dirks and rapiers show links with France in Briard's "type treboul." Publication of the Welsh and southern British palstave material remains a requirement for an understanding of the Middle Bronze Age industries. The summaries which exist of this material illustrate regional developments throughout the Middle into the Late Bronze Age. Early contacts are recognised across the North Sea with the Ilsmoor phase, and continuing contact with France is demonstrated by palstaves during the period. Production of rapiers and dirks also continued with probable production in the Thames valley.

Around the twelfth century B.C. a series of ornaments imported, probably from northern Europe, instigated the production of indigenous ornaments such as the quoit headed pins, a single example of which comes from Hammersmith (Fig. 5.3). Although these northern
European contacts have often been emphasised in discussion of the period, Burgess and Rowlands have drawn attention to the continuing French contacts. These are witnessed by certain palstave forms, incised decorated arm rings and a few pins.

By c. 1100 B.C. European, Urnfield influence began to reach these shores. This is Burgess's Penard phase and he has summarised the developments which took place. The main concentrations of this material are in the Thames valley and Ireland. They share group IV dirks and rapiers, cylinder socketed sickles and early swords. These, the Ballintober and Lambeth swords, developed from the imported Rixheim and Rosnoen types. The early flanged hilted swords also have an Urnfield background as do shields.

In the succeeding Wilburton period the industries of the London region continued to develop with the production of leaded bronzes. It is this technological advance in the south which marks the opening of the Late Bronze Age. It was a time of axe, sword and spearhead production and close industrial ties with the French St. Brieuc-des-Iles tradition. In the eighth century B.C. dramatic developments took place within the bronze industries throughout the British Isles. Ewart Park swords came into common use and contacts with France are shown by the occurrence of Carp's Tongue material in south eastern Britain. The quantity of metalwork deposited in hoards and in rivers increases (Fig. 5.2), representing perhaps increased wealth and a level of instability. Spear types develop and an emphasis upon weapon production can be traced to certain regional hoard groupings. Of these the Broadward complex is represented in the Thames valley. During this period exotic types continue to make an appearance and Hallstatt contact is represented by a markedly riverine distribution of swords. The bronze industries must have continued, in part, to serve a warrior element within society which is represented by the emphasis upon weapon groups and the introduction of horse trappings. By the seventh century B.C. the use of iron had become known in these islands.

This did not bring the Bronze Age to a dramatic conclusion but the technological change heralded, must have made steady progress within these dynamic metalworking traditions.

NOTES

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9 Riley, D. N. "Archaeology from the air in the Upper Thames valley", ibid. 8/9 (1944) 64-101.
15 Benson & Miles op. cit. in n.9, 57-60.
20 Burgess op. cit. in n.2, 173 see also 223-232 for list of radiocarbon dates.
22 Merrifield, R. The Archaeology of London (1975) 27.
23 Clarke op. cit. in n.19, corpus no. 497.
24 V.C.H. op. cit. in n.1, 37.
29 C.H.V. op. cit. in n.1, 37.
30 Clarke op. cit. in n.19, 439 & 444.
34 Clarke op. cit. in n.19, passim.
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46 Vuillamy, C. E. *The Archaeology of Middlesex and London* (1930) 94.
52 Barrett op. cit. in n.45.
53 Barrett op. cit. in n.44, 45.
55 Not clearly represented in the lower Thames region, but perhaps Teddington; C.H.V. op. cit. in n.1, 44.
56 Gardner op. cit. in n.37, 23–26.
57 I must thank J. Shenton and B. Johnson for information prior to publication.
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65 Erith & Longworth op. cit. in n.48, 189.
68 Barrett op. cit. in n.45, 129–130. Burgess op. cit. in n.2, fig. 25. For a possible association of Collared Urn and Deverel Rimbury material see; Dyer, J. F. "Dray’s Ditches, Bedfordshire, and Early Iron Age territorial boundaries in the Eastern Chilterns", *Antiq.* J. 31 (1961) 35.
69 Burgess op. cit. in n.2, 194.
70 Burgess ibid.
72 Piggott, C. M. *op. cit.* in n.58, maps. Piggott, S. *op. cit.* in n.64, 393.
74 Burstow & Holleyman *op. cit.* in n.57. Holden *op. cit.* in n.47.
75 But see Holden *op. cit.* in n.47.
76 Wheeler, R. E. M. "Old England Brentford", *Antiquity* 3 (1929) fig. 4.
77 Harding *op. cit.* in n.15.
78 For example the maps in Burgess, C. B. "The Later Bronze Age in the British Isles and North-Western France", *Archaeol. J.* 125 (1968).
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The Bronze Age


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91 Butler op. cit. in n.82, 48.


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98 Burgess op. cit. in n.76, 3.


103 Burgess op. cit. in n.76, 9.

104 Briard op. cit. in n.89, 175.


108 Wheeler op. cit. in n.74, Pl. 1; 5, 9, 10.

THE IRON AGE

ROY CANHAM

The material evidence consists principally of objects recovered from the bed of the Thames by dredging or collected from its foreshore. It is fortunate that we may now add to this information from a steadily growing list of settlement sites, located mainly on the gravel terraces that border the river. As yet none of the settlements excavated has yielded finds of metalwork comparable to the material from the Thames, so that the relationship of that very lavish body of antiquities to the common domestic items normally recovered from settlement features remains a problem. Thus the inherent difficulty posed by river finds prevails—they are in no way associated by stratification, and any cultural or chronological grouping must proceed on the basis of typology alone. Since most of the metalwork relates in some fashion to well-dated assemblages found on continental sites, it is proposed to divide it into groups that represent phases of the European Iron Age. An attempt can be made to see whether the settlement evidence may be fitted to this scheme.

Phase 1. c. 650—500 B.C.

In terms both of the use and, apparently, the manufacture of Late Bronze Age metal artefacts the London region was the most active in Britain, and it is clear that from the few British hoards in which iron objects are associated with LBA items that the bronze-working factories were in full production during the initial years of the Iron Age. There seems to be no evidence for an iron-using culture arriving in such strength as to overwhelm and replace the long-established Bronze Age traditions of the Lower Thames Valley. However, from the associations in hoards such as that discovered at Llynfawr, Glamorgan, it is plain that there was much influence—if not actual settlement—from areas of central or western Europe. The Hallstatt C culture established itself c. 700 B.C. as the first iron-using community in Europe north and west of the Alps, and by virtue of the distribution of the typical Hallstatt C swords, the London area lies firmly within its province. The distribution map recently published by Burgess reveals a concentration of around 20 of these swords in the Middle and Lower Thames Valley—equal to the number that has been found scattered over Britain as a whole. In the same article reference is made to the distinctly insular characteristics found on the majority of these weapons, a factor which argues strongly against the theory that raiding parties were responsible for the British distribution of the swords.

A number of objects other than swords support the theory that contact of some sort was maintained with European communities in the period 650—500 B.C. The large bronze cauldron from the Thames at Battersea has been closely compared to Hallstatt C Bronze vessels and numerous winged chapes, razors and horse-harness attachments paralleled in Hallstatt assemblages in Europe have been brought forth from the Surrey/Middlesex reaches of the river. The large collection of Late Bronze Age tools, weapons and decorative pieces discovered over a period of years at the Old England site near Brentford seem of special significance. Although none of the items are technically associated, most of the object-types that were found in the Llynfawr hoard are represented. From Brentford and from other find-spots on the Thames, there is a small number of iron socketed axes, iron spears and
sickles. All have been regarded as of early date though proof of this is lacking. It would be of exceptional interest to locate a settlement in which the finely-cast bronzes had been used or manufactured. The special promise which the Thames foreshore at Old England appears to hold out attracted the attention of Mortimer Wheeler in 1928. An excavation along the crest of the shore revealed the floor-timbers of a small hut which turned out to be of Roman date. Beneath the hut were sherds of Iron Age pottery, though nothing of the exotic character which one might hope for at this famous find-spot.

Are there other groups of pottery in the region that may be accepted as indicators of settlement in this early phase? Although there is no shortage of prehistoric pottery from the Thames, it is apparent that we do not possess the same clear-cut links with the Hallstatt culture of the Continent that are exhibited by the metalwork. This is a situation that prevails throughout Britain, with the notable exceptions of the globular bowls from Eastbourne and the decorated pottery from All Cannings Cross in Wiltshire. It is becoming clear that the large number of excavated settlements in Southern Britain do not belong to this primary phase; during the period of expansion of the Hallstatt C culture objects of metal were common, yet in our earliest Iron Age settlements metal is extremely rare, implying a later date for the sites. The exception to this is Staple Howe in Yorkshire with its Hallstatt C bronze razors and a collection of pottery forms that contrast in many ways with the styles found on the mass of early sites.

In spite of the lack of clear connections with the Hallstatt world, certain aspects of the Thames pottery are exceptional and may eventually prove to be characteristic of this primary phase:

i. The standard early jar form with high rounded (occasionally angular) shoulder is rare.

ii. Of the 50-odd Iron Age vessels and sherds from the river, eight bear rims that are decorated in some fashion. This trait was extremely common at Staple Howe.

iii. Six fragments are decorated with chevrons, triangles and other motifs reminiscent of continental Hallstatt fashion.

iv. The rare omphalos base (a Hallstatt form in origin) occurs on five vessels.

v. There are a number of diminutive vessels which are not so much bowl-forms as scaled-down versions of the coarse-ware jars. They tend to be rough-made and thick-walled and have parallels at the All Cannings Cross site.

There are two land-sites that seem to have been occupied in the primary phase. At Coombe Warren near Kingston a range of archaeological material has been found during quarrying of the hill-top for gravel, including a number of small, jar-like vessels analogous to the Thames finds. Furthermore, one of the principle discoveries made on the hill-top is an LBA hoard suggesting that one of the factory sites which produced the Thames metalwork in the Late Bronze Age may have been located here.

The second site is at Queen Mary's Hospital, Carshalton, where in 1902 construction trenches exposed the enclosure ditch of an Iron Age settlement; this was further investigated in 1937. In the later excavation a group of rather unusual pottery came to light from the lower silt of the ditch. The 5 vessels represented are in a fine fabric with smoothed or highly burnished surfaces, and each exhibits a tall upright rim springing from an angular shoulder. None of the authorities who have surveyed the ceramic evidence for this region have been able to suggest a set of parallels; Cunliffe places them at the beginning of the Iron
Age sequence, but quotes no dating evidence in support of this. A parallel for one of the bowls (Lowther's C2) is a black-burnished vessel from the Thames at Strand-on-the-Green, and it may be noted that two of the five vessels have a rim diameter of seven inches (178 mm.), and two are less than six inches (152 mm.). Many of the small shouldered vessels from the Thames fall within this range.

Phase 2. 500–150 B.C.

The beginning of the outstanding series of iron daggers from the Thames may be used as a convenient starting point for this phase. The relevant material consists of four daggers with sheaths, a sheath fragment and an iron dagger blade. Two are without exact provenance, two are from Battersea and two from Mortlake. The six objects are closely paralleled by weapons from Hallstatt D contexts in Southern Germany and Austria, yet along with later members of the series possess characteristics that differentiate them from their continental models. Whatever economic or sociological process produced the British class of Hallstatt swords seems still to have operated therefore for the period of these early daggers, c. 550–500 B.C.

The series continues with 18 British daggers of La Tene type (mostly from the Thames) which had their origins in a form manufactured in the sixth century in Eastern France. A French series developing along different lines from the same stock has the advantage of bearing datable associations and intimates that in Britain the Thames-side workshops must have been active in the period 450–300 B.C.

The restricted distribution of the daggers, both Hallstatt and La Tene, is undoubtedly significant. The majority come from the river between Mortlake and Hammersmith, and the task of locating prehistoric settlement sites along the floodplain terrace in this region is an exceedingly difficult one. It is worth noting that three-quarters of the Iron Age pottery from the Thames has been brought forth from the same stretch of water.

The Thames pottery itself has little to add to the story. As with settlement material, the fragments of coarse, flint-gritted jars are far in excess of the fine ware. Bands of finger-impressed ornament on the shoulders of jars are relatively common, a few examples have lines of oblique slashes. Weakly rounded shoulders are more common than the situate jar form. Some of the burnished bowls in dark grey or black ware are sharply angular and of high quality, recalling perhaps more than most Iron Age fine wares the Early La Tene ceramics of the Marne region.

A number of settlements are known in the region. The sole surviving earthwork enclosure is Caesar’s Camp, Wimbledon Common, a circular univallate hillfort some 800 ft. (c. 242 mm.) in diameter. A pipe-trench dug through its defences in 1937 revealed that the rampart had been revetted front and rear with a line of posts. A single ditch approximately 30 ft. (c. 9 m.) wide surrounded the earthwork. The pottery consists of shouldered jars, some of which are distinctly angular. There is little more that can be said of this obviously important site due to the lack of extensive excavation. Like the settlements of similar date in West Middlesex, Caesar’s Camp is located on a gravel plateau. There is some doubt whether this material is glacial in origin as is stated on the Geological Survey map or is the remnant of a former river terrace. Apparently lacking any capping of brickearth, it is likely to have been sterile in comparison with the Middlesex gravel plain and thus to have attracted settlement of a different nature.

A site adjacent to the Hogsmill river at Old Malden seems to have been occupied in the same period, since it has yielded fragments of situate jars. The geology in this case is London
Clay, an unusual siting for a prehistoric community. In the same region but closer to the Thames, traces of settlement in the Iron Age have been reported from both Kingston and Putney whilst the Carshalton enclosure mentioned above continued in use during phase 2, judging from sherds found in the uppermost filling of the ditch.

In the West Middlesex area a similar group of Iron Age sites have been more thoroughly investigated. The most informative of these is undoubtedly the enclosure excavated by W. F. Grimes during the construction of Heathrow Airport in 1944. When Stukeley published a drawing of the earthwork in the eighteenth century it was clearly something of a landmark, but prior to excavation was barely perceptible from ground level. In view of the nature of the construction work Grimes was able to examine the entire area. The enclosure was roughly square, measuring 450 ft. (c. 136 m.) across, with a single entrance on its southern side. Its northern half seems to have been the designated dwelling area, for gullies of circular and semi-circular plan that were found to concentrate here were thought to be the drainage channels surrounding typical Iron Age round-houses. Average size was around 35 ft. (c. 10.6 m.) in diameter.

On the southern edge of the hut complex a contrasting square plan building was sharply defined by its sleeper-beam trenches and post-holes cut into the natural brick earth. By analogy with the later and more formal structures of the Roman world this is interpreted as a temple. It consisted of an inner chamber surrounded by a colonnade, the whole measuring no more than 36 by 31 ft. (c. 10.97 × 9.44 m.)

A detailed report on the excavation is currently in preparation. The main occupation is dated to phase 2 by situlate jars decorated on the shoulder with finger-tip impressions.

A contemporary site has recently been located on the north west corner of Heathrow Airport close to the village of Longford. In this case the settlement was discovered when destruction was already under way, though there was sufficient time for limited excavation of selected features. The area examined, believed to be only a fraction of the total settlement, had been principally used for the dumping of refuse in round, straight-sided pits. There also occurred examples of the large scoops or hollows such as have been excavated on a number of Iron Age settlements. No further light could be shed on their purpose, though it was clear that they had become receptacles for domestic refuse only after considerable silting had taken place.

The pottery forms follow the pattern observed on the majority of sites in the South. The bulk of the sherds belong to shouldered jars in a coarsely gritted fabric, a proportion of which bear the usual band of finger-impressed decoration. Fragments of fine-ware bowls in a smooth, black-burnished fabric were found in association. These are undecorated save for the occasional horizontal groove and are mostly tripartite in shape. One or two of the coarse-ware jars are of an exceptional nature. These are characterised by a short everted rim, rounded shoulder and squat, cauldron-like profile. One version is covered in a type of rusticated decoration, for which the only parallel is at West Harling in East Anglia. The presence of multiple bands of finger-tip impressions on the other few sherds in this category is another link with the same site. A distinctive feature of the Heathrow pottery is the fairly large proportion of jar rims that are decorated.

Two miles (c. 3.2 km.) to the south east of the 1969 site another Iron Age settlement has been located by means of aerial photographs. The entire complex of straight drainage ditches and circular enclosures occupies some eighty acres. The area investigated in 1971–2 contained pottery that shows the site to be contemporary with the two settlements already described. Another
link with the 1944 site was the discovery of circular gullies with an average diameter of about 30 ft. (c. 9.14 m.) Two were excavated, another three are visible on aerial photographs.²² We may add to this list for West Middlesex indications of further habitation on Stanwell Moor, where a small enclosure discovered from the air has been shown to be Iron Age²³ and also a third Heathrow site, for an isolated pit containing a large situlate jar was found half a mile (c. 804 m.) from the main 1969 site and probably represents yet another settlement.

It is clear from the evidence of excavation that the Taplow terrace around Heathrow was well populated in phase 2. All indications are that these were farming communities; the abundant large jars were used, one presumes, for storage of grain; the animal bone at Heathrow 1969 is entirely domesticated (mostly horse, cattle and sheep). There is no evidence of specialised manufacturing activities. It is relevant that the gravel hereabouts is largely capped with brickearth and that this provides a loamy intermediate soil of value to prehistoric farmers. Comparison is readily made with those stretches of river valley in England that are more responsive to aerial survey. The suggestion that we should think in terms of sizeable complexes of occupation as a mode of prehistoric settlement clearly applies to the West Middlesex discoveries.²⁴

PHASE 3. 150 B.C.—A.D. 43

On the whole, the evidence of settlement in the final two hundred years of the Iron Age is somewhat meagre. On the basis of ceramics at least, one would judge that much of the London region became virtually depopulated. However, the scarcity of finds is considerably offset by the spectacular nature of the decorated bronze items from the Thames. All of these objects are notoriously difficult to date since they embody a form of Celtic art that is not easily placed in the lineage of European styles. The Brentford horn-cap, now thought to belong to the first century B.C. or first century A.D. was once dated by Fox to the early third century B.C.

The principle objects are:-

- Battersea — A bronze shield with glass inlay
- Brentford — A bronze 'horn-cap' with enamel inlay
- Wandsworth — Two bronze shield bosses
- Waterloo Bridge — A bronze horned helmet with red enamel inlay

The 'Thames school' of bronze-smiths who produced these finely decorated pieces may be seen as the continuation of a metalwork tradition started in the Middle Bronze Age a thousand years earlier. Throughout the period the pattern is the same; production was concentrated on martial items, often so fine in quality that they have come to be regarded as parade pieces rather than objects of utility; elements of style or technology distinctly different from continental modes are present, strongly suggestive of local manufacture.

A small collection of bronzes found near Hounslow may perhaps indicate that the Middlesex gravels continued to be the centre of occupation. Apparently the discovery was made in the same field as a Bronze Age hoard, but no further details of the circumstances were recorded. The objects are mostly animal figures, three boars and two dogs—in a simple, but distinctly plastic style.²⁵
To the same phase belong the majority of the iron swords from the Thames. These constitute Professor Piggott's Group II, the distribution of which covers Southern and Eastern England. A total of 8 have now been recorded from the Thames reaches in West London. All are weapons with slim, slightly tapering blades with scabbards in iron or bronze. Their European counterpart has La Tène II associations, though Piggott describes the British versions as 'distinctively insular'. Their associations in this country are few but imply a date-range of second century B.C.–first century A.D.

Finds of Celtic coinage in the region indicate contact with the tribes of northern France during the first century B.C. and first Century A.D. Coins of the Gallo–Belgic B group in particular have a restricted distribution centred on the London region. According to Allen the Gallo–Belgic series represents waves of immigrants, presumably bearing Belgic culture to England, but there is no way in which this hypothesis can be tested at present. The dating of the whole series is little more than guess-work; a reasonable suggestion for this particular group would be 100–50 B.C.

The British coins that developed from the Gallo–Belgic series are rare in the region, with the exception of the coins of Cunobelinus, a small number of which are spread across the London Area. The speculum coins, however, are distinctly associated with our region. Hoards have come to light at Brentford, Eel Pie Island, Gunnersbury, Hammersmith, St. James's Park and Shepperton. Since all these locations are close to the Thames, movement of people rather than trade or stable settlement has been suggested.

There is not a great deal of settlement evidence or even stray finds of pottery to augment the information supplied by the metalwork. The collection of pottery from the Thames, for example, includes little in the way of globular or barrel-shaped vessels that are typical of later Iron Age sites in Southern Britain. The 1944 Heathrow site is one of the few that produced signs of later inhabitation. Grimes was able to establish that a small enclosure within the main earthwork was subsequent to the round-houses; the pottery forms include vessels of rounded shape, some with incipient bead rims. During the 1969 excavations, a few isolated pits contained similar forms, though here also it was obvious that the later occupation was a comparatively trifling affair. Only on the very extremes of the region, at Crayford in Kent and Moor Park in North Middlesex is there evidence of well-established settlement in which the decorated globular vessels and Belgic forms were in use.

It is clear, therefore, that the London region was unaffected by the wave of Belgic settlement that descended upon Essex, Hertfordshire and Kent. This absence of Belgic material and the concentration of the speculum coins around the Thames may reflect the existence of a community that resisted Belgic influence. The presence of various non-Belgic pottery forms in West Kent, Surrey and parts of Sussex has led to the suggestion of a large non-Belgic province in the South East. These pottery forms appear in London, though inevitably in Romano–British contexts. The few details of the Thames Basin given by Caesar makes it plain that the area was not uninhabited, so that it is reasonable to regard the area as part of the south eastern enclave.

In conclusion, there remains an inexplicable contrast between the iron and bronze metal-work of the Iron Age from the Thames and the farming settlements sited on the gravel terraces. Detailed publication of several excavated sites in the near future should yield basic information on these communities, but only an intensive programme of fieldwork and excavation can reveal the real extent of the occupied area. Since private flying is severely restricted in the region we can hope for little assistance from aerial survey.
NOTES

5 M. E. Cunnington The Early Iron Age Inhabited Site at All Cannings Cross Farm, Wiltshire (1923).
7 Examples in the Museum of London are A 13677, A 19134, A 23465.
8 Cunnington op. cit. in n.5, Pl. 28, nos. 14, 15, 17-19.
12 Museum of London, Layton Collection, P. 34.
15 Unpublished material in Kingston Museum.
17 Excavations at Gay Street, Putney, by Wandsworth Hist. Soc. (Unpublished).
18 William Stukeley Itinerarium Curiosum (1776).
20 Report to be published by H.M.S.O. for the Museum of London.
21 J. G. D. Clark and C. Fell "The Iron Age Site at Micklemoor Hill, West Harling", Proc. Prehist. Soc. 19 (1953) Fig. 12, no. 26.
24 D. W. Harding The Iron Age in the Upper Thames Basin (1972) 10.
27 D. F. Allen in S.S. Frere (ed.) op. cit. in n.19, 98.
28 Photographic records, Museum of London.
30 Uxbridge Record No. 5 (March 1965), 9.
31 S. S. Frere (ed.) op. cit. in n.19, 92.
32 Caesar De Bello Gallico V, 18-19.
ROMAN
RALPH MERRIFIELD

THE ORIGIN OF LONDON

The most important development in this period was the origin of London itself, and the general pattern of the physical growth of the Roman city from a bridge-head settlement east of the Walbrook is fairly clear. It is a reasonable hypothesis that the Thames was bridged at London early in the conquest, and excavation in 1972 revealed a military ditch at Aldgate of very early date.¹ We need more information about this early fort, and other evidence of the first phases of military occupation may be expected on both sides of the river. A rectangular ditched enclosure west of the Fleet also demands further investigation in this connection, since, like the Aldgate ditch, it cuts the presumed line of a Roman road and may therefore antedate it.²

The principal roads must soon have been laid out as an essential part of the pattern of conquest, and were inevitably brought to the bridge, which could also be reached by sea-going ships; so that London was from the beginning as ever since—a great centre of communications by land and water. It is now established that the choice of the site of the bridge was partly determined by the existence of an area of slightly higher well-drained ground south of the river, just above the tidal limit of the period.³ There now seems little doubt that the Roman bridge was on or very near the site of the medieval bridge, as was strongly suggested by Roach Smith’s observations of the discovery of numerous Roman antiquities, including thousands of coins, during dredging on the line of Old London Bridge.⁴ Recent excavations in Southwark seem to clinch the matter, since it has been demonstrated that the alignments of two Roman roads, the northern stretch of Watling Street and a road from the south west, probably from a ford at Westminster, converge on the site of the medieval bridge. This site, moreover, seems to remain the central axis of Londinium through two major phases of Roman town-planning.⁵

THE PLAN OF LONDINIUM

The earliest well-attested feature is an E–W road parallel to the river,⁶ suggesting a planned nucleus, presumably military, though this remains to be proved. We know nothing of the first N–S roads, or of their relationship to the bridge or Ermine Street. New N–S roads were laid out when the centre of London was re-planned to provide a great basilica and forum, probably in late Flavian times. We know the limits of this central insula and the position of the parallel E–W road to the south, but very little else.

For this and other problems concerning the early development of London, we need not only more archaeological facts, but also much more precise information about the underlying physical geography of this area. We have a general picture on the south bank of a sandy area divided by streams a little higher than the surrounding alluvium, which became swampy to the east, where it was intersected by a large stream or creek, and also apparently to the west as well, where there may have been another channel. Similarly on the north bank, we can envisage two gravel plateaux rising steeply from the Thames, and separated by the stream of the Walbrook
Fig. 7. Roman London and the London area.
with its numerous tributaries, all narrow, but together forming a valley with a considerable flood plain. The reconstruction of a detailed and accurately contoured large-scale map of the original surface of the City and Southwark remains to be done, although a small-scale preliminary survey has appeared. A considerable amount of the necessary information is probably already available, not only from the minority of archaeological reports in which the O.D. level of natural is recorded, but also from the innumerable bore-hole sections recorded by engineers, many of which are in public possession.

This work would also throw more light on the artificial modification of the natural contours by the Romans. Observation in limited areas has shown that they terraced the steep bank on the City side of the river, both by cutting it away and by depositing material above it against retaining walls. They also quarried the local gravel for road-making and the brick earth for the manufacture of tiles and pots, and used both for dumping to raise the ground above flood level or to fill hollows in an uneven surface. A timber river embankment was constructed more than half a mile east of the Walbrook in the early second century, and was replaced in the late second century by a box-framed quay 20ft. (6.09 m.) to the south.

West of the Walbrook, where the city expanded rapidly in the later first and second centuries, we know very much less. Only the course of the main E–W road, a continuation on a new alignment of the primary street east of the Walbrook, is known with any certainty. The positions of other streets may be marked by finds of gravel metalling, but we need more observations of this kind before their lines can be drawn with confidence. The present indications point to a surprisingly irregular street plan in the S.W. quarter of the city, with at least two different alignments.

The lay-out of the N.W. corner is fortunately simpler, as it was occupied by a fort, built in the early second century, and this followed the standard pattern in the arrangement of its internal streets.

**Fortifications of Londinium**

We know that the fort preceded the city wall and helped to determine the shape of the latter, since its north and west walls, with the addition of a thickening, were incorporated in the city defences. It seems likely that the fort was a barracks for the troops normally resident in a provincial capital, rather than a defence to protect London. It is unlikely that much more can be learnt of the internal buildings of the fort, owing to earlier destruction of the Roman levels in this area.

The Roman city wall after many rebuildings survived in use until Tudor times, and the only portion of its line that remains doubtful is the stretch south of Ludgate. This disappeared in the Middle Ages when the priory of Blackfriars was built and the wall was extended westward to the Fleet. There is little doubt of the approximate original line, but its precise position here remains uncertain, since definite archaeological evidence is still lacking. The building of the wall can now be fairly firmly dated to the period between A.D. 190 and 220, but a closer dating, making possible a correct assessment of its historical purpose, so far escapes us; and will probably continue to do so until we are able to date more accurately the considerable quantity of pottery that antedates it. For this and many other problems, one of our greatest needs is for a detailed and objective survey of Roman coarse pottery in the London area. The defensive river-side wall, containing re-used Roman material, now known to extend from Blackfriars to Queenhithe, with some interruption at Lambeth Hill,
is apparently of late Roman date (? 4th century) but may utilise earlier foundations of a terrace wall just west of Lambeth Hill. We do not yet know whether a comparable defensive wall was built west of the Walbrook.

Thanks to the unexpected discovery of Bastion 11 A, overlying a deposit with thirteenth century pottery, we now know that some (and probably all) of the hollow bastions in the western part of the wall are of medieval origin. This inevitably threw doubt on the Roman date of the solid bastions also. Investigation of Bastion 6 in 1971, however, showed that a layer of rubble, containing nothing later than fourth century pottery and coins of the House of Theodosius, had apparently accumulated after the building of the solid bastion. More definite evidence of its date should be found when it is possible to examine underlying deposits. In view of the important finds of re-used material from other bastions, the contents of this and any other solid bastion that becomes accessible should be investigated.

Buildings of Londinium

Among the buildings of Londinium, we have had tantalising glimpses of a great structure, obviously a public building, of very early date, underlying Gracechurch Street and extending on both sides of it. All opportunities for further investigation must be taken, for the correct identification of the nature of this building at the centre of the city would tell us a great deal about the early history and functions of Londinium. Unfortunately such opportunities will be few.

This building was deliberately demolished to make way for the forum, which was laid out around the earlier building, probably in the late first century. Apart from its limits, which are clearly defined by roads to the south, east and west, and by the basilica to the north, we know little about the forum, beyond the facts that it had massive ragstone walls and brick piers, and that its floor was levelled by dumping vast quantities of material. The reason that we know even less about the forum than its predecessor is partly due to this raising of the level, since deeper structures have a better chance of survival, and partly to the extensive robbing of its walls to the foundations, presumably in the Middle Ages, when it may be surmised that these walls were still visible above the ground. The difficulties in observation and interpretation of the evidence, as well as its importance, make it imperative that opportunity shall be given for controlled archaeological investigation wherever it is likely to survive. Observation of builders' excavations alone is of little value. Scientific examination of any site in the forum area would almost certainly yield great dividends, since it could produce evidence not only of the forum itself and the great public building that preceded it, but also of the earliest settlement of London and its nature. Underlying the forum and its predecessor on the west side of Gracechurch Street, there appears to have been a very early building which, surprisingly, had stone foundations; and on the east side of Gracechurch Street, below the S.E. corner of the forum, Mr. B. J. Philp found traces of timber buildings underlaying the wattle and daub houses that were destroyed in the Boudiccan fire of A.D. 60.

The basilica which formed the north side of the basilica/forum complex is better known, but presents puzzling features. It now appears to have had a nave and north aisle, but no south aisle. In its western half at least, the southern arcade of the supposed nave seems to have formed the southern limit of the building, so that on the ground floor it was presumably open to the forum. The presence of another wall, outside but adjacent to the sleeper wall of the south arcade in its eastern part, and oversailed by one of its piers, has led to the suggestion that the eastern part of the building originally formed a smaller basilica, which was subse-
quently extended. It is difficult, however, to reconcile an early basilica in this position with the pre-forum building, which would have been contemporary with it, and which lies immediately adjacent to its supposed site on a different alignment.

There is good evidence of a double row of offices north of the north aisle, in the western part of the basilica, but we have practically no knowledge of the corresponding lay-out on the north side of the eastern part, which seems to be quite different. Here we might expect to find the curia or local senate house, London’s first Aldermen’s Courtroom. Fortunately, the remains are likely to survive between Whittington Avenue and Gracechurch Street, where any opportunity for investigation must be seized. We also need further evidence of the date of the building, which at present appears to be of the late first century, and elucidation of the anomalies discussed above.

A considerable amount of information, including much of the plan, has been retrieved in recent investigations of the great public building that partly underlies Cannon Street Station, and extended certainly 170 ft. (57.9 m.) and probably more than 300 ft. (91.4 m.) to the east of it. The wing west of and partly underlying Suffolk Lane has been archaeologically excavated, and seems to have been built in the later Flavian period. It continued to be used with few changes into late Roman times, but other parts of the building were rebuilt to a different plan during the Roman period. The combination of large reception halls, living quarters and probable offices in such an extensive complex suggests that this was the residence of a high official, and the eighteenth century guess that it was the Governor’s palace seems as likely as any other interpretation. The parts of the building that we know least about are the northern side adjoining and partly underlying Cannon Street, and the western wing under the railway station, where a considerable part may survive undisturbed between the nineteenth century arches. Valuable evidence undoubtedly still exists in both areas, and should be sought whenever an opportunity is presented.

Part of the plan has been recovered of extensive public baths in Upper Thames Street, on both sides of Huggin Hill. Built in the Flavian period, and later extended and modified, they seem to have been deliberately demolished by the middle of the second century. No building of comparable importance succeeded them on the sites investigated, so it must be assumed that the demolition formed part of the re-planning of a much wider area.

It may be significant that two successive Roman structures, unfortunately not datable, were detected 150 yds. (c. 137 m.) to the west in Lambeth Hill, and the second of these had terrace walls built on chalk platforms supported by wooden piles. The riverside wall may subsequently have been built on the southernmost of these.

As yet unexplained are two parallel walls on the line of Knightrider Street, of which the more northerly was at least 400 ft. (c. 122 m.) and probably more than 580 ft. (c. 177 m.) long. It appears to have been built after the late first century, when gravel pits on the site had been filled, and to have been in existence, perhaps after rebuilding, in the late third or fourth century. No off-set wall of this “long wall of Knightrider Street” has ever been observed.

Of the smaller buildings of Londinium, we know a little about a small bath-house north of Cheapside, and a great deal about the Mithraeum excavated by Professor Grimes on the east bank of the Walbrook. In the latter case, it need only be observed that most of the narthex remains unexcavated, and should partly underlie the modern street of Walbrook. This is the only structure in Londinium definitely identified as a temple, although an apsidal
structure west of Gracechurch Street and contemporary with the pre-forum building may well have been another. The temple of the state cult from which came the inscription found in Nicholas Lane so far eludes us.

For the rest, we have a host of fragments, mostly, no doubt, of dwelling-houses of the more substantial type though, curiously, it is only recently that a considerable portion of the plan of such a residence has been recovered. This is the house with private baths set deeply into the terraced hill-side above Lower Thames Street like the public baths of Huggin Hill above Upper Thames Street. The excellent preservation of both these buildings encourages further investigation on this slope above the Thames whenever opportunity permits.

The Lower Thames Street house has the further distinction of giving us our first glimpse of the end of Roman London. Built about A.D. 200 and substantially rebuilt with floors at a higher level at a later date, its occupation continued well after A.D. 395 (on coin evidence) and perhaps into the second half of the fifth century, if an East Mediterranean amphora found beneath the furnace ashes has been correctly dated. The picture of fifth century London presented by this site is of a city only slightly decayed, still enjoying the comforts of Roman civilisation, and apparently engaged in commerce with remote places. Yet the end came before A.D. 500, on the evidence of a Saxon brooch dropped after the collapse of the bathhouse roof, and was brought about here not by hostile destruction, but by desertion and neglect. What followed is of the greatest importance and interest. After an unspecified period, before the walls collapsed, the ruins were deliberately demolished, and a gravel surface was eventually laid over them. Here at last we seem to have the Dark Ages of London in strati-fication, and careful study of the associated pottery is required, with a search for dated parallels on the Continent, since there seems to be no affinity with contemporary Anglo-Saxon wares in this country.

**Outside Londinium**

We know remarkably little about the pattern of settlement outside the Roman city, and the whole question of the utilisation of the surrounding land and its occupation is at present a matter of conjecture, based on geographical probabilities and a few scraps of not very informative archaeological evidence. The pattern of pre-Roman occupation must have been considerably modified by two things—the development of Londinium as a large centre of population, offering urban attractions and opportunities, and demanding quantities of food and consumer goods, which could be supplied in part by exploitation of the immediate environment; and the establishment of the Roman road system, which offered ready access, to the city and canalised a hitherto unprecedented traffic of men and goods. In this respect the countryside around Londinium must have been more affected than any other part of the country, and probably soon assumed its special character as the hinterland of a major city.

**The Roads**

The Roman roads have been the subject of much inconclusive study, and although there is little doubt of the general course of the major roads, which left the city by historic gates and tend to be followed, in part, at least, by modern roads, it is difficult to obtain satisfactory corroboration of them by archaeological means. Opportunities for excavation are limited, and investigation usually reveals only an indeterminate gravel feature, undatable, and often
not easily distinguishable from natural gravel. Much patient work has already been carried out by local archaeological societies and other groups of enthusiasts. It is to be hoped that it will be continued, and that the results, however doubtful, will be published, bearing in mind that negative evidence may be as valuable as positive when sufficient facts have been accumulated. There is no short cut here, and no substitute for excavation; field-work and the study of topographical probabilities are not enough.

Detailed accounts of probable alignments and alternative possibilities have appeared elsewhere. Here only the main gaps in our knowledge can be indicated. It must be emphasised, however, that all alignments need checking and most are supported by very little real evidence. Even the line of Stane Street through Southwark, which seemed one of the better authenticated stretches of Roman road, is now known to be incorrect, and the unsatisfactory nature of the evidence has been demonstrated. As for Ermine Street, this main road to the north has been remarkably elusive through Edmonton and Enfield, though it undoubtedly left Londinium at Bishopsgate and is followed by the street of that name, while its alignment farther north through Theobald’s Park and Cheshunt seems clear. The line of the Colchester road is lost for several miles to the east of Whitechapel High Street, but has been located recently (1969–70) in its expected position just west of the Lea crossing at Old Ford. The contrast between the imposing width of this road here and near Colchester, and the apparent narrowness of its exit from Londinium at Aldgate is curious. Somewhere east of the ford the Colchester road was probably joined by the Great Dunmow road, but the latter has not yet been traced with certainty west of the Roding.

There are probable indications of another ancient road north of the main Colchester road, leading from the neighbourhood of Chelmsford towards London. This requires further study, and its line needs confirmation south and east of Navenby, where it seems to lie practically parallel with the main Roman road to the south. This area might be of great topographical interest.

A Roman road from west to east by-passing Londinium on the line of Old Street (Margery 20) seemed well authenticated, and it was a reasonable assumption that its line farther east was marked by the significantly named Green Street and Roman Road. Excavations at Bow in 1970, however, have shown that it did not lie on the supposed line immediately east of the end of Roman Road, but it would presumably have joined the main Aldgate–Colchester road west of this point. Here again conclusions must be withheld until more evidence is available.

Finds of Roman road metalling on or near the projected alignment of the Silchester road (Margery 42) have shown that the siting of a Roman road was not immutable, even within the Roman period, a further complicating factor that has been too little taken into account. An E–W cambered road found on the projected line at 69/71 High Street, Staines, in 1969, had been built over at a very early date, following a disastrous fire, after only a short period of use. Similarly, a much later surface that can probably be attributed to this road was found in 1961–2 20 ft. (c. 6 m.) south of the kerb-line on the south side of Oxford Street at Marble Arch. This metalling overlay pottery not earlier than late second century, and from its thickness represented only a short period of use. The Silchester road seems, therefore, to have been the subject of diversions, and there is no reason to believe that similar changes were not made in other roads. The presence of Roman occupation on the supposed line of a road does not, therefore, necessarily mean that the road was never there, but only that it was not there for the period of occupation.
The existence of a ford at Westminster, on which Watling Street north of the river seems to be aligned, has received some confirmation from the discovery of a Roman road west of Borough High Street apparently leading from the bridge-head in the general direction of the supposed ford. More archaeological facts with a bearing on this problem are needed from Lambeth or Westminster.

**Occupation Outside Londinium**

Our ideas about the topography of Roman Southwark, the only true suburb of Londinium, are now being clarified by the excellent work of the Southwark Archaeological Unit, and it is of the greatest importance that every opportunity shall be taken for the investigation of the area around the southern end of London Bridge, in advance of development. Recent work on the foreshore immediately east of Old London Bridge has demonstrated the great advantage of extensive over limited excavation in this kind of urban archaeology. The existence of flimsy early Roman buildings with clay walls has been demonstrated, and it is likely that these would have escaped detection in a small trench, since they are very inconspicuous and have been much disturbed.

It is also important that the results of previous excavations, however inconclusive, shall be made fully available to those who are investigating the problems of Southwark. When information is so scanty and difficult to acquire, none must be wasted, and negative evidence may prove to be as valuable as positive.

Elsewhere in Inner and Outer London we know of the existence of a few buildings substantial enough to be revealed by the discovery of recognizable Roman building material, on or near the sites of the following churches: St. Bride's, Fleet Street, St. Andrew's, Holborn, Westminster Abbey, possibly St. Martin's-in-the-Fields, and presumably St. Andrew's, Kingsbury, which has Roman flue-tiles incorporated in its walls. The apparent tendency to found early English churches on the ruins of substantial Roman buildings should be borne in mind when any opportunity arises for investigation of these or similar sites. We know little or nothing of the real nature of the building in Greenwich Park, but fragments of inscriptions found suggest that it was not an ordinary villa, and it may even have been a temple of some kind. Luxurious villas for gentlemen-farmers, numerous in West Kent, seem to be absent in the London area, and the nearest fine mosaic so far recorded was found in the eighteenth century in Wanstead Park.

The nature of the local British communities at the time of the Roman conquest and later is obscure, and will remain so until a total excavation of a native site can be carried out. In a region that is largely built over, opportunities for full investigation of this kind will be very rare indeed. Since the preliminary examination by Mr. Farrant on behalf of the Society has shown that such a site exists on relatively open ground at East Bedfont, it is most important that full advantage shall be taken of it.

Other known Romano-British settlements also require further study. It may be assumed that Pontes (Staines) and Sulloniae (Brockley Hill) began as posting stages on the new roads, but both developed potteries and no doubt served as market centres. Comparable settlements might be expected centering on posting stations at similar distances on Ermine Street and the Colchester Road, but these remain elusive. The successful development or failure of such centres is of considerable interest.
In Highgate Woods, we have to account for the appearance of an industrial community of potters remote from any known road, though easy transport for its wares to Londinium was clearly essential. The dwellings of these potters are also still to be found. 47

There were also settlements on the riverside, as at Brentford, and there is considerable evidence of occupation at Putney and Fulham, suggesting the existence of a ford at that point. The nature and topography of these riverside settlements require further investigation.

The discovery in 1974 of a military site of the later Roman period (1 late third century), apparently a signal-station, in the London Docks, suggests that there should be a series of such sites extending to the river mouth, and others should be sought in likely positions.

Any evidence of the ultimate fate of the rural population following the Roman abandonment of Britain would be of the greatest interest, particularly in view of the apparent absence of early Saxon settlement in the London area north of the Thames between Mucking and Hanwell. The possibility that this region was still dominated by a sub-Roman population will remain a matter for conjecture until we are able to identify such a population archaeologically. The latest Roman occupation yet found beyond Londinium is at Bow, where a kiln, probably for tiles, was in use towards the end of the fourth century, or even into the fifth, if a glass fragment has been correctly dated. 48

For the study both of the distribution of population and of the alignment of roads, an up-to-date survey of all known Roman burials would be of great value. This was last done for the London region in 1927, 49 and there have been many finds since that date. A new survey should take account not only of the associated pottery, but also of any surviving human remains, for which anthropological and medical reports should, where possible, be obtained. It is of course important that all further finds of this nature should be adequately recorded and studied.

NOTES

2 Grimes W. F. The Excavation of Roman and Medieval London (1968) 183 ff. fig. 42.
3 Illustrated London News (March 10 1962) 374 ff.
4 Roach-Smith C. Illustrations of Roman London (1859) 20-27, and Archaeologia 29 (1841) 161-166.
6 Merrifield R. The Roman City of London (1965) 118-120.
9 Merrifield op. cit. 6 above, 121-130 for details of streets west of Walbrook.
10 For a detailed account of the fort, see Grimes op. cit. 2 above, ch. 2.
11 Ibid. 52 ff.
13 John Gillam's survey of Roman coarse pottery in the north of England, Roman Coarse Pottery (1968) is of limited value in the south, where the dating of similar types often seems to be considerably earlier.
14 Grimes op. cit. 2 above, 71 ff.
15 An opportunity for further investigation of Batson 6 will be given when Duke's Place is closed to traffic.
17 Merrifield op. cit. 6 above, 138, Gazetteer 240, 243.
20 Merrifield op. cit. 6 above, 134-135.
21 Trans. London and Middlesex Archaeol. Soc. 22 pt. 2 (1969) 10 ff. Merrifield op. cit. 12 above, 78 ff. The plan does not include the more recent finds E. of Suffolk Lane. For plan including these, see Merrifield R. The Archaeology of London (1975) 55.
22 Maitland W. The History of London (1758) 1, 17. It seems likely that Maitland was quoting the view of Wren, who saw a substantial part of the building, and more than once showed considerable insight on archaeological matters.
24 Ibid. pt. 2 (1967) 149 ff.
25 Merrifield op. cit. 6 above, Gazetteer 93-99, 100-102
26 Ibid. Gazetteer 93.
27 Ibid. 140-142, Gazetteer 55.
28 Grimes op. cit. 2 above, 92-117.
29 Merrifield op. cit. 6 above, Gazetteer 235.
Roman

31 Merrifield op. cit. 12 above, chs. 3 and 4.
34 Merrifield op. cit. 12 above, 56. Also C.B.A. op. cit. 32 above, 8, item 64.
36 Merrifield op. cit. 12 above, 46–74.
37 Ibid., 63 ff.
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39 Grimes op. cit. 2 above, 182–183.
40 Grew N. Museum Regalis Societatis (1681) 380.
42 Ibid., 147.
45 Victoria County History: Essex 3 (1963) 398. Also Archaeologia 1 (17) 73.
46 London Archaeol. 1 no. 13 (1971) 305 ff.
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ANGLO-SAXON AND MEDIEVAL

J. G. HURST

LATE ROMAN AND SAXON LONDON

Despite intensive work during the last twenty five years in the City very little evidence has emerged for the end of Roman London and what succeeded it in Anglo-Saxon times. The recent find of a Type B1 amphora, imported from the Mediterranean, from a layer which preceded the collapse of the roof of a Roman building in Lower Thames Street,\(^1\) raises very important questions as to how long into the fifth and sixth centuries urban life survived. More evidence is urgently required but there is an almost complete lack of Early Saxon material. With the founding of St. Pauls Cathedral together with a royal complex in the early seventh century scholars have thought that urban life may have survived till then or revived if there was a gap. Recent work on the Continent\(^2\) and in this country, especially at Winchester,\(^3\) has shown however that the likely continuity in towns is not of an urban character. There could be the cathedral and royal complex around which were clustered scattered thanes’ establishments like that at the Brooks in Winchester. In London such settlement as there was seems to have shifted to the western part of the City to be west of Walbrook around the new foundation of St. Pauls.\(^4\) That settlement was by no means confined to the area of the Roman city is shown by the finding of Saxon farms at Arundel House, the Savoy\(^5\) and Whitehall\(^6\) which suggests a widely scattered settlement along the Thames with suitable access to the River. Despite the bishopric, coins and documents with references to London’s trade contacts,\(^7\) it is likely that it did not again become a fully urban centre till the tenth century. There is at the moment only archaeological evidence for two large urban centres in England before 900, at Hamwih, Hampshire, and Ipswich, Suffolk,\(^8\) on which seem to have been centred respectively the trade with Merovingian France and the Rhineland.\(^9\) No archaeological work has been carried out at another possible contender, Fordwich in Kent.

EARLY ANGLO-SAXON SETTLEMENT

There is as yet no evidence for early Saxon settlement in the City of London. It may be that the Saxon mercenaries were not actually settled in London but the Thames area was clearly one of the first places where they were placed in the late fourth and early fifth century. The settlement at Mucking, Essex, was strategically placed on a bend commanding the Thames and the river approach to London.\(^10\) Other mercenaries were placed at Ham and Mitcham. Until recently it was thought that these early settlements were rare and confined to the Thames valley as far as Dorchester but recent finds of several late fourth and early fifth century settlements in Essex and Suffolk suggest that there are many more of these early settlements to be discovered. Besides the evidence of early Saxon pottery and belt-fittings,\(^11\) the incidence of Romano-Saxon pottery\(^12\) made by the Romans for the use of Saxon mercenaries should also be studied and the collections searched for more examples as well as other possible Mediterranean imports,\(^13\) which might help to expand our knowledge of this period.

60
Medieval

Middle Saxon Settlements

There are very few settlements known of the later Pagan or Middle Saxon periods. There is no evidence from the City of London itself but the three sites found at Arundel House, the Savoy and Whitehall, already mentioned, set a possible pattern for scattered farms along the river. Possible village settlements with sunken huts, rather than timber halls like Whitehall, have been found at Ham, Surrey, and with timber buildings at Northolt, Middlesex. There is other evidence for settlement at Hanwell and Staines, Middlesex, and at Blackheath, but there are clearly many more sites to be found and now the pottery types to be expected are firmly established (see below) it should be much easier to locate sites. But the chances for excavating large areas such as at Mucking, Essex, with its associated timber halls and sunken huts, is rather remote.

Pagan Saxon Cemeteries

The evidence for cemeteries in the London area is not very extensive. The most important is that at Mitcham, Surrey, which includes early material of the late fourth and early fifth centuries before the full Anglo-Saxon invasions. South of the river there seems to be continuity throughout the Pagan period but to the north there seems to have been a British recovery with very little Saxon material of the sixth century. More evidence is badly needed to confirm or deny the sub-Roman triangle surviving in the fifth and sixth century as originally suggested by Wheeler. It is not until the seventh century with the establishment of Anglo-Saxon settlements at sites such as Northolt, Middlesex, that the Saxon settlement of the area is firmly and finally established.

Early Saxon Pottery

There are examples of Early Saxon domestic pottery of which the most characteristic examples are carinated facetted bowls, from Mucking, Essex, Mitcham and Ham in Surrey and examples should be looked for from other sites. The full assemblage of pottery fabrics to be expected in later settlement sites of the fifth and sixth centuries however is less easy to determine because of the difficulty of dating stray finds of pottery. The limited amount of funerary pottery has been recently studied by Myres but a new cemetery in the London area is badly required, which might be excavated under modern methods.

Middle Saxon Pottery

By the seventh century we are on much firmer ground and it can be said that there are four main fabrics, all roughly handmade, typical of all sites in the London area between the seventh and ninth centuries. This assemblage and sequence was first established at Northolt, but has since been repeated exactly at Whitehall, Blackheath and further afield at Brooklands in Surrey, suggesting uniformity over quite a wide area. These four fabrics are (a) grass-tempered, (b) sandy, (c) gritty and (d) shell-tempered. Very few complete profiles are known but the shapes comprise mainly small simple cooking pots and bowls.

Late Saxon Pottery

It is most remarkable that, despite the obvious growth of London as an important centre from the ninth century onwards, the massive area of wheel-thrown pottery which was made throughout eastern and Midland England, with some outliers in Wessex, not only seems to
have stopped dead north of the Thames but was not imported into London, except in very small quantities. There are a few Stamford glazed pitchers of the eleventh century but no St. Neots or other coarse wares have so far been recognised. The rough handmade wares seem to have reigned supreme. Even important sites such as the royal manor of Old Windsor, Berkshire, continued to use hand-made pottery entirely right down to the time of the conquest.27

Imported Pottery

There are surprisingly few examples of imported pottery in the Middle Saxon period as opposed to the vast quantities found at Hamwih and those found at Ipswich. This tends to confirm the lack of evidence on other grounds for London being an important trading centre before the ninth century. From the ninth and tenth centuries onwards there is an increasing amount of Rhenish Badorf, Pingsdorf and Paffrath pottery imported culminating in the large group at Dowgate which must have been a shipment of pottery broken in transit and dumped on arrival.28

Small Finds

There are quite a few Anglo-Saxon small finds of various kinds found in the London area and now largely buried in the various museums.29 As with the pottery, work is urgently required on many of these. For all periods there is as much work required on the material already collected as there is for further fieldwork and excavation.

Towns

Recent work suggests that except for special cases of early trading centres the main impetus for urbanisation occurred during the second half of the ninth century30 at the time of Alfred and the Danish invasions and that the greatest expansion came from the tenth century onwards. It must be to this period that the growth of London must be assigned together with the creation of the burh on the south of the river at Southwark. It is for this formative period that Professor Grimes has been able to locate the evidence for timber cells that go with the houses of this period.31 But both for the Late Saxon and the full medieval period later disturbance makes it very difficult to locate the secular buildings.

In the first place the deep Victorian cellars mean that in many areas the medieval levels have already been removed while the large number of pits of all kinds dug continuously over most of the city make the location of stratified undisturbed levels very difficult. It is for this reason that the excavations of the last twenty-five years have not produced many medieval structures. Excavations at Neville’s Inn and Brewers’ Hall show the complexity of urban sites while the stone vaulted undercroft in Cheapside32 gives some indication of the major buildings we have lost as does the recent work on Baynard’s castle.33 There is now very little of the City which has not been destroyed but it is very much to be hoped that when the rest is developed opportunities will be taken to give special attention to medieval as well as Roman levels. Since the publication of the Future of London’s Past34 and the formation of the Department of Urban Archaeology under Mr. Hobley at the Museum of London, the situation has been transformed. Of particular importance have been the excavations along the waterfront producing evidence at last for the Roman river wall and Anglo-Saxon and Medieval timber river frontages and quays.35 In the initial enthusiasm perhaps
too many sites were attempted but it is now sensibly suggested that work should be
concentrated on fewer major sites, including the largest area yet available in the city north
of St. Pauls at Newgate Street.

During the last twenty-five years there has been considerable work on the defences of
London and important evidence has been obtained for the medieval date of some of the
bastions and opportunities taken to excavate sections of the medieval ditch.36 This has been
continued in 1974 with important work in Ludgate.

Work has recently been in progress in Southwark excavating medieval buildings in Tooley
Street37 and the projected redevelopment all along the river should give an unrivalled
opportunity for much more work to be done in the next few years. At the same time very
little has been done elsewhere in the area and some attention should be given to other urban
centres, especially the smaller ones which could be contrasted with the large centres. Un-
fortunately the evidence for so many of these has already been lost through redevelopment.

MONASTIC

Work by Professor Grimes in London has included important work on several monastic
sites both in the centre at Charterhouse but also south of the river at Bermondsey.38 Oppor-
tunities for further work on these sites are restricted by development.

CHURCHES

Work in the City has also included important work on parish church sites at St. Swithin
and St. Alban but the most important results have been obtained at St. Brides Fleet Street
where for the first time in this country a major excavation of an urban church was under-
taken by Professor Grimes.39 The complex story uncovered demonstrates the importance of
such work which is common on the continent and only too rare in this country, and in fact
has so far only been repeated at Winchester.40 There is also a need for the excavation of rural
churches though these are not readily available in the London area in the present circum-
stances where it is hard to excavate in advance of even fundamental changes to the fabric or
internal arrangements. The complete excavation of the small apparently insignificant parish
church at Wharram Percy, Yorkshire, has demonstrated what is possible and the likely
complexity of most church sites.41 It is to be hoped that the negotiations at present in progress
over state aid for churches, the various moves in the redundant churches problem, and the
plans for work in churches in use under repair by the Churches Committee of the C.B.A.
will give added opportunities for work on church sites in the next few years. This should
include not only below ground archaeology but also examination of the fabric above ground.
This is all archaeology; there has been far too much dichotomy in the past between ex-
cavators and architectural historians on the subject of churches. There is also important work
to be done on the large number of parish churches in London and the reasons for them as
recently demonstrated by Professor Brooke.42

CASTLES

Work by Mr. Davison at the Tower of London has substantially changed ideas of the early
history of the castle,43 but there is only likely to be limited work on sites of this kind in the
future. For rural castles, especially the earlier timber motte and bailey examples, the work at
South Mimms44 has also transformed our ideas of what a motte was like showing that the
present appearance of many of these sites is very deceptive. In this case far from being an exposed mound it had a vertical timber revetment. The lack of other sites in the London area together with the difficulty of excavating others means that there is little prospect of adding much more to castle research in the London area.

**Palaces**

Here again there is little scope for further work though valuable opportunities were lost at such sites as Lambeth Palace when the post-war reconstruction was done without much thought to the archaeological possibilities. Work in New Palace Yard at Westminster produced important evidence for an impressive fountain outside Westminster Hall.\(^{45}\) Mr. Dawson has obtained important results from his investigation of Kennington Palace\(^{46}\) one of the few major sites which has been available for excavation in recent years. One of the most important possible sites, that of the supposed Anglo-Saxon palace in Aldermanbury with all it might tell us about early London is now destroyed.\(^{47}\)

**Manors and Moats**

Lower down the social scale there is much more scope for work on moats. My own excavations at Northolt\(^{48}\) have been an attempt to take a single site and study it in depth but as in so many cases it was much more complex than expected with its Saxon and early medieval village underneath. Circumstances unfortunately only allowed weekend work which has been unsatisfactory in many ways, especially as it has taken over twenty years to complete the excavation of what is in fact only part of the whole complex. The only other major excavation in the London area has been that of the More, Hertfordshire by Mr. Biddle.\(^{49}\) There are still a large number of moats left and the first requirement is a series of surveys carried out in conjunction with the recently formed Moated Sites Research Group, though as excavation of moats has shown, the full complexities of the sites can only be solved by intensive excavations. With the present urgent rescue situation there should not be any more research excavations on moats but there are bound to be threats and several moats may come up for rescue excavation in the next few years. Meanwhile the other surviving moats require more protection and an eye kept on them as with the modern tendency to dispose of stagnant water and fill in hollows even major earthworks like moats can very speedily disappear.

**Vernacular Architecture**

Despite the almost complete lack of surviving medieval buildings in London itself there are a large number still surviving in the whole London area. Very little has been done in surveying these and as they are disappearing at an alarming rate with the current fashion to remove almost anything old at all costs, there is an urgent need for local groups to locate and survey early buildings. There are many important buildings still to be located and only too often is an important early building not noticed until it is already being demolished. There are in particular many post-medieval brick fronts which mask early medieval timber buildings.

**Building Materials**

Work is needed on all aspects of the history and the development and use of different building materials. There is very little stone used which makes it all the more important for
distribution maps to be produced which will show trade contacts and other aspects of how and by whom buildings were erected. For example at Northolt besides chalk, which itself would have to be brought about fifteen miles from the nearest source, the quoins and dressings were in Surrey greensand in the fourteenth century. This is just the same time that the imported pottery was coming from the Surrey kilns rather than Hertfordshire as before. The two major imports to the site therefore showed the same shift at the same time. Most of the medieval buildings in the area however are of timber or of brick. Recent excavations at Charterhouse, Northolt, Eltham and Kennington have shown that bricks were already in full use by the fourteenth century so more should be looked for in surviving structures to see how far down the social scale these came.

Deserted Medieval Villages

It is most unfortunate that no systematic work has been done on medieval settlement in the London area and Middlesex is now almost the only county in England for which no list of deserted villages has been prepared. There are in fact likely to have been quite a few in the area despite the effect of the capital which nullifies many of the usual causes of desertion. About ten possible sites have already been suggested by Norden and Lysons but this has never been followed up, either on the ground or documentarily. There still are large areas to be searched in outer Middlesex where earthworks may still survive. In the eighteenth century many villages were emparked and many of these will survive in the London area not only in areas like Richmond but even near the centre where part of the DMV of Marylebone might lie under Regents Park!

Part of a deserted village was excavated quite by chance at Northolt since the Saxon and early medieval village was cleared away and moved to a new site in the fourteenth century when the moat was laid out. This has disclosed the usual pattern for clay areas in which timber peasant houses were set in rectangular enclosures defined by small ditches 2ft. wide and 2 ft. deep. Although excavation has only uncovered several house plots it is almost unique in having a complete sequence of peasant houses from the seventh to the thirteenth century.

Fields

Hardly any work either has been done on medieval field systems in the London area. Again much is covered but there are still large open and park areas where the characteristic ridge and furrow should be searched for both from ground surveys and aerial photographs. The evidence has not necessarily been lost from those areas built over during the last twenty years since the Royal Air Force national air cover taken in the late 1940s can be examined. Despite the large areas built up there is still plenty of scope for medieval fieldwork looking for all types of earthwork connected with medieval settlement, such as park banks.

Medieval Pottery

The story of medieval pottery in the London area is still imperfectly understood despite the large amount of material in the various museums. Most of the collections comprise complete jugs collected in the nineteenth century when the Victorian cellars which cut through so many medieval pits were excavated and the material collected by such stalwarts as Roach-Smith. Unfortunately most of these are unassociated. Recent work in the City has produced
a large number of groups but unfortunately these still all remain unpublished whether from Professor Grimes’s or the more recent Guildhall excavations. One of the first priorities is therefore to have this important material published. Until this is done it will not be possible to determine the precise sequence and trade contacts of the City. It is therefore very gratifying to see the promptness with which the new Department of Urban Archaeology is working on reports and producing publications.  

For the time being the best evidence comes from Northolt which, although it may not be typical as it is fifteen miles N.E. of London, is still the only site in the area with a complete stratified sequence from the seventh century to the present day. The sequence there demonstrates that in the twelfth and thirteenth centuries local wares are mainly used with pots coming from further afield Hertfordshire kilns in the second half of the thirteenth century. From 1300 onwards there is a sudden change with the complete swamping of the local wares by the off-white Surrey wares. This is to be expected in London but is much more surprising north of the river in a clay area where transport of fragile articles must have been very difficult. The reasons are not known however and it could be argued that as the Manor belonged to a series of City merchants the pots were bought in London and then sent out. This might be confirmed by the fact that from the fifteenth century when it was farmed out by Westminster Abbey Surrey wares disappear to be replaced by East Anglian redwares, though even here why not by the nearer Hertfordshire fabrics?

Many types of London pottery have been identified by Dr. Dunning and others, especially the highly decorated jugs of the thirteenth and fourteenth centuries, but except for the Surrey white wares it is not known where such distinctive types as the baluster jugs, polychrome jugs and other distinctive London types were made. With so much development in the area it is surprising that more kiln sites have not been located over the years.

SMALL FINDS

The various London museums are full of a very wide range of small finds of which we have Dr. Ward-Perkins’s very important pioneer study. But more work is urgently needed on these in view of the recent evidence accumulated during the past thirty years since the publication of the London Museum Medieval Catalogue. It is to be hoped that the new Museum of London with its amalgamation of the two important collections of the London and Guildhall Museums, together with the many stratified finds made since the war will enable a new and up-to-date study to be made of this material which should provide a new basis for the subject in this country.

INDUSTRY

The main need, as already said, is to locate the various pottery making centres. A full documentary study may assist with this as might a series of distribution maps plotting the various fabrics, though the distortions of the national capital may prevent this giving the true picture. Work on evidence for other industrial processes is badly needed as this is a much neglected study.
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