Three later Neolithic discoidal knives from north-east Surrey: with a note on similar examples from the county

by JONATHAN COTTON

Summary

The publication of three later Neolithic discoidal knives found during the 1960s provides an opportunity to consider the type as a whole from the historic county and the areas immediately adjacent to it. Thirty-three examples have been identified and are divided into four geologically-based groups. Group I comprises six implements from the Chalk of the North Downs, Group II nine implements from the Lower Greensand, Group III fifteen implements from the river Thames and its foreshore and Group IV three implements from the Tertiary deposits. Examination of the flint-types utilised across the four groups points to the existence of two discrete zones, one based on the Thames valley (Groups III and IV) and the other on the Chalk and Greensand country to the south (Groups I and II). A preliminary analysis of the distribution of the various other classes of later Neolithic material from the county indicates that some at least may respect this suggested division. Final confirmation, however, awaits further study of the discoidal knives from Hampshire, Kent and Sussex – a task considered to be beyond the modest scope of the present paper.

Introduction

In writing the definitive account of the later Neolithic tool-type known as the polished discoidal knife, which was published in 1929, J G D Clark could cite only two examples from Surrey, from Barn Elms and Richmond Lock (1929, 50), compared with sixteen from the neighbouring county of Sussex (1929, 51). The following decade saw the publication of two more examples, from Rotherhithe in the extreme north-east of the historic county (Stebbing 1937), and from Elstead in the extreme south-west (Lowther 1939, 156), although in the same period Curwen had been able to add another seven to the Sussex total (Curwen 1937, 146–8).

Despite an increase in the number of fieldworkers active in the county in the post-war period, only a single further example from Leatherhead received proper notice (Carpenter 1957), since when matters have rested. The aim of this short paper is therefore threefold: firstly the publication of three implements found in the 1960s — two complete examples from Ewell and Woodmansterne and a fragmentary example from Pebble Coombe; secondly the collection of information relating to the old and hitherto unrecorded finds from the historic county and the areas adjacent to it (see Appendix in Microfiche); and thirdly to offer some preliminary remarks on the type as a whole and on its position within the later Neolithic of the county.

The new implements

The knife illustrated on fig 1:1 was found on a builder's spoilheap by Mr Arthur Jenkins in October 1965, during the redevelopment of 56–58 High Street, Ewell (TQ 2197 6247). The site is now occupied by a three-storey office block, and lies below the 46m contour on the gently rising ground of the Thanet Sand outcrop which runs roughly N–S through the village. Immediately to the west lie the Woolwich and Reading Beds and Taplow Terrace gravels, while to the east lies the Upper Chalk of the North Downs.

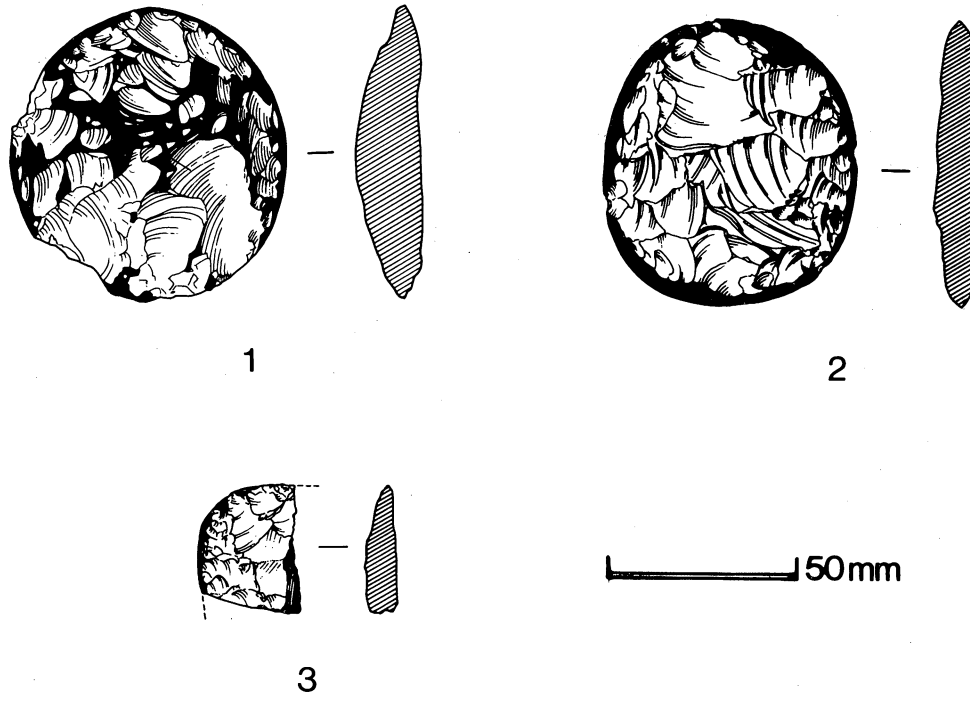

Fig 1. Discoidal knives from Ewell, Woodmansterne and Pebble Coombe, scale 1:2.

The implements measures 77 × 73mm and conforms to Class I of Clark's typology (1929, 41), being almost circular in form. It is a rather cumbersome example with an unusual asymmetrical profile, and made of poor quality opaque light grey flint. The illustrated face has been worked over with shallow radial flaking and subjected to heavy grinding and polishing, which has almost obliterated some of the shallower flake-scars on the crown of the implement. By contrast, the cherty nature of the flint has rendered controlled flaking of the unillustrated face virtually impossible. There are several small patches of iron staining on both faces, and the edge has been damaged in two places. The implement is currently on loan to the Bourne Hall Museum, Ewell.

Although better known for their Romano-British associations, the springs on which Ewell is situated attracted settlement in all phases of prehistory as well. Thus struck flint has been found in practically every excavation conducted in the area, although material attributable to the later Neolithic period has so far only been published from Purberry Shot (Lowther 1949, 15–17). However, further relevant material awaits publication from a series of excavations, including those conducted in St Mary's churchyard (Temple & Barfoot 1976), while any assessment of the local Neolithic must take account of the numbers of stray finds recovered from the area (eg Carpenter 1961), many of which remain in private hands and therefore largely unstudied.

The second knife (fig 1:2) was found by Mr Andrew Compton in 1968 or 1969, on ploughland close to the outbuildings of Oaks Farm, Woodmansterne (TQ 2736 6096) (Cotton 1980). The findspot lies just above the 107m contour on the eastern slope of a small dry chalk valley which runs south to north across the North Downs dipslope. A trench for a North Sea gas pipeline had been dug NW/SE through the area prior to the discovery, and it seems likely that the implement was disturbed by this work. Measuring 75 × 67mm, its nearly circular form marks it out as another implement belonging to Clark's Class I (1929, 41). A particularly fine example, it is made of attractively-banded blue-grey flint with carefully controlled bi-facial retouch and with the edge ground and polished all the way around. Two small patches of iron staining occur on one

face, while the edge — which has a possibly accidental S-twist on both of the longer sides — has sustained minor damage in several places. The implement has been retained by its finder.

Woodmansterne has long been a favourite haunt of local flint collectors. It was well known to Johnson and Wright, who recorded a polished flint axe and other artefacts from the area at the turn of the century (1903, 149–52), while thirty years later further implements were recovered a little to the north during the excavations in the grounds of Queen Mary's Hospital, Carshalton (Lowther 1946, 70–3). More recently, undated but possibly Neolithic flintwork has been recorded from Oaks Park and Woodmansterne during fieldwork in advance of 'Operation Pipeline' in 1968 (Baxter 1968), while a large collection of struck flint including probably Neolithic material was picked up further east at Little Woodcote at about the same time (Harrison & Turner 1970).

The third knife (fig 1:3) was found by Mr Tom Walls, probably in the late 1960s, during the systematic fieldwalking of arable land at the top of Pebble Coombe a kilometre and a half SSE of Headley (*c* TQ 206 531). The findspot lies above the 180 m contour on the Clay-with-Flints deposit over Middle Chalk at the point where the Chalk scarp falls steeply to the Upper Greensand below Dawcombe Wood.

With surviving measurements of 34.5 × 30.5mm, this fragmentary implement has been knapped from tabular rather than nodular blue-grey flint, which makes it unlikely that the usual 'prepared core' technique was used to detach the broad oval flake needed to manufacture a typical discoidal knife. The unillustrated face is almost completely covered with a thick, coarse cortex characteristic of tabular flint, although the drawn face has been delicately worked, and the edge ground and polished. The implement has been retained by its finder.

There is surprisingly little published material of relevant date from this area of the North Downs, although the Wright Collection, now held jointly by the British Museum and Kingston Museum, contains a number of crude core tools together with a series of mainly transverse arrowheads, scrapers and fabricators from the vicinity of Headley (Johnson & Wright 1903, 154–9). Further implements from the same area are recorded by Carpenter (1961), while a second large collection, belonging to Sgt W Beveridge, and now in Guildford Museum (RB 2942; Julia Arthur pers comm), contains many undistinguished flake- and core-tools picked up from the fields around Headley Court. Recent fieldwork along the route of the M25 Motorway has identified similar material near Headley village (David Field pers comm).

Further east, intensive fieldwalking close to Lower Kingswood village has recovered a fine flint adze and a number of fragments of polished flint axes in addition to Palaeolithic material (Walls & Cotton 1980, 17), while, although not on the Chalk, a series of finds including polished flint axes and a sherd of decorated later Neolithic Peterborough pottery were found during the digging of Box Hill Sand Pit near Betchworth, a kilometre to the SSW of Pebble Coombe (Hooper 1929; Piggott 1931, 152, where the location is erroneously given as 'near Guildford').

Background: dating and function

Although recognised as a discrete artefact type by Evans at the end of the last century (1897, 339–44), the dating of the discoidal knife has been open to question until quite recently. In outlining a typology and mapping the distribution of the 133 examples known to him in 1929, Clark took them to be a feature of the Beaker period (1929, 46), a view shared by Grimes, who argued for their contemporaneity with the flint daggers of that period in a paper published shortly afterwards (Grimes 1931, 347). Writing twenty years later, however, Piggott included them within his Secondary Neolithic light flint industry (1954, 285–6), although like earlier writers he could cite no examples with reliable associations. Piggott's view subsequently received tacit support from Clarke, who failed to find a single direct association between Beakers and discoidal knives in his review of British Beaker pottery published in 1970 (Clarke 1970).

Uncertainty persisted until the following year, when a single association at Lawford, Essex

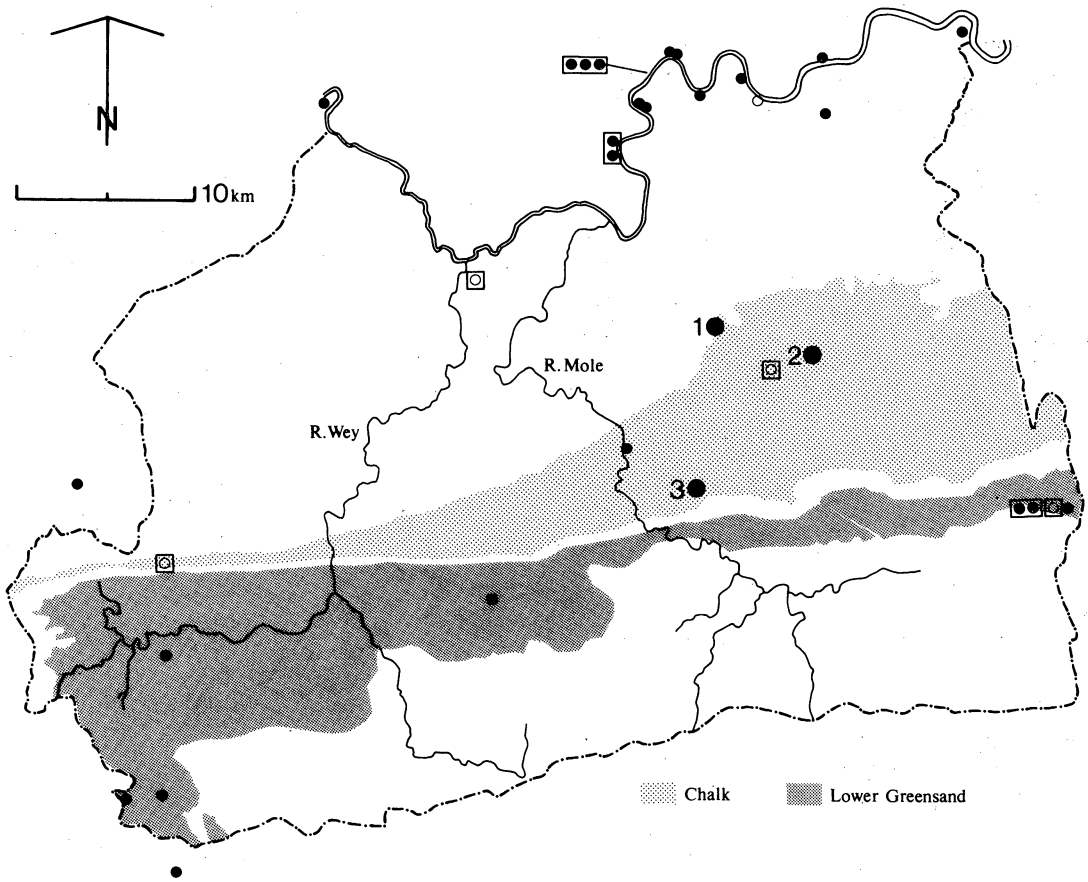

Fig 2. Historic Surrey showing the distribution of discoidal knives. The new finds are numbered 1–3; hollow circles indicate dubious or unconfirmed implements, while boxed symbols refer to implements lacking exact findspots (see text and Appendix in Microfiche for details).

allowed Wainwright and Longworth to link them with later Neolithic Grooved Ware pottery (1971, 260). Three years later Manby added a second similar association from Carnaby Top (Site 12) near Rudston, East Yorkshire (Manby 1974, 86), while further important evidence was recovered during the 1971 excavation of a flint mine shaft at Grimes Graves in Norfolk, which was fully published seven years later (Mercer 1981). Here, two unground discoidal knives formed part of a large collection of flint debitage found scattered around the lip of the excavated shaft (Saville 1981, 56). The excavator considered this to be 'archaeologically contemporary' with the digging of the shaft itself and therefore associated with sherds of Grooved Ware recovered *in situ* from its base and from one of the galleries (Mercer 1981, 39). Mining activity at Grimes Graves falls within a nodal C^{14} date of 2000–1800bc (Mercer 1981, 35), and if it is correct to link the two unground discoidals with the ground series, then the site provides not only a third Grooved Ware association for the type, but also a later Neolithic radiocarbon date-sequence as well.

The function of these implements is still far from clear, however, although the time and effort spent in manufacturing and grinding a standard shape and form (fig 3) suggests that they were prized objects put to a particular use or set of uses. The blunting of one edge noted on a number of examples, particularly those from the Thames (see below), is probably an indication that some at least were hafted. Evans regarded them as 'flaying--knives' employed in the dressing of skins (1897, 340), and noted their similarity to the Ulus, an Eskimo knife used exclusively by women

(1897, 343). Clark followed him in this (1929, 45), while Savory has recently drawn attention to an unground example from Rhigos, Glamorgan bearing traces of silica-gloss near the edge of one face (Savory 1975, 245–246). The S-twist noted on the sides of the Woodmansterne example above might suggest a connexion with skinning, although a use/wear examination would be needed to provide confirmation.

Discoidal knives in Surrey

Turning to the examples from the county, it can be quickly stated that all are, in the strictest sense, unassociated stray finds. However, those from Haslemere, Limpsfield and Peaslake were reported to have been found variously 'with' a range of other artefacts including a barbed and tanged arrowhead, scrapers, a flint knife and part-polished and unpolished flint axes (see Appendix) — all types current in the later Neolithic. The Rotherhithe implement meanwhile appears to be the only Surrey example with a recorded stratigraphic context, having been found *c* 10ft 6in below OD 'in gravel overlaid with peat varying up to 6ft in thickness' (Stebbing 1937). Its reported position 'about half a mile from the present course of the Thames', together with the nature of the overlying stratigraphy is suggestive of a silted-up river channel, and calls to mind similar riverside circumstances noticed further upstream (eg Penn & Rolls, 1981, 8–11).

A glance at the distribution map (fig 2) reveals that the Surrey knives fall conveniently into four groups; those from the Chalk (Group I), those from the Lower Greensand (Group II), those from the Thames (Group III) and those from the London Tertiary deposits (Group IV), and they will be briefly considered in that order here.

GROUP I

Six examples are known from, or in the Ewell case just off, the Chalk, with a concentration in the Leatherhead-Woodmansterne area. Four of these are certain, well-authenticated finds, and include the three implements described above together with the example from Leatherhead (Carpenter 1957). The remaining two, from 'Banstead' and the Hog's Back near Seale, are less sure. Although lying within the main concentration, the Banstead example appears to have been formed from a trimmed-down polished axe, while the Seale implement is also a crude core- rather than flake-tool, and lies well to the west of the other members of the group. The flint employed is, in every case but that from Seale, a light grey or grey-blue 'chalk' flint, and the size-distribution and proportions of the complete implements are reasonably consistent, tending as they do towards the circular (fig 3).

GROUP II

The second group, composed of eight examples from the Lower Greensand, is split into two main concentrations — around Limpsfield in the east of the county, and around Haslemere in the south-west (fig 2). Of these eight, seven — three from the Haslemere area, two from 'Oxted' and single examples from Limpsfield ('Lombarden') and Peaslake — are well-authenticated. The eighth, a second implement from Limpsfield, is described simply as a 'circular flint knife' (Bell 1888) and so must remain doubtful. In addition, a ninth example from Wade's Marsh, near Haslemere, falls just outside the county boundary in West Sussex, but clearly belongs to the Haslemere group.

The flint employed is again a light grey or grey-blue type, although the size-distribution is more diverse than that of Group I (fig 3). Alone among the Greensand knives is the sub-triangular implement from Peaslake, whose blunted base is characteristic of a number of the Thames group now described.

GROUP III

The river and its foreshore have contributed the largest of the four groups with ten examples, to

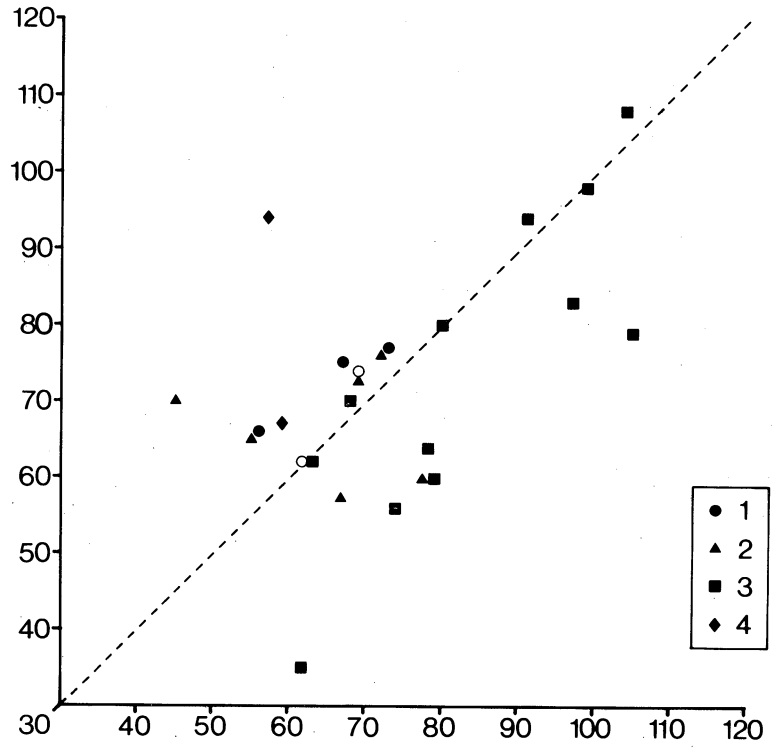

Fig 3. Size-distribution graph of discoidal knives by length (vertical axis) and breadth (horizontal axis). 1 = Group I, 2 = Group II, 3 = Group III and 4 = Group IV. Scale in millimetres.

which can be added the implement from Rotherhithe, and in all probability the three unprovenanced examples in the Museum of London (see Appendix), two of which are from the Layton Collection (Smith 1920, 4). Of the eleven provenanced implements, six were found on the Surrey side, although one, that from Wandsworth, is of dubious authenticity. With the exception of the Rotherhithe example, and of another from just outside the county boundary at Windsor, Berkshire (Clark 1929, 50) (shown on fig 2, but not included in the Appendix), all are from the west London stretches of the river between Chelsea Reach and Twickenham.

Unlike the implements from the Chalk and Lower Greensand, which are mostly of a pale grey flint, those from the Thames are almost without exception of a dark grey/black or mottled smoky brown flint. The size-distribution is also markedly different (fig 3), in that a group of five implements — Barn Elms, Chelsea Reach, Richmond Lock II, Strand-on-the-Green I and an unprovenanced example in the Layton Collection (Museum of London acc no 0.673) — are significantly larger, while a second group of three smaller implements — Richmond Lock I, Rotherhithe and an unnumbered example in the Museum of London — are proportionally broader than they are long. Only three implements — Mortlake, Strand-on-the-Green II and an unprovenanced example in the Layton Collection (Museum of London acc no 0.769) — are comparable in terms of size with those from the Chalk and Lower Greensand, and of these that from Mortlake is not a true discoidal knife but a flake with a ground and polished distal end similar to Oxted I from the Greensand (see Appendix in Microfiche). Also anomalous, as its length/breadth ratio makes clear (fig 3), is a sub-rectangular 'polished-edge' knife from Twickenham (I). This belongs to a group of knives more usually found accompanying burials or in hoards of the 'Macehead Complex' (Roe 1968, 155–63; Kinnes 1979, 65–6), although the distribution of the type in Yorkshire at least appears to be closely similar to that of the discoidal

series (Manby 1974, 86–90). Finally, six of the implements — those from Barn Elms, Chelsea Reach, Richmond Lock I and II, Rotherhithe and Strand-on-the-Green I — have been deliberately and skilfully blunted along one long edge, which strongly suggests that they were provided with hafts. Perhaps significantly, four of these latter implements belong to the group of large knives noted above.

GROUP IV

Those few examples not mentioned hitherto come from the Tertiary deposits of the London Basin and include a fragmentary and somewhat dubious implement of yellow-brown flint from the Weybridge locality, a rather fine small knife of olive-brown flint from Clapham Common, and an unusual elongated example of 'smoke brown flint' from Farnham Ranges (Site 'U') (Lowther 1939, 155–6). This last knife falls outside the county boundary in Hampshire and forms part of the Canon O'Farrell Collection.

The flint employed serves to link this small group with that from the Thames, although little can be said concerning the size-distribution of the two complete implements beyond reiterating the anomalous proportions of the Farnham knife. Finally, the Clapham implement is, surprisingly, one of only two so far recorded from the terrace gravels in Greater London. The other was found at Yiewsley, Middlesex and is now in the British Museum (acc no 1933 4.6 83) (Clark 1929, 50).

Discussion

Consideration of the overall size-distribution and pattern of flint-use adopted throughout the county points to the existence of two apparently discrete zones — one centred on the Thames valley, with access to a fine, predominantly mottled smoke brown/black flint (Groups III and IV), and the other on the higher Chalk and Greensand country to the south, with access to a smooth light grey or grey-blue flint (Groups I and II). The origins of both types of flint are, in the absence of further detailed analysis, unknown, although there are reasonable grounds for doubting whether either of them lie within the present county. In particular, the lack of proven Neolithic flint mines on the Surrey North Downs — despite some unconvincing claims (eg Rankine 1939, 131–2; Todd 1950, 142–3; Farley 1967, 41–2) — suggests that artefacts of good quality chalk flint had to be brought in from elsewhere. Raw material for less prestigious tool-types requiring lower-grade flint seems to have been obtained from local surface sources such as the alluvial gravels and clay-with-flints deposits (Care 1979, 95), where its easy availability removed the necessity to dig for it, and it may be that several of the less distinguished discoidals from Groups I and II — in particular the squat flake-knive, Oxted I (see Appendix in Microfiche) — were also knapped from nodules recovered from the latter source.

Pursuing the idea of a dichotomy between the Thames valley and the Chalk/Greensand country a little further, examination of the distribution of other later Neolithic artefacts is instructive. These divide fairly neatly into those which respect the two notional zones and those which do not.

Of the first category, Roe's 'Crown antler', 'ovoid' and 'pestle' maceheads are the most numerous, and have a marked concentration along the west London Thames (Roe 1968, fig 34). Only three have turned up in 'dry' locations within the county, at Ash (Rankine 1949), Kingston (David Field pers comm) and Oatlands Farm, Weybridge (Frere 1946), although the findspots all lie on the Tertiary deposits to the north of the Chalk and Greensand. Grooved Ware pottery, whose associations with the maceheads and discoidal knives are now well-established, has a similar riverine distribution, with sherds recorded from Battersea, Hammersmith, Strand-on-the-Green (Celoria & Macdonald 1969, 32–3) and most recently Putney (Warren 1977, 9). Lastly, two bone or ivory pins from the river — a laterally-bulbed fragment from Wandsworth (Wainwright & Longworth 1971, 263) and a skewer pin from Putney (Macdonald 1976, 26) — are

also unmatched on land.

Second category artefacts — those which have a county-wide distribution — include 'Seamer type' axes (Manby 1979, 69; David Field pers comm), with part-polished surfaces reminiscent of discoidal knives, decorated Peterborough pottery (Piggott 1931; 1954, 383–5), transverse arrowheads (Green 1980, 104–6) and a number of other small flint artefact-types such as scrapers and fabricators.

The most important of these, although its cultural status is still the subject of some debate (eg Smith 1974, 112–3), is the Peterborough pottery series, which occurs equally on the few communal as well as domestic sites known from the county (eg Keiller & Piggott 1939; Robertson-Mackay 1962; O'Connell & Poulton 1982, 3–4; Grimes 1960, 181–5; Harding 1967). Its local ascendancy over Grooved Ware — elsewhere linked with the construction of a number of henge monuments (Wainwright & Longworth 1971, 249–53) but virtually absent from Kent, Surrey and Sussex (Clarke 1982, 27; Drewett 1978, 29) — is particularly noticeable, and taken together with the absence of proven henges suggests the existence of a more mobile, perhaps less highly-organised later Neolithic society in the area to the south of the Thames valley (e g Drewett 1978, 29) although whether the two notional flint-using zones outlined above have any wider significance in this context remains to be seen.

In conclusion, it can be noted that, compared with the county's earlier Neolithic (only one long barrow between the Medway valley and Preston Candover, Hampshire (RCHM 1979) for instance) the quantities of later Neolithic material recovered, including discoidal knives, may, contrary to the apparent situation in Kent and Sussex, actually represent an *expansion* into areas previously ignored, or at least, only sparsely settled. Confirmation or denial of this hypothesis awaits a concerted programme of problem-oriented fieldwork combined with detailed artefact-studies. It would be fair to say that nothing of the sort has been attempted in Surrey hitherto.

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