

HANDAXE TYPOLOGY AND LOWER PALAEOOLITHIC CULTURAL DEVELOPMENT: FICRONS, CLEAVERS AND TWO GIANT HANDAXES FROM CUXTON

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ABSTRACT

One small test pit dug off Rochester Road, Cuxton in August 2005 produced over twenty handaxes, including two of exceptional size and quality. This volume in honour of RJ MacRae, properly known of course as Mac, provides the ideal opportunity to report briefly on the circumstances of their discovery and not only to indulge in their aesthetic qualities, but also to consider some of their wider implications. It is now clear that throughout the Lower Palaeolithic, there is a trend for handaxe shapes to become both more varied and increasingly recognisable as intentionally executed types. The Lower Palaeolithic is perhaps not, therefore, the period of stasis that is often suggested, but incorporates a trajectory of cultural, cognitive and behavioural development that is continued into, and through, the Middle Palaeolithic.

INTRODUCTION

Back in 1987 Mac published a light-hearted article in *Lithics* (MacRae 1987), providing a roll-call of the longest handaxes found in Britain. The article, perhaps betraying rather too much familiarity with terminology of the turf, revels unashamedly in the ostensibly unacademic issue of size. Nonetheless one should not doubt Mac's contribution to academic debate, exemplified in his pioneering work on non-flint artefacts (MacRae & Moloney 1987). Nor should any of us disregard the value of diverse engagements with the material remains of the Palaeolithic, whether with aesthetics, technical accomplishment, antiquity or other flights of fancy (c.f. MacRae 1988) as well as a concern with more conventional interpretive potential.

Although never professionally involved in archaeology, Mac made a major contribution not only through his diligent collecting and voluntary work at the Baden Powell Quaternary Research Centre, but also through his enthusiasm, *joie de vivre* and generous moral support for other flintophiles. I remember joining Mac for a day collecting in the Oxford area. We found nothing and the weather was distinctly bracing. After the obligatory pub-lunch and pipe we returned to the fray, and Mac suggested I check out one particular pile of flints — luckily I noticed the mammoth tooth surreptitiously exposed halfway down one side. One can but hope that Mac is looking down on these new finds from Cuxton from his "grandstand in collecting Elysium" (MacRae 1987: 15).

BACKGROUND

The site of Cuxton first came to prominence in the early 1960s. Excavations by Tester (1965) at the Rectory (Figure 1) established the presence of a thin body of fluvial gravel lying on a Chalk terrace bench at c. 17m OD. This gravel contained an extraordinarily rich concentration of handaxes, with over 200 being recovered from three small trenches. Typologically, the

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collection was dominated by pointed handaxes including several ficrons, and there were also eleven cleavers. There were also over 50 flake-tools, dominated by various forms of scraper. Dating was based primarily on typological considerations, over-riding contradictory geological indications. Tester concluded that the site was probably of the same age as the Middle Gravels at Swanscombe, despite (a) the great difference in elevation and (b) the presence at Cuxton of ficrons and cleavers, types absent at Swanscombe, and the relative abundance of flake-tools.

Further work took place in the 1980s, this time on the opposite side of Rochester Road (Cruse *et al.* 1987). A deeper sequence of fluvial sands and gravels was found with a base-level of 14m OD, again lying on Chalk bedrock. The lower beds contained flakes, cores and flake-tools, but no handaxes. The upper levels contained mostly handaxes, and far fewer cores and flake-tools. The handaxes and flake-tools were of similar types to those found in the earlier excavations. Despite the absence of bifacial technology in the lower levels, the deposits were taken as a continuation of those at the Rectory. Clast lithological analysis established the deposits as laid down by the main Medway, and they were correlated with the Binney Gravel on the Hoo, attributed [at that time] to the mid-Devensian around 45,000 BP. A contradictory dating indication (besides the abundance of mint or fresh handaxes!) was provided by TL-dating of the loam capping the fluvial deposits to at least 100,000 BP. Overall, despite the application of newer techniques and rejection of the previous reliance on typological comparison, the second phase of work did little to resolve the date of the site.

Therefore, as part of the *Aggregates Levy Medway Valley Palaeolithic Project* (MVPP) a small reinvestigation of Cuxton took place in August 2005. The aims of MVPP included:

- dating Pleistocene sand and gravel terrace outcrops in the Medway Valley
- sourcing historic artefact collections to different terrace deposits
- building up a picture of typological and technological variability in different parts of the region through time.

The main objective of the work at Cuxton was merely to dig the smallest possible trenches to gain access to sand-rich deposits for optically stimulated luminescence (OSL) dating. We also wanted to build up a fuller picture of the stratigraphy and geometry of the terrace outcrop. And if in the course of this work we recovered further well-provenanced lithic artefacts then that would be a bonus.

Despite the limited scope of the proposed work, it was remarkably difficult to find suitable sites. The main A228 Rochester Road runs along the centre of the small Cuxton terrace outcrop, with the Rectory on the northwest side and private housing on the southeast (cf. Figure 1). The main trenches [1, 2 and 4] dug by Tester in the 1960s are in a heavily overgrown and inaccessible area between the Rectory lawn and the main road. However the area of Tester's trench 3, to the northeast of the Rectory drive was relatively accessible. This

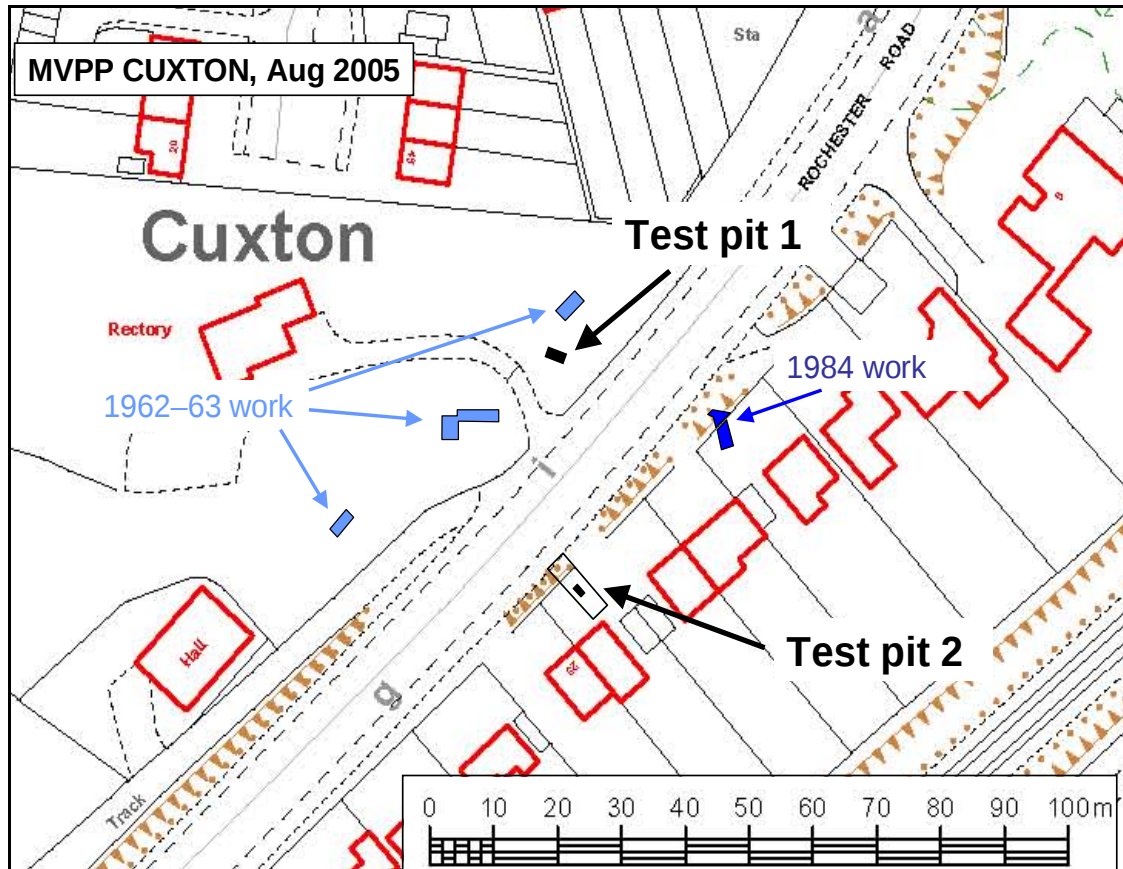


Figure 1. Site layout

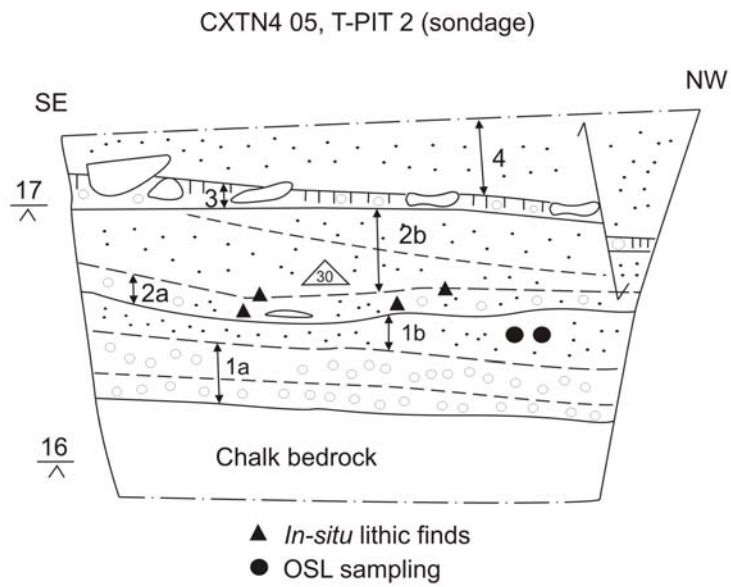


Figure 2. Sondage stratigraphy

had produced similar deposits with waste flakes but no handaxes, and we were kindly permitted by the present vicar Rev. Roger Knight to dig a test pit there. Our second test pit was at 21 Rochester Road, directly opposite the Rectory. It is this second test pit that produced the finds discussed below. The archaeological community is forever indebted to David and Sarah Norwood for allowing the work that led to their discovery to take place on their front lawn.

EXCAVATIONS AT 21 ROCHESTER ROAD

There were two phases of work (cf. Figure 1). In the first phase, a strip of ground adjacent to the driveway was reduced in depth with mechanical excavator by about 1m. This upper excavation removed the overburden of made ground and topsoil, along with some higher level Pleistocene sediments. Despite careful attention and controlled machining no artefacts were discovered at this stage. In the second phase a small sondage c. 2m long by 1m wide was dug, again with mechanical excavator, in the base of the freshly stripped ground. At this stage we had no idea of what lay beneath. Now that we do know, future excavations into the same deposits should proceed with hand-tools. We were expecting to find deposits similar to those at 15 Rochester Road, comprising gravels with sandy layers down to c. 14m OD (over 3m beneath the top of the sondage). This anticipated depth made hand-digging an impractical option. We were expecting to find a certain amount of artefactual material, and possibly also some faunal remains. Consequently our plan was to open the small sondage with careful stratigraphically controlled mechanical excavation, sieving 100% of the excavated spoil, and to identify layers suitable for OSL dating. We would then shore the sides of the trench and proceed with the dating.

TWO GIANT HANDAXES

The top levels of the sondage comprised cross-bedded sands, lacking in artefacts (Figure 2, level 4). These overlay a thin layer (level 3) that curiously combined large flint nodules with medium-coarse flint pebbles. Then came further cross-bedded sands (level 2b). About 60cm down, the level 2b sands came down onto a more gravelly layer (level 2a). As this level was being reached, the scrape of the bucket revealed the butt of a large handaxe in the bottom of the trench, with the tip buried by the recently disturbed spoil. Upon retrieval, the handaxe was found to be a monstrous ficron, 307mm long (Figure 3), making it the second longest handaxe known in Britain, after the pointed specimen from Furze Platt found in 1919 (Lacaille 1940: 267, Pl. xlvii; Wymer 1968: 224).

Besides its extreme size, the workmanship of this new Cuxton find is exquisite, almost flamboyant. The narrowed waist of the ficron occurs approximately two-thirds towards the butt from the tip. From the waist to the tip, both sides are straight and perfectly symmetrical. As a final flourish, one side of the tip has been finished with two tranchet blows, creating a sharp edge extending 75mm, without affecting the overall symmetry of the plan view. The handaxe is almost in mint condition. The sharpest edges, such as the tranchet tip, have very light nicking — which could of course relate to use rather than post-depositional wear and tear. The cross-section of the handaxe is quite thick, making it extremely strong, as reflected in the scrape marks left by the digger bucket, which fortunately failed to snap the specimen in two. It weighs 1418g, and is too large across the base to hold with comfort — clearly the user/maker was extremely robust.



Figure 3. The ficron [scale cm]



Figure 4. Sondage section, level 2b and cleaver in situ [Photograph by Martin Bates]



Figure 5. The cleaver [scale cm]

The second big surprise of the sondage was the shallow depth at which Chalk bedrock was reached, not much more than one metre down at 16.2 m OD. Consequently access to the trench was unproblematic, and the sections could easily be cleaned by hand. In the course of cleaning numerous artefacts (including two further pointed ficron handaxes) were identified *in situ* in the section at the same level as the giant ficron just found. A sharp-edged flake was also found, well-embedded in the section (Figure 4), and removal of this was left until the section had been recorded and OSL sampling completed. Upon excavation it quickly transpired that we were dealing not with a flake, but another giant handaxe, this time a cleaver 179mm long by 134mm wide at its widest point and with a transverse cutting blade 110mm wide (Figure 5). Both faces of the cleaver edge are tranchet-sharpened, with each face having one main tranchet blow. Both blows were struck from the right (if the handaxe was held for knapping them in the palm of the hand with the tip facing inward, as seems most likely to this knapper).

Again, it is in very fresh condition. The cleaver edge has unfortunately been slightly scraped in a couple of places by the side of the digger bucket. In the unaffected parts some nicks along it may be use-damage rather than post-depositional wear. The workmanship is again extraordinary. Despite the large size, there are no mistakes such as step fractures across the

wide expanse of the faces. The cross-sections along the long axis and across the handaxe are perfectly symmetrical. The cleaver edge, straight and perfectly orthogonal to the long axis, has been achieved by two immaculate opposing tranchet blows, one from each edge. It weighs 1210g, and, like its partner above, is too large and heavy for this modern human to wield.

BRIEF DISCUSSION: HANDAXE TYPOLOGY THROUGH THE LOWER PALAEOLITHIC

It is premature to embark on a full analysis of the new material from Cuxton. Besides the two handaxes discussed above, over twenty others were recovered — from throughout the deposits investigated, although concentrated at level 2b. OSL dating samples were taken at three sand horizons throughout the sequence. Fuller reporting will take place when lithic and dating analyses have been completed. However, the finds illuminate immediately the key issues of (a) whether types of handaxes exist in the Lower Palaeolithic and (b) if so what are the implications.

There has been some recent critique of the notion of types in the Lower Palaeolithic. Some reject the idea that the shape of handaxes reflects any prior intention of the knapper, preferring to see the shape as an almost incidental by-product of applying a general bifacial knapping approach to nodules of varying shapes. Under this scenario (e.g. White 1998a), whether a handaxe is fundamentally pointed or ovate is determined by the shape and knapping quality of the raw material (c.f. Wenban-Smith 2000 for a critique). This perspective fails, however, to explain/explore finer typological variation (as exemplified in, for instance, Wymer's (1968) typological scheme for British handaxes) within the umbrella categories of "point" and "ovate". Others view the imposition of any handaxe types in the Lower Palaeolithic as a fallacy whereby "discarded stones are seen as designed tools, rather than the accidental products of the mechanics of stone fracture" (Davidson 1991: 41). Although this perspective does address the full range of typological variability (albeit by dismissing it as a fantasy), it fails to consider that the recognised types are clusters within a constellation of variability, not arbitrarily chosen instances within a continuum. Paradoxically, since one would have thought that shapes resulting from the inevitable mechanics of stone tool manufacture would easily be reproduced, such views are usually the product of those with little experience of successful replication of the tools dismissed as unintentionally shaped.

The greatly contrasting shapes of the two handaxes are so far removed from application of a generalised bifacial construct that it is hard to view them, particularly in light of the repeated occurrence of these specific shapes in the late Lower Palaeolithic record, as accidental. They show specific technical and shaping traits that can only be explained by the prior intentions of the knapper to create the form we find today as a finished form. Above all, the use of diverse approaches to tranchet-sharpening in each of these contrasting types of handaxe is inconceivable other than as a finishing touch to deliberately create a much sharper cutting edge than would result from continuing the more natural bifacial knapping pattern orthogonal to the central axis of each tool.

There is also a chronological aspect to the recognition of handaxe types through the British Lower Palaeolithic (Table 1). This has, due to increasing understanding of the Pleistocene chrono-stratigraphic framework (e.g. Bridgland 1994), become clearer in the decades since Roe's (1968) pioneering analysis. Through the Lower Palaeolithic two distinct trends emerge.

<i>Period</i>	<i>Site</i>	<i>Industry</i>	<i>Context</i>	<i>MI Stage</i>	<i>References</i>
pre-Anglian	Boxgrove	Ovate handaxes	Q1B Unit 4	13	Pitts & Roberts 1997; White 1998a
	High Lodge	Large unifacial flake-tools	Beds B, C1 and C2	13	Ashton 1992
		Ovate handaxes	Bed E	13	Ashton 1992
pre-Anglian?	Fordwich	Pointed handaxes	Stour 125 ft terrace	12–13?	Roe 1968; White 1998a; Bridgland <i>et al.</i> 1998
Hoxnian	Swanscombe	Clactonian	Lower Gravel	11	Ashton & McNabb 1996
		Predominantly pointed handaxes	Lower Middle Gravel	11	Wymer 1968; Wenban-Smith & Bridgland 2001
	Foxhall Road	Ovate handaxes, often twisted	Red gravel, gray clay	11	Roe 1968; Wymer 1985
Hoxnian/early Wolstonian complex?	Hoxne	Lower industry — cordate handaxes	Stratum C	11 [10?]	Wymer & Singer 1993
	Priory Bay	Ovate and cordate handaxes	Poulton collection	9–11	Poulton 1909; Wenban-Smith (2003 & in prep.)
	Red Barns	Plano-convex sub-cordate handaxes	Gray loam	10	Wenban-Smith <i>et al.</i> 2000
	Wolvercote	Plano-convex sub-cordate handaxes	Gravel at base of Wolvercote Channel	9	Wymer 1968; Bridgland 1994:64
Later Wolstonian complex	Bakers Farm	Pointed and sub-cordate handaxes, with large ficrons and cleavers	Lynch Hill (basal gravel)	8–10	Lacaille 1940; Wymer 1968
	Furze Platt, Cannoncourt Farm	Pointed and sub-cordate handaxes, with large ficrons and cleavers	Lynch Hill (basal gravel)	8–10	Lacaille 1940; Roe 1968; Wymer 1968
	Harnham	Pointed and sub-cordate handaxes, with ficrons	Chalk solifluction deposits over Avon Terrace 7 alluvium	8	Whittaker <i>et al.</i> (2004; Bates <i>et al.</i> in prep.)

Table 1. Some key British Lower Palaeolithic assemblages

Firstly, there is a generally increasing variety of distinctive handaxe shapes. Secondly, there is increasing typological differentiation *within* assemblages. In well-provenanced pre-Anglian assemblages, there does seem to be a general trend for handaxe shape (and other aspects of the lithic industry) to cluster around a central theme, different of course at each site; it is hard, however, to distinguish different types within these assemblages. In the Hoxnian (MIS 11), this trend continues, accompanied by increasing regional stylistic variety of handaxe shape such as cordiform points and the deliberate twisting of ovates, not to mention the Clactonian industry of southeast England (c.f. Wenban-Smith 1998; White 2000). And in the Wolstonian complex (MIS 10 to MIS 6, although handaxe industries only proliferate up to the end of MIS 8) there is a relative explosion of clearly distinct types such as plano-convex cordates, ficrons and cleavers.

Unfortunately, there is currently a great deal of uncertainty over the precise dating within the Wolstonian complex of a number of key sites. Sites such as Red Barns, Hoxne, Wolvercote, Bakers Farm and Cannoncourt Farm are all somewhat generally dated to the period MIS 10–8. If these sites could be more reliably dated, an even more clear-cut, and perhaps regionally specific, chronological pattern relating to the appearance of these later more distinctive types might appear. It is tempting to wonder whether the classic Lynch Hill terrace, which includes the sites of Cannoncourt and Bakers Farms and has Levalloisian material in its upper parts, might date wholly to MIS 8.

Of particular interest concerning ficrons and cleavers is, not only that they occur as well-defined and recognisable types in the Wolstonian complex, and so can be added to types such as twisted ovate and *bout coupé* that have dating implications (c.f. Tyllesley 1987; White 1998b; White & Jacobi 2002), but that they appear to co-occur in the same assemblages, as Roe (2001) has recently reiterated for sites in the Solent Basin. Up until now, despite this regular pattern, there has been a legitimate concern over whether this co-occurrence is an illusion caused by conflation of assemblages of different ages into the same gravel deposit. However these new finds from Cuxton go some way towards resolving this uncertainty. Both the ficron and the cleaver are impeccably provenanced to the same thin band of gravelly sand, and are in the same near mint condition. On the balance of probabilities, it is reasonable to suggest that the makers of these artefacts, if not actually contemporaries of each other — or indeed the same individual — at least shared the same historical cultural network.

Assuming that we now have demonstrable contemporaneity of different types in the Lower Palaeolithic, what might be the interpretive implications? Davidson (1991) and Davidson & Noble (1993) have argued that the capacity for abstraction implicit in imposition of a type reflects a potential for symbolic behaviour such as language. Secondly, this evidence of (a) increasing variety of handaxe types through the Lower Palaeolithic and (b) intra-assemblage typological diversification late in the Lower Palaeolithic challenges the widely held view that the Lower Palaeolithic is essentially a period of cultural and intellectual stasis, with human social organisation and development on hold, prior to possible changes associated with the advent of Levalloisian technology. In contrast, many of the supposed changes (such as dense concentrations of material at key locations, sophisticated *chaînes opératoires* and organisation of behaviour around the landscape) conventionally associated with Neanderthal development and Levalloisian technology are presaged by the Lower Palaeolithic record. Perhaps rather than indicating a cognitive and behavioural watershed, the advent of Levalloisian technology is a minor, but disproportionately visible, development on a smooth trajectory of Archaic behavioural, cognitive and physiological evolution, rudely interrupted by the arrival of *Homo sapiens sapiens*?

CONCLUSIONS

There are still of course numerous questions that still need answers. Firstly, we do not yet know the date of the Cuxton assemblage. Hopefully the OSL work will resolve this, and it will be interesting to see how late in the Wolstonian complex is the outcome — in the spirit of Mac, I wouldn't bet against MIS 8. If we have the deliberate and contemporary imposition of different types, reflecting the capacity for symbolic expression, then what were these symbols expressing? Although there is no doubt that these stone tools were also serving a utilitarian purpose (and it still wouldn't do any harm to find out what that was!), what are their implications for the organisation of the society in which they were produced? Can we move beyond a purely functional or a hollow cultural explanation to consider (a) the general implications of expressing types in handaxe manufacture, (b) the implications of maintaining relatively long-standing and widely spread typological traditions and (c) any implications of the particular symbols that were expressed? Why were such exquisite tools, so far as one can tell still serviceable, discarded, or at least set down and then never reclaimed? Were they discarded together? Are they in fact the product of the same individual, and if so what are the implications of their contrasting shapes? Watch this space.

ACKNOWLEDGEMENTS

This work was funded by the Aggregates Levy Sustainability Fund, distributed by English Heritage on behalf of DEFRA. Firstly, I am grateful to Martin Bates and Gilbert Marshall of the core *Medway Valley Palaeolithic Project* team for their help in the fieldwork and its planning, and for many discussions over the years concerning Pleistocene geology and handaxe typology. Other members of the MVPP team who helped with the fieldwork were Marcus Hatch and James Cole. I am also grateful to Roger Knight and David and Sarah Norwood for giving permission for our work, particularly the latter who didn't let a small matter like the arrival of their second child undermine their willingness to have a substantial proportion of their front lawn machined away. I am also grateful to John Daly, both as an accommodating neighbour to the site of excavations and as a delicate and precise driver of the mechanical excavator. Finally I would like to thank Lis Dyson of Kent County Council, and Peter Kendall and Helen Keeley of English Heritage for their help and support in developing and facilitating the project.

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