A BOUT COUPÉ BIFACE FOUND IN THE CHELMER VALLEY AND ITS IMPLICATIONS FOR NEANDERTHAL PRESENCE IN ESSEX

Jessamy H. Doman

ABSTRACT

In May 2009 a biface was found during construction work at Cornelius Vale, Chelmsford. It is a fine example of the bout coupé biface associated with Mousterian contexts in Britain and its geological context supports deposition during the Early Middle Devensian glaciation. The Cornelius Vale biface is the first archaeological evidence of Neanderthal presence in the Chelmer Valley and may reflect a later migratory episode of Neanderthals out of continental Europe.


Keywords: Middle Palaeolithic, Mousterian, bout coupé, biface typology, Neanderthals, British migrations, Chelmer Valley, Essex.

INTRODUCTION

In May 2009 a biface (Figure 1) was discovered by Russell Southgate during preliminary excavations for new housing in Cornelius Vale, Chelmer Village, Chelmsford (TL737078). It is a fine example of the flat-butted cordiforms — commonly labelled bout coupé — that appear in Britain around the Middle Devensian glaciation (MIS 3). The Cornelius Vale biface is therefore the first archaeological evidence of Neanderthal presence in the Chelmer Valley. Bifaces of this type often occur as chance, stray finds and are relatively rare, probably reflecting the intermittent nature of population in Britain during the Middle Palaeolithic. It is therefore particularly important that the locations of such finds are reported and recorded, to develop our understanding of migratory episodes at this time.

FIND DESCRIPTION

The find is a well-made, flat-butted symmetrical biface measuring 90 mm in length, 64 mm in width, and 23 mm in thickness. It was probably made on a flake, indicated by possible evidence of a striking platform on the butt edge (Figure 1:4). No cortex is present. A number of large, flat removals towards the outer surface preceded a series of smaller edge removals on the ventral side to achieve a cutting edge running all the way around the implement (Figure 1:1). The dorsal side exhibits neater, more regular soft-hammer flaking across the entire surface, including a series of long thinning scars towards the edges (Figure 1:3). The result is a symmetrical, aesthetically pleasing tool with refined edge shaping. Two distinct corners are seen where the lateral edges meet the slightly convex butt: the right ventral corner more rounded compared to the left, creating the same “D-shaped” asymmetry seen in several examples of bout coupé bifaces, such as that from Tilbury (Roe 1981, Figure 6:7.4).

The biface is bright blue grey in colour, with a bright, creamy white patina across a significant extent of the ventral surface and occurring dendritically across the dorsal surface. Besides some glossing, both surfaces are in extremely fresh, sharp condition with crisp flake ridges and no apparent modern damage scars. Some possible ancient chips have occurred around the edges, and ancient pit marks are visible on the ventral surface. The differential patination and pitting on the one side probably indicates an extensive period of weathering on the ground surface, lying ventral face up.

PROVENANCE AND LOCAL GEOLOGY

The area surrounding the find spot was probably little disturbed prior to the construction work which led to discovery of the biface. The find was deposited on the western slope of the Chelmer River Valley, 25 m above modern sea level (10 m above the lowest point of the floodplain). Its fresh
Figure 1. 1–4 Ventral, profile, dorsal and butt views of the Cornelius Vale biface (NHM copyright).
condition and the absence of any sign of abrasion suggest the biface is unlikely to have been transported from elsewhere along the river. It can be assumed that to have survived in a state of such good preservation, the find has remained close to its place of deposition on the valley slope.

Significant study of the Quaternary geology of this area has been undertaken due to the presence of gravel resources, and its position as the southernmost limit of the Anglian glacial sheet. Overlying Chelmsford gravels are the till deposits of chalky boulder clay (the Lowestoft Formation) found across much of East Anglia. The till is composed of diamicitic flint gravels and sands deposited during the Anglian glaciation (Sturdy et al. 1979) and may well be the source of the tool’s raw material — the till is exposed at the ground surface nearby (Figure 2), and a dominant feature of the landscape during the Palaeolithic would have been the plateau of chalky boulder clay rising above the Chelmer Valley. The Cornelius Vale biface was found 375 m down slope from the edge of this outcrop.

Cutting through the till and gravels is the Chelmer River Valley and associated post-Anglian river terraces, spanning from the Hoxnian (MIS 11) through to the Ipswichian (MIS 5e) or possibly the Devensian (MIS 4) (P. Allen, pers. comm.) The area was then covered by alluvial, loess and Head deposits. Investigation (Sturdy et al. 1979) into the parent materials of superficial deposits in the Chelmsford area suggests that the Head derives mainly from underlying till, with upper deposits incorporating wind-blown loess considered to be Late Devensian. At nearby Springfield (TL 725 087) a red palaeoargillic soil horizon lies between the till and loess. This horizon, consisting of sand and gravel deposits, was probably formed during a warm period preceding the Devensian glaciation (Rose et al. 1978; Sturdy et al. 1979).
The biface was found in the Head deposits 60 cm beneath the surface, within a red sandy deposit descriptively similar to the pre-Devensian argillic horizon observed at Springfield. However, the very nature of Head (i.e. solifluction) deposits and the lenses within them also leaves the possibility that the find is derived, like many similar artefacts (such as those dredged from the Thames river terraces, e.g. at Tilbury) from any of the earlier post-Anglian river terraces within the valley. What is apparent is that it had lain flat for a considerable time in an aeolian, periglacial environment after deposition — i.e. during the Devensian — based on the greater patination and pitting on its ventral surface.

**BOUT COUPÉ TYPOLOGY**

Bifaces of this type (presenting the distinctive flat-butt and broad subtriangular or cordate shape) have been commonly labelled as “bout coupé” (e.g. Roe, 1981; Tyldesley 1987). This type is representative of the British Mousterian, occurring only during the Middle Devensian, and indicating Neanderthal occupation during a time when modern humans were apparently not present in Britain. British Mousterian sites have yielded dates from as early as c. 65,000 BP at Lynford Quarry (Boismier 2003) to c. 39,000 BP at Coygan Cave (Aldhouse-Green *et al.* 1995).

Significant variation in shape (i.e. from the sub-triangular forms to the nearly rectangular; Roe 1981) has led some to suggest that *bout coupés* might be further subdivided based on their morphology (e.g. Coulson 1986; R. Jacobi pers. comm.) and to question whether they are all “true” *bout coupés* (Tyldesley 1987; White & Jacobi 2002) which represent the same industry as the *bout coupé* holotype of Coygan Cave (McNabb 2006). The Cornelius Vale biface may be considered to be a “true” or “Coygan type” *bout coupé*, displaying significant similarities to the larger Coygan Cave specimen. Such examples are relatively flat in profile, with parallel or sub-parallel sides, a flat or convex base, distinct corners (or sometimes D shaped), a carefully finished cutting edge all the way around the tool, and a convex or slightly ogee tip (McNabb 2006). They are flat, and more rectangular than triangular; Coulson (1986) defines them as “subrectangular”, observing that whilst the majority of British bifaces labelled “bout coupé” fall comfortably within the Mousterian of Acheulean Tradition (MTA) biface categories defined by Bordes (1961), this shape (e.g. as seen at Coygan Cave, Little Paxton and Kent’s Cavern) cannot be classified within the same scheme, and thus forms a separate group. However, whilst it is apparent that regionally specific biface shapes did exist (Reubens 2007), inferences of regionally or culturally discrete groups would not be practicable. Wragg Sykes (2009) demonstrates that with a larger, more current sample size of British bifaces there are some *bout coupés* that overlap (under the Bordes scheme) with non-*bout coupé* cordate or pointed bifaces from other sites, suggesting more of a spectrum in terms of morphology in Mousterian Britain.

Mixed assemblages from Mousterian sites demonstrate that subrectangular or “Coygan type” *bout coupés* did not dominate the technological repertoire, but rather, are just one tool type amongst many possible options. For example, Lynford Quarry in Norfolk has yielded a great variety of biface shapes including “Coygan types” but also many others, including pointed, cordiform, ovate and more irregular forms, as well as unifaces (Boismier 2003). Wragg Sykes’ (2009 & 2010) comparative study of 117 bifaces of MIS 3 age suggests that flat-butted cordates constitute only 20% of British Mousterian bifaces, or 5% if only the “classic” variety (i.e. those which are better characterised as cordate or pointed) are included. The “Coygan type” classic *bout coupé* may be considered a distinctive marker of the Mousterian in Britain and a deliberately manufactured form that perhaps served a particular function within the much larger tool repertoire of Neanderthals in Britain.

**EVIDENCE FOR BRITISH NEANDERTHAL MIGRATIONS**

*Bout coupés* are perhaps the most dependable indicators of the later Neanderthal presence in Britain, representing a “recolonisation” around the end of MIS 4 (White & Jacobi 2002; McNabb 2006). Britain had been periodically isolated from mainland Europe during the Ipswichian interglacial, and there is no evidence for hominin occupation between the end of MIS 7 and MIS 4 (Ashton & Lewis 2002). Archaeological evidence for the Middle Palaeolithic occupation of Britain is so rare in
comparison with that of the earlier Palaeolithic (White & Jacobi 2002) that it may only represent occasional migrations by a small number of Neanderthals at times when Britain was either more hospitable or simply more accessible than during glacial conditions, which inevitably prevented prolonged occupation during this climatically tumultuous time. The differences between the flat-butted Mousterian tools of France and Britain (greater variability in French assemblages and the restriction of extreme triangular forms to northern France; a dominance of bout coupés in Britain) suggest that the two countries were isolated. The relatively few Mousterian finds from Britain may therefore be the relics of “trapped” populations of Neanderthals (Roe 1981). Coinciding with the advent of modern humans in southern Europe, it has also been suggested (Pettitt 1999) that during later MIS 4/early MIS 3 Neanderthals were being forced into Britain — one of their final refuges.

The Cornelius Vale biface is the first Mousterian handaxe known to have been found in the Chelmer Valley, and, outside of London (i.e. Tilbury docks) is the first classic bout coupé found in Essex. The closest evidence of Neanderthal presence is to be found 35 miles to the south-east at Oldbury in Kent (Collins & Collins 1970), and Lynford Quarry 50 miles to the north in Norfolk. Both have yielded Mousterian tools and, at the latter, cold-adapted animal remains including mammoth and woolly rhino (Schreve 2006). OSL dating suggests that Neanderthals were using the site for butchering or scavenging activities c. 65–50,000 years ago (late MIS 4/early MIS 3), possibly marking the first Middle Palaeolithic reappearance of Neanderthals in Britain (Boismier 2003). The Cornelius Vale biface may date to the same interval. Harsh periglacial conditions prevailed at this time, evidenced by wind-blown loess occurring across much of Essex, and arctic fauna such as that found at Lynford and Loft’s Farm (Great Totham, Essex; Bridgland 1994). This may explain the apparent preference for sheltered cave sites by Neanderthals in Britain. The carcase processing activities at Lynford and an apparent frequency of Mousterian finds from fluvial contexts suggest that Neanderthals in Britain were migratory hunters, following wandering herds along river systems. The spatially limited nature of Mousterian sites and dominance of cave sites, however, may simply reflect archaeological research biases, and stray finds such as this will continue to enhance our understanding of late Neanderthal occupation.

CONCLUSION

The Cornelius Vale biface is a subrectangular example of the bout coupé biface which appears for a relatively short period in Britain during the Middle Devensian. It is the first example of Mousterian technology, widely regarded as the only reliable cultural evidence of Neanderthal presence in Britain, known to have been found in this part of Essex. It forms part of a small but growing sample of bout coupé bifaces known from Britain and highlights the importance of reporting such stray finds, in order that we can better understand their place in Mousterian culture, and clarify the nature and timing of intermittent hominin migration into Britain throughout the Pleistocene. Dating of the associated deposits and prospecting for fine debris, bone or further lithics at the find site would be desirable in order to establish whether a more substantial site is present, and it is hoped that ongoing development in the Chelmer Village area may open up chances for archaeological investigation in the future.

ACKNOWLEDGMENTS

Credit must first be given to Mr Russell Southgate for discovering and reporting the find to the author. Thank you to Mark Lewis, Mark Roberts and Nick Ashton for initial identification and plentiful advice; Francis Wenban-Smith and Peter Allen for detailed information in regards to the terrace sequences and geology of the area; Phil Crabb at the NHM photographic unit; and Becky Wragg Sykes, John McNabb, John Stewart and Philip Fenberg for helpful discussions. Lastly, I am deeply grateful to the late Roger Jacobi for his enthusiasm, mentoring, and encouragement.

REFERENCES