

Early Upper Palaeolithic archaeology at Beedings, West Sussex: new contexts for Pleistocene archaeology

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The site of Beedings in Sussex was first recognized as the source of some exceptional Upper Palaeolithic flintwork in 1900, but subsequently disappeared from the archaeological literature. In the 1980s it was recognized again, but it was not until 2007–8 that in situ Palaeolithic archaeology was found at the site. In this article, the director of the excavations describes the discovery, within a network of geological fissures, of two separate industries, one Middle Palaeolithic and the other Early Upper Palaeolithic. The archaeology at Beedings spans a crucial cultural transition in the European Palaeolithic and therefore provides an important new dataset for the analysis of late Neanderthal groups in northern Europe and their replacement by modern human populations.

In 1900, the building of an imposing turreted house named Beedings was undertaken upon retirement by the physician John Harley (Figs 1 and 2).



Figure 1 Maps showing location of Beedings

The house was built in a commanding position on the skyline of an east-west ridge of the Lower Greensand with extensive views across the western Weald towards Surrey.¹ The construction of such a monumental stone-built structure required solid foundations and thus extensive removal of weathered sandstone and construction of deep footings was undertaken across the footprint of the house. During these initial ground works Harley recovered an exceptional collection of Upper Palaeolithic flintwork, which was eventually displayed alongside other antiquities in dedicated rooms within the house. Labels accompanying these finds give us our only clue to the original context and disposition of the material: “...from sand pockets (fissures in the Lower Greensand) in the excavations in which this house now stands.”

While initially recognized as Upper Palaeolithic, presumably by either

R. Garraway Rice or Reginald Smith, who were both in close contact with Harley, the subsequent consideration of the material led to its near obliteration from the archaeological literature. During the 1930s the archaeologist E. C. Curwen ascribed the collection to the Bronze Age and suspicions were cast upon the authenticity of the material, which was considered either a forgery or an import from the continent. The general uncertainty surrounding the assemblage led to the eventual discard of all but 199 of the original collection of 2,300 pieces after accession to Barbican House Museum in Lewes.

It was not until the 1980s that the remnants of the collection were lifted from obscurity through reconsideration by Roger Jacobi, who recognized the remaining elements of the collection as clearly of Upper Palaeolithic character.² Moreover the identification of refitting elements within the assemblage, and the disproportionate quantity of retouched tools and core elements, suggested that the original assemblage could have

included large quantities of debitage from core reduction and may well have been exceptionally preserved. Further close analysis of the assemblage and thermoluminescence dating of a burnt blade element allowed Jacobi, in a recent seminal account of the British Early Upper Palaeolithic, to place the Beedings material firmly within the earliest blade traditions of Northern Europe. One of a handful of similar assemblages from western Britain to Poland, forming the Lincombian-Ranisian-Jerzmanowician (LRJ) techno-complex, the Beedings assemblage represents, even in its current denuded state, the most extensive and technologically lucid example.

The defining artefact of the LRJ is the blade point, manufactured on substantial, triangular cross sectioned blades struck from opposed platforms cores (Fig. 3). Secondary retouch, which is regularly present on both dorsal and ventral faces, was aimed at straightening and thinning the pieces, presumably for hafting as projectile points. Further evidence for use as projectiles was identified by Jacobi through the recurrence of broken elements, some times refitting, which exhibited features of impact damage. Some of these broken elements had been recycled into other tool forms including end-scrapers and burins, leading Jacobi to speculate that the site represented a hunting station where kit was maintained and repaired while the Wealden plain was observed for game.³ Excavations by Jacobi and Con Ainsworth in 1985, which followed recognition of the site's importance, failed to find any further trace of the Palaeolithic whatsoever and here the matter rested: the late but welcome recognition of the site as representing a hunting camp from the earliest Upper Palaeolithic, although apparently lost to archaeology.



Figure 2 “Harley’s Castle”, the monumental house of Beedings, built at the turn of the 20th century

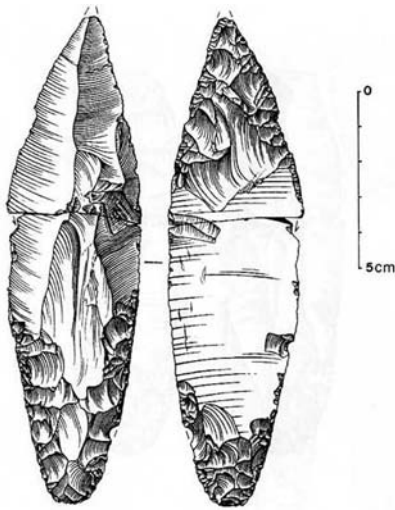


Figure 3 Blade point projectile of the LRJ from Beedings comprising two refitted elements along an impact break. Drawn by Hazel Martingel

Recent work

Our own work began in 2003 when, at the request of Caroline Wells, the Boxgrove Project was asked to ground-truth geophysical plots undertaken in a field adjacent to the site, which produced striking patterns of apparent fissuring. The possibility that fissures were not restricted to the footprint of the house seemed reason enough to attempt a further search for the remnants of Harley's original site. Frustratingly these excavations revealed only superficial bedding structures in the underlying bedrock without any associated archaeology. However, during this field season some ground works associated with the construction of a tennis court at an adjacent property did reveal a different order of geological feature, a wide fissure or *gull* infilled with fine-grained deposits of loess and weathered bedrock. This fissure provided the first clear evidence that original accounts of the finds, which described them as having come from "sandy pockets" within the greensand were credible and that *gulls* were more widely prevalent on the hill and not just restricted to the footprint of Beedings House itself. These fissures also provided the opportunity to take background dose rates for the successful calibration of thermoluminescence on burnt flint from the original assemblage, dates which revealed an age of $31,100 \pm 5700$ BP, suggesting a clear Devensian age for the assemblage, and put to rest any remaining doubt as to the Upper Palaeolithic age of the material.

Encouraged by these results further excavations were undertaken in 2007 immediately adjacent to the house, targeting further promising geophysics signals that indicated possible fissures. In this case the ground-truthing exercise

was successful and revealed at least two significant fissures, this time with associated Palaeolithic archaeology. Yet curiously this assemblage was of an entirely different character and condition from the bulk of the original finds, comprising elements of Middle Palaeolithic core reduction and a small discrete scatter of retouching debitage. Of the original collection of 2,300 pieces only two, a small bifacial tool and a side scraper, were, on the basis of condition and technology, thought by Jacobi to be of possible Middle Palaeolithic character and comparable to our 2007 finds. While these finds were exciting, in showing clear evidence for earlier, Neanderthal occupation of the hill and the preservation of this material within the fill of the fissures, it took us no closer to further understanding of the Upper Palaeolithic assemblage.

Through the first half of 2008, a new project, funded by English Heritage and directed by Archaeology South-East, the Boxgrove Project and Caroline Wells, readdressed the hill and its elusive Upper Palaeolithic archaeology. This new opportunity was provided by a proposal to plant vineyards and trees at the site, which required the evaluation of potential archaeological threat outside the control of PPG16. A team consisting of volunteers drawn from Worthing Archaeological Society, Brighton and Hove Archaeological Society and students from UCL, Southampton and Reading universities were mobilized on the hill for a further season. While evidence of multi-period occupation of the hill, through Mesolithic, Neolithic and Late Iron Age periods was encountered, and

will be described elsewhere, attention was focused again on the fissures identified in 2007. This excavation represented a final chance both to determine more fully the character of the Middle Palaeolithic archaeology identified on the hill and to recover elements of the upper Palaeolithic assemblage under modern archaeological conditions.

Geophysics continued to identify the wider extent of the fissure network, and four trenches were aligned across promising locations close to Beedings (Fig. 4). Finally, in June 2008, the fissures yielded pieces of Upper Palaeolithic flint work, identical in condition and technological affinity to the original Beedings finds. The assemblage included elements of blade debitage and portions of blade points, associated debitage and a single blade core (Fig. 5). The excavations confirmed beyond doubt the *in situ* presence of the Upper Palaeolithic material at the hill and provided an opportunity to examine directly the context of the original finds, including sedimentary context, environmental and dating evidence. The programme of analysis, already underway, should provide a modern account of the site, in spite of the loss of the bulk of the assemblage and destruction of the original findspot.

The significance of the finds

Beyond clearing up a century-old mystery, the new work at Beedings is immensely important for at least two directions of current Palaeolithic research. First is the vexing question of attribution surrounding the LRJ itself. The technology represents the first appearance of blade technology



Figure 4 Exposure of fissure fill in 2008



Figure 5 Upper Palaeolithic blade core under excavation

in northern Europe, predating by several thousands years the Aurignacian industries which are often seen as the signature of the appearance of anatomically modern humans on the continent. Its early appearance has led to speculation that the makers of this efficient and deadly hunting kit were the last Neanderthal population of northern Europe and that prior to extinction they were independently evolving a technologically advanced approach to tool production, an approach which is still often considered the preserve of our own species. While considered highly probable, the case for Neanderthal authorship of the LRJ still has to be formally proved through closer dating of human occupation patterns in the Mid-Devensian within Northern Europe. From the Beedings excavations we now have a dataset which can ensure the site becomes central to this primary research question.

In pursuing this question the Middle Palaeolithic archaeology from Beedings becomes significant. Rather than simply being part of the background signature to the Upper Palaeolithic archaeology of the site, we believe the Middle Palaeolithic material is crucial to its understanding. While it may simply be coincidence that below the blade elements recovered from Beedings were tools clearly manufactured by Neanderthals, the spatial overlap of the two technologies may suggest a degree of behavioural continuity in terms of habitat preference and hunting strategy. The Beedings Middle Palaeolithic tools are technologically similar to those from the rock shelter site at Oldbury in Kent, also situated on the Lower Greensand, which still provides the best examples

of MTA (Mousterian of Acheulean Tradition) archaeology in southeastern Britain. Within Sussex we have only one clearly identified MTA artefact and this was a surface find, located only 1km from the Beedings site and in an identical topographic position on the crest of the Greensand ridge (Fig. 6). Given that Late Neanderthal archaeology is so painfully rare in the Weald and virtually absent in Sussex, the superimposition of both the first MTA site from the county and the only Early Upper Palaeolithic site in the region has to be considered carefully. The possibility that Beedings contains two, technologically distinctive, phases of

Neanderthal occupation is far from proven but an immensely exciting prospect to test through further research.

The second aspect of significance is the context of the finds themselves: fissures opened in the Lower Greensand Hythe Beds and filled with windblown loess and locally derived sand. These fissures, known across the weald as *gulls*, are by no means restricted to Beedings and its immediate surroundings. Through limited site investigation and literature reviews, we have been able to establish that these features are a recurrent and widely spread phenomenon of the Lower Greensand landform and to an extent of the central Wealden Hastings Beds. However, these fissures, which are only rarely visible from the surface as landscape features, have been all but ignored for over a century and while Beedings has clearly shown their archaeological potential, historical accounts also exist for the preservation of exceptional ice age faunal remains within these contexts.

Two sites, both discovered and recorded in the 19th century, indicate the potential value of the resource. In 1827 the first hints of the potential of these sites was noted after the discovery of Pleistocene fauna including hyena, horse, rhinoceros and mammoth within fissures at the site of Boughton, to the south of Maidstone in Kent.⁴ Described originally as caverns, but in reality pipes and fissures of varying size, they contained fine-grained deposits and are a widespread subsurface feature within the Kentish *rag* beds of the Lower Greensand around Maidstone. In the late 19th century the wider prevalence of fissure sites was demonstrated at a



Figure 6 Mousterian (MTA) biface from crest of Wood Hills, 1km to the east of Beedings

quarry located in the parish of Ightham, near Sevenoaks, in Kent (Fig. 7). Here the presence of fissures was first recognized by Benjamin Harrison, the notable eolith hunter and excavator of Oldbury. Work at the site was continued in turn by William Abbot and Edwin Newton who excavated the Ightham Fissures during their removal by quarrying and made extensive collections of faunal material.⁵ The final list of recovered fauna from the site was extensive and included Pleistocene mammals (mammoth, rhinoceros, horse, reindeer, hyena, bear), Holocene mammals (roe deer, red deer, sheep and pig) as well a large range of avian, amphibian and small mammal fauna. The assemblage was recovered in excellent preservational condition and suggested that the fissures acted as preservational contexts throughout the late Pleistocene and Holocene periods. Beyond Sussex, fissure contexts forming through similar processes of landscape denudation and solution have also demonstrated the potential to preserve faunal and archaeological material. A significant fissure site was recognized and excavated at Glaston in Rutland.⁶ Here a small collection of stone tools, including a leaf point with technological affinities to the Beedings assemblage, was found alongside butchered horse remains within an infilled fissure through sands forming a low ridge. At Dewlish, Dorset a linear fissure in the chalk preserved remains of *Mamuthus meridionalis*, a mammoth species dating to the Pliocene/Early Pleistocene, while fissures in the limestone of Portland have also produced Pleistocene faunal assemblages. These sites, many yet to be reexamined through modern fieldwork, offer the potential, outside of upland karstic landscapes for localized structural features to act as preservational contexts for the Pleistocene archaeology and fauna.

From the work in 2008 at Beedings has arisen the need for the immediate and proper consideration of this resource, in terms of future management, development control and targeted prospective field work. Until now much of Lowland Britain has lacked the exceptional Devensian archaeology more widely prevalent in the karstic landscapes of western and central Britain. The recognition of the potential of fissures in the region, galvanized by the recent excavations at Beedings, might be the first step in remedying this deficiency in the coming century.

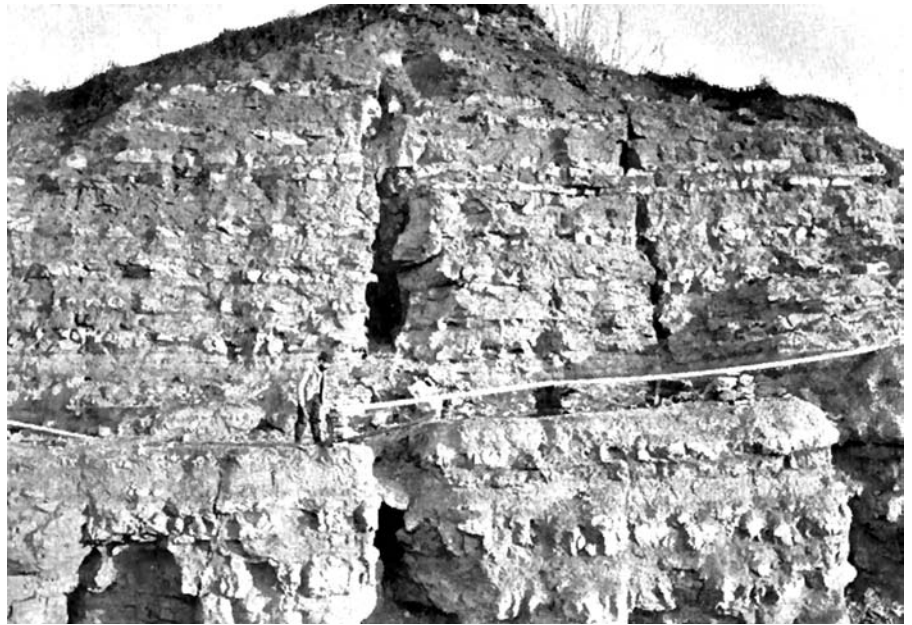


Figure 7 Fissures containing Pleistocene fauna from Ightham in Kent. Note figure on ledge for scale

Notes

- 1 For a detailed account of the circumstances of the find see R. M. Jacobi, "A collection of Early Upper Palaeolithic artefacts from Beedings, near Pulborough and the context of similar finds from the British Isles", *Proceedings of the Prehistoric Society* 73, 229–325, 2007.
- 2 R. M. Jacobi, "The contents of Dr Harley's show case", in *The Palaeolithic of Britain and its nearest neighbours: recent trends*, S. N. Collcutt (ed.), 62–8 (Sheffield: University of Sheffield, Department of Archaeology and Prehistory: John R. Collis, 1986).
- 3 For detailed discussion of the technological affinities of the Beedings material and distribution of the LRJ see R. M. Jacobi, "A collection of Early Upper Palaeolithic artefacts from Beedings, near Pulborough and the context of similar finds from the British Isles", *Proceedings of the Prehistoric Society* 73, 229–325, 2007.
- 4 W. Topley, *The Geology of the Weald*, Memoirs of the Geological Survey, England and Wales (London: HMSO, 1875).
- 5 E. T. Newton, "The Vertebrate Fauna collected by Mr. Lewis Abbott from the Fissure near Ightham, Kent", *Quarterly Journal of the Geological Society* 50, 188–211, 1894).
- 6 S. Collcutt, "The Sackung Hypothesis: a challenge for Palaeolithic Prospection", in *A Very Remote Period Indeed. Papers on the Palaeolithic presented to Derek Roe*, S. Milliken & J. Cook (eds), 223–33 (Oxford: Oxbow Books, 2001); L. Cooper, "The hunter-gatherers of Leicestershire and Rutland", in *Leicester Landscapes*, P. Bowman & P. Liddle (eds), 12–29 (Leicester: Leicester Museums Archaeological Fieldwork Group, Monograph No.1, 2004).