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# Behaviour and process in the formation of the North European Acheulean record: Towards a Unified Palaeolithic Landscape Approach

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ABSTRACT

The Acheulean record of northern France and southern Britain has long been acknowledged as internationally important, having played an important historical role in the development of the discipline. Abundant artefacts have been recovered, primarily from fluvial gravel archives, allowing the responses of Middle Pleistocene human populations on the edge of their geographical distribution to be interrogated. The richness of the record from such deposits can most simply be read as reflecting absolute population numbers – and changes in this over time. However, factors such as regional super-abundance of high quality flint (related to solid geology) and intensity of aggregate exploitation also played their part in generating the apparently regionally dense record of finds. This paper investigates the inter-related patterns of human behaviour, preservation, artefact release and research tradition which underpin these basic distribution maps. We here present a framework for understanding the processes which have created the current distribution map – in terms of where we find material, and which periods are best represented within it. We term this the Unified Palaeolithic Landscape Approach and outline ways in which the spatial and temporal range of the Acheulean record can be addressed through the archaeological record of its heartland.



## 1. Geology and Palaeolithic research history in cretaceous Northern Europe

The rich Lower and Middle Palaeolithic record of Southern Britain and North France as currently mapped (Fig. 1) emerged through the interaction of three regularly considered factors. Firstly much of our data was collected in the late 19th century and early 20th century in the wake of Joseph Prestwich's (1859) publication of the proof of the antiquity of humanity. The explosion of scientific interest, and efforts in documenting prehistoric implements and their geological contexts as well as securing specimens and collections for the burgeoning public museums, which expanded at this time contributed hugely to our core dataset. Secondly, the birth and expansion of human origins studies coincided with an industrial and engineering revolution that was hungry for raw materials extracted, by hand, from the landscape – clays, minerals and aggregate. The traces of human behaviour recovered from within these deposits was undoubtedly skewed in favour of Acheulean handaxes – being abundant, large and very visible artefacts. Handaxes were more readily noted by quarry workers and passed through to collectors and academics to a greater degree than other artefact classes.

Throughout the late 20th and early 21st century, the transition to mechanised aggregate extraction meant that fewer new northern Europe sites were encountered. Understanding of the existing record, however, was drastically transformed through the development of a fully multi-disciplinary approach to Quaternary environments and past human behaviour. In Britain, John Wymer (Wymer, 1968, 1985, 1999) and Derek Roe (Roe, 1964, 1968, 1981a, b) developed definitive national gazetteers of Lower Palaeolithic find spots, and established basic sequences of techno-cultural development within the region, leading to an appreciation of the extent – and richness – of the regional record. Work to develop basic sequences of valley development and climate history (e.g. Bridgland, 1994, 2006), combined with the development of a Marine Isotope Framework (Shackleton and Opdyke, 1973) transformed the chronological framework for our occupation history (White and Schreve, 2000). The record of find spots was further

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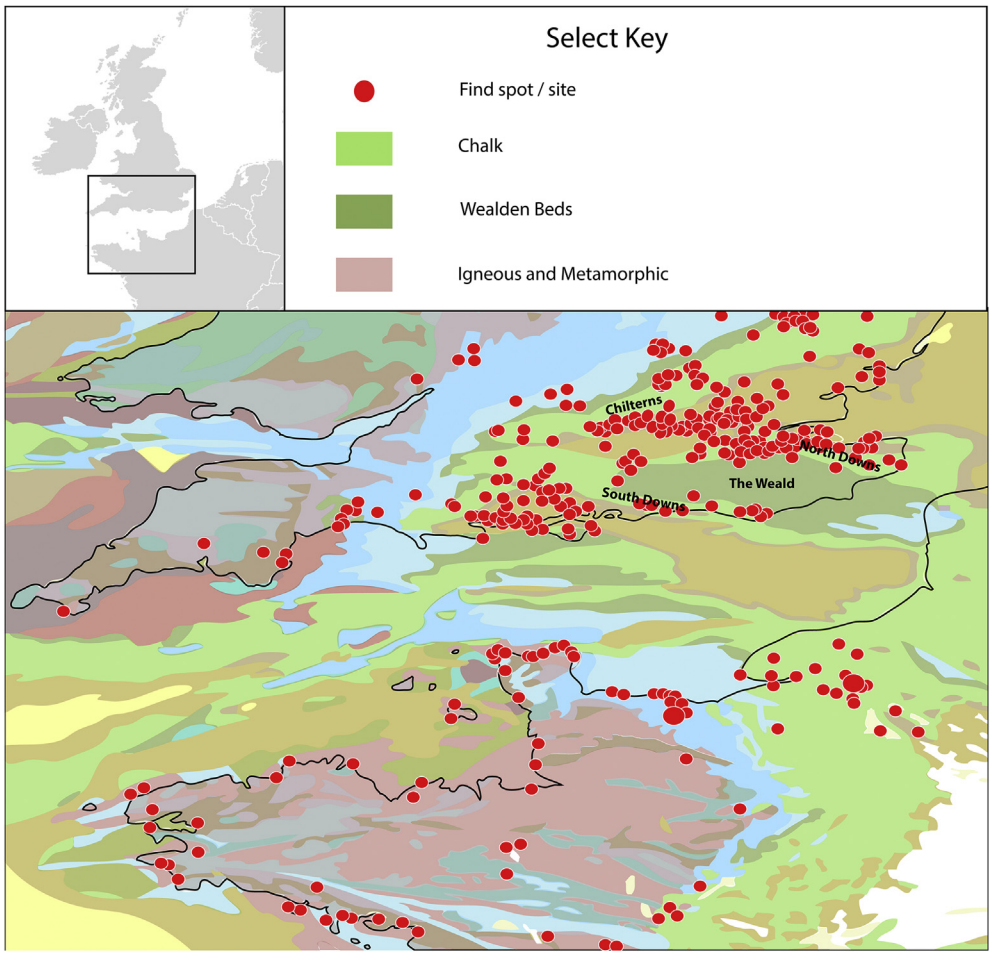


**Fig. 1.** Mapped distribution of Lower and Middle Palaeolithic find spots in the La Manche region.

enhanced by The English and Southern Rivers Projects (Wessex Archaeology, 1993, 1996), and fieldwork by the Ancient Human of Occupation of Britain project. These developments expanded the chronology of the British Palaeolithic back to at least 780,000 years (Parfitt et al., 2005, 2010), and developed a demographic model for the colonisation, and apparent late Middle Pleistocene depopulation, of Britain (Ashton and Lewis, 2002).

Whilst this historical confluence, of academic and industrial ambition, brought large quantities of material and many of the dots on our base-maps of the Palaeolithic to light, it also shaped greatly *where* and *how* our past became visible. Historical contingency acted as a lens through which the geographical distribution of the Palaeolithic became both viewed and through which it was almost certainly skewed. Bearing this in mind, the third factor that shaped the Acheulean record – past human behaviour – can only be properly brought into focus once we consider carefully how that record was formed. These three factors, two of which can be understood through historical enquiry (history of the discipline/industry), and a third which forms the target of our research (past human behaviour), are those most often considered to have shaped the big data providing the bedrock of our understanding of the north European Acheulean (Hosfield, 1999). Without a radical transformation in the scope and scale of field research (dedicated site prospection or archaeological responses to a return to large scale hand quarrying) the nature of this dataset is unlikely to change in terms of the number of sites, or overall distribution pattern.

It is therefore vital that, in the absence of large volumes of new data, we consider the information we have even more critically, and use it in smarter ways. In order to test and expand it's limits, in order to determine what it can, and cannot, tell us about the deep human past, we need to carefully consider wider factors that have acted as filters to our understanding of past human behaviour, demography and paleoecology. In this paper we explore this scope by intensifying our focus on a fourth key factor in the formation of the Palaeolithic record, and one which currently lacks an identifiable framework for analysis: the geomorphological controls over artefact preservation and recovery.

Whereas site formation processes are now regularly addressed at the site or palaeolandscape level, there seems to scant consideration of landscape formation processes involved in the formation of the extant data-set when working with larger-scale (national and regional) patterns. In this paper we aim to highlight just how profound the effects of these processes upon the characteristics and distribution of our core regional datasets might be for the Palaeolithic as a whole. We do this by first considering the record of Acheulean handaxe find spots within the north European cretaceous region (between northern France and southern Britain). Handaxes are chosen as the primary dataset here as the Acheulean forms the focus of our current research, they also provide a consistent dataset in terms of size, shape and recognisability. Our assumption is that, by focusing on handaxes in the first instance, the effects of collector bias, when compared to the flaked based

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