

Three different species of humans

An exceptional assemblage from an exceptional museum

By Dr Torben B Ballin

In 2014, the author spent a week in Moray to investigate the archaeology and geology of the local area. In this context he also visited two local museums – the Falconer Museum in Forres and Elgin Museum – where he classified and catalogued the museums' lithic collections and held a public workshop on lithics at each museum.

Both museums had in their collections interesting lithic artefacts from the local area, many of flint, but also many of local silcrete/Stotfield chert (Ballin & Faithfull 2014). However, the greatest surprise was to discover in the collections of the Falconer Museum an unexpectedly large and important assemblage of Palaeolithic flints covering several hundred thousand years of human prehistory – a collection which, on this point, matches those of the National Museum in Edinburgh, the Hunterian Museum and Kelvingrove Museum in Glasgow. The assemblage includes 10 flints of Lower Palaeolithic age (the Acheulean), four flints of Middle Palaeolithic age (the Mousterian/Levalloisian), and 55 pieces of Upper Palaeolithic age (the Magdalenian; see catalogue of Palaeolithic finds from the Falconer Museum at the end of this paper).

Interestingly, the three lithic industries are associated with three different species of humans, namely *homo erectus*, *homo neanderthalensis* and *homo sapiens*. The former two species are extinct, whereas we belong to the latter species. The earliest remains of *homo erectus* are approximately 2 million years old, and this species died out *c.* 110,000 years ago. The first Neanderthals occurred several hundred thousand years ago and probably died out *c.* 30,000 years ago. *Homo sapiens* probably developed in Africa several hundred thousand years ago and arrived in Europe *c.* 45,000 years ago. It has been suggested that our species, *homo sapiens*, may have been partly responsible for the extinction of the Neanderthals.



Fig. 1. A large hand axe with a repaired tip and a small ficron hand axe, both from Lower Rainham, Kent and both probably dating to the Acheulean (from the author's private collection, photo: B. Ballin Smith).

The Acheulean material from the Falconer (from the eponymous St Acheul site in Dordogne) includes several hand axes, the key diagnostic artefact form of this industry (Fig. 1). The Mousterian/Levalloisian material (from the eponymous site Le Moustier, Dordogne) includes an unmodified flake and a side-scraper based on blanks produced in the Levalloisian technique, which resulted in typical faceted platform remnants (Fig. 2). And the most numerous of the three Palaeolithic sub-assemblages from the Falconer, the Magdalenian collection (from the eponymous sites La Madeleine and Les Eyzies, both Dordogne), includes flints potentially of relevance to the continued search for Hamburgian material in Scotland.

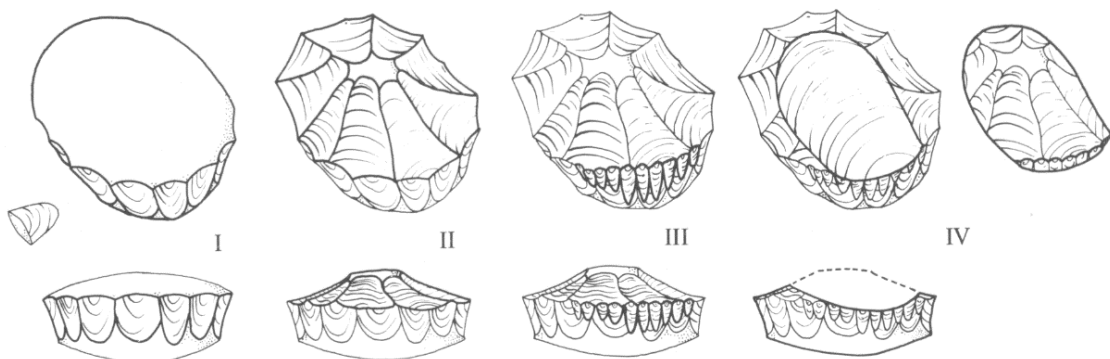


Fig. 2. The operational schema of the Late Acheulean/Mousterian Levalloisian (Roe 1981, Fig. 3:9): I. Basic shaping of nodule, II preparation of domed dorsal surface, III. preparation of faceted striking platform on core, IV. the flake and the struck core, with their characteristic features (drawn by the late M.H.R. Cook).

The Hamburgian is a spin-off of the Magdalenian industry, and the three industries the Magdalenian, the Creswellian (another Magdalenian spin-off) and the Hamburgian shared the same lithic technology. It is thought that the Hamburgians arrived in Scotland after having crossed Doggerland, the then dry bed of the North Sea, from their original homeland in northern Germany or southern Denmark (Ballin 2016).

The Magdalenian is mostly associated with France but is also represented in various Central European countries and in Spain. The Creswellian is mostly associated with southern England and Wales but is also represented in the Low Countries (so far not in Scotland). And the Hamburgian is mainly associated with northern Germany and southern Denmark; but is also represented in the Low Countries, Poland, and Scotland. This paper focuses on the relevance of the Falconer's Magdalenian finds to the continued research into the earliest prehistory of Scotland.

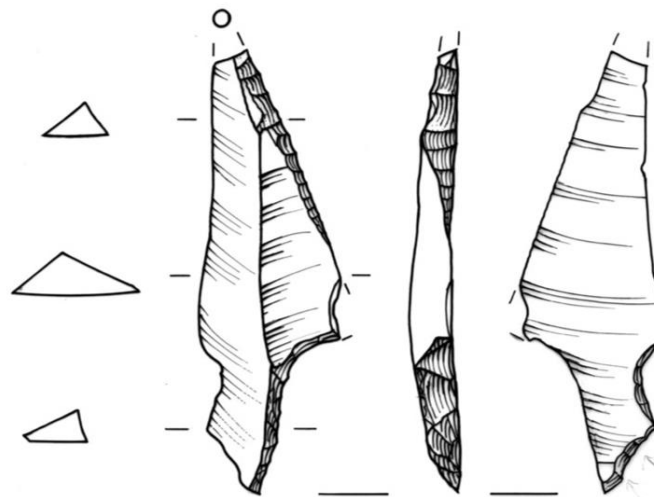


Fig. 3. Typical Havelte point from Howburn, South Lanarkshire (Ballin et al. 2018; artist: M. O'Neil).

The earliest known lithic finds from Scotland are those from the Late Hamburgian site of Howburn in South Lanarkshire, with a date of *c.* 14,000 BC (Ballin et al. 2018). It has been suggested that two flints from sites on the Dee in Aberdeenshire (Clarke in Wickham-Jones et al. 2021, Figs. 7.14 and 7.47) are Early Hamburgian shouldered points, but it is this author's view that 1) neither fits the definition of a shouldered point (one having the general outline of a shouldered point but not the necessary basal modification, and the other is probably an Early Mesolithic isosceles triangle), and 2) the evidence from Continental European sites suggests that the northwards expansion of the Hamburgian (into first Denmark and then Scotland) began around the Early/Late Hamburgian transition. The finds from Howburn are associated with so-called Havelte points (Fig. 3), that is, asymmetrical tanged points used for hunting, among other things, reindeer.



Fig. 4. *En eperon* blades from Howburn, South Lanarkshire (Ballin et al. 2018; artist: M. O'Neil).

The relevance of the Magdalenian finds from the Falconer to the understanding of the Scottish Hamburgian mainly relates to the technology (the reduction technique or operational schema) of the two industries, as their tool kits shared some elements but also varied on a number of points. First and foremost, the tool blanks of both industries were produced by the application of the so-called *en eperon* technique, leaving similar tool blanks (flakes and blades) and similar cores. As shown in the appendix listing of the Palaeolithic finds from the Falconer, the museum's Magdalenian finds include several *en eperon* blades. An *en eperon* blade is a blade which has a finely faceted platform remnant with a small spur at the front (in French, *eperon* means 'spur'; Fig. 4). The collection also includes at least one typical opposed-platform core (Fig. 5). The purpose of detaching blades from two opposed ends of a core was to produce straight blades which could be transformed into straight arrowheads.

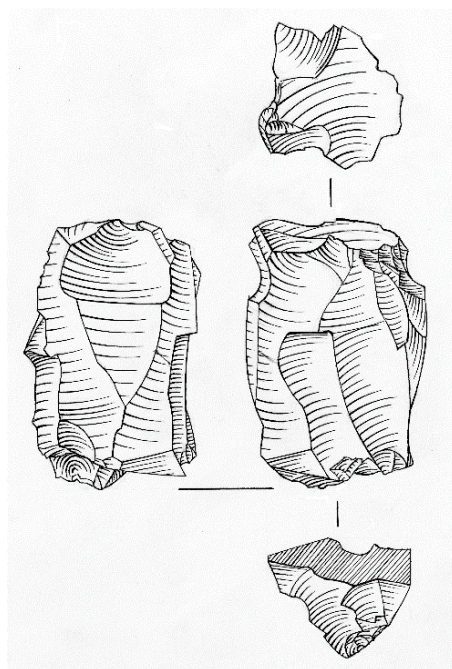


Fig. 5. *Opposed-platform* core from Howburn, South Lanarkshire (Ballin et al. 2018; artist: H. Martingell).

The Magdalenian assemblage from the Falconer also includes several typical blade tools, such as one truncated flake and six blade-scrapers.

In the bigger picture, the Palaeolithic finds from the Falconer Museum have several use values, such as supporting the continued research into the Scottish Hamburgian by offering insight into the Period's main lithic reduction technique (shared with the Magdalenian and Creswellian industries), but also by giving young Scots an opportunity to look into the daily lives of the Acheuleans and the Neanderthals, two now extinct species of human beings. With the artefacts from three lithic industries, visitors of the Falconer Museum can look at three different species of humans at once, *homo erectus*, *homo neanderthalensis* and *homo sapiens*.

In terms of its research potential, the early Palaeolithic material from the Falconer clearly matches similar collections at the larger museums in Edinburgh and Glasgow.

LITERATURE

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APPENDIX – Palaeolithic finds from the Falconer Museum

<i>Museum reference</i>			<i>Description</i>	<i>Site</i>
Lower Palaeolithic				
1897	25	A	Pointed hand axe	St Acheul, Valley of the Somme
1897	25	B	Cordate hand axe	St Acheul, Valley of the Somme

1897	25	C	Cordate hand axe	St Acheul, Valley of the Somme
1897	25	D	Irregular hand axe	St Acheul, Valley of the Somme
1897	25	e	Cordate hand axe	St Acheul, Valley of the Somme
1897	25	f	Cordate hand axe	St Acheul, Valley of the Somme
1897	25	g	Small cordate hand axe	St Acheul, Valley of the Somme
1897	25	h	Hard-hammer blade	St Acheul, Valley of the Somme
1981	81	ao	Hard-hammer flake	St Acheul, Valley of the Somme
1981	81	ap	Ficron hand axe	St Acheul, Valley of the Somme
Middle Palaeolithic				
1979	194	b	Hard-hammer flake	Le Moustier, Dordogne
1981	81	ad	Levallois flake	Le Moustier, Dordogne
1981	81	ae	Side-scraper on Levallois flake	Le Moustier, Dordogne
1981	81	af	Side-scraper on distal flake frag.	Le Moustier, Dordogne
Upper Palaeolithic				
1979	194	c	Distal frag. of blade	La Madeleine, Dordogne
1979	194	d	Distal frag. of blade	La Madeleine, Dordogne
1979	194	e	En eperon blade w retouch	La Madeleine, Dordogne
1979	194	f	En eperon blade	La Madeleine, Dordogne
1979	194	g	Distal frag. of blade	La Madeleine, Dordogne
1979	194	h	Blade	La Madeleine, Dordogne
1979	194	i	Distal frag. of blade	La Madeleine, Dordogne
1979	194	j	Blade	La Madeleine, Dordogne
1979	194	k	Blade	La Madeleine, Dordogne
1979	194	l	Blade	La Madeleine, Dordogne
1979	194	m	En eperon blade w retouch	La Madeleine, Dordogne
1979	194	n	En eperon blade	La Madeleine, Dordogne
1979	194	o	Blade frag.	La Madeleine, Dordogne
1979	194	p	Distal frag. of blade	La Madeleine, Dordogne
1979	194	q	Distal frag. of blade	La Madeleine, Dordogne
1979	194	r	Distal frag. of microblade	La Madeleine, Dordogne
1979	194	s	Blade frag.	Les Eyzies, Dordogne

1979	194	u	Soft-hammer blade	Les Eyzies, Dordogne
1979	194	v	Truncated flake	Les Eyzies, Dordogne
1981	81	a	Blade frag. w retouch	La Madeleine, Dordogne
1981	81	b	Blade frag.	La Madeleine, Dordogne
1981	81	c	Blade frag.	La Madeleine, Dordogne
1981	81	d	Distal frag. of blade	La Madeleine, Dordogne
1981	81	e	Flake	La Madeleine, Dordogne
1981	81	f	Blade	La Madeleine, Dordogne
1981	81	g	Microblade	La Madeleine, Dordogne
1981	81	h	Distal frag. of blade	La Madeleine, Dordogne
1981	81	i	Blade	La Madeleine, Dordogne
1981	81	j	Distal frag. of crested blade	La Madeleine, Dordogne
1981	81	k	En eperon blade	La Madeleine, Dordogne
1981	81	l	Blade frag.	La Madeleine, Dordogne
1981	81	m	Distal frag. of blade	La Madeleine, Dordogne
1981	81	n	Frag. of microblade	La Madeleine, Dordogne
1981	81	o	En eperon blade	La Madeleine, Dordogne
1981	81	p	Distal frag. of blade	La Madeleine, Dordogne
1981	81	q	Flake	La Madeleine, Dordogne
1981	81	r	Crested blade	La Madeleine, Dordogne
1981	81	s	Blade frag.	La Madeleine, Dordogne
1981	81	t	Blade	La Madeleine, Dordogne
1981	81	u	Crested microblade	La Madeleine, Dordogne
1981	81	v	Blade-scraper	La Madeleine, Dordogne
1981	81	w	Blade-scraper	La Madeleine, Dordogne
1981	81	x	Blade-scraper	La Madeleine, Dordogne
1981	81	y	Blade-scraper	La Madeleine, Dordogne
1981	81	z	Blade-scraper	La Madeleine, Dordogne
1981	81	aa	Blade-scraper	La Madeleine, Dordogne
1981	81	ab	Poss. opp.-platf. core or robust burin w burin-edges at three corners	La Madeleine, Dordogne
1981	81	ac	Opposed-platform core	La Madeleine, Dordogne
1981	81	ag	Blade scraper	Les Eyzies, Dordogne
1981	81	ah	Distal frag. of blade	Les Eyzies, Dordogne
1981	81	ai	Frag. of side-scraper	Les Eyzies, Dordogne
1981	81	aj	Distal frag. of blade	Les Eyzies, Dordogne
1981	81	ak	Blade w finely faceted platform remnant	Les Eyzies, Dordogne
1981	81	al	Blade w finely faceted platform remnant	Les Eyzies, Dordogne
1981	81	am	Blade w finely faceted platform remnant	Les Eyzies, Dordogne
1981	81	an	Single-platform blade-core	Les Eyzies, Dordogne

About the author

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