

PAPER

Boucher de Perthes and the Discovery of Human Antiquity

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Why did Boucher de Perthes' discoveries of handaxes in the Somme River's gravels need to be verified by English geologist Joseph Prestwich, and antiquarian John Evans, before members of the French Academy of Sciences changed their minds about evidence for the antiquity of humanity? The problem was not with the evidence itself, but with the way Boucher de Perthes interpreted and published it. Teetotal, but an over-imaginative Romantic, a provincial bureaucrat and an antiquarian scholar, an autodidact, and a generous provider of charity to local workers and early advocate for women's education, Boucher de Perthes was not only eccentric and remarkable, but also his own worst enemy. He was easily dismissed by the scientific elite of Paris until more handaxes were found at other sites and in different countries, and were recognised as being similar to those found at Abbeville.

At least for thinking people the world was never the same after 1859. This was of course the year Charles Darwin published *On the Origin of Species*. But the year also saw another, largely independent scientific revolution, that even more quickly challenged how people thought about their place in the scheme of things. This was the demonstration in Northwestern Europe, largely in France and England, that the human story does not extend back only some half-dozen millennia, as received opinion in those days would have it. Instead it showed that people of one sort or another had actually lived alongside now-extinct animals in the so-called deep time of geological history, well before the earth's landscape had assumed its present form. At stake was what was referred to as 'the Antiquity of Man' controversy. Once resolved, however, it took on concrete form in what we know today as the Palaeolithic, or Old Stone Age – the first, and by far the lengthiest stage of the prehistoric archaeological record.

The story of how this came about is as tangled as any in the history of science, just the sort of thing evolutionary biologist and historian of science, Stephen Jay Gould would have delighted in (although he never tackled it head-on). Many of the ablest researchers involved were guided by scientific doctrines that a modern reader would dismiss as absurd. Then too, the thinking of nearly everyone who got involved in the question, whether promoting or opposing the notion of human antiquity, was coloured by assumptions regarding human nature and man's place in nature that only served to skew, if not

obscure altogether, their view of the data most relevant to their task. And, indeed, while the revolution was sure to take place sooner or later, it could easily have come about in quite a different way, at quite a different time, and have been anchored in an altogether different block of archaeological and geological evidence. But all I shall do here is sketch a few highlights of the story, especially as they happened to play out in the history of the man whom most regard as its central figure, one Jacques Boucher de Perthes. This is by no means an easy task, as he was in many respects as quixotic and elusive a scientific hero as can be imagined.

What follows is a brief sally of the mind, unencumbered by the usual scholarly baggage of citations and footnotes. However, attached at the end of the piece is a brief list of some of the key references that have informed my narrative and that some readers may wish to pursue on their own.

The Early Years

Jacques Boucher de Perthes was born in 1788, the year before the fall of the Bastille, in Rethel, a small town in the Ardennes region near the northern border of France. His father was Jules-Armand Boucher de Crèvecoeur, a provincial aristocrat who held the distinction of being a corresponding member of the Academy of Sciences in Paris for his work in botany. (Jacques himself was later to replace the 'de Crèvecoeur' of his original name with 'de Perthes', in recognition of his mother's more distinguished lineage.) Once Napoleon I had consolidated his rule, Jules-Armand was named Master of the Customs at Abbeville, the key port of the Somme River in Picardy. His was the formidable task of wrestling with the embargo imposed upon Napoleonic France by England, which here lay just across the Channel.

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Jules-Armand Boucher (he seldom attached 'de Crevecoeur' to his name) was a short but extremely lithe man, who among other things could run after a horse, leap, and mount it from the rear. His son Jacques was equally so athletic and remained agile for most of his eighty years. Somewhat over five feet, six inches in height, rather taller than average for a Frenchman of his day, Jacques was noted for his physical carriage, his horsemanship, and life-long habit of swimming daily in the river (a sight rarely seen in France since Benjamin Franklin's sportings in the Seine a couple of generations earlier). Though usually comfortably well off, he was indifferent to the quality of the food he ate, drank nothing but water, and could as easily sleep on the floor as on a bed. He claimed to be the handsomest of a handsome family (see **Figure 1**), a conceit which probably fostered the vanity he showed in his middle age. For then he took to wearing a wig that replicated the lost dark brown curls of his youth; ultimately he took to a full beard and flowing white hair appropriate to the role of a sage he adopted in his advanced years. His vanity was such that, when no longer young, he resisted sitting for portraits or, once they became fashionable, of carrying photographic cartes de visites.

Although he was to become a wide-ranging autodidact, Jacques' formal education was checkered at best. He would probably be diagnosed today as the possessor of some sort of hyperactive attention-deficit disorder. He seemingly never outgrew it, for as an adult he still found it difficult to mask his impatience when obliged to sit through a sermon or a prolonged discourse. I suspect the real problem was that too many novel and distracting ideas steadily flashed across his mind and he lacked the discipline (or probably even the desire) to control or shape the flow. For better or worse, this was what lay behind his enormous, if ideologically diffuse, productivity. Jacques was not a genius, but he may have had a greater variety of talents than can comfortably fit into any one person.

He joined the customs service while still a teenager, soon finding himself wearing the smart green uniform of what Napoleon liked to think of as a special branch of his army. In the days of the Empire, particularly capable customs officials were often chosen to help shape the direction of France's economic system and even the conduct of its diplomacy. It took Jacques only a few years to gain the enviable distinction of being posted to Genoa, the capital and key port of the newly French-controlled kingdoms of northern Italy. Despite carrying out several confidential missions for the Emperor, he found time to become both a voracious reader and seemingly compulsive writer. And he quickly became a social success at the brilliant dinners and balls that enlivened the capital, for apart from his physical presence and charm, he excelled both as a dancer and musician. Perhaps inevitably, he attracted the eye of the head of Genoese society, the Princesse Borghèse, Pauline Bonaparte, whose zestful brand of free-living would have raised eyebrows even in Gomorrah. Whether their liaison was ever really consummated remains in question, but it did entail a farcical climax of sorts when Jacques was



Fig. 1: Jacques Boucher de Perthes, aged 43.

nearly asphyxiated after becoming trapped for four hours in an armoire in her bedroom, where she had instructed him to hide and wait her coming. After five years of this heady life, Jacques was recalled to France, where his career in the customs service was to continue along bumpy, but still reasonably satisfactory lines until 1814, when the allies occupied Paris and brought Napoleon's Empire to an end.

By this time he had already determined upon a new plan for his future: he would marry, immerse himself in the intellectual ferment of post-Imperial Paris, and gain renown as a poet and playwright. The last, at least on the face of it, was not an unreasonable hope, for he was well versed in the cultural fashions of Paris as well as the literature and thought of the Romantic movement (whose grip he was never to escape). But few of his poems gained attention and even fewer, if any, of his plays ever reached the stage. Nor did he find a suitable wife, let alone some alternative means of maintaining himself in the literary and artistic world of Paris. Hence, once the political situation quietened down under the renewed monarchy and France's need for experienced administrators remained as great as ever, Boucher returned to the customs service. After some lesser postings, he was named in 1825 to succeed his father as Director of Customs at Abbeville. He remained in the post until it was abolished twenty-seven years later, apparently in response to an injudicious pamphlet he circulated about the policies of France's second Emperor, Napoleon III. But he was to remain one of Abbeville's leading citizens until his death in 1868.

Back to Abbeville

Now that he has reached full maturity, I shall refer to Jacques more formally as Boucher de Perthes (or, where it serves to lighten the text, simply Boucher). On his return to Abbeville he settled into his father's large town house, whose store of paintings, natural history specimens, medals, artefacts, and books he continued to augment until he soon found himself living in an overstocked museum.

It, along with its contents, was totally destroyed when Rommel's Panzers devastated Abbeville shortly before the Fall of France in 1940. Little seems to be known of Boucher's daily life and even less of his inner thoughts in his mature days. His correspondence was massive but he seemingly had few, if any, intimate friends. Obviously his halcyon days were over, yet he never found a wife to ease what seems to have been a subdued and rather lonely existence. Outwardly, however, he was warm, gracious, and even gay on occasion, and noted for his generosity and liberal mindedness. An especially attractive trait is the care he was said to take to converse politely and attentively with even the most ignorant and humblest people he happened to encounter. Perhaps revealing in this regard is his financial support of schools for educating the poor, and the substantial yearly sums and prizes he awarded to those judged to be the most worthy and hardest-working female labourers in Abbeville and several other towns in northern France.

The position he commanded in Abbeville is best illustrated by his role in the local *Société d'Émulation*, of which he was president for three decades. Its name may be untranslatable, but the institution (comparable, say, to what were often called Athenaeum clubs in America) is typical of its era. Provincial doctors, lawyers, clergymen, and gentry, along with many merchants and entrepreneurs, often led cultivated lives centered upon books, the arts, archaeology and (not infrequently, quite original) scientific pursuits with a dedication that is rarely seen among their modern counterparts. They met regularly for discussion and the presentation of formal papers, many of which were published in the local society's journal (and occasionally even elicited attention in the great learned academies of Paris). From time to time, a highly regarded one of their number, like Boucher's own father, might be named a corresponding member of one of the academies.

Boucher de Perthes epitomized the spirit of this movement but felt by no means constrained by it. Having taken his daily swim, eaten breakfast, and completed his official duties, he was free to devote most of the day to his great passion – writing. His output was prodigious, amounting by his death (excluding lost poems, plays, and innumerable unpublished manuscripts) to some 49 books occupying a total of 69 volumes. Much of this mined the Romantic vein of his early years, and is largely forgettable. (Though admittedly, judgment in such matters can change: I have recently found his *Emma* [1852], a Gothic romance about a homicidally maniacal woman, described by a modern scholar as an insightful study of the female psyche.) Much of his writings are fairly impenetrable, such as the heavily metaphysical *De la Création* (1838–1841), a five-volume work that Boucher supposedly claimed to have written without consulting any metaphysicians. Yet much else is quite lucid and rewardingly readable today, such as his collection of Breton folklore and the entertaining accounts he wrote of his travels. Then too, a great number of his essays are said to be original and well informed, ranging over such topics as the competing merits of free

trade versus high tariffs, the reform of governmental administration, a proposal for holding world fairs, and steps that need to be taken to improve the economic and living conditions of the poor. A particularly modern note is struck by his pleas for equal rights for women. Perhaps equally modern is that, unlike most nineteenth century meliorists, Boucher seems to have believed that a realistic approach to bettering the human condition must depend upon improving human institutions rather than upon trying to improve human nature.

Antiquarianism and Human Antiquity

As his personal museum and the deliberations of the *Société d'Émulation* make clear, Boucher de Perthes must always have been something of an antiquarian (as prehistoric archaeologists were then called). At least during the first half of his long life, he presumably shared with most of them a view of ancient humanity largely framed, consciously or not, by the Book of Genesis. This was not necessarily because Genesis was believed to be divinely inspired (largely a Protestant English notion that tended to bemuse the largely Catholic French). It was rather because it was the oldest narrative known to Europeans at the time, who by intellectual convention, could only think of the human past with reference to the written record. And according to Genesis, the human presence on earth began only a half dozen millennia ago, was based almost from the start upon farming and herding, and quickly gave rise to advanced metal technology and civilized city life.

As a consequence, antiquarians insisted upon peopling the few millennia that separated the Roman occupation of France and England from the Biblical beginning of humankind, with tribes and nations mentioned in historic records. For a while Noah's descendants or even refugees from Troy held the field. But ultimately antiquarians settled on the Celtic-speaking Gauls and Britons who had confronted the Romans. The notion of a rich Celtic past appealed to national sentiment, especially when flavoured with a bit of romantic Druidomania. But it was no help in organizing the prehistoric archaeological record, which seemed to most antiquarians like an undifferentiated and directionless jumble of artefactual odds and ends – not unlike the jumble that overflowed Boucher's own house *qua* museum. (The scientific antiquarians of Denmark knew better, but theirs is a story to be taken up another time.)

Now, although the Genesis chronology itself provided no room for it, there had long been a suspicion among a scattering of antiquarians in France and England that a more primitive stage of humanity might well lie beyond Celtic times. Particularly intriguing in this regard is a two-page article published by the Society of Antiquaries of London in 1800 by a country squire named John Frere (who happens to have been the great-great-great grandfather of Mary Leakey of Olduvai Gorge fame). Frere describes, and illustrates with excellent engravings, bifacially chipped, pointed stone tools that are obviously what we today call Acheulian handaxes, which he says diggers had found lying alongside giant animal bones deep in a

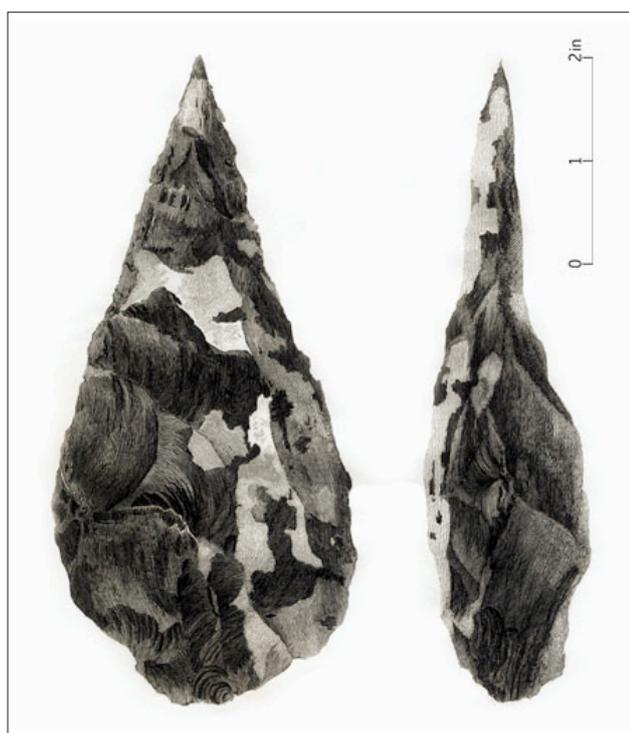


Fig. 2: Hoxne Handaxe, John Frere, 1800.

brick clay pit at Hoxne, Suffolk (see **Figure 2**). (Let me add that handaxes come in a variety of shapes and sizes, most being shorter and squatter – regardless of how artfully chipped – than the elegant ones saved by the diggers at Hoxne.) Frere argues that the axes were ‘fabricated and used by people who had not the use of metals’ and that he is tempted to refer them to a remote period, ‘even beyond that of the present world’. We are not sure what he had in mind: perhaps no more than culturally impoverished folk eking out a living in the ravaged landscape left by Noah’s flood. But to modern ears his words hint at something along the lines of the Palaeolithic. In any event, Frere’s claims evoked no response from his contemporaries. Presumably the more sophisticated ones, in other words, those who viewed the handaxes as something more than mere curiosities, realized that the answer lay in knowing just what, and how old, the Hoxne animals might be.

At least a good part of the answer was to come in the next few decades from geology and its sister science paleontology. It centered upon what modern earth scientists ultimately came to call the Pleistocene, popularly known as the ‘Ice Age’, plus the subsequent current warmer interlude in which we find ourselves today, the Recent (or Holocene). The first began somewhat more than 2 million years ago, the second perhaps 10,000 years ago, and together they comprise the last era of earth history, known as the Quaternary. Geologically, the Quaternary comprises the relatively superficial gravels, sands, and clays that mantle the earth’s present surface, along with such features as glacial moraines, river terraces, and cave fills. Particularly important to the issue of human antiquity is that the older, Pleistocene segment of these deposits qualifies as ‘deep-time’, because its faunal component includes several animals that are either extinct or at least

no longer to be found in Northwestern Europe. Of special interest in this case are the large quadrupeds, or ‘mega-fauna’, notably a variety of extinct elephants (most importantly, the woolly mammoth), hairy rhinoceros, and steppe bison, along with a formidable array of carnivores such as the cave bear, cave lion, and cave hyena.

Some provincial amateur (but by no means amateurish) geologists were soon to locate and recognize the fossilized remains of such animals in the river valleys of Picardy. However, Pleistocene research received its main impetus during the first half of the nineteenth century, particularly in the 1820s and 1830s, from the exploration of bone caves (not to be confused with the rockshelters which only later became the center of ‘cave man’ research in Western Europe). These are real caves, that is, underground tunnels and chambers dissolved within limestone bedrock by running water. Their in-fill consists of poorly stratified clay and silt and sand, much of it washed in from the outside; the deposits are often brecciated by calcium carbonate and covered by a stalagmitic seal known as travertine. Because they often yielded animal bones in great quantity, they deservedly became the bone reservoirs favoured by paleontologists attempting to work out the faunal makeup of Pleistocene times. Neither paleontologists nor the antiquarians of the day had much, if any, familiarity with what we recognize as Palaeolithic stone tools, and in any case few of them expected to find man-made artefacts in ancient deposits dating to geological deep-time. And in any event, being cold, dark, dank, and often serving as dens for the great carnivores, bone caves would hardly seem to have been conducive to human occupation. Yet a few bone-cavers did indeed believe that legitimate artefactual remains were to be found below the travertine that sealed in cave fills, that they were as old as the animals among which they lay scattered, and that – at least in some cases – they had not been washed in from outside the cave but instead derived from intact archaeological features.

I myself find that the story of these bone-cave researchers, both for its scientific and human interest, constitutes the most compelling chapter of the search for human antiquity. However, neither their arguments nor their evidence were sufficient to challenge the scientific establishment, that is, the members of the great academies of France and Britain whose opinions really counted. The latter’s reluctance was not simply a matter of archaeological naiveté but rather of nineteenth century conventions of thought regarding man’s place in nature. For one thing, people feared that pushing human ancestry back into the deep-time of geological history raised the specter of evolution, which would mean descent from some ape-like ancestor (popularly known as ‘going the whole orang’, in honor of Jean-Baptiste Larmack and Erasmus Darwin, Charles’ own grandfather, who believed this to actually have been the case). Most people found the idea repugnant. And the more thoughtful of them added that the intellectual and moral gap between humans and the animal world was in any event too great ever to have been bridged by some sort of transmutation of one species into another. Moreover, given that we were made in some

sense in the image of God, even if by means of secondary (that is, natural) causes set in motion according to some Divine plan, it was largely assumed that it was not until the arrival of the Holocene that a benevolent providence had created a world fit for human occupation. It would take more than bone caves to convince the scientific establishment otherwise.

Boucher Confronts the Old Stone Age

Like other antiquarians of the time, Boucher de Perthes was aware of the claims of the bone-cave researchers. But very likely they interested him less than, say, megalithic monuments and what folklore might hint about what the Druids did there. Things changed, however, in 1828 when a new doctor came to Abbeville and ultimately converted Boucher's diffuse antiquarian interests into an obsession with the question of human antiquity. Dr Casimir Picard (1806-1841) might easily have become the hero of our story had he not tragically succumbed to pneumonia at the age of thirty-four. He, unlike Boucher, was a hard-headed empiricist who believed that a scientific antiquarian must first gain a detailed knowledge of the intrinsic makeup of artefacts themselves before becoming overly concerned about their possible culture-historical significance. (This of course is no different from saying that beetle taxonomy would be an idle pursuit unless anatomical variation in beetles themselves was first well understood.) At the same time, perhaps because he was more a

naturalist rather than typical antiquarian, Picard held that it was the banal – not the beautiful or rare or intrinsically valuable – that really counted in the long run. In his case, the banal meant stone tools. In the few short years left to him, Picard pretty well worked out the basics of lithic technology, among other things how blade and flake tool blanks are detached from prepared cores; and, equally important, how chipped stone tools such as handaxes differed fundamentally from the ground stone, bitted axes that we date to Neolithic and later prehistoric times. He may have been the first to recognize clearly that the former do not simply represent roughed-out tool blanks destined to be converted into the ground stone forms. But it is not clear how far he came to suspect that the two different classes are not simply functionally different but are actually the lithic signatures of two altogether different stages of the archaeological record.

Although Picard did not live to take advantage of the fact, the Lower Somme River Valley was an ideal place to test the possibility. For, in contrast to the seemingly disorganized composition of bone-cave fills, the open-air landscape of Picardy presented a fairly obvious topographic segregation of the Old Stone Age from what came later. Holocene archaeological deposits containing the Neolithic and subsequent stages were to be found in the peat bogs that extended over much of its ground surface. On the other hand, Pleistocene deposits containing handaxes lie buried in the step-like formations of stream terraces that

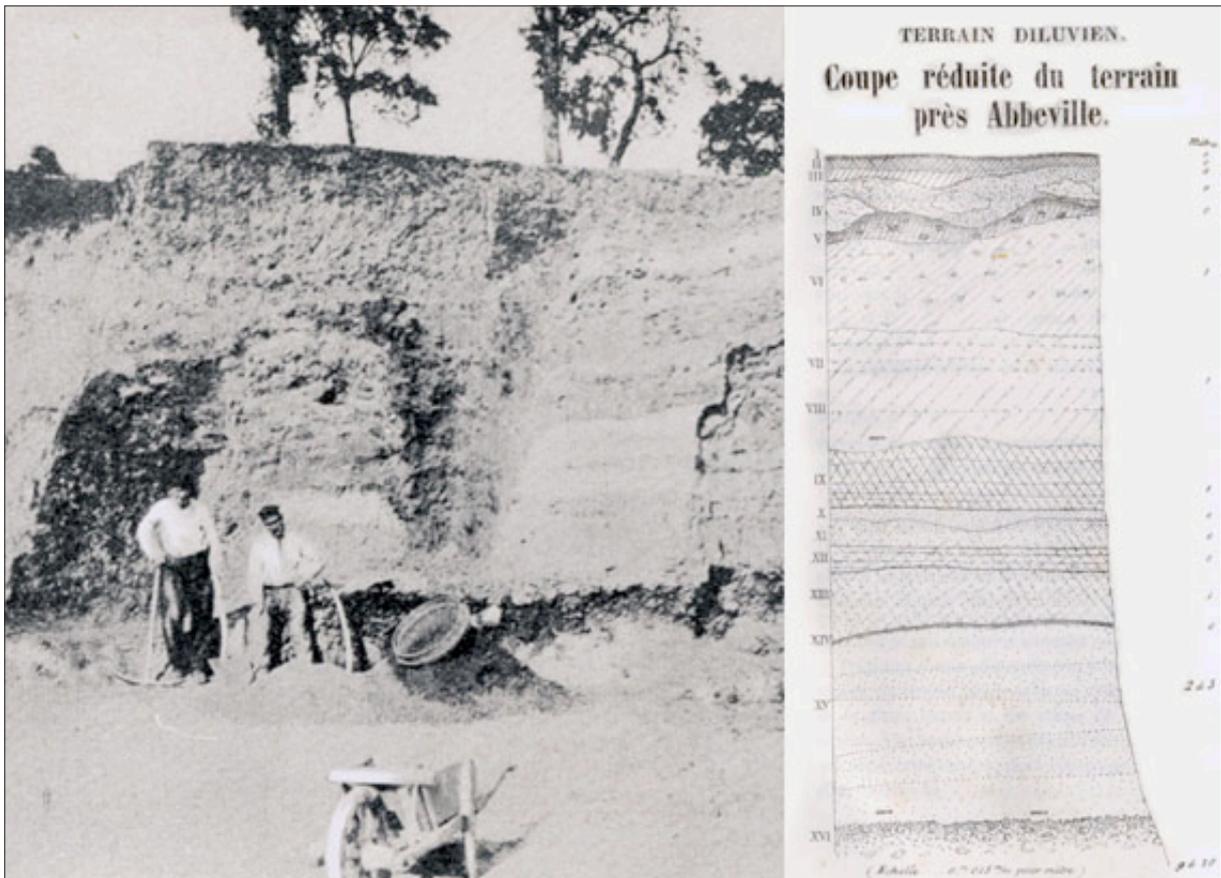


Fig. 3: Stream terrace quarry at Abbeville with Boucher de Perthes stratigraphic section (*Antiquités Celtiques et Antédiluviennes*).

mount the Somme River's valley wall above its present flood plain. (The fact that handaxes are involved in the equation is important, as they tend to be relatively much larger and, to the unpracticed eye, far more distinctive in shape and mode of chipping than are most Palaeolithic stone tools; even quarry workers recognized their distinctiveness, labeling them *langues de chat* or 'cat's tongues'.) How these formations of sand, gravel, and other water-laid (i.e., fluvial) depositions were created was not well understood. Many attributed them to a cataclysmic flood. Today we know they are the product of alternating cycles of stream deposition and down-cutting allied to the changes in climate and sea level that accompanied the alternating glacial and interglacial stages of Pleistocene times. Be that as it may, what concerns us here is that archaeological material, mostly dating to Acheulian times, became incorporated into the terraces during the course of their formation, and in doing so became stratigraphically associated with fossil remains of the great megafauna – notably, or at least most noticeably, elephants and rhinoceroses. With luck, one who examined the deep stratigraphic sections of terraces exposed by sand and gravel quarries could find evidences of this admixture of tools and bones (see **Figure 3**). And, assuming one appreciated its significance, the association could be used to prove that human ancestry did indeed extend back beyond the appearance of the modern world.

This, following Picard's lead, is what Boucher de Perthes set out to do. Most likely in 1842, soon after the doctor's death, he began examining the quarries excavated into stream terraces around Abbeville, gradually building up a collection of handaxes that supposedly had been recovered from the strata that also produced fossil elephants and rhinoceroses (see **Figure 4**). He had found the proof of human antiquity. In the process he had developed the rudiments of a stratigraphically-based science of terrace research, which he very aptly termed 'geo-archaeology'. By 1847 he had completed the first edition of his *Les Antiquités Celtiques et Antédiluviennes* (Celtic and Antediluvian Antiquities). Its curious title calls for explanation. 'Celtic', as we have seen, was the all-inclusive label conventionally applied by antiquarians of the day to the entire segment of the Holocene archaeological record that supposedly pre-dated Roman times. 'Antediluvian' meant the Pleistocene, which most geologists believed had been brought to a close by a great deluge that buried its animals and artefacts (assuming any existed at that time) in thick diluvial deposits like those which made up stream terraces.

Had Picard lived to examine the quarries and write the book, *Antiquités* might have become a turning point in the history of archaeology. But Boucher's treatment of the subject virtually guaranteed the book would fail to gain a thoughtful hearing. To be done effectively, the job called for a straightforward, clearly documented and well illustrated discussion of stone tools and strata – nothing more or nothing less. He failed embarrassingly. For one thing, he never troubled to familiarize himself with stone tool morphology, but rather depended largely upon

handaxes (see **Figure 5**) he bought from the quarry workers – whose supply of legitimate specimens was richly supplemented by fraudulent ones they had made themselves. (They ought not to be judged too harshly, at least at the beginning: they were impoverished day labourers who had simply seized upon the opportunity of putting a few extra sous in their pockets while simultaneously gratifying

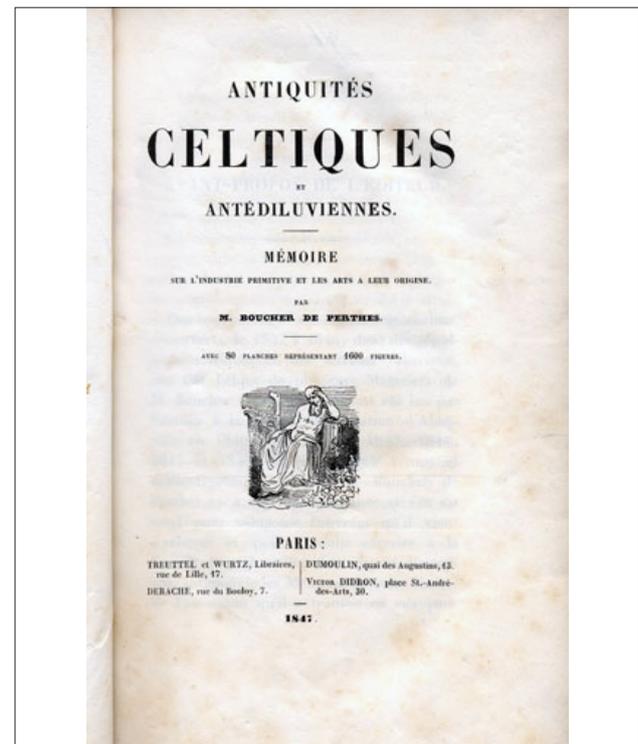


Fig. 4: Title Page to: *Les Antiquités Celtiques et Antédiluviennes* (1847).

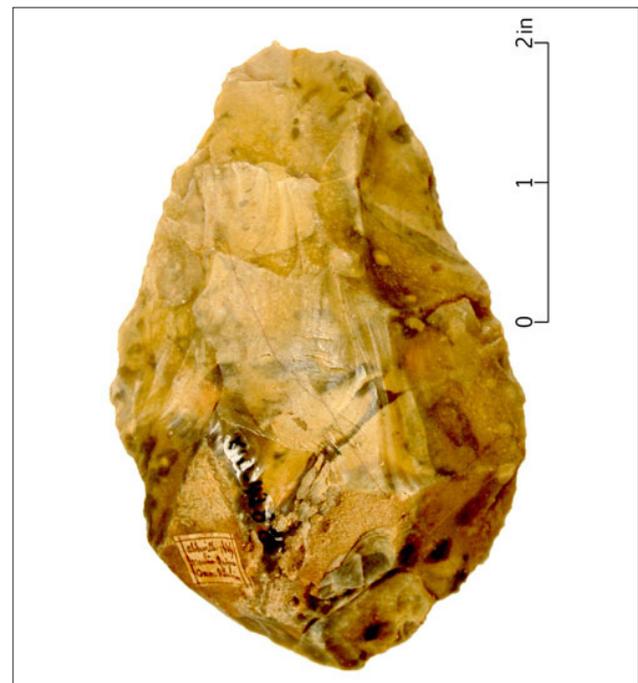


Fig. 5: Handaxe from Abbeville (from the author's collection).

an aristocrat who treated them kindly and whose aims they hardly grasped).

At the same time, Boucher had also become obsessed with what he called 'figured stones' – some in reality no more than naturally shaped rocks and others seemingly miscellaneous chunks of lithic chipping debris – that allegedly depict all sorts of animals, human faces, and even hieroglyphics (see **Figure 6**). These supposedly represented an early stage in the development of language (an idea which an autodidact like Boucher might have picked up from the eighteenth century Italian scholar Vico, whose work was enjoying considerable vogue in France at the time). Indeed, Boucher largely regarded handaxes themselves not as utilitarian implements but instead as symbolic items used for purposes of ritual, exchange, and trade (see **Figure 7**). To add to the confusion, although he could easily have afforded a professional engraver, Boucher insisted upon drawing all his own illustrations, which he did in a perfunctory fashion that obscured as much as it informed (as is obvious in **Figures 6** and **7**). Finally, he added an element of Romantic mysticism to the mix by returning to an argument he first made in *De la Création* several years before: that people of one sort or another had existed over eons of geological time, thanks to a kind of evolutionary metempsychosis. Seemingly the essential spirit of every living creature – including humans – was present from the beginning, and had simply expressed itself in a different outward form in passing from one geological stage to the next. This is not a crude argument for evolution in any scientific sense, but rather a mystical theory of progressive reincarnation.

All this did not go over well in the prestigious halls of the French Académie des Sciences. Boucher's book had sabotaged his own cause; some even dismissed it as the meanderings of a provincial crank. Although the academy went through the motions of naming a commission to examine his stream terrace findings, it in fact did nothing. Among its members were some, such as Edouard Lartet (the first to discover fossil apes) and the evolutionist Isidore Geoffrey-Saint-Hilaire, who agreed with Boucher in so far as human antiquity itself was concerned. But the academy was dominated by disciples of Georges Cuvier, France's greatest nineteenth century paleontologist, whose strong doubts as to the probability of antediluvian man had by then become hardened into the doctrine of its being downright impossible. At the same time, the British scientific elite (unlike some of the British amateur field workers) largely failed altogether to overlook Boucher's over-imaginative claims and perceive the significance of the geo-archaeological discoveries that lay behind them. Thus Darwin later admitted to a colleague that at the time he had found the book to be 'rubbish'.

Nonetheless, Boucher's work stimulated other naturalists in Picardy to make their own forays into the Somme stream terraces. Particularly important among them was the highly capable Marcel-Jérôme Rigollot (1786–1854), who in 1854 published a straightforward and well-illustrated account of his findings at gravel pits around Amiens, some 40 kilometers upstream from Abbeville. Unlike Boucher, he was a solid, hands-on researcher, who also had the good fortune to work in archaeologically far richer deposits. It was also his good fortune that handaxes from the Amiens sector tend to possess more

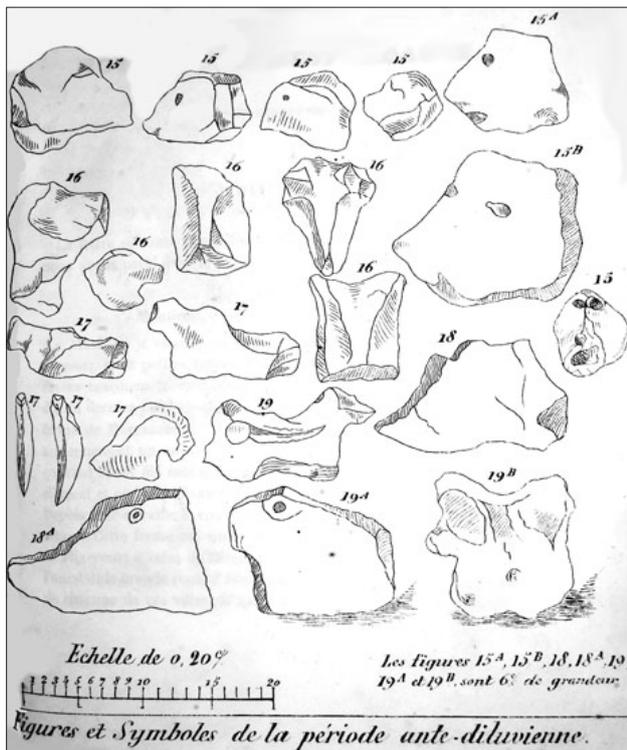


Fig. 6: Some figured stones, mostly faces, birds and a quadruped (*Antiquités Celtiques et Antédiluviennes*).

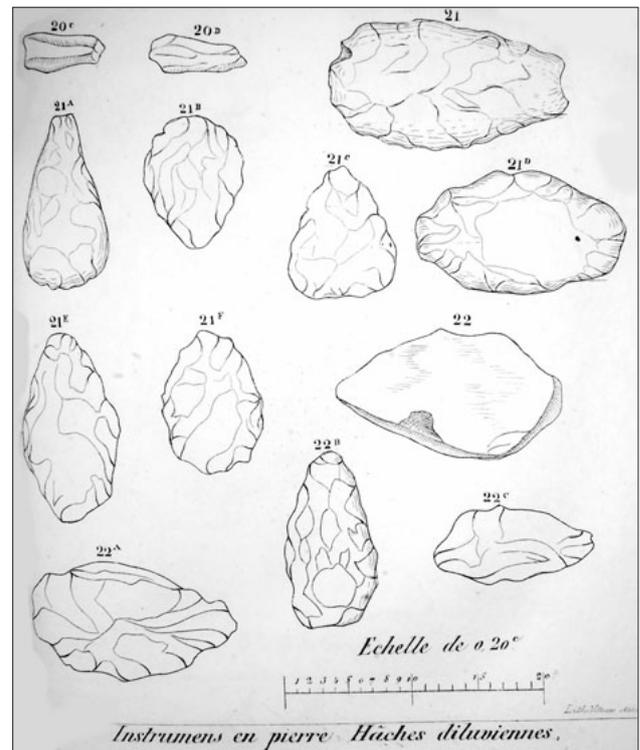


Fig. 7: Handaxes and three flake tools (*Antiquités Celtiques et Antédiluviennes*).



Fig. 8: Handaxe from Saint-Acheul (*Musée de Picardie*).

symmetrical shapes and more skillful chipping than those from Abbeville (see **Figure 8**). Most important were the quarries of Saint-Acheul (from which the Acheulian handaxe complex derives its name), where Rigollot himself retrieved 150 handaxes and verified an additional 400 chipped stone tools recovered by the quarry workers. The artefacts belonged to undisturbed strata in which elephants, rhinoceroses, and other Pleistocene animals were to be found. Rigollot's well-illustrated report of the work stuck strictly to stone, bones, and stratigraphy – nothing more nor nothing less.

Boucher's reaction was characteristically mixed: gratified that Rigollot had vindicated his claims, but worried that he – rather than Boucher himself – might be awarded priority for discovering human antiquity. Rigollot's work did in fact attract interest in Paris, and he was elected a corresponding member of the Académie des Arts et Belles Lettres, only to die on the same day he was elected. Boucher immediately proposed himself as a candidate to fill the vacancy, but to his chagrin was informed that the position had been given to someone else. All this served to feed Boucher de Perthes' finely tuned sense of injury and neglect. Unfortunately, whether prompted by an unquestioned belief in the rightness of his cause or simply stubbornness to admit he might have made mistakes, he refused to re-examine the question of figured stones or even to learn enough stone tool typology to distinguish real from fake handaxes. Instead, he wrote article after article, and book after book, tediously restating his claims. A second edition of *Antiquités Celtiques et Antédiluviennes*

appeared in 1857. It up-dated the 1849 edition on a few important issues, particularly in the realm of geology, but otherwise added little that was new except 140 pages of notes in fine print. Some of the latter, particularly those only tangentially relevant to his case, make delightful reading. One describes peasants' claims that megalithic stones can on occasion roll over in the ground, stand erect, or even take a morning stroll to drink from a neighboring spring – of course, only after making sure that no humans are near at hand to see them do so. But, most of the notes consist of correspondence, newspaper articles, and mini-essays designed to establish his priority. The volume made few converts.

This is an appropriate place to touch upon the darker side of our story, largely known through the work of Léon Aufrère, seemingly the only prehistorian to closely examine Boucher's archives and collections before they were incinerated in the destruction of Abbeville in 1940. For one thing, it appears that Boucher re-labeled many of the flint tools in his collection, presumably to suggest he had actively begun his search well before Picard's death. He was also given to altering the text of old letters, newspaper clippings and speeches before publishing them; his later publications sometimes even misquote passages borrowed from his own earlier printed works. More troubling, because it was ungenerous as well as deceptive, he was in the habit of rewriting his own history in terms that progressively lessened the contributions of others while inflating the magnitude and originality of his own achievement. (Even Picard's role has dwindled well before Boucher finished his story.) Boucher could depict himself as having been a reputable scholar at a time when few actually took him seriously; perhaps even more often, however, he assumes the role of a prophet in the wilderness, a solitary hero who defended the truth against the attacks of misguided critics. Fair to say, much of the opposition he encountered was well deserved. And even his eventual supporters tended to regard his work as scientifically amateurish and he himself as a relic of the obsolete Romantic age. Perhaps Boucher's problem simply boils down to a self-deceptive sense of entitlement, which can blind a researcher not only to the good work of others but – even more gravely – to his or her own weaknesses and errors of judgment.

Vindication

Finally, in 1859, Boucher de Perthes' fortunes changed. Actually, by then the intellectual climate itself had changed, due in part to new discoveries in both France and England that seemed to strengthen his claims, and in part, to a weakening of traditional doctrines regarding man's place in nature. Even though establishment science still resisted the idea of human antiquity, it had nonetheless become a topic that had come to excite the interest of the cultivated public. Telling in this regard is that by 1858 *La Revue des Deux Mondes*, the most prestigious journal of the time, featured a long article on the topic by Emile Littré – not a scientist at all, but instead a distinguished philosopher and France's greatest lexicographer. He gave

the human antiquity question an informed and sympathetic, if inconclusive, hearing. This and similar articles in the Anglo-Saxon world at least convinced people that the question of human antiquity deserved to be taken seriously.

The breakthrough came when the British palaeontologist, Hugh Falconer, who had already met Boucher de Perthes, began urging his colleagues to visit Abbeville. The trip was soon made in 1859 by the Pleistocene geologist Joseph Prestwich and the antiquarian John Evans (who fathered both the British school of lithic archaeology and Arthur Evans of Minoan fame). Both belonged to the British scientific establishment, which had just been newly aroused from a long period of disinterest in the human antiquity question by the work of first-rate amateur excavators at the newly discovered bone-cave of Brixham, in Devon. They were graciously received by Boucher, examined the evidence from Abbeville and Amiens, and found themselves – apparently somewhat to their surprise – becoming converted to human antiquity. Some say the matter was clinched when they were summoned to photograph a handaxe still lying *in situ* in the wall of a gravel pit at Saint-Acheul. There soon came a flurry of distinguished cross-Channel visitors, and shortly afterward the British scientists (at least on the whole) declared themselves convinced of human antiquity. And the French academicians, some of whose distinguished members revisited the Somme on their own, also (at least on the whole) agreed. This chapter of our story is too well known even to the casual reader of archaeological history to warrant further detail here. Instead, let us touch briefly upon a couple of related points.

For one thing, contrary to what some writers have implied, the events of 1859 do not show that it was actually the British who established human antiquity. Both Evans and Prestwich (both of whom wrote excellent accounts of Abbeville and Saint Acheul) were quite clear on the matter, taking care to recognize Boucher de Perthes' priority and even generously glossing over his more extravagant claims and downright mistakes. He might be an amiable fanatic but he was by no means the crank of former years. Nonetheless, the role of British scientists in confirming Boucher's discoveries was considerable, thanks not only to their expertise and thorough weighing of the evidence, but as well to the influence they enjoyed in the French Academy of Sciences, whose members tended to value the opinions of eminent foreigners above those of their own provincial countrymen who had done most of the fieldwork.

There was an ironic side to the affair, however. For I doubt that Prestwich and Evans could not help having been discomfited to learn that solid evidence of human antiquity had, all along, been waiting to be found in their own country. The more immediate shock came when Evans, upon returning from his first trip to Abbeville, was 'horrified' when he happened by chance to come upon John Frere's long-forgotten handaxes housed at the Society of Antiquities. He immediately convinced Prestwich to visit the brick clay pits at Hoxne, whose deposits are not

dissimilar in kind from those of the Somme and in fact sample one of Europe's richest Acheulian localities. It soon became evident as well that some English stream terraces, including a few studied by Prestwich himself, contained handaxes that had gone unrecognized, presumably because it had not occurred to geologists at the time to look for any there.

The second point is more subtle. Perhaps because Darwin's *On the Origin of Species* and Boucher de Perthes' vindication took place in the same year, it is widely assumed that the establishment of human antiquity quickly led to the acceptance of human evolution. Far from it. True, the first is obviously a precondition to the second: since people could not have descended from some remote ancestral form had our lineage not indeed extended back into geological deep-time. But at first, in fact, the establishment of human antiquity mostly served simply to reinforce the views of those who already happened to believe in human evolution. Those who did not were more likely to make a characteristically nineteenth century compromise between an article of faith and an article of fact. The first was that most still believed that the world as we know it was expressly designed by a benevolent creator to make the earth fit for human occupation. The second required admitting that nonetheless the handaxe makers must in fact have lived alongside now-extinct species such as woolly mammoths and hairy rhinos – in short, denizens of an earlier world.

Reconciling faith and fact in this case hung upon the matter of timing: the handaxes need not really be so old after all, if one assumed that the elephants and rhinos had only newly disappeared. The argument was valid at the time. After all, many Pleistocene animals are still very much with us – for example, the reindeer, aurochs, and ibex. And, after all, the stream terraces that housed them might well be of fairly modern origin. For, as we have seen, most geologists in Boucher's day failed to appreciate that they are a by-product of drawn-out, relatively gradual fluctuations in glacial climate; instead, it seemed likelier that they resulted from an abrupt, cataclysmic flood that could have excavated and re-molded a river valley virtually overnight. Hence one was free to argue, as did Prestwich himself, that the Pleistocene need not constitute deep time after all, but no more than an earlier phase in the unfolding of the modern world. Humans might be a bit older than was once thought, but by no means so old we need bring evolution into the matter. Of course this compromise view failed to stand up, for very long, against the advance of Quaternary geology or the later realization that handaxes easily dated back to some 200,000 or 300,000 years ago. But it did give those who needed it, breathing space to absorb the evidence for human antiquity, without having to worry over its possibly unwelcome implications as to our origins and place in the natural world.

Coda

Boucher de Perthes' last decade of life remained as crowded with incident as any that went before. In 1863 he rewarded the workers in the Moulin Quignon quarry at



Fig. 9: Engraved mammoth tusk from La Madeleine, Lartet and Christie 1864 (Photo: Delporte, with permission from Don Hitchcock, donsmaps.com).

Abbeville 200 francs for discovering a portion of a human jaw and several handaxes which, they claimed derived from one and the same stratum. Boucher had realized his final ambition: the discovery of skeletal evidence for fossil man. The business got off to a bad start, however, when the British almost immediately suggested (correctly, as it ultimately turned out) that he had been defrauded by the quarrymen. He did not hesitate to voice his hurt and sense of betrayal by those who had vindicated him only a few years before. Happily, the French reaction was more encouraging. The affair climaxed somewhat melodramatically in a formal hearing, which ended in the English delegation largely voting against, and the French for, the validity of the Moulin Quignon finds. Possibly by then, the French had become a bit tired of gentlemen coming across the Channel to tell them what to accept and what to reject among findings made on French soil. Possibly they were reluctant to disappoint a seventy-five-year old gentleman who had so often, and sometimes unfairly, been disappointed before. Then too, the newspapers got involved, no doubt welcoming a chance to exploit the undercurrent of suspicion and mistrust that has always coloured Anglo-French relations. Whatever the reason, the Moulin Quignon affair had the happy, if ironic, result of freeing Boucher from the grip of the academy and of bringing his achievements before the public eye.

Indeed, he became a celebrated figure, soon to be named an 'Officier de la Légion d'Honneur' by the Emperor, Napoleon III, (who eleven years earlier had fired him from the customs service). Boucher's final triumph came when the Emperor requested that he place the highlights of his archaeological collection on permanent display at the newly founded Musée des Antiquités Nationales, overlooking Paris in the refurbished palace at Saint-Germain. Discretely culled by others of their fake artefacts and fanciful figured stones (which disappeared into museum drawers, never to be seen again for all I know), they

furnished a splendid complement to the archaeological exhibits at the great Paris Exposition Universelle of 1867, the first world's fair to highlight prehistoric research. Also on display was a newly discovered artefact from a stratigraphically sealed archaeological deposit at the famous rockshelter of La Madeleine (from which the Magdalenian derives its name), which removed any lingering doubts about Boucher's claims. It was a portion of a mammoth tusk upon which some ancient man or woman had carefully engraved a depiction of none other than a mammoth itself (see **Figure 9**).

Boucher de Perthes died in 1868 at the age of eighty, long enough to see the completion of his eight-volume autobiography, *Sous Dix Rois* (Under Ten Kings). Like many of his earlier accounts, its accuracy is open to question. It seems a pity that one who did so much to make history also did so much to muddle it. But let us not detract from the importance of his very real achievements. It is certainly fair to say that – thanks to his long life, doggedness, enormous prolixity, and, to be sure, being right on at least the key issues – Boucher had become the leading figure in what might be called the heroic era of Old Stone Age research. Sadly, in contrast to most eminent Frenchmen of recent centuries, almost nothing remains to be seen of his world. Apart from a bell tower that houses the modern Musée Boucher de Perthes, we cannot walk the streets of Abbeville and see anything that would have been part of the fabric of his daily life. But one appropriate monument did survive the town's destruction: Boucher's tomb, on which reposes his full-sized likeness, seemingly having fallen asleep after a hard day's work, a manuscript at his side and a pen just slipping from his fingers.

Suggestions for Further Reading

Three French sources focus directly upon Boucher de Perthes. Cohen and Hublin (1989) is a highly readable and informative account of his life both in and out of

archaeology. Aufrère's two substantial volumes (1940 and 2007) are indispensable, not least because they deal heavily with archives, correspondence and other materials relevant to Boucher that were lost when Abbeville was destroyed at the beginning of World War II. More general French surveys of nineteenth human antiquity research are to be found in Laming-Empeire (1964) and Richard (2008). Several English sources provide comprehensive accounts of how discoveries and debates in nineteenth century earth science and antiquarianism ultimately led to the acceptance of human antiquity, a story in which Boucher himself was but one of many actors. Sackett (2000) is a useful review if only for its brevity and scope; Goodrum (2004) authoritatively treats the scientific milieu in which early man research developed. Grayson (1983) remains the best book-length treatment of the subject. Gamble and Kruszynski (2009), review the events of 1859 from a British perspective.

Aufrère, L 1940 *Figures de préhistoriens. J. Boucher de Perthes*. Préhistoire VII.

Aufrère, L 2007 *Le Cercle d'Abbeville. Paléontologie et Préhistoire dans la France Romantique*. Belgium: Turnhout.

Cohen, C and Hublin, J-J 1989 *Boucher de Perthes. Les Origines Romantiques de la Préhistoire*. Paris: Belin.

Gamble, C and Kruszynski, R 2009 John Evans, Joseph Prestwich and the stone that shattered the time barrier. *Antiquity* 83: 461–475.

Goodrum, M 2004 Prolegomen to a history of Paleo-anthropology: the study of human origins as a scientific enterprise, part II. *Evolutionary Anthropology* 12: 224–233. DOI: <http://dx.doi.org/10.1002/evan.20030>.

Grayson, D K 1983 *The Establishment of Human Antiquity*. New York: Academic Press.

Laming-Empeire, A 1964 *Origines de l'Archéologies Préhistorique en France*. Paris: Picard.

Richard, N 2008 *Inventer la Préhistoire: les Débuts de l'Archéologie Préhistorique en France*. Paris: Vuibert.

Sackett, J 2000 Human antiquity and the Old Stone Age: the nineteenth century background to paleoanthropology. *Evolutionary Anthropology* 37: 36–49.

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