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To cite this article

Flas D., 2014 - The Chronocultural Sequence of Belgian Complexes in the European Aurignacian Context, in White R., Bourrillon R. (eds.) with the collaboration of Bon F., *Aurignacian Genius: Art, Technology and Society of the First Modern Humans in Europe*, Proceedings of the International Symposium, April 08-10 2013, New York University, *P@lethnology*, 6, 00-00.

THE CHRONOCULTURAL SEQUENCE OF BELGIAN COMPLEXES IN THE EUROPEAN AURIGNACIAN CONTEXT

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Abstract

The study of Aurignacian collections from the Meuse Basin, associated with recent fieldwork data, has led to a new overview of the Aurignacian in this region. This work discredits some of the hypotheses advanced for the earliest Aurignacian occupations in north-western Europe and proposes a hypothetical chronocultural sequence based on the most reliable data for this period. The Meuse Basin presents an important concentration of Aurignacian occupations, some of them very rich and this zone is therefore conducive to large scale comparisons, in particular with regions with a better defined chronostratigraphic framework. The existence of technical and artistic similarities between these different European regions also highlights the strong links binding the Aurignacian complex, and is probably an important element for understanding the transition from the Middle Paleolithic to the Upper Paleolithic in Europe.

Keywords

Aurignacian, northwest Europe, lithic industry, symbolic production.

Introduction

Aurignacian occupations are generally rare in the northwest of Europe and are represented by rather sparse assemblages, apart from in the Meuse Basin, in the southern part of Belgium. These traces of the Aurignacian complex are important as they probably correspond to the first dispersals of anatomically modern populations in northern latitudes. Due to the abundance of these assemblages, comparisons with other European regions can be undertaken.

The Belgian Meuse Basin presents a remarkable concentration of Aurignacian occupations in relation to the rest of north-western Europe. In comparison, evidence of the Aurignacian in Great Britain is limited to several artefacts (Dinnis, 2012), the plains of the North of France are scattered with rare assemblages, often with no chronostratigraphic context (Bodu *et al.*, 2013; Brou *et al.*, 2013; Fagnart *et al.*, 2013), and northern Germany, from the Rhine to the Oder, only contains several important sites (Wildscheuer, Lommersum, Breitenbach; Hahn, 1977, 1989) (figure 1). Conversely, at least sixteen Belgian sites are attributable to the Aurignacian (Flas, 2008), including several particularly rich sites. The density of Aurignacian occupations in this region could be linked to the fact that intensive research has long been carried out in the Meuse karst (Otte, Noiret, 2013). Nonetheless, this cannot fully account for differences between regions with much scatter remains, such as Great Britain, where equally intensive research has been conducted since the first half of the 19th century (Flas, 2009; Dinnis, 2013), and the north of France where numerous rescue archaeology operations have only yielded very rare traces of the early Upper



Figure 1 - Map showing the main sites mentioned in the text. (CAD : F. Tessier, D. Flas).

Paleolithic (Goval, Hérisson, 2012; Fagnart *et al.*, 2013). However, it is important to recall that taphonomic conditions in the latter region are not very conducive to the preservation and discovery of early Upper Paleolithic sites (Soriano, 2013).

However, most of the Aurignacian assemblages from the Meuse Basin are from early excavations, dating mainly from the end of the 19th and the beginning of the 20th centuries, and thus present inaccurate and unreliable data. Moreover, the last detailed study of these assemblages was conducted about forty years ago (Otte, 1979). Since that time, major developments have changed our perception and approach to Aurignacian lithic complexes, particularly as far as blade production methods are concerned, leading to a renewed understanding of the chronological and technological structure of the different phases or facies of the Aurignacian complex (Le Brun-Ricalens *et al.*, 2005). Furthermore, a growing awareness of taphonomic factors has underlined problems of reliability in archaeological assemblages and opened the way to a critical revision of formerly advanced hypotheses. In addition, recent excavations (Maisières-Canal; Miller *et al.*, 2004) and chronological and stratigraphic data (Trou Walou and Trou Al'Wesse; Pirson *et al.*, 2012; Miller *et al.*, 2011) have also enhanced our vision of the Belgian Aurignacian.

A program of study for the collections from early excavations was thus initiated and is currently in progress. This revision of the Aurignacian of the Meuse Basin, and in particular the lithic component, began with the study of the Spy Cave collections (Flas *et al.*, 2013) and continued with the examination of the main Aurignacian sites (Trou Magrite, Goyet, Trou du Renard, Trou du Sureau, Trou Al'Wesse, Grand-Abri at Ben-Ahin). The preliminary results of these studies are presented here. This new approach to lithic assemblages is mainly based on recent advances in Aurignacian techno-typology, developed over the course of the past fifteen years for sequences from the South of France. These have resulted in a more accurate description of the technical evolution sequencing of the Aurignacian complex (Bon, 2002; Bordes, 2006; Chiotti, 2003; Le Brun-Ricalens *et al.*, 2005; Michel, 2010; Pesesse, Michel, 2006).

1 - A very early Aurignacian in the northwest of Europe?

Most of the work on Le Trou Magrite was carried out at the end of the 19th and beginning of the 20th centuries, and yielded considerable Mousterian (Ulrix-Closset, 1975), Aurignacian and Gravettian industries (Otte, 1979), as well as several more recent elements from the Magdalenian to the Iron Age (Dewez, 1985, 1987). More recent operations were conducted on the terrace of Le Trou Magrite in 1991-1992, resulting in the identification of several archaeological layers. Among these, *stratum* 3 yielded material attributed to the Aurignacian and radiocarbon dated to $41\,300 \pm 1\,690$ BP (CAMS-10352)¹ (Straus, 1995). As a result of this attribution, certain researchers assumed that anatomically modern humans and the Aurignacian spread across northern Europe at an early stage (Churchill, Smith, 2000; Davies, 2001; Harrold, Otte, 2000; Klein, 2000). However, others expressed reservations as to the reliability of the association between the dated bones and the lithic assemblage (Jacobi, Pettitt, 2000); whereas others suggested ascribing this assemblage to a transitional industry with leaf-shaped points rather than to the Aurignacian (Djindjian *et al.*, 2003; Zilhão, d'Errico, 1999).

The revised study of the material curated at the University of Liège, shows that the attribution of the assemblage from *stratum* 3 to the Aurignacian can be ruled out. Contrary to the typological interpretations advanced up until now (Straus, 1995), no characteristic Aurignacian artefacts, such as carinated pieces or Dufour bladelets, are present in this assemblage. Practically all of the collection displays typological and technological attributes compatible with the Middle Paleolithic (figure 2). Only a few elements (30 out of 2319 artefacts) may possibly be ascribed to the Upper Paleolithic (bladelet fragments, light blades, a crested blade), but are not typical of the Aurignacian.

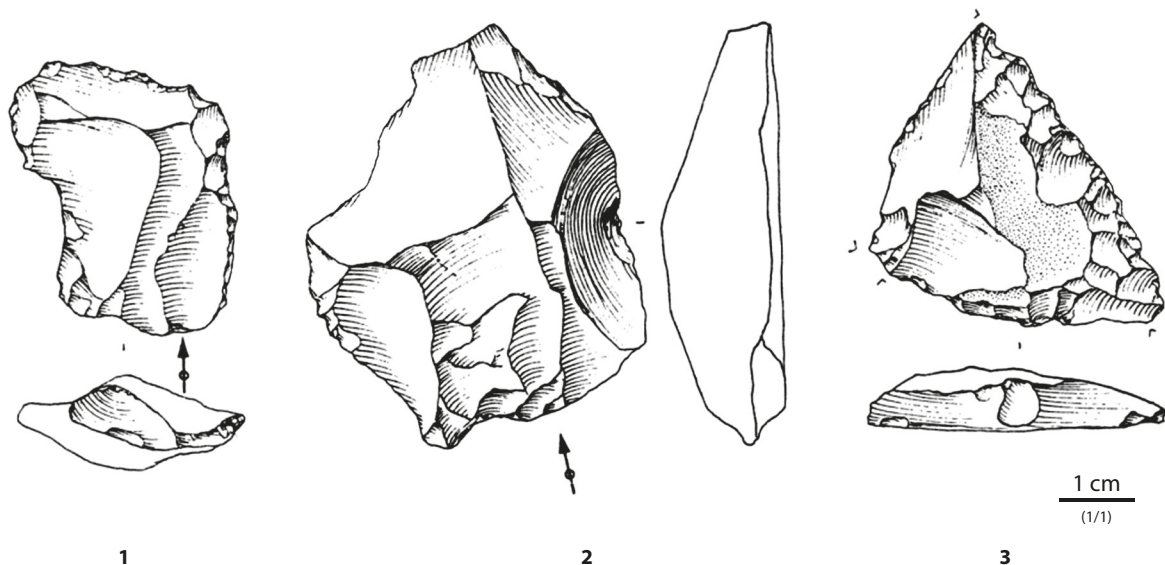


Figure 2 - Trou Magrite, *stratum* 3 (after Straus, 1995).

1: side scraper; 2: side scraper (classified as a nosed end scraper by L. Straus); 3: side scraper fragment.

1. All the dates cited are in non-calibrated radiocarbon chronology.

Moreover, these elements include a mesial fragment of a stemmed piece, similar to the Font-Robert points from earlier excavations (Otte, 1979) and probably Gravettian. In addition, most of the artefacts from *stratum* 3 display significant damage (chipped edges, blunted surfaces), pointing to substantial post-depositional disturbance. This zone also appears to have been affected by bioturbation, leading to the intrusion of much more recent elements, as shown by the presence of metallic slag. These observations show that this assemblage probably corresponds to Mousterian material comprising several intrusive pieces (in particular a Gravettian one), and that given the considerable damage to the material, it may not be in primary position. Therefore the bone dated to 40 000 BP is not incoherent with the lithic material but cannot be used to date the Mousterian occupation on account of the apparent displacement of the deposits.

This research thus confirms previously expressed doubts as to the Aurignacian nature of this assemblage and thereby calls into question the presence of this complex at such an early stage in north-western Europe. This latter question is particularly pertinent in the light of the recently advanced hypotheses founded on the new age estimate of the human remains from Kent's Cavern in England (Higham *et al.*, 2011a). This estimate, which is solely based on a Bayesian model established from the radiocarbon dates of faunal remains, postulates that the fragment of anatomically modern maxillary found in this cave during the 1920s, should be older than ~37 000 BP and thus corresponds to a starting date for the diffusion of the Aurignacian complex into the British Isles. However, the stratigraphic context of this discovery is not reliable (Flas, 2013; White, Pettitt, 2012), as shown by blade fragment refits demonstrating the secondary position of these deposits. Furthermore, no evidence of early Aurignacian occupation is known in Great Britain, only later Aurignacian stages (Dinnis, 2012).

The absence of a very early Aurignacian in north-western Europe is also compatible with data pointing to the presence of another complex in this region; the Lincombian-Ranisian-Jerzmanowician, and the subsistence of the Neanderthal population until around 36 000 BP in Spy Cave (Flas, 2014; Semal *et al.*, 2013).

2 - Is there a proto-Aurignacian north of Arcy-sur-Cure?

In certain stratigraphic sequences in the southwest of France, assemblages with retouched bladelets beneath Aurignacian levels were initially classified as “Perigordian II” by Denis Peyrony (1946). Later, similarities with the Aurignacian complex were taken into account and these assemblages were described as “Proto-Aurignacian” by Georges Laplace (1966). However, this concept was subsequently seldom used and some of these assemblages, at times mixed with retouched bladelets, were classified into diverse categories, namely the “Aurignacian 0” (Djindjian, 1993). Recently, renewed technological approaches to Aurignacian lithic industries have confirmed the differences between the Proto-Aurignacian and the early Aurignacian (or Aurignacian I), in particular concerning the typology of retouched bladelets and the technical relationships between bladelet and blade production (Bon, 2002; Bordes, 2006). The same differences observed in French assemblages have also been documented in Central Europe (Teyssandier, 2008), where the “Krems-Dufour” type Aurignacian, defined by Joachim Hahn (1977), partly corresponds to the Proto-Aurignacian. These early Upper Paleolithic assemblages with large retouched bladelets are part of a far-reaching phenomenon identified from the North of Spain to the Balkans and present similarities with some industries from the Near East (Tsanova *et al.*, 2012). In a European context, the geographic distribution of the Proto-Aurignacian thus appears to be based in the south, and the Grotte du Renne at Arcy-sur-Cure, with an abundant Proto-Aurignacian assemblage in layer VII (Bon, Bodu, 2002), seems to represent its northernmost extension.

The presence of this Proto-Aurignacian is often considered as the first phase of the Aurignacian complex in the northwest of Europe and is a particularly important element for discussions concerning the transition processes from the Middle to the Upper Paleolithic and the dispersal of modern humans in these regions. However, the presence of large Dufour bladelets in several lithic assemblages from the Meuse Basin had only been occasionally pointed out up until now (Otte, 1979). During the recent revision of the material from Spy Cave, two long and rectilinear fragments of Dufour bladelets were identified (Flas *et al.*, 2013). These pieces were similar to Proto-Aurignacian elements and equivalent pieces have also been identified in collections from Goyet, Abri Sandron, Trou du Chêne (Otte, 1979), Scladina Cave (Otte, 1998) and Franquénies (figure 3). However, in all these cases, these pieces lack a precise stratigraphic context and nothing allows us to confirm that they are from an early Upper Paleolithic occupation. It is imperative to continue the examination of collections comprising such bladelets with inverse retouch but caution must be applied to the interpretation of rare elements with no well-defined chronological and stratigraphic context due to the risk of confusion with pieces from the recent Upper Paleolithic. Indeed, similar bladelets with inverse retouch have been identified in the final Magdalenian in the North of France (Valentin, 1995) and in Belgium (Dewez, 1987).

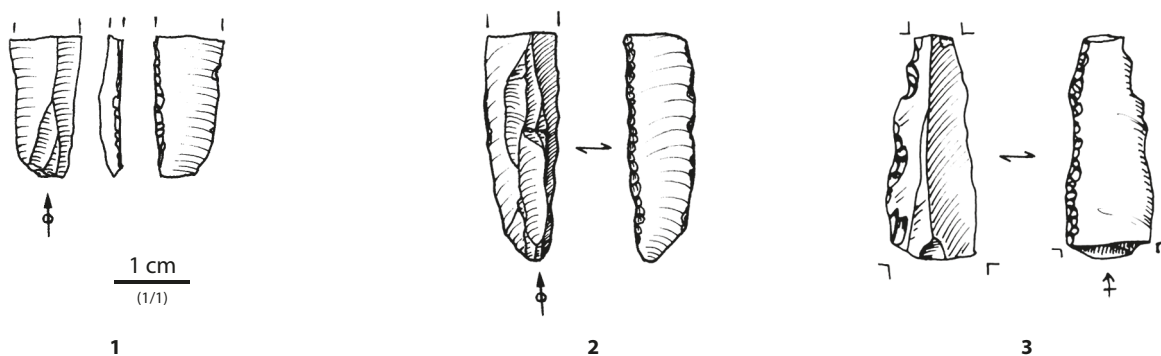


Figure 3 - Fragments of rectilinear bladelets with inverse retouch on the right edge, similar to Proto-Aurignacian Dufour bladelets. 1 and 2: Spy Cave (after Flas *et al.*, 2013); 3: Trou du Chêne (after Otte, 1979).

For the time being, it would be hasty to affirm the presence of the Proto-Aurignacian in the Meuse Basin on the basis of these few artefacts. However, the existence of these pieces should be taken into account in the study of other assemblages from north-western Europe as a more northern Proto-Aurignacian presence remains possible. This is the case, in particular for Begar-C'hastel, on the north coast of Brittany. This site yielded an assemblage with numerous Dufour bladelets strongly evoking the Proto-Aurignacian, in a stratigraphic context preceding the last glacial maximum (Giot *et al.*, 1975; Hinguant, Monnier, 2013). In any event, if the Proto-Aurignacian extended north of the Paris Basin, it could probably only have done so during a period contemporaneous with the northernmost Proto-Aurignacian assemblages currently known, between ca. 36 and 34 000 BP (layer VII of Grotte du Renne, lower unit 04 of Cottés; Higham *et al.*, 2010; Hublin *et al.*, 2012; Talamo *et al.*, 2012).

3 - A chronocultural proposition for the Aurignacian sequence in the Meuse Basin

A - The early Aurignacian with split-based points

Unlike the Proto-Aurignacian, the presence of occupations attributable to the early Aurignacian appears more certain. However, for the time being, no consistent occupation or clearly identified archaeological level back up this affirmation, which is solely based on artefacts from expansive collections probably including artefacts from different phases of the Aurignacian. Nonetheless, comparisons with reliable industries enable us to identify an early Aurignacian component in these mixed assemblages. The presence of carinated end scrapers with a wide retouched edge used to produce curved bladelets over 2 cm long, some of which are transformed by retouch into Dufour sub-type Dufour bladelets, evokes assemblages from the early Aurignacian in other regions (Bon, 2002; Bordes, 2006; Chiotti, 2003; Le Brun-Ricalens, 2005; Pelegrin, O'Farrell, 2005; Teyssandier, 2008). Moreover, several caves from the Meuse Basin have yielded split-based osseous points. The strict correlation between this type of point and the early Aurignacian is subject to debate, as it may also be present in Proto-Aurignacian assemblages, in particular (Ortega Cobos *et al.*, 2005; Tartar, White, 2013). However, to our knowledge, when only homogeneous assemblages are taken into account, no split-based osseous points have been recorded more recently than the early Aurignacian. It thus appears that the several split-based points from the Meuse Basin may be consistent with the previously described lithic elements and probably correspond to an early Aurignacian occupation. These early traces of the Aurignacian complex in this region have been identified in several caves: Spy (Flas *et al.*, 2013), Goyet, Trou Magrite, Trou du Sureau and Trou Al'Wesse (Otte, 1979) (figure 4).

It is difficult to directly date this phase, given the mixed character of the assemblages. At Trou Al'Wesse, a recently discovered bone tool was dated to $33\,600 \pm 550$ BP (OxA-19969; Miller *et al.*, 2011) and could hypothetically correspond to previously discovered early Aurignacian elements (Otte, 1979). At Spy, a point fragment, probably from a split-based antler point, was dated to $32\,800 +200/-190$ BP (GrA-32619), which is probably a rather young age (C/N ratio = 3.6; Semal *et al.*, 2013). Near the Belgian Meuse Basin, the open-air site of Lommersum (Rhineland) yielded an occupation with similar bladelet production to early Aurignacian productions, dated between ca. 35 and 33 000 BP (Hahn, 1989; Matthies, 2012). Up until now, this was the earliest known Aurignacian occupation in these northern regions.

These chronological data are also coherent with the dates for the split-based point assemblages in France, as in layers 14 to 19 at Abri Pataud, ca. 35 000 to 33 500 (Higham *et al.*, 2011b), Abri Castanet from ca. 33 to 32 000 BP (White *et al.*, 2012) and Trou de la Mère Clochette between ca. 35 500 and 33 500 BP (Szmids *et al.*, 2010).

B - The middle Aurignacian with nosed scrapers

The sequences from the southwest of France, between the early “classic” Aurignacian and the recent Aurignacian with carinated burins (*burins busqués*, Vachons burins), often comprise levels characterized by the predominance of carinated “nosed” end scrapers, cores producing frequently twisted and smaller bladelets than during the previous phase (Bordes, 2005, 2006; Chiotti, 2003; Michel, 2010). These elements are frequent in Belgian Aurignacian assemblages (figure 5). They account for the majority of carinated pieces observed during the recent revision of the collections from Spy Cave (Flas *et al.*, 2013). They are also abundant in many other assemblages, in particular at Trou Magrite, Goyet, Grotte de la Princesse Pauline and Trou du Diable (Otte, 1979). However

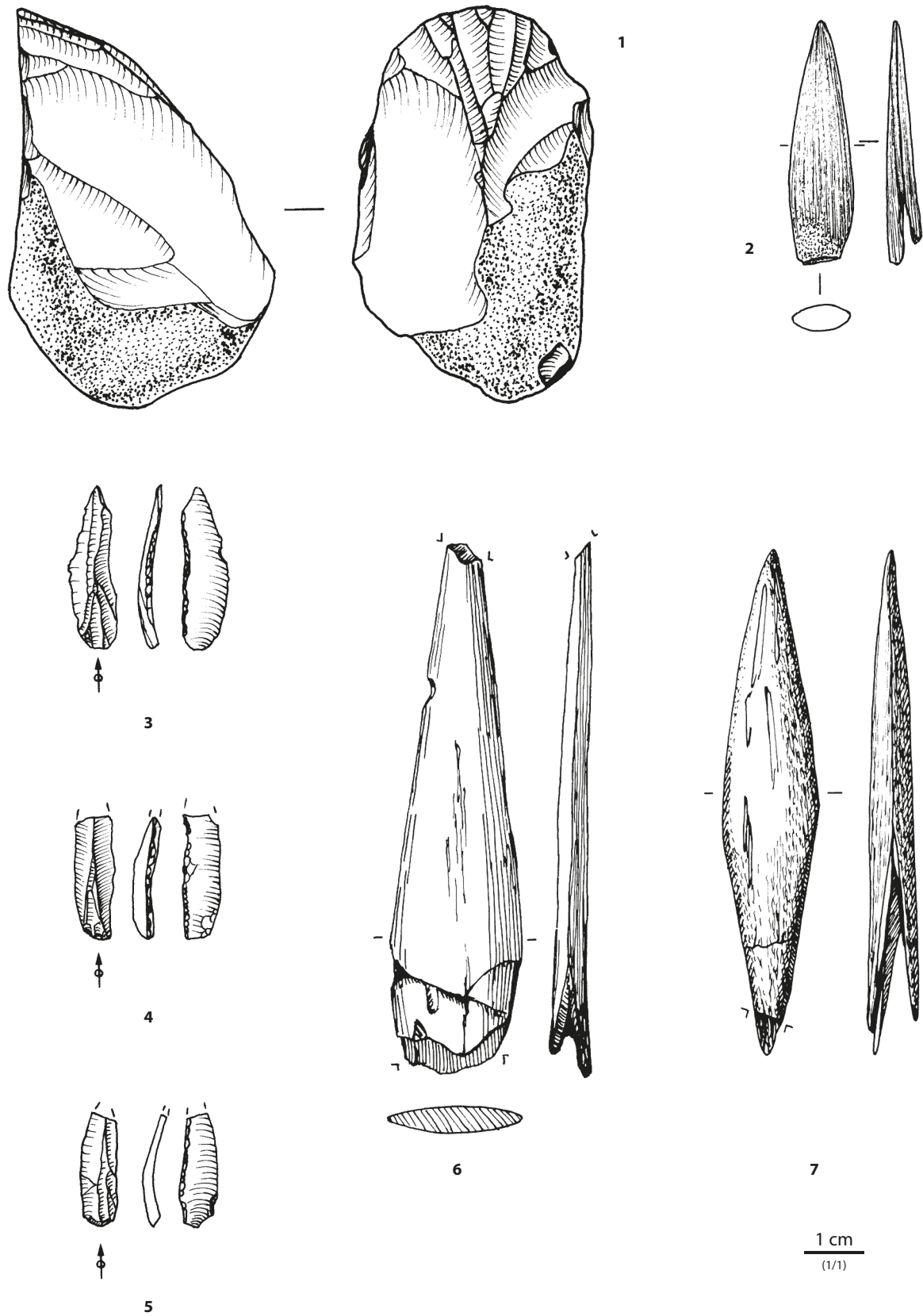


Figure 4 - Elements attributable to the early Aurignacian. 1: carinated end scraper (Spy Cave); 2, 6 and 7: split-based points (2, 6: Spy Cave; 7: Trou du Sureau); 3 to 5: Dufour bladelets (Dufour sub-type), Spy caves (1 to 5 after *Flas et al.*, 2013; 6 and 7 after *Otte*, 1979).

this phase never occurs in consistent and chronologically well-defined assemblages. One of the rare assemblages with a middle Aurignacian series showing little evidence of contamination by other phases of the same complex is Grand-Abri at Ben-Ahin (Destexhe-Jamotte, 1973). The direct dating of the bone material from this latter site could thus potentially shed light on the chronology of this phase in the Meuse Basin. In comparison, in the Abri Pataud sequence, this middle phase of the Aurignacian complex was recently dated to approximately 33 000 BP (Higham *et al.*, 2011b).

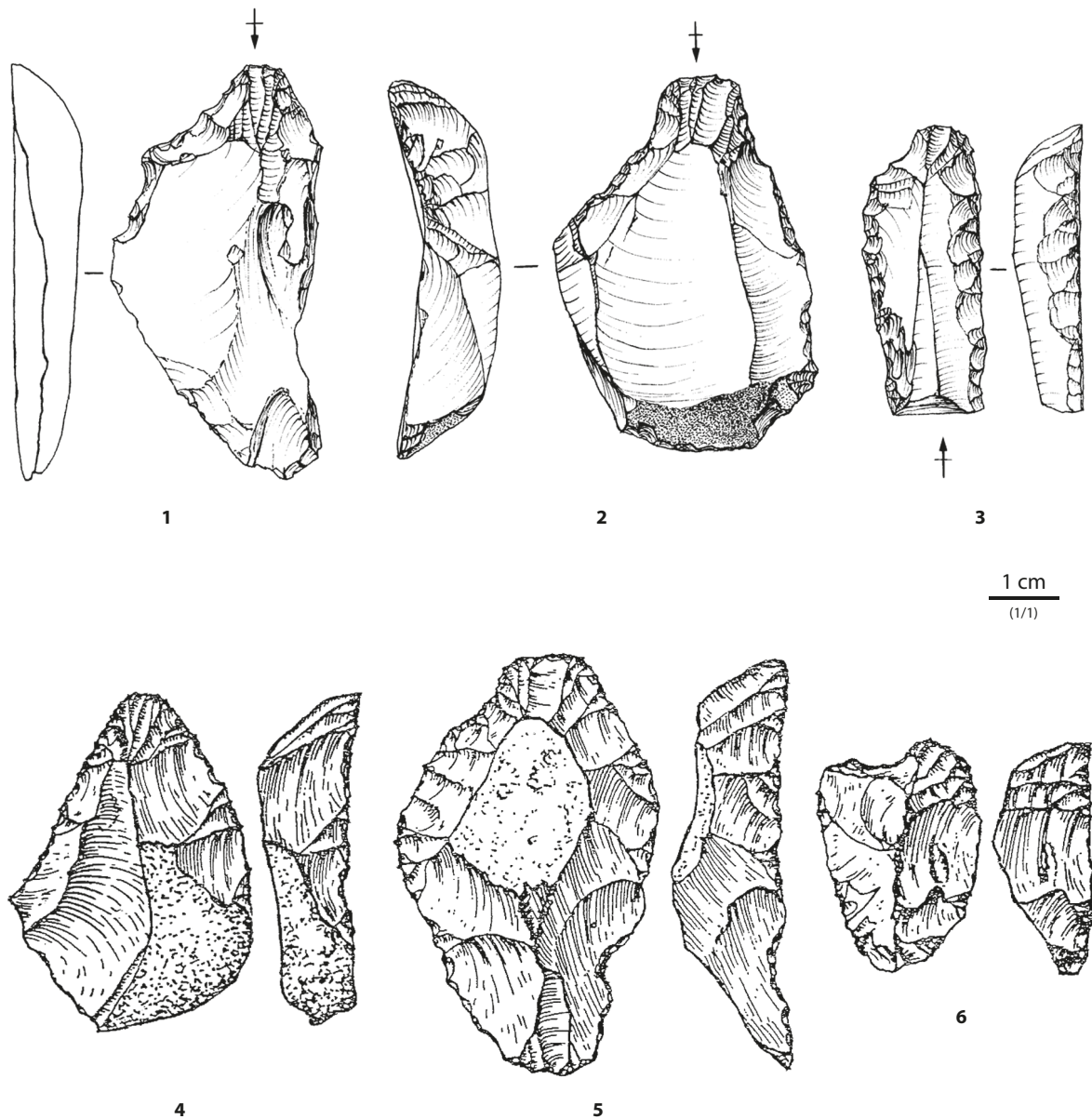


Figure 5 - Nosed end scrapers. 1 to 3: Spy Cave (after Flas *et al.*, 2013); 4 to 6: Grand-Abri (or grotte de la Cave, Ben-Ahin) (after Destexhe-Jamotte, 1973).

C - The recent Aurignacian with burins busqués

In the Aquitaine sequences, “carinated burin” type cores develop in the most recent levels, particularly burins busqués and Vachons burins (Bordes, Lenoble, 2002; Chiotti, 2003; Lucas, 1997; Michel, 2010; Pesesse, Michel, 2006). In Belgium, similar technologies have been identified and show, once again, the strong ties between the different regions of Europe during the Aurignacian period (figure 6). In this way, layer NDB at Maisières-Canal revealed a brief occupation corresponding mainly to debitage activities, including a series of burins busqués and Roc-de-Combe-type Dufour bladelets. The latter are identical to those described in assemblages from the southwest (Flas *et al.*, 2006). A very detailed study of the chronostratigraphic sequence of the site (Haesaerts, 2004) indicates that layer NDB probably corresponds to the Huneborg II Interstadial, dated to 32 500 BP (van der Hammen, 1995).

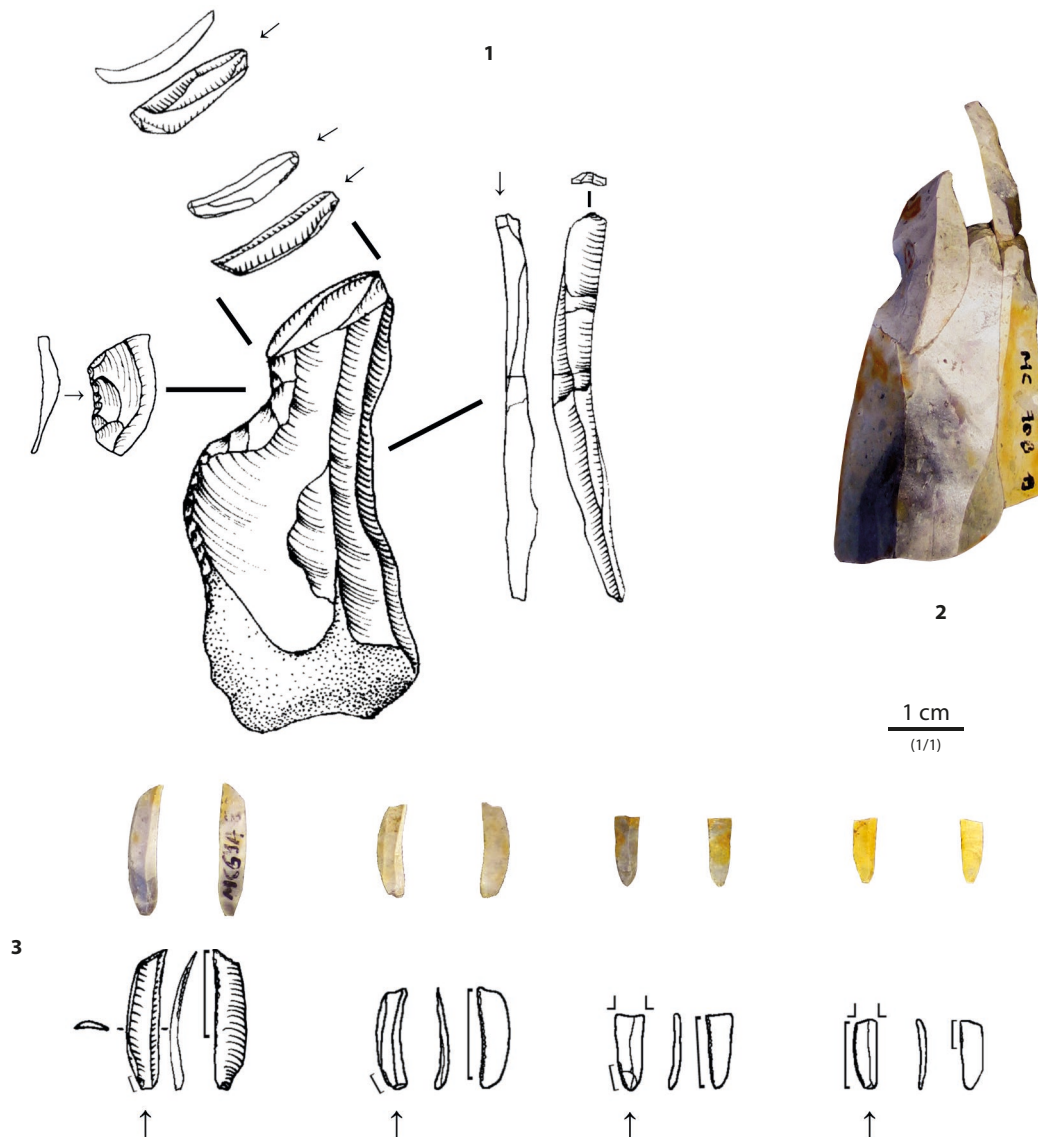


Figure 6 - Maisières-Canal, layer NDB, bladelet production on burins busqués (after Flas *et al.*, 2006). 1: nosed burin and bladelet production products and by products; 2: nosed burin refit, of a burin spall and a notch resharpening flake limiting the length of the bladelet products; 3: Dufour bladelets (Roc-de-Combe sub-type), the retouched zones are underlined.

Another relatively limited but apparently consistent assemblage comes from layer CI-1 from Trou Walou. It is marked by the presence of carinated burins and also yielded a losange-shaped point with a massive base as well as decorative elements (Dewez, 1993). The chronostratigraphy and a former radiocarbon date [29 800 ± 760 BP (Lv-1587) on charcoal] point to an estimation of about 30 000 BP for this occupation (Pirson *et al.*, 2011a, 2011b), which is still in keeping with a recent Aurignacian phase. Trou du Renard is another limited assemblage dominated by carinated burins and burins busqués, alongside Roc-de-Combe-type Dufour bladelets (Otte, 1976), with a hypothetical age of 28 000 BP (Flas, 2005). However, this assemblage may be mixed with elements from more recent periods (recent Upper Paleolithic, Holocene?; Dinnis, Flas, *in progress*). Carinated burins and burins busqués are also present in the heterogeneous assemblages from Spy, Trou Magrite, Goyet and Fonds-de-Forêt (Otte, 1979).

Several Vachons burins have also been identified in the Belgian series, namely at Spy (Flas *et al.*, 2013), Goyet and Trou Magrite (Flas, *in progress*). These are probably from the final Aurignacian phase (Pesesse, Michel, 2006), or at least they correspond to this period in the southwest. These three sites also yielded “Paviland burins”, similar to those identified in certain British assemblages and probably part of the recent Aurignacian (Dinnis, 2011; Flas *et al.*, 2013).

The chronology of the end of the Aurignacian in the Meuse Basin is unclear due to the unreliable dates from Trou du Renard and the absence of chronological data for the assemblages with Vachons burins and “Paviland burins”. In the Aquitaine sequences, the Aurignacian with burins busqués is dated between *ca.* 33 and 32 000 BP at Abri Pataud and precedes the phase with Vachons burins (Chiotti, 2003; Higham *et al.*, 2011b; Michel, 2010). These data are consistent with the rare reliable chronological elements available for the British and Belgian Aurignacian occupations (Dinnis, 2012) bearing the same technologies, between *ca.* 33 and 30 000 BP. From 28 000 BP onwards, another complex emerges, known as the Maisierian, characterized by the presence of stemmed pieces similar to the early Gravettian Font-Robert points and with a very different technology to that of the Aurignacian (Pesesse, Flas, 2012).

4 - The role of symbolic production

Symbolic elements (ornaments, figurines, bone engravings) attributed to the Aurignacian are relatively frequent in the Meuse Basin (Dewez, 1985; Otte, 1979; Lejeune, 1987), but layer CI-1 from Trou Walou seems to be the only consistent assemblage with symbolic productions. These are represented by two perforated cervid teeth and a reindeer bone engraved with regular incisions (Dewez, 1993).

It is likely that symbolic production is associated with Aurignacian occupations in other less reliable stratigraphic contexts but as these assemblages probably comprise different Aurignacian assemblages it is impossible to link them to a specific phase (early, middle or recent) of this complex. This is the case, in particular, at Spy and Grotte de la Princesse Pauline (Otte, 1979). At Spy, ochre-covered ivory “ear-shaped” pendants, spherical ivory beads (represented by all the different production stages from ivory rods to finished products), ivory rings, numerous perforated animal teeth (fox, cervid) and bone tubes decorated with regular incisions are attributed to Aurignacian occupations (Otte, 1974; White, 1995; Khlopatchev, 2013). In the grotte de la Princesse Pauline, an antler pendant and an ivory ring decorated with incisions were found associated with perforated animal teeth (Otte, 1979). The ivory rings from Spy and Grotte de la Princesse Pauline have often been compared to pieces from other sites, such as Paviland Cave, Bockstein-Törle and Arcy-sur-Cure (Otte, 1979; White, 2002). Some of these ivory beads and decorated bone tubes from Spy also display analogies with decorative Aurignacian elements from Cottés (Rigaud *et al.*, 2014).

At other sites, such as Trou Magrite and Goyet, caution is called for as regards the association of symbolic elements with Aurignacian occupations. Certain items, namely beads and fragments of ivory rings, appear to be similar to those mentioned above in other sites and their attribution to the Aurignacian seems to be plausible. But it is more difficult to ascribe other elements to a specific period, in particular the anthropomorphic figurine from Trou Magrite (Otte, 1979; Dewez, 1985), especially considering the fact that this material was mixed with Gravettian and Magdalenian components.

Conclusion

The Aurignacian from the Meuse Basin is the only Aurignacian from northern Europe capable of being compared to other regions, such as the Aquitaine and the Swabian Jura. Nonetheless, assemblages derived from early excavations are often mixed and due to a lack of accuracy and reliability, the propositions outlined here remain hypothetical.

Contrary to postulates concerning Kent's Cavern or Trou Magrite, no assemblage from these regions can be attributed to the Aurignacian between 40 and 35 000 BP. During this period, the Lincombian-Ranisian-Jerzmanowician complex is present and probably corresponds to the last Neanderthal populations of the region. Moreover, Proto-Aurignacian occupations, probably more recent than 36 000 BP, remain too hypothetical in the light of current data and the only strong candidate is the Beg-ar-C'hastel assemblage.

On the other hand, from 35 000 BP onwards, as indicated by the Lommersum dates, the presence of early Aurignacian occupations is probable. This affirmation is based on lithic elements and the presence of split-based spear points in several sites in the Meuse Basin. Finally, the Aurignacian complex seems to display a similar evolution of bladelet technology to that described in the southwest of France: development of carinated end scrapers with a narrow working edge (particularly "nosed" scrapers), then a transition to different forms of carinated burins after 33 000 BP, including burins busqués and Vachons burins. As the chronology of the end of the Aurignacian in north-western Europe is not clearly established, the existence of a gap before the development of the following phase, the Maisierian, at around 28 000 BP, cannot be excluded.

Although the Aurignacian complex seems to break down into different European regional clusters, these regions are connected by contacts, the flow of ideas and population movements, in the same way as an archipelago made up of different islands. These connections are illustrated by the wide diffusion of certain technical practices, such as split-based spear points during the early phase, or the production of Dufour Roc-de-Combe sub-type bladelets from burins busqués during the recent phase, clearly unifying the different Western European regions (Aquitaine, Meuse Basin, Great Britain). The circulation of raw material also indicates extensive networks and trans-regional routes (Le Brun-Ricalens, Bordes, 2007). In addition, the similarity between certain decorative elements from the Meuse Basin and the Swabian Jura or the southwest of France (Khlopachev, 2013; Rigaud *et al.*, 2014; Vanhaeren, d'Errico, 2006) clearly shows strong links between the different regions of the European Aurignacian. This view contrasts with earlier observations of very different complexes dividing Europe, with no apparent contact with each other (Châtelperronian, Lincombian-Ranisian-Jerzmanowician, Uluzzian, Szeletian, to cite but a few).

Nonetheless, we cannot deny that differences exist between the different European regions and it would be misleading to depict the Aurignacian as a monolithic entity (Liolios, Teyssandier, 2008). Although strong similarities link certain regions during certain phases, these connections are variable and probably evolved during the course of the sequence, perhaps with more marked

regionalization phenomena during certain periods (where are the burins busqués east of the Rhine?, Flas *et al.*, 2006). In this respect, even older, low resolution Aurignacian collections from the Meuse Basin enable us to broach these questions and shed light on the history of this complex.

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