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SPY CAVE

125 years of multidisciplinary research
at the Betché aux Rotches
(Jemeppe-sur-Sambre, Province of Namur, Belgium)

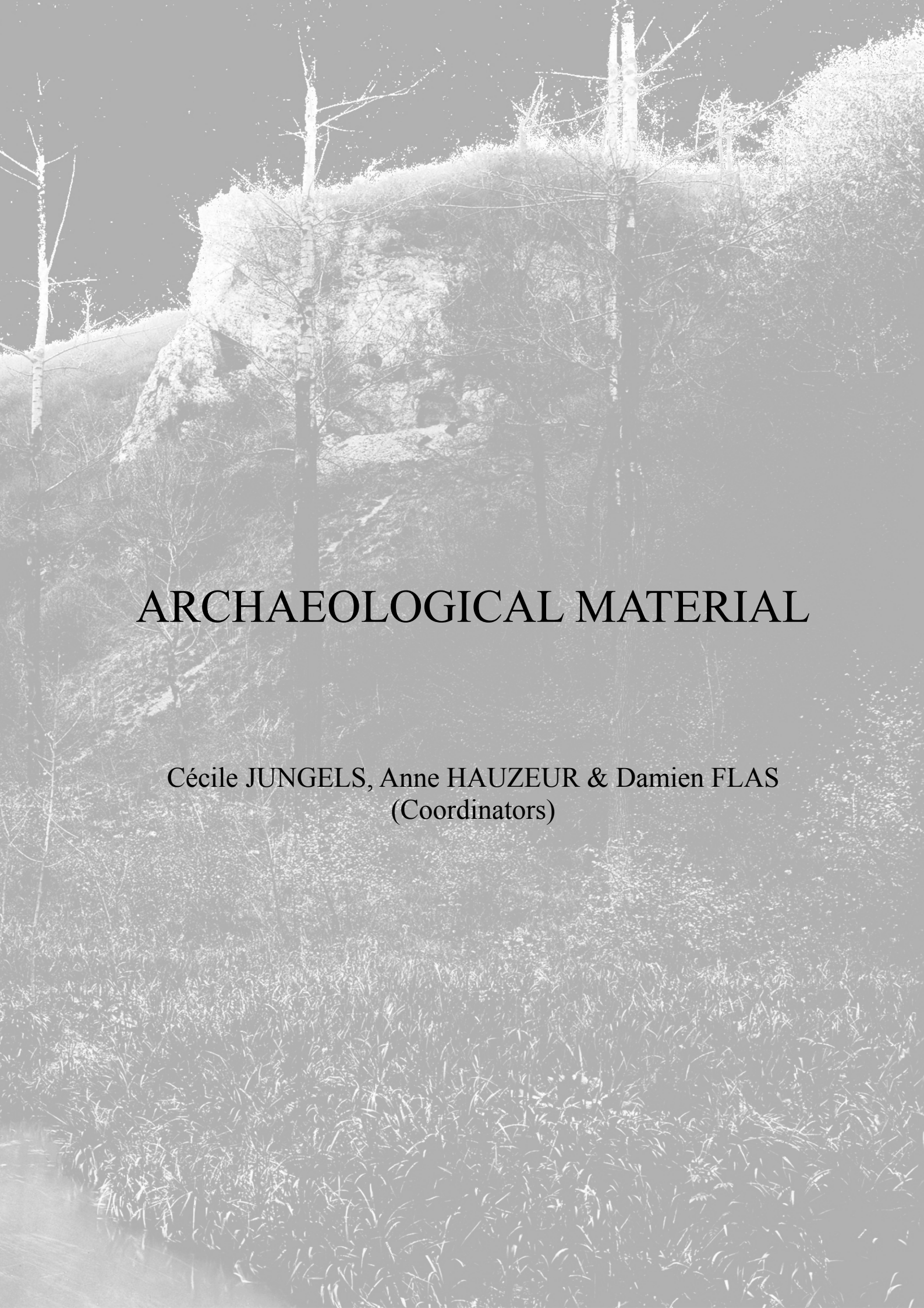
Edited by Hélène ROUGIER & Patrick SEMAL

Volume 1

2013

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A black and white photograph of a rocky hillside. The hillside is covered in sparse vegetation and several thin, bare trees. The foreground is filled with dense, low-lying plants. The overall scene is somewhat desolate and naturalistic.

ARCHAEOLOGICAL MATERIAL

Cécile JUNGELS, Anne HAUZEUR & Damien FLAS
(Coordinators)

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CHAPTER XI

JERZMANOWICE POINTS FROM SPY AND THE ISSUE OF THE LINCOMBIAN-RANISIAN-JERZMANOWICIAN

Damien FLAS

Abstract

Described and drawn since the 19th century, leaf-points, made on blades by partial flat bifacial retouch, are present in the middle layer at Spy. Over the course of different excavations, more than twenty artefacts of this type (“Jerzmanowice points”) were recovered from this site. Coming from a layer also yielding a significant collection of Aurignacian artefacts, leaf-points were long considered as elements belonging to this complex and were used, in the context of the “Aurignacian battle”, as an argument to lend credit to the idea of a “Protosolutrean” Aurignacian. After new studies and discoveries in different sites in Northern Europe, the position of these artefacts has been increasingly clarified. They were differentiated from Gravettian points with flat retouch, then considered as independent elements of the Aurignacian complex, and associated with the Northern complex called the Lincombian-Ranisian-Jerzmanowician, chronologically and technologically transitional between the Middle and Upper Palaeolithic. However, while the independence of this transitional complex, characterised by the presence of Jerzmanowice points, has been advanced by certain researchers, others continue to view these points as a component of the Aurignacian industry, which would thus have had an original facies in Northwest Europe.

The collection of Jerzmanowice points from Spy is particularly interesting in this respect because it comes from one of these sites in which there is an “association” of Aurignacian and leaf-points. However, the revision of the series attributed to the Lincombian-Ranisian-Jerzmanowician supports the hypothesis (based on archaeological, chronological and technological data) of a distinct origin for Jerzmanowice points and the Northern Aurignacian. Behind these often forgotten artefacts is hidden a technological complex essential for understanding of the Middle to Upper Palaeolithic transition in Northern Europe and the associated questions (autonomous development or acculturation; continuity or replacement; relationship to hominin species, Neandertal or modern, present during this period).

INTRODUCTION

“Jerzmanowice points”¹ are leaf-points made on blades with partial bifacial, or only inverse, retouch. These artefacts were discovered in Interpleniglacial deposits (OIS 3) at more than thirty sites in Northern Europe, from Wales to Poland. Most often they are isolated or found with rare lithic artefacts. However, leaf-points have also been found in richer assemblages, which sometimes include characteristic Aurignacian elements. While some scholars group these points to create a particular industry (the

“Lincombian-Ranisian-Jerzmanowician”), weaknesses (few sites, poor assemblages, characteristic points included in assemblages belonging to already-defined complexes) have often led to their consideration as part of a larger technocomplex and not as a homogeneous and independent industry.

Spy is an important site for this debate as its *deuxième niveau ossifère* (“second fauna-bearing level”) yielded a clearly Aurignacian assemblage in which Jerzmanowice points are also present. The reappraisal of these points, from Spy as well as other Northern European sites, in the framework of a doctoral thesis (Flas, 2006, 2008), brought new data about the nature of assemblages with Jerzmanowice points in the context of the Middle to Upper Palaeolithic transition in Northern Europe.

¹ The term has been proposed by H. Müller-Beck (1968: 48), as well as F. Bordes (1968: fig. 191), to name the blade leaf-points coming from Nietoperzowa cave (Jerzmanowice, Cracow region). Typologically, these artefacts are relatively similar to some subtypes of Solutrean “*pointes à face plane*” (Smith, 1966: 48-49).

JERZMANOWICE POINTS FROM SPY: DISCOVERY AND INTERPRETATIONS

In the publication of their works at Spy, M. De Puydt and M. Lohest described four “levels” (De Puydt & Lohest, 1887). Coming from “level C”², they described and illustrated clearly Mousterian artefacts (particularly Mousterian points; Di Modica *et al.*, this volume: chapter IX) and others belonging to the Aurignacian (notably nosed endscrapers and split-based bone points; Flas *et al.*, this volume: chapter XII). This is the same level that yielded the artefacts now called “Jerzmanowice points” (described at that time as “*lames retouchées sur une face et retaillées en pointe*”; De Puydt & Lohest, 1887: 216). They illustrated one of them (here Figure 4: 1) and noted that they found a dozen.

Similar pieces were also discovered during excavations by A. de Loë and E. Rahir, as well as by J. Hamal-Nandrin. They are, indeed, present in the collections of the Royal Museums of Art and History, although these excavators did not mention them in their publications (de Loë, 1905, 1907, 1908; de Loë & Rahir, 1911; Rahir, 1928; Hamal-Nandrin *et al.*, 1932). A few more were discovered by amateurs exploiting the site during the 20th century, among others L. Éloy (1956). Finally, others were recovered from disturbed deposits during excavations made by the Royal Belgian Institute of Natural Sciences in the 1950s.

The precise origin of most of these points is thus unknown, and sometimes appears to be from disturbed deposits. Nonetheless, descriptions and illustrations provided by M. De Puydt and M. Lohest indicate a provenance in the *deuxième niveau ossifère*; in agreement with the patina and alteration of these pieces (Otte, 1979: 273).

According to M. De Puydt and M. Lohest (1887: 235), the three archaeological levels were homogeneous and Mousterian. H. Breuil was the

first to consider that at least part of the assemblages was mixed (Breuil, 1912: 127); he thus reclassified them according to his chronology of Palaeolithic industries. With regard to the Aurignacian from the second level, he insists on the presence of “*pointes protosolutréennes à retouches alternées, sur le dos vers la pointe, sur le plat vers la base ou inversement*”, corresponding to the Jerzmanowice points. In the context of the “Aurignacian battle”, these “Protosolutrean” elements in an Aurignacian assemblage were an argument supporting the idea of the precedence of the Aurignacian on the Solutrean, as had already been proposed by A. Rutot (1908). The interpretation given by H. Breuil would often be taken up again. Part of the collections was even relabelled according to the H. Breuil classification and not their stratigraphic origin (Otte, 1979: 202).

Like Breuil, L. Éloy (1956) also considered the blade leaf-points as Protosolutrean. He classified some of them as Aurignacian and others as Gravettian with Font-Robert points, based on the regularity of flat retouch and leaf-point symmetry. He underscored the similarity of the blade leaf-point illustrated by M. De Puydt & M. Lohest (1887), although from the second level, with points discovered in French Gravettian sites such as La Font-Robert and Les Vachons. Thus, he linked these leaf-points with the tanged and unifacial points from the first level, creating, as Breuil did, an evolution outside of the true stratigraphic origin of these pieces.

D. de Sonneville-Bordes (1961) noted the presence of typical Aurignacian and Upper Perigordian artefacts in the second and first levels of Spy, but emphasised that the excavation techniques and lack of reliable stratigraphic data prevented attribution of artefacts with flat retouch, “*notamment un fragment de lame avec retouche sur la face plane*” (*ibidem*: 427): they could be Protosolutrean, but could equally be part of the Mousterian. This was the first time that doubt was cast about the Aurignacian or Gravettian nature of the blade leaf-points.

In an initial study, M. Otte (1974, 1979) connected the blade leaf-points with the Aurignacian, based on “*techniques de débitage et de façonnage, [...] [du] matériau utilisé et [de] son*

² Described as “*lit d’une épaisseur de 5 à 30 centimètres, presque toujours coloré en rouge et contenant des fragments anguleux de calcaire; deuxième niveau ossifère*” (“bed 5-30 centimetres thick, nearly always coloured red and containing angular limestone fragments; second fauna-bearing level”).

altération” and by comparison with assemblages from the German site of Ranis and some British sites (Otte, 1979: 273). He counted 24 blade leaf-points, called “*pointes de Spy*”, and classified eight other artefacts with inverse or bifacial partial retouch as Perigordian because of the blank lightness and comparisons with French Gravettian artefacts (Otte, 1979: 272).

However, after the final publication of the assemblages from Ranis (Hülle, 1977), Otte (1978a, 1981: 99) dissociated the blade leaf-points from the Aurignacian, leaf-points now being grouped by him under the name “*industries à pointes foliacées du nord-ouest de l'Europe*”.

Nonetheless, this separation of the Jerzmanowice points from the Aurignacian assemblage of the second level was not unanimously accepted. For example, Ph. Allsworth-Jones underscored the difficulty of isolating “unifacial leafpoints” from the Aurignacian and Mousterian elements of the same level (Allsworth-Jones, 1990: 208).

These different points of view regarding the classification of the Jerzmanowice points from Spy repeat the hesitations concerning similar artefacts from other sites.

Indeed, after the excavations by W. Chmielewski (1961) and W. Hülle (1977), J. Kozłowski (Kozłowski & Kozłowski, 1979, 1981; Kozłowski, 1983: 60, 2002; Desbrosse & Kozłowski, 1988: 34), M. Otte (1978a, 1978b, 1981, 2002) and R. Jacobi (1980, 1990, 2007) separate the Jerzmanowice points and the Aurignacian, but other scholars consider at least part of them as artefacts belonging to the Northern Aurignacian (McBur-

ney, 1965: 25-27; Mellars, 1974: 67-69; Campbell, 1977: 147, 200; Allsworth-Jones, 1986: 185-186, 1990: 207-210; Straus, 1995: 67-75; Aldhouse-Green, 1998: 141-142; Aldhouse-Green & Pettitt, 1998: 764; Miller & Straus, 2001: 152).

DESCRIPTIONS OF THE JERZMANOWICE POINTS

The various Spy collections stored at the Royal Museums of Art and History, the Royal Belgian Institute of Natural Sciences, the *Musée Archéologique de Namur*, the *Université de Liège* and the *Grand Curtius* Museum have all been studied. The archives of M. Otte were used as a complement for artefacts that were not possible to locate in these institutions and for private collections.

Twenty-five artefacts that can be classified as Jerzmanowice points, or tools recycling fragments of this type of point, have been identified (Table 1; Figures 4-7, except Figure 7: 7-8). Among these 25 pieces, 19 have been directly studied, the others known only from Otte's drawings and descriptions.

Among the pieces for which the *débitage* direction of the dorsal scar pattern is legible and meaningful³, eight were struck from a core with two opposed platforms and three from a single-platform core. If the retouch did not spread too widely on the blanks, we can sometimes observe that the blade originally had a straight morphology (Figure 4: 3).

³ Has been considered as “indeterminate”, not only the pieces with unclear dorsal scar pattern but also short proximal fragments that are sometimes not meaningful for the direction of *débitage*.

Type		Number	Débitage		
			unipolar	bipolar	indeterminate
Burin on leaf-point fragment		2	1	0	1
Splintered piece on leaf-point fragment		1	0	1	0
Jerzmanowice point	complete	9	0	4	5
	proximal*	6	1	1	4
	mesial	6	0	2	4
	distal	1	1	0	0
Total		25	3	8	14

* The number of proximal fragments is perhaps overvalued; Jerzmanowice points being often bipointed, the separation with the distal fragments is difficult.

Table 1. LRJ artefacts from Spy.

Complete Jerzmanowice points, or just slightly shortened by breakage (a few millimetres), have a length between 5.1 and 9.5 cm, but one of the broken points was longer (> 9.7 cm; Figure 4: 1). Their width ranges between 1.7 and 3.2 cm and their thickness between 0.7 and 1.4 cm (Figures 1-2).

Like the other Jerzmanowice points from Northern European sites, they are mostly bipointed. Only one has a rounded base (Figure 5: 1), but it appears that this is a distal fragment on which a new base was made, creating this rare sub-type. The retouch creating this new base includes longitudinal dorsal removals, some kind of “fluting”, a feature that can be found on other Jerzmanowice points, particularly in the British Isles (Beedings, Kent’s Cavern; Jacobi, 1990, 2007; here for example SF1: 5).

Among these 25 artefacts, there are two burins on break made on Jerzmanowice point fragments (Figure 6: 5), and a third reused as a splintered piece (Figure 6: 6).

Considering its size and morphology, one mesial fragment showing complete bifacial retouch could come from a Jerzmanowice point (Figure 6: 7). However, due to its small size and

importance of the retouch, it is not possible to be positive. Bifacial artefacts related to the Late Mousterian being also present at Spy (Ulrix-Closset, 1975), this fragment cannot be certainly joined with the Jerzmanowice points.

Six artefacts similar to Jerzmanowice points based on the presence of bifacial or inverse partial retouch, but made on slighter blanks and with weakly spread retouch, have also been found (Figure 7: 7). However, this type of artefacts can also be present in Gravettian assemblages⁴. It is also possible that some of these pieces, particularly the short distal fragments (Figure 7: 8), are actually Font-Robert points, as this type sometimes has inverse distal retouch (Otte, 1981: 111; Demars & Laurent, 1989: 136-137). Because of the presence of an important Gravettian assemblage in the same site (Pesesse & Flas, this volume: chapter XIII), the lack of stratigraphic data about these pieces and the mixing of different assemblages, it is not possible to con-

⁴ Among others, at the Station de l’Hermitage in Huccorgne (Otte, 2000) and in the French Fontirobertian, for example at La Ferrassie (de Sonneville-Bordes, 1960: 194) and Les Vachons (Bouyssonie, 1948: 21), as well as in the Central European Gravettian (at Mauern; Bohmers, 1951: pl. 53, no. 7), or in the Noaillian from Abri Pataud (level 4 lower; David, 1995: 112, fig. 29c).

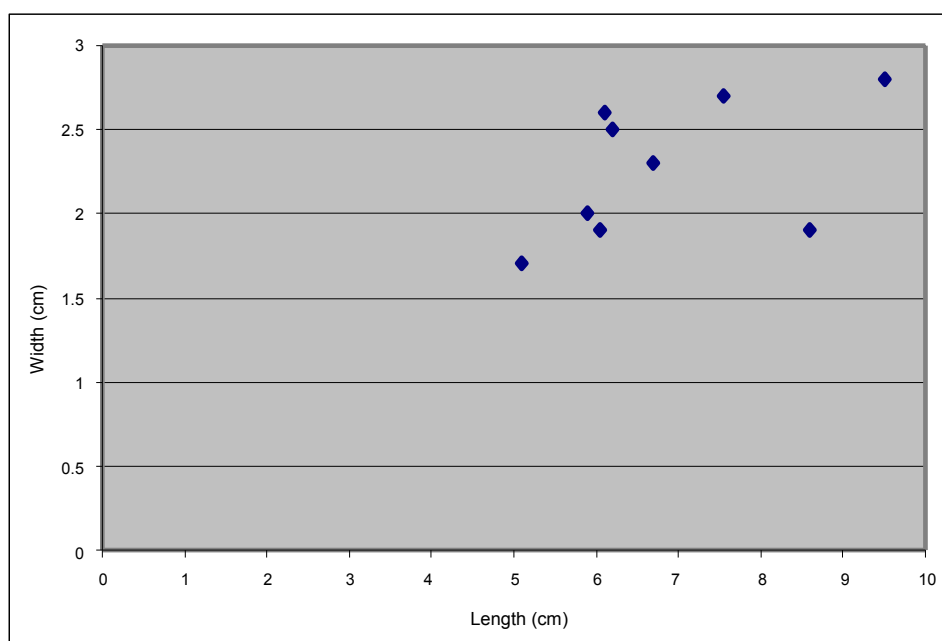


Figure 1. Length/width of the (almost) complete Jerzmanowice points.

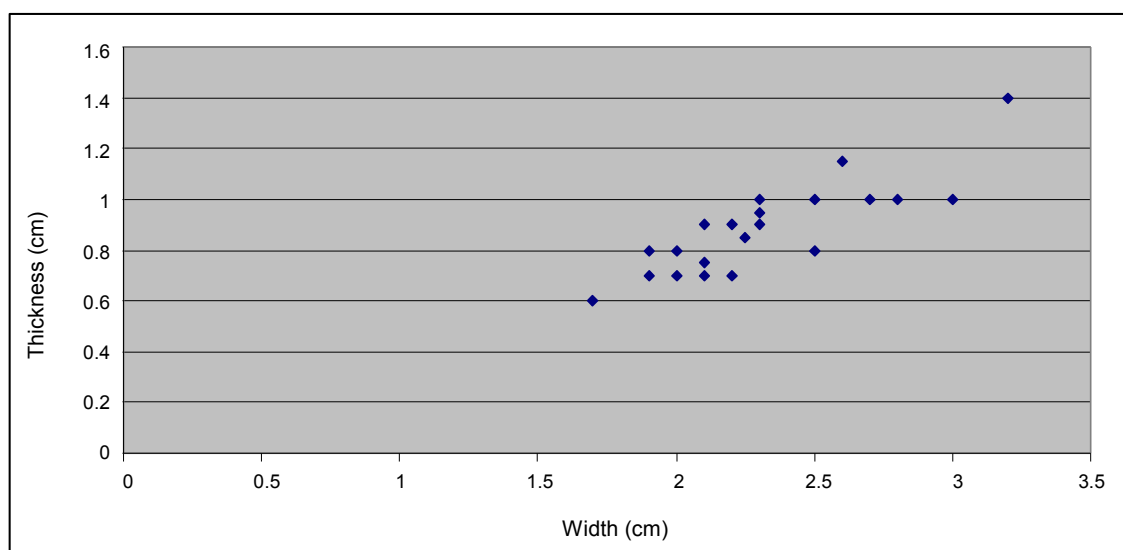


Figure 2. Width/thickness of Jerzmanowice points.

clude if they are linked with the Jerzmanowice points or associated with the Gravettian, even if the lightness of the blanks suggests rather the latter (as was already emphasised by Otte, 1979: 272). They are thus not considered here.

COMPARISONS

The Jerzmanowice points from Spy are similar to others coming from different sites from Northern Europe (Flas, 2002, 2006; Figure 3). In the Meuse River Basin, the Goyet caves (SF1: 2-3) yielded three artefacts of this type (Dupont, 1872; Otte, 1979: 388), as well as an endscraper made on a former Jerzmanowice point.

The British sites yielding such points are numerous (27), the most important of which are Beedings, Kent's Cavern, Paviland, Badger Hole, Robin Hood Cave and Bramford Road (SF1: 1, 4-5; SF2: 1, 3; Jacobi, 1990, 2000, 2007). In Germany, the main site is Ranis (Thuringia) where the Jerzmanowice points come from a homogeneous level and are associated with fully bifacial leaf-points (SF2: 2; Hülle, 1977). In Poland, the main site is Nietoperzowa cave (Chmielewski, 1961), with three successive levels of Jerzmanowician hunting camps that yielded many similar points (SF2: 4).

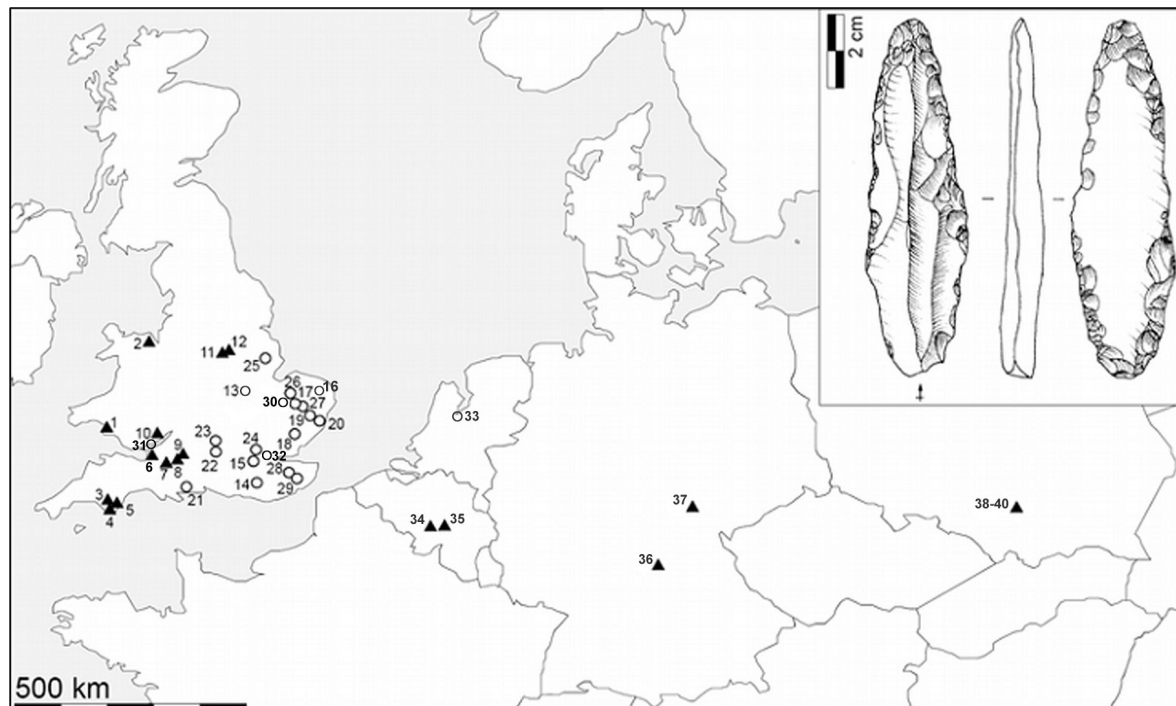
The similarity is not only typological

(bipointed, retouch localisation), but also technological. Indeed, regardless of site, the blades used are mostly struck from cores with two opposed platforms⁵. The blades are most of the time straight and relatively heavy⁶. In assemblages where it is possible to observe, direct organic soft hammer percussion was mainly used.

Nonetheless, we observe that, in comparison with the Jerzmanowice points from other sites, some of the pieces from Spy are smaller and have more retouches (Figure 5). The concomitance of these two features suggests a reduction process linked with the lithic raw material economy. While in the case of Spy it is thus possible to partially link the extension of retouch with a reduction process, this is not the case for other assemblages with Jerzmanowice points. On the contrary, it appears that variability in the extension of retouch is mainly linked to specific characteristics of the blanks (size, regularity, cortex) and not to a reduction process. This economical aspect of the Spy collection is possibly related to the distance between the site and sources of good quality lithic raw material (around 50 km), and is also perceptible in the recycling of

⁵ Among the different studied assemblages with Jerzmanowice points (Flas, 2006), on 189 blades for which the *débitage* direction has been established, 129 come from *débitage* of cores with two opposed platforms (68.25 %).

⁶ Often > 10 cm length, 2.5-3 cm width and thickness around 1 cm.



- | | | | |
|------------------------|--------------------------|----------------------------|-------------------------|
| 1: Paviland | 11: Pin Hole | 21: Moordown | 31: Goldcliff |
| 2: Ffynnon Beuno cave | 12: Robin Hood Cave | 22: Sutton Courtenay | 32: Temple Mills |
| 3: Bench Tunnel Cavern | 13: Glaston Grange Farm | 23: Osney Lock | 33: Aardjesberg |
| 4: Windmill Hill cave | 14: Beedings | 24: Creffield Road | 34: Spy |
| 5: Kent's Cavern | 15: Earl of Dysart's Pit | 25: Wallow Camp | 35: Goyet |
| 6: Uphill Quarry cave | 16: Drayton | 26: Brandon | 36: Zwergloch |
| 7: Soldier's Hole | 17: Warren Hill | 27: Town Pit | 37: Ranis 2 |
| 8: Hyaena Den | 18: White Colne Pit I | 28: Bapchild | 38: Nietoperzowa cave |
| 9: Badger Hole | 19: Eastall's Pit | 29: Conningbrook Manor Pit | 39: Koziarnia cave |
| 10: King Arthur's Cave | 20: Bramford Road Pit | 30: Hainey Hill | 40: Puchacza Skala cave |

Figure 3. Geographic distribution of LRJ sites (modified after Flas, 2006 and Semal *et al.*, 2009).
Triangles = cave sites; circles = open air sites. Upper right: Jerzmanowice point from Spy cave.

Jerzmanowice point fragments (two burins on break, a splintered piece, a Jerzmanowice point with rounded base).

JERZMANOWICE POINTS: AURIGNACIAN ARTEFACTS?

May the Jerzmanowice points coming from the second level of Spy be considered as part of the Aurignacian assemblage yielded from the same deposit? For several reasons, the answer is negative.

This “second fauna-bearing level” included an obviously mixed assemblage with clear Aurignacian and Mousterian elements (and also

some pottery), unsurprising considering the excavation techniques used in the late 19th century⁷. While Jerzmanowice points were long considered as part of the Aurignacian assemblage, this was mainly because they are made on blades and classified as “Protosolutrean”. As D. de Sonneville-Bordes (1961) already underscored, in such fuzzy stratigraphic context, nothing really suggests that these points are Aurignacian. It is thus not possible to group the Jerzmanowice points with other artefacts or to give them a precise chronological position.

⁷ Because of sediment thickness, M. De Puydt and M. Lohest used a gallery system of excavation (for a detailed analysis of the problems linked with inaccuracy of the old excavations at Spy, cf. Dewez, 1980: 37-41; Semal *et al.*, this volume: chapter II).

This weakness of the stratigraphic context yielding the Jerzmanowice points and the Aurignacian is obvious at Spy, but is also true for other similar “associations”. Sites in question⁸ were all excavated early (late 19th/early 20th century), without reliable stratigraphic data, and where different forms of disturbance are clear (bioturbation by cave bears and hyaenas, colluvial deposits; Flas, 2008, 2009). Moreover, there are many more Northern European Aurignacian sites (around 50) and Lincombian-Ranisian-Jerzmanowician sites (33) where these two complexes are not “associated” than the contrary (7 sites).

This would be sufficient to strongly weaken the hypothesis of the integration of the Jerzmanowice points to the Aurignacian. But several other arguments can also be proposed:

- The blade *débitage* technology used to produce the Jerzmanowice points and Aurignacian technology are different. This is mainly a bipolar technique in the LRJ, but an almost exclusively unipolar technique for the Aurignacian (Flas, 2004a, 2008; Flas *et al.*, this volume: chapter XII). The blades have different morphologies and size (often straight and massive in the LRJ, often curved and lighter in the Aurignacian).
- The geographic distribution of the two complexes is partially distinct (Flas, 2009). The LRJ is mainly found in Great Britain with only a few sites on the continent; on the contrary, the Aurignacian is much more present on the continent with only a few poor sites in Wales and Western England (Jacobi, 2007; Jacobi & Pettitt, 2000; Dinnis, 2010).
- The chronology also sets apart the two techno-complexes. Some LRJ assemblages are dated around 38-37,000 uncal BP, such as layer 6 of Nietoperzowa cave⁹ (Kozłowski, 2002), while the Northern European Aurignacian is not older than 34,000 BP (Street & Terberger, 2000; Flas, 2004b, 2005, 2009; Grünberg, 2006; Jacobi, 2007; Flas *et al.*, this volume: chapter XII). In addition, the only case of reliable stratigraphic sequence including LRJ and Aurignacian

levels – at Ranis (Hülle, 1977) – shows that Jerzmanowice points are below the Aurignacian.

CONCLUSION: THE IMPORTANCE OF THE LINCOMBIAN-RANISIAN-JERZMANOWICIAN

Jerzmanowice points from Spy thus fit within a group of sites spread across the Northern European plain which, more than containing this common typological feature, also share technological affinities. This techno-cultural complex, called the Lincombian-Ranisian-Jerzmanowician (following Desbrosse & Kozłowski, 1988: 34), is clearly independent of the Aurignacian, as it is indicated by archaeological, technological, geographical and chronological data. The existence of such a complex at the time of the Middle to Upper Palaeolithic transition is important for understanding of this phenomenon. Indeed, it shows the autonomous development of a complex with a specific form of blade *débitage* from local Middle Palaeolithic traditions *before* the appearance of the Aurignacian in Northern Europe, the “acculturation” hypothesis being irrelevant in this case. Thus, the Aurignacian does not seem to be the only actor in the development of the Early Upper Palaeolithic of Northern Europe.

The question of the Middle to Upper Palaeolithic transition is often linked with the question of Neandertal disappearance and the appearance of *Homo sapiens sapiens* on the European scene. Although no human remains can as yet be clearly associated with the Jerzmanowice points (Flas, 2008: 129-130), the radiocarbon dates of the Neandertal remains from Spy, around 36,000 uncal BP (Semal *et al.*, 2009, this volume: chapter XVI), fit well in the chronological range of the Lincombian-Ranisian-Jerzmanowician, and the supposed origin of this complex in the local Middle Palaeolithic industries substantiates the idea of an association with this anatomical type (e.g. Otte, 1990; Kozłowski, 1995; Jacobi, 1999).

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⁸ Besides Spy: Goyet, Paviland, Ffynnon Beuno, Kent's Cavern, Uphill Quarry and Hyaena Den.

⁹ Some British sites (Badger Hole, Pin Hole, Bench Tunnel Cavern) yielded similar dates but in less secure context (Jacobi *et al.*, 2006; Jacobi, 2007).

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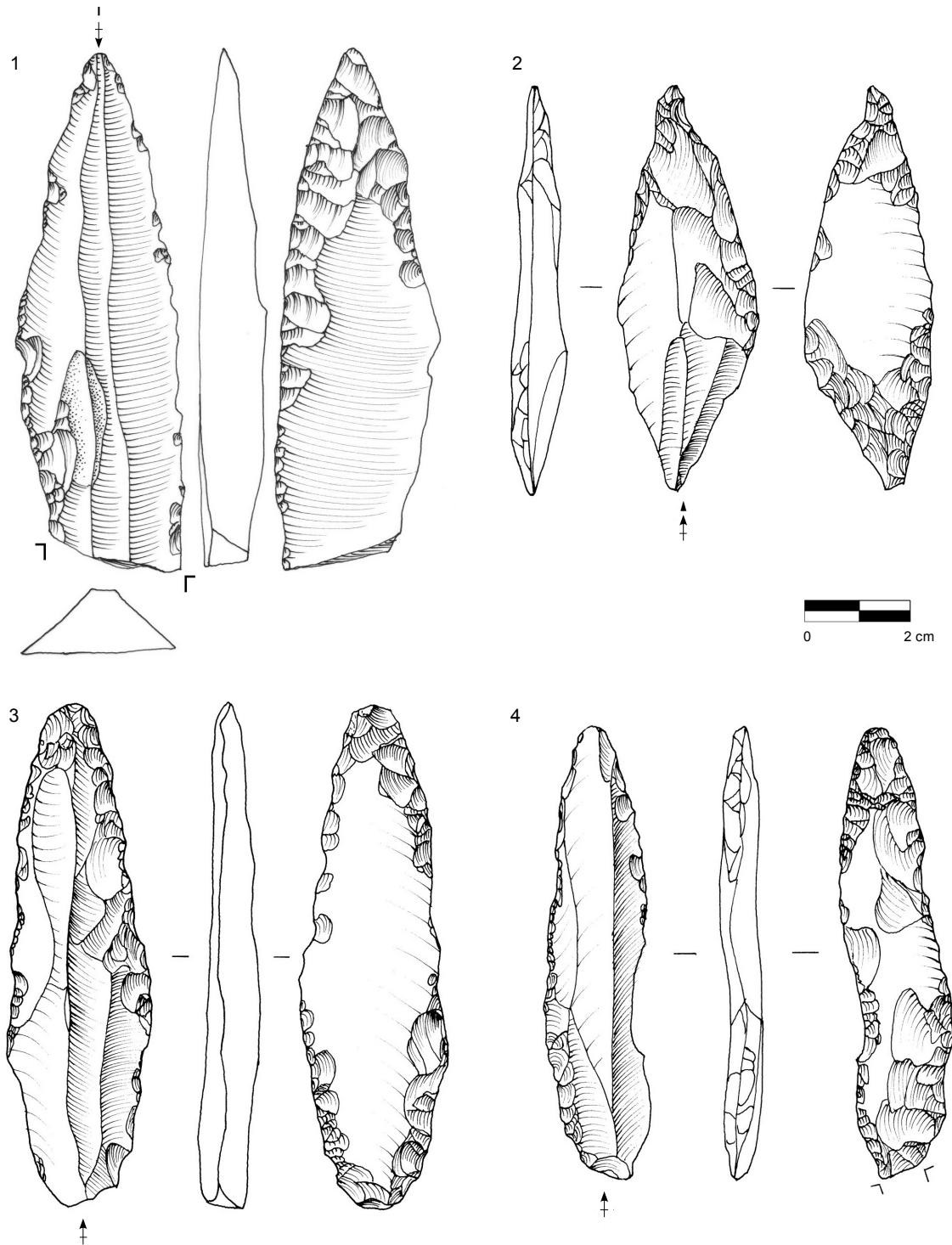


Figure 4. 1 to 4: Jerzmanowice points from Spy (illustrations by M. Otte).

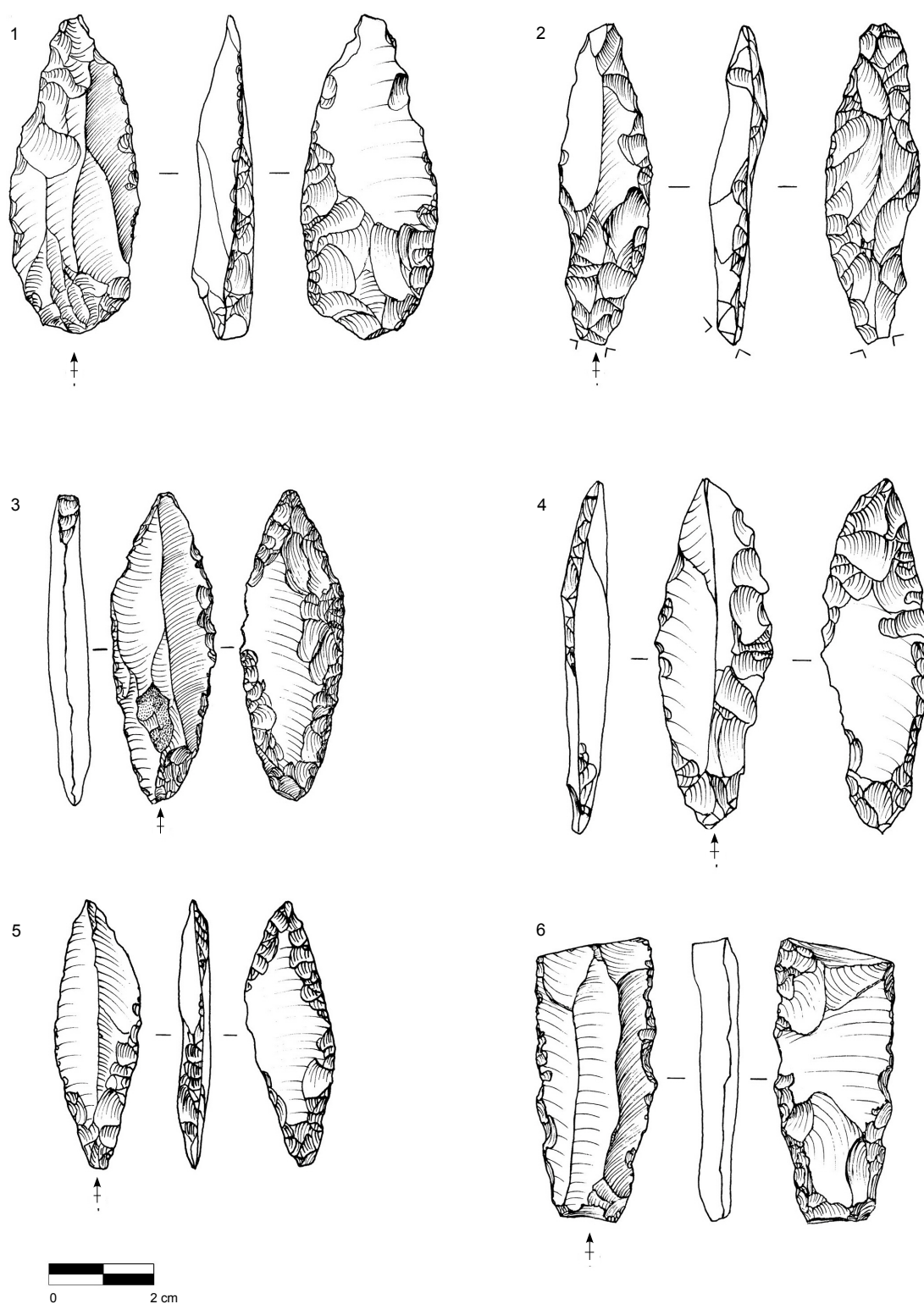


Figure 5. 1-6: Jerzmanowice points from Spy (1, 2, 4-5 by M. Otte; 3 & 6 by A.-M. Wittek, ADIA).

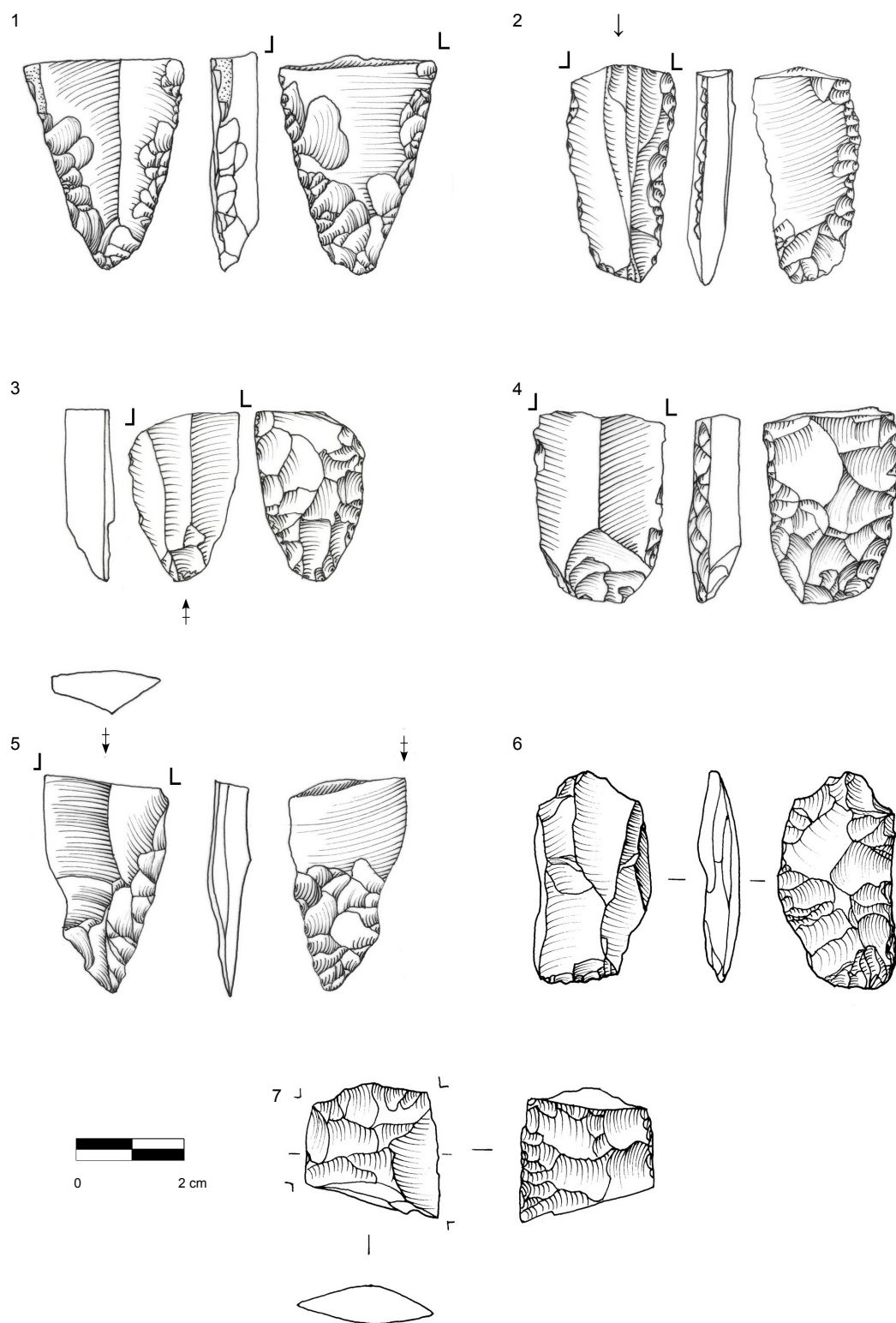


Figure 6. 1-4: Jerzmanowice points from Spy; 5: burin made on a Jerzmanowice point;
 6: splintered piece made on a Jerzmanowice point; 7: fragment of a bifacial artefact
 (Jerzmanowice point or bifacial leaf-point?)
 (1-7 by M. Otte).

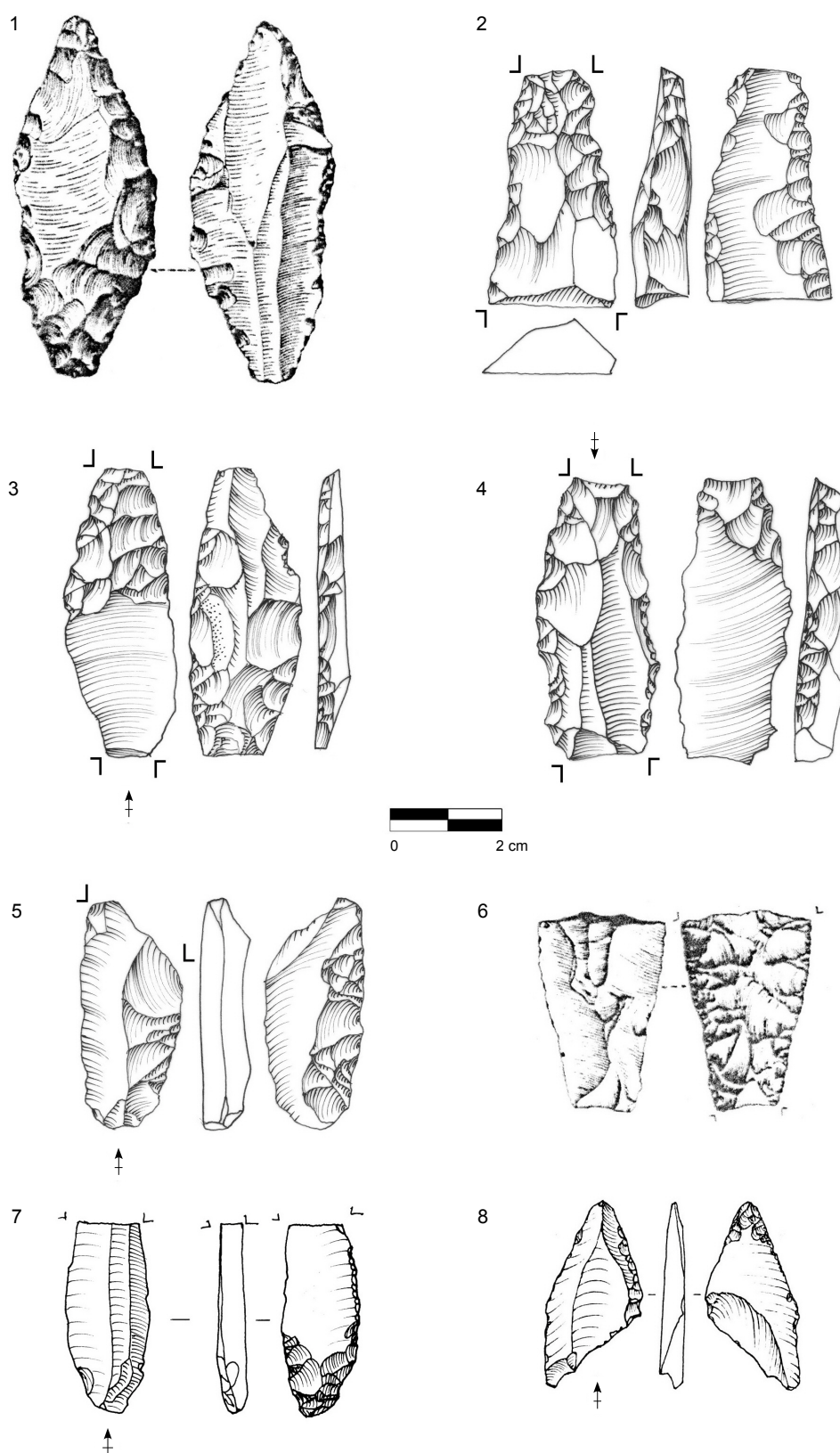


Figure 7. 1-6: Jerzmanowice points from Spy; 7-8: examples of artefacts with ventral retouch from Spy that cannot be certainly associated with the Jerzmanowice points (1 & 6 from Éloy, 1956; 2-5 by M. Otte; 7-8 by A.-M. Wittek, ADIA).

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AUTHOR'S AFFILIATION

Damien FLAS
 FNRS
 Département de Préhistoire
 Université de Liège
 7, place du XX Août
 4000 Liège
 Belgium
 damienflas@yahoo.com