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The origin of the Gravettian



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ABSTRACT

The Gravettian is an Upper Palaeolithic unit that had a pan-European range. Unlike the Aurignacian, it did not extend beyond Europe. In terms of taxonomy, in a polythetic system, the Gravettian can be placed on various levels. In terms of material culture and lithic inventories, it is closer to the concept of a “technocomplex”, while in terms of symbolic culture it corresponds to the concept of “archaeological culture”. These differences in the degree of the correlation of particular socio-cultural sub-systems have caused emphasis to be placed either on unifying elements, or on differentiating components.

These different viewpoints on the Gravettian have resulted in various hypotheses of the origins of this complex. These hypotheses take into account:

a) monocentric origin from Danubian centers, from which the Gravettian spread to the west giving rise to the “western European Perigordian”, and to eastern Europe where it gave rise to the Kostienkian (the Kostienki–Avdeyevo culture). This hypothesis is most frequently proposed.

b) polycentric origins that assume other centers of autonomous formation of the Gravettian (e.g. eastern European and middle Mediterranean centres).

c) origins related to cultural adaptations that led to convergent cultural evolution in various territories in consequence of environmental changes, notably in the younger part of MIS 3.

None of these hypotheses seems to fully explain the processes of the emergence of the Gravettian. It is only a combination of these hypotheses that enables a more penetrating understanding of the process of cultural evolution in the Middle Upper Palaeolithic in Europe.

Doubtless, the Gravettian is a varied unit in a number of aspects. Nevertheless, similarities do exist in respect of numerous elements of technology, morphology of lithic and bone implements, symbolic culture, behaviours related to food procurement, and the broad sphere of inter-group contacts and zones of raw material procurement. In the Gravettian, a number of elements are herbingers of the “Neolithic revolution”: the semi-settled way of life (multiseasonal settlements), intentionally designed lay-out of villages, the use of fired clay, the building of complex dwelling structures, and the use of plant foods.

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1. Introduction

The Gravettian is a complex Middle Upper Palaeolithic cultural unit in Europe (Fig. 1). These differences in the degree of the correlation of particular socio-cultural sub-systems have caused emphasis to be placed either on unifying elements (“Gravettian unity”; Kozłowski, 1985) or on differentiating components (“civilisation mosaïque”; Klaric et al., 2009; Klaric, 2010). The different viewpoints on the Gravettian have resulted in various hypotheses of the origins of this complex.

Hypothesis I: monocentric origin from Danubian (Central European) centres from which the Gravettian spread first to the

west, giving rise to the “western European Perigordian”, and later to the east of Europe where it gave rise to the Kostienkian (the Kostienki–Avdeyevo culture). This hypothesis has been proposed by a number of authors (e.g. Otte, 1981; Kozłowski, 1986, 1991; Valoch, 1996; Otte and Noiret, 2004).

Hypothesis II: polycentric origins that assume other centers of autonomous formation of the Gravettian (e.g. eastern European and middle Mediterranean centers), or even an autonomous formation of the Gravettian in western Europe, unrelated to Middle European centres (Surmely, 2007; Surmely and Ballut, 2011).

Hypothesis III: origins related to cultural adaptations that led to convergent cultural evolution in various territories in consequence of environmental changes, notably in the younger part of MIS 3. The mosaic of assemblage types may relate to functional factors (Gamble, 1986, p. 195).

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Each of these hypotheses is based on a selective choice of arguments. Consequently, none of the hypotheses can be *a priori* ruled out.

2. The hypothesis of a monocentric origin of the Gravettian (Fig. 2)

The most important premise of this hypothesis is the chronology of Gravettian centers on the Middle Danube, earlier than the chronology of Gravettian centers in western or eastern Europe, and the kinship of Gravettian centers in central Europe and those in the western and eastern Europe.

Geochronological data suggest that the oldest Gravettian centre is the middle Danube basin (Fig. 2) where the Pavlovian evolved (Klíma, 1976; Svoboda et al., 1996). The earliest Pavlovian assemblages were registered at sites such as Dolní Věstonice I and II (Fig. 3). Relatively small concentrations of lithic artefacts were found in trench I/90, in the lower level dated at $29\,300 \pm 750$ BP, in the upper level dated at $27\,250 \pm 590$ (Svoboda, 1991), and on the

western slope of Dolní Věstonice II with dates of $28\,300 \pm 300$ – $27\,080 \pm 170$ BP (Svoboda et al., 1993, 1996; Svoboda, 2001; Oliva, 2007). Dolní Věstonice II Brickyard provided charcoal concentrations dated at $29\,000 \pm 200$ BP, and Dolní Věstonice I (lower part) at $29\,180 \pm 460$ BP, but unaccompanied by artefacts. Sites in Lower Austria can also be ascribed to the Early Gravettian, most importantly the first Gravettian level from the sequence of Willendorf II (level 5) dated at 30/29–28 ka BP (Haesaerts et al., 1996). From this level a more numerous lithic assemblage was recovered (Fig. 4) with 160 retouched tools including numerous burins, backed bladelets, parageometric microliths, Pavlov type points (with convergent retouch), and points with alternate retouch resembling *flèches* (Otte, 1981; Moreau, 2012). Fairly early, Pavlovian centres in the middle Danube basin expanded towards the upper Oder and the Vistula basins, as documented by the appearance of flints from Silesia and Lesser Poland at Moravian sites. Moreover, in the Carpathian basin in the Obłazowa Cave at the boundary between Slovakia and Poland, decorated antler tools and *Conus* shells were recovered, both typical for the Pavlovian. The Obłazowa Cave

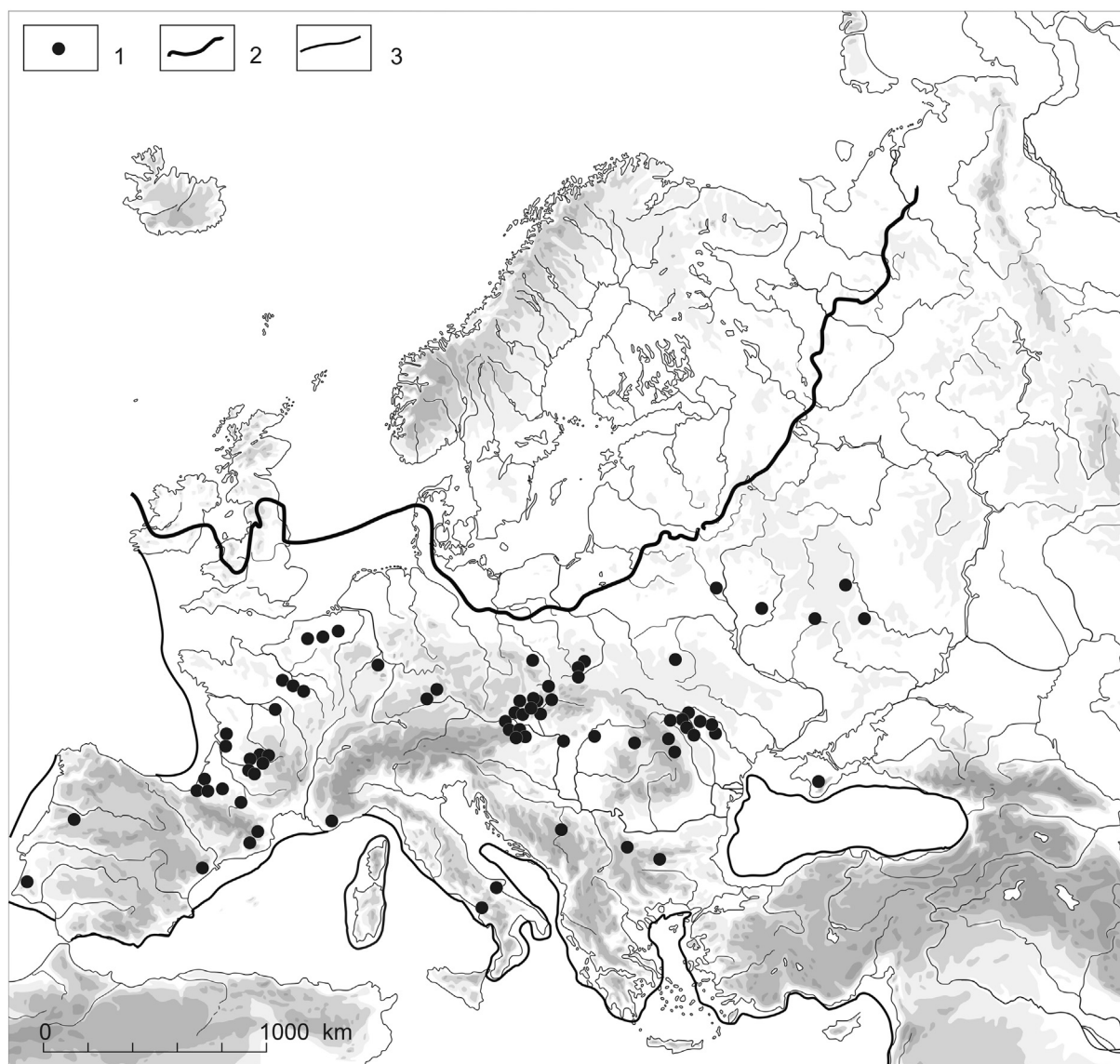


Fig. 1. Map of the Gravettian distribution in Europe: 1 – most important sites, 2 – LGM ice-sheet, 3 – coastline.

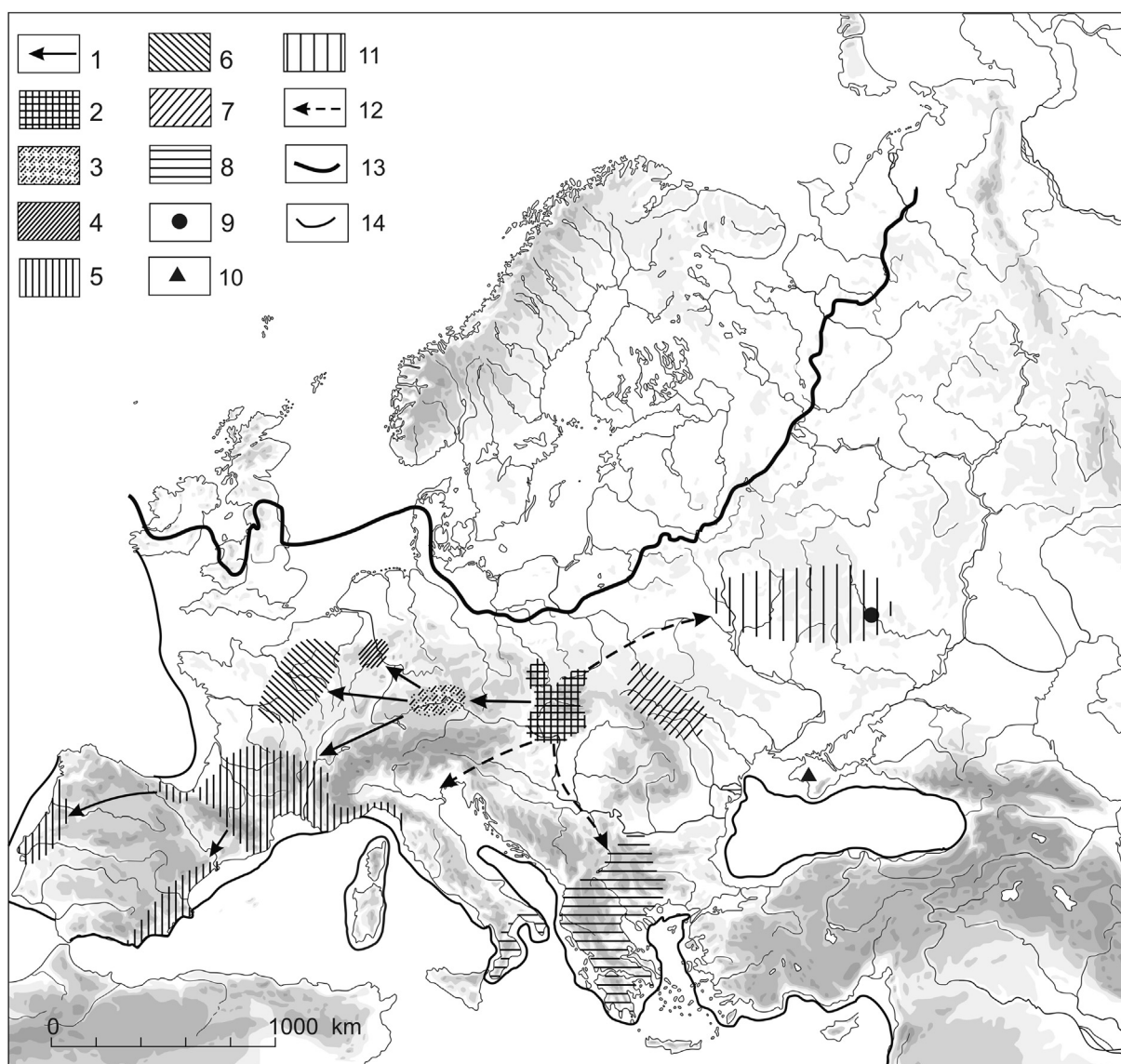


Fig. 2. Map of the different regional centers of the Gravettian: 1 – Diffusion of the Gravettian to the west, 2 – Pavlovian, 3 – Upper Danube group, 4 – Middle Rhine group, 5 – western Gravettian (Perigordian), 6 – Maisierian/Perigordian, 7 – Dnester/Prut group (Molodovian), 8 – Mediterranean Gravettian, 9 – Kostienki 8-Telmanskaya, 10 – Buran-Kaya, 11 – Kostienkian (Kostienki–Avdeyev group), 12 – Diffusion of the Gravettian to the East and South in the beginning of LGM, 13 – LGM ice-sheet, 14 – coastline.

provided early AMS determinations for level VIII: $31\,100 \pm 550$ BP, $30\,600 \pm 550$ BP, or $32\,400 \pm 650$ BP (Valde-Nowak et al., 2003). The easternmost extension of the Early Gravettian is marked by the sites in eastern Slovakia (Slaninova Cave near Haj – Kaminská; Nemergut, this volume) and in northeastern Hungary (Bodrogkeresztúr Hényehgy; Lengyel, this volume).

Generally, the early phase of the Pavlovian coincides, approximately, with the time interval between two oscillations of the Interpleniglacial (MIS 3), namely (Figs. 5 and 6): the GS 6 cooling (Greenland stadial 6 – 30/29 ka BP) and the GI 5 warming (Greenland Interstadial 5 – 29/28 ka BP). This chronology is corroborated by the position of the Early Pavlovian within the MG 9 palaeopedological complex (Schwallenbach II soil; Haesaerts et al., 2007). In that period novel developments included: blade production based on double-platform volumetric core, hunting small game such as hare, fox and wolf, and also large mammals such as horse and mammoth (West, 2001), site location in the landscape, and other innovations. Tools resemble types distinctive for the

Early Gravettian in the Upper Danube basin and France: backed blades/bladelets and *fléchettes*.

The Gravettian of the Upper Danube basin is transitional between the Pavlovian and the Early Gravettian (the Perigordian) in the Loire basin. Early sites of this group: Geissenklösterle IA/Ib, Weinberghöhlen, Hohle Fels IIe, and possibly Brillenhöhle, provided elements that are found in the Pavlovian, such as *fléchettes* (Klíma, 1967; Hahn, 1988; Kozłowski, 1996; Bolus, 2010) (Fig. 7). The sites in the Upper Danube basin provided not only *fléchettes* typical of the western European Bayacian (corresponding to Gravettian I; Djindjian, 2003) but also Font-Robert points, either accompanied by *fléchettes* (Geissenklösterle, Weinberghöhlen) or alone (Steinacker; Scheer, 2000).

The dating of the beginnings of the western European Gravettian (Perigordian) places this unit within “biozone 6” (Delpéch and Texier, 2007) which is equivalent to the GI5 amelioration and the GS 5 cooling i.e. later than the beginning of the Gravettian in Central Europe. The succession: Pavlovian – Upper Danube

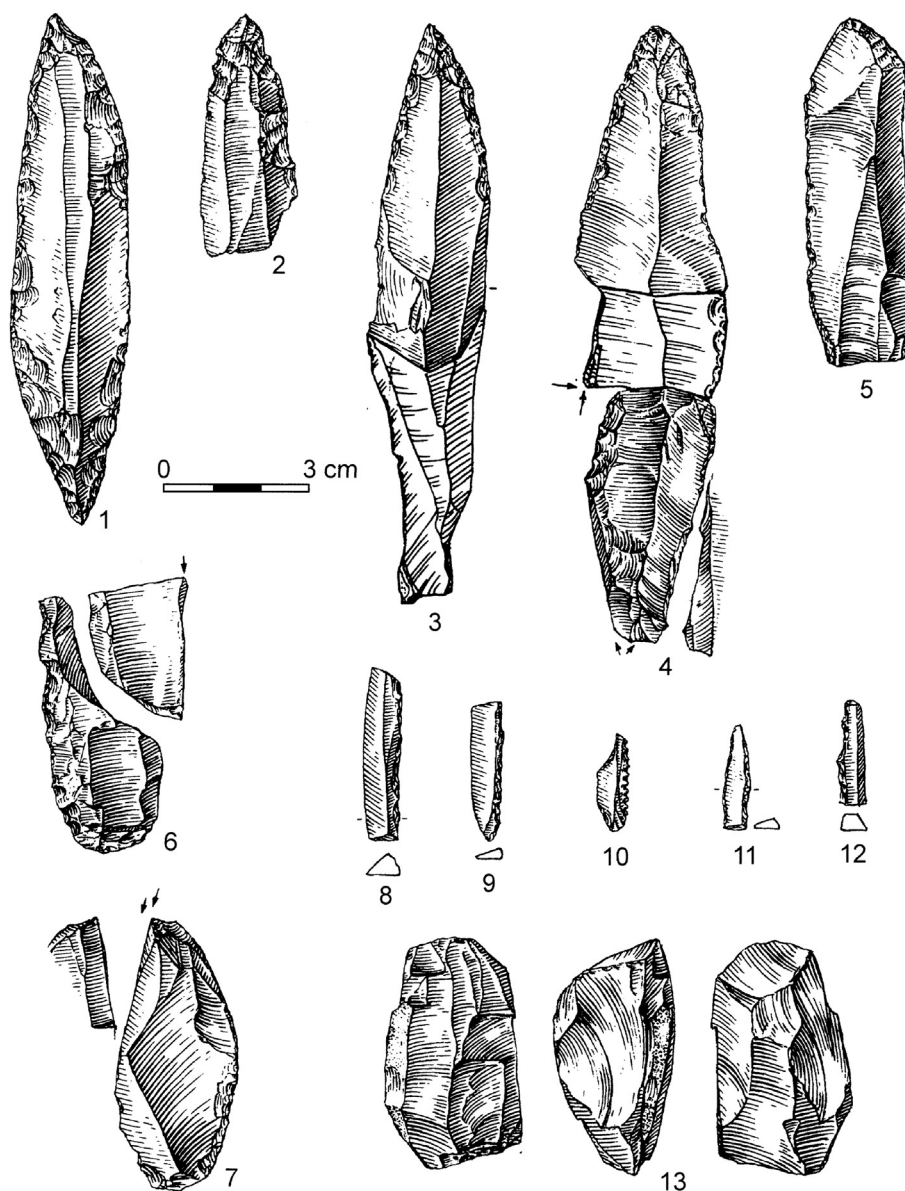


Fig. 3. Early Pavlovian from Dolní Věstonice II complex 4: 1–4 – pointed blades (4 – with truncation burin), 5 – retouched truncation, 6, 7 – burins, 8–12 – backed bladelets, 13 – core (Svoboda et al., 1993).

Gravettian (with *fléchettes*) – “Bayacian” (Delporte and Tuffreau, 1984) seems fairly convincing, and could reflect the expansion of the Gravettian to the west. However, the proposed succession of Gravettian units is more complicated in view of the fact that tanged points do not occur in the Middle Danube basin. Tanged (Font-Robert) points are more likely to indicate contacts between the western Gravettian and the industries of the Western European Plains, with the Maisièrian (Fig. 8), or possibly a population shift from the plains to the southeast in the cool episodes of the late phase of MIS 3 (Otte, 1976; Pesesse and Flas, 2011).

The expansion of the Gravettian to the east was later than its spread to the west. It had several phases and various directions. In the effect of this expansion the earliest Gravettian centre to the east of the Carpathians formed in the Dniester and the Prut basins as the Molodovian (Chernysh, 1973). Subsequently, Gravettian groups emerged in the Russian Plain represented at Kostenki 8-Telmanskaya, followed by the Gravettian with shouldered points

(Kozłowski, 1969, 2008). In the same period, the Gravettian expanded to northern Italy (notably the facies/phase with Noailles burins; Palma di Cesnola, 1993), the Iberian Peninsula (Cantabria; Villaverde, 2001), the Levant (Fullola i Pericot et al., 2006), and Portugal (Aubry et al., 2007).

With the Middle Danube centre two phases of expansion of the Gravettian are connected: first, to the northern Balkans (Temnata Cave layer TD-I/X VIII – Drobniewicz et al., 1992), and secondly, to northern Italy (facies with shouldered points – Kozłowski, 2008). If the hypothesis about the monocentric, Central European origins of the Gravettian is adopted, then the question must be posed about the origins of this unit in the Middle Danube basin.

The origin of the Central European Gravettian could be sought in the northern zone of the “Proto-Aurignacian”. The recent excavation in Krems-Hundsteig (Neugebauer-Maresch, 2010) confirms that the end of the “Proto-Aurignacian” sequence (AH 4:14) dated at $30\,750 \pm 290$ BP is almost coeval with the earliest Gravettian

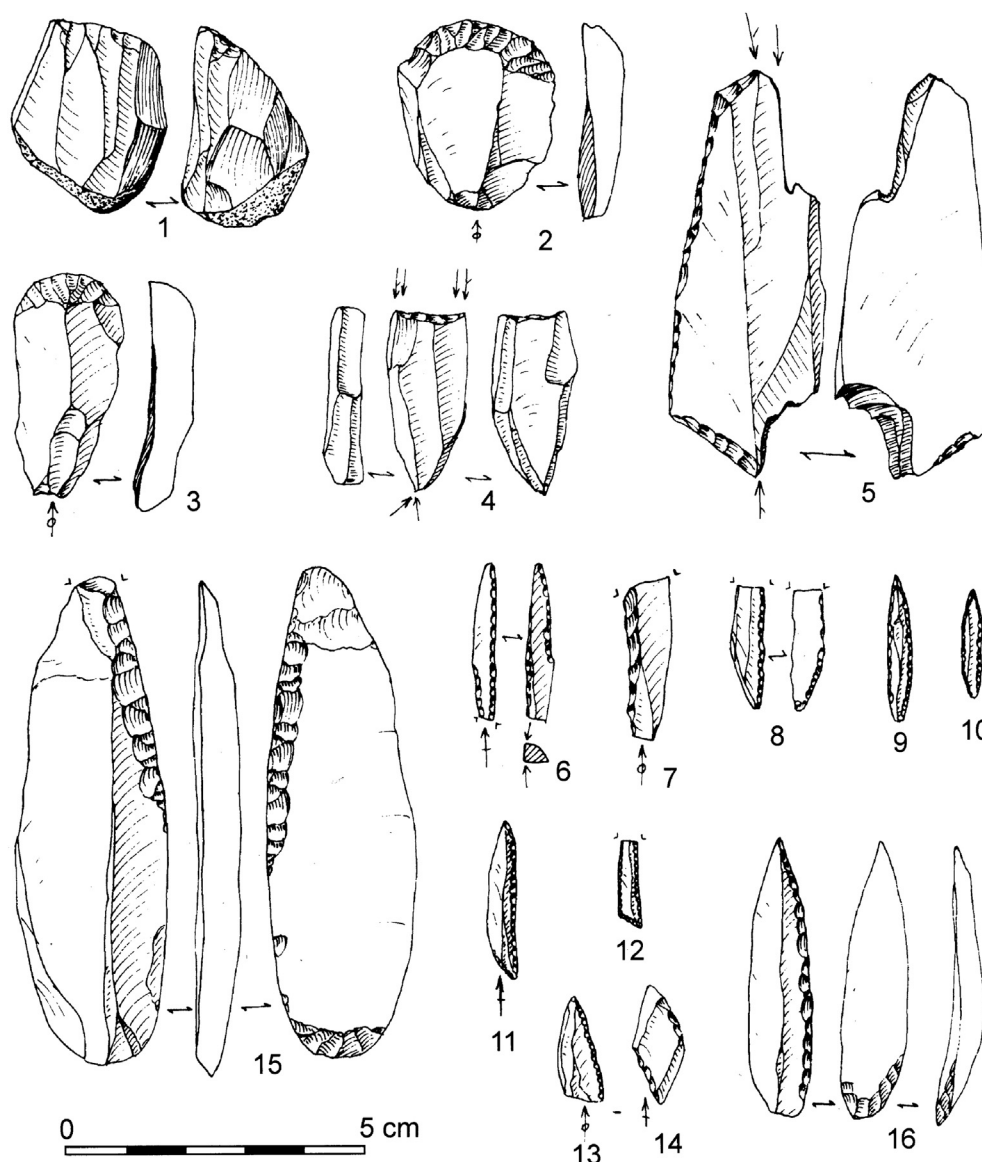


Fig. 4. Early Gravettian from Willendorf II, AH 5: 1 – core, 2, 3 – end-scrapers, 4, 5 – burins, 6–12 – backed bladelets, 13, 14 – parageometric microliths, 15–16 – Pavlov points (Otte, 1981).

from Willendorf II AH 5, and the beginning of the Gravettian in Krems-Hundsteig (AH 3.74) at $27\,790 \pm 250$ BP.

In contrast to the hypothesis of the formation of the Early Gravettian from the northern sphere of the “Proto-Aurignacian”, Moreau (2012) proposes the evolution of the Early Gravettian in the Middle and Upper Danube Basin from local Aurignacian groups in the same territory. Moreau notes the presence of *lamelles rectilignes* from prismatic cores on small flint nodules in the Aurignacian horizon AH II at Geissenklösterle, and Dufour bladelets or backed bladelets at Vogelherd (AH IV) and Bockstein-Törle (AH VII) Caves. However, the stratigraphic position of these artefacts is uncertain. Moreau (2010, 2012) critiques the early dates for the Pavlovian at Moravian sites, and the attribution to the Pavlovian of the finds from Obłazowa Cave (AH VIII) in the Carpathians and the earliest Gravettian assemblage from Willendorf II-5. Moreau suggests that “mise en place des traits génériques du Gravettien dans son acceptation socioéconomique et culturelle” covers not only the Middle but also the Upper Danube Basin (Swabian Jura) where “la transition

avec l'Aurignacien sera consommé”, preceding the fully matured Gravettian technocomplex (Moreau, 2012, 364).

3. The hypothesis of a polycentric origin of the Gravettian (Fig. 9)

The hypothesis about the polycentric origins of the Gravettian assumes that the industries in the various Gravettian centers (or, more broadly, industries with backed blades), in the later part of MIS 3, had formed independently, deriving from local traditions of the early phase of the Upper Palaeolithic.

Besides the Middle Danubian centre and the western European Gravettian/Perigordian in the early phase of the Gravettian, other centres can be distinguished whose formation was autonomous: the Molodovian in the Dniester and the Prut basins, Kostienki 8–Telmanskaya on the Middle Don, Buran-Kaya in the Crimea, and several centres in the northern Mediterranean. Among the latter centres are the *Gravetien indifférencié*, mostly in southern Italy

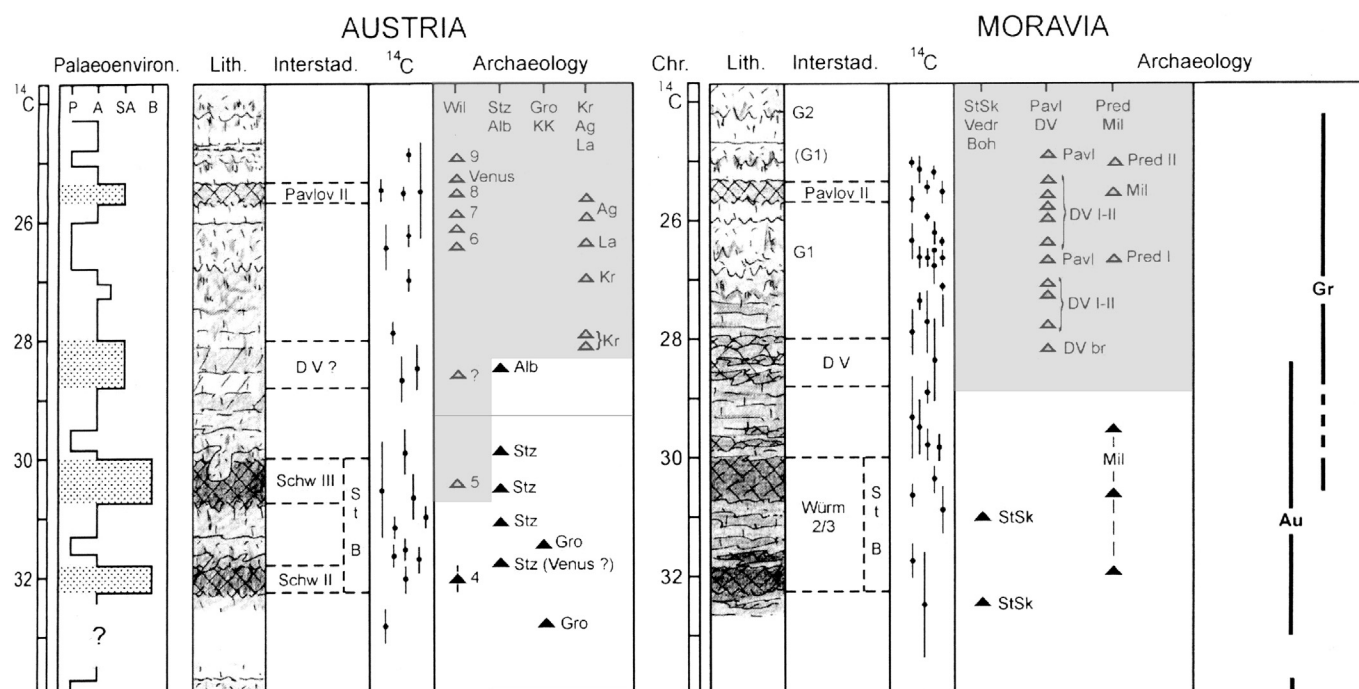


Fig. 5. Open-air Gravettian sequences in Lower Austria and Moravia (Wil – Willendorf, Stz – Stratzing-Galgenberg, Alb – Alberndorf, Gro – Grossweikersdorf, Kr – Krems-Hundsteig, La – Langenlois, Ag – Aggsbach, StSk – Stranská Skala, Vedr – Vedrovice, Boh – Bohunice, Pavl – Pavlov, DV – Dolní Věstonice, Pred – Předmosti, Mil – Milovice) (Haesaerts et al., 2007).

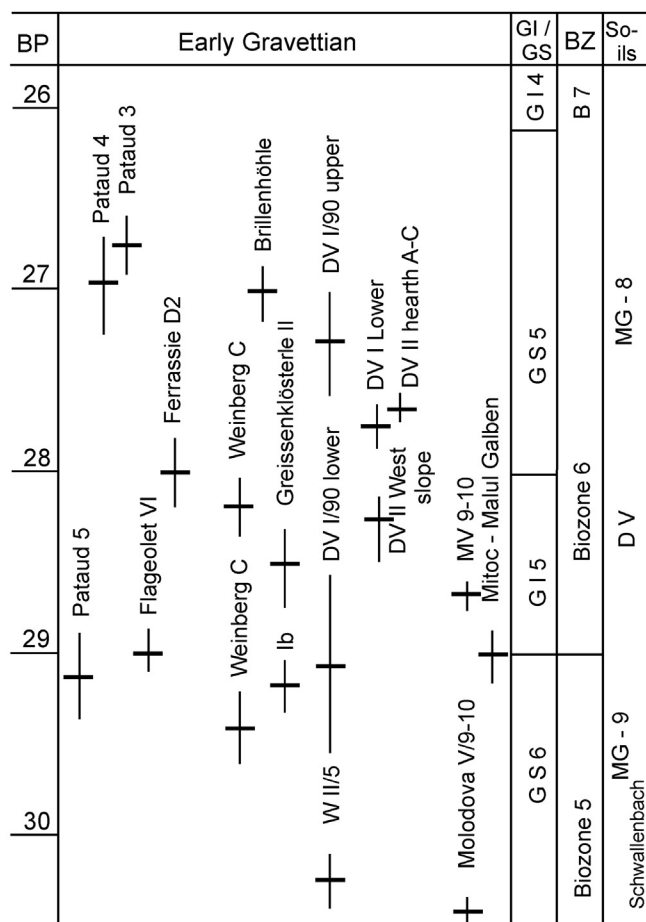


Fig. 6. Stratigraphic and radiometric relations between the Early Gravettian groups/facies (GI – Greenland interstadials, GS – Greenland stadials, BZ – biozones).

(Palma di Cesnola, 1993), and southern Greece (Klissoura Cave level III'; Kaczanowska et al., 2010).

To the east of the Carpathians, in the middle and the younger part of the Upper Palaeolithic, a unit referred to as the Molodovian evolved in the Dniester and the Prut basins (Chernysh, 1973; Kozłowski, 1986). The rhythm of the formation of this unit is registered in the sequence of Molodova V. It is similar to the formation of the Pavlovian, as artefacts that are diagnostic for the various horizons and their dating are similar (pointed blades, backed bladelets, shouldered points etc.). In the sequence of Molodova V, the oldest horizons (10–9) have a very early chronological position: contemporaneous with or even earlier than the Pavlovian. The radiometric determinations for horizon 9 of Molodova V are between $29\,650 \pm 1320$ and $28\,100 \pm 1000$ BP. Horizon 10 is stratified between palaeopedological levels MG 10 and MG 9 i.e. older than 30 ka BP (Haesaerts et al., 2004, 2007; Noiret, 2009). Assemblages from archaeological horizons 9 and 10 contained single- and double-platform volumetric cores. Among retouched tools, there were pointed blades modified into burins and backed bladelets (Fig. 10). A special element are leaf points that are, possibly, the heritage of the Early Phase of the Upper Palaeolithic e.g. the industries of Ripiceni Izvor type (such as from level Ia/Ib; Paunescu, 1987, 1993). In the Prut valley, some inventories contain both leaf-points and arched backed blades e.g. at Korpach level 4 (Grigorieva, 1996). The association of these types of artefacts is, however, disputable. Also, the date obtained from layer 4 from Korpach is uncertain ($25\,250 \pm 300$ BP). If this date is correct and layer 4 homogeneous, the industry from Korpach would be younger than the beginning of the Molodovian. Further to the east, Early Gravettian centers were registered in two regions: the Middle Don region at Kostienki 8-Telmanskaya layer II (Praslov and Rogatchev, 1982; Sinitsyn, 2007) and the Crimea at Buran Kaya (Otte and Noiret, 2004).

The earliest site ascribed to the Gravettian complex in the East European Plains is Kostienki 8-Telmanskaya, dated at

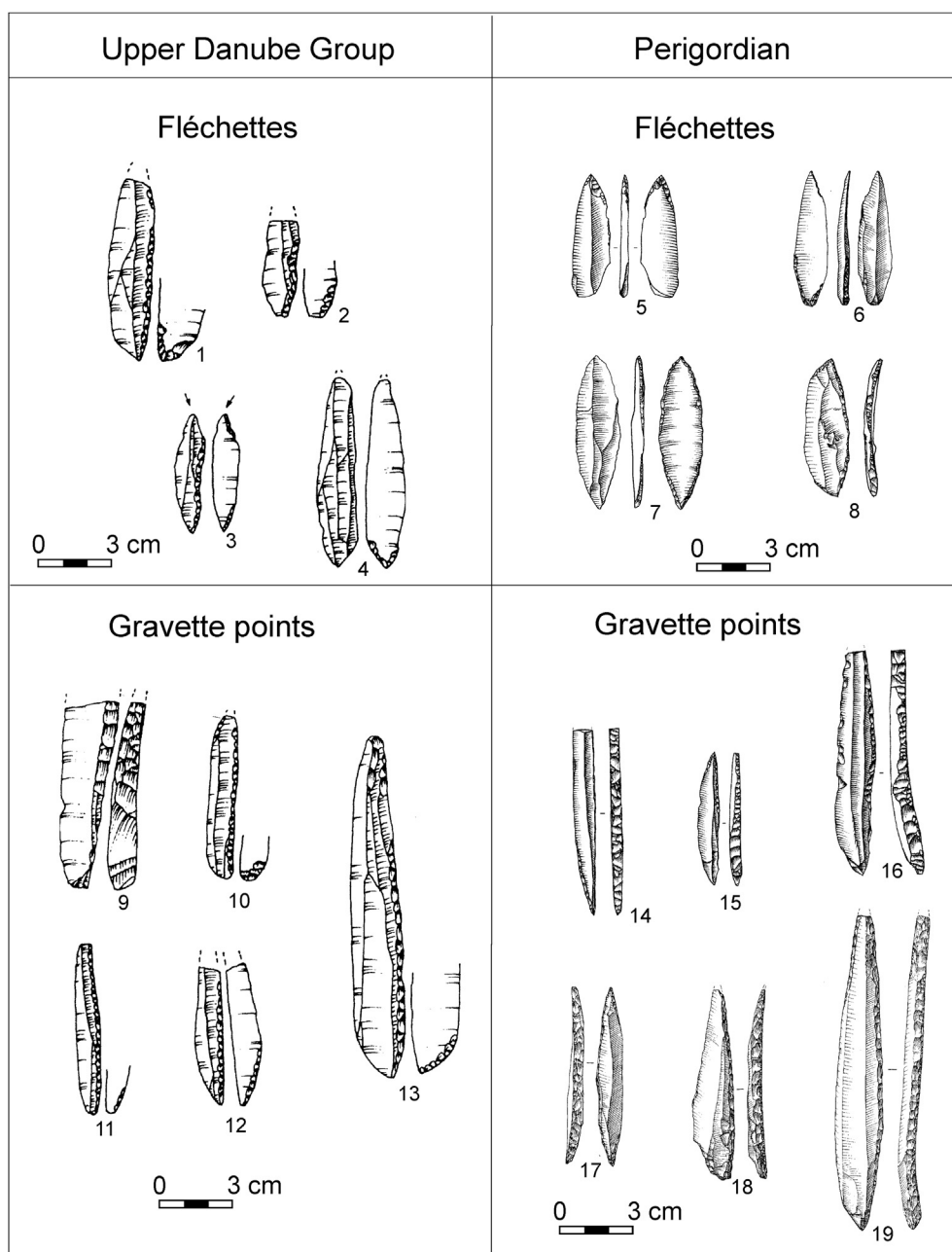


Fig. 7. Comparison between the Upper Danube Gravettian and Western Gravettian (Perigordian): *fléchettes* and Gravette points (1–4, 9–12 – Brillenhöhle AH VII, 5–8 – La Gravette and Puyjarrige, 13 – Weinberghöhlen AH C, 14–19 – La Gravette).

27 700 ± 750 BP. This date is probably the upper chronological boundary, because level II at this site is stratified within the top of the pedological complex dated in the range of 32–38 ka BP. The site is rich: with 5 habitation structures (Litovchenko, 1966) and with an abundant lithic inventory based on the blade and bladelet technique, with a numerous set (43%) of backed bladelets, and parageometric forms such as trapezes and segments (Fig. 11). Regrettably, the derivation of this industry is unknown; in the east European Plains it has no predecessors with a similar blade technique, backed implements, or parageometrics.

In the Crimea, the industry from the Buran Kaya Cave (level AH 17–18), Gravettoid in nature, is placed within the same chronological interval as the industry from Kostienki 8-Telmanskaya (Otte

and Noiret, 2004). In the Mediterranean zone, Early Gravettoid industries confirm the autonomous formation of Gravettian centers in the Apennine Peninsula and in the Balkans.

The centers in Italy provided early assemblages described as *gravettiano a punta a dorso indifferenziato* (Laplace, 1978; Palma di Cesnola, 1993; Tozzi, 2003). These assemblages are found at sites in northern Italy (Riparo Mochi layer D levels f3.6–1, Grotta del Broion, Rio Seco – De Stefani et al., 2005) and in southern Italy such as Grotta Della Cala, layer Beta I–II, Grotta Della Calanca, layer B in Campagna and Grotta Paglicci layers 23–22 in Apulia (Palma di Cesnola, 1990). These assemblages are characterized by the use of blade and bladelet technique, the presence of (predominantly) microgravettes, typical La Gravette points: the proportion of the

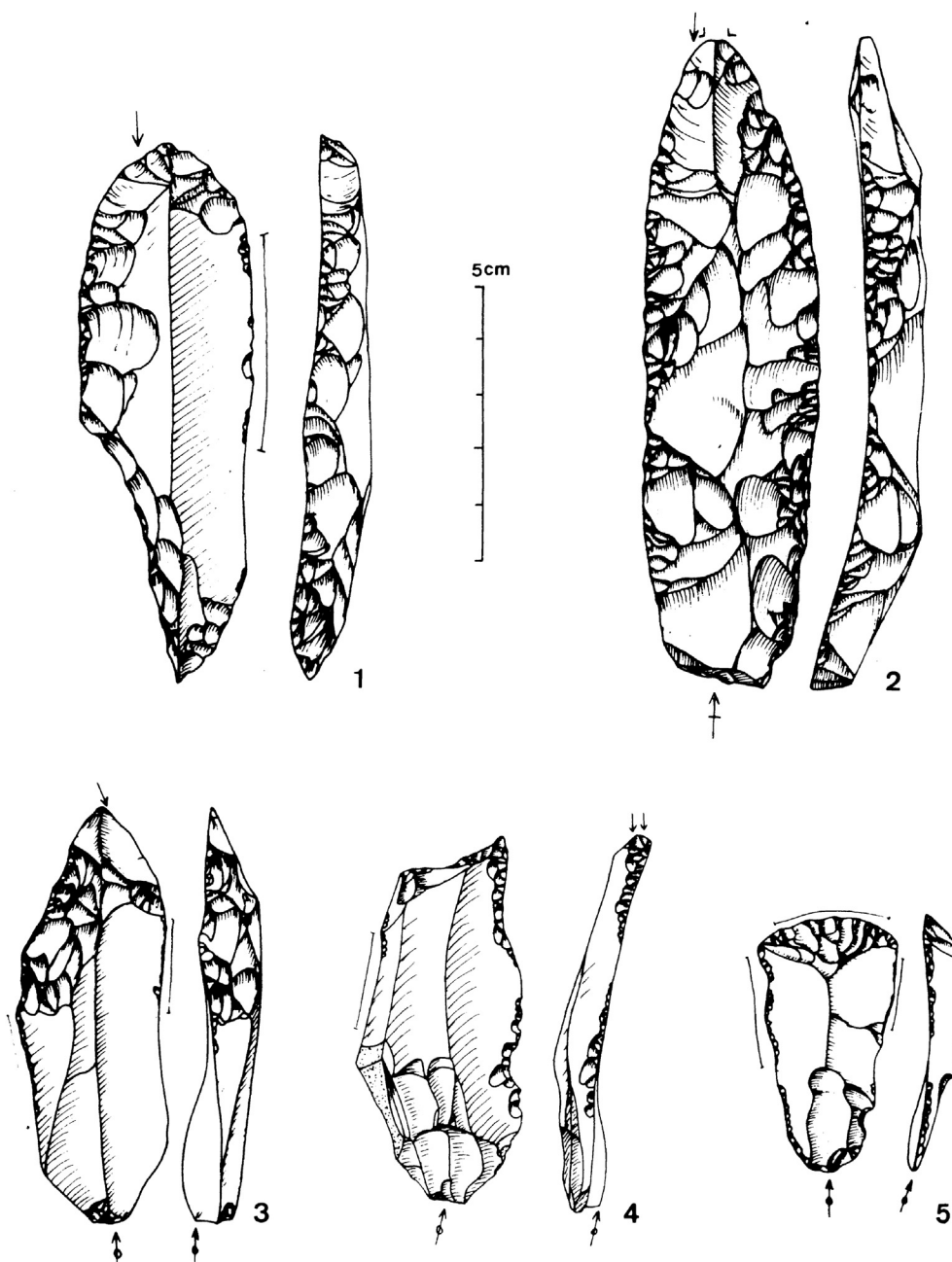


Fig. 8. Lithic industry from Maisière-Canal: 1 – tanged point, 2 – unifacial leaf point, 3 – retouched truncation, 4 – perforator, 5 – end-scraper (Otte, 1976).

two tool types is fairly high, up to 50%. They occur with retouched blades and flakes, end-scrapers, and burins (Fig. 12).

The stratigraphic position of *Gravettiano indifferenziato* is earlier than the appearance of the Gravettian with Noailles burins (dated around 27 ka BP) and later than the Aurignacian dated in the della Cala cave at 29.8 ka BP (Gambassini, 1982), in the Paglicci cave at 24–29 ka BP. The Gravettian in level 22 in the Paglicci Cave is dated at 28.1–28.3 ka BP (Palma di Cesnola, 1993).

The Balkans were a centre of the formation of Gravettoid industries, as suggested by assemblages in central-northern Bulgaria as well as in southern Greece. The Bulgarian center is attested by early Gravettian layers in the Temnata Cave near Karlukovo, where levels X–VIII in lithological layer 3d were dated between $28\,900 \pm 1400$ BP and $28\,700 \pm 1700$ BP (Ginter and Kozłowski,

1992). These levels are later than the Aurignacian from layer 4, dated at $31\,900 \pm 1600$ BP (TL method at $46\,000 \pm 8000$ a) and earlier than the upper Gravettian series from level 7b to level 4, dated at 24–21 ka BP. The assemblages from the early Gravettian layers in Temnata Cave contained regular volumetric, single-platform cores with lateral preparation, backed bladelets (Drobniewicz et al., 1992, Pl. 6:1, 2; 16:6–12), a fragment of a large arched backed blade (Drobniewicz et al., 1992, Pl. 5:7), micro-truncations, burins, end-scrapers (of which some could be an Aurignacian intrusion), and perforators (Fig. 13). Unlike the later Gravettian industries from northern Balkans that show links with the Danube Basin, the assemblages from levels X–VIII in the Temnata Cave exhibit no clear links with the Early Gravettian of the Middle Danube Basin. The chronological position of these

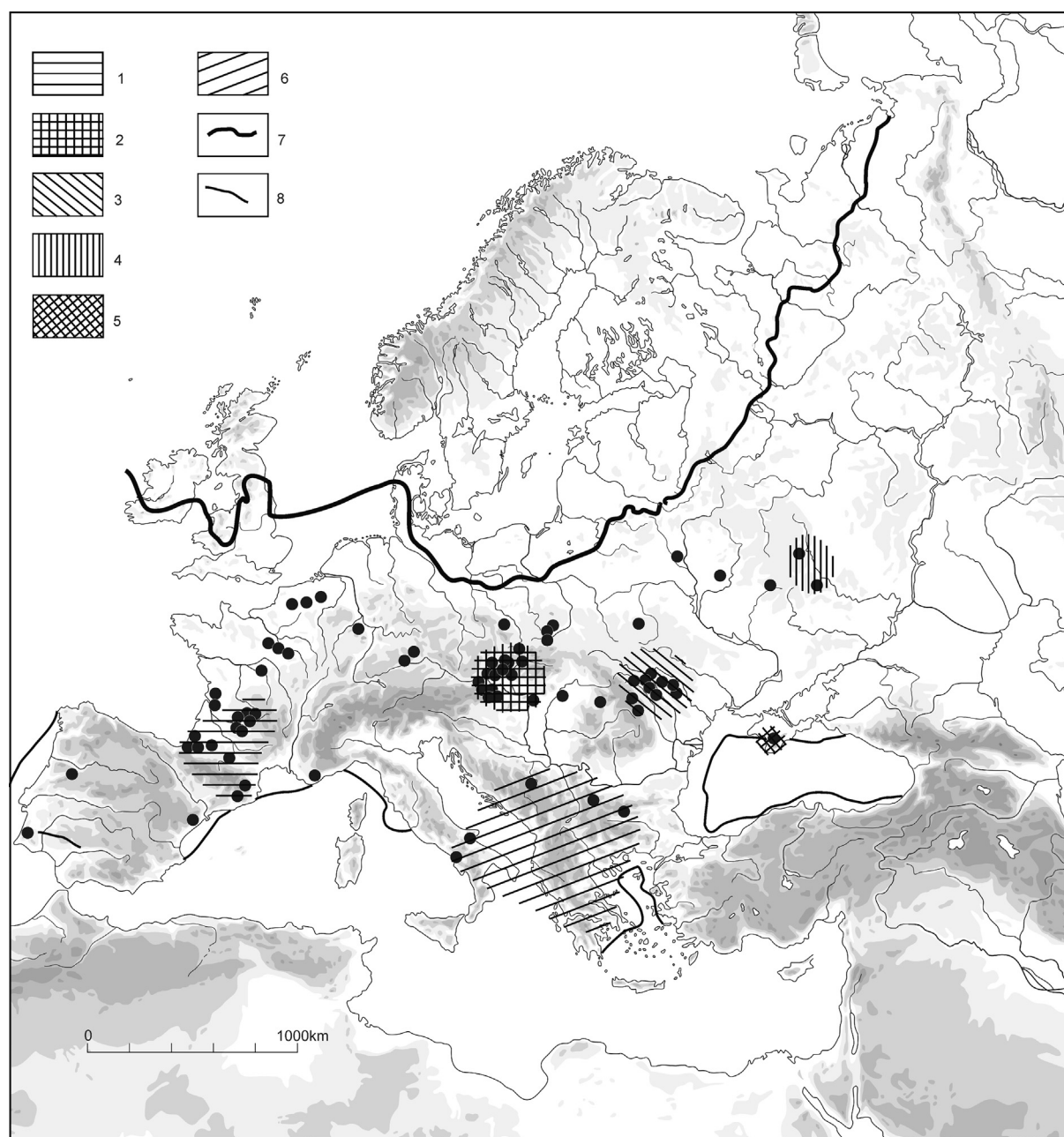


Fig. 9. Map of the independent regional centers of the Early Gravettian: 1 – Western Gravettian (Perigordian), 2 – Middle Danube Gravettian, 3 – Dniester/Prut Gravettian, 4 – Middle Don Gravettian, 5 – Crimean Gravettian, 6 – Mediterranean Gravettian, 7 – LGM ice-sheet, 8 – coastline.

assemblages corresponds (probably) to the hiatus between levels 5 and 6 in the Willendorf II sequence. For this reason the supposition that in the cool episode GS 5 (Greenland stadial 5 – 29–28 ka BP) Gravettian population withdrew from the Middle Danube basin to the south, as far as the northern Balkans, cannot be ruled out.

Such queries have not been raised concerning the centers of Gravettoid industries in Greece, notably *Gravettian indifférencié* from layer III' in Klissoura Cave near Argos. This layer is part of the lithostratigraphical complex D (Karkanas, 2010) and was radiocarbon dated at $23\,000 \pm 540$ BP (Gd-15349), whereas the AMS ABOX date is much earlier, $31\,460 \pm 210$ BP (AA 73821). The latter date is closer to the underlying Aurignacian layers within the stratigraphic complex C (Kuhn et al., 2010). The industry in layer III'

exploited mainly single-platform (occasionally double-platform) cores for blades and bladelets, with flat flaking surfaces, without preliminary preparation. Among tools, end-scrapers (30.8%) are most numerous: both on blades and on flakes, sometimes nosed; next in number are backed pieces predominantly shaped on bladelets with straight or slightly arched blunted backs. Moreover, some parageometric microliths, fairly numerous bladelets with fine unilateral retouch, straight or weakly concave, also occur (Fig. 14). Other tools are retouched flakes and blades, and a few perforators, burins, side-scrapers and retouched truncations. The industry in layer III' in Klissoura Cave in Greece is comparable to the finds from layer 10 in Asprochaliko Cave dated at 25 ka BP (Adam, 1989), and the neighbouring Kephalaria Cave – layer DI, investigated in the

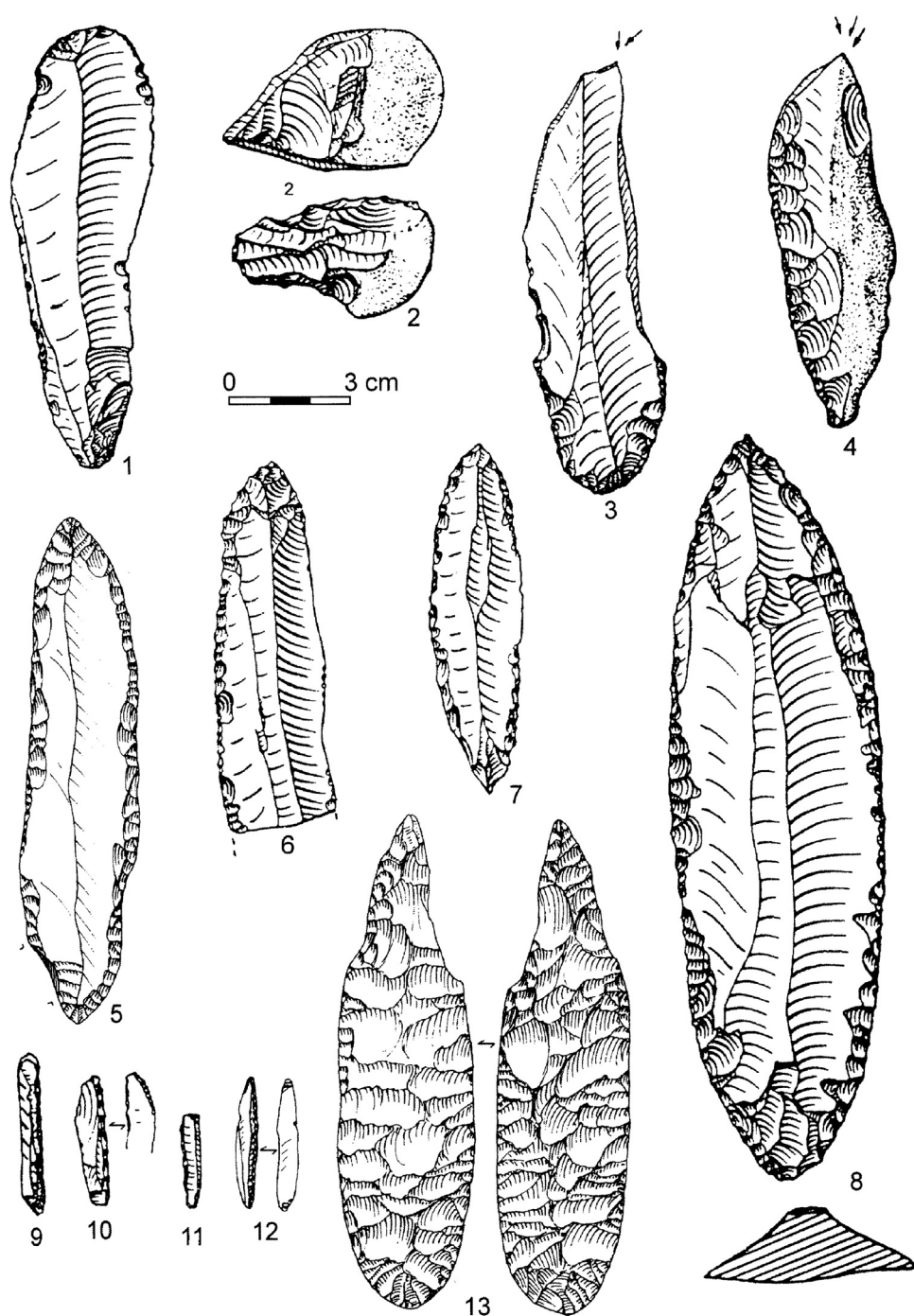


Fig. 10. Lithic industry from Molodova V, AH 9–10: 1, 2 – end-scrapers, 3, 4 – burins, 5–8 – pointed blades, 9–12 – backed bladelets, 13 – leaf-point (Chernysh, 1973).

1970s (though not fully published) (Hahn, 1984), and possibly also to caves Skini III and IV, dated at 27–25 ka BP and recently explored by A. Darlas.

The origins of the Apennine and the Balkan gravettoid industries, notably *Gravettiano indifferenziato*, can be sought either in the north-Mediterranean proto-Aurignacian (Fumanian – Broglio, 1996) or in the Uluzzian. The sequence of culture layers in Klissoura Cave seems to support the latter supposition, as the Uluzzian occurs both below the Aurignacian in layer V, and above the Aurignacian sequence in layer III', directly underlying Gravettoid

layer III'. This order of layers confirms the parallel evolution of the Uluzzian and the Aurignacian.

4. Hypotheses about the adaptational, convergent origins of the Gravettian

The third hypothesis attempts to explain the origins of the Gravettian as a process of cultural adaptation to climatic changes that were taking place with the approaching Upper Pleniglacial Maximum (LGM). This hypothesis assumes that, beginning from

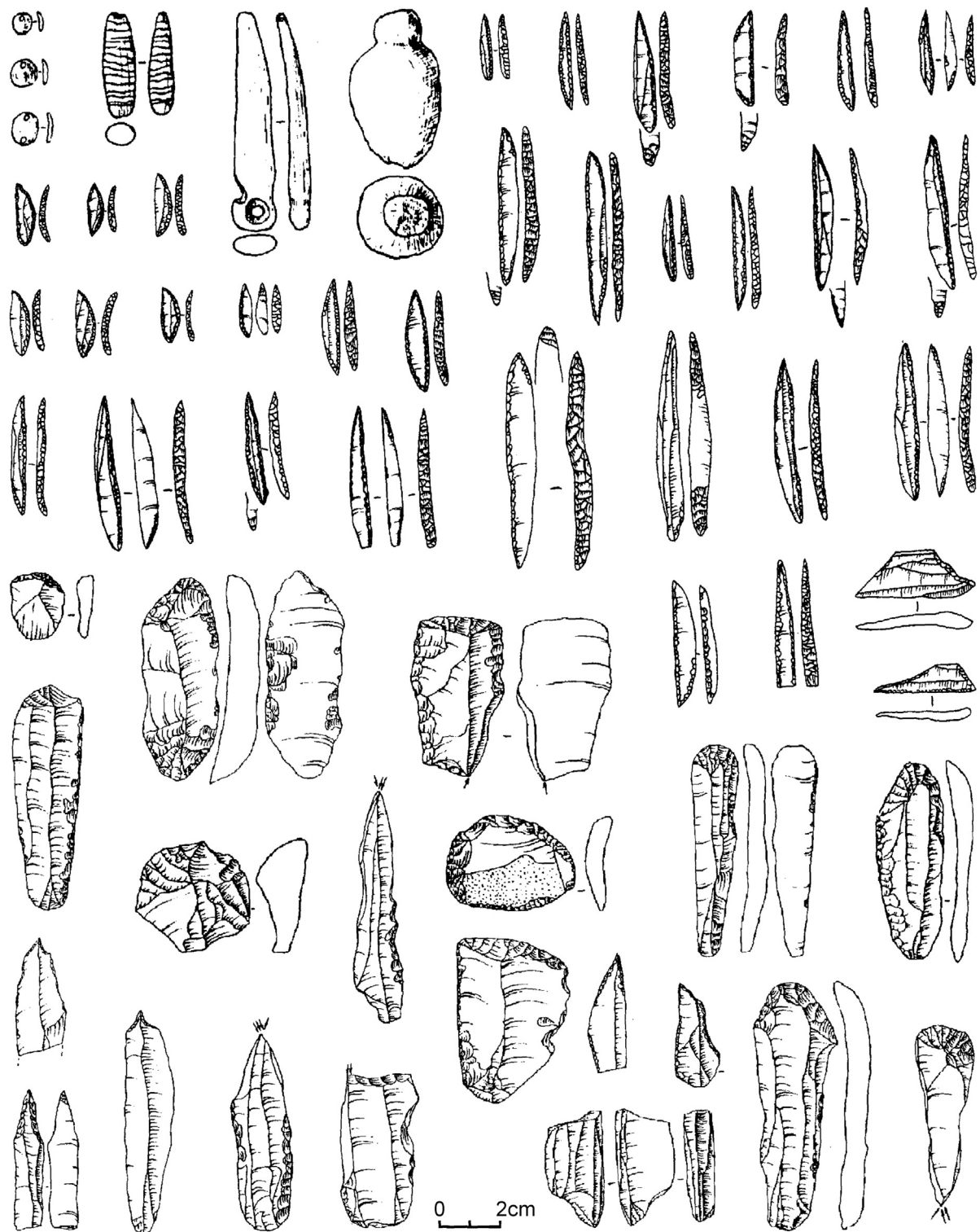


Fig. 11. Lithic industry from Kostienki 8-Telmanskaya: personal adornments, backed bladelets and para-geometric microliths, end-scrapers and burins (Sinitsyn, 2007).

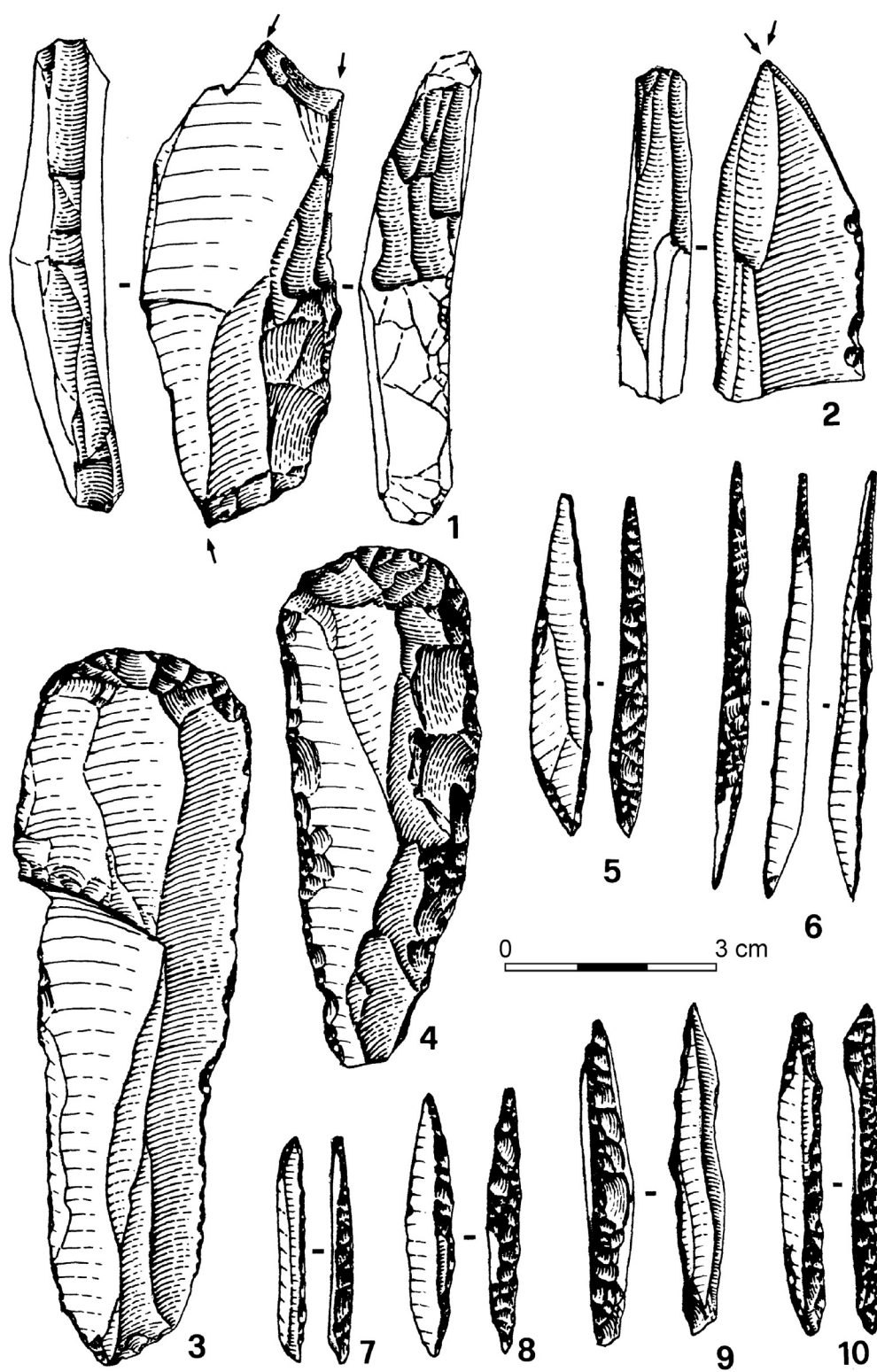


Fig. 12. Lithic industry from Paglici Cave, AH 23–22: 1, 2 – burins, 3, 4 – end-scrapers, 5–10 – backed points (Palma di Cesnola, 1990).

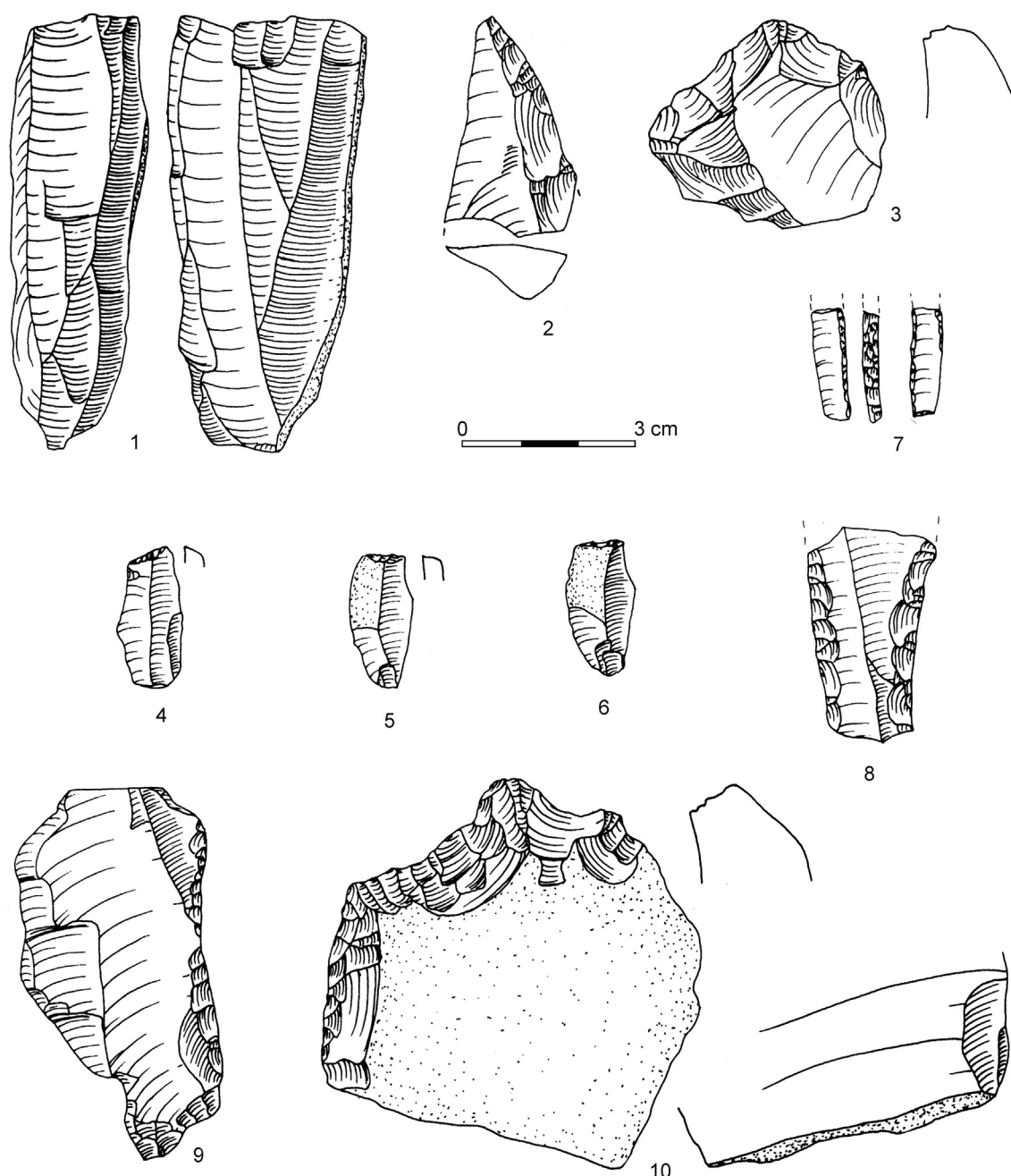


Fig. 13. Lithic industry from the Temnata Cave, TDI, AH IXa: 1 – core, 2 – arched backed blade, 3 – end-scaper, 4–6 – microlithic truncations, 7 – backed bladelet, 8,9 – retouched blades, 10 – macroperforator (Drobniewicz et al., 1992).

30 ka BP until 22 ka BP, environmental conditions gradually deteriorated and required that humans adapt subsistence economy and behaviour to the dominant environment of open steppe and steppe-tundra (Figs. 15 and 16). The effect of this adaptation are to have been the replacement of circulating mobility by logistic mobility leading to the emergence of multi-seasonal camps, specialized lithic production from selected raw materials, new hunting strategies, and significant changes in the spiritual sphere. These phenomena are registered in the Gravettian, particularly in the belt of the loess plateau from western to eastern Europe.

The Gravettian is, as recently emphasized by Klaric (2010), a mosaic of diverse cultural phenomena that occurred in a variety of environments and landscapes from the Atlantic to the Ural Mountains. The diversity of these cultural phenomena depends on the

scale applied in their description, and on the refinement of chronological resolution. Across the entire time-span from the beginnings of the Gravettian in episode GS 6 until the LGM, environmental changes were oscillatory. The response of population groups to such changes could have been cultural adaptation to new conditions, or a territorial shift in order to find environments compatible with a given group. For these reasons, the interpretations of “Gravettian unity” by adaptations exclusively, or claims of exclusively monocentric origin of the Gravettian, seem unwarranted.

5. Conclusions

This paper looked into three hypotheses of the origins of the Gravettian. These hypotheses are not necessarily mutually



Fig. 14. Lithic industry from the Klissoura Cave I, AH III': 1–13, 22, 23 – backed bladelets, 14–17 – arched backed microliths, 18–21 – retouched truncations (Kaczanowska et al., 2010).

exclusive. Generally, the opposition of the Gravettian unity versus the mosaic nature of the Gravettian, is different at various levels of analysis, depending on different aspects of material and spiritual culture and differing intervals considered (Noiret, 2013). Consequently, depending on the level of analysis and time considered, we have to apply differing models of interpretation: either a model that emphasizes “Gravettian unity” resulting from broad interregional contacts (e.g. widespread presence of types of ivory points, Gravettian “Venuses”,

backed and shouldered points; Kozłowski, 1985; Simonnet, 2012), or a model emphasizing regional and chronological differences (e.g. in the techniques of production of lithic bladelets; Klaric et al., 2009), the model of the polycentric and mosaic nature of the Gravettian. Generally, common, trans-European elements of the Gravettian culture concern the economic-social and the spiritual spheres, whereas regional elements are seen primarily in the sphere of material culture such as technology of raw material processing.

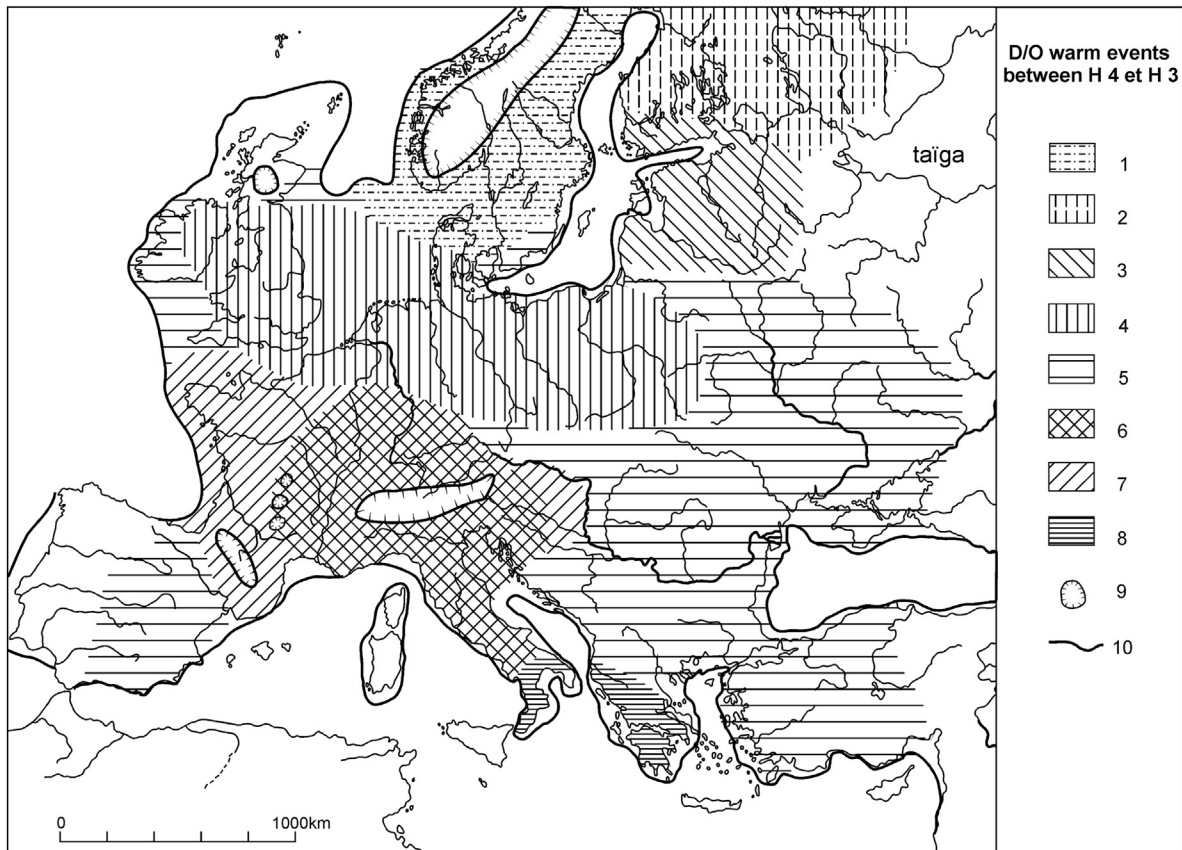


Fig. 15. Ecological zones during Interpleniglacial D/O warm events: 1 – polar desert, 2 – tundra, 3 – steppe with coniferous trees, 4 – cool steppe, 5 – park-steppe, 6 – temperate steppe, 7 – open landscape with clusters of trees, 8 – temperate forest, 9 – glacier, 10 – coastline.

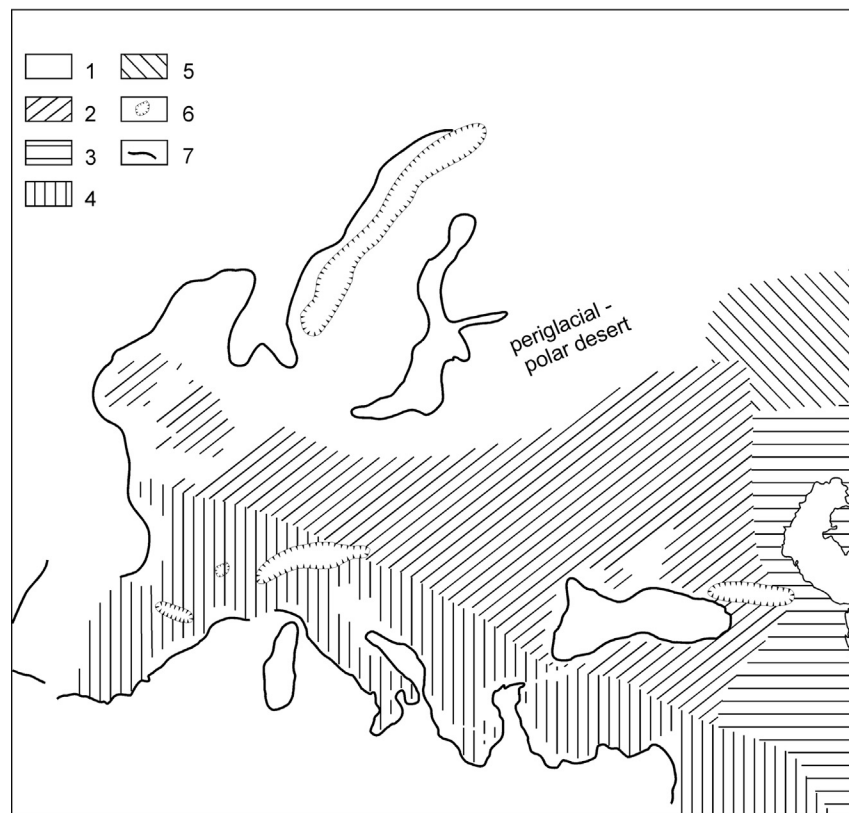


Fig. 16. Ecological zones during Interpleniglacial D/O cold events: 1 – polar desert, 2 – steppe-tundra, 3 – cool steppe, 4 – temperate grassland, 5 – evergreen taiga, 6 – glaciers, 7 – coastline.

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