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22 - CONCLUDING CONSIDERATIONS

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After the many chapters presenting detailed data on the Siuren I assemblages, it should be clear that the Lower and Middle deposits are represented by Upper Paleolithic Archaic Aurignacian and Middle Paleolithic Micoquian artifacts in the 1920s Lower layer/1990s Units H and G, and by only Upper Paleolithic Late/Evolved Aurignacian artifacts in the 1920s Middle layer/1990s Unit F. This is the basic interpretation after all of the analyses carried out. It should be recalled that the Siuren I rock-shelter is the only site in all of Central and Eastern Europe with *in situ* archeological levels with a sequence of two Aurignacian *sensu stricto* industries differentiated by the kinds of retouched microliths – one with mainly Dufour microliths of Dufour sub-type and the other with Dufour and pseudo-Dufour microliths of Roc-de-Combe sub-type. Given this, it is possible to argue for the Pan-European distribution of both Aurignacian industries, not restricting them only to Western Europe. At the same time, going outside of Europe and considering Siuren I and other North Black Sea region Aurignacian complexes within a wider geographical range, including Near Eastern and Middle Eastern materials, it is possible to study the Aurignacian phenomenon more profoundly and broadly.

But what was happening with the present author when he was publishing articles on the Siuren I materials from the site's lower and middle deposits before the present book? This is of interest to show here for our readers as demonstrates some obvious difficulties in understanding the Siuren I material encountered by both Western and Eastern (former Soviet Union) colleagues. Sometimes this is funny, but sometimes not.

Western Side Problem

The "Western side of the problem" is related to the Siuren I Archaic Aurignacian geochronology. Accepting all the Aurignacian archeological definitions proposed for Siuren I, including that for the 1990s Units H and G – Early Aurignacian of Krems-Dufour being an equivalent for the more common terms of Archaic Aurignacian/Proto-Aurignacian with Dufour microliths of Dufour sub-type, most of our Western colleagues are usually unable to agree with the supposed geochronological attribution of the Siuren I Aurignacian finds – the Arcy Interstadial with two AMS OxA dates around 28,000 BP, obtained in the 1990s. Such a negative geochronological view is certainly understandable as such Archaic Aurignacian/Proto-Aurignacian assemblages are radiocarbon dated in Western Europe to a period 37/36-34/33,000 BP. Therefore, the Arcy Interstadial for the Siuren I Archaic Aurignacian would appear to be too recent for most of our Western colleagues. What was and still is possible to state regarding the geochronological problem?

The simple answer is that the period from 31-28,000 BP is still within the Aurignacian time span and not in the much younger LGM, as has been suggested by some Eastern European colleagues (see below). There were and still are two possibilities for interpreting the late radiocarbon chronology. First, we should keep in mind the combined effect of Heinrich Event 4, the Laschamp geomagnetic excursion, a phase of increased 10Be concentration during the cosmogenic nuclide peak and the Campanian Ignimbrite eruption that took place in Western Eurasia around 40-39,000 years ago, according to 40Ar/39Ar dating (see Fedele et al. 2008). The events clearly show the significant radiocarbon anomaly for the time period containing C14 dates between 42 and 27,000 BP. The important thing is that the Early Aurignacian of Krems-Dufour/Proto-Aurignacian find complexes are also known in Italy (open-air site Serino and Castelcivita Cave) directly below the Campanian Ignimbrite eruption ashy level and the archeological layers are radiocarbon dated to around 32-31,000 BP, showing a discrepancy of about 7-8,000 actual years. Moreover, the supposed small number of Early Aurignacian of Krems-Dufour/Proto-Aurignacian assemblage might also originate from the Kostenki 14, cultural layer of volcanic ash from the Campanian Ignimbrite eruption (Central Russia) with an AMS date of ca. 32,000 BP (see Sinitsyn 2003a; Sinitsyn & Hoffecker 2006; Hoffecker *et al.* 2008). This may further support the Italian data, although there are some doubts regarding the Kostenki 14 site cultural layer in volcanic ash stratigraphy – that it might be not covered by the ashy layer, but rather lie <u>on</u> (sic!) or only partially within the ashy level (Lisitsyn 2006:116, 118-119), which would indicate deposition of the Aurignacian finds after the Campanian Ignimbrite eruption. This stratigraphic comment would very radically change the chronology for the earliest Proto-Aurignacian *Homo sapiens* penetration into Central Russia, showing the correctness of the AMS date of ca. 32,000 BP (GrA lab). Moreover, there is also

a problem with the particular Aurignacian attribution for the Kostenki 14 artifacts. This find complex was discovered by Sinitsyn during the 1998-2001 excavations (Sinitsyn 2003a). The archeological level was recognized in ashy sediments with some spot distributions for a total area of less than 10 sq. meters. Accordingly, relatively few finds were recovered at this open-air site. Indeed, less than 500 flint items, including tiny chips, were discovered, accompanied by some fragmented faunal remains with the notable presence of many hare and polar fox bones, as well as some fragmented bone tools and personal adornment pieces. Despite such artifact rarity, Sinitsyn came to a conclusion regarding the Aurignacian nature of the complex and the presence of Aurignacian retouched microliths that can be "identified as Dufour bladelets, and, more precisely, as Roc-de-Combe variety" (Sinitsyn 2003a:11). The same conclusion of the Roc-de-Combe-like twistedness of these microliths was also made by Demidenko after personal observation in St.-Petersburg (Russia) in 2001. Accordingly, the level might belong not to the European Proto-Aurignacian with Dufour sub-type bladelets, but, instead, to an Evolved/Late Aurignacian. More information, both stratigraphic and archeological, on the Kostenki XIV, ashy level and its archeological finds are needed for better understanding of this very interesting Aurignacian aspect for Eastern Europe. Therefore, it seems too early to use the Kostenki 14 Aurignacian data to develop hypotheses regarding the earliest Aurignacian human migrations.

At any rate, still taking into account the probable radiocarbon anomaly for the time period in between 40,000 and 30,000 BP, it is quite possible to speculate that the Siuren I, Units H and G AMS dates might be indeed too young and just represent the dispersal of Proto-Aurignacian *Homo sapiens* not only throughout the southern territories of Central and Western Europe, but also in Eastern Europe as well. In favor of this case, an attempt was made to obtain new AMS dates for the Siuren I Units H and G in 2009 and 2010. The results, however, provide no further definite results, being again ca. 31-28,000 BP and show either younger dates than expected or lack enough collagen for secure dates.

At the same time, it should not be forgotten that bone preservation is fairly good for the Siuren I archeological sequence. Therefore, there is also a possibility put forward by Nigst (Max Plank Institute associate, also involved in the new dating program for Siuren I) that already obtained dates for Units H and G might be indeed too young because of poor collagen preservation in the Siuren I animal bones. This is certainly possible. The Siuren I dating problem recalls the situation for the Early Upper Paleolithic sequence at Uçagızlı Cave in south-western Turkey. A good series of more than 20 AMS dates ranging between ca. 41 and 29,000 uncal BP has been obtained for the level sequence, mainly on carbonized plant material, and some marine mollusk shells used to date the Early Ahmarian levels at the top of the Early Upper Paleolithic sequence. At the same time, it is worth noting a comment on the condition of the fauna: "The macrovertebrate assemblages from Uçagızlı Cave are large and well-preserved. Bone mineral preservation is generally very good, whereas collagen preservation is very poor (J. Pearson, pers. comm.)" (Kuhn *et al.* 2008:104-105). So, there may be a similar situation in which the well-preserved ungulate bones at Siuren I indeed do not have enough collagen, causing their dating to fail or provide results that are too young.

The second possible explanation lies in the field where we can still rely on the 31-28,000 BP dates for Siuren I Units H and G AMS dates and consider why the Siuren I Archaic Aurignacian is so late in the southern part of Eastern Europe – the Arcy Interstadial, for the moment. We will return to the late Siuren I Archaic Aurignacian topic below, considering some possible reasons for this.

Eastern Side Problem

The "Eastern side of the problem" is much more complicated in comparison to the Western one. The problem's roots originate in the points of view of the entire East European Aurignacian subject proposed by M.V. Anikovich in the early 1990s and still supported by him. Therefore, they need some particular discussion.

Anikovich's view

In his 1992 article in the *Journal of World Prehistory*, Anikovich announced the very late geochronology for the 1920s excavation Siuren I Aurignacian Lower and Middle layers already discussed in the present volume (see Chapter 1). Why this was done is clearly seen by his direct statement cited here: "The faunas of both the lower and the middle horizons indicate a steppe-semidesert landscape and severe climatic conditions (Vekilova 1957:256, 1971:140). Thus, we can assume that the lower and middle horizons were close in time and date to a marked cold spell" and "[i]t therefore seems most likely that the lower and middle horizons date to the maximum cold of Upper Valdai (ca. 20,000-18,000 B.P.)" (Anikovich 1992:223-224). Also accepting the absence of any "mechanical admixture" for "the "Mousterian complex" in the lower layer of Siuren I", Anikovich (1992:224-225) came to the conclusion that "the collection from the lower layer of Siuren I must reflect ties between local "Mousterians" and, probably, intruders, who brought with them developed Upper Paleolithic cultural traditions" and, at the same time, "the material in the middle layer shows the rapid obsolescence of Middle Paleolithic traditions and a complete dominance of Upper Paleolithic techniques", which led to his final conclusion: "The likely geological age of the lower and middle layers suggests that the Middle-Upper Paleolithic transition occurred in the Crimea much later than in most of Europe". It is strange that in stating such a late geochronology for the two Siuren I Upper Paleolithic layers in 1992, Anikovich did not mention the fact that this conclusion was not properly his own, but he actually joined with the opinion of the very famous Soviet geologist I.K. Ivanova (Moscow) expressed as early as the late 1960s (Ivanova 1969). This is confirmed by citing Anikovich again, this time his 1991 habilitation dissertation thesis in Russian: "The cold-loving fauna that is connected to lower cultural layer (of Siuren I – Yu.D.) indicates that the time of layer's existence was, highly likely, the last climatic minimum of Upper Valdai (18-20,000 years ago). Exactly so the layer was dated by geologist I.K. Ivanova" (Anikovich 1991:19-20). Citing Ivanova's early 1980s opinion on the matter: "There are no doubts that maximum cold conditions, so clearly reflected in fauna and floral structure of Siuren I rock-shelter, are connected to noted in the global scale cooling of Second half of

Würm/Valdai (20-18,000 BP)" (Ivanova 1983:29), it is obvious that Anikovich just followed Ivanova's hypothesis.

It is also important to bear in mind Anikovich's archeological approach in describing the Siuren I Upper Paleolithic find complexes. He has never identified any core and/or tool type as proper to the Aurignacian, which is probably why the Siuren I Upper Paleolithic assemblages were analyzed by him within the context of his Aurignacoid technocomplex and never as Aurignacian *sensu stricto*.

Taking a step back from the strict Siuren I subject, it is very important to cite Anikovich's techno-typological definition of his "Aurignacoid technocomplex", that was developed by him in the early 1990s and is still in use by him with no modifications, and then analyzing it as having these data, it will be much easier then to understand the whole Aurignacoid problem in Eastern Europe.

"Blady primary flaking technique is directed to production of big massive blades. Microblades are, if they occur at all, usually amorphous and often similar to chips. It is characterized by an intensive edge retouch that is far deep on a blank's surface. Burin blow technique is at evolved stage. Flat retouch is rare or absent at all. The tool-kit is characterized by forms made through application of intensive edge retouch on high blades: Aurignacian blades, end-scrapers and points on them. Different forms of short high end-scrapers are associated with them. Dihedral multifaceted pieces are characteristic among burins. Microtools, when present, are usually made by a fine edge retouch, often alternate (Dufour bladelets)" (Anikovich 1991:34-35, 2003:15-16).

It is worth analyzing the Aurignacoid definition using true European Aurignacian tool determinations. Aurignacoid microblades are "usually amorphous and often similar to chips", while Aurignacian microliths are bladelets and microblades with elongated metric proportions. "An intensive edge retouch" seems to be characteristic of supposedly "Aurignacian blades, end-scrapers and points" of Aurignacoid complexes, whereas Aurignacian retouch is invasive and clear stepped. In this case, so-called retouched blades, end-scrapers and points of Eastern European Aurignacoid industries are not true Aurignacian ones. There is also no guarantee that Aurignacoid "short high end-scrapers" are analogous to Aurignacian carinated typical end-scrapers with lamellar retouch. Quite the opposite, Paleolithic archeologists of the ex-Soviet Union usually mean by the term "high end-scrapers" pieces with non-lamellar retouch on thick blanks, that at best are carinated atypical end-scrapers in European terminology. "Dihedral multifaceted burins" are claimed to be the most characteristic for Aurignacoid complexes, but, at the same time, the most Aurignacian different carinated burin types (specific dihedral asymmetrical multifaceted ones) are the best represented among burins of Late/Evolved Western and Central European Aurignacian and Central European Epi-Aurignacian. Accordingly, it is not necessarily that Aurignacoid dihedral multifaceted burins are in fact Aurignacian *sensu lato* carinated burins. The Aurignacoid microtool description appears to be a combination of Aurignacian and non-Aurignacian morphological features. Yes, Aurignacian Dufour bladelets of Dufour sub-type are the most characterized by alternate retouch, although the retouch is not "a fine edge retouch", but its genuine Aurignacian variants are micro-scalar and micro-stepped. At the same time, Aurignacian Dufour bladelets of Roc-de-Combe sub-type usually have ventral retouch that is also marginally abrasive. Thus, the Aurignacoid technocomplex, according to Anikovich's data, by definitions of its characteristic tool types, does not match with genuine Aurignacian or Epi-Aurignacian industries in the rest of Europe.

Turning back to Anikovich's geochronological and archeological points of view on the 1920s excavation Siuren I Lower and Middle layers' artifacts, as well as his "*Aurignacoid technocomplex*" definition, it should be acknowledged that they have significantly influenced the opinions of some Ukrainian colleagues.

Sapozhnikov's view

For example, I.V. Sapozhnikov (Odessa), much supported and developed in more detail Anikovich's position on the Siuren I 1920s Lower and Middle layer finds (Sapozhnikov 2002, 2003, 2005). First, he completely agreed with the Last Glacial Maximum geochronological positions for the Siuren I sediments based on the fauna, geology and radiocarbon dates. Faunal data used by him to support the LGM period are the presence of reindeer and polar fox that are supposed to be permanent residents of the Crimean peninsula during a prolonged time, the second half of the Last Glacial (Sapozhnikov 2002:54). There are, however, some real contradictions to this opinion. On one hand, reindeer remains are known for some Crimean Middle Paleolithic sites, while its occurrence in Siuren I is only restricted to its 1920s *Lower* layer with just two bones. Remembering the complete absence of any reindeer bone in the 1990s Units H, G and F, it seems incorrect to use only very rare reindeer bone remains as a serious indicator for a "prolonged cold spell" within the Siuren I lower layers. On the other hand, polar fox bone remains are well-represented in both the 1920s Lower layer and the 1990s Units H and G. But their presence could be better explained not through simply the paleontological presence/absence of the species, but due to Paleolithic human selection: polar fox bone remains are indeed very rarely known in just a few Crimean Middle Paleolithic sites with single bones at best, while the Siuren I polar fox bone data are abundant. Having such different polar fox situations in the Crimean Middle Paleolithic and Early Upper Paleolithic records, it is much more reasonable to argue for some specialized Aurignacian *Homo sapiens* hunting of prime-adult polar foxes, as well as red foxes, for their fur used for clothes at Siuren I Units H and G (see Chapter 5), which is typical for the Upper Paleolithic *Homo sapiens* life way, but is completely unknown for Middle Paleolithic Neandertal survival strategies. This is why the polar fox presence in the Siuren I lower sediments is a new cultural marker, but not a climatically valued feature. At the same time, it is also worth noting the absence of any true cold-loving small mammal species for Siuren I both in the 1920s Lower and Middle layers (Vekilova 1971:126-127) and the 1990s Units H, G and A (see Chapter 6). Thus, no fauna data points out the LGM period for these Siuren I deposits unless, however, someone such as Sapozhnikov uses 1940s-1960s approaches for faunal interpretations. Similarly, the 1930s-1960s geological approaches have been also applied

by Sapozhnikov for understanding of the Siuren I sequence. Indeed, he uses the arguments of 1940s and 1960s geologists N.I. Nikolaev and I.K. Ivanova, leading to his conclusion that "nobody … was able to falsify with any arguments the known to all specialists conclusion of leading geologists that practically all cultural bearing sediments of the site are deposited in one lithological strata package connected to the maximum of Würm III, in other words … from 22 to 16.5 000 years ago" (Sapozhnikov 2003:240; see also Sapozhnikov 2002:54, 2005:185). What can be done to respond to this statement? First, all the geological data represented in the present volume clearly show the variable geological contexts for Units H, G and F and they certainly do not represent a single lithological unit. Second, one of the basic geological approaches in understanding sediment sequences in caves, grottos and rock-shelters in the 1930s-1960s was based on the assumptions that thick limestone *éboulis* strata reflect very cold and arid Pleistocene periods. As the Siuren I deposits are full of many angular limestone *éboulis*, the Soviet geologists attributed the rock-shelter's entire sediment sequence to a very cold phase (Nikolaev 1940) that later was placed into the LGM period (Ivanova 1969, 1983). But two circumstances have to be seriously considered. On one hand, the geologists did not pay attention to the fact that the Siuren I rock-shelter is located within a rather soft and fragile Danish tier of limestone beds of the Belbek river valley. The Siuren I limestone beds' softness and fragility is very definitely seen through continuous intensive weathering of the rock-shelter's limestone walls and roof, even today during the Holocene Interglacial, causing a great number of modern angular limestone *éboulis* to heavily cover the rock-shelter's modern floor. On the other hand, the 1930s-1960s geological approach is now obsolete and no longer applied in studies of Paleolithic sites in caves, grottos and rock-shelters. If Sapozhnikov, as an archeologist, is not aware of this from the geological literature, he still should be aware of it from various archeological publications where the approach was discussed prior to his Siuren I interpretations (e.g. Rigaud 2000:326). Finally, Sapozhnikov completely rejected the radiocarbon dates for the Siuren I rock-shelter: the three uncalibrated AMS dates from Oxford on ungulate bone samples after the site's 1990s excavations – two around 28,000 BP for Unit H and level Ga and one around 29,000 BP for sub-level Fb2. He considered the AMS dates as absolutely inconsistent because dates from level Ga and sub-level Fb2 have a "reverse chronology" as the "depth difference in between them is no less than 1.4-1.5 m whiles a difference in dates is only 250 years". Accordingly, he came to "a sad conclusion: the received dates rather complicated the Siuren I dating problem (not a really complex one!) than clarified it" (Sapozhnikov 2005:181; see also Sapozhnikov 2002:47). Why did Sapozhnikov come to such sad conclusions about the Siuren I dates and stratigraphy? First, he really believes in all radiocarbon dates with their precise numbers, which is why the dates for Unit H and level Ga, on one hand, and the date from sub-level Fb2, on the other hand, are reversed for him. He actually does not know much about real analyses of C14 dates with their sigma data (1 sigma or 2 and their implications). In this case, he would consider that the three Siuren I AMS dates around 29 and 28,000 BP are statistically identical (Pettitt 1998). Second, he considers the Siuren I stratigraphic sequence with a number of limestone *éboulis* lenses and some huge limestone blocks as being similar to loess sequences at open-air sites with continuous slow sedimentation. Therefore, he does not realize that the limestone blocks of, for example, the third rock-fall level (lithological stratum 13) separating mostly level Ga and sub-level Fb2, were not the result of a continuous sedimentation process, but certainly a one-time sedimentation event resulting from partial collapse of the rock-shelter's ceiling. Moreover, several limestone *éboulis* lenses in the sediments of Units H, G and F, separating the dated Unit H and sub-level Fb2, also reflect rapid sedimentation rates at the site, creating a thick sequence for the units. As a result, all these sedimentation data once again repeated here definitely point out a short time period for the deposition of the nearly three meter thick Siuren I sequence, which is why the AMS dates are close one to another.

Finally, Sapozhnikov (2002:47,54, 2005:182-184) also completely rejected any Aurignacian *sensu stricto* characteristics of the Siuren I Lower and Middle finds, as well as the presence of any Middle Paleolithic artifacts within the 1920s Lower layer/the 1990s Units H and G, proposed by the present author in a series of articles published before the present volume. He attributed finds from the 1920s Lower layer/the 1990s Units H and G as representing "Gravettoid Epi-Aurignacian that partially corresponds to the former Aurignacian V of the French scheme" and the Middle Paleolithic unifacial tools there "do not fall out from the Upper Paleolithic technocomplex", while the presence of a few bifacial tools "can be interpreted as an extraneous mechanical admixture, brought to the site from a Mousterian settlement". Finds from the 1920s Middle layer/the 1990s Unit F were attributed by Sapozhnikov to an "Aurignacoid Epigravettian". Such unusual and heterogeneous industrial definitions proposed by Sapozhnikov for these Siuren I materials are based on his following statements regarding the artifacts. The Siuren I 1920s Lower layer/1990s Units H and G "Gravettoid Epi-Aurignacian" term became valid for Sapozhnikov and, respectively, "the material characteristics do not allow us to consider the site's lower layer horizons lithic industry as Aurignacian, that is related to the time of Typical Aurignacian I-IV and not even talking about Aurignacian 0 there" because Sapozhnikov "does not see there any expressive core-like carinated end-scraper; there are very few "nosed", "*à museau*" and "pointed" end-scrapers; both end-scrapers on "strangled" blades and end-scrapers with working edges on their blanks' butts are absent" and "there are no retouched chips or micropoints of Dufour type". Sapozhnikov's interesting Siuren I Lower layer Upper Paleolithic artifact characteristics can be completed by some of his notions on retouched microliths where, aside from dominating "microblades and blades with alternate retouch," he stressed the presence of "blades and microblades with a backed edge and fine ventral retouch, as well as uncommon points of Gravette type and even rarer points with two backed edges, some of them recalling pieces of Krems type". The basis for Sapozhnikov's Siuren I 1920s Middle layer/1990s Unit F "Aurignacoid Epigravettian" definition is also worth consideration. First, he simply stated that "the considering find complex does not contain any Aurignacoid elements" because "there are not only core-like or high end-scrapers, but also retouched microchips". He also made the following additional comments while describing some flint classes and tools: "a series of micropoints should be attached to a micro-Gravette type and ca. ten pieces

are retouched microchips with twisted profile, among which 4-5 examples can be defined as micropoints of Dufour type" citing illustrations by the present author of Dufour and pseudo-Dufour microblades of Roc-de-Combe sub-type (see Demidenko 2002b: fig. 8); "the so-called Yu.E. Demidenko's "carinated burins" are just "cores" and "there are no large retouched blades, a number of end-scraper types and Krems type points" there. As a result, having such unusual Aurignacian tool type understandings for the Siuren I find complexes, similar, however, to Anikovich, Sapozhnikov created at Siuren I an Aurignacian 0 assemblage with Dufour bladelets of Dufour subtype (1920s Lower layer/1990s Units H and G Upper Paleolithic artifacts) and an Aurignacian II-IV/Evolved Aurignacian assemblage with Dufour and pseudo-Dufour microblades of Roc-de-Combe sub-type (1920s Middle layer/1990s Unit F), following here strictly French terms, "Gravettoid Epi-Aurignacian" and "Aurignacoid Epigravettian" assemblages, respectively. Taking a closer look at his Siuren I artifact descriptions, we clearly understand his problems and also his near-zero knowledge of the Aurignacian, which is again comparable to the Soviet Paleolithic archeologist approach in the 1950s and 1960s, which still survives today thanks to Anikovich. It is also important to bear in mind that Sapozhnikov personally studied some Siuren I artifacts, but only the labeled ones, in 1986 at Kunstkamera Museum (St.-Petersburg), so it was reasonable to expect from him some real new data, but this was definitely not the case. His problems are evident when we look once again at his proposed tool type classification and compare it with our own. For the 1920s Lower layer/1990s Units H and G Upper Paleolithic, our bladelet "carinated" cores and carinated end-scrapers *sensu lato* (including thick nosed/shouldered ones) turned out to be absent in Sapozhnikov's data; there are no flat nosed/shouldered and ogival end-scrapers in our data and very few of them ("nosed", "*à museau*" and "pointed" end-scrapers") in Sapozhnikov's data that is a common feature in the European Aurignacian 0 assemblages; his accent on the absence of end-scrapers on Aurignacian blades ("end-scrapers on "strangled" blades") is also a common feature for the Aurignacian 0, while "end-scrapers with working edges on their blanks' butts" is only Sapozhnikov's enigmatic Aurignacian typical tool type. Regarding the retouched microliths, the absence of any "retouched chip or micropoint of Dufour type" would really surprise anyone who knows something about Aurignacian 0 microlith features and, moreover, his notions of "blades (sic!) with alternate retouch", "blades (sic!) and microblades with a backed edge" and some "points of Gravette type" leave no doubt as to his complete misunderstanding of Aurignacian Dufour, pseudo-Dufour and Krems microlith types in the Siuren I Lower Aurignacian assemblage. At the same time, Sapozhnikov's rejection of the true Middle Paleolithic Micoquian artifact component presence in the Siuren I Lower deposits shows both his incompetence for the Middle Paleolithic by which he is not able to recognize the difference between true Micoquian unifacial tools and simple retouched flakes occurring in Upper Paleolithic assemblages, and his incomprehension that the presence of bifacial tool treatment flakes and chips in these collections makes impossible his hypothesis of just bringing of a few Middle Paleolithic bifacial tools to Siuren I rock-shelter from a Middle Paleolithic site. Taking Sapozhnikov's data on the Siuren I 1920s Middle layer/1990s Unit F flint tools, his conclusion is quite surprising – "the considered find complex does not contain any Aurignacoid elements". We do not know exactly what is hidden under his Aurignacoid elements, but regarding the true Aurignacian core and tool type presence, the Siuren I Evolved Aurignacian is much more Aurignacian, having, for example, the entire carinated core/tool type package (cores, end-scrapers and burins) in comparison to the Siuren I Aurignacian 0 with the absence of carinated burins, although it is a well-known difference between these Aurignacian industries. Therefore, Sapozhnikov's accent on the absence of "core-like or high end-scrapers" in the Siuren I assemblage is not understandable, as well as his identification of our carinated burins as just cores. The latter statement is really funny as the Siuren I Unit F bladelet narrow flaked cores/"carinated burins" and carinated burins *sensu stricto* are functionally, of course, cores for twisted and "off-axis" microblade primary flaking removal, but, typologically speaking, they are Aurignacian carinated burins and nothing else. We should simply not mix typological, technological and functional matters for Paleolithic flint objects as by mixing them someone could classify, for example, retouched blades as "knives" or "jack-planes" etc. Sapozhnikov states that he did not see any "retouched microchips" but, then mentions "ca. ten pieces" that are "retouched microchips with twisted profile". He should know that all of these pieces are typical Dufour and pseudo-Dufour microblades of Roc-de-Combe sub-type, including "micropoints" of "a micro-Gravette type" also defined by him. He should also know that Aurignacian blades with stepped retouch and Font Yves/Krems points are absent in Evolved Aurignacian assemblages.

Thus, following Anikovich's Aurignacoid approach, Sapozhnikov has managed to construct from the two truly Siuren I Aurignacian assemblages some weird hybrids during the LGM period. As it seems to the present authors, the observed Aurignacian and Aurignacoid problems come from the following archeological misunderstandings. Sapozhnikov, like Anikovich and many other colleagues from the former Soviet Union, knows little about the internal structure of the Aurignacian *sensu stricto* where there are three different industries: Aurignacian 0/Proto-Aurignacian, Aurignacian I/Early Aurignacian and Aurignacian II-IV/Evolved Aurignacian for the time span between ca. 38-28,000 uncal BP. There is also the former Aurignacian V industry or Epi-Aurignacian industry dating to the LGM (ca. 22-18,000 uncal BP) with only two Aurignacian-like industrial features – carinated atypical end-scrapers and tiny pseudo-Dufour microliths made on chips and shortened microblades with marginal dorsal abrasion retouch and flat or slightly incurvate, but not twisted, general profiles for the "North Black Sea region Epi-Aurignacian of Krems-Dufour type" (e.g. Demidenko 1999, 2008a). Accordingly, the ex-Soviet Union colleagues, when discussing the Aurignacian/Aurignacoid topic, constructed in their minds a mixed and static industry having Aurignacian I/Early Aurignacian and former Aurignacian V/Epi-Aurignacian features with sometimes only additions of strangely understood carinated burins, which were for them simply dihedral multifaceted ones. Coming to the retouched microlith details, it is also obvious that they nearly always confound true Dufour pieces of both Dufour and Roc-de-Combe sub-types with the North Black Sea region Epi-Aurignacian of Krems-Dufour type microliths and some Epigravettian and even Gravettian backed

pieces. This is why Anikovich and his supporters have a great variety of actually non-Aurignacian *sensu stricto* industries for their various Aurignacoid industries: a Middle to Upper Paleolithic transitional "bidirectional blady pointed" Levallois Bohunician-like industry from Kulychivka, lower layer (Western Ukraine); a specific Spitsynskaya EUP industry from Kostenki XVII, lower layer; a Jerzmanowician-like industry from Kostenki VIII, upper layer; various Gravettian industries from Kostenki IV, upper layer and Kostenki IX (Middle Don River region, Russia); an Epi-Aurignacian industry from Radomyshl (Northern Ukraine); North Black Sea Epi-Aurignacian industry of Krems-Dufour type from Muralovka and Zolotovka I sites (Lower Don River region, Russia); mixed and industrially heterogeneous complexes of North Black Sea Epi-Aurignacian industry of Krems-Dufour type and an Epi-Gravettian industry from Rashkov VII and VIII (Moldova); an Epigravettian assemblage from Anetovka II (Southern Ukraine) (see Demidenko 2004b, 2008b), not mentioning here some more of Sapozhnikov's hybrid assemblages of "Gravettoid Epi-Aurignacian" and "Aurignacoid Epigravettian" based again on either mixed and/or non-*in situ* materials (see also Demidenko & Nuzhnyi 2003-2004). As a consequence of these industrial "Aurignacoid" exercises, the "Aurignacoid technocomplex" became dated to a long period between ca. 38 and 18-17,000 BP, similar to the Aurignacian geochronology in the first half of last century.

All in all, we cannot agree with an Aurignacoid attribution for the Siuren I two Aurignacian assemblages, or with the rejection of the Middle Paleolithic Micoquian component for the 1920s Lower layer/1990s Units H and G assemblages. At the same time, we fully understand that any criticism of the Aurignacoid proponents, even with all the arguments presented here, will not influence them quickly and only a slow and permanent accumulation of new published data and arguments might change the situation. This, however, also explains the positions of some of our well-known European colleagues (J.K. Kozlowski and F. Djindjian) who actually support the Russian and Ukrainian Aurignacoid colleagues in their interpretations of the Siuren I Aurignacian assemblages. For example, it is well seen in the following citation of one of their joint publications: "Siuren 1 (Crimea) (Vekilova 1957; Otte *et al.* 1996). Level Fb1 = late Aurignacian = 29,550 BP (?) or mixed Mousterian-Epigravettian layer (?)" (Djindjian *et al.* 2003:42). It is especially interesting that Kozlowski studied some of the 1920s excavation Siuren I labeled artifacts at Kunstkamera Museum (St.-Petersburg) in the 1960s and in all his previous publications, the Siuren I Upper Paleolithic finds from the lower and middle deposits were Aurignacian, while Djindjian, visiting St.-Petersburg in the 1990s and 2000s, never examined the Siuren I artifacts. Therefore, with such Western-sided support, there is little chance that Anikovich and/or Sapozhnikov would change their interpretations of the Siuren I archeology and geochronology. This is one of the reasons why our descriptions of the situation are so detailed here: to show all colleagues the complexity of the interpretations of the Siuren I Aurignacian.

Stepanchuk's view

Another Ukrainian colleague, V.N. Stepanchuk, is also well-known for his actual Aurignacoid exercises in Eastern Europe (see, for example, Cohen & Stepanchuk 1999, 2000-2001; Stepanchuk & Cohen 2000-2001) and for the unusual hypothesis for the youngest Middle Paleolithic Neandertals in "Crimean refugia" – "there are foundations to believe that Ak-Kaya (Micoquian – Yu. D.) and Kabazi (Western Crimean Mousterian/Levallois-Mousterian – Yu. D.) industries survive till 23-24,000 BP and 18-20,000 BP, respectively" (Stepanchuk 2005:209). Stepanchuk has proposed another interpretation for the role of Middle Paleolithic Micoquian finds within the Siuren Lower deposits that are rich in Early Aurignacian of Krems-Dufour type artifacts, based on his analysis of the published data from both the 1920s and the 1990s excavations at the rock-shelter. "I find more grounds to claim in favor of a hypothesis on contacts between incoming (into the Crimea – Yu.D.) Aurignacian people and local Neandertal people that became apparent in a form of direct joint habitation by different human groups being bearers of Middle Paleolithic technological traditions and Dufour Aurignacian traditions" at Siuren I rock-shelter ca. 29-28,000 BP (Stepanchuk 2001-2002:320). Later, he again viewed the joint occurrence of a few Micoquian and many Aurignacian artifacts at Siuren I lower archeological levels "as evidence of peaceful contacts between Archaic and Modern humans" (Stepanchuk 2006:207) for both this site and all of Eastern Europe, which was then used by him as the basis for acculturation-like hypotheses constructing many Early Upper Paleolithic "symbiotic archeological find complexes".

Although Stepanchuk's idea, like any other hypothesis has the right to be proposed, it is quite difficult to imagine such joint (*sic!*) and multiple modern *Homo sapiens* and Neandertal groups' habitations of the same living floors with no sharing as is clear from the archeological data, for several different archeological levels. This is why the separate occupations of the rock-shelter by Micoquian Neandertals and Aurignacian *Homo sapiens* (see Chapter 16) is more plausible, keeping in mind the rapid sedimentation rates at the site, such that rich Aurignacian living floors simply enveloped the rare Micoquian finds there.

Thus, another aspect of the Siuren I archeological context is interpretation differently, showing once again some uniquely East European views of actions and interactions of different Paleolithic human groups.

Our interpretations

But keeping to our own interpretations, we can demonstrate some other "doors" that are now opened for the range of Aurignacian *sensu lato* questions, not only in Eastern Europe but also for all of Western Eurasia.

First, the Siuren I Early Aurignacian of Krems-Dufour type/Aurignacian 0/Proto-Aurignacian/Archaic Aurignacian materials play a crucial role in understanding possible routes of *Homo sapiens* bearers of the industrial tradition into the vast territories of the southern part of Eastern Europe, as it is still the only *in situ* assemblage with absolute dates there. There are still two possibilities to resolve the human dispersion question. The first is based on the assumption that the existing AMS dates for Siuren I, Units H and G are too young for these Aurignacian finds. This is why these Siuren I materials can be still used as

indicators for a general penetration of *Homo sapiens* across the whole entire southern territory in Europe during the time range between 38-37-33-32,000 uncal BP or before the Campanian Ignimbrite eruption event. The second possibility is to accept the dates at hand and to examine the Proto-Aurignacian peopling of Europe in a more complex way, as has been previously suggested. Accepting the existing AMS dates, which are also supported by the Siuren I fauna, microfauna and malacofauna data and general Crimean Paleolithic geochronology, it was already possible to propose another scenario for appearance of Proto-Aurignacian *Homo sapiens* in the south of Eastern Europe (Demidenko 2008a:101). Here we can add the Campanian Ignimbrite eruption event in combination with Heinrich Event 4, the Laschamp geomagnetic excursion, a phase of increased 10Be concentration during cosmogenic nuclide peak that certainly seriously influenced the sociocultural and environmental system of Paleolithic human groups for their survival through various climatic effects that included severe volcanic-winter conditions over a period of several hundred years (see again Fedele *et al.* 2008). Because of these events, Zilhao even suggested that "the area available for human settlement in Europe must have contracted by as much as 30%, implying a major population crash (fig. 9)" (Zilhao 2006b:192). Adding to this reasonable demographic hypothesis the fact of a significant ashfall area for Central and Southern Italy, the Balkans, Asia Minor and North Black Sea region (Fedele *et al.* 2008:838, fig. 1), it is possible to speculate about the unsuitable nature of these territories in South-Eastern Europe for any migrations into them of possible incoming human groups during some time period after the Campanian Ignimbrite eruption. If this was the case, then we can understand why Proto-Aurignacian/Aurignacian 0 human communities known in the south of Western Europe around the Hengelo Interstadial before the Campanian Ignimbrite eruption event did not move intensively into Eastern European territories and only later, around the Arcy Interstadial, they came to be known there by simply infiltrating from Western Europe where these human communities, again because of the Campanian Ignimbrite eruption event, were territorially restricted mainly to the southern areas. Accepting such a scenario, the presence of some Proto-Aurignacian sites in Austria (Krems-Hundssteig), in the Banat region of Romania (Tincova, Romanesti-Dumbravita I-II and Cosava), in North-Western Bulgaria (Kozarnika, layer VII) and in the Ukrainian Transcarpathian region (Beregovo I) throughout the Danube river basin area in the eastern part of Central Europe, adjacent to the considered East European region with the Siuren I Proto-Aurignacian at its central southernmost part (the modern Crimean peninsula), further points out the use by Proto-Aurignacian *Homo sapiens* of an easterly route of the "Danube Corridor" for their dispersal into the south of Eastern Europe. Indeed, it is clearly possible to imagine the Danube pathway of these humans from Lower Austria (Krems-Hundssteig) down to the river basin areas in the Banat and Ukrainian Transcarpathian regions and then on to the mouth of the Danube with easy straight access to Western Crimea (Siuren I) across then-dry land of the present-day Bay of Odessa. Moreover, with access to the dry land of the present-day Sea of Azov during the Würmian Interpleniglacial, it is also possible to trace another movement of these Proto-Aurignacian *Homo sapiens* to the north-west (the present-day Lower Don river area) where the Chulek I surface find site is known with its small, but typologically indicative flint assemblage. This assemblage, like the Siuren I Proto-Aurignacian materials, is also characterized by some strong European Proto-Aurignacian typological features with the most obvious seen in a series of retouched microliths with fine ventral basal thinning (Demidenko 2008b:121). Among the tool-kit's 39 retouched microliths, there are 11 microliths with such secondary treatment, which is 28.2% of all 39 microliths or 35.5% of 31 Dufour and pseudo-Dufour bladelets *sensu lato*. It has already been proposed that "the ventrally thinned "non-geometric microliths" be called the Chulek-I type" (Demidenko 2000-2001:151). This rather unusual additional treatment of the Chulek I microliths is known for some European Proto-Aurignacian Dufour bladelets (e.g. Fumane in North-eastern Italy) but seems to be completely absent for Near Eastern and Middle Eastern Aurignacian microliths. Moreover, taking into consideration the absence of Chulek I type microliths among the Siuren I Proto-Aurignacian microliths, it is also necessary to suggest a multiple process of Proto-Aurignacian *Homo sapiens* penetration into southern territories of Eastern Europe from the west and not to see it as a simple one-time event. It has also been previously suggested (Demidenko 2008a) that further movement of the Proto-Aurignacian *Homo sapiens* to the east can be seen through the presence of Proto-Aurignacian materials at Kamennomostskaya Cave and Shyrokiy Mys. Paleogeographical factors also support such a hypothesis. Continuing from the mouth of the Danube into the Crimea, there is no other way than to lengthen this "migration line" to North-western Caucasus with the Kuban river basin where the two above-noted sites are known south of its valley. But a closer techno-typological look at the respective Upper Paleolithic materials of the two sites (Demidenko 2008b) does not allow us to support the Proto-Aurignacian *Homo sapiens* movement there, using the materials presently available. The Kamennomostskaya Cave and Shyrokiy Mys Upper Paleolithic assemblages are in fact industrially similar to some Early Aurignacian Levantine assemblages (e.g. Ksar Akil rock-shelter, levels XII-X) by the presence of such specific elements as serial lateral carinated pieces (Kamennomostskaya cave) or a dominance among retouched microliths of items with fine Ouchtata-like dorsal lateral retouch (Shyrokiy Mys) among basic Proto-Aurignacian techno-typological features. Thus, it is possible to argue for two directions of Proto-Aurignacian/Archaic Aurignacian *Homo sapiens* migrations into the south of Eastern Europe. On one hand, there were possible migrations from the west, from Central Europe, via the "Danube Corridor" in an eastern direction, seen through Upper Paleolithic assemblages from Siuren I, Lower cultural bearing sediments and Chulek I. On the other hand, there were also possible migrations from the south, from the Levant, following the Black Sea eastern shore line (Demidenko in preparation), reflected by the assemblages from Kamennomostskaya Cave and Shyrokiy Mys.

Arguing in favor of these proposed migration hypotheses, it makes sense to consider P. Mellars's hypotheses regarding penetration into Europe of Early Aurignacian/Aurignacian I and Proto-Aurignacian *Homo sapiens* from the Levant because central roles there were played by both the southern European territories occupied by Proto-Aurignacians and the Danube valley as the "main road" for Early Aurignacians on their way

into Europe (Mellars 2004, 2006a, 2009) that are rather widely accepted by many colleagues. For Mellars, there are data that "tend to support the model of two separate routes of dispersal of anatomically modern populations across Europe, one primarily along the Danube valley associated with the dispersal of the "classic" Aurignacian, and the other along the Mediterranean coast represented by the bladelet dominated Fumanian industries, and both deriving from the hypothetically ancestral Emiran and Ahmarian populations within the east Mediterranean Levantine region (Figure 18.2)" (Mellars 2009:349). Taking additionally his data and the directions of migrations as indicated by arrows on his map (Mellars 2009:341, fig. 18.2), we see some particular features for the two proposed routes across Europe during 45,000-35,000 calendar years ago that deserve specification and discussion.

The Proto-Aurignacian *Homo sapiens* dispersal migration arrows pass, with some uncertainty, through Turkey and the Balkan Peninsula, due to the lack of Proto-Aurignacian sites there, on to northern and central Italy and then from northern Italy to the Mediterranean coast of France and further to both northern Spain and south-western and central France, with the only arrow before Italy leading to the Danube river where Krems-Hundssteig is located. Now, taking additionally Kozarnika, layer VII with uncalibrated AMS dates between 39 and 36,000 BP in Bulgaria, it is reasonable to place the migration arrow for the "Proto-Aurignacian spot" in the Balkans further to Mediterranean Western Europe, but it is also located less than 50 km south of the Danube valley, showing actual use of Proto-Aurignacian *Homo sapiens* of the "Danube Corridor". Then, accepting the first Proto-Aurignacians penetration into Western Europe through the Balkans, using Krems-Hundssteig in Austria, Banat Proto-Aurignacian sites in Romania and Beregovo I in the Ukrainian Transcarpathian region, all within the Danube river basin, it can only be argued that the Proto-Aurignacian rotational movement to the east through the "Danube Corridor" down to the Crimea (Siuren I) and Lower Don river area (Chulek I) could have lasted until the Arcy Interstadial (ca. 30,000 uncal BP). Accordingly, the "Danube Corridor" was actually of great importance for Proto-Aurignacian *Homo sapiens* dispersal throughout Europe in both western and eastern directions.

Mellars's Aurignacian I *Homo sapiens* dispersal route does not relate directly to the present study, although there is not total agreement on some particular aspects of the matter (see also Conard & Bolus 2003, 2008; Zilhao 2006b; Teyssandier 2006; Nigst 2009).

At the same time, arguments regarding starting "industrial and chronological points" of the two Aurignacian migration routes from the Levant into Europe should be considered with some criticism.

Comparisons with the Ahmarian

Starting from Bar-Yosef's opinion that the European Mediterranean Proto-Aurignacian resembles the Levantine Ahmarian (Bar-Yosef 2003), many colleagues argue about such similarity and the origin of the Proto-Aurignacian from the Early Ahmarian, taking into consideration the earlier chronology for the latter technocomplex's sites. To confirm this, it is enough to directly cite Mellars, Zilhao and Teyssandier, colleagues who very often have different positions on Early Upper Paleolithic questions, but interestingly holding nearly the same but independent positions on this particular question. At the same time, it is worth noting Mellars's position as he is the only one who mentions specific Levantine sites and assemblages, whereas Zilhao and Teyssandier discuss only the basic Early Ahmarian industry.

Mellars expressed his opinion as follows: "I would suggest … that these Near Eastern bladelet technologies (Yu.D. – materials used: "Levantine Aurignacian B" assemblages from levels 9-11 at Ksar Akil" in Lebanon and Boker A Early Ahmarian assemblage in Israel) could well represent the immediate source of the highly distinctive Fumanian/Proto-Aurignacian industries along the Mediterranean coastline of Europe, and reflect the dispersal of new populations across this region which was largely if not entirely separate from that reflected by the dispersal of the "classic" Aurignacian technologies via the Danube valley and subsequently into the northern and western zones of Europe" (Mellars 2009:346; see also Mellars 2004:463). In the same article, he detailed his typological arguments for the Near Eastern assemblages: "high frequencies of these small retouched bladelet forms, which fall into the same two broad categories of large "Dufour" forms (often shaped by means of inverse retouch on the ventral as opposed to the dorsal faces of the bladelets) and more sharply pointed "Font Yves" or "El Wad" forms".

Zilhao was very short and straightforward: "Technologically and typologically, the Protoaurignacian is virtually indistinguishable from the Early Ahmarian of the Levant. Its Font-Yves points, for instance, are exactly the same things as the latter's El Wad points" (Zilhao 2006b:190).

Teyssandier added more bladelet details for the analysis: "Similarities between Proto-Aurignacian and Early Ahmarian assemblages are particularly significant in terms of blade and bladelet core reduction methods and retouched bladelet morphologies (e.g. certain El-Wad points resemble the Font-Yves points of the Proto-Aurignacian, Belfer-Cohen, Gorring-Morris 2003). The convergences are also of particular significance when examining the general "allure" of blade and bladelet blanks, often standardized and regular, narrow and elongated and with a predominant rectilinear profile. All these technological and stylistic patterns well differentiate the Early Ahmarian and the Proto-Aurignacian on the one hand from the classical Early Aurignacian on the other hand. Moreover, as in the Proto-Aurignacian, the Early Ahmarian industries include few examples of organic productions and the predominant use of shells for ornaments, as recently demonstrated in levels F–H of Üçagizli for instance" (Teyssandier 2006:25).

The seemingly commonly accepted idea does not, however, appear as promising to us. First, when colleagues mention the Early Ahmarian for the discussion, they do not pay attention at all to the technological and typological differences between Negev, Sinai and Jordan Southern Levantine Ahmarian assemblages, including the Boker A open-air site, and the Mediterranean Northern Levantine Ahmarian assemblages in Northern Israel,

Lebanon and southernmost Turkey, including the Ksar Akil rock-shelter. The southern assemblages (e.g. Boker A site), technologically, are characterized by evident blade/bladelet and strictly bladelet primary flaking processes based on reduction of single-platform and elongated cores. Usually, core reduction was carried out on the narrow sides ("Narrow-fronted" cores, after Davidzon & Goring-Morris 2003) with fewer cores for which wide fronts were also used for reduction. Having such basic core reduction data (see papers in Goring-Morris and Belfer-Cohen 2003), the overwhelming majority of blady debitage is represented by bladelets. The northern assemblages (e.g. Ksar Akil, levels XIX-XVI, Üçagizli Cave, levels C-B), technologically, are based on mainly primary reduction of double-platform bidirectional blade and blade/bladelet rectangular and sub-cylindrical wide-fronted cores, such that blades and to a much lesser extent bladelets are known among the blady debitage (see Bergman 1987). Such northern-looking assemblages are represented by only single examples in the south (e.g. Lagama XVI– see Bar-Yosef and Belfer 1977:72-76) that confirms the regional Early Ahmarian variability. The respective technological differences are well reflected in various types of points and retouched microliths. These tools of the southern assemblages are mainly composed of elongated variously retouched el-Wad points and pieces with lateral dorsal retouch on narrow blades and bladelets, while tools of the northern assemblages are best represented by dorsally retouched Ksar Akil points on blades with a few retouched bladelets. Moreover, retouched blades and especially bladelets, including pointed elements, often compose nearly half or more in the southern tool-kits, whereas such tools are much less represented in the northern tool-kits. Indeed, the southern and northern Early Ahmarian assemblages are different enough from one another to represent at least two different facies of the Early Ahmarian. The techno-typological differences between the two regional Early Ahmarian assemblages were known early on and are very well expressed by the following 1980s comment: "As J.L. Phillips exclaimed when shown the Early Ahmarian material from levels XX-XVI at Ksar Akil, "my material [from Sinai] does not look anything like this" (Bergman 2003:185). Accordingly, if the three European colleagues discussed above would like to connect the European Proto-Aurignacian with the Levantine Early Ahmarian, they at least should use data on the Southern Levantine materials that are, however, the most territorially distant Levantine region to Europe. But still the Early Ahmarian assemblages in the Southern Levant are also in fact techno-typologically different from the European Proto-Aurignacian assemblages, such as the characteristic Proto-Aurignacian bladelet "carinated" cores have much shorter flaking surfaces than the Ahmarian cores, some carinated end-scrapers and dominant alternately regularly retouched Dufour sub-type bladelets and microblades are nearly completely unknown or represented by a very few pieces among the Early Ahmarian assemblages. Moreover, the three European colleagues' accent on the similarity or near-identical characteristics of the Proto-Aurignacian and the Early Ahmarian microliths does not reflect reality except for their very basic production on bladelets *sensu lato* with either flat or incurvate general profiles without abrupt retouch. First, the Southern Levantine Early Ahmarian microliths are characterized by a significant portion of pointed elements (el-Wad points) among the "non-geometric microliths" (different items on bladelets *sensu lato*), if they are present in each specific assemblage at all, either including them or not into the category of points on blades. This is shown in recently published tool composition data for Southern Levantine Early Ahmarian assemblages (see Phillips & Saca 2003:105, tabl. 9.1). Taking the most important (C14 dated, *in situ* and quantitatively abundant assemblages) related sites with numerous points, Boker A (Negev) and Lagama VII (Sinai), the predominance (*sic!*) of points over all the other retouched bladelets is clear: ca. 69% of points (84 specimens) among the "non-geometric microliths" for Boker A (calculated according to Jones *et al.* 1983:288, tabl. 9-5) and ca. 55% of points (387 specimens) among the grouped points and retouched bladelets for Lagama VII excavated tool sample only, although the point category includes some items on blades (calculated according to Bar-Yosef & Belfer 1977:49, tabl. 9). At the same time, no European Proto-Aurignacian "non-geometric microliths" sample shows a percentage of Font-Yves/Krems points more than 8-10%. Such high numerical representation of points among Early Ahmarian microliths is conditioned by the assemblages' blade/bladelet primary flaking particularities where indeed "the makers wanted to produce a single type of end product: a non-cortical distally pointed blade (e.g., Coinman 1998a:44; Ferring 1988:334 and 348)" (Monigal 2003:127). And once again the same conclusions on the recent Jordanian Early Ahmarian materials – "Elongated blanks in Ahmarian assemblages were produced and used primarily for pointed implements made on the small blades and bladelets. Initially (Yu. D. – for the Early Ahmarian), the emphasis was on producing a variety of el-Wad point types" (Coinman 2003:160-162). Furthermore, the Early Ahmarian points are quite variable based on retouch placement. For example, ventrally retouched points compose ca. 63% of all points on bladelets at Boker A. Also, alternatively retouched points are present among 28 el-Wad points on bladelets at Boker A but their exact percentage is unknown from the published data; one of their retouched edges is almost always very weakly and partially retouched. The Lagama VII point data demonstrate, however, the almost exclusive presence of dorsally retouched items. The recently published Early Ahmarian data from Jordanian Wadi al-Hasa are somewhere between the Boker A and Lagama VIII point data – "… el-Wad points tend to exhibit retouch on both edges, often by inverse retouch (19.1%), but more commonly as obverse retouch (69.9%). Retouch on both edges or alternating inverse/obverse retouch along the same edge is less frequent" (Coinman 2003:162). The Early Ahmarian points are also rather elongated as many of them are more than 5 cm long. Finally, the Early Ahmarian point retouch is also characterized by many partially and discontinuously retouched edges (see Jones *et al.* 1983:300, fig. 9-9 and Monigal 2003:128, fig. 11.9 for Boker A; Coinman 2003:163, fig.13.11 for Wadi al-Hasa sites). The retouch edge data are again interconnected to basic convergent/pointed shape for the majority of points' bladelet blanks, so that it was not necessary to modify them by any regular retouch, also known early on: "These tools (Yu. D. – el-Wad points and retouched blade-bladelets) all exhibit minor retouch; i.e., the debitage blank closely approximates the final morphology of the tool. In this sense, the Early Ahmarian technologies can be considered "specialized," in that blade blanks with specific morphology were the focus of the reduction strategies (Ferring 1988:342). Quite the opposite is known for the European Pro-

to-Aurignacian points on bladelets. They are usually characterized by the great dominance of dorsally retouched items (proper Font-Yves points), rarer alternately retouched items (proper Krems points) and nearly no ventrally retouched points; the occurrence of mainly pieces under 5 cm long and just a very minor percentage, if at all, of more elongated (> 5 cm long) items; the great significance of regularly and continuously retouched items. Thus, the two European and Levantine Early Upper Paleolithic industries are in fact different in terms of points on bladelets and the significance of the points within the retouched microlith samples. The retouched bladelets further confirm the differences between the two industries with the absolute predominance of specimens with dorsal lateral and/or bilateral retouch for the Early Ahmarian assemblages, while the Proto-Aurignacian bladelets have mainly alternate bilateral retouch.

In sum, the proposed hypothesis regarding techno-typological "similarities" between the European Proto-Aurignacian and the Levantine Early Ahmarian or even their "indistinguishable" characteristics are not supported by a closer look at the data from any of the Northern or Southern Levantine Early Ahmarian assemblages and comparisons to the European Proto-Aurignacian.

Comparisons with Levantine Aurignacian B

At the same time, Mellars' attention to the Ksar Akil rock-shelter, levels XI-IX (Lebanon), referred by him as ""Levantine Aurignacian B" assemblages", deserves further attention. The first point that should be mentioned is that these Ksar Akil levels do not actually belong to the "Levantine Aurignacian B" phase, as most Paleolithic specialists working with the Levantine Upper Paleolithic agreed in the 1970s-1980s, rather an Aurignacian *sensu lato* sequence (levels XIII-VI) above the last Early Ahmarian *sensu stricto* (level XVI), is subdivided, according to artifact characteristics, into the following phase structure: levels XIII-XI – "Levantine Aurignacian A"; levels X-IX – "Levantine Aurignacian B"; levels VIII-VI – "Levantine Aurignacian C" with additional reservations for the taxonomic status of level VI (see Copeland 1975:342-343; Bergman 1987:7-9). Accordingly, Mellars grouped together materials from both "Levantine Aurignacian A and B" phases (level XI and X-IX) into his "Levantine Aurignacian B" phase. Second, his statement that the Ksar Akil Aurignacian *sensu lato* assemblages from levels XI-IX are "analogous bladelet industries" to the Boker A Early Ahmarian assemblage (Mellars 2009:346) is also incorrect. Taking a closer look at the Ksar Akil levels XII-XI (level XIII has too few flints and even rarer tools for detailed descriptions) and level X (level IX is partially mixed with artifacts from overlying level VIII) with Bergman's Ksar Akil 1937-1938 London collection data (Bergman 1987), there is no other way than to agree with his subdivision of materials from the three levels into two different Levantine Aurignacian phases. Flints from the "Levantine Aurignacian A" phase of Ksar Akil, levels XII-XI are characterized technologically by Ahmarian-like blade/bladelet single-platform core reduction processes with production, however, of mainly twisted and "off-axis" blades and bladelets from elongated cores, where the former debitage type dominates within the debitage. Typologically, burins outnumber end-scrapers and up to three-fourths of burins are dihedral; el-Wad points and retouched bladelets compose ca. 16-17% of all tools, but percentages of el-Wad points either absolutely dominate among these two tool categories in level XI (ca. 85%) or remain very common in level XII (ca. 66%); carinated tools, depending on the particular level, are either ca. 15% (level XII) or 28% (level XI) among the levels' tool-kits, and a remarkable percentage is composed of specific lateral carinated pieces. Bergman's data can be complemented by more specific comments based on his typological details for these Ksar Akil levels, some minor artifact observations of levels XII-XI by Demidenko in 1993 and 1995 at Peabody Museum (Harvard University, Cambridge, USA) and recently, very similar materials from layer 3 at Yabrud II rock-shelter (Syria, A. Rust excavations) in Cologne (Germany) analyzed by Demidenko in 2009. These specifications are related to the question of the internal typological composition of carinated tools. Bergman did not separate carinated end-scrapers and carinated burins from one another, rather grouping them as a combined tool category – carinated tools produced on debitage blanks. But our observations allow us to say that there is a very great prevalence of carinated burins *sensu lato* within the carinated tools, while typologically defined carinated end-scrapers number just a few specimens. Moreover, the carinated burins are represented by a variety of types with serial numerical representation of each type: strictly simple carinated burins, flat-faced carinated burins/*burin caréné plan*/"*Ksar Akil burins*" or, in the European Aurignacian tool terminology, *burins des Vachons* (see Perpère 1972) and, finally, items with rather wide burin-like verges termed for similar items at Siuren I, Late/Evolved Aurignacian Unit F as bladelet narrow flaked cores/"carinated burins". These lateral carinated pieces are also techno-typologically connected to the group of carinated burin types. Also, worth noting are the abundance of el-Wad points mainly on blades, although rather narrow, and less much common than el-Wad points on bladelets, as well as the dominance of twisted and "off-axis" items for blady debitage and tool blanks. Accordingly, the great importance of carinated burins and twisted and "off-axis" blades and bladelets for the Ksar Akil, levels XII-XI has the following two implications. First, the unambiguous mistake made by Mellars in his attempt to directly connect the European Proto-Aurignacian with the Ksar Akil, level XI material can be seen, as all the noted specific features of the latter assemblage are not known for the former assemblages. Second, it is quite surprising to see the evolved Aurignacian features (the abundance of different carinated burin types) at the very beginning of the "Levantine Aurignacian" industrial-chronological sequence. Therefore, it also becomes understandable why de Sonneville-Bordes attributed carinated burins-rich assemblage from layer 3 at Yabrud II as "*Aurignacien récent*" (Sonneville-Bordes 1956) – she simply followed the already established French Aurignacian standards. All in all, doubts about any Aurignacian *sensu stricto* industrial attribution for the "Levantine Aurignacian A" (e.g. Bergman 1987, 1988, 2003; Belfer-Cohen & Bar-Yosef 1999; Bar-Yosef 2000, 2006) seem to be reasonable, recalling its Early Ahmarian-like primary reduction characteristics. The materials of Ksar Akil, levels XII-XI, as well as very similar finds from Yabrud II, layer 3, might be an industrially special and chronologically rather late variant of Early Ahmarian variability in which its specific feature is pronounced with different carinated burin-like reduction

strategies to produce some small-sized twisted debitage. This proposal finds further support when we look at Early Ahmarian Lagaman site materials from Sinai. Indeed, some rare, but typologically definite carinated burins sporadically appear there (e.g. Lagama V – Bar-Yosef & Belfer 1977:51, fig. 18, 2; Lagama XII – Bar-Yosef & Belfer 1977:68, fig. 29, 11), but they can even also occupy a signification portion of all burins – 5 pieces of all excavated 23 burins (21.7%) at Lagama VII (Bar-Yosef & Belfer 1977:60, fig. 25, 1-2), which is probably the most typical Early Ahmarian assemblage for the entire Gebel Maghara region. At the same time, carinated end-scrapers are either again represented by single items (Lagama V) or completely absent (Lagam VII and XII). Similar percentages up to 25% of carinated burins among all burins are also known for some more Early Ahmarian sites in the Levant, the most clear examples of which are the Early Ahmarian type-site Erq el-Ahmar, layers E – D (Neuville 1951) and Yabrud II, layers 5-4 (Rust 1950). This is why it is possible to suggest the existence of a separate facies of Early Ahmarian with some carinated burin technology already used prior to any proper Aurignacian industry occurrence in the region, which is, however, missing in the Ksar Akil rock-shelter archaeological sequence.

Moving up through the Ksar Akil "Levantine Aurignacian" sequence, we come up to level X, which was grouped with level XI by Mellars as the Ksar Akil "immediate source" representative of the European Proto-Aurignacian. Bergman's data on Level X (Bergman 1987) with some limited artifact observations of level X by Demidenko in 1993 and 1995 at Peabody Museum (Harvard University, Cambridge, USA) can be briefly summarized as follows. First, artifacts are clearly different from those in underlying levels XII and XI. Technologically, blade/bladelet primary reduction strategies are again based on flaking of mainly single-platform cores, but (*sic!*) the resulting blady debitage is different; it now has mostly non-twisted and "on-axis" morphological characteristics; bladelets predominate over blades. Typological features also show significant changes. End-scrapers outnumber burins. Dihedral burins slightly dominate over burins on truncation/lateral retouch. El-Wad points and retouched bladelets together account for ca. 31% of all tools and it is notably the highest proportion of these two tool categories within the entire "Levantine Aurignacian" sequence at Ksar Akil. Moreover, these two tool categories are numerically equivalent: 270 el-Wad points and 273 retouched bladelets. Dorsally retouched el-Wad points, including some items with Ouchtata retouch, are complemented here by the only known example for levels X and IX in the Ksar Akil Aurignacian sequence of an "el-Wad point variant"/"Abu Halka point", having in addition to dorsal lateral retouch some ventral lateral and basal retouch, thus with some similarities to points with alternate bilateral retouch (Krems points in European terminology). Dorsally retouched items prevail among retouched bladelets where the proportion of items with ventral and alternate retouch only reaches ca. 30%. Like all blady debitage, the el-Wad points and retouched bladelets are non-twisted and "on-axis". Carinated tools number only ca. 11%, that about two and a half times less than was known for the level XI tool-kit. More than that, for the first time for Ksar Akil, the significance of carinated end-scrapers and the much decreased role of carinated burins is clearly seen in the levels XIII-X sequence. Lateral carinated pieces still occur, but are also less common. Finally, Aurignacian blades and end-scrapers on Aurignacian blades, still numbering a few examples, seem to be represented by some very typical examples, including even some strangled items.

All these data on the Ksar Akil, level X assemblage indicate for the first time in the entire Levantine Early Upper Paleolithic record some real techno-typological similarities to the European Proto-Aurignacian. Additional new specifications on the Ksar Akil, level X assemblage are based on as yet unpublished observations on the Peabody Museum, Harvard University collection by T. Tsanova and N. Zwyns. These colleagues with a good knowledge of the European Aurignacian and particularly the Proto-Aurignacian, clearly identified core and tool types that are very typical for the Proto-Aurignacian: bladelet "carinated" cores, carinated and thick nosed/shouldered end-scrapers, and even a few definite Dufour bladelets and Krems points with alternate bilateral retouch (Tsanova and Zwyns, pers. comm. to Demidenko in 2009). But there are still some differences between the European Proto-Aurignacian and the Ksar Akil, level X assemblages that are best expressed by the presence in the latter of many dihedral and some carinated burins, some lateral carinated pieces, dominance of dorsally retouched bladelets and half of all "non-geometric microliths" comprised by el-Wad points, features which are not typical for the former assemblages at all. Therefore, it is still not possible to make a very definite and straightforward Proto-Aurignacian *Homo sapiens* migration route from the Levant into Europe.

Comparisons with North-Western Caucasus and Near/Middle East

But widening the European southern territories, where most of the sites with Proto-Aurignacian layers are known, into the North Black Sea region, we come back to two important sites with Proto-Aurignacian-like flint assemblages in North-Western Caucasus – Kamennomostskaya Cave, lower layer and the Shyrokiy Mys open-air site. Recently (Demidenko 2008b), it was suggested that one can see definite techno-typological connections of these two assemblages with the Ksar Akil, levels X-IX, "Levantine Aurignacian B". Now, after Demidenko's work with Yabrud II, layer 3 and further analysis of the Ksar Akil, levels XII-XI and X assemblages, further specifications are now proposed for comparisons between the North-Western Caucasus and Levantine materials. Materials from Kamennomostskaya Cave, lower layer with lateral carinated pieces and some carinated burins fits more precisely into the "Levantine Aurignacian A" assemblages (Ksar Akil, levels XX-XI and Yabrud II, layer 3). The Kamennomostskaya blady debitage and tool-blank data with prevalence of non-twisted and "on-axis" items over twisted and "off-axis" ones (see Demidenko 2000-2001) now find an explanation in poor excavation methods used in 1961, where most of the small-sized debitage and "non-geometric microliths" would have been lost. The same can be said about the Yabrud II, layer 3 assemblage where most of the debitage pieces were not kept after the early 1930s excavations. Accordingly, if there were better controlled and performed excavations at Kamennomostskaya Cave, there could be at least some dominance of twisted and "off-axis" blady debitage and "non-geometric microliths" there. As a result, Kamennomostskaya Cave

should be connected to the "Levantine Aurignacian A" with all the data presently available. On the other hand, the Shyrokiy Mys materials still most closely resemble the Ksar Akil, level X assemblage, although the former has some minor differences – a subordinate position of dihedral burins, absence of both carinated burins and lateral carinated pieces in the North-Western Caucasian site. Such differences can be regarded as not too important, falling within the range of industrial variability.

Thus, instead of the direct industrial similarities between the European Proto-Aurignacian and the Levantine Early Ahmarian and "Levantine Aurignacian B" proposed by our European colleagues, leading to proposed migrations of Levantine *Homo sapiens* into the southern areas of Central and Western Europe, we do not see significant techno-typological similarities for these European and Levantine Early Upper Paleolithic industries. At the same time, it is possible to postulate similar characteristics between the "Levantine Aurignacian A" (Ksar Akil rock-shelter, levels XII-XI; Yabrud II rock-shelter, layer 3) and Kamennomostskaya Cave, lower layer, on one hand, and between the "Levantine Aurignacian B" (Ksar Akil rock-shelter, level X) and Shyrokiy Mys open-air site. Having no preceding Early Upper Paleolithic assemblages with Aurignacian-like characteristics in Northern Caucasus, very different from the Levantine situation, it is, therefore, reasonable to again put forward the idea of migrations of Levantine *Homo sapiens* to North-Western Caucasus based on these archeological materials. Moreover, given the different archeological data for the two sets of Levantine and North Caucasian Upper Paleolithic assemblages, migrations from the Levant to Northern Caucasus should be regarded as not a single event, but with at least two waves.

Understanding the migration possibilities along the eastern shore of the Black Sea, we also need to look at geographically intermediate Early Upper Paleolithic/Proto-Aurignacian – Aurignacian-like assemblages. The only known possible related assemblages are Baradostian ones in the Zagros Mountains region of Iraq and Iran. Since 1994, when D. Olszewski and H. Dibble first renamed the Baradostian as the Zagros Aurignacian (Olszewski & Dibble 1994), much more is now known about the Early Upper Paleolithic there (e.g. Olszewski 2007; Olszewski & Dibble 2006; Otte *et al.* 2007; Otte & Kozlowski 2007; Bordes & Shidrang 2009). Taking the Yafteh Cave and Warwasi rock-shelter Early Upper Paleolithic assemblages into consideration, as the most important stratified sites for the Zagros Upper Paleolithic, and, at the same time, excluding Middle Paleolithic features for the Warwasi Upper Paleolithic levels as possibly being an intrusive component from the underlying Zagros Mousterian levels, their Proto-Aurignacian features are clear, including mostly non-twisted and "on-axis" blady debitage characteristics. But as is the case with the general Levantine Early Upper Paleolithic trend where most el-Wad points and retouched bladelets have dorsal lateral and/or bilateral retouch, this is also typical for the Early Zagros Aurignacian. Thus, it cannot be excluded that the proposed human migration route between the "Levantine Aurignacian B" (Ksar Akil, level X) and Shyrokiy Mys might be connected via the Early Zagros Aurignacian sites and their archeological materials. It is not easy at all to find materials comparable to the "Levantine Aurignacian A" (Ksar Akil, levels XII-XI) and Kamennomostskaya Cave in the Zagros Mountains region, as the early phase of the Zagros Aurignacian seems to be occupied by chronologically later "Levantine Aurignacian A-like" assemblages, while its late phase looks very much like European Late/Evolved Aurignacian with Dufour and pseudo-Dufour microblades of Roc-de-Combe sub-type. The only other possibility is Shanidar Cave, layer C. The Shanidar Upper Paleolithic materials served as the archeological basis for designation of the original "Baradost industry" by R.S. Solecki (1955:415) following the advice of D. Garrod. Recently, Olszewski and Dibble (1994, 2006), comparing the Shanidar, layer C materials with Warwasi Upper Paleolithic assemblages, surely included the former materials within the Zagros Aurignacian, while Bar-Yosef (2000:137) suggested, with no details, however, that the blady Shanidar Upper Paleolithic materials "would correlate at best with the Ahmarian". Before a detailed study of the Shanidar Upper Paleolithic flint assemblages, it is possible to now argue that Olszewski and Dibble, and Bar-Yosef might both be right to some extent. The most prominent techno-typological features of the Shanidar assemblages are "a blade-tool industry" and an abundance of various carinated burins including flat-faced ones to which Solecki saw similar burin examples among the Ksar Akil, level XI flints (see Solecki 1955:415-416). Accordingly, by these features, the Shanidar Upper Paleolithic might be comparable to either the "Levantine Aurignacian A" or the Late Zagros Aurignacian. Resolving the Shanidar Upper Paleolithic industrial attribution will add much to understanding of the Aurignacian *sensu lato* for the Near and Middle East and surrounding regions.

What is left?

And what is left after all of these possible European Proto-Aurignacian and Levantine Early Upper Paleolithic archeological interrelations? The Levantine sites representing the Ahmarian and "Levantine Aurignacian A and B" assemblages are radiocarbon dated between ca. 39/37-32,000 uncal BP. The European Proto-Aurignacian sites are believed to be dated between 38/36-34-32,000 uncal BP. The Zagros Aurignacian C14 dates for Shanidar Cave, layer C and Yafteh Cave had obtained a rather wide chronological range between ca. 38,000 and 28,000 uncal BP in the 1950s and the 1960s (see Hole & Flannery 1967:153, tabl. I). However, during new excavations at Yafteh Cave directed by M. Otte in 2005, new AMS dates were obtained from Beta Analytic: ca. 35,500 (240 cm below datum) and ca. 33,500 (150 cm below datum) uncal BP (Otte *et al.* 2007:93, tabl. 5). Remembering some uncertainty regarding radiocarbon dates for the range between 40-30,000 radiocarbon uncal BP, we surely can use the Early Upper Paleolithic assemblages to make technological and/or typological comparisons in terms of human migration hypotheses.

With the currently available data, there are no very direct techno-typological data that would allow us to support Mellars's, Zilhao's and Teyssandier's hypotheses of strong archeological similarities between the European Proto-Aurignacian and Levantine Ahmarian and/or "Levantine Aurignacian A and B" assemblages. Only the latter, the "Levantine Aurignacian B" (first of all, Ksar Akil, level X assemblage as the most published in detail, and then the respective assemblages from Antelias and Abu Halka Caves) shows real similarities to the European

Proto-Aurignacian, but a dominance of el-Wad points and dorsally retouched bladelets among "non-geometric microliths" probably reflects some significant differences in their use as projectile point components. So, additional both artifact data and theoretical reflections are needed to determine a possible connection between the two industries. The Early Zagros Aurignacian (e.g., Yafteh Cave, lower levels) seem to be techno-typologically comparable to the Ksar Akil, level X assemblage. Accordingly, the proposed human migration route from the Levant through the Zagros Mountains region to the eastern shore of the Black Sea region in North-Western Caucasus (Shyrokiy Mys site) looks probable. Moreover, before these "Levantine Aurignacian B" humans moved to the north, the same migration route may have been used by "Levantine Aurignacian A" (Ksar Akil, levels XII-XI) humans – Shanidar, layer C (Zagrous Mountains region) and Kamennomostskaya Cave, lower layer (North-Western Caucasus). At the same time, the Ksar Akil, level X assemblage of "Levantine Aurignacian B" could be considered only as an "initial industrial source" for the European Proto-Aurignacian, if we additionally accept some significant changes in microliths use for projectile points where for the latter assemblages proportions of dorsally retouched bladelets are much lower, replaced by much more common alternatively retouched items among the "non-geometric microliths". Thus, it is really too early to place a definitive arrow showing human migration arrow from the Levant to showing an origin of European Proto-Aurignacian there.

These considerations of the Levantine Early Upper Paleolithic record indeed demonstrate some problems with its understanding as much additional work has to be done for assemblages relating to the "Levantine Aurignacian A and B" types. Moreover, there are also problems relating the two Aurignacian-like industry types within the European Aurignacian record. As was shown for the assemblages from Ksar Akil, levels XII-XI and Yabrud II, layer 3 belonging to the "Levantine Aurignacian A", one of the most striking techno-typological features is the serial presence of various carinated burins *sensu lato*, including both flat-faced carinated burins, also known as *burin caréné plan*/"*Ksar Akil burins*"/*burins des Vachons* and so-called lateral carinated pieces and bladelet narrow flaked cores/"carinated burins" that certainly technologically caused the dominance of twisted and "off-axis" bladelet *sensu lato* debitage, recalling the near-complete absence of typologically defined carinated end-scrapers there. Taking separately these techno-typological features alone, someone could again make de Sonneville-Bordes's 1950s interpretation that such complexes were similar to the French "*Aurignacien récent*". However, the "Levantine Aurignacian A" clearly stratigraphically precedes the typological equivalent of European Early Aurignacian/Aurignacian I in the Levant: "Levantine Aurignacian C" (complexes like Ksar Akil, levels VII-VII). Therefore, the following re-structure of Levantine Aurignacian industries, based on the Levantine and European Early Upper Paleolithic record, can be proposed. "Levantine Aurignacian A" could be a special variant of the Early Ahmarian where carinated burins *sensu lato* and twisted and "off-axis" bladelet debitage reflect a search for a new production system for microlith blank manufacture, which is why its assemblages feature Ahmarian and Aurignacian techno-typological features (see among others Bergman 1987, 1988, 2003; Marks and Ferring 1988). "Levantine Aurignacian B" can be considered as a rough equivalent to the European Proto-Aurignacian/Aurignacian 0 with some special features seen in the many dorsally retouched bladelets, including pointed elements, and the presence of some Aurignacian blades that also occur in the seemingly similar assemblages from Shanidar Cave and Shyrokiy Mys site. Finally, "Levantine Aurignacian C" reflects mostly a striking similarity to the European Early Aurignacian/Aurignacian I. At the same time, it is difficult to propose any real comparable assemblages in the Levant to the European Late/Evolved Aurignacian with Dufour and pseudo-Dufour microblades of Roc-de-Combe sub-type, despite the fact that the Aurignacian *sensu stricto* in the Levant is usually compared to Aurignacian assemblages containing "comma-shaped" microblades similar to Roc-de-Combe, due to their variable chronological positions between ca. 32 and 17,000 BP, although the Late Zagros Aurignacian (materials from upper Aurignacian levels at Yafteh Cave and Warwasi rock-shelter) and Siuren I, Unit F are very much like the Western European Late/Evolved Aurignacian with Roc-de-Combe sub-type microliths. Finally, the absence of European Proto-Aurignacian sites in North-Western Caucasus, where their presence would be expected due to the eastern route of the "Danube Corridor", might be explained by the appearance of "Levantine Aurignacian A and B" sites (Kamennomostskaya Cave and Shyrokiy Mys): the eastern part of the Great North Black Sea region was already occupied by *Homo sapiens* communities with Levantine roots who did not allow European *Homo sapiens* to penetrate there.

But all our archeological comparisons and considerations of course need in further research with European, Near Eastern and Middle Eastern Early Upper Paleolithic artifact complexes. New perspectives in this regard do exist. Aside of new site material analyses (e.g. Umm el Tlel in Syria), re-analyses of some long-known sites (e.g. Ksar Akil, levels XII-X; Antelias Cave, level IV; Abu Halka Cave, level IVc in Lebanon; Yabrud II, layers 3-2 in Syria) related to "Levantine Aurignacian A and/or B" industry types can add much to our knowledge of these industries. Also remembering the Early Upper Paleolithic levels of Shanidar Cave, Warwasi rock-shelter and Yafteh Cave in Iraq and Iran, it is also reasonable to expect more new data on these materials. As a result, any new human migration hypotheses will be supported by reliable archeological data.

In this respect, we can say that the following 2003 appeal of Ch. Bergman, "to date, no comprehensive comparison of lithic technology involving the European Aurignacian and Levantine Aurignacian has been undertaken. Such a study may help to resolve issues related to cultural affinity beyond simple reference to artifacts of similar appearance" (Bergman 2003:194), has begun to be met and new and already ongoing studies will contribute greatly to clarify the situation.

All of these considerations and hypotheses regarding the European, Near Eastern and Middle Eastern Early Upper Paleolithic were inspired by the Siuren I Aurignacian material analyses, again underlining the importance of this site for us, and possibly for some of the present readers. More absolute dates for Siuren I *in situ* levels with two different Aurignacian industry types will also clarify our ideas on initial Aurignacian *Homo sapiens* penetration into the south of Eastern Europe.