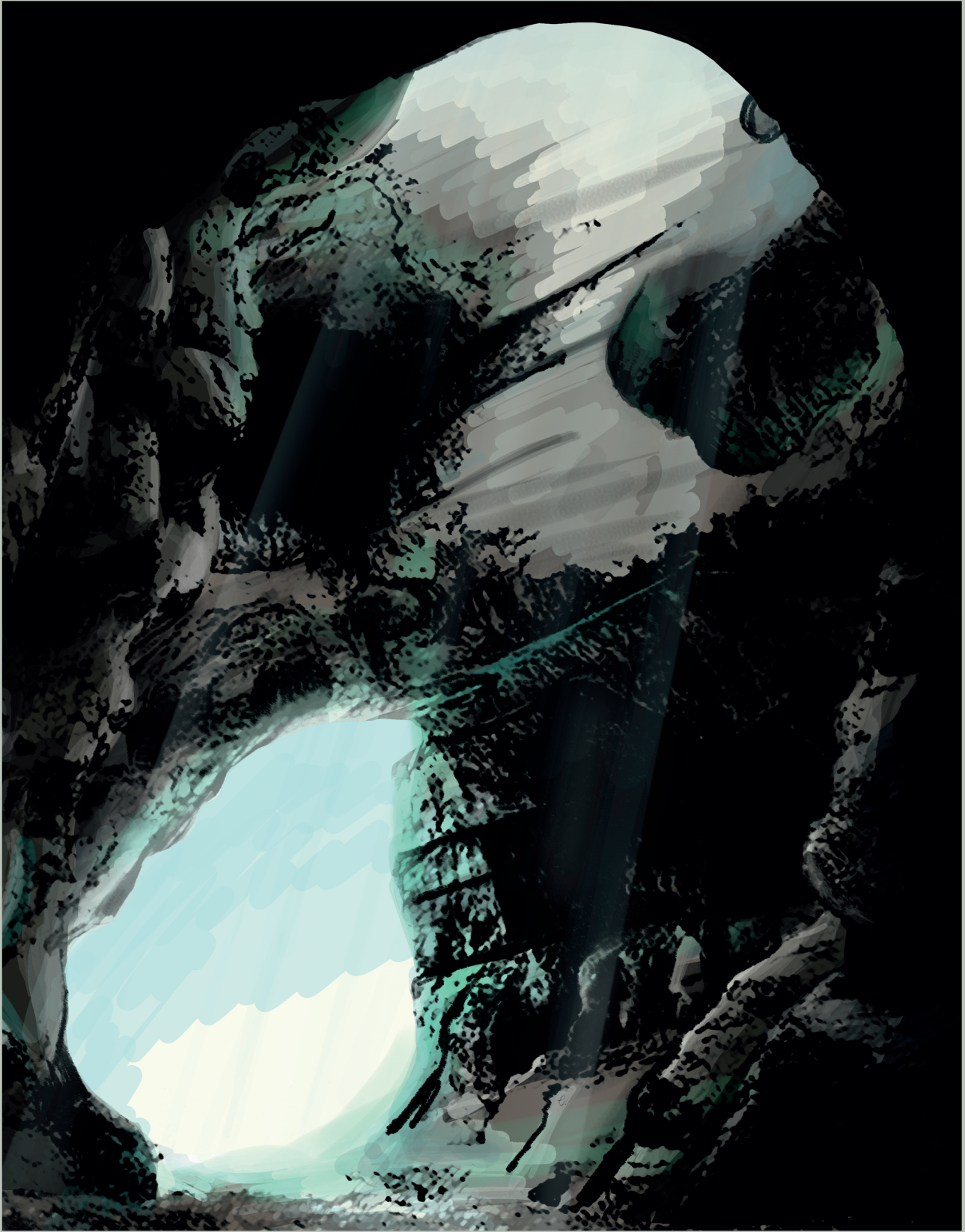


Hugo Obermaier-Gesellschaft

für Erforschung des Eiszeitalters und der Steinzeit e.V.



58th Annual Meeting in Budapest
March 29th – April 2nd 2016

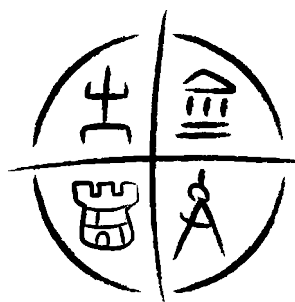
Hugo Obermaier Society
for Quaternary Research and Archaeology of the Stone Age



58th Annual Meeting in Budapest

March 29th – April 2nd 2016

In cooperation with



Institute of Archaeological Sciences
Eötvös Loránd University
Faculty of Humanities

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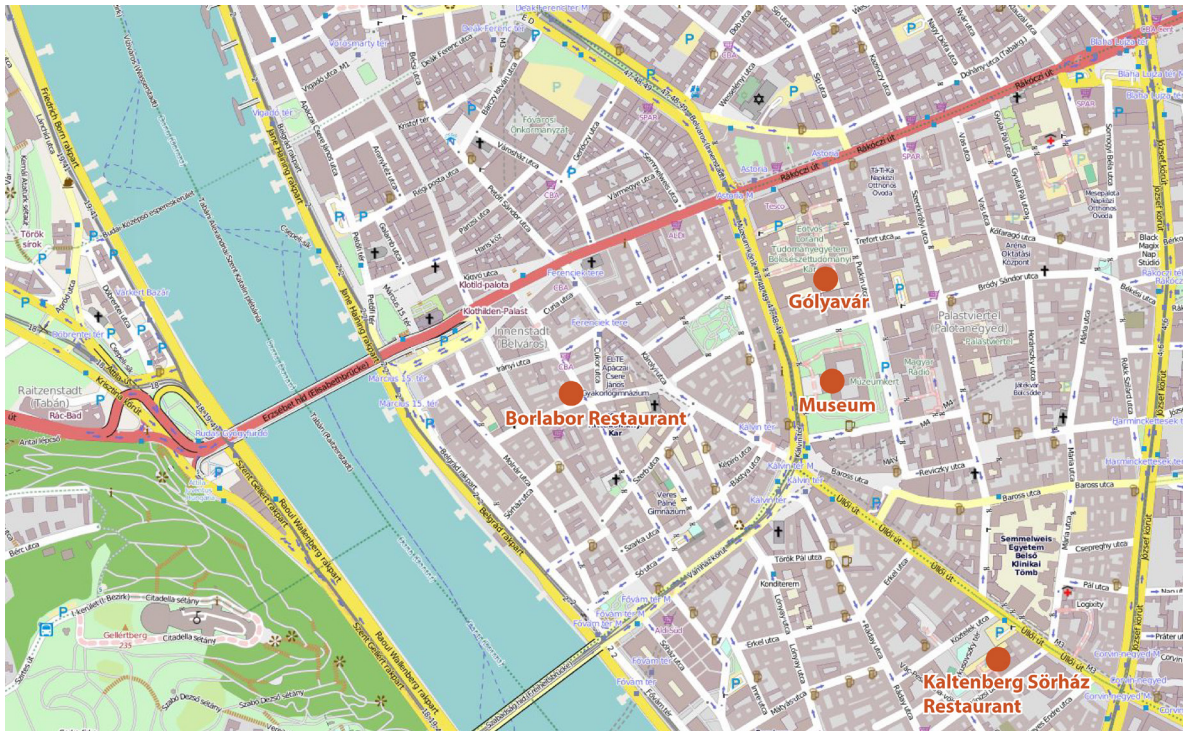
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www.obermaier-gesellschaft.de

Hugo Obermaier Society

for Quaternary Research and Archaeology of the Stone Age

c/o Institut für Ur- und Frühgeschichte, Kochstr. 4/18, D-91054 Erlangen



58th Annual Meeting in Budapest

At the invitation of the
Eötvös Loránd University Budapest, Institute of Archaeological Sciences

*Conference venue: Gólyavár Budapest,
Múzeum körút 8, 1088 Budapest*

Tuesday, March 29th

- 12:00 Opening of the conference office at Gólyavár
- 14:00 Beginning of the meeting, welcome by Dr. Zsolt Mester and the president of the Hugo Obermaier Society Prof. Dr. Thorsten Uthmeier
- 14:20 – 16:00 Presentations (*Coffee break* 16:00 – 16:30)
- 16:30 – 18:30 Poster-Session
- 18:30 Reception at the Gólyavár

Wednesday, March 30th

- 09:30 – 12:30 Presentations (*Coffee break* 10:50 – 11:10)
- 12:30 – 14:30 Lunch break
- 14:30 – 18:00 Presentations (*Coffee break* 16:10 – 16:40)
- 18:30 Public evening lecture by Dr. Zsolt Mester at the Gólyavár on „The Palaeolithic of Hungary: on a cross-road and at a cul-de-sac“
- 20:00 Gala dinner at the Borlabor Restaurant (<http://www.borlaboretterem.hu>)

Thursday, March 31st

- 09.30 – 12.30 Presentations (*Coffee break* 10:50 – 11:10)
- 12.30 – 14.30 Lunch break
- 14:30 – 17.20 Presentations (*Coffee break* 15:50 – 16:20)
- 17:45 Society's annual general meeting
- 20:00 Get-together and dinner at the Kaltenberg Sörház Restaurant (<http://kaltenberg.hu/en>)

Friday, April 1st

Excursion A:

Vértesszőlős (open-air museum and site), **Tata** (“Old Lake”, geological open-air museum and site) and **Jankovich Cave** at Bajót.

Saturday, April 2nd

Excursion B:

Loess profiles at **Paks** (most important Quaternary profile in Hungary) and **Dunaföldvár, Százhalombatta** (archaeological park with reconstructions of an Iron Age tumulus and of Bronze Age and Iron Age houses).

Tuesday, March 29th

12:00 **Opening of the conference office at the Gólyavár**

14:00 **Beginning of the meeting, welcome by Dr. Zsolt Mester and the president of the Hugo Obermaier Society Prof. Dr. Thorsten Uthmeier**

Reports on the Lower and Middle Palaeolithic

14:20 – 14:40 *M. Gema Chacón, Hassan Aouraghe, Jordi Agustí, Claudia Álvarez, Lee Arnold, Alfonso Benito-Calvo, Hugues-Alexandre Blain, Angel Carrancho, Arturo De Lombera, Mathieu Duval, Kamal, El Hammouti, Abderrahmane El Harradji, Hamid Haddoumi, Leticia Menéndez, Josep María Parés, Pedro Piñero, Andoni Tarriño, Juan José Villalaín & Robert Sala*
Ten years of archaeological research in the Aïn Béni-Mathar/Guefaït region (Eastern Morocco): Results and perspectives

14:40 – 15:00 *Antony Borel, Marie-Hélène Moncel & Zsolt Mester*
The use of radiolarite as microlithic tools: experimentation and case study with the site of Tata (Hungary)

15:00 – 15:20 *Andrea Picin*
Short-term occupations at the lakeshore: a technological reassessment of Königsau open-air site

15:20 – 15:40 *Viktor Chabai & Thorsten Uthmeier*
Zaskalnaya V: lithological and archaeological sequences

15:40 – 16:00 *Francesca Romagnoli & Manuel Vaquero*
Investigating Neanderthal social and economic dynamics during MIS 3: a new multidisciplinary high-resolution approach

- Coffee break -

16:30 **Poster Session**

18:30 **Reception at the Gólyavár**

Wednesday, March 30th

Reports on the main topic:

"Late Middle and Early Upper Paleolithic between the Alps and the Black Sea"

- 09:30 – 09:50 *A.P. Derevianko, K.K. Pavlenok, M.B. Kozlikin & A.V. Kandyba*
Recent data on the eastern Adriatic Middle Palaeolithic: Bioče rockshelter in Montenegro
- 09:50 – 10:10 *A.K. Otcherednoy, L. B. Vishnyatsky, E. V. Voskresenskaya, A.V. Larionova, K.N. Stepanova & P.E. Nehoroshev*
Khotylevo I: a multilayer complex with the Late Middle Paleolithic industries
- 10:10 – 10:30 *Paweł Valde-Nowak, Bridget Alex, Elisabetta Boaretto, Bolesław Ginter, Krzysztof Sobczyk, Damian Stefański & Mirosław Zając*
The late Middle Palaeolithic occupation in the Ciemna Cave
- 10:30 – 10:50 *Bernhard Buhs*
The role of leafpoints in the Altmuehl valley (Bavaria)

- Coffee break -

- 11:10 – 11:30 *András Markó*
Leaf points and osseous tools found together: recent observations
- 11:30 – 11:50 *Małgorzata Anna Kot*
All in one. Szeletian, Jerzmanowician, Jankovichian and Babonian leafpoints comparison
- 11:50 – 12:10 *Dariusz Bobak, Marta Połtowicz-Bobak, Zdzisław Jary & Jerzy Raczyk*
Lubotyń 11 and the chronology of the Szeletian in Silesia and Moravia
- 12:10 – 12:30 *Jürgen Richter, Thomas Hauck & Arpad Ringer*
News from Szeleta cave: a refined chronology of the Szeletian type site

- Lunch break -

- 14:30 – 14:50 *Petr Škrdl*
Chronology of Middle to Upper Paleolithic transition period in Moravia
- 14:50 – 15:10 *L. B. Vishnyatsky, A. K. Otcherednoi & E. V. Voskresenskaya*
Betovo: a palimpsest of epochs or an extremely long persistence of Middle Paleolithic traditions?
- 15:10 – 15:30 *Yuri E. Demidenko & Thomas Hauck*
Yabrud II rock-shelter (Syria): one more interpretation of the site's industrial-chronological sequence and its meaning for the Levantine Paleolithic
- 15:30 – 15:50 *Dirk F. Leder*
The Middle to Upper Palaeolithic interface in the Levant: A mosaic of techno-typological traditions and novelties: Transition or Initial Upper Palaeolithic?

15:50 – 16:10 *Andrei Sinitsyn*
Early Upper Palaeolithic in the Eastern Europe: chronology, taxonomy,
adaptation models

- Coffee break -

16:40 – 17:00 *Ine Leonard*
Bridging Distances or Wandering About? The Raw Material Procurement
Organization of Early Upper Palaeolithic Humans in the Banat
(SW-Romania)

17:00 – 17:20 *Wei Chu, Christian Zeeden, György Lengyel, Lubomíra Kaminská & Zsolt Mester*
Evaluating Early Upper Palaeolithic Open-Air Surface Finds from Northern
Hungary and Southern Slovakia

17:20 – 17:40 *Janusz K. Kozłowski & Zsolt Mester*
New evidences of the Early Upper Palaeolithic in Northern Hungary

17:40 - 18:00 *Ondřej Mlejnek & Petr Škrdla*
New results of the Early Upper Palaeolithic research in Moravia
(Czech Republic)

18:30 **Public evening lecture at the Gólyavár, Dr. Zsolt Mester:**
The Palaeolithic of Hungary: on a cross-road and at a cul-de-sac

20:00 **Gala dinner at the Borlabor Restaurant**

Thursday, March 31st

Reports on the Upper and Late Paleolithic and the Mesolithic

- 09:30 – 09:50 *Sonia Shidrang, Christine Neugebauer-Maresch, Thomas Einwögerer, Marc Händel & Ulrich Simon*
Protoaurignacian in broader context: a new techno-taphonomic assessment of 1900s Krems-Hundssteig lithic assemblage
- 09:50 – 10:10 *Martin Moník & Jiří Drozd*
What Aurignacian facies occupied the Moravian Gate? The case of Salaš I and IV sites
- 10:10 – 10:30 *György Lengyel, Zsolt Mester, Sándor Béres & Attila Péntek*
The Aurignacian in the Carpathian Basin
- 10:30 – 10:50 *Guido Bataille & Nicholas J. Conard*
New investigations of the Aurignacian horizons of the Hohle Fels Cave (Swabian Jura/ Germany)

- Coffee break -

- 11:10 – 11:30 *Andreas Tallér & Nicholas J. Conard*
Current research on the Gravettian assemblages of Hohle Fels Cave
- 11:30 – 11:50 *Ulrich Simon*
More painting from the Pavlovian of Krems-Wachtberg (Austria)
- 11:50 – 12:10 *Christine Neugebauer-Maresch, Thomas Einwögerer, Jürgen Richter, Shumon T. Hussain & Andreas Maier*
Grubgraben revisited – Preliminary results of recent excavations and typo-technological analyses of the lithic artefacts
- 12:10 – 12:30 *Yuri E. Demidenko, Petr Škrdl & Joseba Rios Garaizar*
A peculiar LGM Late UP industry in Central and Eastern Europe: background & new data

- Lunch break -

- 14:30 – 14:50 *Zdeňka Nerudová, Martina Roblíčková, Nela Doláková, Jan Novák, Katarzyna Pyzewicz, Miriam Nývltová Fišáková & Petr Neruda*
Štýřice III (Brno District) – A contribution towards understanding the Epigravettian Environment
- 14:50 – 15:10 *Pablo Arias, Roberto Ontañón & Olivia Rivero*
La Garma, a key context for the study of Palaeolithic portable art
- 15:10 – 15:30 *Andreas Pastoors & Gerd-Christian Weniger*
Reconstructing territory and land use of Pyrenean middle Magdalenian foragers from Enlène (Ariège, France)

15:30 – 15:50 *Florian Sauer*
Northern Bavaria: A transit zone. Mobility and raw material procurement
in Late Paleolithic Bavaria

- Coffee break -

16:20 – 16:40 *Hannah Parow-Souchon & Martin Heinen*
Raw material economy and mobility at Wesseling

16:40 – 17:00 *Tadeusz Wiśniewski & Barbara Niezabitowska-Wiśniewska*
Late Palaeolithic and Mesolithic settlement in the vicinity of the Ulów
village in the Middle Roztocze (south-eastern Poland)

17:00 – 17:20 *K. Čuláková, L. Varadzinová & L. Varadzin*
Lithics from the Mesolithic site of Sphinx (SBK.W-60) at Jebel Sabaloka,
central Sudan

17:45 **Society's annual general meeting**

20:00 **Get-together and dinner at the Kaltenberg Sörház Restaurant**

Poster presentation

Amira Adaileh

The Upper Paleolithic open-air site Vilshofen-Kuffing

Guido Bataille

Technological investigations of the Aurignacian horizons of Siuren 1 (Crimea)

Guido Bataille

Buran-Kaya III, Level C (Crimea) and Kostenki 12, Layer III (Mid-Don) in the context of the formation of Streletskian-related industries

Viviane Bolin, Gerd-Christian Weniger & María de Andrés-Herrero

Rock art site distribution on the Iberian Peninsula during the Solutrean and Magdalenian

Doris Döppes, Wilfried Rosendahl, Ronny Friedrich, Susanne Lindauer, Gernot Rabeder, Christine Frischauf & Sebastian Krutter

Bärenfalle – new results of the highest cave lion site from Austria

Johanna Dreier, Thomas Hauck, Jürgen Richter, I. Gjipali & R. Ruca

Blaz Cave, an in situ Epigravettian site in Albania

Thomas Einwögerer

New investigations at the Upper Palaeolithic open air site Kammern-Grubgraben, Lower Austria

Armando Falcucci, Marco Peresani, Morgan Roussel, Christian Normand & Marie Soressi

Protoaurignacian retouched bladelets: where do we stand?

Juliane Frost & Thomas Weber

Palaeolithic sites from Schöningen's geographical neighbourhood: The Krähenwinkel 13 gravel finds compared with the Older Palaeolithic assemblages in Northern and Central Germany

Marc Händel

Excavation and 3D documentation of a Palaeolithic grave – developing a methodology for the Krems-Wachtberg double burial

Henning Hundsdoerfer, Andreas Pastoors, Erich Claßen, Marco Peresani & Manuel Vaquero

New research at the Middle Palaeolithic workshop site Troisdorf-Ravensberg (Rhineland, Germany)

Ivor Karavanić & Nikola Vukosavljević

Late Middle and Early Upper Paleolithic in the Eastern Adriatic

Karin Kindermann, Philip van Peer, Felix Henselowsky & Olaf Bubenzer

Living at the lakeshore – Early Nubian Complex site associated with a lacustrine environment

Susanne C. Münzel, Sibylle Wolf, Marius Achtelik, Svenja Arlt, Julia Becher, Luca Brunke, Johanna Klett, Anne Kremmer, Josephine Krönke, Antje Langer, Ria Litzenberg, Anna-Katharina Loy, Anna-Franziska Mandt, Jacqueline Alice Mena, Ullrich Ochs, Annika Rebentisch, Benjamin Schürch, Noora Taipale, Hannes Wegeng, Hannes Wiedmann, Heike Würsch, Teresa Zahoransky, Max Zerrer & Petra Krönneck

Chaîne opératoire of Molly (1), an Indian elephant from the Wilhelma in Stuttgart – Bad Cannstatt. Results of a workshop in Blaubeuren on the processing of Proboscidian ribs as raw material for tools

Susanne C. Münzel, Chris Baumann, David Boysen, Isabelle Jasch, Antje Langer, Hannes Wegeng & Sibylle Wolf

Chaîne opératoire of Molly (2), an Indian elephant from the Wilhelma in Stuttgart – Bad Cannstatt. Results of a 2nd workshop in Blaubeuren on the processing of skins with Proboscidian rib smoothers

Hannah Parow-Souchon

New indication for a formal blade industry in Eastern Africa – Neocreting blades at Mochena Borago rockshelter, Ethiopia

Andreas Pastoors, Yvonne Tafelmaier & Gerd-Christian Weniger

Within sight - Divergences and convergences in the Middle Paleolithic of Northern Africa and Southern Iberia

Florent Rivals, Gina M. Semprebon, Luce Prignano & Sergi Lozano

Seasonality scratched on teeth: A tool to estimate of the duration of mortality events in archaeological assemblages using extant ungulate tooth microwear

Florian Sauer

A 3D-Representation of a Newly-Discovered Shaft Smoother from the Federmesser-Site of Oberweiherhaus, Schwandorf District (Bavaria, Germany) in the Naab Valley

Carlos Sánchez-Hernández, Florent Rivals, Ruth Blasco & Jordi Rosell

Neanderthal occupational patterns in the North of the Iberian Peninsula: A preliminary approach to Cueva Morín (Cantabria) and Cova de les Teixoneres (Barcelona)

Taisiya Soldatova

The Upper Paleolithic bone industry from the Sungir site, Russia: a short review

Kseniya Stepanova

Upper Palaeolithic grinding stones from the East European Plain

Regine E. Stolarczyk

Understanding Retouchers: Cognigrams a new way to analyse complexity, innovative capability and technological change

Oliver Vogels & Tilman Lenssen-Erz

Transcribed music: playing techniques, cultural diversity and some sociocultural aspects of musical bow performances in southern Africa's rock art

Marcel Weiß, Shannon P. McPherron, Tim Schüller & Jean-Jacques Hublin

A Reinvestigation of the Ranisian Type Site

Tadeusz Wiśniewski

Late Palaeolithic settlement in the western part of the Lublin Upland (eastern Poland) - research project

Krisztian Zandler

An open-air Szeletian site at Hont-Csitár (Nógrád county, Northern Hungary)

V.S. Zhitenev

Fossil shell personal ornaments from the Kapova cave (the Southern Urals, Russia): Upper Paleolithic mobility and migration in the Volga-Ural region

Abstracts of Reports and Posters

Amira Adeileh

The Upper Paleolithic open-air site Vilshofen-Kuffing

The site of Vilshofen-Kuffing is located in the district of Passau, approximately 6 km south of the Danube at the southern fringe of the Bavarian Forrest. It is situated on a sloping spur, formed by a bend of the Wolfach river. Since its discovery in the mid 1990's, approximately 70.000 stone artefacts have been found. The first brief overview confirms the Upper Paleolithic nature of the surface collection and leads to the attribution of the site to an early Magdalenian (Weißmüller 1995). Due to the presence of nearly 800 Magdalenian triangles, this site may be considered as the biggest triangle bearing site in Europe (cf. Maier 2015, Höck 2000). Furthermore, the collection indicates the presence of a second, typologically different Upper Paleolithic facies. The occurrence of star-shaped perforators, nose scrapers, carinated pieces and very small retouched bladelets led to the idea that it may be attributed to the Early Epigravettian (cf. Maier 2015, Ducasse 2012). Test pits at the site are planned to answer that question on the basis of stratigraphy. Additionally, the site also yielded a piece of portable art, more precisely - a jet pendant. The integration of Vilshofen-Kuffing in the context of Epigravettian and/or early Magdalenian settlement in the area proves to be challenging, since the few comparable sites are situated in a distance of 200km and more. Even the next Magdalenian sites (including late Magdalenian) are located in a distance of approximately 100km (Maier 2015). The examination of this surface collection therefore holds the possibility to gain further information about the Epigravettian and early Magdalenian settlement in south-eastern Germany and possible connections to sites in neighbouring countries such as the Czech Republic, Austria and Poland. Due to the amount of artefacts, their typologically interesting composition and also the isolated location of Vilshofen-Kuffing with regard to comparable sites, the analysis of the site is important not only for the Bavarian Upper Paleolithic researches but also in a European context.

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Pablo Arias¹, Roberto Ontañón² & Olivia Rivero¹

La Garma, a key context for the study of Palaeolithic portable art

The cave of La Garma, in northern Spain, has provided one of the most important assemblages of Magdalenian portable art of SW Europe. Nine high quality objects in bone and antler seventeen engraved plaquettes have been found in a restricted area inside the Lower Gallery, a passage that has been isolated since the late Glacial, where middle Magdalenian floors have been preserved in an astounding state of preservation. Moreover, in other contexts of the same karst system, such as the cave of La Garma A, other objects of middle Magdalenian and Gravettian chronology have been found. The site has been controlled by archaeologist and heritage preservation authorities since the discovery of the site in 2005, so the context has been curated and recorded according to the current highest standards. This paper summarizes the recent research on this important site. The main decorated objects

are described, and their technical traits, studied with microscopic analysis, are discussed. The issue of the significance of the differences in technical proficiency and quality among the objects is also addressed. Finally, the relationship between the objects and their context is discussed.



Fig. 1. La Garma. Lower Gallery. Aurochs phalanx with engraved representations of a male aurochs, a possible human face and a sign

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Guido Bataille

Buran-Kaya III, Level C (Crimea) and Kostenki 12, Layer III (Mid-Don) in the context of the formation of Streletskian-related industries

Technological studies give evidence to functional and technological overlaps of the Buran-Kaya/III C assemblage both with the Eastern Micoquian and with the Kostenki-Streletskaya industry of the Mid-Don region, as exemplified on Kostenki 12/III. It is concluded that foliate based assemblages marking the Eastern European Middle to Upper Palaeolithic transitional period formed on the substrat of the Eastern Micoquian.

References:

Bataille, G. (2013). *Der Übergang vom Mittel- zum Jungpaläolithikum auf der Halbinsel Krim und in der Kostenki-Borshchevo-Region am Mittel-Don. Adaptionsstrategien spät-mittelpaläolithischer und früh-jungpaläolithischer Gruppen*. PhD thesis, Universität zu Köln. URI: <http://kups.ub.uni-koeln.de/5981/>.

Bataille, G. (in press). Neanderthals of Crimea - creative generalists of the Late Middle Palaeolithic. Contextualizing the leaf point industry Buran-Kaya III, Level C. *Quaternary International*.

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Guido Bataille

Technological investigations of the Aurignacian horizons of Siuren 1 (Crimea)

Detailed technological studies (Bataille, 2012 & 2013), as attribute analysis, the reconstruction of operational sequences of bladelet cores (Work Step Analysis acc. to Pastoors, 2001) and the reconstruction of on-site transformation sequences of lithic raw material (Transformation Analysis acc. to Weissmüller, 1995) highlight the technological variability of the Aurignacian of Siuren 1. The poster focuses on unpublished investigations of bladelet production strategies.

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- Bataille, G. (2012). Flakes And Blades. The Role of Flake Production in the Aurignacian of Siuren 1 (Crimea, Ukraine). In: Pastoors, A. & Peresani, M. (Hg.) *Flakes Not Blades. Wissenschaftliche Schriften des Neanderthal-Museums* 5, Mettmann, 261-293.
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Guido Bataille & Nicholas J. Conard

New investigations of the Aurignacian horizons of the Hohle Fels Cave (Swabian Jura/Germany)

The Swabian Jura with its flagship sites in the valleys of the Ach and the Lone, tributaries of the Danube, is of crucial importance for the understanding of the formation and development of the Central European Aurignacian. The lowest Aurignacian horizons of the region (e.g. Geißenklösterle, AH III and Hohle Fels, AH Vb) are among the oldest known assemblages of this technocomplex (Higham et al. 2012 & 2013). Moreover, they exposed surprisingly early evidences of symbolic behavior such as the production and use of organic beads, figurative art objects and bone flutes (e.g. Conard & Malina 2006 & 2009; Conard 2009). The Hohle Fels in the Ach valley near Schelklingen exhibits a long Pleistocene stratigraphy comprising Middle Palaeolithic, Aurignacian, Gravettian and Magdalenian horizons embedded within fourteen geological strata. The 1 m thick Aurignacian sequence consists of at least seven horizons (AH IIIa.1, IIIa, IIIb, IV, Va, Vaa & Vb) within geological horizons GH 6-8. Similar to other regional sequences, the Aurignacian of the Hohle Fels is separated from the underlying Middle Paleolithic by an occupational hiatus. Clusters of ashes, charcoal and artefacts indicate in situ zones of human activity (Schiegl et al. 2003; Bolus 2003; Conard & Bolus 2008; Miller 2015). The presentation informs about recent investigations. Furthermore, after finishing the excavation of the extensive archaeological horizon AH IV (28 m²), preliminary insights into actual analyses of the lithic production system are given.

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- Bolus, M. (2003). The Cultural Context of the Aurignacian of the Swabian Jura. In: Zilhão, J. & d'Errico, F. (Ed.). *The Chronology of the Aurignacian and of the Transitional Technocomplexes*. Lisboa: Instituto Português das Arqueologia, 153-163.
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Lubotyń 11 and the chronology of the Szeletian in Silesia and Moravia

Lubotyń 11 is currently one of the most well preserved szeletian sites in Poland and one of the best examined sites of this culture. Research conducted since 2006 on the area of 110 square meters has provided almost 14 thousand of lithic artefacts and led to the discovery of the relics of fireplaces. The site is located in the southern part of Głubczyce Plateau in Silesia. It is located on the top of a vast hill, one of the highest points in the area (309.8 m. a.s.l.), built of fluvioglacial sediments of the Odra glaciation. The sediments were later covered by loess (currently partially eroded) at the end of the second vistulian pleniglacial. The area where remains of szeletian settlement were found is cut by the frost- or ice-wedge pseudomorphosis, which were created before the settlement. Fluvioglacial sediments with depressions which were remnants of the wedges were the original living floor. After the settlement, the cultural layer was partially displaced, but partially left intact and covered by sediment flowing into depressions. It led to a good preservation of the lithics distribution as well as the fireplaces. The samples of charcoal from the fireplaces were radiocarbon dated and series of 6 dates were obtained and the following 8 samples are being processed in the lab now. Together with the analysis of the planigraphy, the dates allow us to state that the site is a palimpsest - place of overlying traces of multiple visits of human groups during a long period of time.

Bayesian age modelling of the radiocarbon dates from Lubotyń 11 and for szeletian sites from Moravia allowed to determine the beginning and the end of the settlement of this culture in the area and to show mutual chronological relations between Silesia and Moravia. The study is supported by the National Science Centre (decision no. DEC-2012/05/N/HS3/01533) and the Provincial Heritage Office in Opole.

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Rock art site distribution on the Iberian Peninsula during the Solutrean and Magdalenian

The settlement history of the Iberian Peninsula during the Upper Palaeolithic was influenced by diverse geographic and climatic conditions. An increase of site density from the early to the late Upper Palaeolithic can be observed – with a higher concentration of sites in the northern regions and in coastal areas of the Peninsula, while the interior and the southern areas were sparsely populated. Only the Solutrean period displays a similar number of human settlement sites in the North and South, as well as an increase of sites in the interior of the Iberian Peninsula (Schmidt et al. 2012).

According to literature, a comparable pattern is visible for the distribution of rock art sites. During most of the Upper Palaeolithic periods mainly the northern and coastal areas show a greater artistic expression than the South or the interior of the Iberian Peninsula – with one exception during the Solutrean when an explosion of rock art sites can also be observed in the southern and interior regions (Bicho et al. 2007).

Does a correlation between demographic and artistic expansion exist? To answer this question, a diachronic and spatial analysis of rock art and occupation sites during the Solutrean and Magdalenian in different regions of Iberia will be carried out. In order to check possible changes in site distribution and frequency, an interpolation and mapping of the data with Kernel Density Estimation was developed. This spatio-temporal multivariate approach furthermore provides estimates of relative population densities and reconstructs land-use patterns (Grove 2011).

The objective of this analysis is to determine demographic and artistic centres of human settlements and show the diffusion and mobility of the hunter-gatherer groups during the later periods of the Upper Palaeolithic. Thus, a cross check between different time periods (Solutrean and Magdalenian), different regions of Iberian Peninsula (North and South) and spatial (settlement) and cultural data (art) is possible.

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The use of radiolarite as microlithic tools: experimentation and case study with the site of Tata (Hungary)

Several Western and Central European archaeological sites from the Marine Isotopic Stage (MIS) 5 to 3 yielded lithic artifacts odd by their small size (less than 30 mm long) into the Neanderthal world. However the reason why and the manner how human used so small artifacts needs more investigations. Tata (Hungary), dated from 116 ± 1.6 ka to 70 ± 2 ka (U/Th), is one of these sites where numerous small pieces (mostly made of radiolarite for the

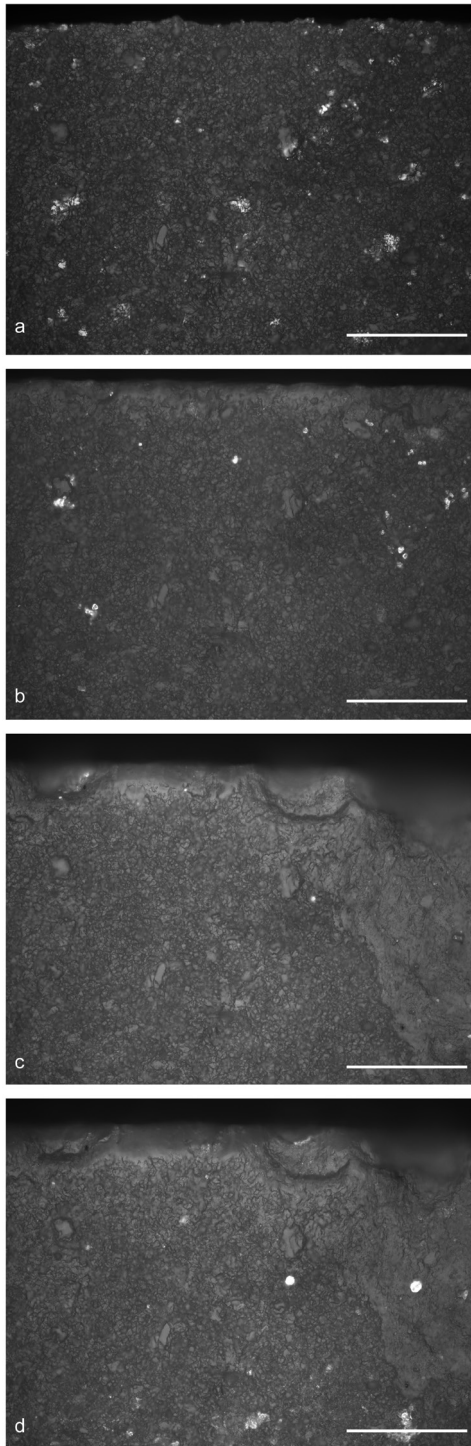


Fig. 1. Polish and scars on an experimental stone (radiolarite) tool used to scrap bone. The micrographs (magnification: 50x; scale = 0.1 mm) show the same point of interest after: a) 0 min. of use, b) 10 min., c) 20 min. and d) 30 min.

case of Tata), were found and represents the base of our case study.

After a brief review of the use of radiolarite for microlithic tools, we propose here to present an ongoing project which aims at building a reference collection of traces of use on radiolarite. In parallel, a case study concerning the site of Tata (Hungary) was carried out in order to characterize the use of these microliths.

A sequential experimentation was carried out with radiolarite found in the surroundings of Tata. Different activities of tool use were experimented in order to build a reference set of traces which could be used for the interpretation of usewear on archaeological artifacts. This first set of traces helped refining the interpretation of a selection of 100 archaeological artifacts from Tata. Both experimental and archaeological artifacts were observed with a reflected light microscope (50-500x) and a stereomicroscope (6.3-80x).

Morphometric analysis was also performed. Log shape ratios were used to gain insights into the variation of shape in the sample. The relationships between shapes and the presence of use traces were analyzed as well as the relation between shape and size and shape and mass with use traces.

Traces of use were found on 57 archaeological pieces and 43 had indeterminate or no traces. Morphometric analysis showed no significant difference of shape related to use. The primary mode of use identified was a transverse motion (N=22) but some tools were also used in longitudinal movement (N=9) and in percussive motion (N=3). Traces suggested hafting on 24 flakes but only 6 pieces could be interpreted with a sufficient reliability.

In conclusion, the overall "shape" of the tools was probably not of great interest for the human (Neanderthal) from Tata. However, it seems that they were looking for artifacts with at least one sharp edge opposite a back. Core technology was performed for producing this form of flake (discoid-type cores and cores on flake with centripetal/orthogonal removals). Small stone tools were used hand held or hafted for diverse activities. The reason why they produced so small artifacts remains unknown as large pebbles were also available and the proportions among the studied sample, morphometric tests and usewear analysis showed that the smallest artifacts might not be the most frequently/intensively used.

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Bernhard Buhs

The role of leafpoints in the Altmuehl Valley (Bavaria)

The Altmuehlian of Southern Germany is a Middle Paleolithic archaeological industry containing knapped-stone leafpoints. These industries are commonly dated to the Late Middle Paleolithic and are regularly invoked in discussions concerning the disappearance of Neandertals and the appearance of *Homo sapiens* in Europe at about 40 ka B.P. However, questions remain as to whether leafpoints in Central Europe may be interpreted as elements of a single European-wide cultural complex i.e. a functional variant of the Mousterian with Micoquian Option (M.M.O).

The Altmuehlian is often described as one of several Western European variants of the Szeletian. The majority of Late Middle Paleolithic sites in the Altmuehl Valley lack precision concerning stratigraphy, chronology and site integrity. Key sites are found in the caves of Mauern, Obernederhöhle and Sesselfelsgrötte. However, compared to the few cave sites, there is a magnitude of contemporaneous open-air sites that remain understudied. Altmuehlian surface sites have to be taken in addition to the minority of stratified sites, to get a higher resolution of relation between leafpoints and Late Middle Paleolithic industries in Southern Germany (M.M.O).

Therefore this talk presents a typotechnological analysis of Albersdorf, the largest Altmuehlian surface collection. The already known assemblage (N=1065) has recently been augmented (N=5560) through new fieldwork and provides important new information about on-site lithic production. Here, I focus on three aspects of the new material: Core preparation, blank production and leafpoints. Whereas the old collection was not able to identify the site function of Albersdorf the new imposed data gives clear information's about on-site activities. A large amount of thinning flakes and bifacial tools indicate the workshop character of Albersdorf. Albersdorf and Altmuehlian sites like Zeitzlarn 1 and Zeitzlarn 2 will then be taken to compare technological issues of the Altmuehlian with its eastern neighbor the Szeletian. This will help to see how strong the technological correlation between the Szeletian and its western branch is and to get insights concerning the question if the Altmuehlian is part of a regional or European-wide cultural complex.

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Victor Chabai & Thorsten Uthmeier

Zaskalnaya V: lithological and archaeological sequences

Zaskalnaya V was found by Yu. Kolosov in 1969. The site is a buried rock-shelter situated at 189 m asl. in narrow lime-stone canyon. The coordinates are N45°06'57.7" and E34°36'42.1". From 1969 to 1997, Yu. Kolosov excavated about 30 m² of 4.5 m thick deposits. He defined 7 cultural layers with thicknesses between 10 cm up to 50 cm. New excavations were conducted between 2012 and 2013 in the frames of the DFG-project „The dispersal of modern humans into an Eastern European refugial area of late Neanderthals: interdisciplinary studies of contemporaneous industries from the Middle to Upper Palaeolithic transition in the Crimea (Ukraine)“ and mainly focused on the reexamination of the lithological and archaeological sequence. The excavated area is directly adjacent to Kolosov's trench and measures 4.5 m². The stratigraphical sequence contains 23 lithological layers (Fig. 1) comprising Holocene (Layers 1 to 6) and Pleistocene (Layers 7 to 23) deposits. The Pleistocene deposits investigated accumulated inside the rock-shelter and consist of soft sandy limestone sediments. Clear traces of a soil formation correlating to OIS 5 were found in lithological Layers 19 to 21. The Pleistocene deposits contain 72 *in situ* archaeological levels and 5 redeposited archaeological levels. The thicknesses of the archaeological levels vary between 1 cm and 7 cm; the thicknesses of sterile deposits between them vary from 2 cm to 20 cm. Most part of the archaeological levels contain hearths and/or sooty/ashy deposits. More than 350.000 artifacts were recovered during the last field campaign in 2013. The assemblages of all of archaeological

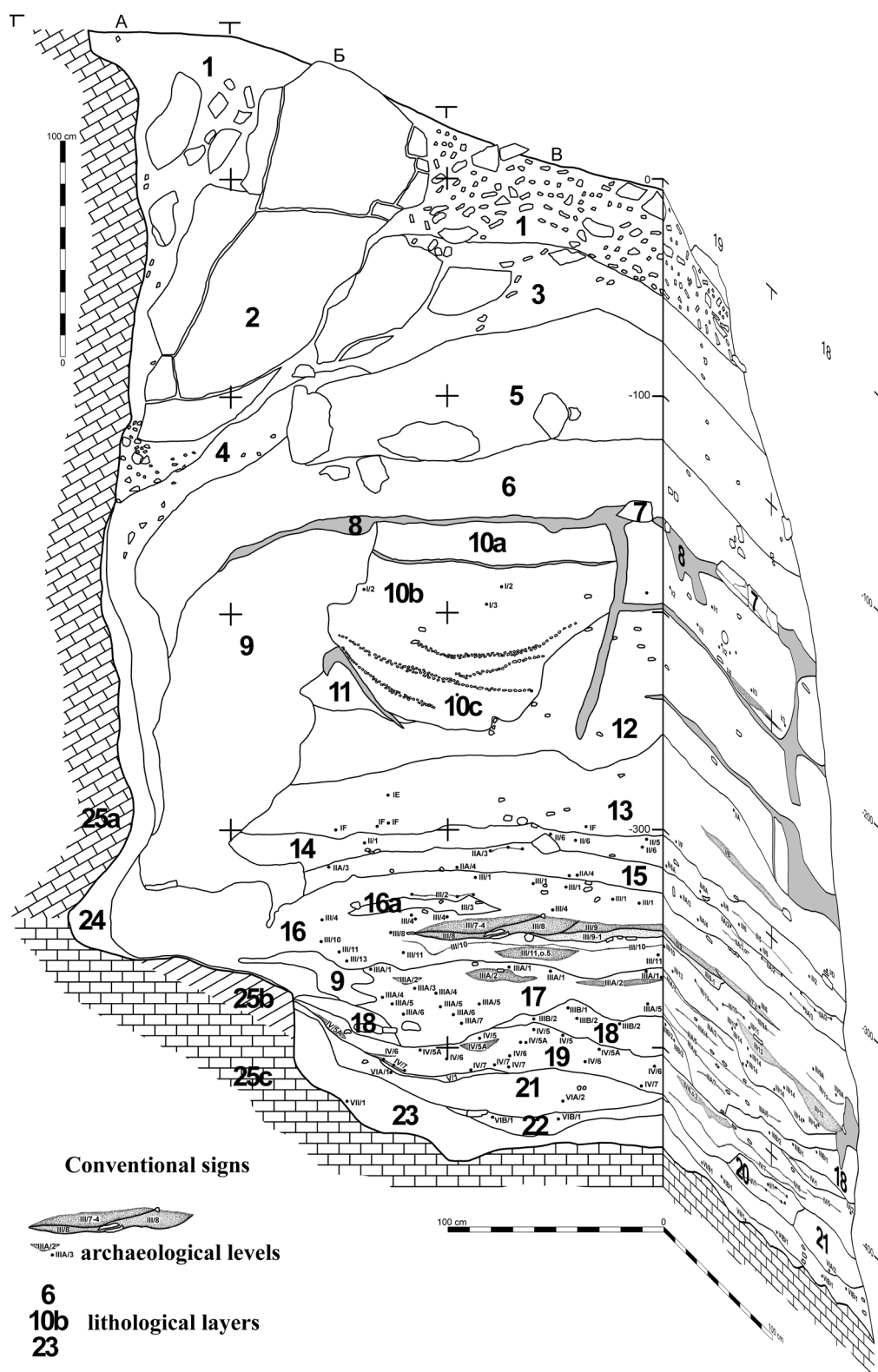


Fig. 1. Zaskalnaya V, the stratigraphical profile along the square lines 19/20 and B/T.

levels belong to the Eastern European Micoquian techno-complex. The intensity of *on-site* flint exploitation differs throughout the sequence, with archaeological Levels IV/1 – IV/7 from lithological Layers 19-21 being the most intensively reduced assemblages.

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Ten years of archaeological research in the Aïn Béni-Mathar/Guefaït region (Eastern Morocco): Results and perspectives

The eastern region of Morocco is very rich in prehistoric archaeological remains and sites. In the last twenty years, one hundred of prehistoric caves, rock-shelters and open air sites were discovered. The Spanish-Moroccan bilateral research project in the Aïn Béni-Mathar/Guefaït region began in 2006. The two main goals are: 1) to realize a detailed inventory of the archaeological heritage in this region with the identification, valorisation and recording of all existing archaeological sites; 2) to establish a chronological, stratigraphical, paleoenvironmental and cultural frame of the evolution of human occupation in this region. To achieve these goals, this interdisciplinary project is formed by Moroccan and Spanish researcher's specialists in different disciplines in prehistoric archaeology and human evolution.

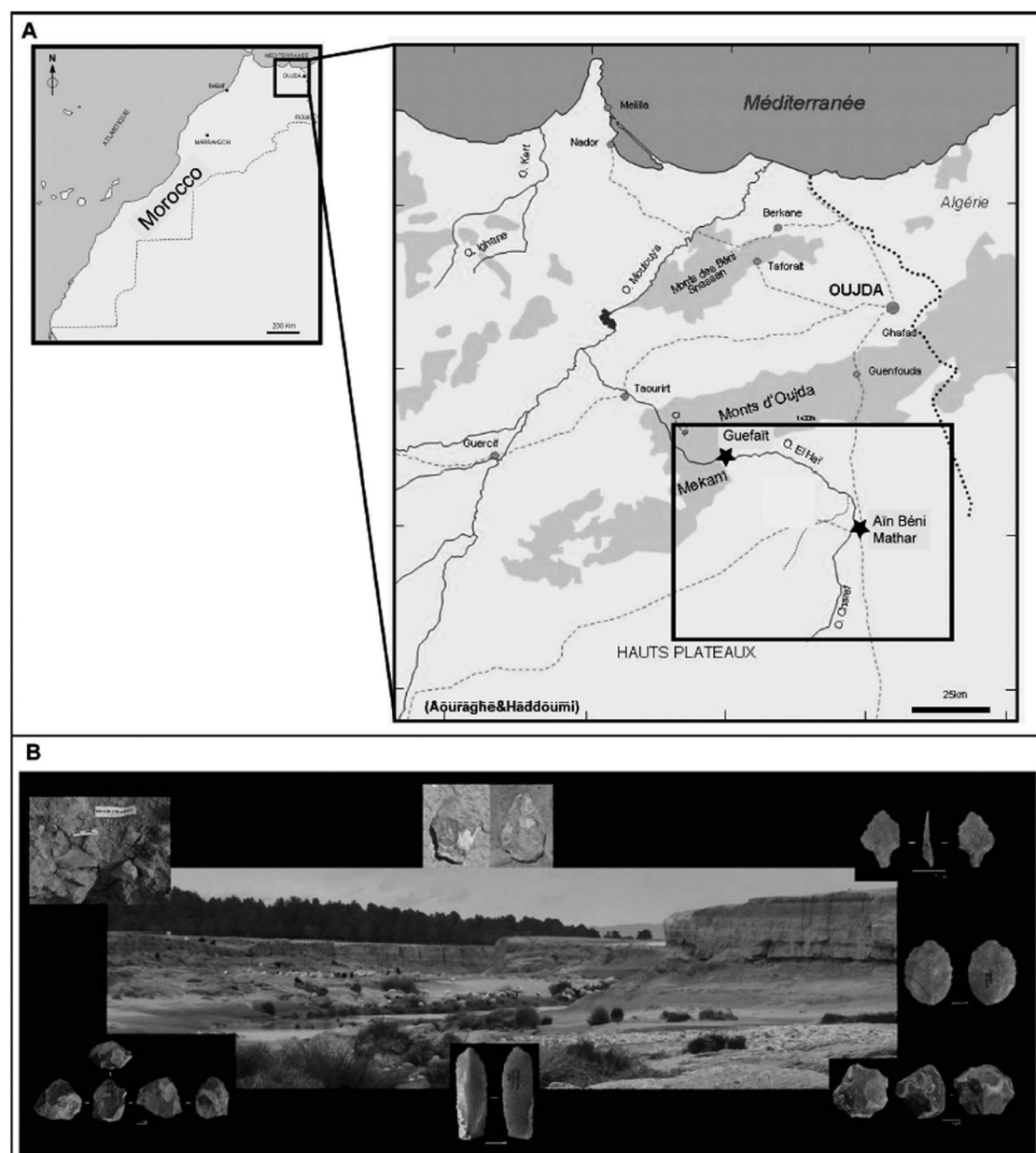


Fig. 1. A. Localisation of the studied area. B. some examples of the lithics discovered on the region and general vie of one of the archaeological sites: Oued Charef.

The systematic surveys conducted in the Aïn Béni-Mathar/ Guefaït region made possible to increase the number of sites identified. The lithic assemblages are the archaeological remains more numerous and allow us to prove the ancient human occupation of the region for the first time, but the last three years also faunal assemblages have been discovered.

The Mode 1 (Oldowan) was identified through the technical attributes of the Aïn Tabouda and Garat Soultana lithic assemblages, sites located in the upper level of the alluvial fans in the sequence of the ancient fluvial lacustrine system: orthogonal methods and flakes without retouch as goal of the reduction sequences. Lower in the sequence, we found the conglomerates levels of Oued Rabt with a very clear Mode 2 (Acheulean) with standardized lithics tool such as bifaces. The IPHES / Zona Educacional 4 / Edifici W3 / Campus Sesce-lades / 43007 - Tarragona -- Phone (+34) 977 943 003 www.iphes.cat / info@iphes.cat VAT G-43783752 / N° 2215 Fundacions de la Generalitat de Catalunya assemblage of Gaâdat Çwiwina, discovered in surface and without stratigraphy, contains lithics belonging to the Mode 2 and Mode 3 (Mousterian). The site of Oued Charef provides also data about Middle Pleistocene occupations with an open air site in stratigraphy and a lithic assemblage without bifaces. The Guefaït area provides also a high number of open air sites with archaeological remains associated to the Mousterian, Aterian and Iberomaurisian.

In this presentation we presents the important results obtained during this 10 years of bilateral research project that open a new vision about the human occupations of North Africa during the Pleistocene and place the eastern Morocco as a key region to understand the first human dispersals.

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Evaluating Early Upper Palaeolithic Open-Air Surface Finds from Northern Hungary and Southern Slovakia

How and when modern humans first penetrated the European continent has been a recent focus of Upper Palaeolithic archaeological research. One hypothesis posits that the Danube served as a main conduit for modern human movement from Southeastern into Central and Western Europe. However, a critical challenge to this theory has been the scarcity of Early Upper Palaeolithic sites along the Middle Danube catchment (Carpathian Basin). Though several sites with Early Upper Palaeolithic characteristics (Szeletian, Aurignacian) are known from surface prospections, very few have been archaeologically investigated. Our aim was to elucidate this long-standing deficiency by evaluating six known-surface sites

from the Northern Middle Danube Basin in the Cserhát and Mátra Mountains (Hungary) and the nearby Košice Basin (Slovakia) through a series of “keyhole” excavations. Our objectives were (1) to see if in situ stratified material still existed at these locations, (2) to characterize their archaeological assemblages and (3) to provide radiometric dates for these assemblages. Additionally, we employed sediment grain-size and color analyses to resolve if the surrounding sedimentary matrix was aeolian loess and/or if it had been mixed with underlying older deposits.

Our results suggest that many of the archaeological assemblages represent early Upper Palaeolithic assemblages that experienced post-depositional mixing. However, two sites (Sena, Nagyréde) showed more nuanced taphonomic processes and may contain more in situ artifacts warranting further exploration. These studies highlight the under-explored nature of archaeological and sedimentological research in the area and underscore the importance of integrating sedimentological research with archaeological investigations. It also suggests that the scarcity of archaeological sites in the region may in part be the result of a dynamic Pleistocene geomorphological evolution rather than a true demographic absence. Our results provide new insights into the Early Upper Palaeolithic settlement and the sedimentary dynamics of the Middle Danube Basin ultimately leading to a greater understanding of the early modern human settlement of Europe.

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K. Čuláková, L. Varadzinová & L. Varadzin

Lithics from the Mesolithic site of Sphinx (SBK.W-60) at Jebel Sabaloka, central Sudan

In this paper, we would like to present the first information on lithics from the sites explored at Jebel Sabaloka and the Sixth Nile Cataract in central Sudan in the scope of research into the late prehistoric occupation of this region and its interaction with the environment. Nowadays this region has semi-arid to arid character, during the climatically more favourable periods of the Holocene, the local environment was of savanna type and was very convenient for hunter-gatherer communities. This is attested in the area by sites with remains of Mesolithic occupation, some of which continued to be used also during the Neolithic period. For this presentation we choose the site of Sphinx (SBK.W-60) with remains of occupation only during the Mesolithic period.

Jebel Sabaloka is a mountain of a volcanic origin located ca. 80 km downstream of the confluence of the Blue and White Niles at Khartoum. The mountain is of supra-regional significance for prehistoric research in central Sudan as it hosts the only sources of rhyolites and other raw materials exploited during the Mesolithic (ca. 9,000–5,000 BC) and Neolithic (ca. 5,000–3,000 BC) for production of lithics and stone implements. This utmost significance of Jebel Sabaloka had been recognised already at the very beginning of prehistoric research in the Sudan. However, the utilisation of the raw materials from this area has so far been studied only on late prehistoric sites located outside this source area.

The lithic at this site seems to be only from the local sources of raw materials. The raw materials were exploited at primary sources, but secondary deposits (e.g. in proximity of Nile) were used too. There is a wide variety of raw materials and technological methods. The raw materials are generally of poor quality and their local provenience (up to 5 kms) indicates a rather sedentary way of life, as is common for Mesolithic communities in the Sudan. The typological range of tools is typical for this period. Majority of the tools could be used for different purposes (crescents, lunates, denticulates). Much lower is the percentage of tools which are intended for a specific activity (scrapers, burins, borers). Until today the analysis of the lithics from this site is still preliminary. Because of the high number of the finds deeper statistics needs to be done in the future.

Yuri E. Demidenko¹ & Thomas Hauck²

Yabrud II rock-shelter (Syria): one more interpretation of the site's industrial-chronological sequence and its meaning for the Levantine Paleolithic

Discovered and excavated in 1932-1933 by A. Rust (Cologne, Germany) Yabrud II rock-shelter (Rust 1950), located on eastern slopes of Anti-Lebanon Mountains in Western Syria, has been always considered as an important Levantine Paleolithic site continuing for Late Mousterian and Upper Paleolithic the famous Lower and Middle Paleolithic sequence of the nearby Yabrud I rock-shelter. Despite some attempts to re-analyze Yabrud II artifacts and incorporate the site's data into a wider Levantine and even Western Eurasia context (see the data overview: Bakdach 1982; Pastoors et al. 2008), the technological context of Yabrud II and its industrial placement are still ambiguous.

In this paper we present new data for 10 artifact assemblages (stored at the Institute for Prehistoric archaeology, University of Cologne, Germany) and propose an alternative industrial attribution within the Levantine Paleolithic record. A major scientific problem is the bias introduced by the sampling method of Rust who took only about tools and cores to Cologne. Therefore, the Yabrud II collection lacks many artifacts that would allow reconstructing the complete *chaîne opératoire* for every level. The assemblages are not a random collection (contra Pastoors et al. 2008: 50) but specific samples of certain artifact categories that represent only parts of the core reduction and tool manufacture process.

Respecting the sampling problem we propose the following techno-typological interpretation for the Yabrud II sequence:

- Layers 10 and 9 (base of the sequence): low sample sizes inhibit any clear attribution to a specific Levantine Mousterian technocomplex.
- Layers 8 and 7 show similarities with other Early Emirian / Initial Upper Paleolithic assemblages (Demidenko 2013). Also possible is a comparison with Nubian / Arabian MSA materials from Ain Difla rock-shelter (Jordan).
- Layer 6: the assemblage is of Early Ahmarian type and is comparable to 1930s excavation levels XIX-XVIII (Phase 2) of Ksar Akil rock-shelter (Lebanon).
- Layers 5 to 2: the assemblages of this sequence exhibit Early Ahmarian as well as Levantine Aurignacian features and are therefore idiosyncratic. The best comparison is possibly Ksar Akil levels XIII-XI which are referred to as Levantine Aurignacian A or Ksar Akil Phase 3 (Demidenko 2011, 2012; Hauck et al. 2014).
- Layer 1: the material is of clear "Classic Levantine Aurignacian" type. Hence, it is comparable with the Levantine Aurignacian B-C, Ksar Akil 1930s levels VIII-VII / 1940s levels Xb-IXc (Phase 5). We propose an industrial-chronological affiliation of the "Classic Levantine Aurignacian" assemblages with the Middle Aurignacian / Aurignacian II of Western and Central Europe dated ca. 33000 - 29000 years uncal. BP.

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Yuri E. Demidenko¹, Petr Škrdl² & Joseba Rios Garaizar³

A peculiar LGM Late UP industry in Central and Eastern Europe: background & new data

Assemblages of two structures at Mohelno-Plevovce site (Czech Republic) having “*steeply retouched end scrapers and specific tiny backed microliths with the closest analogy in the North Black Sea Region*” (Škrdl et al. 2014; in press) lend a “new breath” for studies of a peculiar LGM industry recognized before (!) only in Eastern Europe.

Eastern and Central European LGM Late UP assemblages from 9 sites (Muralovka, Zolotovka I, Mikhailovskaya Balka, southern Russia; Sagaidak I, Anetovka I, southern Ukraine; Rashkov VII-VIII, Moldova; Mohelno-Plevovce, Czech Republic; Rosenberg, Austria) compose the same non-Gravettian / Epigravettian industry enveloping about the whole LGM period of ca. 21 – 17 000 BP uncalibrated and demonstrating a “two-way human group traffic” between Central Europe and south of Eastern Europe, with uniform techno-typological traits the best seen in combination of carinated atypical end-scrapers used as cores for production of serial elongated chips being then modified by a dorsal marginal abrasion retouch (see for the East European overview: Demidenko 2008).

In the past, the presence of these two Aurignacian-like features, allowed one of us to name it as “North Black Sea region Epi-Aurignacian of Krems-Dufour type” (since Demidenko 1999), but there is still a question for such LGM industry origin in Central and Western Europe. Since the late 1960s, this LGM industry has been generically connected with the Late / Evolved Aurignacian complexes like Góra Pulawska II (Poland). But the idea should be rejected as other sites of this proposed now by us to be newly defined Evolved Aurignacian industry type with similar but true carinated end-scrapers and marginally retouched microblades are dated no younger 30-28 000 BP uncalibrated – Stránská skála IIa, layer 4, Líšeň-Čtvrť, Líšeň-Nad výhonem, Czech Republic; Alberndorf I, Austria, Breitenbach, Germany for Central Europe; Kostenki 14, volcanic ash layer; Kostenki 1, layer III, Russia and Kulychivka, layers II-III of 1982-1983 excavations, Ukraine for Eastern Europe. There



Fig. 1. Mohelno-Plevovce site, KSA paved stone structure (Czech Republic). Eight retouched elongated chips (0.8-1.2 cm long) refitted onto wide front / flaking surface of a double carinated atypical end-scraper.

is no other candidate for a local origin of the “Epi-Aurignacian” industry in Central and Eastern Europe up to now. At the same time, the ex-Aurignacian V industry in south-western Europe dated to beginning of LGM, ca. 22 – 21 000 BP uncalibrated, being now considered to be a transitional Proto-Solutrean or Terminal Gravettian industry in between Final Gravettian and Lower Solutrean (see for the West European overview: Almeida 2000), is not an easy possible “generic candidate” either. That’s because the Central and East European “Epi-Aurignacian” assemblages cannot be defined as representing any similar transitional industry so far being also different from the western “Aurignacian V” that is known by bladelet cores, carinated end-scrapers (with a great dominance of typical over atypical items) and thick nosed end-scrapers used as cores for production of bladelets and microblades then used for microliths bearing marginal and true (!) backed retouch. Thus, now having more data on the peculiar LGM Late UP industry in Central and Eastern Europe, there are more problems than before with its origin, why additional studies on the industry and chronologically related other UP assemblages are needed to be realized.

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Recent data on the Eastern Adriatic Middle Palaeolithic: Bioče Rockshelter in Montenegro

The Balkan region, which occupies a strategic position at the crossroads between Europe and the Near East, plays a key role in studying of the continent prehistory in the Middle Paleolithic period. According to the results of recent research, this area could be a kind of refuge for plant, animal and, therefore, ancient human communities during global cold events throughout the Pleistocene [Dogandžić et al., 2014].

The region can be conditionally divided into three main zones showing a strong variation in paleoecological parameters. These include the coastal area of the Adriatic and Ionian seas, mountain ranges (the Dinaric Alps, the Dalmatian mountains, the Carpathians, the Rhodopes, the Pindus) and depressions in the north, which are part of an overall paleo-ecological zone including lowlands of the Lower Danube River and the Black Sea [Furlan, 1977]. Currently, the coastland of the Balkans can not be attributed to a well-studied area from the point of the Stone Age archeology. Meanwhile, the topographical situation and climatic conditions in the region caused the presence (and conservation) of the distinctive material culture. The littoral zone is separated from inland areas of the peninsula by the Dalmatian orographic massif and Dinaric Alps, which were natural barriers for the dynamic cultural contacts of the earliest population [Karavanić, 2007].

Over the last decade, the intensity of research in the region has significantly increased, including through research of the Russian scientific organizations carried out in Monte-

negro [Derevianko et al., 2014; Karavanić, 2007]. The primary focus of the Russian-Montenegrin expedition was on the study of the Bioče site, which can be rightfully attributed to the most informative sites in the region.

The small village of Bioče, which gave the name to the site, is located in a small valley surrounded by mountains, at the confluence of the Morača and Mala Rivers (Fig.1. A). The Bioče rockshelter is situated on the left side of the Morača valley, at the base of the limestone

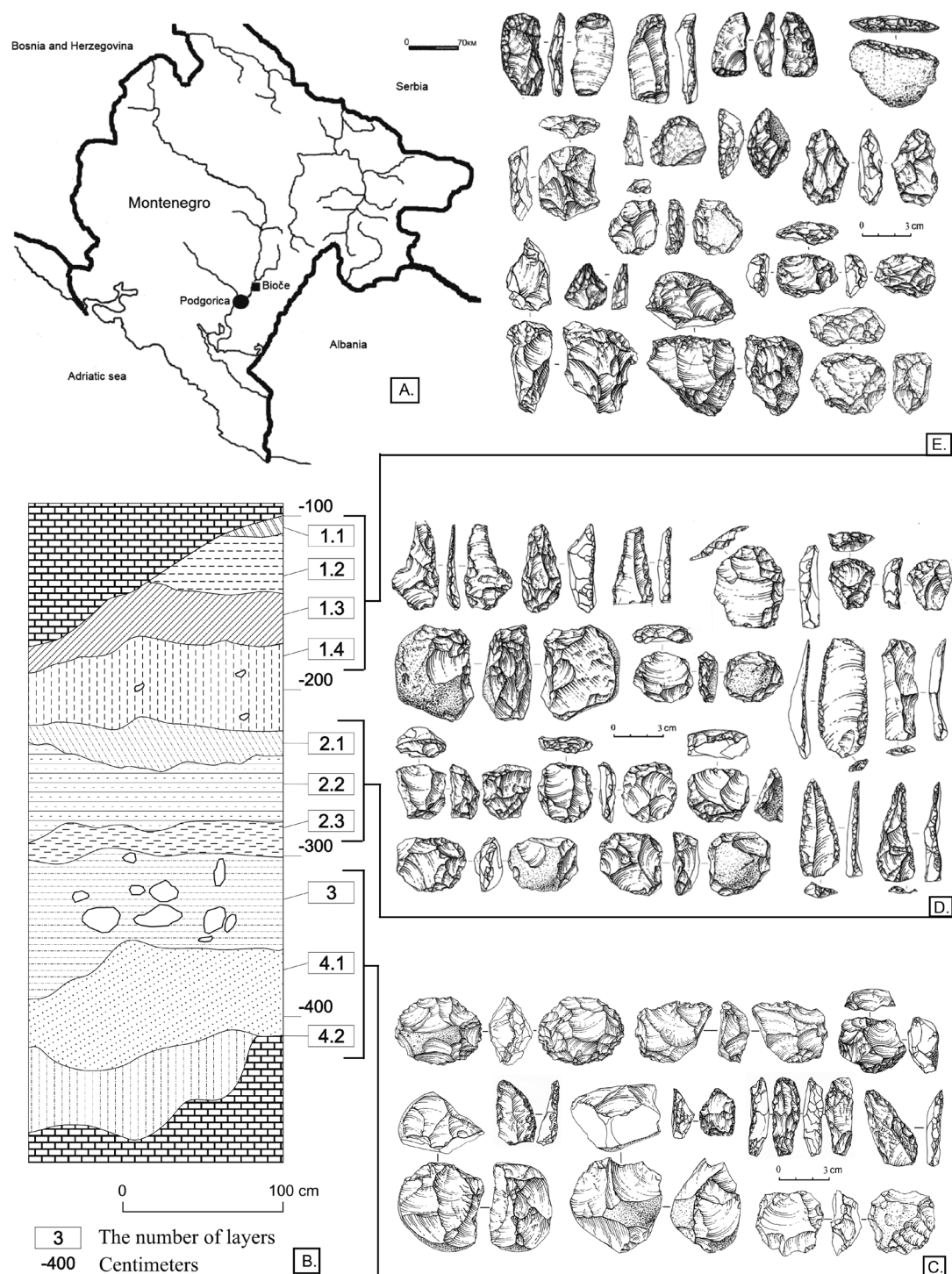


Fig. 1. Bioče rockshelter. A: Location; B: Section; C, D, E: Cores, blanks and tools.

massif, at an altitude of about 40 m above the modern-day water's edge of the river. The first excavation area was produced at the site in 1986, and then it was periodically investigated until 1997. The thickness of the Pleistocene sediments was divided by L. Đuričić, the first researcher of the site, into three series (I–III) [Đuričić, 2006]. The lithic industry of the site industry has been attributed to regional micro-Mousterian facies of the Middle Paleolithic, dated back to OIS 3 [Ibid., Derevianko et al., 2014].

A new excavation at the site (2010–2015) was started inside the rockshelter, where the undisturbed occupation deposits were identified. The section produced here, with a thickness exceeding 5 m, revealed 4 main lithological units (Fig.1. B) [Derevianko et al., 2015].

Deposits comprising *layers 3* and *4* (sublayers 4.1 and 4.2), which form the lower part of the section, consisted of heavy reddish-brown loamy soils, with debris showing different degree of saturation. Primary knapping, based on pebble raw material, the simplest methods of parallel, orthogonal and centripetal reduction were used, but there is also clear evidence of the Levallois technique (Fig.1. C).

The deposits of *layer 2*, composing the middle part of the section, are divided into three sublayers (2.1–2.3). The sediments includes mainly gray-colored sandy loams and sands of a various grain size in the upper and middle part of the layer, the near-bottom part is composed of light loams. The lithic industry recovered in the layer reveals the frequent use of a radial technique. This industry characterized by production of medium-sized blades and elongated points made on blades, as well as side-scrapers and knives (Fig.1. D).

Four sublayers (1.1–1.4) were recognized in the sediments comprising *layer 1*. They include medium and light loams of different shades (from reddish to black), showing different degrees of saturation with humus and rubbly material. Radiocarbon analysis of bone and charcoal samples collected from sublayers 1.2 and 1.4 indicates that the accumulation of layer 1 occurred within a time period ranging from 32 to 40 ka BP [Derevianko et al., 2014]. The major part of the archaeological material (Fig.1. E) (about 90% of the whole industry) was documented within layer 1. Radial cores used for the production of small flakes were found to be the most numerous among the nucleuses. Orthogonal cores are typologically close to them. Parallel cores, including rare items with a volumetric working surface, more numerous than parallel transverse cores. Narrow-faceted cores also existed. The most numerous category of tool-kit is side-scrapers, usually with one straight working edge. Another large category consists of atypical end-scrapers. Among knives, the third largest category, single-edge longitudinal tools were found to be common. Pointed tools and composite pieces appeared in small numbers.

The dynamics revealed in the Bioče industry (in conjunction with stratigraphic observations) provides the basis for recognizing several technocomplexes at the site, reflecting episodes of its occupation by human groups with different lithic technologies. Such a circumstance allows us to use the Bioče rockshelter as a key-site in cultural-historical reconstructions, along with the classic sequence of Crvena Stijena Rockshelter [Crvena Stijena, 1975; Bakovic et al., 2008; Mihailović, 2014].

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Bärenfalle – new results of the highest cave lion site from Austria

The Bärenfalle (Austrian Cave Number 1511/169) is located in the Tennen Mountain, a very heavily karstified high plateau with many caves, at 2,100 m above sealevel. The range is located in Austria in the district of Salzburg near Bischofshofen. The fossils of the Bärenfalle which are stored at the museum of Golling (“Museum Burg Golling”) and Salzburg (“Haus der Natur”) were metrically and morphologically recorded and furthermore interpreted. The morphological comparisons to other cave bear faunas as well as the DNA analyses strongly suggest that the bear fauna of the Bärenfalle is assigned to the taxon *Ursus spelaeus*

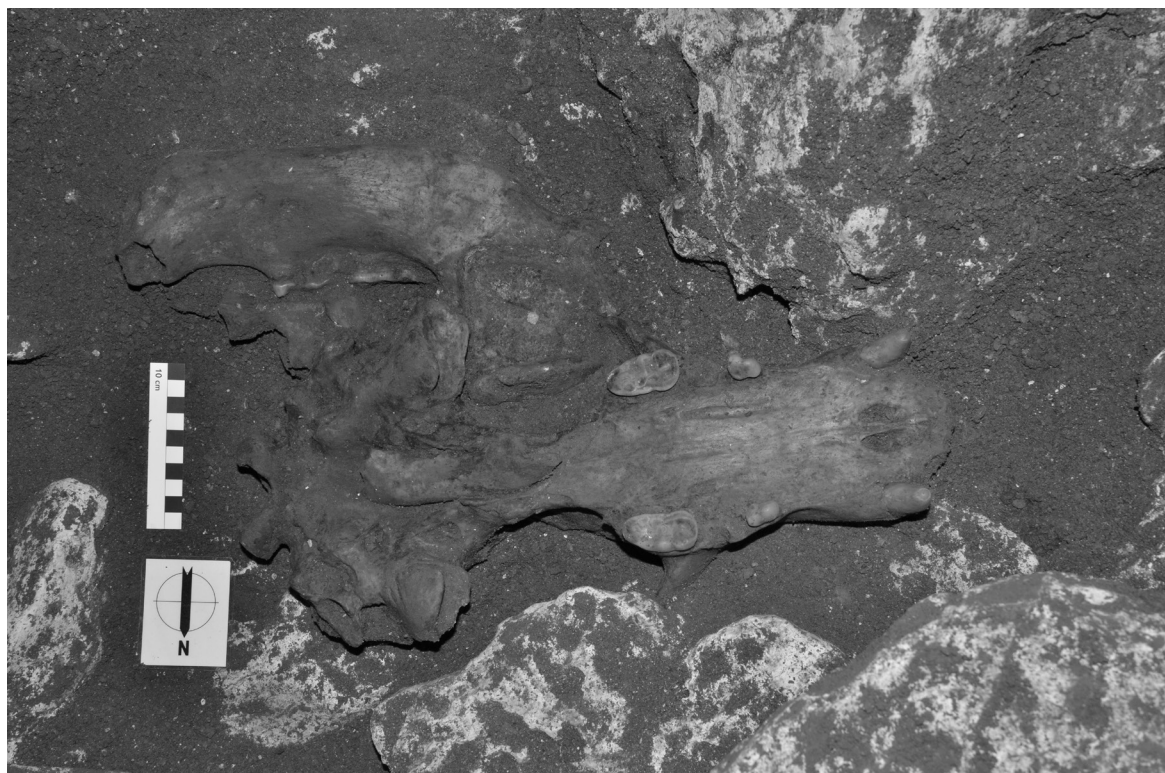


Fig. 1. Bärenfalle, Tennen Mountain (Salzburg, Austria): Cave bear skull during the excavation 2015 (Foto: D. Brandner).

eremus. A large amount of cave bear bones show typical bite marks that caused by wolves. One 14C-AMS date indicates that the mountain range of the Tennen Mountain was inhabited by cave bears in the Middle Wurmian warm period.

Numerous limb bones can be assigned to the cave lion and most probably originate from one individual. A 14C-AMS date of a cave lion bone will be dated at the Klaus-Tschira-Laboratory in Mannheim.

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Blaz Cave, an *in situ* Epigravettian site in Albania

Epigravettian sites were already known from northern Greece as well as from Montenegro, but not from Albania. This picture changes with the recently excavated *in situ* Epigravettian deposits of Blaz cave (Mati District, Northern Albania). The new data fill a research gap for the time of the Late Upper Palaeolithic in the Eastern Adriatic.

Blaz Cave is located in a karst system in the mountainous region of north-central Albania at 300m a.s.l. Excavations already started in 1979 in search of Neolithic remains, whereas the Pleistocene artefacts remained unstudied. Since 2012, a cooperation between the German Collaborative Research Centre 806 (University of Cologne) and the Albanian Institute of Archaeology (Tirana) has led to new excavations. During a field campaign in 2015, a small part of remaining deposits inside the cave were investigated. They yielded a very dense accumulation of stone artefacts and animal bones, some of them still in their anatomical connection. The artefacts and bones are well preserved and their spatial distribution suggests an *in situ* preservation of the archaeological layer. The tool spectrum contains a high ratio of backed bladelets and microgravette points, typical components of an Epigravettian assemblage. The faunal remains (ibex and deer, among others) exhibit numerous cut and percussion marks. A first ¹⁴C-date of 18.820 +/- cal. BP is available for the Epigravettian deposits in Blaz Cave.

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New investigations at the Upper Palaeolithic open air site Kammern-Grubgraben, Lower Austria

The Upper Palaeolithic site Kammern-Grubgraben is situated 12 km northeast of Krems in Hadersdorf-Kammern (east Austria) and was known since the second half of the 19th century.

The cultural layers were marked by stone artefacts located in a defile. During the excavations in the years 1984-1995 five archaeological layers, dwelling and stone pavement structures were unearthed. The find material is characterized by an extensive lithic inventory and an abundant bone industry which contains different types of adornments (dentalia, perforated shells and teeth), stone disks, needles with tiny eyes, ivory points, a bone flute and a baton. The relocation of a rural road resulted in a number of measures coordinated with the Federal Monuments Authority Austria (BDA). From January to December 2015 two profiles, several core drillings and a small-scale excavation were conducted by the Quaternary Archaeology research group, Institute for Oriental and European Archaeology (OREA), Austrian Academy of Sciences (ÖAW). Two trenches with two respectively four square metres were excavated about 50 metres south of the old excavation (1984-1995). Again a massive stone pavement and a high number of finds including two extraordinary objects for personal adornment were documented. A number of samples was taken for sedimentological, palaeobotanical and malacological analysis as well as for OSL dating. Attention was turned to a new absolute chronological classification of the cultural layers which have been dated by old ^{14}C dates (about 20000 BP) into the Last Glacial Maximum (LGM).



Fig.1. A view over the excavated trench B-D3, Photo: OREA, ÖAW.

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Protoaurignacian retouched bladelets: where do we stand?

The Protoaurignacian is a blade-bladelet dominated industry. Both products are often described to be obtained from the same cores, often of pyramidal or prismatic morphology, through a continual reduction sequence (Bon and Bodu 2002), even if several are the exclusive bladelet cores identified in Fumane, Isturitz and Arbrede (Broglia et al. 2005; Normand 2006; Ortega et al. 2005). Among the tools, retouched bladelets are the most attested type, followed by end-scrapers and few retouched blades (Bon 2002). In Europe there is little evidence for

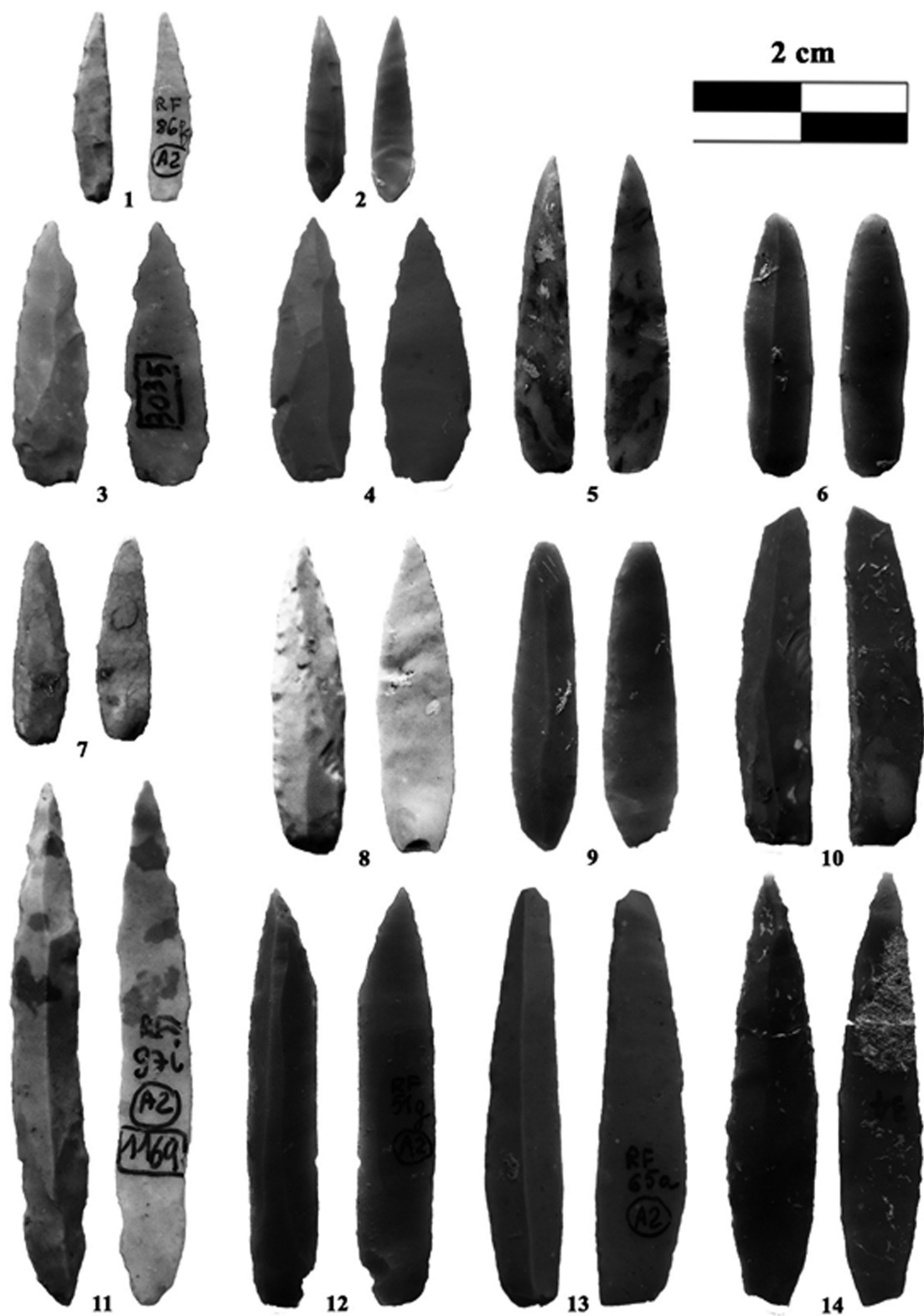


Fig.1. A sample of bladelets found in Fumane Cave: 1-5, 7-8, 11-12, 14: retouched points; 6, 9-10, 13: retouched bladelets (Photo: Armando Falcucci)

bladelet production in Musterian (Peresani et al. 2013; Slimak and Lucas 2005) and Chatelperronian assemblages (Roussel 2011). It is with the advent of the Aurignacian, and during the later Upper Paleolithic, that those tools start to accomplish a primary role in the hunter-gatherer societies. This is why lithic analysts address at the stabilization of lamellar-based elements as the major break from the previous stone knapping traditions (Bon 2005). Despite the long standing interest on those elements, a careful inter-regional comparison, stressing similarities and divergences, has not yet been attempted. The issue that there is no general agreement on their typological characterization, is precisely imputable to the lack of well-structured morpho-metrical studies, that took into account comparable criteria. Moreover, the identification of a major tool type, the Dufour sub-type Dufour bladelet (Demars and Laurent 1992) ended up homogenizing the general picture. Therefore, the lamellar collections of three main sites across Europe, Grotta di Fumane (Fig.1), Grotte d'Isturitz and Grotte des Cottés, have been analyzed to better understand the morpho-metrical characterization of the retouched bladelets during the Protoaurignacian, without a preconceived typological approach. In order to perform morphological and dimensional comparisons among the three assemblages, various attributes have been selected: flaking direction, butt and bulb morphology, number of scars, curvature of the profile, blank morphology, basal and distal shape, retouch and final size (length, width and thickness). Several differences have been found among Fumane, Isturitz and Les Cottés, even if it appears certain that all lamellar products belong to shared stone knapping traditions, which characterize the Protoaurignacian and more in general the beginning of the Upper Paleolithic in Western Eurasia. It has finally been argued that two main categories of bladelets can be highlighted: retouched points and lateralized bladelets and that the feature that better discriminate Protoaurignacian assemblages across Europe is the presence and the relative variability of retouched points.

We consider this a first contribution to help deconstruct the monolithic picture of the Aurignacian, that in our opinion has been built up to easily track the spread of modern humans across Western Eurasia, and not to make proper inference on the structures and organization of the hunter-gatherer societies that inhabited Europe at the threshold of the Upper Paleolithic.

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Palaeolithic sites from Schöningen's geographical neighbourhood: The Krähenwinkel 13 gravel finds compared with the Older Palaeolithic assemblages in Northern and Central Germany

Between the North Sea marshland, the East German Weichselian moraine area, the Leipzig lowlands and the northern edge of the Central German Uplands traces of the presence of Stone Age people have been found - mostly stone artefacts - in interglacial sediments - from peat to travertine layers, in river sediments of the early glacial periods and even sometimes re-deposited in fluvioglacial and glacial layers. A special feature of the region is that remains of humans and ice alternated, e. g., could be observed even in the same profile (such as the upper layers of Central German opencast lignite mines). The salvage conditions vary considerably, however. Sometimes, there was the chance of a subtle dig, e.g. when more than half a century ago research blasting was conducted in Weimar-Ehringsdorf. Many finds come from collections made in gravel pits - rarely from the trimmed profile ballast body, often from screening of oversize burden dumps and sometimes from burden dumps that have emerged during screening of underground gravel deposits. Here stratigraphic observation opportunities in the course of dredging below the groundwater level did not exist.

Many find complexes from Saxony, Saxony-Anhalt and Thuringia, but also from the Hanoverian Wendland were extensively studied typologically and technologically. Currently, this is done for the finds of Leine-/Wietzel north of Hanover (Frost 2015), which has grown considerably in recent years. These pieces probably belong to the (late) Early Saalian period immediately preceding the maximum extension of Saalian ice shield 140,000 years ago – or perhaps later, to the Early Weichselian after the Eemian interglacial. Geologically, both possibilities are difficult to distinguish as gravel dredging occurred below the ground water level in this region, too. Thus collection occasions only come up at burden dumps or from band-conveyors.

From a technological point of view, the flakes show clear similarities to the definitely or probably Saalian assemblages in Central Germany investigated earlier. Here – especially for the finds from underwater gravel exploitation in the Middle Elbe valley - a mixture of Saalian and Weichselian components cannot be excluded. Comparing these “doubtful” Saalian inventories with clear Saalian and clear Weichselian materials like Markkleeberg on the one hand and Königsau B on the other, the Middle Elbe artefacts show closer connections to the Saalian finds (Weber 1997).

The other artefacts – cores and tools – bring comparable results. Unfortunately, cores are rarely subjects of morphometric studies. They are (too) often classified in *a priori* defined drawers like N. Conard's et al. (2004) “initial”, “inclined”, “parallel”, “platform”, “multi-directional” and “bifacial” pieces. C. Clarkson (2010) described cores in 3 D together with

conventional form attributes like size relations, curvature of core face (concept of surface convexity), the ratio of the height of core face above the plain of intersection between top and bottom, or front and back, and worked and unworked surfaces of the core, etc. When tested on real Howieson Poort cores from South African sites, this attribute complex can be shown to actually reflect traditional core types.

Some of the features used by Clarkson were also included in our study. It was quite interesting to ask how the core data reflect the inventories' classification using the flake characteristics. We compare the Krähenwinkel core data with results obtained from the other Older Palaeolithic assemblages from Central Germany, Central and Western Europe.

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Marc Händel

Excavation and 3D documentation of a Palaeolithic grave – developing a methodology for the Krems-Wachtberg double burial

In 2005 a double burial of newborns was discovered at the Gravettian site of Krems-Wachtberg. The infants had been buried more than 30,000 years ago in a pit, embedded in red ochre, and covered by the shoulder blade of a mammoth (Einwögerer et al., 2006; Händel et al., 2009; Neugebauer-Maresch et al., 2013; Simon et al., 2014). After its exposure the burial was recovered as a block to apply the available non-destructive methods of documentation and analyses.

10 years later a point had been reached where only an excavation, and therefore destruction, of the finding would provide answers to the remaining questions. In this situation we decided to document the excavation process by using state-of-the-art technology, while at the same time maintaining our documentation standards. This task required the development of an adapted workflow.

A high-precision structured light scanning system (Breuckmann smartSCAN HE 5 Megapixel Color 3D Scanner) was used to 3-dimensionally document every single step of the excavation and disassembling process in the course of which the elements of the double burial were recovered: bones and tooth germs of the newborns; personal adornments; colour pigments in different processing forms (Händel et al., 2015); sediments. This documented the exact position of each element and sample. Parallel to the scans each step was also documented by a series of digital photos to enable structure from motion (SFM) modelling. The excavation of the double burial took place in a lab of the Natural History Museum Vienna and was successfully completed in August 2015.

The next step, which is still ongoing, involves the documentation of the single elements. For the human remains this is not an easy task, because they are extremely fragile. In many cases it is not possible to entirely remove the sediment without destruction of the bones. Here, micro-CT scans will have to be carried out to enable a digital preparation of the bone



Fig.1. Excavating the Krems-Wachtberg double burial of newborns in a lab of the Natural History Museum Vienna. (Photograph: Austrian Academy of Sciences)

surfaces. In other cases the bones are not complete and will have to be reconstructed digitally. The process eventually aims at producing a fully 3-dimensional dataset of the burial – consisting of the pit, the mammoth scapula, the surrounding red ochre, the personal adornments, and of course all human elements. This dataset can then be used to reconstruct not only the original situation (in 3D) but also the *chaîne opératoire* of activities which took place during the funeral, as well as the post-sedimentary formation processes (4D = development through time). Furthermore it will allow for 3D-printing selected stages or parts of the complete finding as well as its single elements, e.g. comparative skeletons of newborn individuals of early modern humans.

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Henning Hundsdörfer¹, Andreas Pastoors¹, Erich Claßen², Marco Peresani³ and Manuel Vaquero⁴
New research at the Middle Palaeolithic workshop site Troisdorf-Ravensberg (Rhineland, Germany)

Due to its geographic and geological setting the northern Rhineland offers a wide spectrum of lithic raw materials. They appear in primary and secondary outcrops of which some are still accessible today. This peculiarity of the research area provides a high potential to study resource-management of stone tool manufacture. Thus, within the framework of a research project funded by the Fritz Thyssen-Foundation, the Middle Palaeolithic workshop site of Troisdorf-Ravensberg is investigated. The site is located directly at the southern margin of a tertiary-quartzite outcrop which has been highly frequented during the Middle Palaeolithic. The poster presents first results of the last year's excavation campaign.

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Late Middle and Early Upper Paleolithic in the Eastern Adriatic

Late Middle Paleolithic in the eastern Adriatic coast is relatively well known and discussed in the literature. On the other hand, early Upper Paleolithic sites in the same region are scarce, while in particular the sites from early Aurignacian are completely lacking. Moreover, sites with stratigraphy encompassing late Middle Paleolithic and early Upper Paleolithic have not yet been found.

In the last 20 years research of late Middle Paleolithic has been conducted in the eastern Adriatic with different intensity in different regions (e.g., Mujina Cave and Velika Cave in Kličevica in Dalmatia, open-air site Kampanož and Romualdo Cave in Istria).

AMS and ESR dates give good temporal frame for late Middle Paleolithic. At the same time new AMS dates from recent excavations from Velika Cave in Kličevica (funded by the Croatian Science Foundation) rise numerous questions about the end of Mousterian in the region and/or reliability of those dates. Contrary to this, radiocarbon dates for early Upper Paleolithic are scarce and were made long time ago, hence bringing into question their reliability as is supported by their very late age for Aurignacian. Only one recent AMS date from Šandalja II could represent real Aurignacian age.

According to current data there is a hiatus of several thousand years between late Middle and early Upper Paleolithic in the eastern Adriatic. The reasons for such fragmentary record of the Middle to Upper Paleolithic transition could be multifold:

- relatively short and unsystematic research of Paleolithic in the region;
- paleoenvironmental change, i.e. sea-level rise probably destroyed potential sites;
- low population density during early Upper Paleolithic;
- no temporal overlap between late Neandertals and early modern humans.

Future research in the region should be primarily focused on finding new sites that would shed light on some of the above raised issues.



Fig. 1. Excavation of the entrance trench in Velika pećina in Kličevica (Dalmatia) (Photo by I. Karavanić).

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K. Kindermann¹, P. van Peer², F. Henselowsky³ & O. Bubenzer³

Living at the lakeshore – Early Nubian Complex site associated with a lacustrine environment

In the vicinity of Sodmein Cave (Eastern Desert, Egypt) numerous well-preserved older surface remnants (terraces) could be documented. They show mainly a dark desert pavement, yielded preferentially Pleistocene artefact concentrations and therefore seem to represent parts of the former surface of the area.

On such a terrace a new open-air site – named Sodmein Playa – was discovered a few kilometres south-west of the cave. So far, it is the first Middle Stone Age (MSA) site in the region to be associated with Pleistocene lacustrine deposits. A small number of lithic artefacts has been collected at the surface which weathered out of the sediments. Based on the presence of some Nubian type 2 cores, this assemblage can be referred to the early Nubian Complex. Together with the lithic assemblages from layer J at Sodmein Cave, this new site clearly establishes the presence of the early Nubian Complex in the region east of the Nile. Chronometric dating of the Pleistocene playa silts is in progress but according to the present chronological evidence from northeast Africa the early Nubian Complex dates to the Last Interglacial.

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Małgorzata Anna Kot

All in one. Szeletian, Jerzmanowician, Jankovichian and Babonian leafpoints comparison

Leafpoint industries are widely spread in Central Europe. Bifacially shaped leafpoints became a kind of “index fossils” for MP/UP transitional industries. Paper presents a comparison of four collections of bifacial leafpoints coming from four eponimic sites: Szeleta cave, Jankovich Cave, Jerzmanovice cave and Sajóabony Mehesztető. The aim of the analyses was to check if the leafpoints ascribed to four different transitional cultures share a similar tool concept or manufacturing scheme. The leafpoints were analysed with a use of scar pattern (working step) method in order to reconstruct their chaîne opératoire and general tool concept.

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Janusz K. Kozłowski¹ & Zsolt Mester²

New evidences of the Early Upper Palaeolithic in Northern Hungary

Due to its geographical position, the territory of Northern Hungary have an importance for a better understanding of the palaeohistorical processes of Central Europe during the Late Middle and the Early Upper Palaeolithic, such as the development of „transitional” industries, the spread of the Aurignacian, and the eventual interactions between Neanderthals and Anatomically Modern Humans. The rarity of sites in the concerned region was one of the main problems for scholars who built up or tested scientific models. In the last 15 years, systematic field surveys by private collectors and young researchers considerably increased the number of sites yielding traces of Early Upper Palaeolithic occupations. In 2002, a Polish-Hungarian research program has been launched for the archaeological investigations of these sites near Eger in the southwestern foothill region of the Bükk Mountains. In this presentation, we focus on the rich lithic material of the recently excavated Andornaktálya 2 (Gyilkos) site which represents a new evidence of the Aurignacian in Northern Hungary. According to the high number of cores and debitage productions, the assemblage should be interpreted as a workshop site. It shows similarities with the industry of the nearby Andornaktálya 1 (Zúgó) site, such as the presence of raw materials of south Polish and western Ukrainian origins. But dissimilarities also, such as the low importance of obsidian and the use of some special type of limnosilicites from the Tokaj Mountains. The assemblage contains further evidence of a recently recognized Early Upper Palaeolithic macroblade industry of the region.

The investigations of Andornaktálya 2 is included into the „Transcarpathian contacts between forager societies” collaboration project of the Hungarian Academy of Sciences, Budapest and the Polish Academy of Arts and Sciences, Cracow.

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Dirk F. Leder

The Middle to Upper Palaeolithic interface in the Levant: A mosaic of techno-typological traditions and novelties: Transition or Initial Upper Palaeolithic?

The Levant occupies a peculiar geographic position in-between Africa and Europe that has made it a crucial trajectory for understanding human migrations between Africa and Eurasia

[1-2]. The time of the Middle to Upper Palaeolithic transition (ca. 50- 35 ka calBP) is characterised by substantial changes in material culture that are traditionally used as proxies for *Homo sapiens*' migration out of Africa [3]. While differences between assemblages in various sub-regions of the Levant were recognized early, we still lack a testable model that would a) clearly outline these differences; and b) query for an internal structuring of these variable assemblages. This paper tackles the question of either continuity or discontinuity between Middle and Upper Palaeolithic in the Levant. In order to do so, relevant lithic assemblages from various Levantine sites have been investigated and were consolidated into meaningful techno-typological system units. This was achieved by employing quantitative methods, such as cluster analysis, PCA, and GIS analyses. Results are then reviewed against available environmental and behavioural data that might have had an impact on the variability of these lithic assemblages. The study shows that individual lithic assemblages can be grouped into three distinct clusters. One clustered group supports the view of a Middle to Upper Palaeolithic transition in one subregion (Emiran, Lower Galilee), while two further clusters constitute novelties in the Levant (*Bokerian*, Southern Levant and Mediterranean zone; *Jerf Ajlian*, Central Syria) that are best described as Initial Upper Palaeolithic [3]. While the authorship of individual assemblages or even entire assemblage groups will largely remain a matter of debate, here a testable multi-lineal model is proposed that might serve as a more appropriate frame work for the Middle to Upper Palaeolithic interface. Human migrations into the Levant might have triggered these novelties, but as it currently seems with a several millennia delay (Manot Cave).

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György Lengyel¹, Zsolt Mester², Sándor Béres³ & Attila Péntek⁴
The Aurignacian in the Carpathian Basin

The Aurignacian in Hungary has long been represented by Istállóskő cave in Bükk Mountains. Although bone and antler points typical to the Aurignacian are abundant in the archaeological assemblage of Istállóskő, the lithic inventory do not contain classic tool types of Aurignacian. In contrast to Istállóskő, open air sites, most of them discovered in the past 15 years in northeastern Hungary, abundantly yielded Aurignacian fossil markers. This presentation summarizes the lithic characters of the open air Aurignacian sites and discusses their significance in the early modern human history in Eastern Central Europe.

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Ine Léonard

Bridging Distances or Wandering About? The Raw Material Procurement Organization of Early Upper Palaeolithic Humans in the Banat (SW-Romania)

Although global dispersal of modern humans has always enjoyed great attention in prehistoric archaeology, debate exists on how to tackle this subject in terms of data gathering and processing. It is proposed that firstly the intricate interplay of socio-cultural and ecological factors at the level of the individual archaeological localities should be understood before questions about human behaviour and our migratory past can be tackled.

With this belief in mind, the here-presented doctoral research of the Collaborative Research Centre 806 Our Way to Europe | Culture-Environment Interaction and Human Mobility in the Late Quaternary intends to arrive at such an understanding for the Banat region in South-western Romania during the early Upper Palaeolithic – a key-region in the early modern human peopling of Europe. A significant aspect in this approach relates to the distance prehistoric people were willing to bridge to collect the rocks they needed to produce lithic artefacts, as the provenance areas may already reveals a great deal about the nature of human mobility.

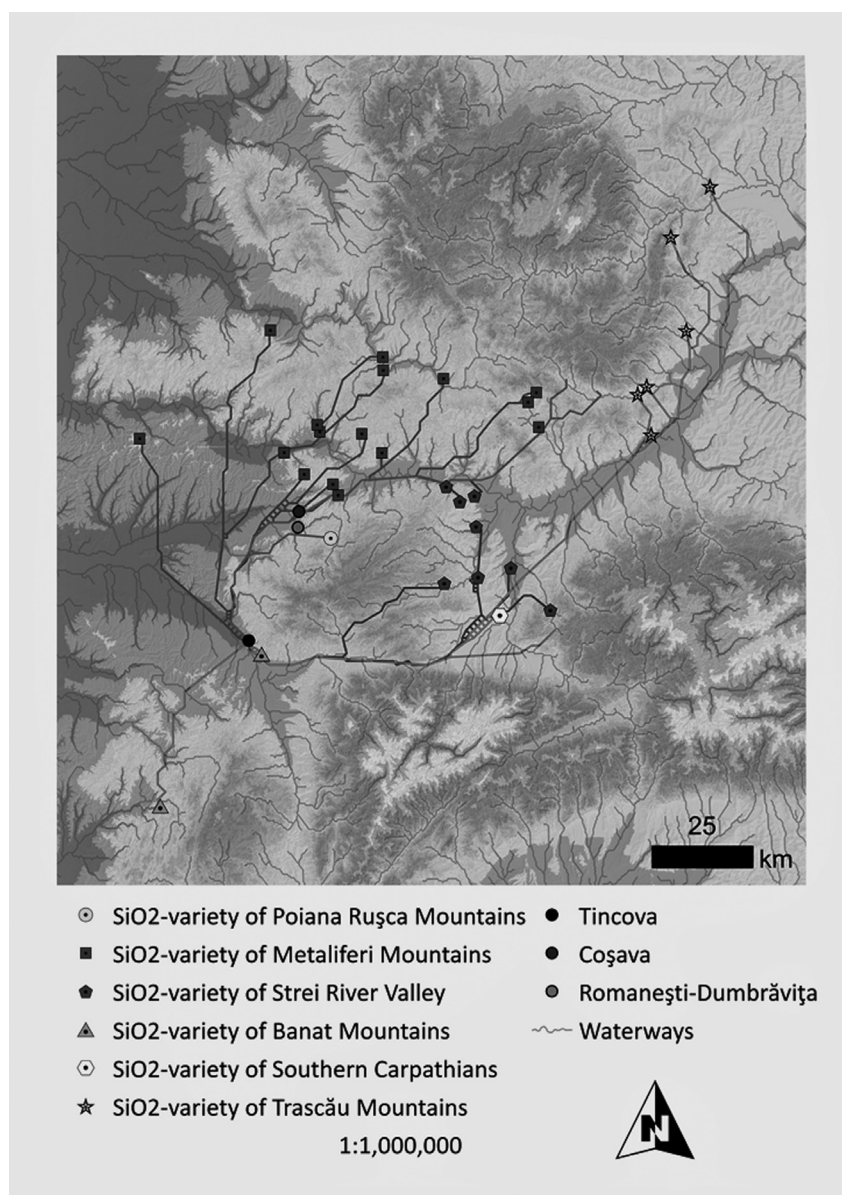


Fig. 1. Raw material localities in relation to Early Upper Palaeolithic sites in the Banat.

Originally, the raw material record of the Banat localities was determined based on superficial macro- and microscopic observations. Although these efforts resulted in a coarse attribution of the artefacts to a number of raw material types, no attempt to pinpoint geological sources has been done so far. Since some raw materials, among which a blackish SiO₂-variety, seem to be exogenous to the region and lack cortex remnants, they could originate from larger distances. Novel chemical and microscopic analysis of especially but not exclusively these “exotics” has to provide closure on whether or not the early modern humans of the Banat region went out of their way – socially or physically – to get their raw materials or merely strolled around the area looking for suitable rocks to knap.

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András Markó

Leaf points and osseous tools found together: recent observations

Early osseous artefacts including split based points are generally considered as typical Early Upper Palaeolithic types, associated with the Aurignacian lithics. The analysis of four assemblages from the Carpathian basin, however, shows that antler and ivory tools were excavated with bifacially worked and leaf shaped implements. At the same time, the Aurignacian-type lithics are absent from the collections.

One of the common points of the studied sites, excavated in the Bükk mountains and in the Transdanubia is the relatively ‘hidden’ topographical position: they are lying at a large relative height, sometimes at the end of long valleys. The raw materials of the lithic tools were imported from far-lying source areas and the little assemblages evidence very few traces of blank production. The osseous tools are often injured or broken. Generally, the assemblages seem to reflect short occupations episodes, probably series of single night stands.

In our view the type of the occupation and not the cultural factors determined the composition and the character of the reviewed archaeological assemblages.

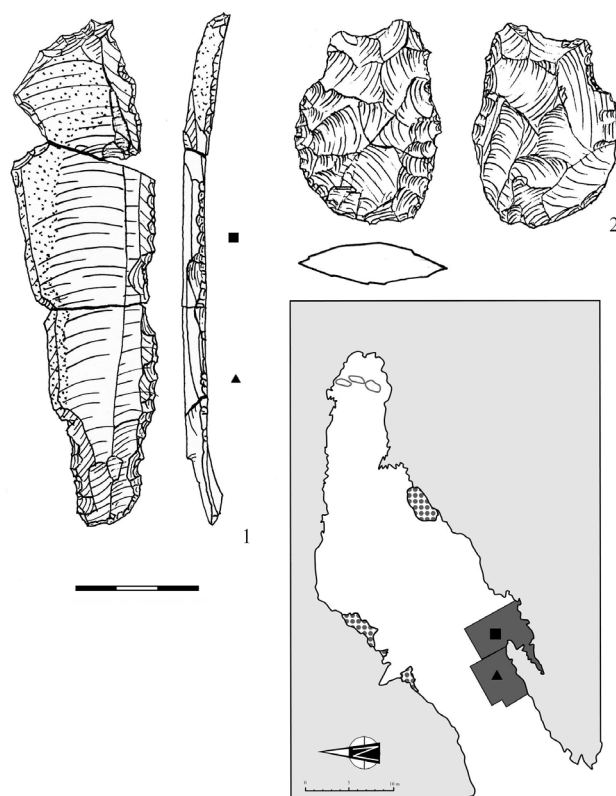


Fig. 1. Raw material localities in relation to Early Upper Palaeolithic sites in the Banat.

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Ondřej Mlejnek¹ & Petr Škrdl²

New results of the Early Upper Palaeolithic research in Moravia (Czech Republic)

The presented paper concludes the results of the Early Upper Palaeolithic (EUP) research in Moravia in recent years. EUP is a period dated approximately in between 45 and 32 000 years BP. It is the time when the last Neanderthals were replaced by the first Anatomically Modern Humans (AMH). When and in which manner exactly this replacement happened is not certain. Lithics dated to this period are deposited in fossil soils, which do not usually allow a preservation of artifacts made of organic materials, including animal and human bones. Therefore the question if the technocomplexes from the very beginning of the EUP (e. g. Lincombian-Ranisian-Jerzmanowician, Bohunician, Szeletian) were created by the last Neanderthals or by the first AMH can be discussed just by indirect proofs. In the case of a little bit younger technocomplex of Aurignacian it is pretty sure that it was created by the AMH. In the central Europe it was proved by the finding of AMH skeletal remains in the Mladeč Caves in central Moravia (Teschler-Nicola, Ed. 2006). Each excavated EUP site can thus answer important questions concerning the arrival of the first AMH in Europe.

A multilayer site of Želeč I (Mlejnek 2015, 121–134) dated to EUP has been excavated recently on the margin of the rich surface site Ondratice I/Želeč (Mlejnek *et al.* 2012). Another site Tvarožná X – Za školou (Škrdl *et al.* 2009) excavated in 2008 and 2015 has enlarged a number of the Bohunician sites. On the cadastral territory of Brno – Líšeň the Aurignacian site Líšeň I – Čtvrť (Škrdl *et al.* 2010) and the Bohunician site Líšeň VII – Hrubé Podsedky – former Podolí I (Škrdl *et al.* 2011) were excavated. Tertiary mollusk shells, which might have served as personal ornaments, were found at both of these sites. Particularly in the case of the second site, if we could without doubts prove its dating to the Bohunician, it would be an indisputable proof of a modern behavior and therefore another indirect proof of a hypothesis, that the Bohunician industry was already made by AMH. Among other recently excavated EUP sites we can mention the Szeletian site Želešice III – Hoynerhügel (Škrdl *et al.* 2014 with references) and finally few hearths dated to 45–41 000 years BP were discovered at the margin of the Bohunician artifact surface cluster Ořeškov IV – Kabáty (Škrdl 2013). All above mentioned sites will be introduced in detail in presented report.

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Martin Moník¹ & Jiří Drozd²

What Aurignacian facies occupied the Moravian Gate? The case of Salaš I and IV sites

Different facies have been traditionally distinguished in Moravian Aurignacian based on topography of sites, techno-typological indexes and raw material distribution (Oliva 1987; 1984; Svoboda et al. 2002). Absolute amount of burins has also informed us, in certain cases, about the chronology of individual sites (Oliva 1987), being an uncertain but necessary criterion given the scarcity of stratigraphical observations in the region. These observations, however, were made in areas of significant clustering of sites (Krumlov Forest and Brno areas, Napajedla Gate, Drahaný Highlands) whereas the Aurignacian settlement of Moravian Gate, connecting today's Central Moravia with Silesia, has been considered less intensive until recently. Nonetheless, two Aurignacian chipped stone assemblages were acquired here between 2000 and 2015 thanks to intensive surface prospection by one of the authors. The sites are strategically positioned just above a glacial moraine, containing well-knappable Baltic flint, and also close to a mineral spring within a calcareous tufa outcrop.

The question is what the relative chronology and function of these two sites was and what relation were they in with other Moravian Aurignacian facies. For that reason, multiple descriptive variables (above all blank, core, tool & raw material types) of given chipped stone assemblages were recorded and statistically compared with identical categories in Moravian Aurignacian collections analysed in the past (Oliva 1984). The two sites, however, are rather unique in the workshop-like character of their stone assemblages, virtually single-raw material exploitation and atypical topography.

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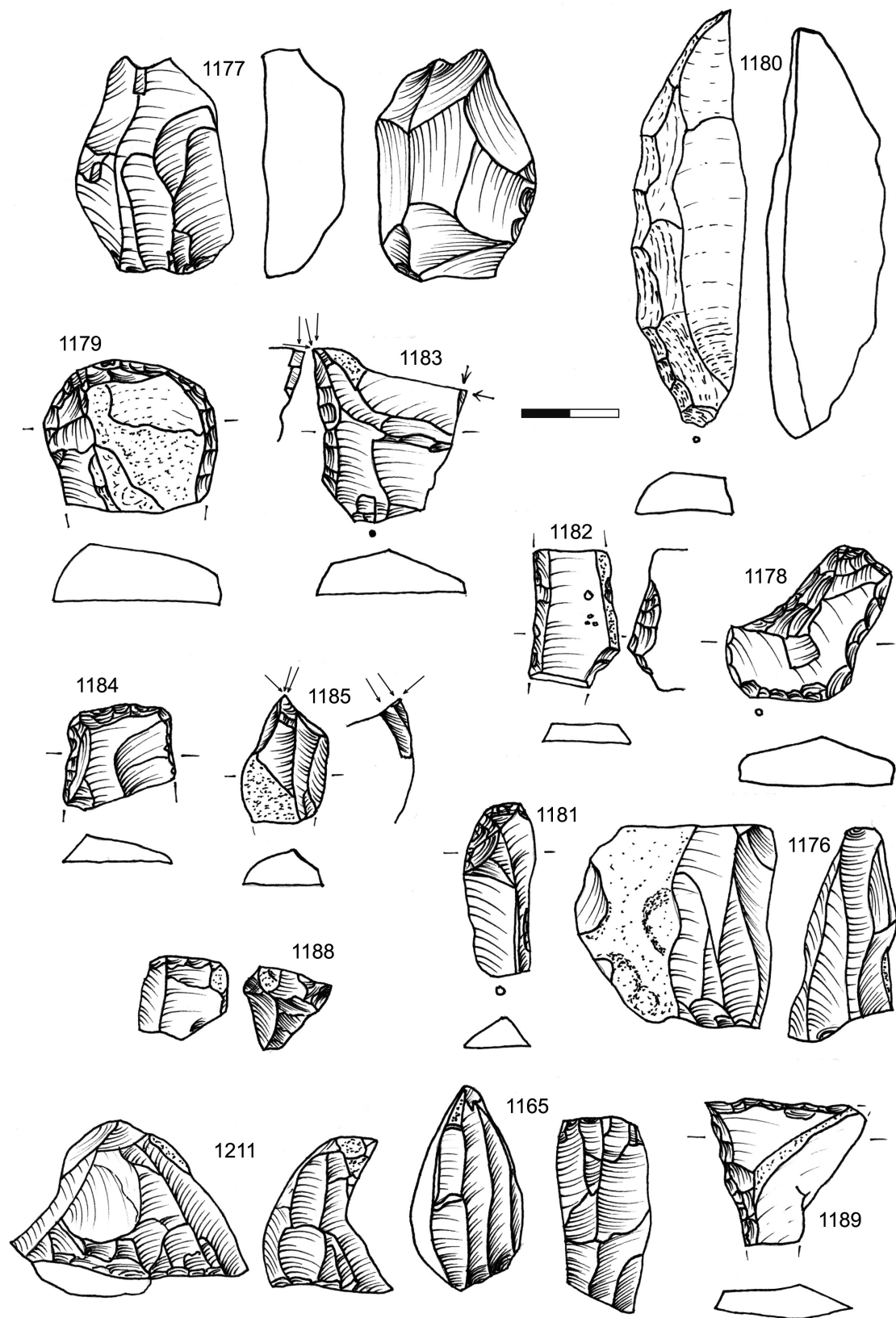


Fig. 1. Artefakts from Salaš I

Susanne C. Münzel, Sibylle Wolf, Marius Achtelek, Svenja Arlt, Julia Becher, Luca Brunke, Johanna Klett, Anne Kremmer, Josephine Krönke, Antje Langer, Ria Litzenberg, Anna-Katharina Loy, Anna-Franziska Mandt, Jacqueline Alice Mena, Ullrich Ochs, Annika Rebentisch, Benjamin Schürch, Noora Taipale, Hannes Wegeng, Hannes Wiedmann, Heike Würschel, Teresa Zahoransky, Max Zerrer & Petra Krönneck

Chaîne opératoire of Molly (1), an Indian elephant from the Wilhelma in Stuttgart – Bad Cannstatt. Results of a workshop in Blaubeuren on the processing of Proboscidian ribs as raw material for tools

Ribs of mammoth and mammoth-/rhino-sized mammals seem to be an important raw material for several kinds of tools during the Upper Palaeolithic, especially during the Gravettian. Most of the mammoth and mammoth-/rhino-sized ribs from the Gravettian layers in Geißenklösterle, Hohle Fels and Brillenhöhle (Ach Valley near Ulm, Baden-Württemberg, SW-Germany) show numerous anthropogenic traces, like cut marks, impacts and scraping marks. Furthermore a large number of ribs are apparently part of a *chaîne opératoire* that is not yet fully understood.

The carcass of an Indian elephant from the Wilhelma Zoo in Stuttgart-Bad Cannstatt, named Molly, gave us the unique chance to study the *chaîne opératoire* of Proboscidian ribs to manufacture blanks for tools, such as smoothers and points. During a workshop in the Urgeschichtliches Museum in Blaubeuren we tested the material properties of these ribs after 3 years of burial in the ditch of the castle Hohentübingen.

During the workshop we were able to compare the experimentally produced bone tools with the archaeological evidence. This experiment gave important insights into the *chaîne opératoire* of smoothers and bone points.

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Chaîne opératoire of Molly (2), an Indian elephant from the Wilhelma in Stuttgart – Bad Cannstatt. Results of a 2nd workshop in Blaubeuren on the processing of skins with Proboscidian rib smoothers

From Upper Palaeolithic context in the caves of Hohle Fels, Geißenklösterle and Brillenhöhle (Swabian Jura, SW-Germany) we know tools such as smoothers resp. burnishers made of ribs of mega faunal animals. These smoothers are made of split mammoth ribs and are highly polished and worn down. It is generally suggested that their shape and appearance is caused by working processes with leather and skin.

After reconstructing the *chaîne opératoire* of the smoothers made out of Proboscidian ribs during the 1st Molly workshop (see previous poster at the Hugo Obermaier meeting 2015), we tested these smoothers in cleaning and processing of skins in this 2nd Molly workshop.

One of the research questions was: are the flat and smooth shape and the shiny appearance of the burnishers part of the manufacturing of the tools or just the result of working with leather. That means, did cleaning of skins start with raw rib surfaces and during the working process they were gradually worn down and got the polished appearance or were the tools already prepared like this before the work got started. Furthermore we compared the efficiency of these bone smoothers with that of lithic scrapers.

In a 3rd workshop we plan to study the use wear on the experimentally used smoothers and the traces on Upper Palaeolithic tools in order to prove or discard our previous suggestions and to get knowledge of former handling and use of these tools.

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Štýřice III (Brno District) – A contribution towards understanding the Epigravettian Environment.

An overview of archaeological finds from Brno-Štýřice III open-air site was presented in HUGO 2013 (Nerudová – Neruda 2013). The rescue excavation finished in 2014, nevertheless, archaeological materials and environmental samples are gradually being evaluated to obtain proxy data for the reconstruction of both human behaviour on the site and natural condition in the region where the site is situated.

The site of Brno-Štýřice III (Koněvova, Vídeňská St) was investigated for the first time by K. Valoch in 1972 (Valoch 1975). The rescue excavations yielded a representative collection of chipped stone industry as well as the remains of animal bones and blobs of ochre. On the basis of a 14C date ($14,450 \pm 90$ BP) obtained later on (Valoch 1980, 1996; Verpoorte, 2004: 262) and the techno-typological analysis K. Valoch attributed the site to the Epigravettian.

The next large-scale rescue excavations were carried out in 2009 and 2011 - 2014. They revealed the extent of the settlement, a new site (in 2009 - Štýřice IIIa), and yielded large amounts of lithic and faunal remains (Nerudová 2015; Nerudová et al., 2012; Nerudová - Neruda 2014, 2015; Nerudová et al. in prep; Roblíčková et al. 2015). New radiocarbon data from mammoth remains and the lithic analysis confirmed the previous cultural classification (Valoch 1975; Nerudová 2015). Currently, the research is focused on gaining a more detailed understanding of the site. From the archaeological point of view it is necessary to recognise the function of identified accumulations of lithic artefacts and bones. Initial application of use-wear analysis to lithic artefacts (burins) has indicated interesting results. Due to the relatively broad spectrum of palaeobotanic (charcoals and pollens) and malacofauna samples the reconstruction of environmental conditions in the area surrounding the site has been possible (Nerudová et al. in prep).

Results of the palaeoecological analyses indicate the more or less treeless character of the surrounding landscape. Vegetation was mostly formed by a mixture of shrub tundra and grassy loess steppe vegetation. Open woodland with birch, willow and bird cherry occurred in relatively moist river valleys and the lower slopes of hills with more favourable microclimatic conditions.

In the surroundings of the studied site, the pollen analysis provided a reconstruction of parkland forest-steppe vegetation (with lack of temperate deciduous trees) typical for a cold and dry climate. Development of both dry and moist stands near the water course was recorded. Anthracological data are consistent with this evidence, reconstructing the presence of open woodland dominated by birch and willow in the nearby surroundings.

The malacological collection highlights the presence of cool temperate species (*Pupilla loessica*, *Vallonia excentrica* and *Helicopsis striata*).

The species spectrum of mammals found at the Brno-Štýřice III site suggests that the individuals were representatives of a community typical for the cool glacial period (e.g. mammoth, rhino, wolf, elk, reindeer, giant deer). The bones of woolly mammoth prevail at the site, and concurrently this is one of the few examples of recent evidence for this period in Central Europe (Markova et al., 2013; Nerudová – Neruda 2015; Roblíčková et al., 2015).

In the context of the Palaeolithic occupation of the site we have noted the presence of numerous fragments of heavily burned bones (mostly *Mammuthus primigenius*) that significantly prevail over the wood charcoals. During the excavations two large concentrations of burned bones (dark grey, grey or black colouration) and dark loess sediment were uncovered. They document a very intensive utilisation of animal bones used probably as a source of fuel (for this issue see Bosch et al., 2012). It indicates a specific adaptation to the environmental conditions, with limited fuel sources for the combustion of the wood (Roblíčková et al., 2015).

The lithic industry analysis as well as the radiocarbon dating evidence fit very well with the presented palaeoecological results and enable a wider spatio-temporal reconstruction. The site at Brno Štýřice III and its surrounding can be interpreted as the evidence of Late Upper Palaeolithic (Epigravettian) occupation of the micro-region near the Svratka River corridor that was used by hunter-gatherer societie(s) due to favourable micro-climatic conditions

during the terminal phase of the LGM or beginning of LGT. The archaeological investigation indicates that groups repeatedly, perhaps seasonally, used this strategic site on the lowest terrace in the meander of the river. We can observe similar behaviour in other sites of Moravia, e.g. Mohelno-Plevovce (Škrdla et al. in press).

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Grubgraben revisited – Preliminary results of recent excavations and typo-technological analyses of the lithic artefacts

Discovered in 1870, the site of Kammern-Grubgraben is said to be the first Paleolithic site found in Austria. It is thus not surprising that the site has a long history of research. Excavations took place in the 1920th (J. Bayer), between 1985 and 1990 (F. Brandtner, A. Montet-White), and in 1993/94 (F. Brandtner, B. Klima). In total, five archaeological horizons have been discerned, roughly falling in the time frame between 20,000 and 22,500 calBP. Grubgraben is thus not only one of the rare examples of an attested human occupation in Central Europe during the Last Glacial Maximum (LGM), but also the only site with such an important multilayered stratigraphy of this critical time period. Despite of its scientific importance, however, relatively little is known about the typological and technological characteristics of the stone artefacts from the different layers and assemblages. The only existing monograph (Montet-White 1990) provides a valuable reference, but appears to be neither complete nor exhaustive. As already pointed out by Brandtner (1996), the site has since been perceived and interpreted in different ways and there is little agreement on the place of Grubgraben in the cultural mosaic of the Central European LGM.

Over the last three years, a joint team of students and researchers from the Austrian Academy of Sciences, the University of Cologne and the University of Erlangen-Nürnberg therefore re-examined, sorted and catalogued the entire inventory, amounting in total to approximately 25,000 lithic artefacts, 280 kg of bone fragments and about 500 mollusk shells. Additionally, a small sample of lithic artefacts has been analyzed in more detail in order to better understand the assemblage's technological organization. The results show that the lithic technology is characterized by different chaînes opératoires used to retrieve flakes, blades and bladelets. Especially the systematic production of bladelets from the edges of flake and blade blanks seems to be very characteristic and reveals technological similarities with sites of the same period from Central as well as from Western Europe. Similarities with contemporaneous Western European sites are further supported by the present typological spectrum, comprising numerous endscrapers, burins, borers, but also "raclettes" and shouldered points. Since these preliminary results are promising, new samples have been selected for dating in order to strengthen the chronological framework. Moreover, renewed excavations conducted by the research group 'Quaternary Archaeology' of the OREA Institute for Oriental and European Archaeology of the Austrian Academy of Sciences are underway since 2015 in order to re-examine the site and verify previously gained results.

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Khotylevo I: a multilayer complex with the Late Middle Paleolithic industries

The paper deals with the first radiocarbon dated Late Middle Paleolithic (LMP) assemblages from the western part of the East European Plane. The sites in question are Khotylevo I and Betovo in the Bryansk region of Russia. Khotylevo I is situated some 10 km northwest of Bryansk on the right bank of the Desna River. The site was discovered and excavated by Fedor Zavernyaev from 1960 through 1964. Zavernyaev presented Khotylevo I as a single site with different complexes distinguished on the basis of typology and statistics (Zavernyaev, 1978). Until recently all the materials of Khotylevo I were thought to have been re-deposited. Our team resumed fieldwork at Khotylevo at 2010. Three new trenches have been excavated in different parts of the site. They seem to demonstrate very similar stratigraphies with a sequence of four MP cultural horizons. A series of AMS and conventional radiocarbon dates obtained on charcoal and humic samples from cultural horizons 1 and 2 of the main excavation area (Khotylevo I-6-2) confirms our previous conclusion (based mainly on palaeomagnetic, lithological and stratigraphic data) that the deposits enclosing the MP assemblages should be dated to the first half of OIS 3 (Ocherednoi *et al.* 2014). The industry of cultural horizon 1 associated with a buried soil deformed by slope and cryoturbation processes, includes rare bifacial tools and different types of unifacial pointes, side scrapers and a number of irregularly retouched pieces. The second cultural horizon comprises four sub-horizons associated with thin humus layers separated by sterile lenses of sand. While the assemblages of these sub-horizons (numbered as 2.1, 2.2, 2.3 and 2.4) are not rich in formal tools, some of them include hundreds of blank flakes, thinning flakes and chips. No absolute dates have yet been obtained from the lowermost cultural horizons (3 and 4) of Khotylevo I, and the question of their age remains open.

The newly obtained chronological evidence and archaeological materials from Khotylevo I and Betovo have a number of interesting implications for our understanding of the Middle/Upper Paleolithic interface in East Europe.

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Hannah Parow-Souchon

New indication for a formal blade industry in Eastern Africa – Neocreting blades at Mochena Borago rockshelter, Ethiopia

The technological analysis of non-Levallois blank production, especially the non-Levallois blade production, is a phenomenon in African MSA inventories worthy of closer investigation. With its early emergence in the Howiesons Poort industry of southern Africa, formal blade production seems to be a frequent part of the technological repertoire of MSA

groups. Especially the neocreasting technique, the distal retouch of a core to refine its lateral-distal curvature, and the resulting crested core-rejuvenation blades are a clear indicator of a distinctly non-Levallois reduction concept aimed at the use of volumetric cores for the production of blades.

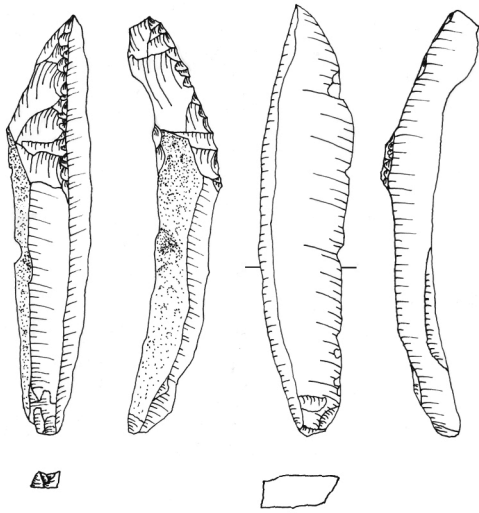


Fig. 1. Neocreasting blade from Mochena Borago.

Such products increase in formality and technical proficiency during the late MIS 3 occupation of Mochena Borago rockshelter, Ethiopia, where four different inventories from two stratigraphical units were studied. Especially the youngest inventory, already understood as displaying initial features of an intentional blade production, yields virtually perfect neocreasting blades. These maintenance products show a technological proficiency that is not as clearly reflected in the small exhausted blade cores or in the few remaining discarded blades. These findings raise the question about the stage of the blade production during the African late Pleistocene, its connection to the Levallois concept on the one hand and to the volumetric blade concept on the other.

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Hannah Parow-Souchon¹ & Martin Heinen²

Raw material economy and mobility at Wesseling

Well preserved late Palaeolithic sites are rare in the Rhineland due to low sedimentation rates and a strong modern overprint. One, by now well known, exception is the Federmesser site of Wesseling, south of Cologne. Apart from its exceptional preservation, it is mostly known for its art objects made out of brown coal and the pebble pavements, which, so far, remain singular in this timeframe. The location of the site, directly in between the occurrences of tertiary quartzite around the Neuwied Basin and the primary Meuse flints around Aachen, as well as in direct proximity to the Chalcedony sources of Bonn-Muffendorf, allows for an in-depth interpretation of mobility and raw material procurement strategies which have formed the recovered inventory.

Most importantly though, the proportionate distribution of the different raw material entities, collected from nearly all available sources of up to 60 km distance to the site, raises important questions. Even though a general orientation towards the tertiary quartzite sources in the South and the primary Meuse flints in the West is noticeable, a strong component of inferior quality Chalcedony from Bonn-Muffendorf was processed at the site. Additionally, strongly fluviially altered Meuse flint nodules, the even more strongly altered, so called “Meuse-eggs”, which were abraded and rounded on the tertiary sea shore, and

one single core of Nordic flint were collected and brought to the site. In total, flints from a catchment area of roughly 3400 km² were processed at Wesseling. An in depth analysis of this raw material procurement shall be given to thoroughly understand the Federmesser raw material economy and mobility as it is preserved at this site.

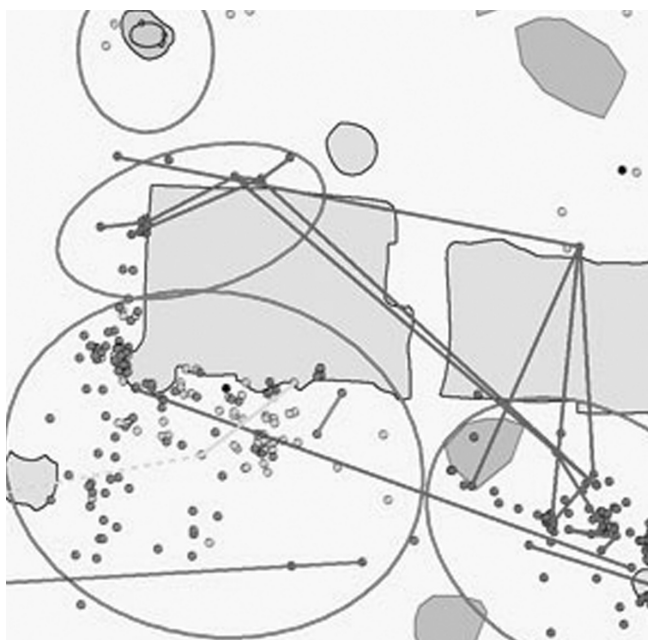


Fig. 1. Wesseling refits.

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Within sight - Divergences and convergences in the Middle Paleolithic of Northern Africa and Southern Iberia

In the frame of a research project “The Western Mediterranean - Bridge or Barrier?” of the CRC 806 “Our way to Europe” possible contact scenarios between Northern Africa and Europe in the Middle Paleolithic via the Strait of Gibraltar are investigated. A theoretical framework constitutes the base for assessing and detecting feasible population interactions. Both primary and secondary data are taken into account. Primary data are available from field work conducted in Morocco and Southern Spain. Excavations at different sites took place during the last years and provide environmental and archaeological data. Secondary data are compiled within a database concerning lithic assemblage variability, raw material catchment, faunal exploitation, and organic production. The poster gives an outline of the project, presents the theoretical model, and gives first insights into data analyses.

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Reconstructing territory and land use of Pyrenean middle Magdalenian foragers from Enlène (Ariège, France)

The middle Magdalenian in Southwestern Europe is characterised by a great cultural

homogeneity on one hand and strong local traditions on the other hand. Various studies of the material culture including mobile art objects support this view. Our presentation summarizes the results of the first complete study of all published mobile art objects from Enlène. A comparison to other middle Magdalenian sites gives evidence that Enlène was a centre of a local Pyrenean tradition. The distribution pattern of motifs and objects is analysed to understand the territory and contacts of the middle Magdalenian foragers from Enlène in detail. The results of the analysis of mobile art objects are discussed against the backdrop of raw material procurement and distribution of rock art.

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Short-term occupations at the lakeshore: a technological reassessment of Königsau open-air site

Reconstructing the technological organization of prehistoric hunters-gatherers is important to understand the subsistence and mobility strategies of archaic humans. Central Europe is an interesting area of research for the maintenance of similar technical behaviours during

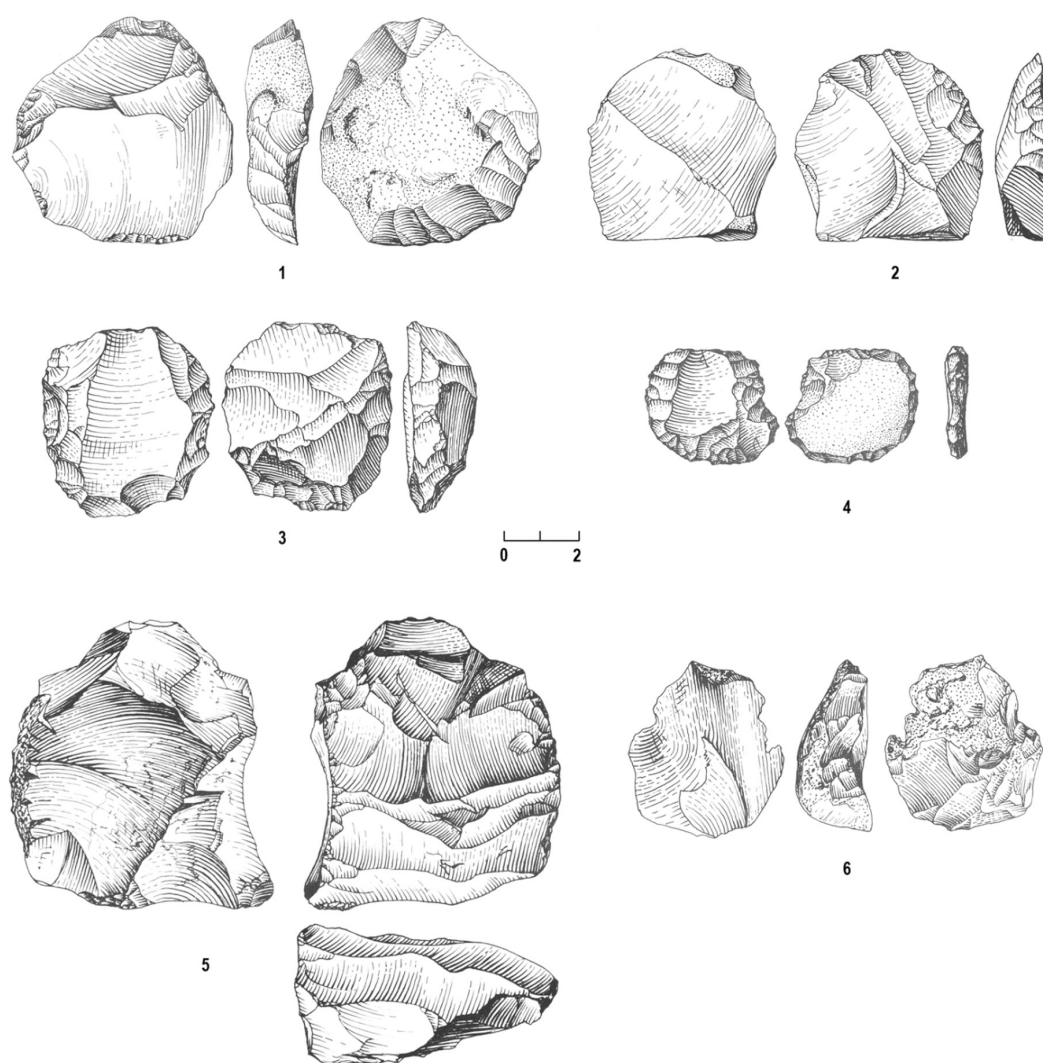


Fig. 1. Cores from Königsau open-air site: level A – 1) Levallois preferential, 2) Levallois recurrent unidirectional; level B – 3) and 4) Levallois preferential; level C – 5) orthogonal, 6) core-on-flake (modified from Mania and Topepfer, 1973)

the Middle Palaeolithic in spite of the frequent climatic fluctuations (Bosinski, 1967; Jöris, 2006; Ruebens, 2013). This paper aims to contribute with new data to the current debate, by exploring the lithic assemblages from levels A, B and C of Königsau (Aschersleben, Germany). The site was placed on the shore of the Aschersleben Lake, an ancient lake that was silted up in historic times, and was excavated by Prof. Mania between 1963 and 1964 (Mania and Toepfer, 1973). The archaeological records of Königsau is renowned for the succession of *Keilmesser* and Levallois-Mousterian industries and the discovery of two birch pitch (Koller et al., 2001; Mania and Toepfer, 1973). The results of the technological analysis indicate high fragmentations of the *chaînes opératoires* suggesting settlement patterns related with repeated short-term occupations. Despite the absence of bifacial production in level B, the use of core technologies in level A and B are very similar with the utilizations of Levallois and unhierarchical methods. In level C, the use of Levallois technology is attested by the presence of artefacts and by-products whereas discarded cores show a marked expediency. The study documents different patterns of artefacts transport offsite between level B and levels A-C proposing a difference in the type of mobility.

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News from Szeleta cave: a refined chronology of the Szeletian type site.

A new collagene treatment protocol developed at the University of Cologne ¹⁴C laboratory (CologneAMS) allowed for better dating precision of bone samples from the Szeleta Cave near Miskolc (Hungary). Szeleta cave is the eponymous site for the Szeletian cultural unit supposed to be connected with the latest occurrence of Neanderthals in Central Europe. The Szeletian industry comprises Middle and Upper paleolithic elements and characteristic “leafpoints” attested in three different occupation horizons at Szeleta cave. The new chronology of the Szeleta stratigraphy places the Szeletian along with the Chatelperronian in Southwestern France, also attributed to latest Neanderthals. Both phenomena appear to be of the same age as the early Aurignacian which is linked to early *Homo sapiens*.

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Seasonality scratched on teeth: A tool to estimate of the duration of mortality events in archaeological assemblages using extant ungulate tooth microwear

The study of mortality events of large game at prehistoric archaeological sites provides significant information for the understanding of ecological management in early phases of human evolution. Among other aspects, researchers usually focus on the approximate duration of these events and their seasonality. We propose to use tooth microwear patterns as a proxy for estimating the relative duration of these events. Tooth microwear, which analyses the microscopic features produced by food items on the surface of teeth, is known to reflect seasonal shifts in diets in ungulates.

We present a new tool to quantify such seasonality from tooth microwear patterns in a dataset of ten large samples of extant ungulates resulting from well-documented mass mortality events (winter mortality, population control, volcanic eruption...). The tool is based on the combination of two measures of variability of scratch density, namely standard deviation and coefficient of variation (Rivals et al. 2015). The integration of these two measurements of variability permits the classification of each case into one of the following three categories (Figure 1): (1) season-long or shorter time windows (region [A] in the figure), (2) longer than a season (region B), (3) separated events that occurred in different non-contiguous seasons (region C).

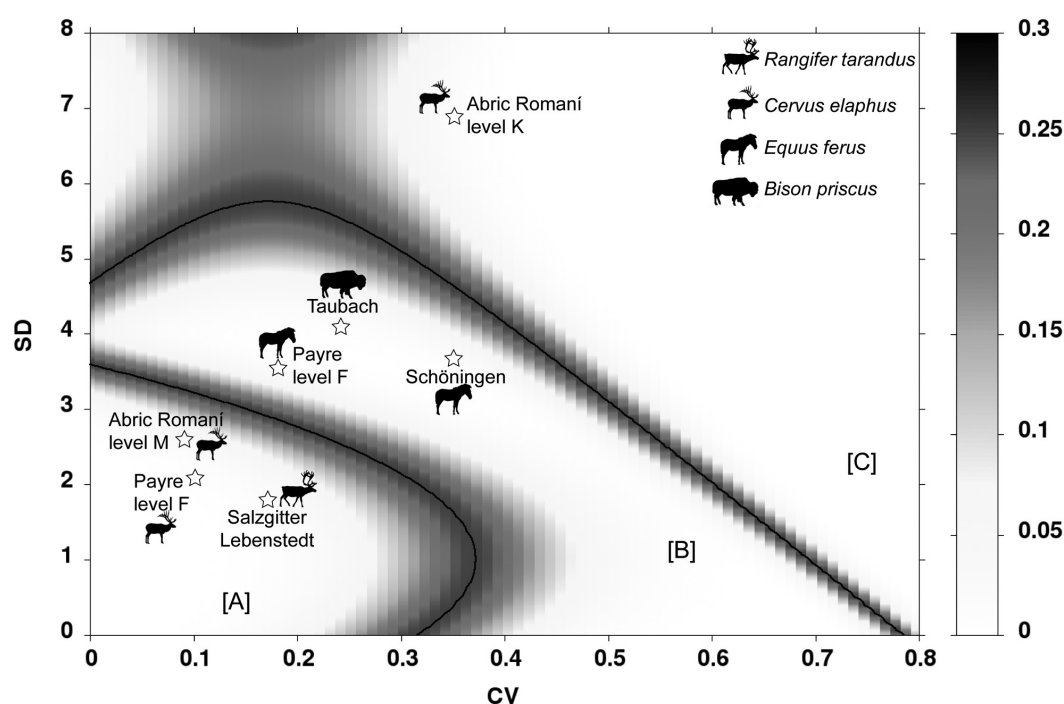


Fig. 1. Boundary lines with the error probability (heat map) based on SD and CV values of microwear data used for the classification of samples into short events (region A), long-continued events (region B), or two separated short events (region C). Archaeological samples from Abric Romaní level K and M (Spain); Payre level F (France); Salzgitter Lebenstedt (Germany); Taubach (Germany); Schöningen 13 II-4 (Germany).

The tool is tested on a selection of fossil samples from Palaeolithic localities in Western Europe which show a consistent classification in the three categories (Figure 1). Results show significant differences among localities, from short seasonal events as at Salzgitter to longer ones at Taubach or Schöningen. A comparison of the same species (red deer) from two levels of Abric Romaní indicate a short event for level M, and two separated short events for level K. At Payre in level F, two species were compared, the red deer indicate a shorter event than for the horse, suggesting different strategies for each species in the same level.

The tool proposed here opens new doors to investigate seasonal patterns of ungulate accumulations in archaeological sites using non-destructive sampling.

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Investigating Neanderthal social and economic dynamics during MIS 3: a new multidisciplinary high-resolution approach

Social dynamics in Palaeolithic have been usually understudied. Thanks to a new two years project we are trying to fill this gap analysing the organisation of technology and investigating the relation between intra-site technical single events, activity areas where these events were carried out, and social use of the housing space. High-resolution scale of analysis of archaeological record allows to identify the human accumulations in the site

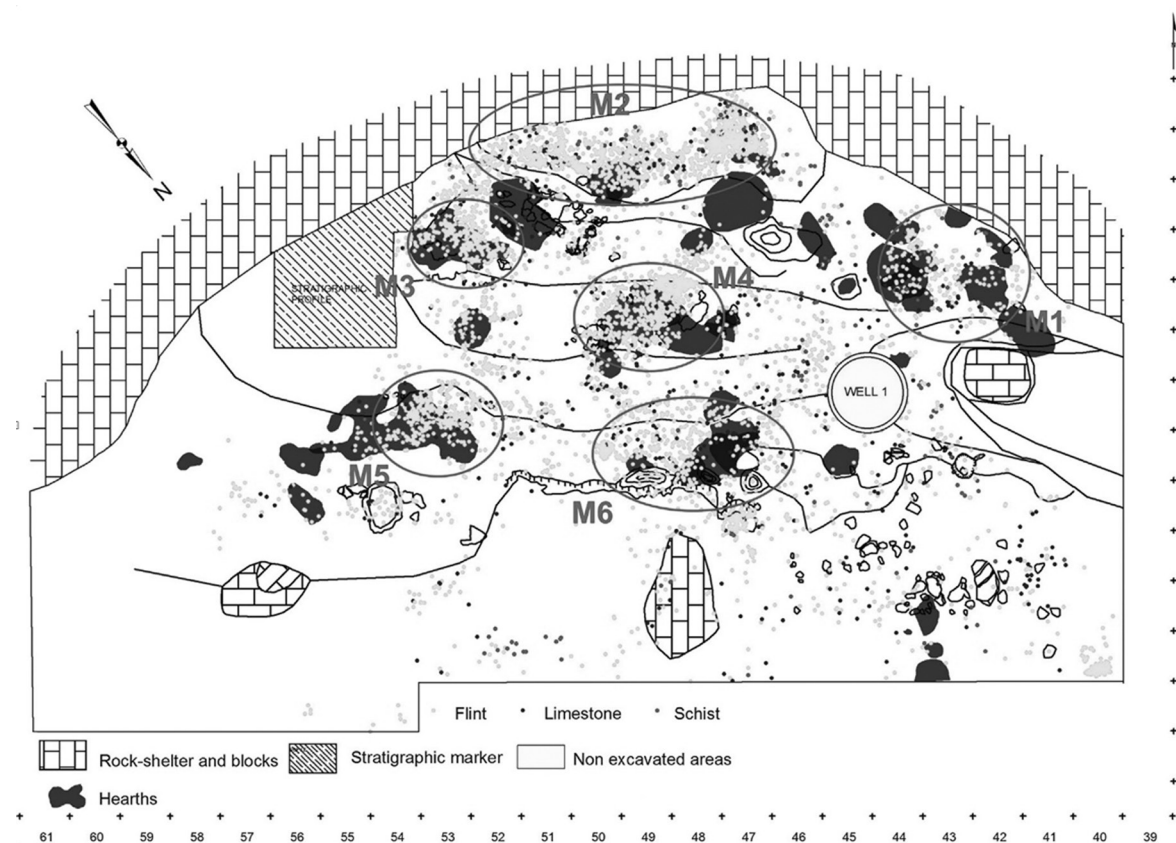


Fig. 1. Abric Romaní, layer M. Spatial distribution of hearths and lithic artefacts (from Vaquero et al., 2015 modified).

and to analyse separately the independent import, export, use, and discard events that are stored into each archaeological layer (Vaquero, 2011; Turq et al., 2013; Vaquero et al., 2015; Romagnoli, 2015). Diachronic analysis of lithic assemblages and of spatial correlation between synchronic technical events is the premise for generate and test hypotheses on long-term human behavioural processes.

The analysis is focused on Abric Romaní rock shelter, located in north-east of the Iberian peninsula in the town of Capellades, approximately 50 km west of Barcelona. The site is characterised by a high temporal resolution reflected on the palaeoenvironmental sequence and on archaeostratigraphy (Vaquero et al., 2013). The over 20 meters sequence attests to human frequentations between 40 kyr and 70 kyr BP. The site was probably occupied since at least 110 kyr (Sharp et al., 2016). Mostly of the layers have been extensively excavated on a surface over 200 m² recording the positioning of all the finds in a Cartesian coordinate system for the 3D space. According to the high number of hearths, to the clustered distribution of the finds close to hearths, and to the different use of the space within the site, it seems that Abric Romaní was essentially a Neanderthal residential camp (Fig. 1).

The first step of our 'in progress' research was the technological analysis of stone tool assemblages through diacritic schemes and morpho-technical attribute analysis, Raw Material Units analysis, and refits. Here we present the results of layer M. The high-resolution approach has allowed us to evaluate the flexibility of the "expedient" productive system, the economic costs and benefits of this production strategy, and to discuss this technology as an adaptive strategy focusing in particular on social vantages of this behaviour. Furthermore the identification of activity areas and the use of statistical tools in point pattern analysis allowed us to discuss variation in event intensity.

Our results have methodological implications for the study of Middle Palaeolithic assemblage variability: (i) showing the limit of behavioural and cognitive inferences made through a classical technological approach in lithic studies at least for expedient behaviour, (ii) reading the technological costs has proxy for social behaviour, (iii) producing a quantification of spatial distribution that allows for comparisons, and (iv) integrating the empirical method typical in archaeological approach based on material culture analysis with the theoretical method typical of quantitative analysis and modelling.

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Neanderthal occupational patterns in the North of the Iberian Peninsula:

A preliminary approach to Cueva Morín (Cantabria) and Cova de les Teixoneres (Barcelona)

The environmental conditions during the Upper Pleistocene in Europe is characterized by high climatic fluctuations. This is known to influence the behavioural and ecological patterns of faunal communities. Neanderthal behavioural patterns are influenced too by numerous factors, including the stability of the resources to which they have access. Therefore the habits of their prey mainly (ungulates) influence directly Neanderthals behavioural and occupational patterns. The reconstruction of prey's paleodiet is crucial to identify if the specific features of each area affected Neanderthal behaviour. Paleodiet of ungulates is reconstructed using tooth wear methods (nondestructive proxies). They are referring to two techniques that provide information about dietary traits in ungulates due to the fact they correspond to different temporal scales (Fortelius and Solounias, 2000, Solounias and Semprebon, 2002, Sánchez-Hernández, et al., in press). Microwear which is based in a short period of accumulative wear (hours/days), reflects the last feeding traits in the animal life. On the other hand mesowear that is based in a longer period (months), reflects the accumulative wear through the last seasons of the animal life. The combined use of these methods allows to observe the specific occupational patterns at each site (Rivals, et al., 2015).

The objectives are (1) to detect seasonal events of Neanderthals occupation at each site and (2) to estimate the duration of these occupations at two Middle Palaeolithic sites. We selected and compared two different areas in the Iberian Peninsula: Cueva Morín (Cantabrian area) and Cova de les Teixoneres (Mediterranean area) where tooth wear patterns allowed the identification of seasonal and long-term patterns.

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Florian Sauer

Northern Bavaria: A Transit zone. Mobility and Raw Material Procurement in Late Paleolithic Bavaria

The Late Paleolithic sites of Bavaria show an extensive mobility pattern, with frequent contacts to distant regions. This is represented by the use of exogenous lithic raw materials from end moraines of the Saalian glaciation in Thuringia, quartzites originating from northern Bohemia and plated Jurassic cherts from the Danube region. Datasets from 26 sites in and around the selected study area were analyzed regarding the assemblages' raw material composition and their distance to the potentially exploited outcrops and secondary deposits. By using a GIS-based cost distance calculation considering the topography as an inhibiting factor the frequency of the varying silexes can be related to the transportation time. Thus, the transportation, exploitation and disposal along the route can be examined more accurately.

The varying raw materials were treated very differently. While plated chert and especially other, local silexes were discarded rather close to their outcrops, the cretaceous flint shows a steady frequency within the assemblages, independent from the distance to the source region.

In many ways, the study area unfolds as a transit zone between various regions. Mobility corridors from north, east and south meet here, facilitating the movement during the annual cycle and account for the heterogeneous lithic assemblages.

This work is part of the PhD project *Late Paleolithic Land Use Patterns* in Bavaria at the Friedrich-Alexander-University Erlangen-Nuremberg.

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Florian Sauer

A 3D-Representation of a Newly-Discovered Shaft Smoother from the Federmesser-Site of Oberweiherhaus, Schwandorf District (Bavaria, Germany) in the Naab Valley.

In the course of the analysis of various Late Paleolithic assemblages from Northern Bavaria, a shaft smoother was discovered in the material of the site of Oberweiherhaus, Schwandorf district. Typologically, the entire assemblage can be assigned to the Federmesser-Groups, whose sites are present in great numbers throughout Northern Bavaria, especially in the Naab valley. Therefore unquestionably dating to the Federmesser-Groups, this tool is the earliest unambiguous example of a shaft smoother in Southern Germany. Given the generally poor documentation of the Late Paleolithic in Bavaria, this artefact shows the great potential of the numerous, hitherto unpublished assemblages known in the area. For the analysis, a high-resolution macroscopic SFM-model was created, to assess the dimensions of the entire artefact as well as those of the major groove on the object and to test the potential of GIS-based surface analysis.

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Protoaurignacian in broader context: a new techno-taphonomic assessment of 1900s Krems-Hundssteig lithic assemblage

The cultural changes of the time period that Neanderthals replaced by anatomically modern humans (roughly around 45000-35000 cal. BP) are the matter of ongoing debates in many geographical areas in Eurasia. The Protoaurignacian appears to be the first fully flagged widespread Upper Paleolithic culture of Europe. Its standardized bladelet lithic industry that can be found alongside a moderate presence of personal ornaments, is reported mainly from Mediterranean regions of Europe and usually linked eastward to Early Ahmarian culture of Levant as the probable origin of this industry. However the northern boundary of this culture in Europe is a matter of controversial discussions. While Swabian Jura with its strong manifestation of Early Aurignacian culture, as the dominant Early Upper Paleolithic culture of region, might overshadows the presence of Protoaurignacian in Central Europe. Currently, the site of Krems-Hundssteig in Lower Austria stands as the representative of Protoaurignacian in this region. However, the archaeological materials of this site found during loess quarrying of 1900s and consequently no reliable contextual information is available to stratigraphically define its cultural layers and their archaeological materials. Here, we present the result of a lithic techno-taphonomic study which attempted to separate the Protoaurignacian nature of the 1900s Krems-Hundssteig lithic assemblage from its Early Aurignacian and Gravettian components through a lithic refitting analysis following by a technological study. In addition, also to compare the technological results of this study with other similar industries found in the territory of the earliest Aurignacian technocomplex in Eurasia.

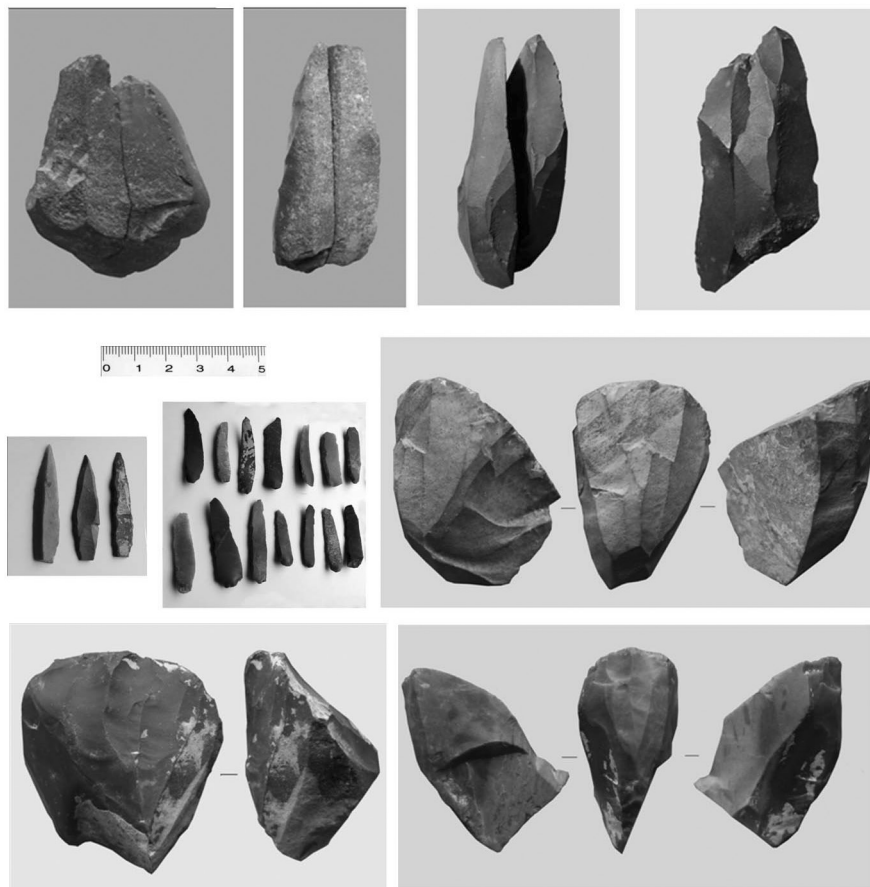


Fig. 1. Examples of the lithic refitting and bladelet productions characteristic pieces attributed to Protoaurignacian and Early Aurignacian from 1900s Krems-Hundssteig lithic assemblage.

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More painting from the Pavlovian of Krems-Wachtberg (Austria)

In April 2012 at the 54th Annual Meeting of the Hugo Obermaier Society in Toulouse we presented a painted ivory fragment from the Austrian site Krems-Wachtberg (Simon 2012). Together with an example from Předmostí in Moravia (Breuil 1924, 538-539), which has unfortunately vanished, this specimen represents rare evidence of painting in the Gravettian mobile art of Central Europe. In the meantime another painted artefact was discovered at Krems-Wachtberg (Excavations by the Austrian Academy of Sciences supported by the Austrian Science Fund and the State of Lower Austria.).

This second object from Krems-Wachtberg is a painted bone fragment. Several red coloured areas are located on the compacta surface. The analysis of the colour remains applying micro x-ray fluorescence spectroscopy confirmed that red ochre was the applied pigment (University of Vienna, Institute of Mineralogy and Crystallography.). For a better detection of the faint colour traces the artefact was examined using ultraviolet light (Natural History Museum Vienna, Department of Mineralogy and Petrography.). As an additional visualization method the program DStretch, a software for the digital enhancement of pictographs, was helpful (DStretch software written by Jon Harman.). It is possible to distinguish five colour areas. All of them are incomplete due to a fragmentation of the bone. Therefore the intended depiction is unknown.

Like the painted ivory fragment the painting discussed here derives from the main archaeological horizon (AH) 4 of Krems-Wachtberg, which is radiocarbon dated between 32.7-31.3 ka calBP (Simon et al. 2014, Table 1). Within the older Gravettian of Central Europe Krems-Wachtberg can be assigned to the regional group of the Pavlovian. This attribution is based on a number of analogies with contemporaneous sites like Dolní Věstonice, Pavlov and Předmostí. In this context the painted art objects from Krems-Wachtberg provide not only further information on the use of colour at the site (Neugebauer et al. 2013; Händel et al. 2015), but also enlarge the scarce record of painted mobile art in the Gravettian of Central Europe and add a new aspect to the characteristics of the Pavlovian.

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Everywhere in Europe the Early Upper Palaeolithic has a bimodal structure, one component of which is the Aurignacian of pan-European distribution, while the other is represented by a series of local “transitional” cultures (Chatelperronian, Uluzzian, Szeletian, Bohunician ..). For the Russian Plain this is the Streletskian, and separate assemblages with bifacial leaf points in the Volga basins.

The lower chronological limit of the Streletskian is distinguished by new dates of ~42.1-42.8 ka (cal: 44.6-47.9) for cultural layer V of Kostenki 1. The upper limit remains debatable, because “recent” cultural layers with Streletskian points at Kostenki are redeposited. Most probably it may be defined by dates of ~30.1 ka (cal: 34.0-34.6) for Sungir, and slightly younger dates for Garchi 1. The Streletskian has a very wide spatial distribution from the Middle Urals (Garchi 1) to the Pontic steppe (Biryichaia balka 2, Vys), without relations to any environmental conditions.

In contrast, the Aurignacian shows connection to latitudinal geographic zones: presently the Kostenki group of sites provides evidence both for the northeast and most ancient manifestation of the Aurignacian /~35.0 ka (cal: 39.3-40.9)/.

The problem of an Upper Palaeolithic more ancient than Aurignacian arose at Kostenki in the 1960s and 70s, due to the discovery of the assemblage from layer II of Kostenki 17. The assemblage is undoubtedly non-Aurignacian and non-Streletskian. Excavations of the last decade of the lowermost cultural layer (IVb) at Kostenki 14, under the CI tephra (~39.6 ka), also provided evidence for an assemblage without Aurignacian and Streletskian cultural affiliation.

Both were distinguished as a pre-Aurignacian Initial Upper Paleolithic (IUP) “stratum”, containing very variable cultural traditions or a number of cultural entities in the framework of 42-40 ka cal. Such a model based seemed useful for a large territory, owing to IUP strata at such sites as: Sokirnitsa in trans-Carpathians, Zaozerie 1 in Mid-Ural, Buran-Kaya 3-C in Crimea. The reason was the same: they were the earliest manifestation of Upper Palaeolithic in their areas, they cannot be identified as Aurignacian or “transitional” (although some Aurignacian elements were identified both in Spitsyanean and in IVb cultural layer of Kostenki 14).

The taxonomic status of the East European IUP-stratum appears to be comparable if not identical to the Proto-Aurignacian of the western Mediterranean, the Fumanian of North Italy, the North African Dabban, the Kara-Bom stratum of Altai and, with less degree of probability, the Middle East Ahmarian.

A new series of dates with modern pretreatment methods for the most ancient Streletskian assemblages of Kostenki show its basal chronological position for the Eastern European Upper Palaeolithic. Nevertheless the IUP-stratum appears to be a cross-continental and very variable sub-cultural entity, most probably existing during Greenland Stadials (GS) 10-11 - Greenland Interstadial (GI) 10.

Most probably it represents a “pioneering” pre-Aurignacian wave of Upper Palaeolithic distribution, realized both as migrations and/or as diffusion.

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Chronology of Middle to Upper Paleolithic transition period in Moravia

An intensive survey project realized by the Institute of Archeology in Moravia has resulted in the discovery of 11 new stratified sites over the last decade. Test pits and small-scale excavations conducted at these sites to date have yielded charcoal samples at seven of the sites. A series of new radiocarbon dates allowed us to precisely define the chronological position of two key Archaeological techno-complexes from the MP/UP transition period – Bohunician and Szeletian, as well as to confirm a relatively late appearance of Aurignacian in Moravia. Based on the radiocarbon results, both the Bohunician and the Szeletian appeared simultaneously during Greenland Interstadial 12 and disappeared before Heinrich Event 4. After HE4, only the Aurignacian techno-complex is documented across the whole territory of Moravia.

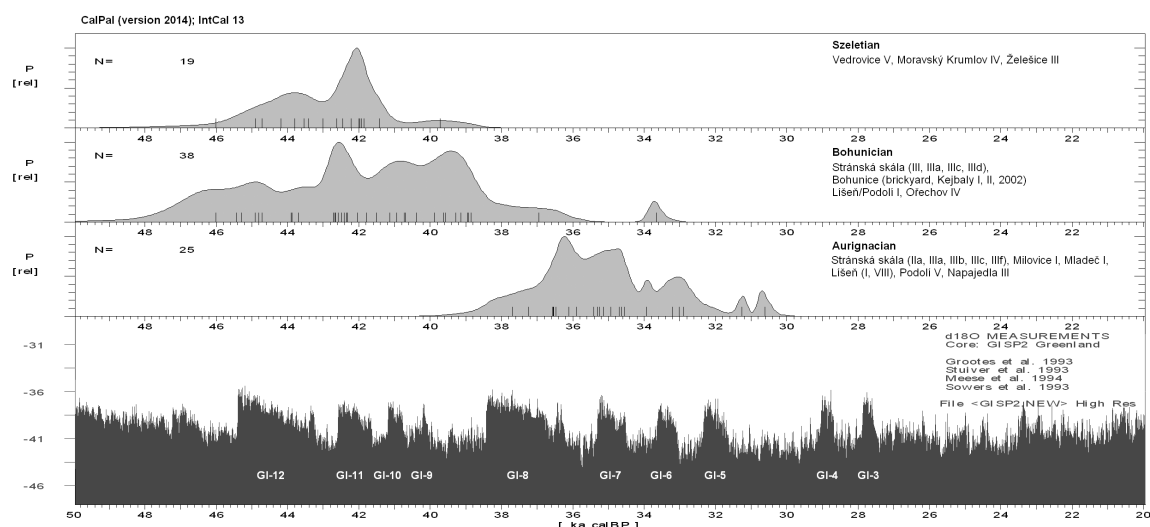


Fig. 1. Distribution of Moravian Bohunician, Szeletian and Aurignacian dates

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Taisiya Soldatova

The Upper Paleolithic bone industry from the Sungir site, Russia: a short review

The open-air Upper Paleolithic site Sungir is located on the central part of the Russian Plain in the basin of Klyazma river, 192 km east of Moscow, at the outskirts of the city of Vladimir (56°11' N, and 40°30' E) (Bader, 1978). It was found in 1956. For 24 field seasons (1957–2004) an expedition under the leadership of O. Bader, N. Bader and L.A. Mihailova revealed over 4000 square meter of the site area. The site became world famous after the discovery of the four burials, one skull, and two femur fragments with a very rich collection of accompanying inventory. Based on a series of ¹⁴C dates the site date to the period from around 29,000 to 26,000 uncalibrated radiocarbon years ago (*Homo sungirensis*... 2000).

Stone industry is characterized by an original stone assemblage with specific triangle points. Analogous industry is discovered at the sites of Kostenki-Streletskian culture at the Middle Dnieper. Also this industry has combined two techno-complex elements: Aurignacian and Szeletian (Bader, 1978; Gavrilov, 2004; Grigoriev, 1990; White, 1993).

The faunal record of the Sungir site contains many amount of reindeer, mammoth, horse and polar fox.

Literature devoted to Sungir is extensive (see, for example: Bader, 1978; Soldatova, 2014a;

White, 1993; Zhitenev, 2013). But up to nowadays not all the materials from this site were research and published completely.

As a part of this work a general analysis of bone findings (except objects from children's burials and personal ornaments) from Sungir was carried out, including technical and typological characteristics. Analysis was conducted of the 175 objects, of which 98 are bone objects, 28 – antler, 49 – ivory.

It must be noted that the relatively high percentage of objects made from antler (28 objects, or 16% of the total number of the finds from bone material except personal ornaments and art objects) distinguish Sungir from other chronologically close sites: Kostenki-Streletskian and Aurignacian archaeological sites of the Russian Plain, on which tooled antler was found either in minimum number (1-2 objects for the site) or didn't not occur at all (Bader, 1978; Soldatova, 2014b).

The artifacts can be categorized as follows: 1) cores – 2.5%; 2) preforme – 26% (shaft straighteners, points, personal ornaments – “beams” for separate preformes of beads, and ivory flakes), 4) by-products – 7%; 5) undefinable fragments and pieces – 36.5%; 6) various tools – 22% (hoes – 8 items, retouchers – 7 finds, awls – 6 items, baguettes – 5 items, shaft straighteners – 4 finds, points – 3 items, chisels – 2 objects and butt – 1 item); 7) others – 5% (pins and slotted discs) (Soldatova, 2014a).

The bone collection of the Sungir is quite monotonous and we can conclusion that the use of bone took place during the time of human habitation on the site. The material allows the reconstruction of particular technological chaînes opératoires for the production of various items, including ornaments (see, for example: Semenov, 1968; White, 1993).

Bone was worked mainly by longitudinal and transversal splitting, cutting, scraping, incision and sawing (?); antler – by chopping, fracture; ivory – by transversal fracture, longitudinal and transversal reduction, scraping, abrasion (?).

Typological and technological study has showed that there are some differences between bone- and antler-working and ivory industry: ivory tools and ornaments the better well-formed than bone and antler tools. Also there are practically no ivory tools used in household activity: just hunting weapons (points, spears and, probably, rod-shaped pieces), art objects and ornaments.

According some researchers in the Early Aurignacian bone material exploitation is characterized by functional divisions: bone used for domestic activities, antler utilized for hunting, ivory took for personal ornaments and art objects (see, for example: Liolios, 2006; Chiotti et al., 2003; etc). It is necessary for find an explanation of these differences to analyze the collections of other Early Upper Paleolithic sites of Europe (including the transitional industries). This comparison can help understand the reason for the differences of various methods of processing bone, antler and ivory, and in finding similarities – to identify the general nature of the bone industries of this period.

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Kseniya Stepanova

Upper Palaeolithic grinding stones from the East European Plain

The paper shows the diversity, main characteristics and spatial-chronological distribution of grinding stones from some of the Upper Paleolithic sites of the East European Plain (from the Prut–Dniestr region to the Lower Don basin) and suggests a variant of their hierarchical classification.

Grinding stones are considered as a single category of objects comprising two subcategories, associated with passive and active modes of action (principles formulated by S. de Beaune, 1989). The former subcategory includes lower grinding slabs (supports) only. They are well represented at all Upper Palaeolithic stages and in different territories (Kosoutsy 1; Doroshivtsy 3; Poushkari I; Chulatovo 2; Kostenki 4, upper layer; Borshevo 5, layer 1; Kamennaya Balka 2, upper and middle layer).

The subcategory of active tools consists of grinders (for backward and forward action, and for circular/chaotic actions), pestles-grinders and pestles. Grinders appear at the middle stage of UP (Radomyshl 1; Poushkari I). At the late stage of UP they may sometimes take the form of modified tools (Chulatovo 2; Suponevo, Divnogorie 1), resembling handstones of later periods. Pestles-grinders tend to occur at the sites of the East Gravettian circle in the central part of the East European plain (Kostenki 4, upper layer; Poushkari I; Klussy). Pestles as specialized tools are rarely found at the UP sites (Kostenki 11, Northernmost point and Mezhygirtsy 1).

Grinding stones are often used in palaeoeconomic reconstructions. Nowadays, the progress in palaeobotany makes it possible to obtain additional information on the character of worked substances. While the proposed classification doesn't take into account the character of worked materials, it is interesting to note that about a third of grinding stones bear traces of ocher.

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Regine E. Stolarczyk

Understanding Retouchers: Cognigrams a new way to analyse complexity, innovative capability and technological change

Before the early 1990s, the archaeological record documented the appearance of complex bone tools in Europe during the Upper Palaeolithic (i.e. after ca. 40,000 BP) and in Africa from the Later Stone Age on (i.e. after ca. 25,000 BP). As a consequence, such artefacts were often considered a proxy for behavioural complexity in the technological evolution of modern humans. More recently, archaeologists recovered artefacts made from bone from Eurasian Middle Palaeolithic and African Middle Stone Age (MSA) sites. Some organic tools, like retouchers, even appear as early as the Acheulean in Africa, Asia and Europe. This tool type is not only one of the earliest bone artefacts, but also the most common one in the Eurasian Middle Palaeolithic, where other organic implements are rare. Thus, retouchers are of particular interest for archaeologists. In contrast, just one retoucher has so far been published from the Middle Stone Age of southern Africa. It was found in the Still Bay layers of Blombos Cave on the South Coast of South Africa. However, other tool types made from bone are present at MSA sites and their number seems to increase. Various questions arise from the fact that retouchers are the first common bone tools in Eurasia: what does their appearance mean for the technological evolution of modern humans and other hominins? How complex and innovative is the production of retouchers? Are retouchers an expression of increasing complexity? It is possible to answer these questions and assess the specific impact of retouchers by coding their manufacture and their use in cognigrams as well as in effective chains and by comparing them with the behaviour associated with other tools. Interestingly, our analyses demonstrate that the manufacture and use of retouchers do not show a high degree of complexity. No special mental capabilities unknown in earlier time periods are required. They appear to be one expression of a gradually increasing variability in tool use and just one component of the growing modular capacity in the human lineage.

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Current research on the Gravettian assemblages of Hohle Fels Cave

Hohle Fels Cave in the Ach valley of the southwestern German Swabian Jura yielded rich assemblages for all phases of the Upper Palaeolithic present in the region: the Aurignacian, the Gravettian and the Magdalenian. This prominent cave with its large cavehall served as a base camp throughout the Upper Palaeolithic. During the Gravettian, three distinct archaeological horizons (AH) IIb, IIc and IIcf each contain extensive lithic and organic assemblages, as well as symbolic artefacts.

Each of the three Gravettian layers indicates comprehensive settlement activities. The lithic assemblages comprise between 3,000 and more than 5,500 artefacts >1cm, several hundred modified pieces, and several thousand pieces of small debris and chips. Diagnostic lithic tool types include many Gravette- and Microgravettepoints, *Fléchettes*, Font-Robert- points, burins on end retouch, as well as dihedral and other burins. The lithic technology shows a sophisticated system of blade and bladelet production aimed at creating long and straight laminar blanks.

AH IIcf is the most striking layer and can be considered a feature. It consists almost exclusively of burnt bone, with a thickness varying from three to ten centimetres, and is exceptionally find-rich. Although AHs IIb and IIc are considerably more voluminous than AH IIcf, almost half of all Gravettian artefacts were found in the latter horizon. Schiegl et al. (2003) view AH IIcf as a trash/dump zone.

Radiometric dates indicate a very early Gravettian, possibly as old as 34 ka calBP, with a youngest date of *ca.* 31 ka calBP (Conard & Moreau 2004; calibrated with www.calpal-online.de, after Weninger *et al.*). The Gravettian of the nearby site Geißenklösterle seems to be of similar or even greater age (Higham *et al.* 2012). Thus, in the Ach valley we have a fully developed Gravettian at a very early date, whereas in most parts of Europe the Aurignacian still predominates. Therefore, it seems possible that the Swabian Jura represents one of the original regions of the Gravettian.

Comparably old dates for Gravettian layers outside Swabia were previously found in some Moravian sites (e.g., Kozłowski 2015; Svoboda *et al.* 2015), as well as some Cantabrian sites (Bradt Möller *et al.* 2015). In Hohle Fels Cave there is no recognizable sterile horizon separating the Gravettian from the underlying Aurignacian; between the two cultural entities are two relatively find-poor layers (AHs IId and IIe) which have been designated as “transitional” horizons. However, it seems possible that these strata are in fact taphonomic accumulations of archaeological material rather than proper layers documenting settlement activities. At this point we can say that AH IId is more similar to the overlying Gravettian, whereas AH IIe contains a majority of Aurignacian artefacts; but a mixing between both techno-complexes in each layer is apparent to some degree. Therefore, the transition between the Aurignacian and Gravettian layers in Hohle Fels Cave remains somewhat unclear for now. Future research will show whether we have to anticipate a break or just a decline in settlement activity. In any case, we know there is no general hiatus in Swabia between the Aurignacian and Gravettian based on the continuous stratigraphy through both technocomplexes at nearby Geißenklösterle (Moreau 2009).

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The late Middle Palaeolithic occupation in the Ciemna Cave.

A new project in the Ciemna cave focuses on the main chamber of the cave system. In the last seasons it brought new valuable data on stratigraphy and chronology of the late Middle Palaeolithic industries, revealing several cultural levels. The lower part of the section is dated by geological method to between 7 to 5 OIS and indicates mousterian industries (level IX-VII) overlaid by Taubachian (level VI). The upper part of the section dated to 4 and 3 OIS shows three levels of Micoquian (III, IV, V) covered with scarce remains of another palaeolithic one (level II - possibly with traces of the leaf point industry). Within the trenched area, as yet, this level is weakly preserved. To obtain the absolute radiometric age, the upper part of the section was subjected to radiocarbon determinations. The dates obtained by different pre-treatment methods and from different materials are inconsistent. These results indicate the complex issue of C14 dating of industries in the first part of 3 OIS. Another aim of the project is to synchronize the new outcomes with the results of excavations which have been carried out there since the beginning of the XX century. Although there is no direct correlation between trenched areas, the published sections together with radar prospection of the main chamber allow for the hypothetical modelling process of site formation and its change during the late Pleistocene. These data could explain shifts of human interest in the particular parts of the cave system. The last years of the project have also brought new interesting findings, i. e. a bone tool or a bifacial knife manufacturing spot, both located in the youngest Micoquian level.

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Betovo: a palimpsest of epochs or an extremely long persistence of Middle Paleolithic traditions?

The paper presents and discusses the first radiocarbon dates from the Paleolithic site of Betovo on the upper Desna River, Bryansk oblast, Russia. The site was first excavated by L.M. Tarasov from 1972 through 1983. Tarasov described Betovo as a single-layer Middle Paleolithic site, but as the layer with archaeological materials was very thick (about 1 m), he subdivided it into four conventional [spit] horizons (Tarasov 1977). Originally, on the basis of stratigraphic and paleozoological evidence, they were believed to date from the early Valdai (=Wurm), but subsequently Tarasov came to the conclusion of the Middle Valdai age of Betovo (Tarasov 1989). This view was seemingly corroborated by the first data obtained by the Upper Desna Expedition from the Institute for the History of Material Culture of the Russian Academy of Sciences, which resumed fieldwork at Betovo in 2009. Proceeding from the stratigraphic, lithological and inconclusive paleomagnetic evidence, we dated the site to the first half of OIS 3 (Ocherednoi et al. 2014).

Two series of AMS ¹⁴C dates, obtained in 2014 and 2015 on bone samples from old and new excavations (9 and 4 dates, respectively), make the picture much more complicated. They place the assemblage within or very close to GS-5 (29–32.5 cal BP), which fully accords with the available paleozoological and palynological data, but is apparently too late for an industry of the Middle Paleolithic appearance. Three alternative explanations for the discrepancy are considered. The first one is that the industry was identified incorrectly and should rather be considered not Middle but Upper Paleolithic. The alternative is that the dates reflect a very long persistence of MP traditions and, arguably, Neanderthals, in the northeastern fringe of their European area. The third possible explanation rests on some new stratigraphic observations which seem to hint that we may have to deal here with a

two- or multilayered site spanning LMP and EUP periods. None of the three hypotheses can be eliminated at present. The explanation for the dates will depend on the results of future research.

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Transcribed music: playing techniques, cultural diversity and some sociocultural aspects of musical bow performances in southern Africa's rock art

Investigating prehistoric music is a difficult task in general because musical performances like singing, hand-clapping or dance do not require the use of instruments. Thus, past musical performances can be archaeologically completely invisible. Although finds of musical instruments exist, they are rare since only those made of imperishable material survive from past times. Additionally, musical instruments are not limited to particular shapes and can therefore be hard to recognize (Hickmann 2002). Finds of bone flutes, on the other hand, demonstrate uses of melodic instruments since the Upper Paleolithic (Conard & Malina 2008). Contrary to archaeological finds, depicted musical scenes do not only offer information about instrument organology and morphology, they may also indicate playing techniques and sociocultural contexts of the musical performances.

Rock art in southern Africa gives a record of the hunting bow, which besides hunting and fighting, has been used for musical purposes. Although depictions of musical bow playing are rare and scattered across southern Africa, these instances provide some insights into the diversity of music cultures in southern Africa's prehistory. However, for an integrated investigation of a prehistoric music culture these musical bow depictions are culturally too diverse. Such a task rather demands a culturally homogeneous and well-studied rock art data base. The collection from the Daureb (Brandberg) mountain in northern central Namibia comprises about 1045 known rock art sites of which 879 were documented by H. Pager. In the course of archaeological projects the Daureb rock art has been dated to ca. 2000 to 3500 years BP (Richter 1991).

A complete analysis of the Daureb rock art collection regarding the bow's uses indicate that "discrete bow positions" may be connected to different fields of application (e.g. hunting, defence, attacking, stalking, carrying, making music, etc.). These discrete bow positions allowed for a categorization of particular musical uses of the bow and guided new discoveries of musical bow depictions within the Daureb collection. In close connection with ethnographic studies, these musical scenes gain new insights into sociocultural aspects of the musical bow.



Fig. 1. Map of the Daureb rock art and sites with depicted musical bows. Black lines marking the watersheds. Rock art sites from the dark area have not been fully documented are not published. For the other part of the mountain documentation and publication of rock art sites is

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A Reinvestigation of the Ranisian Type Site

The cave site of Ranis-Ilsenhöhle, Saale-Orla Kreis, Thüringen (Hülle 1977), is an important data point for the Middle to Upper Paleolithic transition in central Germany and northern Europe. It was excavated between 1932 and 1938 by Werner M. Hülle (1977). The finds from Layer X (Ranis 2) were given the name Ranisian and form one part of the Lincombian-Ranisian-Jerzmanowician (LRJ) transition period complex of northern Europe (Flas 2006, 2011). Recent studies have shown that bifacial leaf points similar to those from Ranis (Uthmeier 2004) and, from a technological point of view, Jerzmanowice blade points can be assigned to the final Middle Paleolithic (Flas 2006, 2011). The stratigraphy of Ranis seems to reinforce the typo-technological arguments, as it is probably the only LRJ site in northern Europe where the final Middle Paleolithic is overlain by an Upper Paleolithic assemblage (Flas 2006).

However, Ranis, like many key transition period sites, was excavated early in the history of prehistory, and there are reasons to be cautious about interpreting the results. Carnivores, especially cave bear, are well represented in the faunal assemblages and hyenas modified bones are common (Hülle 1977). Radiocarbon dates obtained on bone for the supposed Upper Paleolithic (Layers VIII and VII or Ranis 3) and the Middle Paleolithic / LRJ of Layer X (Ranis 2) (Grünberg 2006; Higham et al. 2007) do not show a clear distinction in ages, have an unknown

association with the human occupation of the site, and may come from bones that moved vertically due to carnivore activity. The site was excavated with shovels, sediments were not screened and parts of the site were excavated in a tunnel underneath a huge block of limestone that fell from the cave roof. Furthermore, the finds were recorded only by square and their Z coordinates, despite some exceptions, have ranges of up to 50 cm (Hülle 1977). Plotting the coordinates of the finds presented in the publication (Hülle 1977) shows layers steeply sloping towards the original interior of the cave with no clear separation between archaeological units. A recent revision of the artifacts stored in the Landesmuseum für Vorgeschichte Halle(Saale) shows a typological mix of Middle and Upper Paleolithic artifacts in the Ranis 3 assemblage (Fig. 1).

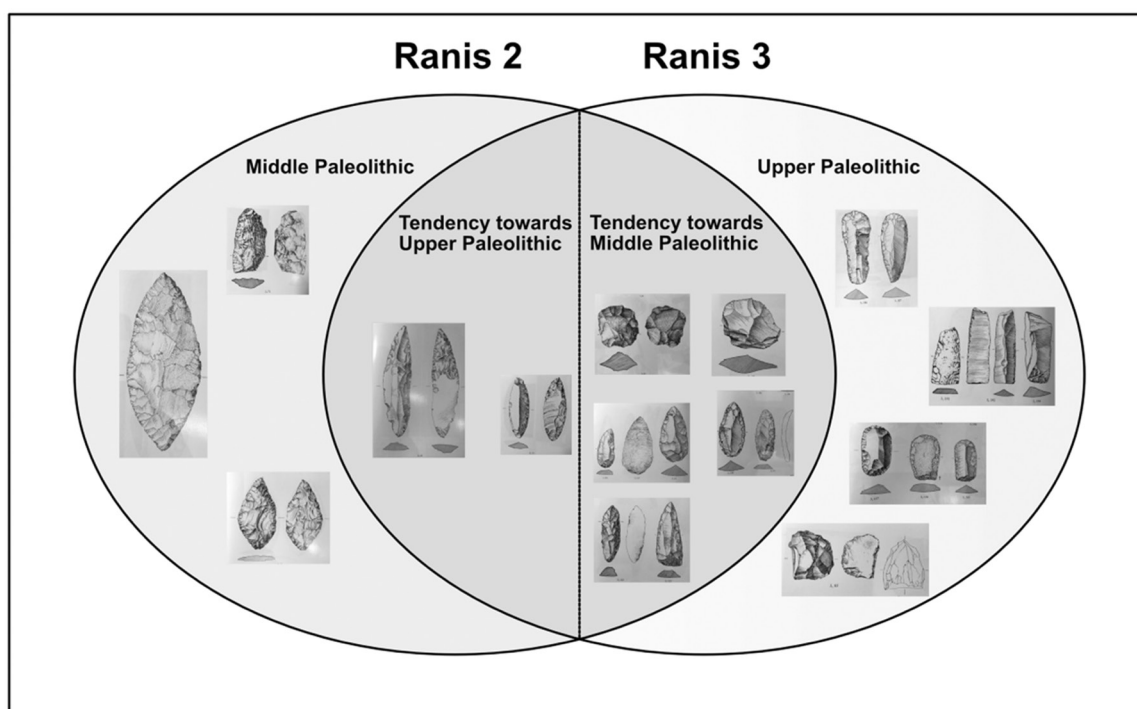


Fig. 1. Variation within the assemblages Ranis 2 and 3.

With these issues in mind and given the importance of the Ranis sequence for understanding the LRJ and the transition from the late Middle Paleolithic to the Upper Paleolithic in central Europe, we are reopening and excavating Ranis starting in the summer of 2016. In addition to obtaining new artifact and faunal assemblages from the sequence using modern excavation techniques, the excavations will emphasize site formation processes and will include dating attempts using ESR, OSL and AMS. In preparation, six resistivity profiles (in each case 48 electrodes with 0.5m distance) were measured to get a better idea of where the previous trenches were located, the presence of boulders, and the configuration of the bedrock. The calculated virtual plans and profiles from this data set provide some insights into the depth of the layers and potential starting points for new excavations. Based on this initial work, it seems that intact deposits close to the previously reported finds do exist. The work in 2016 is designed to verify this.

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Late Palaeolithic settlement in the western part of the Lublin Upland (eastern Poland) - research project.

The western part of the Lublin Upland consists of mesoregions characterized by varied landscape, soil substrata and river networks. Latitudinally, the area extends ca. 80 km in straight line, and longitudinally ca. 60 km (the distances measured between the farthestmost points).

The main objective of the project is the examination of the Palaeolithic settlement and the reconstruction of the environmental conditions in which it was developing following the Last Glacial Maximum in the western part of the Lublin Upland.

Within the confines of the western part of the Lublin Upland, 80 sites (settlement points) altogether have been inventoried, from which the finds determined as Late Palaeolithic have been acquired. The vast majority of these finds are materials acquired during surface surveys and the stray (accidental) finds with an approximate localization (Libera 1995; 1998). The chronology of the finds is only based on classification and typological comparative analysis. The materials from the neighbouring areas, which have been radiometrically dated and stratigraphically contextualized, serve as the analogies.

The key point of the research on Late Palaeolithic settlement in the western part of the Lublin Upland is the localized Turonian flints deposits area: Świeciechów type and Gościeradów type. It is located in the south-west part of the area. These raw materials were extensively utilized in Late Palaeolithic in the areas of the south-east Poland (Libera 1995).

The study will focus primarily on the acquiring the archaeological sources through excavations and taking samples for radiometric dating (TL, OSL, ¹⁴C) in order to establish absolute chronology of the discovered complexes.

Learning the hunting strategies of Late Palaeolithic communities of hunters and gatherers will be the basis for the analysis of the settlement processes at that time. The study will pay special attention to the role of the hydrographic network of that time. The literature on the topic offers numerous studies on the evolution of the Vistula valley in the late glacial (Starkel 2001). The project will attempt to indicate the most convenient places for crossing the Vistula river for the Late Palaeolithic communities. Also important will be the reconstruction of the routes and ways of distribution of chocolate flint and Świeciechów flint in the western part of the Lublin Upland.

The planned interdisciplinary research and the completion of particular tasks will help to achieve the main aim of the project, that is to reconstruct the specificity and the nature of the Late Palaeolithic settlement in the western part of the Lublin Upland and also the system of connection with other areas.

So far only one project in Klementowice has been implemented concerning the area in question and directly intended to obtain of the resources for the research on Palaeolithic settlement (Wiśniewski et al. 2012).

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Late Palaeolithic and Mesolithic settlement in the vicinity of the Ulów village in the Middle Roztocze (south-eastern Poland)

Ulów is a small village located in the Middle Roztocze region also called Tomaszów Roztocze (Lublin voivodeship). The highest elevation of the Middle Roztocze – Wapielnia (387 MASL) is located west of the village.

The complex of archaeological sites in the woods in the vicinity of Ulów was found by searchers with metal detectors who were looking for military items from the World War II. They have gathered a collection of a few hundred items that includes the artefacts dated back to the 5th century, or to the very beginning of the 6th century AD, and the period of the early Middle Ages. The area of the archaeological sites was established on the basis of the accounts of the collectors-discoverers and the prospecting conducted with their participation.

A three-day exploratory excavation works in Ulów were conducted in October 2001. Extensive archaeological studies started in April 2002. The interdisciplinary project called “Roztocze – the ancient *terra incognita*? (Settlement micro-region in the area of Ulów in Middle Roztocze in the prehistory and its background. Interdisciplinary studies)” has been carried out since 2014 and it has been financed by the National Science Centre in Poland on the basis of the decision DEC-2013/09/B/HS3/03352.

The main aim of the project is the reconstruction and the interpretation of prehistoric settlement processes in the vicinity of the Ulów village on the basis of the results of different studies: archaeological, anthropological, geomorphic, geological, geodesic, mineralogical-petrographic, botanical, and geophysical. The main focus of the project is the analysis of the materials gathered during excavations carried out in Ulów between the years 2001 and 2013. During these years, over the dozen archaeological sites were recognized and explored to various degrees. The material discovered there supports the existence of the settlement from the Late Palaeolithic Period to the Early Middle Ages. The traces of the 17th-century human settlements were discovered as well.

Traces of the Late Palaeolithic and Mesolithic settlement were discovered at the site 3. This is primarily series of flint artefacts (among others Masovian points, backed blade, burins, blades). The radiocarbon dates from charcoal confirm that dated settlements were also obtained. These are the first such dates from this part of the Lublin region.

The area of Roztocze, mainly its middle part, had bad luck when it comes to extensive archaeological research before excavation works were initiated in Ulów. Surface surveys conducted there as part of the National Archaeological Pictures of Poland Programme (AZP) revealed the existence of a small number of archaeological sites. However, the results

of the research can be regarded as unreliable mainly due to the fact that forest areas covering a significant part of this region were omitted or examined very tentatively.

Before the initiation of archaeological works in Ulów, it was generally assumed that the area of Roztocze was unfavourable for prehistoric settlement including the Late Palaeolithic and Mesolithic settlement. Excavation works that have been conducted for over ten years in Ulów allowed for debunking the aforementioned myth and proved that previous data resulted from the quality of research rather than facts. They were also based on observations of the contemporary natural environment and contemporary hydrographic condition in Roztocze.

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Krisztian Zandler

An open-air Szeletian site at Hont-Csitár (Nógrád county, Northern Hungary)

In 1969 the Gábori couple excavated a site with mixed Middle and Upper Palaeolithic tool types at Hont. Unfortunately the field documentation's whereabouts are unknown except 6 tables and 19 dia positives.

The new investigations in the Cserhát mountains necessitate the publication of these artefacts together with newly collected unstratified finds.

The site can be found on the right bank of the Csitár streamlet on the top of the Csitár (or Molnár hill) just front of the Neolithic Várhegy site. The hill itself is a natural continuation of the foothill slopes of the north-eastern Börzsöny at the left terrace of the river Ipoly.

In 2002 we successfully relocated the site. Between 2011-2015 more than 300 artefacts were collected from the surface.

The used raw materials are local quartzites came from the banks of the nearby rivers and streamlets. Nummulitic cherts located in the Ipoly valley and South Slovakia. Regional limnic quartzites and andezites came from the Cserhát mountains, radiolarites from the river valleys of the Carpathians, the Nagyoroszi formation (East Börzsöny area), and perhaps from the Transdanubia. The primary sources of extralocal raw materials like felsitic porphyry, jasper, lidite and hornstone lying in the territory of Mátra and Bükk mountains. Obsidians came from the environment of Tokaj and Eastern Slovakia. Northern flints from extremely long distance are also represented but in very small quantity.

The most important characteristics of this collection are the presence of the middle and upper palaeolithic tool types. The Levallois-technique isn't illustrative, the laminarity is very low. Micoquian characteristics are represented in the collection. The tools made on blades and the unretouched blades are only 10 % of the whole collection. The cores are simple and less prepared. The most dominant tool types are the different side-scrapers and the bifacially worked leaf shape implements. Most of the Middle Palaeolithic tool types like scrapers, leaf shape points made on local limnic quartzites and extralocal felsitic porphyry. Other local raw materials used in small quantity. The bifacially worked tools are asymmetrical to the axis. The end-scrapers and retouched blades contain few Aurignacian types. The Upper Palaeolithic tool types made on local limnic quartzites and radiolarites.

The technology, tool types and raw material procurement show similarity with the Bábonyian and Szeletian sites of the Bükk and Cserhát mountains as well as the Moravian Szeletian sites.

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V.S. Zhitenev

Fossil shell personal ornaments from the Kapova cave (the Southern Urals, Russia): Upper Paleolithic mobility and migration in the Volga-Ural region

The Kapova cave is situated in the Southern Urals (Russia). In 1959, A.V. Ryumin discovered in the Kapova cave the Upper Paleolithic wall paintings. The archaeological research in the cave was conducted by O.N. Bader (1960-1981) and V.E. Shchelinsky (1982-1991). One of the major results achieved by V.E. Shchelinsky was the discovery of the Upper Paleolithic cultural layer in the Chamber of Signs. The charcoal from the cultural layer dates back to the period from 13930 ± 300 BP (GIN-4853) to 16010 ± 100 BP (KN-5023) (Zhitenev et al., 2015). In 2008 the Southern Urals archaeological expedition of the Lomonosov Moscow State University started to work at the Kapova cave. In the Cupol Chamber several distribution points of cultural layers of the Late Pleistocene and Holocene were discovered. As of today, in the bench of Late Pleistocene deposits eight cultural layers are recorded, containing the Upper Paleolithic remains.

The expedition under the supervision of V.E. Shchelinsky made an important discovery in the Upper Paleolithic cultural layer in the Chamber of Signs - a collection of personal ornaments made of fossil shells. There were intact objects, as well as fragments and rustic shells. As Y.I. Skorobogatov defined, the collection is made of fossil shells *Theodoxus cf. astrachanicus* Stew., *Bithynia curta*, *Bithynia cf. troscheli* (Paasch), *Dreissena* (*Pontodreissena*) sp. (Shchelinsky, Shirokov, 1999). In total, 65 intact perforated objects, 150 non-perforated objects and 199 fragments were discovered in the cultural layer of the Chamber of Signs.

According to Y.I. Skorobogatov the shells belong to "very ancient freshwater mollusks that lived in the Pliocene or even earlier. They were not found in the Urals, but they are well known from the sediments along the Volga and the shores of the Caspian Sea" (ibid.). Consequently, the shells or the shell personal ornaments (with signs of prolonged wearing) were brought and/or obtained by the group that used the Kapova cave, from a location at ≈ 480 kilometers distance.



Fig. 1. Kapova Cave. 1,1: Intact shell from the fifth cultural layer; 1,2: Perforated shell from the second cultural layer; 1,3: Fragment of a perforation from the fifth cultural layer.

A similar confirmation of the likeness of directions of the bonds, but to the east (≈ 110 km), is also the raw material for the large part of stone industry - the Transurals jasper.

While working at the adjacent Cupol Chamber, the MSU expedition had discovered new personal ornaments made of fossil shells *Theodoxus* cf. *astrachanicus* Stew.(?). During the study of the second cultural layer with stoned floors an intact perforated fossil shell was found (fig.1,2). The method used for perforating was similar to that from the Chamber of Signs.

Two shells were found in the fifth cultural layer: a shell chip with a fragment of perforation (fig. 1,3); an intact shell without any signs of perforation (fig. 1,1).

It is very significant that the shells are represented among others by the rustic items, which possibly allows raising questions about the nature and the specific historical mechanisms and features of exchange or acquisition/procurement, transportation of this kind of raw materials.

These shells are of particular importance as they show that the cave was used by the representatives (probably, generations) of one group for quite a long time, since it is hardly possible that unrelated groups of people used the same exotic materials, delivered from a distance of at least 480 kilometers.

The Upper Paleolithic shell personal ornaments of the Kapova cave is one of the major categories of objects, showing at least the Volga direction of relations of the group of people that used the cave.

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Bericht zur 57. Tagung der Gesellschaft in Heidenheim vom 07.-11. April 2015

von

Thorsten Uthmeier und Andreas Maier

2015 hatte die Stadt Heidenheim auf Initiative des Instituts für Ur- und Frühgeschichte und Archäologie des Mittelalters der Universität Tübingen, das maßgeblich an der Austragung beteiligt war, und gemeinsam mit dem Förderverein Eiszeitkunst im Lonetal e.V. zur 57. Jahrestagung der Gesellschaft nach Heidenheim eingeladen. Angesichts der Bedeutung der Fundstellen der Schwäbischen Alb lag es nahe, im Rahmen des diesjährigen Schwerpunktthemas auf „Symbolic communication and modern culture“ einzugehen. Hierzu wurden international herausragende Vortragende aus Europa, Asien, Afrika und Amerika mit Hilfe von Sponsorengeldern und der Unterstützung der Stadt Heidenheim eingeladen. Ergänzt wurden die Vorträge durch Exkursionen zu den Höhlenfundplätzen des Ach- und Lonetals sowie den entsprechenden Museen. Aufgrund der zahlreichen Höhepunkte, des hohen Engagements aller Beteiligten vor Ort und der Herzlichkeit, mit der die Gesellschaft in Heidenheim aufgenommen wurde, wird die Jahrestagung 2015 sicher allen Teilnehmern und Teilnehmerinnen noch lange äußerst positiv im Gedächtnis bleiben. Neben der Stadt Heidenheim und dem Tübinger Institut gilt ein besonderer Dank der Gesellschaft Prof. Nicholas J. Conard PhD und Ewa Dutkiewicz M.A., die beide gemeinsam die Hauptlast vor Ort getragen haben. Besonderer Dank gebührt auch Oberbürgermeister Bernhard Ilg, dem Vorsitzenden des Fördervereins Eiszeitkunst im Lonetal e.V., Hermann Marder, sowie der Hermann Voith Stiftung und der Stadtparkasse Heidenheim für ihre tatkräftige und nicht zuletzt auch finanzielle Unterstützung.

Der Tagungsverlauf

Ort der Vorträge war das Kongresszentrum Heidenheim, wo am frühen Nachmittag des 7. Aprils 2015 zunächst der Oberbürgermeister der Stadt Heidenheim, Bernhard Ilg, und der Vorsitzende des Fördervereins Eiszeitkunst im Lonetal e.V., Hermann Marder, als Einladende die Tagungsteilnehmerinnen und Teilnehmer begrüßten. Danach richtete Thorsten Uthmeier, der Präsident der Gesellschaft, Grußworte an alle Anwesenden, dankte im Namen der Gesellschaft den einladenden Institutionen, Organisatoren sowie Geldgebern und eröffnete die Tagung.

Das Vortragsprogramm begann mit Beiträgen zum Altpaläolithikum. Liane Giemisch stellte mit „Makuyuni: Acheulean sites from the Lake Manyara, Northern Tanzania“ eine Fundregion mit zahlreichen vielversprechenden Fundstellen in einem der Kerngebiete der Menschwerdung vor, in der die Chance besteht, die Plätze auch stratigraphisch und damit altersmäßig näher einzugrenzen. Danach berichtete Jordi Serangeli über „Lithic technology and landuse during the Middle Pleistocene in Schöningen“ und stellte dabei wichtige Merkmale der Steingeräteinventare - wie etwa das Fehlen von Hinweisen auf das Vorliegen des Levalloiskonzeptes - heraus. Bereits in das Mittelpaläolithikum gehörte die „Grotte de la Verpillière II, a Late Middle Paleolithic reference site in southern Burgundy“, deren Stratigraphie und mittelpaläolithische Befunde von Jens Axel Frick und Harald Floss geschildert wurden. Aus Tarragona angereist war María Gema Chacón, die sich stellvertretend für ihr Team mit „Dissecting palimpsests and events of activity through lithic and faunal refits in karst systems during the Middle Paleolithic: the layer 4 of the Maras rockshelter (Ardèche, France)“ auseinandersetze und damit ein Kernproblem selbst gut erhaltener Fundstellen – der Akkumulation von Fundniederschlägen verschiedener Begehungen – ansprach. Mit Camille Jéquier sprach danach die Trägerin des Hugo Obermaier-Förderpreis 2014 in ihrem „First report from the excavations at the De Nadale Cave, a single layered Mousterian site in the North of Italy“ über Ergebnisse von Grabungen, die sie von dem Preisgeld bestritten hat. Einen ersten Vorgeschmack auf die kommende Tagung in Budapest bot Zsolt Mester mit seinem stimulierenden Vortrag zu „Leaf-shaped tools of the Middle and Upper Palaeolithic in Hungary: a technological approach“, in dem er u.a. auf die große zeitliche Tiefe der Blattspitzen hinwies.

Nach Beendigung des ersten Vortragsblocks wurde das Programm nicht nur durch die auch in den folgenden Tagen vorbildlich organisierte Kaffeepause aufgelockert, sondern zusätzlich durch die offizielle Präsentation von Mammutplastiken, die aus Anlass der Tagung an zeitgenössische Künstlerinnen und Künstler vergeben und nach ihrer farblichen Ausgestaltung im Stadtgebiet von Heidenheim verteilt wurden. Im Anschluss wurde der offizielle Teil der Posterpräsentation durch den Präsidenten der Gesellschaft eröffnet, in dessen Verlauf die Autorinnen und Autoren Gelegenheit hatten, ihre Poster kurz vorzustellen und zu kommentieren. Dank ihrer besonders großzügigen Hängung in einem großen und ruhigen Raum unmittelbar neben dem Ausschank der Pausengetränke stießen die Poster auch nach der ersten Vorstellungsrunde auf reges Interesse und wurden auch an den folgenden Tagen intensiv begutachtet und diskutiert. Der Abend klang mit einem Stehempfang mit Livemusik der Gruppe Six-Pack aus. Interessierte konnten parallel dazu an einer Führung durch das benachbarte Schloss Hellenstein teilnehmen, wo Prof. N. J. Conard, Dr. S. Münzel und Dr. B. Chep die Funde aus der Heidenschmiede erläuterten.

Während sich die ersten beiden Vorträge des darauffolgenden Vormittags von Davide Delpiano zu „Reconstructing skill and operational sequences from flake refittings. A view on Discoid technology“ und von Patrick Schmidt über „How can lithic heat treatment in the South African MSA be an indicator of modernity?“ mit speziellen Aspekten der Operationskette zur mittelpaläolithischen Steinartefaktherstellung beschäftigten, erörterte Daniel Richter „New ages for the human remains from Wannen. A ‘classical’ Neanderthal and human remains as symbol?“, wobei er auf ein – für klassische Neandertaler frühes – Alter vor dem letzten Interglazial schloss. Damit war eine thematische Brücke zu den folgenden paläoanthropologischen Vorträgen geschlagen, in denen Christoph Wißing zu „Insight from stable isotopes into the ecology of late Neandertals and early anatomically modern humans (AMH) in North-West Europe“ und C. Posth zu „Biomolecular investigation of Paleolithic and Mesolithic human remains from the Swabian Jura (South-West Germany)“ sprachen. Nach der Kaffeepause setzte Hannah Parow-Souchon das Vortragsprogramm, das sich nun der Einbettung von Fundstellen in die jeweilige Paläolandschaft zuwandte, mit einem Bericht über ihre laufende Promotionsarbeit zu „The Wadi Sabra – a contextual approach to the Palaeolithic landscape“ fort. Ebenfalls aus der Graduiertenschule des SFB 806 in Köln kam Ine Leonard nach Heidenheim, um erste Eindrücke aus ihrer Arbeit mit dem Titel „Reading the Stones. Modelling the Early Aurignacian Archaeological Landscape of the Banat (SW-Romania)“ vorzustellen. Auch die folgenden beiden Beiträge von Luc Moreau über „Stratzing-Galgenberg in its lithic landscape: Difficulty of terrain as a relevant proxy for objectifying mobility patterns and economic behaviour in the Aurignacian of the Middle Danube region“ und María de Andrés-Herrero über „Upper Palaeolithic mobility patterns and territoriality in Western Cantabria using Least Cost Path Analysis“ waren der Rekonstruktion von Landnutzungsmustern gewidmet. Der methodisch gehaltene Vortrag von Andrei Sinitsyn über „Aesthetic subsystems in the context of Upper Paleolithic cultural unities: East European perspectives“, in dem er auf bemerkenswerte chronologische „Durchläufer“ unter den Elfenbeinanhängern des osteuropäischen Jungpaläolithikums aufmerksam gemacht hat, leitete zu den Beiträgen zum Schwerpunktthema „Symbolic communication and modern culture“ über. Ebenfalls diesem Thema gewidmet waren die Ausführungen von Julia Blumenröther zu „The Mäanderhöhle – Analyses of palaeolithic cave art in Bavaria“, die Stellung zur Frage eiszeitlicher Felsbildkunst in Deutschland bezogen, und Andreas Pastoors, der mit „Tracking in Caves“ ein Projekt vorstellte, bei dem erstmals informierte traditionelle Fährtenleser aus Südafrika Fußspuren des Menschen in paläolithischen Bilderhöhlen in Frankreich begutachtet haben.

Nach der Mittagspause begannen die eingeladenen Vorträge zum Schwerpunktthema mit dem einleitenden Beitrag „The earliest instances of symbolic material culture“ von Francesco d’Errico, im dem ebenso wie in den folgenden Vorträgen von Lyn Wadley über „Early Symbolic Communication in the Middle Stone Age of South Africa“, Akira Ono zu „Northeast Asian record of early symbolic behavior“ und Marco Peresani über „What the Southern European record tells us about the evolution of symbolic culture“ neben Fallbeispielen auch theoretische Grundlegungen diskutiert wurden. In einem zweiten Vortragsbündel, der aus Beiträgen von Sandrine Costamagno über „Beyond food : The animal exploitation in the Early Upper Paleolithic“, Britt M. Starkovich zu „Environment

and subsistence during the Swabian Aurignacian“, Michael Bolus zu “Lithic and organic technology during the Swabian Aurignacian and their implications for testing models of cultural innovation during the early Upper Paleolithic“ und Guido Bataille über “Mechanisms of the Early Upper Paleolithic occurrence and consolidation in Eastern Europe. The Crimean and Kostenki example“ bestand, wurde der technologische und ökologische Kontext früher Kunstäußerungen beleuchtet. Einen viel beachteten methodenkritischen Beitrag lieferte Yvonne Tafelmaier, die in ““Trapped in terms“ - the Proto-Aurignacian and early Aurignacian of Northern Spain“ die Schwierigkeiten einer eindeutigen Trennung dieser beiden Fazies deutlich herausarbeitete. Den Abschluss dieses instruktiven zweiten Tags der Jahrestagung bildete eine 20-minütige Abschlussdiskussion. Um 19.00 hielt dann Prof. N. J. Conard nach einem Ortswechsel in die Stadthalle von Heidenheim den öffentlichen Abendvortrag. Aufgrund des großen Interesses hat er in dankenswerter Weise seinen Vortrag „The Swabian Aurignacian and its implications for population dynamics and cultural evolution“ am darauffolgenden Donnerstag noch einmal in deutscher Sprache gehalten. Ein Höhepunkt des Begleitprogramms war sicherlich das anschließende Gala-Abendessen im Konzerthaus Heidenheim, zu dessen Gelingen die Stadt Heidenheim maßgeblich beigetragen hat. Musikalisch wurde das Abendessen durch den Pianisten Christian Vaida begleitet, danach spielten „Quasi Musici“ Tanzmusik.

Am 9. April, dem letzten Tag des Vortragsprogramms, wurde das Schwerpunktthema mit allgemeinen Beiträgen zu Verwendung von Farbe und Körperschmuck fortgesetzt. Nach den Beiträgen von Laure Dayet zu „Early production and use of pigments: theory versus facts“ und Marian Vanhaeren über „Personal ornaments and group identity during the Early Upper Palaeolithic“ folgte dann mit Betrachtungen von Sibylle Wolf zu “Early Aurignacian Personal ornaments of southwestern Germany and southwestern France: commonalities and differences“ und Shumon T. Hussain über “Substantiating the saltationist view of Aurignacian emergence in Central and Western Europe: a reassessment of qualitative and quantitative arguments“ eine erste komparative Auseinandersetzung mit den Kunstobjekten der Schwäbischen Alb, die mit dem Beitrag von Randall White über “Aurignacian graphic and plastic expression in Southwest France: context, dating and inter-regional comparisons“ fortgesetzt wurde. Nach der Kaffeepause wurde diese Perspektive in den Vorträgen von Walpurga Antl-Weiser zu “Symbolic expressions of early modern humans – a comparison between Aurignacian and Gravettian symbolic objects“, Claus-Joachim Kind über „The Lion Man from Stadel Cave and his significance for the Swabian Aurignacian“ sowie Ewa Dutkiewicz zu “Markings and symbols - the fully developed symbolic behavior“ vertieft. Schließlich referierten Susanne Münzel mit “Discovery and Soundscape of Musical instruments of the Swabian Aurignacian“ über Musikinstrumente des Aurignacien im Speziellen, und Gary Tomlinson mit “Music and Early Symbolic Communication“ über die Bedeutung von Musikerzeugung im Allgemeinen. Nach einer Abschlussdiskussion zu dem zweiten Teil der Vorträge zum Schwerpunktthema und der Mittagspause rundeten die Beiträge von Stephan M. Heidenreich, der über den Stand des Antrages zu “Caves with the oldest Ice Age art – On the Way to UNESCO World Heritage“ referiert, und Judy Y. Chang zu “The lithic technology and social-economic context at Vogelherd IV and V“ den Themenkomplex zur eiszeitlichen Kunst ab. Es folgten Vorträge zum mittleren Jungpaläolithikum durch Hervé Bocherens zu „Morphological, ecological and genetic characterization of Pleistocene wolves and Palaeolithic dogs in the Gravettian of Předmostí I (Czech Republic)“ und Zdeňka Nerudová, die über “Štýřice III (Brno District) - A contribution towards understanding the Epigravettian Environment“ sprach. Nach der Kaffeepause schloss ein Paket von Vorträgen zum späten Jung- und Spätpaläolithikum an. Zunächst trat Nadine Huber mit den Ergebnissen ihrer Bachelorarbeit auf, in der sie sich mittels fotografischer Analyse mit den „Painted limestones from the Magdalenian of the Klausenhöhlen (near Essing, Bavaria)“ beschäftigt hat. Es folgten Beiträge von Jeanne Marie Geiling zu “Distinguishing Drop Zones: Lithic and Faunal Perspectives on Lower Magdalenian Activity Areas in El Mirón Cave, Cantabria, Spain“ und Dorothee G. Drucker über „Isotopic evidence of aquatic resource consumption in the Swabian Jura during the Late-Glacial Interstadial“. Danach gab Clemens Pasda einen Überblick über “Very modern cultures - New results of research on the late Upper and Late Palaeolithic in Central Germany“. Den Abschluss des Vortragsprogramms 2015 bildeten die Beiträge von Florian Sauer, der unter dem Titel

“Organic Resource Management in the Late Palaeolithic of North-Eastern Bavaria. Geomorphology-Based Modelling of Potential Biodiversity for Catchment Analysis” einen Einblick in seine Promotionsarbeit gab, und Tina K. Jahnke, die mit „Zigeunerfels: First results of recent investigations into the lithic and faunal remains“ die Wiederaufnahme der Bearbeitung dieser wichtigen spätpaläolithischen und mesolithischen Fundstelle bekannt gab.

Mitgliederversammlung

Am Donnerstagnachmittag eröffnete der Präsidenten der Gesellschaft die Hauptversammlung und verlas anschließend den Jahresbericht des Geschäftsjahres 2014. Die Gesellschaft hatte vor Beginn der Tagung 247 persönliche und institutionelle Mitglieder. Während des laufenden Geschäftsjahres gab es 14 Neueintritte. Während des Geschäftsjahres verstarben die Mitglieder Karl Lehr und Prof. Dr. Klaus Schmidt. Die Anwesenden gedachten der Verstorbenen mit einer Schweigeminute.

Der Kassenbericht für das Rechnungsjahr 2014 wurde durch die Schatzmeisterin Frau Dr. M.-J. Weber vorgetragen. Er enthielt einen detaillierten Bericht über Einnahmen, Ausgaben und Saldo des Geschäftsjahres zum 31.12.13 sowie zum aktuellen Stand, die Mitteilung über Ausgaben und Einnahmen der Tagung 2013 in Braunschweig sowie den Hinweis auf die Möglichkeit der Einsichtnahme. Anschließend verlas Herr Thomas Weber den Bericht über die Kassenprüfung durch Mitglied Frau Maria Knipping, der die einwandfreie Kassenführung bestätigte und die Entlastung der Schatzmeisterin vorschlug, was von der Mitgliederversammlung einstimmig angenommen wurde. Herr Uthmeier sprach im Namen der Gesellschaft Frau Knipping den Dank für die Tätigkeit als Kassenprüfer aus. Als Kassenprüferin für das neue Geschäftsjahr wurde Frau Maria Knipping einbestellt.

Werner Müller berichtete im Namen des Herausgebergremiums des Jahrbuchs Quartär über den ausgelieferten Band 61 (2014). Dem Herausgeberteam wurde gedankt. Es wurde beschlossen, dass die vom Verlag erhöhte Papierqualität wieder auf das bisherige Niveau gesetzt werden soll, um die Versandkosten zu reduzieren. Es wurde diskutiert, ob das Jahrbuch künftig nur noch in digitaler Form erscheinen soll, bzw. ob der Erhalt bei gleichem Preis sowohl – je nach Wunsch des PLUS-Mitglieds – einer gebundenen als auch einer digitalen Form erfolgen kann. Der Vorstand wird hierzu beim Verlag nachfragen. Zur besseren Akquirierung von Artikeln soll das Herausgeberteam vergrößert werden. Bei der nächsten Tagung sollen außerdem QUARTÄR Bände zu Werbezwecken ausgelegt werden. Es ist der ausdrückliche Wunsch der Gesellschaft den Förderpreis im bisherigen Umfang weiterzuführen. Da das Stiftungskapital aufgebraucht ist, wurde der letzte Preis bereits in Teilen durch die Gesellschaft getragen. Zur Beibehaltung des Förderpreises sind zweckgebundene Spenden mit namentlicher Nennung möglich. Dankenswerterweise erklärte sich das Mitglied Herr Wolfram Freudenberg bereit, den nächsten Förderpreis (2016) zu stiften, wofür die Gesellschaft ihm herzlich dankt. Bei den nächsten Tagungen sollen zudem Spendenboxen aufgestellt werden.

Auf Wunsch von Frau Knipping ist im Tagungsband wieder eine Teilnehmerliste mit allen angemeldeten Teilnehmern beigelegt.

Während der letzten Zeit generierte die Gesellschaft durch Ihre Aktivitäten mehr Ausgaben als Einnahmen. Hier sind der Förderpreis und der Tagungsband besonders große Kostpunkte. Es wurde vorgeschlagen sowohl die Beiträge für voll zahlende Mitglieder als auch für die Tagungsteilnahme zu erhöhen. Hierüber herrschte weitgehende Einigkeit. Studenten und arbeitslose Mitglieder sollen jedoch nicht stärker belastet werden. Die Erhöhung soll maximal 10 Euro betragen. Zur Erhöhung der Mitgliedsbeiträge wird der Vorstand einen Vorschlag ausarbeiten, der bei der nächsten Mitgliederversammlung zur Abstimmung gestellt wird. Die Anhebung des Tagungsbeitrags muss hingegen nicht beschlossen werden und wird unter Verweis auf diese Versammlung zur nächsten Tagung festgelegt.

Es wird angestrebt wieder zum Rhythmus von jährlich wechselnden In- und Auslandstagungen zurückzukehren.

Die vorbereitete Kinderbetreuung wurde mit 3 angemeldeten Kindern von zwei Elternpaaren deutlich zu selten nachgefragt um annähernd kostendeckend zu sein (mindestens 10 Anmeldungen nötig). Dies wird als Signal verstanden, dass der Bedarf einer Kinderbetreuung momentan nicht gegeben ist. Sollte aber bei einer größeren Gruppe der Wunsch

nach einer Kinderbetreuung wieder gegeben sein, kann diese auch angeboten werden. Hierzu sollte eine Gruppe entsprechender Größe an den Vorstand herantreten.

Für die 58. Jahrestagung lag eine Einladung von Dr. Zsolt Mester (Eötvös Loránd Universität Budapest) vor, welche die Gesellschaft dankend angenommen hat. Die kommende Tagung wird vom 29. März - 07. April 2016 in Budapest stattfinden.

Unter dem Punkt Verschiedenes wurde folgende Themen besprochen:

- Der Verein hat die Gemeinnützigkeitsprüfung beim Finanzamt bestanden.
- Zur Senkung der Ausgaben wird der Tagungsband dieses Jahr letztmalig an alle Mitglieder mit der Post verschickt. Wer weiterhin eine Zusendung wünscht wendet sich bitte schriftlich an den Vorstand. Der Vorstand erkundigt sich beim Verlag inwieweit das abdrucken einer Abbildung pro Abstract sich auf die Gesamtkosten auswirkt. Die Zitate sollen auf maximal 5 beschränkt werden.
- Die Möglichkeit einer Verwaltung wissenschaftlicher Nachlässe wird derzeit durch die Archiv-Stelle der FAU geprüft.

Die Versammlung schloss um 20.00 Uhr.

Exkursionen

Beide Exkursionstage waren den so reichen Fundstellen der Schwäbischen Alb gewidmet. Der erste Exkursionstag führte die teilnehmenden Mitglieder der Gesellschaft nach einem vorbereitenden Besuch im Museum Ulm, wo das Original des Löwenmensen aus dem Hohlenstein-Stadel aufbewahrt wird, in das Lonetal. Dort führten Prof. Nicholas J. Conard, Dr. Michael Bolus und Ewa Dutkiewicz kompetent am Bockstein (Abb. 1), der nach den Grabungen – zuletzt durch R. Wetzel – zwar keine nennenswerten Sedimente mehr enthält, aber dennoch durch seine Lage hoch über dem Tal und seine Gliederung in Höhle, Schmiede und Törle beeindruckte. Am deutlich tiefer zur Lone gelegenen Hohlenstein-Stadel erwarteten mit Prof. Dr. Claus-Joachim Kind, Dr. Stephan Heidenreich und Dr. Conny Meister drei Kollegen die Exkursion, die maßgeblich für die Antragstellung der Schwäbischen Fundstellen mit frühesten Eiszeitkunst als UNESCO-Weltkulturerbe verantwortlich zeichnen. Gemeinsam beschrieben sie den Zustand der Fundstelle bei der überstürzten Aufgabe der Grabungstätigkeiten zu Beginn des 2. Weltkrieges sowie die Ergebnisse der neuen Ausgrabungen vor allem im Bereich des hinteren Höhlenteils, in dem der Löwenmensch geborgen wurde. Neben der Bergung weiterer Bruchstücke der Statuette, die eine geänderte Rekonstruktion nach sich zogen, konnten wichtige Erkenntnisse zum Prozess der Fundplatzentstehung und der stratigraphischen Position des Löwenmensen gewonnen werden. Demnach steht außer Zweifel, dass die Figur in das Aurignacien gehört. Der erste Exkursionstag endete im Archäopark Vogelherd (Abb. 2), in dem nach einer freien Führung mit vielen Mitmachstationen die Gemeinde Niederstotzingen zu einem Imbiss eingeladen hat (Abb. 3).

Der zweite Exkursionstag begann im 2014 neu eröffneten Urgeschichtlichen Museum Blaubeuren, wo die Leiterin, Frau Dr. Stefanie Kölbl, das Konzept der Ausstellung erläuterte. Zweiter Exkursionspunkt war die Brillenhöhle (Abb. 4) mit ihrer lokal bedeutenden Schichtenfolge des Aurignacien, Gravettien und Magdalénien. Für Furore haben in der Vergangenheit neben den Menschenresten aus dem Magdalénien vor allem die Zusammensetzungen von Steinartefakten aus dem Gravettien der Brillenhöhle, dem Geißenklösterle und dem Hohle Fels gesorgt. Die beiden zuletzt genannten Fundstellen standen ebenfalls auf dem Exkursionsprogramm. Am Geißenklösterle (Abb. 5) erklärte Dr. Susanne Münzel die Schichtenfolge sowie Ergebnisse der archäozoologischen Analysen, während im Hohle Fels (Abb. 6 und 7) Prof. Dr. Nicholas Conard eindrucksvoll und quellenkritisch die Grabungs- und Fundgeschichte referierte. Der ereignisreiche Tag endete mit einem kurzen Flötenkonzert durch: Anna Friederike Potengowski im hinteren Teil des Hohle Fels, bei dem Repliken der Aurignacien-Flöten zum Einsatz kamen.

✉ Thorsten Uthmeier, Andreas Maier, Hugo Obermaier-Gesellschaft c/o Institut für Ur- und Frühgeschichte, Universität Erlangen, Kochstr. 4/18, 91054 Erlangen



Abb. 1: Ewa Dutkiewicz führt die Teilnehmer/Innen der Exkursion am Bockstein



*Abb. 2: Einführung in die Fundlandschaft um Weitsche/Grabow durch Stephan Veil
(Foto: H. Parow-Souchon)*



Abb. 3: Die Teilnehmer des 1. Exkursionstages unmittelbar vor Beginn des Imbisses im Archäopark Vorgelherd (Foto: H. Parow-Souchon)



Abb. 4: In der Brillenhöhle mit Blick auf die namengebenden Öffnungen im Höhlendach



Abb. 5: Susanne Münzel vor dem Geißenklösterle (Foto: H. Parow-Souchon)



Abb. 6: Nicholas Conard führt im Hohle Fels



*Abb. 7: Gemeinsame Pause vorm Hohle Fels
(Foto: H. Parow-Souchon)*

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