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## The 61<sup>rst</sup> Annual Meeting of the Hugo Obermaier Society 2019 in Erkrath and Mettmann, Germany

The 61<sup>rst</sup> Annual Meeting of the Hugo Obermaier Society was held from the 23<sup>rd</sup> to the 27<sup>th</sup> of April 2019 in the Stadthalle of Erkrath and the Neanderthal Museum in Mettmann (*Figure 1*). The society had been invited by the NeanderthalMuseum and its director, Dr. Bärbel Auffermann, and its former director, Prof. Dr. Gerd-Christian Weniger. The annual meeting was organized by Dr. Andreas Pastoors and the team of the NeanderthalMuseum. After the welcome speeches of Dr. Dr. Bärbel Auffermann, representatives of the city of Erkrath and the president of the society, the sessions started.

## 1. Sessions

This year, the order of the sessions was inverted and began with Presentations on the Neolithic, Mesolithic and Late Paleolithic. The first speakers were Wolfgang Heuschen, Michael Baales and Jörg Orschied, who talked about "A Pleistocene-Holocene transitional industry from the Blätterhöhle rock shelter (Hagen, Westphalia)". The Blätterhöhle is one of the most important Mesolithic-Neolithic sites excavated in the last decade in Germany, and it became known to a wider public due to the presence of numerous human remains and related paleogenetic investigations into past diets. The team reported about the presence of two stratified assemblages of the Mesolithic Rhine-Meuse-Schelde-Group. The lithics, which include several backed monopoints, partially backed points with a bent tip and curved-backed points, are well comparable to assemblages of the French "Epi-Laborien" dating to the Pleistocene-Holocene boundary. It followed a contribution by Taylor Otto, Jörg Linstädter, Abdesalam Mikdad and Gerd-Christian Weniger about "Hassi Berkane and Late Iberomaurusian Subsistence in Northeast Morocco". It elucidated settlement patterns, the procurement of raw materials and the mobility patterns of the regional Middle Paleolithic based on 300 sites discovered in the course of surveys conducted by the DAI, INSAP and the CRC 806 "Our Way to Europe". The session proceeded with Julia Kotthaus, who reported about "Between the caves and the sea: investigating the British late glacial Paleolithic". Emphasizing the problematic database, she pointed out that most of the assemblages are surface finds. Therefore, the observed differences

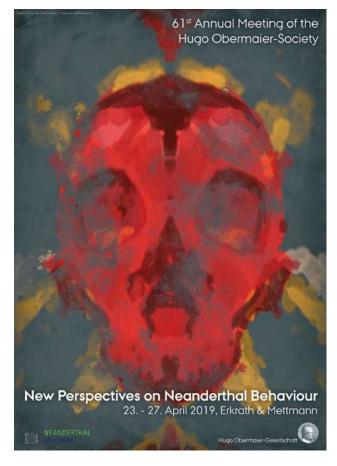


FIGURE 1: Poster of the 61<sup>rst</sup> annual meeting of the Hugo Obermaier Society in 2019 (graphic and artwork: Florian Sauer).

between the Late Upper Paleolithic Creswellian and Federmesser assemblages await a crosscheck by new excavations. Afterwards, *Arantzazu Jindriska Pérez Fernández*, *A. Alday-Ruiz* and *E. Iriarte-Avilés* gave an overview over their investigations of the "Microstratigraphy in the Pleistocene-Holocene transition sequence in the Upper Ebro Valley, Northern Spain: Reconstructing environments and Changes in human activities and natural, anthropogenic and post-depositional formation processes". Based on the analysis of the sedimentary infills of three cave sites, Socuevas, Martinarri, and Atxoste, they reconstructed different types of human occupations and the intensity of human activities.

After the coffee break, the next session included "Presentations on the Aurignacian" and started with a talk by Olaf Jöris, Tim Matthies and Peter Fischer about "At the northern edge of the habitable world. New results from the Aurignacian open-air site of Breitenbach, Sachsen-Anhalt, Germany". Surveys and excavations conducted at Breitenbach over the past 10 years testified an overall size of the open-air site of 6,000 to 10,000 sqm. The multi-disciplinary investigations revealed a change from a more ephemeral use of the site in the lower layer to intensive occupations in the upper one, the latter resembling those of the large base camps of the Gravettien. The session was continued with a contribution by Guido Bataille, Michael Bolus and Nicholas J. Conard about the "Technological variability in the Aurignacian of Geißenklösterle and Hohle Fels (Southwestern Germany)". Recent analysis of assemblages from the Hohle Fels showed that the blank production in layers IIIa and IV significantly differs from other regional Aurignacian assemblages in so far as bladelets are produced from burin cores rather than from broad faced carinated cores on flakes. The "Hohle Fels IV facies" nevertheless shares techno-typological features of other Swabian assemblages, which are dominated by carinated cores. The occurrence of splitbased osseous points speaks for an Early Aurignacian. However, the presence of marked differences do not allow a full equation with facies of the Western European Aurignacian. Therefore, the formerly proposed classification as "Swabian Aurignacian", which encompasses the overall functional variability of the region, is seen as being supported by the new evidence. The next talk of the session, presented by Isabell Schmidt and Andreas Zimmermann, touched a largescale questionnaire by investigating "Population estimates for the Aurignacian of central and western Europe". Their analysis is part of a series of similar investigations into the demography of overall nine Paleolithic periods at the University of Cologne following the same protocol. For the Central and Western European Aurignacian between 42 ka BP and 33 ka BP, they reconstructed a mean meta-population of 1,500 people only. Because this is below the assumed carrying capacities, the authors discussed a "social carrying capacity" as a possible demographic threshold. The last oral talk of the first day was the Presentation of the Hugo Obermaier Research Grant Awardee 2018. The awardee, Senka Plavšić, reported about her "Excavation of Meča Dupka cave site: Study of the late Middle Paleolithic and the emergence of Upper Paleolithic in southeast Serbia, Balkans". New excavations of six sqm in the southern niche of the cave revealed a hitherto unknown stratigraphical sequence with three layers not affected by post-depositional processes. Although no clear fossil types were present, the lithics of the newly excavated layers are still of Upper Paleolithic character and thus add substantial knowledge to the already known Middle Paleolithic layers in other parts of the cave. The measurements of samples taken for radiocarbon dating will elucidate the age of the Upper Paleolithic component.

It followed the <u>Poster Session</u> with numerous posters dealing with "New Perspectives on Neanderthal Behavior", "Mesolithic and Late Paleolithic", "Site Reports" and "Methodical Advances". The first day ended with the Evening Reception at the Neanderthal Museum, where wine and snacks were served.

The second day (Tuesday, the 24th of April) was dedicated to the Special Session "New Perspectives on Neanderthal Behavior". Due to the many talks, the session was divided into four parts. The session started with the presentation "Between the Middle and the Upper Paleolithic in Moravia: Current state of the art" by Petr Škrdla, Tereza Rychtaříková, Jaroslav Bartík, Ladislav Nejman and Yu. E. Demidenko. A mosaic of lithic industries characterizes the Moravian transition between the Middle and the Upper Paleolithic: the Bohunician, dominated by the Levallois concept, the Szeletian, with bifacial reduction and Upper Paleolithic technology, and the Upper Paleolithic Aurignacian with microlithic bladelets. Chronologically, the Bohunician and the Szeletian overlap and both disappear with the Heinrich 4-Event. Recently, two novel industries were discovered in the course of excavations, both dating to GI 11. Whereas the Bohunician from Ořechov IV shows a hitherto unknown microlithization of Levallois points and bladelets, the Líšeň-Podolí I-industry is an Upper Paleolithic industry with Lincombian-Ranis-Jerzmanovician, Szeletian and Bohunician components.

It followed a contribution by Małgorzata Kot about "Truncated-faceted pieces from Beedings (Great Britain)". Bifaces, Kostenki knives and cores of the Lincombian-Ranis-Jerzmanovician open-air site were investigated by working step analysis. It turned out that truncatingfaceting played a major role in the production and maintainace of bifacial tools, including leafpoints, as well as in the re-use of these pieces. The next representation about "New research on Middle Palaeolithic stone tools from the type site of *Homo neanderthalensis*" by *Ralf* W. Schmitz, Alfred Pawlik, Susanne C. Feine and K. Felix Hillgruber referred to the Neanderthal type-site of Kleine Feldhofer Grotte. The excavation of the back dirt in the 1990ties resulted in more than 70 human remains belonging to two Neanderthal individuals, and more than 2.000 artifacts, including *Keilmessers* and Groszaks. The latter were analyzed recently by micro-wear, which revealed that the microliths were hafted implements of multicomponent tools used for a large array of activities. Rather unusual is the site context of the "North Sea treasure trove: The first Dutch Neanderthal birch tar", presented by Marcel J. L. Th. Niekus, Paul R.B. Kozowyk and Geeske H. J. Langejans. The birch tar covered most parts of an undiagnostic lithic artifact collected from an artificially constructed beach. The close cooperation with the building company allowed an approximation of the original find spot, now being submerged, and a reconstruction of the original topographical context. Direct radiocarbon dating, pyrolysis-gas chromatographymass spectrometry and micro-CT were used to analyze the 50,000-year-old piece.

After the break, the special session was continued by Davide Delpiano, Marco Peresani and Andrea Zupancich, who reported about "Backed tools in the Late Middle Paleolithic: design, manufacture and use of an uncommon artefact in Discoid assemblages". The investigation of one of the largest Middle Paleolithic assemblages with backed implements from Grotta di Fumane, Unit A9, which dates to 47,6 ka BP and is characterized by a discoidal core reduction, integrated both typotechnological and use wear analysis. The results show that backing was a common strategy to enhance the performance of manual handling of curated tools, but was not systematic nor was it used for hafting. Whereas these results indicate the presence of features of "modern behavior" already in the Middle Paleolithic, the analysis of Manuel Will, Viola C. Schmid, Michael Bolus and Nicholas J. Conard speak for a different regional pattern. Their "New insights on technological behavior of Late Pleistocene Neanderthals from Middle Paleolithic assemblages of Geißenklösterle Cave, Germany" assume marked differences between the regional Middle and Upper Paleolithic technologies. The assemblages from levels AH IV to VIII, dated to 90-45 ka BP, were mainly produced from local raw materials by Levallois methods and lack bifacial implements. The low densities of archeological finds, the export of artifacts and the lack of features all indicate short-term occupations and a high degree of mobility. The results underline the overall interassemblages similarity and argue for a sharp break within the Geißenklösterle sequence between the Middle and the Upper Paleolithic. A more general topic of the "Functional design of the Late Middle Palaeolithic? Testing Keilmesser in controlled experiments" was presented by Lisa Schunk, Ivan Calandra, Walter Gneisinger, Olaf Jöris and João Marreiros. It is well acknowledged that Keilmessers have one active working edge with different qualities at different sections. To tackle the question whether this can be equated with a multifunctional use, Keilmessers from Balver Höhle and Buhlen are investigated following a new, interdisciplinary protocol. The pieces are 3D scanned, followed by a semi-automatic calculation of the edge angles at defined steps. Based on this, replicas of the different edge angles are produced using the same raw material than the originals. Automatized experiments and use wear analysis help to identify the potential use of different angles and thus contribute to a better understanding of the Keilmesser concept. The talk of Jens Axel Frick about "The spatial and temporal distribution of the tranchet blow phenomenon during the Middle Paleolithic in Western and Central Europe" elucidated a phenomenon often seen as being closely related to Keilmessers. Instead, an in-depth survey of the literature showed that lateral sharpening flakes and negatives thereof occur from MIS 3 to MIS 9.

The special session went on with a talk by Andrea "Neanderthal settlement dynamics: a diachronic perspective from Central Europe", based on novel analysis of assemblages from Markkleeberg (MIS 8), Zwochau (MIS 7), Rabutz (MIS 5e); Neumark-Nord level 2/0 (MIS 5a) and Königsaue (MIS 3). Despite some changes through time, such as the decrease of raw material size and the innovation of Keilmessers, other knapping strategies remained unaltered. This is interpreted as a long-term cultural stability in the area. The following presentation by Kseniya Kolobova, Maciej Krajcarz, Alena Shalagina, Magdalena Krajcarz, Svetlana Shnaider and Andrey Krivoshapkin moved the geographical focused to "Neanderthal mobility pattern in Altai Mountains". The authors reported about their attempts to identify related Middle Paleolithic occupations at different sites by comparing the raw material procurement strategies, the hunting tactics and the lithic technologies of Chagyrskaya and Strashnaya Caves, which both yielded the same industry and are situated in adjoining river valleys. It followed a talk by Alena Shalagina, Kseniya Kolobova and Sergei Markin about "The significance of bifacial technology in the Middle Paleolithic of Altai Mountains". The manufacture and use of bifacial tools was previously thought to be situational and thus without significance for the differentiation of the regional Altai industries. Novel analysis of assemblages from Chagyrskaya Cave and Okladnikov Cave revealed that the opposite is the case. Bifacial tools from these sites follow a strict plan-convex concept and often result in Keilmessers. To the contrary, bifacial tools of the Kara Bom industry were bi-convex. The fact that plan-convex bifacial tools in the Altai are exclusively manufactured by Neanderthals is taken as an argument to link the appearance of this species with this tool concept.

The last part of the Special Session on "New Perspectives on Neanderthal Behaviour IV" started with Lutz Kindler and Olaf Jöris, who presented "A Thought Experiment: Raising a Neanderthal Baby today: A Paleo-ethological Perspective on Neanderthals and Human Behavioural Evolution". Their main aim was to stimulate an integration of the many disciplines at work during the analysis of human behavior under the methodological umbrella of N. Trinbergen's ethological approach. The special session ended with a presentation by Jordi Serangeli, Bárbara Rodríguez Alvarez, Ivo Verheijen and Nicholas J. Conard about "Gatherers, hunters and more than ten dead elephants in Schöningen", which bridged the Middle and the Lower Paleolithic. The team found the remains of ten straight-tusked elephants from Saalian deposits, showing that these animals were regularly hunted.

After a short break, *Yvonne Tafelmaier* and *Andreas Pastoors* gave an overview over their research into the Middle Paleolithic (mainly conducted in the institutional frame of the NeanderthalMuseum) in the <u>Public evening lecture</u> "Dem Neandertaler auf der Spur". The second day of the annual meeting finished with the Conference Dinner at the Restaurant Neandertal N°1 right opposite to the NeanderthalMuseum.

The last day of presentations (Wednesday, the 25<sup>th</sup> of April) started with "<u>Presentations on Site Reports</u>" and was opened by *Merlin Hattermann*'s talk about "Losing Everything? A Report on the Felsenhäusl-Kellerhöhle, Altmühl Valley". The Felsenhäusl-Kellerhöhle is a small cave near to the Sesselfelsgrotte in the Lower Altmühl

Valley and was excavated without much documentation. A detailed analysis of the lithic artifacts on the one hand and the available stratigraphical information on the other revealed stratigraphic mixing, which only allowed to differentiate a Micoquian and Magdalenian assemblage on techno-typological grounds. The results are nevertheless an important contribution to the knowledge of the settlement patterns of the regional Paleolithic. The presentation of Jürgen Richter, Thorsten Uthmeier, Andreas Maier and Florian Sauer was a resumée of "A decade of research and excavation at the Magdalénian open-air site at Bad Kösen-Lengefeld". Large scale excavations on an area of about 100 sqm showed that the stratigraphy at Bad Kösen-Lengefeld consists of two archaeological levels (AHs) embedded in the uppermost part of a loesscover, which was core-drilled to a maximal thickness of more than nine meters. Only the upper archaeological level has been excavated so far on larger scale. It yielded several in-situ features, such as complex fireplaces and postholes, as well as concentrations of limestone slabs representing parts of a immobile infrastructure used in the course of multiple occupations. In concert with the distribution of the lithic artifacts and faunal remains, this enabled the detection of intra-site structures. Another important find category of the site, which is radiocarbondated to 15,350 calBP, are engraved lime stone slabs. Chronologically older are the finds presented by Armando Falcucci, Nicholas J. Conard and Marco Peresani, who conducted "A re-evaluation of the Protoaurignacian sequence at Fumane Cave in northern Italy". The rock shelter is well known for its Aurignacian sequence stretching from levels pre-dating the Heinrich 4-Event to those post-dating it. This allows to test if the "Aquitanian Model", e.g. the emergence of a Proto-Aurignacian followed by a Classical Aurignacian, also fits to other regions. It turns out that in Grotta di Fumane, technotypological features of the Proto-Aurignacian persist throughout the sequence. The case study therefore does not support a transfer of the "Aquitanian Model" to Northern Italy. The same industry, e.g. the Aurignacian, was in the focus of the talk by Wei Chu, João Marreiros, Adrian Doboş, Alexandru Ciornei, Jacopo Gennai, Thomas Albert, Florian Peudon and Jürgen Richter about "New excavations and functional analyses of the early Upper Paleolithic assemblage from Românești-Dumbrăvita, Romania". The site has been re-evaluated by excavations and subsequent multi-disciplinary analysis by the team of the CRC "Our Way to Europe" at the University of Cologne. First use wear analysis contribute to the knowledge about functional differences between the Proto-Aurignacian and the Aurignacian. The report of Jonathan Schoenenberg about "Intra Ansab 1, preliminary results of the Find Distribution of an early Ahmarian site in the southern Levant" was dedicated to one of the possible forerunners of the Proto-Aurignacian. The site is under excavation since 2015 and has yielded an Early Ahmarian assemblage from an excavation area of 30 sqm. 3D-data for the position of each larger find allow a detailed analysis of the vertical and horizontal distributions, which support the hypothesis of an in-situ preservation of the archaeological level. The presentation of Nicholas Conard, Gregor Bader, Viola Schmid, Chantal Tribolo and Manuel Will about "New results from Middle Stone Age of Kwa-Zulu Natal, South Africa" were dealing with more southerly find regions. Intensive fieldwork at the Middle Stone Age (MSA) sites of Sibudu and Umbeli Belli allow the analysis of diachronic developments as well as synchronic variability. The deep sounding at Sibudu pushes back the regional context to 100 ka BP. Together with data from Umbeli Belli and the collection of Holley Cave, the regional chronological sequence of "Still Bay", "Howiesens Port" and "Sibudan" lithic industries is elucidated in this regard. The last talk in this session was given by Thorsten Uthmeier, Avi Gopher and Ran Barkai, who reported on "The bifacial tools of the Acheulo-Yabrudian Cultural Complex from Qesem Cave, Israel: a techno-functional analysis". Despite its long Acheulo-Yabrudian sequence, spanning between 200 ka BP and 400 ka BP, and the wealth of lithic artifacts, faunal remains and evident as well as latent features, Qesem cave has yielded only a low number of bifacial tools. These were documented by 3D-models produced by Structure-from-Motion technique. Work step analysis showed that the shaping of inclined lateral parts near to the base of the handaxes, which dominate the small assemblage of bifacials, was part of an overall concept to manufacture sharp working edges opposite to a back to enhance the manual application of considerable amounts of manual cutting energy.

In the afternoon, the "Presentations on Methodical Advances" started with a contribution of Ivan Calandra, Walter Gneisinger, Antonella Pedergnana, Lisa Schunk, Eduardo Paixao and João Marreiros about "The TraCEr laboratory: developing experimental programs combining material properties, variable control and use-wear quantification". Despite its high potential, use wear analysis has been criticized in the past for a lack of standardization and quantification. To tackle this, the RGZM in 2017 founded the Laboratory for Traceology and Controlled Experiments (TraCEr). The talk presented the newly developed research design for controlled experiments used as analogy for the

interpretation of use wear observed on archaeological artifacts. The protocol starts with an analysis of the raw properties, followed by automatized material experiments that allow controlling each variable that is potentially contributing to the formation of use wear. In addition, experiments with human agency contribute to the understanding of the possible variability. In a final step, 3D models help to locate and quantify the experimental use wear data. The following three talks concentrated on the properties of lithic raw materials. The first speakers, A. Malago, Y.-M. Hou and O. Jöris, reported about "Hardness and Knappability - What do quantitative raw material properties tell us about hominid behavior". A sample of 100 Mode-2 artifacts and raw material samples from China were measured for their hardness and density. The correlation between both variables is interpreted as a measure for knappability. It turns out that the Hornfels raw material preferred during Mode 2 in China is difficult to knap due to its density. It follows that the early hominins already were capable of handle complex geometries to obtain the anticipating products. The second talk about raw material was given by Alejandro Prieto, Maite García-Rojas, Iñaki Yusta, Alvaro Arrizabalaga and Javier Baena about "Procurement and Management of raw material in El Arteu and El Habario: Geo-Archaeological characterization of quartzite in the Cantabrian region (NW Spain)". Quarzite is the second most frequent raw material in Paleolithic archaeology, but by far less investigated and less precisely defined than chert. The team therefore investigated quartzites from a Cantabrian micro to mesoregion using three different steps: first, the petrographic, geochemical and binocular analysis of raw material samples from surveys, second, the macroscopic noninvasive analysis of original archaeological material from the sites, and third, spatial analysis using GIS. Whereas one focus was the definition and classification of different types of "archaeological quartzite", the other aspect was a case study of the Middle Paleolithic sites of El Habario and El Arteu. It showed that the investigated mountainous region in Cantabrian Spain was not a barrier, but instead a region regularly and systematically used by Middle Paleolithic groups. The third talk dedicated to raw material, "Searching for chert heat-treatment in Moravian Magdalenian", was presented by Martin Moník, Zdeňka Nerudová and Petr Schnabel. Starting from the observation that some artifacts of Greyish-greenish Jurassic chert (Olomucany chert) showed a suspiciously reddish color, they analyzed the artifacts and reference samples with Infrared Spectroscopy (FT-IR) and Paleomagnetic measurements

(IRM). Both methods were only able to produce results on specific questionnaires: whereas FT-IR was appropriate to investigate thin artifacts, IRM only detected non-heated artifacts. The next talk by Nadine Huber and Harald Floss reported about "The portable art of Solutré (Burgundy, France). Reflectance transformation imaging, a portable and low-cost solution to the imaging of Paleolithic art objects". In the course of the analysis of all mobile art items from the site, the photo-based method of reflectance transformation imaging was applied using a portable setup. The inexpensive and portable method allowed the identification and analysis of even very fine engravings. Hannah Parow-Souchon was the last speaker of this session and talked about "Unriddling variability - testing hypotheses on assemblage variability" with the help of Canonical Correspondence Analysis (CCA). Exemplified data came from the in Central Germany Azilian and the Levantine Upper Paleolithic and showed that the CAA not only allows to identify groups, but at the same time enables to test hypothesis about the causes of the grouping.

At the end of the afternoon, the program of the annual meeting came to "Presentations on Human-Animal Interaction". The line of presentations was opened by Susanne C. Münzel, Thomas Hess, Angel Blanco-Lapaz and Nicholas J. Conard about "Faunal

remains of Helga Abri, a Late Magdalenian/Early Mesolithic rockshelter in the Ach Valley near Schelklingen (Swabian Jura)". The analyzed material mainly stems from Late Magdalenian and Mesolithic levels excavated by Joachim Hahn during the 1970ties and 1980ties and dates to 16-14 ka BP and 10.2-9.2 ka BP, respectively. Basically, the two faunal assemblages were markedly different, with the Magdalenian being dominated by cold and the Mesolithic by warm species. However, there were also temperate species among the Magdalenian fauna, such as beaver, roe deer and wild boar, underlining the difficulties of too simplistic equations of temperate species with moderate to warm environments. The next talk by Chris Baumann, Britt M. Starkovich, Dorothée G. Drucker, Susanne C. Münzel, Nicholas J. Conard and Hervé Bocherens was dedicated to the "Isotopic and ecological niches of commensal and domestic Magdalenian canids", followed by Elaine Turner, Louise Humphrey, Abdeljalil Bouzouggar and Nick Barton, who talked about "Subsistence strategies during the Middle Stone Age: evidence from the Grotte des Pigeons, Taforalt, Morocco". The archeozoological analysis focused on the Middle Stone Age (MSA) layers of the site. Although a wide range of animals was procured, prime age adults of Barbary sheep and other medium sized animals were the preferred prey. Entire carcasses



FIGURE 2: Martin Heinen (in the center, with red jacket) is guiding the participants of Excursion A near Mönchengladbach-Geneicken at sites of the Federmesser groups and the Mesolithic.

were brought to the site and all body parts were processed, including the extraction of marrow. With regard to diachronic comparisons, it is remarkable that the same hunting strategies were applied during both the Aterian and the late MSA. The last speaker of this year's annual meeting was *Shumon T. Hussain*, who talked about "After the 'animal turn' - re-configuring the study of human-animal relations in Paleolithic archaeology".



FIGURE 3: Martin Kehl at Rheindahlen in front of the reopened section. The archeological finds of the Middle Paleolithic level B1 were found in geological layer "EH", which is part of the Erkelenzer Boden soil complex (the Bthorizon marked with "Er").

The aim of the paper was a critical assessment of the potential of a multi-scalar and multi-agency approach to investigate human-animal-relationships after the "animal turn". As a result, a novel methodological perspective was proposed, which integrates human, animal and spatial agencies.

After the sessions were finished, the president of the society, Thorsten Uthmeier, again thanked the NeanderthalMuseum – and especially Dr. Bärbel Auffermann and Prof. Gerd-Christian Weniger – for the kind invitation, and PD Dr. Andreas Pastoors, the team of the NeanderthalMuseum and the student helpers for the organization of the annual meeting. In addition, he thanked Dr. Andreas Maier, the secretary of the society, for the work he invested in the organization of the meeting and the editing of the abstract book. The day before the excursions ended with the Society's Annual General Meeting and the Get-together dinner at the Restaurant Neandertal N°1.

## 2. Excursions

During the first day of excursions (Friday, the 25<sup>th</sup> of April), Excursion A led the participants in the morning to sites of the Federmesser groups and the Mesolithic near to Mönchengladbach-Geneicken. Overall 225 drilling cores in sediments of the ancient floodplain of the Niers showed that sediments from the Late Glacial and the Early Holocene were preserved in an area of no less than nine hectares. The fact that Late Paleolithic and Mesolithic artifacts had been collected from the surface already indicated the high potential for the presence of well-preserved archaeological sites of prehistoric hunter-gatherers when the construction of an artificial basin to store surface water was planned. This made necessary the control of the construction works and, if present, the excavation of archeological sites. Martin Heinen, who reported the results of the fieldwork to the visitors (Figure 2), led the excavations. Within an area of 4,000 sqm, ten sites of the Late Paleolithic Federmesser groups were found. Most of them were placed near to the then river meanders of the Niers, only some meters away from the lake-like floodplain. In addition to lithic artifacts, also faunal remains - otherwise rare in the Rhineland - were excavated, including wild horse, red deer, beaver and fox. The mapping of burnt artifacts made possible the detection of former fireplaces. In two cases, the Niers was used as an underwater waste disposal. The dominating raw material is Nordic flint, which was imported from the Ruhr area North to the site, as was

the rare Vetschau flint, which stems from the Aachen region. The Mesolithic was located at four sites, each consisting of a small concentration of lithics. In addition, the almost complete skeleton of a female aurochs was found scattered over 25 sqm. The good preservation allowed to reconstruct a kill and butchering site, from which the meat bearing parts were taken to a nearby site (possibly corresponding to one of excavated concentrations mentioned above), and the waste being thrown into the shallow Niers river.



FIGURE 4: Martin Kehl explains the preliminary results of new investigations of the loess section at the quarry of Rheindahlen.

It followed a visit to the archaeological site of Rheindahlen, which is well known for its Middle Paleolithic layers embedded in a comparably long loess sequence characterized by several soil formation horizons. Main excavations were conducted by Gerhard Bosinski in the 1960ties and by Ralf-W. Schmitz and Jürgen Thiessen in 1995 to 1997. Recently, a team led by Andreas Pastoors, FAU Erlangen-Nürnberg and Martin Kehl, University of Cologne in cooperation with Ralf-W. Schmitz, LVR LandesMuseum Bonn reopened the sequence for a reevaluation of the stratigraphy (Figure 3). The new investigations became necessary because two contrasting interpretations of the sequence are still discussed. The conventional version dates the first interglacial Bt, termed "Erklenzer Boden" and found below the recent soil and a upper loess unit, to the Eemian (MIS 5e). Conversely, W. Schirmer is of the opinion that this soil is either missing or has been overprinted by the recent Holocene soil formation. Consequently, the interglacial soils below, e.g. the "Rheindahlener Boden" and the "Wickrath-Boden", are dated by him to MIS 7, which would make the Middle Paleolithic industries described below considerably older. Martin Kehl explained in length and with the help of a poster (Figure 4) the new interpretation of the sequence and the first results of absolute OSLdates. Afterwards, Ralf-W. Schmitz, LVR Landes Museum Bonn explained the archaeology of Rheindahlen. While level B3 is awaiting a publication in full length, the finds of level B1 became famous due to the combination of Levallois as well as laminar concepts of core reduction and truncated-facetted pieces classified as Kostenki knives, which often show the negative of a lateral sharpening flake. The last point of interest in Rheindahlen was the Archaeological Museum in the Water Tower, where Bernd Hussener and Andreas Pastoors guided the tour (Figure 5). In the early evening, the excursion visited the lignite mine of Garzweiler, where Franziska Schmid, University of Cologne gave an overview over a running project focused on the survey of Neolithic settlement. It followed a short report on Middle Paleolithic sites by Thorsten Uthmeier. Surveys conducted in the past along and also on the steps of the active walls of the Garzweiler lignite mine, right in front of the extraction machines, led to the discovery of numerous Paleolithic sites. The most important ones were small find scatters of lithic artifacts and faunal remains found slightly redeposited in the gravels of the brooksides of small rivers dated to MIS 4.



FIGURE 5: Andreas Pastoors in front of the Water Tower of Rheindahlen (on the right, with a map under the arm, Ralf-W. Schmitz).



FIGURE 6: Andreas Pastoors in front of an installation that marks the position of the Kleine Feldhofer Grotte. In the course of quarrying activities, the former limestone cliff has been destroyed completely. The present installation marks the horizontal position of the cave, which before its destruction was located several meters above.



FIGURE 7: Ralf-W. Schmitz at the site of Bonn-Oberkassel.

Excursion B of the second day (Saturday, the 25<sup>th</sup> of April) began with a visit to the Neanderthal Museum and to the place where the Kleine Feldhofer Grotte was to be found before quarrying activities destroyed this part of the valley. Andreas Pastoors described the didactic concept of the recently renewed presentation of the eponymous site of the Neanderthal species (Figure 6). The excursion was continued with a visit to the LVR LandesMuseum Bonn, where the group was led by Ralf-W. Schmitz and, at showcases with the finds from the famous site of Bedburg-Königshoven, by Martin Street. The excursion ended at the site of Bonn-**Oberkassel**, where *Ralf-W. Schmitz* (*Figure 7*) gave an overview over the discovery of the double burial in 1810 during mining works for a railway line and the subsequent excavations of remnants of the original sediment led by him and Jürgen Thissen in 1994 as well as by him in 2012. Thanks to multi-disciplinary research, the dating of the burial of a male and a female, accompanied by a domesticated wolf, could be made more precise: against first assumptions, which dated the burial to the Magdalenian, it now seems to be not older than 12-14 ka.

With the last stop, the 61<sup>rst</sup> Annual Meeting of the Hugo Obermaier Society ended. It was again an intense, interesting and perfectly organized conference. A PDF version of the abstract book is available under http://www.obermaier-gesellschaft.de/2019\_neander-thal/conference\_proceedings\_2019.pdf.

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