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REVIEW ARTICLE

Lithic Research Roundtable 14, 2024

Edited by András Markó[a] & Attila Király[b]

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Abstract. The 14th annual meeting of Hungarian lithic specialists was held on December 13, 2024, at the Department of Archaeology, Faculty of Arts, University of Szeged, Szeged, organized by András Markó. The abstracts of the presentations and posters are as follows.

Keywords: Lithic Research Roundtable, conference, Palaeolithic, Mesolithic, Neolithic

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The chipped stone assemblage of the Late Neolithic Borđoš site

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This paper focuses on the chipped stone material, discovered in the Late Neolithic part of the Borđoš site between 2014 and 2022 in Vojvodina, North-Serbia. The aim is to briefly overview raw material and typo-technological categories of chipped stone assemblage. The comparative units are organized by the archaeological context in tell and flat settlements to see any potential tool-making and use differences between the two different spatial areas. Altogether 1193 pieces of chipped stone tools were discovered at the site of Borđoš, which is one of the biggest published stone assemblages from Neolithic sites in Vojvodina besides Čoka-Kremenjak, Donja Branjevina (Deronje), Opovo-Ugar Bajbuk, Gomolava and Potporanj-Kremenjak, but also one of the most numerous assemblages in comparison to other Neolithic materials e.g. Vinča-Belo Brdo, Popovića Brdo, Blagotin and Drenovac in North-Central Serbia. This lithic assemblage opens up the possibility to analyse the potential proxy function of the Late Neolithic community at Borđoš for transporting raw materials and stone artefacts besides the transmitted lithic technological information along the Tisza. We provide a cross-section of raw materials and typo-technology of the chipped stones, which gives a rich basis to study the economic and social connections of the local and extended surroundings of the Late Neolithic Borđoš community based on the chipped stones.

A comprehensive petrographic and geochemical evaluation of the sandstone ground stone tools from the Hódmezővásárhely-Gorzsa site

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In total, 1061 polished and ground stone tools were unearthed from the stratified tell settlement of Hódmezővásárhely-Gorzsa. During the excavation of the multiperiod tell site (in the 1980s and 1990s), detailed archaeological study of the excavated archaeological finds (mainly chipped-, polished stone tools and ceramics) was started, including archaeometric sourcing of the lithic raw materials. Among the numerous polished stone tools and ground stone tools (GSTs), the latter ones dominate (they represent three-quarters of the total amount) (Starnini *et al.*, 2015; Miklós *et al.*, 2021; 2024). Due to their quantity, the investigation of these macro-lithic tools is an important task in the provenance analysis of the stone tools. The archaeometric investigation, including petrography and geochemistry, of such artefacts to determine their raw materials has not been conducted routinely. Over the last two decades, research on GSTs showed exponential growth, not only from an archaeological point of view but also from their raw material analysis (e.g., Wright, 1992; Adams *et al.*, 2009; Dubreuil *et al.*, 2015; Christiani & Zupancich, 2021). Since then, they have served as the basis of much provenance research in Hungary (e.g., Makkai *et al.*, 1996; Starnini & Szakmány, 1998; Horváth *et al.*, 2015; 2016; Péterdi, 2020; Priskin, 2022; Kósa *et al.*, 2023) and at the same time, in the international literature, the archaeological questions predominate.

GSTs from Gorzsa show a rather varied composition, the most common types are different types of sandstones (50%), andesite and granitoid-metagranitoid varieties. Our research focus is the identification of the sandstone tools' provenance. We comprehensively investigate artefacts and potential geological source samples, using petrographic-mineralogical and geochemical methods. Our research explores an understudied field because only a few studies looked at sandstone tools (e.g., Szakmány & Nagy, 2005; Péterdi, 2012; 2020; Kósa *et al.*, 2023). So far, Hódmezővásárhely-Gorzsa Neolithic tell settlement is the only one where a multidisciplinary approach was applied. In the international specialized literature, they mainly focus on macroscopic petrographic examinations of the raw materials.

Based on the petrographic examination of the Gorzsa sandstone tool (402 pieces), the following grouping system can be established: red, grey, white meta-, carbonate-bound and other sandstones-metasandstones. The sandstone raw materials have been divided into two main groups: 'red' and 'grey'. The former includes exclusively the Permian red sandstones with various shades of red, while the latter includes grey, white meta-, and carbonate-bound, which have typically grey, yellow and white colours. Each type of raw material was submitted to petrographic, heavy mineral and geochemical (SEM-EDX, PGAA and NAA) analysis. This resulted in four 'red' and three 'grey' sandstone types (grey, white meta- and carbonate-bound), as well as several variants within each type. In addition, we also carried out comparative studies of possible raw materials from natural sandstone occurrences. Therefore, it can be established that the raw materials are sourced non-locally, in regions located to the east of the settlement (more than 60-70 km), primarily within the river Maros upper valley and its surroundings.

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From broken to whole. Archeometric and archaeological analysis of a prehistoric polished stone tool

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The artefacts collected during archaeological field surveys receive little attention beyond the possibly most precise establishment of the date and extension of the site. Besides ceramics and metal artefacts, lithic finds have little importance. In our presentation, we would like to show the amount of information that can be obtained via archaeological and natural scientific investigations of a single, highly damaged polished stone tool found during a field survey in the territory of Szerep (a village in Hajdú-Bihar County).

During the primary macroscopic examination, it became obvious, that despite the broken surface, the piece could be further investigated. Based on the documentation of the use-wear and surface damage, data can be obtained about the individual phases of its life cycle. The tool, originally produced and used as an axe, after fragmentation was reshaped and used as an adze. In addition to the archaeological determination, the relatively long time of the use of the tool is closely connected to the raw material of the stone tool, which was shown to be amphibolite or metabasite based on primary macroscopic and stereomicroscopic examinations.

In order to determine the raw material more precisely, we carried out non-destructive, so-called "original surface test measurements" on the stone axe surface using a scanning electron microscope equipped with an energy dispersive spectrometer (SEM-EDS), an X-ray fluorescence spectrometer (XRF), a Raman microspectrometer and magnetic susceptibility meter at the Archaeometry Laboratory in the National Institute of Archaeology of the Hungarian National Museum Public Collection Centre.

In our presentation, we would like to answer two important research questions. What is the raw material of the tool? Can the choice of raw materials support multiple changes of function and long-term use?

Obsidian blade cores from Füzesabony

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During the 2022 autumn field survey of the István Dobó Castle Museum, in the eastern outskirts of the town of Füzesabony, located in the Northern Great Plain region of Hungary, we discovered an obsidian blade core accompanied by the dense spread of late Chalcolithic find material. Despite the surrounding find material,

based on technological and typological attributes, the artefact can most likely be dated to the Neolithic. The core shows parallels with another, similar item from the Neolithic found in the late 80's, also from the vicinity of Füzesabony, at a site called "felszámolt gyümölcsös „kiskert", 10. számú terület". We have done the non-destructive element composition measurements of the cores. Based on the measurements of the fingerprint-like composition made with prompt-gamma activation analysis (PGAA), we have identified the items clearly as C1-type material, but we weren't able to determine a more specific source (Kasov, Cejkov, Vinicky) of the obsidians. The research further enriches the data on obsidian use in the Northern Great Plain region's Neolithic period.

Core tradition in the Middle and Late Neolithic period in Western Hungary

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The natural occurrence of the knappable raw materials used during the Neolithic can be divided into two major groups: the various nodular formations (Tevel flint, obsidian, northern flint and in some cases radiolarites from the Bakony) and the block formations (limnic silicites and Bakony radiolarites). Technological analysis of these cores has shown that the appearance and morphology of the raw material already anticipate the process of preparation and the debitage itself. We are dealing here with a fixed and characteristic sequence of operations which is predestined by the naturally occurring shape of the raw material itself.

In the Middle and Late Neolithic, we can distinguish between prismatic (block or rectangular), conical, natural wedge-shaped (splinter-like) and irregular shapes that cannot be classified in these groups. Unipolar and bipolar cores occur based on the shape of the striking surfaces. In terms of striking directions, unidirectional and multidirectional, including orthogonal and alternating strikes are known. Looking at their debitage surface, we can distinguish unilateral or multilateral and circular separations. Based on these complex features, we can arrange the individual cores into groups: unipolar conic core with unidirectional circular separations, prismatic core with unilateral and multilateral as well as unidirectional and multidirectional separations, wedge-shaped core with unilateral and unidirectional separations, and the circle of irregularly shaped core with ad hoc unilateral and unidirectional separations.

Reassessment of the presence of Świeciechów flint in the Palaeolithic of Hungary

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Since the 1960s, two tools found in the Sólyomkút Rockshelter (Bükk Mountains, Hungary), attributed to the Mousterian, were considered one of the oldest evidence of the use of the Świeciechów flint as lithic raw material. In the 1990s, though the archaeological revision of the site revealed uncertainties about the cultural attribution of these artefacts, further pieces were reported from Sajóbábony-Méhész-tető open-air site, the eponymous site of the Middle Palaeolithic Bábonyian. The new French-Hungarian excavations at Sajóbábony unearthed the most numerous collection of artefacts made of Świeciechów flint ever found in Hungary. Although the Bábonyian is characterized by bifacial and leaf-shaped tool production, the assemblage of Polish flint demonstrates a blade production and contains Aurignacian tool types. Most probably it represents a different occupation episode. This discovery shed new light on the problem of the appearance of this specific raw material in the Palaeolithic of Hungary. Moreover, the use of the Świeciechów flint during the Palaeolithic of the neighbouring regions (Poland, Moravia, Slovakia) is reconsidered too.

The Middle Palaeolithic assemblage of Gyöngyöstarján 10

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Systematic Palaeolithic research in the Mátra Mountains region began quite late, in the early 2000s. As a result of the field surveys, numerous sites, mainly Upper Palaeolithic, were identified.

The presence of Middle Palaeolithic archaeological sites in the Mártaalja region was initially proposed by Katalin Simán (Simán, 1986, pp. 271–275). She assumed that the circulation of the quartz-porphyry lithic raw material from the Bükk Mountains through the Mátra Mountains to the west indicates the potential presence of previously unknown sites in the latter region. The earliest known lithic artefact there, which can be linked to the Middle Palaeolithic, is a bifacial knife made of quartz-porphyry found in Parád-Marhád-tető. Katalin Bíró (Biró, 1984, pp. 5-11) considered this carefully knapped piece with bifacial retouch a diagnostic tool of the Micoquian culture.

In 2011, Mónika Gutay and Gyula Kerékgyártó (Gutay *et al.*, 2012, pp. 12–17) collected four bifacial leaf points during field surveys in the Mátra region. The second leaf point was found in the vicinity of the Mulató-hegy hill in Gyöngyöstarján.

The site of Gyöngyöstarján 10 was identified by Mónika Gutay and Gyula Kerékgyártó in 2006. Further research (Gutay, 2021) was carried out in 2011, 2017, 2020, and 2021 in the form of field surveys, test excavations, as well as luminescent dating, and sedimentological sampling. Some of the tools were examined and assigned to the Middle Palaeolithic by Zsolt Mester and Mónika Gutay (Gutay & Mester, 2024). Through the typological and technological analysis of the lithics, the assemblage was linked to the Micoquian of Eastern and Central Europe. However, some features show differences from the already-known Micoquian-like industries in Hungary.

The typological examination of the whole assemblage was the subject of my BA thesis. Due to the presence of debitage products and waste, which makes up the majority of the finds, and the lack of intact tools, the site can be interpreted as a workshop phenomenon. In terms of lithic raw material, it is characterized almost exclusively by the use of locally sourced limnosilicite.

The assemblage contains 178 tools out of a total of 2817 finds. Retouched flakes and various types of sidescrapers constitute the largest part of the collection, but the number of leaf points, bifacially backed knives (*Keilmesser*), and handaxes are also significant. In this presentation, I will discuss the results of the typological examination of the assemblage, briefly supplemented with the results of the field surveys conducted recently with Attila Péntek in the Mátraalja region.

A Middle Palaeolithic site in the Cserhátalja region: Ecseg-Sándor-hegy

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The site was located in the spring of 2003, during field research of the area around the nearby Buják–Szente Palaeolithic site. In the autumn of 2005, the Ecseg-Sándor-hegy site became uncollectible, and the surface collection did not resume until the spring of 2022. Given the fact that the area of the site that can be collected is practically flat and that there has been no significant deep ploughing, the find intensity is rather low, but the finds are intact and there are relatively few freshly damaged or broken finds. In the course of the collections so far, archaeological findings typical of the Younger Prehistoric Age have only been found sporadically in the form of a few chipped stones, there are no ceramics or characteristic settlement features. Up to the present, a total of about 700 knapped stones have been recovered, and due to the local limnosilicite raw material and the fossil-rich coastal soil, apart from other taphonomic features, most of the finds are either unpatinated or only slightly patinated. The number of chipped stone tools in the assemblage is around half a hundred, of which nearly half are formal tools. The Buják–Szente site, probably a lithic workshop based on

the processing of local limnosilicite, with 1,495 pieces, was previously classified by the authors as belonging to the Szeletian culture. However, based on the intensive field surveys of the last two decades, due to the presence of a large number of atypical bifacial tools found at both sites, the existence of a Middle Palaeolithic culture and industry unknown elsewhere in the Cserhát Mountains must be assumed.

Human-associated bone remains and revision of the fauna of the Remete Upper Cave

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The cave is located in the northwest part of Budapest, on the border of Remeteszőlős, in the Remete gorge. The entrance to the cave is situated above the Remete cave, 70 m above the valley floor (approx. 350 m above sea level). Veronika Gáboriné Csánk excavated the cave on behalf of the Budapest History Museum. The cave is divided into two parts, the front room was excavated in 1969 and the back room in 1970. During the excavation, the bones were packed separately in sections and layers. The Pleistocene fauna recovered from the sediment was determined by Miklós Kretzoi. The find material of the cave was published by Veronika Gáboriné Csánk in 1984. The examined remains are now in the collections of two museums (BTM Aquincum Museum Prehistoric Collection and the Collections Department of the Supervisory Authority for Regulated Activities). Except for a few items, they are not inventoried. In a significant part of the finds packed in paper bags, mixing of the bones could be determined. Pleistocene fauna also occurred in the Holocene layers, and vice versa. The mixing of fauna was mainly caused by wintering bears during the formation of the sediment, and by burrows or diggings of badgers living in the cave during the Holocene period. According to the latest research, the remains of mammals from several Pleistocene periods were mixed in the cave fill. Taphonomic observations were made on the bone remains; particular attention was given to traces of human activities. Each bone was examined using a hand-held magnifier. In many cases, the bone surface was difficult to examine due to the tooth and chewing marks of predatory mammals. Most of the bone remains were identified at the species level. During the review of the findings of both rooms, several bones with cut marks, human remains (five vertebrae belonging to one individual) and a pierced red deer canine were identified. Among the large mammals, the remains of several taxa could not be found in the mentioned collections (mammoth, woolly rhinoceros, giant deer). The cave fill left in the back room can provide an opportunity for further research.

Use-wear analysis of the Vértesszőlős Lower Palaeolithic stone tool assemblage

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The Lower Palaeolithic site of Vértesszőlős is the oldest known prehistoric settlement in Hungary, which was excavated in the 1960s. The processing of the excavated finds also started in those years, using the knowledge available and a novel methodology at the time. In the years since then, our knowledge of this period has increased, and new analytical possibilities have emerged in Palaeolithic research.

In this presentation, we will present two methodologies and their results that have not been applied to the Vértesszőlős artefacts yet. These are the geometric morphometry (Log Shape Ratio - LSR) and use-wear analysis with the help of different microscopes. Using LSR, the

objective is to identify potential support pieces in the artefact assemblage, for which a detailed data table with a large amount of data is essential. With use-wear analysis, we should be able to identify the worked materials and the type and intensity of work done with the stones can also be observed. Furthermore, we will present the basics of the methods and the tools used to get the data, together with the possibilities for later applications of them in the future.

Thoughts about a late prehistoric knapped lithic industry. Preliminary analysis of the knapped lithic assemblage from Șardu – Lângă Podeț (Romania) site

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Șardu (Hungarian: *Magyarsárd*) is located in Cluj County, Northwestern Romania. During an extensive field survey conducted in 2022, the author identified the Șardu - *Lângă Podeț* site. A total of 268 lithic artefacts and 39 ceramic fragments were collected from the site. The unusually high proportion of lithic artefacts compared to ceramic fragments strongly suggested a multi-period site.

The collected ceramic assemblage includes prehistoric, Roman, and modern-era fragments. Due to the nature of the prehistoric ceramics, it was not possible to precisely date the prehistoric occupation, however, the coarse craftsmanship suggests a Late Bronze Age or Early Iron Age origin. The lithic toolkit from the site contains notched and denticulated tools, side-scrapers, and splintered pieces. Blades are present only in small quantities, while end-scrapers are absent. The raw material used for the lithic artefacts exclusively consists of the local, low-quality "Șardu type" chert. Initially, the large number of lithic artefacts and the simple, atypical toolkit appeared to indicate a Middle Palaeolithic occupation; however, the assemblage finds closer analogies with Late Prehistoric (Late Bronze Age, Early Iron Age) sites.

The current state of research suggests that the use of lithic tools gradually declined in the Carpathian Basin following the Koszider period. If we accept the provisional dating of the studied site, it can be concluded that the intensive use of lithic tools persisted in certain contexts during the Late Prehistoric period. This case study aims to illustrate the interpretative challenges and pitfalls that arise when a surface lithic assemblage is approached with preconceived notions.

Macrolithic tools from Scythian burials in Békés County: A Pilot study

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The grave goods of the Vekerzug (or, Vekerzug-Chotín) culture include stone artefacts of various materials and designs. Research explains the burial of these objects with different cultural and religious reasons. Grave goods of the inhumated burials are thought to be of pre-Scythian origin, while the cremated burials are associated with the surviving traditions of local Late Bronze Age and Early Iron Age communities, or perhaps with a steppe tradition.

Thirteen macrolithic tools were analysed from four graves in Békés County. Each piece was placed in inhumation burials, apart from the three cremation graves from Gyopáros. Their placement in these burials may also indicate the position of the buried person in society. They are typically female grave goods, often with traces of red ochre(?) and the presence of a realgar. In the case of male burials, these objects may have served as weapon-sharpening tools.

The macrolithic grave goods from the cemeteries of the period are traditionally defined as polishing or grinding stones. However, the simple, macroscopic definition of stone tools is no longer sufficient for a more thorough interpretation of the graves. Our investigation includes functional analysis and use-wear analysis. In the presentation, we present the first results of this research, proceeding along with the following questions. What were the phases of the use of the tools? In which phase of fragmentation

were they placed in the graves? Can traditionally defined types be substantiated and can they be linked to standard forms? How can deformed tools be interpreted?

In the presentation, we present the first results of a new research project and we describe the main directions and future objectives of the research.

Nephrite tools from Maria Enzersdorf–Hirschkogel (Austria, Jevišovice culture) – raw material and provenience studies (poster presentation)

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Two neighbouring Austrian Late Neolithic sites, Maria Enzersdorf–Hirschkogel (Jevišovice Culture) and Mödling–Jennyberg (Boleráz culture) have already been presented recently (Péterdi *et al.*, 2022, 2023a, 2023b; Horváth *et al.*, 2023). Although the two nearby sites were inhabited partly at the same time (from 3400/3300 BC to 2900/2800 BC) significant differences could be observed amongst the macrolithic artefacts: at Maria Enzersdorf–Hirschkogel, polished stone tools dominate but at Mödling–Jennyberg, ground stone tools and pebbles can be found in greater numbers. Nephrite, which is usually the raw material of polished stone tools, is only known from the Maria Enzersdorf–Hirschkogel assemblage.

The special „nephrite texture" makes nephrite an excellent raw material for polished stone tools, especially for axes and adzes. The interweaving and interlocking thin, fine amphibole (tremolite – actinolite) fibres make a very tough rock – and give an aesthetic appearance to the finished tools. Nephrite was a widespread raw material in Europe during the Neolithic but its use is usually found only in small numbers at each site since it was not available in large quantities at the geological sources either. This is also the case at Maria Enzersdorf–Hirschkogel: Among the 67 macrolithic finds we examined, only 5 finds were made from nephrite.

During our raw material investigations, only non-destructive techniques were used. After macroscopic description and grouping, first, the magnetic susceptibility (MS) of the findings was measured using a KT-5 type Kappameter. To avoid measurement errors due to the shape of the adzes, we applied corrections that take into account the size and shape of the artefacts (Bradák *et al.*, 2005; 2009). To determine the mineral composition and texture more precisely, scanning electron microscopy and energy dispersive X-ray spectrometry from the original surface (OS-SEM-EDX, Bendő *et al.*, 2013) were applied to one of the artefacts. Amphibole species were defined based on the nomenclature of the International Mineralogical Association (IMA) (Hawthorne *et al.*, 2012).

Nephrites discovered at the Maria Enzersdorf–Hirschkogel site were very fine-grained rocks with a silky lustre. The characteristic „nephrite texture" is also visible on their surface by the naked eye: amphibole fibres that exhibit a tissue-like interweave or spread out like a fan. Their colours are different shades of green (dark green, pale green) or almost white (very pale green in spots). During weathering, the surface of the originally green specimens can also fade to white. Likewise, the surface of a specimen with a macroscopically uncertain classification turned dark (almost black) in spots due to weathering.

The magnetic susceptibility value of the nephrites found on the site is low: 0,090-0,210 SI units except for the specimen with macroscopically uncertain classification mentioned above, where the MS value is slightly higher: 0,814 SI units.

Based on the OS-SEM-EDX results, the main rock constituents are amphiboles: tremolite, actinolite and edenite (an amphibole species with higher calcium and iron content). The characteristic „nephrite texture" which can be seen with the naked eye in places is mainly created by the amphiboles with tremolitic composition which were formed last, and to a lesser extent by the amphiboles with actinolitic composition. As accessories opaque minerals (magnetite and

chrome spinel) can be found in the rock in small quantities and sizes.

The previously examined Prehistoric nephrite artefacts from Hungary were classified into five groups based on their mineral composition, texture and mineral chemical characteristics (Péterdi *et al.*, 2014a). The most probable source areas of several groups have also been identified (Péterdi *et al.*, 2014a; 2014b).

The artefact from Maria Enzersdorf–Hirschkogel is similar to types 1 and 2 in that it contains only small amounts of accessory minerals in addition to the main rock-forming amphiboles, and these are only grains of magnetite and spinel. However, while type 1 is almost pure tremolite nephrite and type 2 is almost pure actinolite nephrite, the amphiboles in the artefact we examined have a more varied composition. The most probable source area of type 1 is Jordanów (Lower Silesia, Poland), while the source area of type 2 is probably in the Swiss Alps but it has not yet been precisely identified (Péterdi *et al.*, 2014a).

Although we detected several types of amphibole in the examined raw material, the fabric of the find is most similar to the Jordanów nephrite, and various authors have shown the presence of actinolite in addition to tremolite in these (Heflik *et al.*, 1987; Łobos *et al.*, 2008; Gil *et al.*, 2015), and also in nephrite from other sources near Jordanów (Nasławice, Lower Silesia, Poland) (Łobos *et al.*, 2008). A type very similar to the raw material we examined – almost completely homogeneous, and containing only a few chromite inclusions in addition to the rock-forming amphiboles – was also presented from the Nasławice site (Łobos *et al.*, 2008).

The Jordanów nephrite and the serpentinites found on the surface, in an area have been known since the Neolithic. It has been proven that the latter was also quarried, and mainly based on finds in Poland they were used for tool making since the same time (Wojciechowski, 1995; Foltyn *et al.*, 2000; Gunia, 2000; Majerowicz *et al.*, 2000; Skoczylas *et al.*, 2000). The raw material has also been identified in archaeological sites in the Czech Republic and Hungary. Their cultural connections to the Carpathian Basin are also known from a wide period of Prehistory, in several archaeological cultures (Přichystal, 2000; Péterdi, 2011; Přichystal *et al.*, 2012; Péterdi *et al.*, 2014b; 2014c).

Taking all of this into consideration, the most likely source area for the raw material of the nephrite artefacts found at the Maria Enzersdorf–Hirschkogel site is Jordanów (Lower Silesia, Poland) and its surroundings.

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New data on the prehistoric utilisation of ignimbrite from the Bükkalja region (poster presentation)

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Ignimbrite is the burnt-through version of the pyroclastic rock rhyolite tuff. Our first data on its prehistoric utilisation in Hungary came from the investigation of the lithic material of the site

Mezőkövesd-Mocsolyás, where it was spotted as the raw material for various grinding stones from various chronological contexts including prehistory. A new and significant addition to the use of ignimbrite was provided by the Late Copper age stele from Mezőcsát-Hörcsögös, which according to recent analysis was made of this material. The new studies were made on the initiatives of Mária Bondár, re-evaluating the megalithic remains of the Copper Age in the central parts of the Carpathian Basin, together with Anna Endrődi and Attila Horváth from the Budapest Historical Museum. The results of the work will be published soon in the 40th volume of the periodical Antaeus. Such an extension of the utilisation of ignimbrite provides us with indirect proof regarding the knowledge of Copper Age mining as well.

The Middle-to-Upper Palaeolithic transition period and new research in Szeleta Cave (poster presentation)

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The Middle-to-Upper Palaeolithic transition period begs for a revision due to the latest findings concerning modern humans. Three cultures are known from this period in Central Europe: Bohunician, Lincombian-Ranisian-Jerzmanowician (LRJ), and Szeletian. According to the shape and the technology of the lithic tools the latter two show a certain similarity, but the concepts behind the formation of their archaeological record are hardly known. This is partially due to the fact that key archaeological sites were excavated in the early period of Palaeolithic research with a methodology different from today's standards. A project started in 2024 aims at excavating the two eponymous sites: Nietoperzowa Cave and Szeleta Cave. Szeleta Cave was excavated in 2024. The preliminary results shed light on the stratigraphic position of the Szeletian in the cave concerning the Middle-to-Upper Palaeolithic transitional period and the Upper Palaeolithic. The geological, palaeobotanical, radiocarbon, stable isotope, paleontological including ZooMS, and aDNA samples are under analysis, therefore our preliminary results stem strictly from recent field observations.

Szeged-Öthalom: the first Palaeolithic find in the Great Hungarian Plain (poster presentation)

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The first Palaeolithic archaeological site in the Great Hungarian Plain was discovered and excavated in 1935.

Of the few dozen recovered artefacts, only 25 lithics are available for analysis today. Retouched tools and cores are missing, however, refitted flakes clearly document on-site core reduction.

The most abundant among the utilized lithic raw materials is a medium-quality rock similar to rocks of hydrothermal origin (called hydroquartzite in the Hungarian technical literature), covered with a white patina. In addition, we have data on the use of small siliceous pebble fragments, Northern flint, jasper and perhaps Jurassic flint from southern Baranya County.

In conclusion, the archaeological significance of the rather atypical artefacts, dated to about 17 thousand years before present via stratigraphic and calibrated radiocarbon data, is mostly topographical.

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