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THE MESOLITHIC OF THE JÁSZSÁG:

The beginning of a new research project and preliminary results

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The 'Jászság Mesolithic' is almost iconic in Hungarian research on prehistory because of the abundance of the sites associated with early Holocene hunter-gatherers discovered there since the late 1980s. At these sites, lithic industries unequivocally connected with the Mesolithic and characterised by geometric microliths were found, refuting the 'Mesolithic hiatus' theory. Unfortunately, the wave of successful research slowed down after the 2000s. Recently, the Hungarian National Museum National Institute of Archaeology and the Hungarian Research Network Institute of Archaeology in cooperation with county museums such as the Damjanich János Museum in Szolnok and the Jász Museum in Jászberény, embraced the topic and started new research on the Paleolithic and Mesolithic sites of the Jászság. The cooperation is based on the surface find collections gleaned by Gyula Kerékgyártó. In this paper, we present the preliminary results and methodology of our research, which hopefully provides a new basis for a better understanding of the Mesolithic of the Jászság and the early Holocene prehistory of the Carpathian Basin.

Keywords: Mesolithic, Jászság, surface collections, topography, geometric microliths, non-geometric microliths

INTRODUCTION

The Carpathian Basin faced serious environmental transformations from the onset of the Late Glacial Greenland Interstadial 1 (GI-1) around 14.7 ka cal BP. Both the vegetation and the fauna responded to the gradual retreat of the Eurasian Ice Sheet and the amelioration of the climate which led to the development of the Holocene environment and the disappearance of the Pleistocene megafauna and tundra-steppe-taiga vegetation (MAGYARI *et al.* 2019; 2022). The significant increase in mean temperatures led to an increase in biomass and the retraction of taxa adapted to a cold and dry climate, bringing about the predominance of temperate broadleaf and mixed forests (FEURDEAN *et al.* 2014). The environmental change also affected the soil formation processes as loess formation ceased during the Late Glacial Period, although the aeolian sand movements occasionally continued during the Early Holocene (GÁBRIS *et al.* 2012; NOVOTHNY *et al.* 2009).

The considerable warming at the end of the Pleistocene affected the subsistence strategies and ecology of human communities, resulting in the emergence of the Mesolithic in Europe (KozŁowski 2009). For a long time, the prevailing view in Hungarian research was that the Mesolithic in our country is mostly 'macrolithic', which made it difficult to compare it with European finds (GÁBORI 1964; VÉRTES 1965, 215–216). Only a handful of lithic assemblages were known, characterized by geometric microliths, which were often referred to as 'Tardenoisian' (GÁBORI 1956; MÉSZÁROS 1948; PUSZTAI 1957). After the first criticisms of the 'macrolithic' Mesolithic (KozŁowski 1973), these materials were re-evaluated, and it turned out that in many cases most came from disturbed or admixed contexts where Middle and Upper Palaeolithic tools

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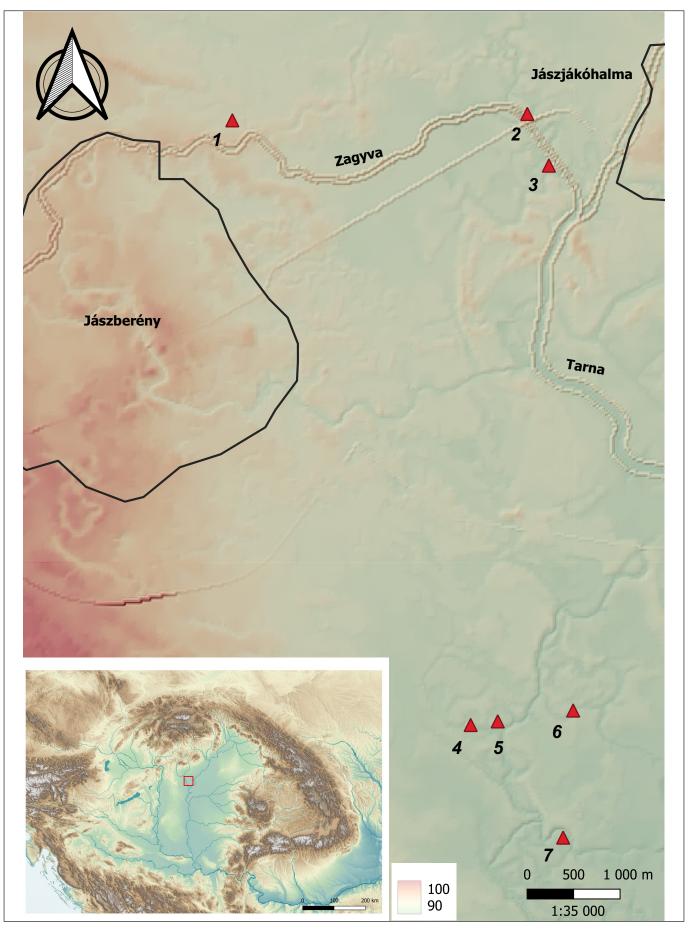


Fig. 1. Sites mentioned in the text

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appeared jointly (DOBOSI 1995). New scientific results and the re-evaluation of old finds led to a drastic decrease in the number of 'real' Mesolithic sites. Based on that, the so-called 'Mesolithic hiatus' theory was born, according to which the Carpathian Basin became almost uninhabited for a long time due to the migration of hunter-gatherer groups to the north at the end of the Ice Age (GABORI 1984).

This deficiency of sites was filled by field surveys, starting in 1989, of Róbert Kertész and Gyula Kerékgyártó in the Jászság region. Their work led to the discovery of the most important Mesolithic sites in the region, including Jászberény I (KERTÉSZ 1991) and Jásztelek I (KERTÉSZ 1994). Both excavated and surface finds included geometric microliths. Based on the results of the typological and stratigraphic analyses, the Jászság Mesolithic was divided into two main chronological phases: the (1) Early Mesolithic 'Jászberény phase', dated to the Boreal period, and (2) 'Jásztelek phase' corresponding with the early Atlantic (KERTÉSZ *et al.* 1994–1995; KERTÉSZ 1996; 2002). The Early Mesolithic phase was characterised by smaller microliths at the onset and a gradual increase in the size of these tools throughout the period, while the Late Mesolithic phase brought along the appearance of regular blades and trapezes (KERTÉSZ 2002, 289). The Mesolithic lithic industry outlined on the basis of the Jászság finds is characterised by a unique typological composition: in addition to traces of the Epigravettian tradition, the so-called Sauveterrian elements, belonging to the western techno-complex (KozŁowski & KozŁowski 1979), were also widespread (KERTÉSZ 1996, 25; 2002).

However, several chronological and taxonomical issues remain to resolve around the 'Jászság Mesolithic' (KozŁowski 2005). The new research on the 'Jászság Mesolithic' tackles these in an attempt to position it in the context of East-Central European prehistory. In the current article, we aim to present the preliminary results of this research programme.

MATERIALS AND METHODS

The foundations of our research are surface finds collected by Gyula Kerégyártó in field surveys since 1989. These surveys were not systematic, although the sites' locations were documented on topographic maps and later recorded with GPS coordinates. Entered into a GIS database, this spatial data serves as a base for future research.

The artefacts collected are diverse, including faunal remains, mollusc shells, lithics, prehistoric and younger ceramic fragments. The primary goal was to isolate the sites with traces of younger prehistoric settlements. Since archaeozoological remains and mollusc shells are often fragmentary and not suitable for making chronological assumptions, these have not been examined in detail. However, the mere presence of subfossil bones together with lithics can indicate a possible Mesolithic settlement. The prehistoric and younger ceramic fragments found by Kerékgyártó are also an important source for research. Since the trapeze and lunate (segment) microliths characteristic of the Mesolithic also occur in the record of other prehistoric cultures, the presence of pottery fragments suggests caution when interpreting geometric microliths. This is also true for other lithics, representing various stages of the chaîne opératoires in different archaeological periods. Small flake and blade cores were identified in some collections of Kerékgyártó, although their presence does not necessarily point to a Mesolithic occupation of the respective sites. The latter is also true for blade and flake blanks. The identification of the knapping technique can only partially help separate the archaeological periods in a find material because the indirect percussion technique has been proven to be applied in the territory of Hungary first by Neolithic lithic industries (MESTER & FARAGÓ 2010; MESTER & TIXIER 2013), while in Europe in the Late Mesolithic of Europe (FONTANA, FLOR & DUCHES 2016). Some possibly Late Mesolithic finds in Transdanubia are assumed to feature traces of pressure flaking, which has yet to be confirmed by detailed technological analysis; however, based on academic literature, this technique is often associated and commonly used with indirect percussion technique (EICHMANN, KERTÉSZ & MARTON 2010; SØRENSEN 2006). Although advanced patina formation has been observed on the lithics from the Jászság area earlier (KERTÉSZ 2002, 288) it was not taken into account when dating surface find assemblages as the extent of this phenomenon is more dependent on geochemical factors of the environment (GLAUBERMAN & THORSON 2012).

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Since the degree of patination and the traits of the applied knapping technique do not help in dating surface finds, they were evaluated typologically. In doing so, little can one rely on domestic tools (endscrapers, burins, retouched blades, and flakes) as their size and morphological characteristics are determined mostly by function (LENGYEL 2016).

As a result, we can only rely on undoubtedly Mesolithic artefacts, such as some types of geometric and non-geometric armatures (BARRIÈRE *et al.* 1969; BROGLIO & KOZŁOWSKI 1983). The examined sites can be classified based on the occurrence of geometric microliths, other retouched tools, and ceramics. We can differentiate between sites where Mesolithic artefacts are definitely present, in addition to those where possible Mesolithic artefacts occur together with prehistoric (Neolithic or Copper Age) ceramic sherds, and sites where possible Mesolithic artefacts occur with non-prehistoric pottery fragments. In sum, the sites were divided into three categories based on the occurrence of Mesolithic artefacts and the dating of the pottery found on the surface: (1) very probably Mesolithic sites; (2) probable Mesolithic sites; (3) questionable Mesolithic sites.

We plan field surveys of the sites worth investigating to specify their extent. This phase will be followed by small-scale $(3-10 \text{ m}^2)$ excavations to document Mesolithic finds in an authentic stratigraphic situation and determine their age.

NEW POSSIBLY MESOLITHIC SITES IN THE JÁSZSÁG

The sites discussed in this article are all located in the Jászság. Based on their topographical position and position in digital elevation models, they are all located along the current course of the Zagyva River or in the immediate vicinity of former meanders of the ancient river. The Jászság area was subject to dynamic hydrological and geographical changes during the Late Glacial and Early Holocene periods, which altered the surface of the ancient Pleistocene alluvial fan (GABRIS 2011). The location of the sites presented here is akin to the already known ones, probably because the early Holocene hunter-gatherer subsistence strategies relied significantly on aquatic resources and, therefore, settlements were established on floodplains and the immediate vicinity of rivers (KERTÉSZ 2002).

PRELIMINARY RESULTS

Questionable and probable 'Mesolithic' sites

Of the seven examined lithic assemblages, three sites have been listed here: Jászberény 30, Jászberény-Északi-elkerülő, and Jászberény 115. The lithic assemblage of Jászberény 30 contained only a sole endscraper made on flake was found (*Fig. 2.8*) made of limnosilicite probably from the Mátra Mountains; the artefact bears traces of advanced patination. The record of Jászberény-Északi-elkerülő comprises two trapezes made on regular blades and an endscraper (*Fig. 2.18–20*). The two trapezes' surfaces are not covered in patina; they differ in size but have straight truncations. Although trapezes are present at possible Late Mesolithic sites in the territory of Hungary, such as Kaposhomok (MARTON 2003), Regöly 2 (MARTON *et al.* 2021), Jásztelek I (KERTÉSZ 1994), and Tarnaörs-Fodor-tanya (KERTÉSZ 2005), the calendar age of these sites still has to be determined. As a result, the Late Mesolithic in Hungary still cannot be dated in absolute terms, and the sites and their relative chronological classification are uncertain. It has also remained a question whether the finds of Jászberény-Északi-elkerülő are Late Mesolithic because, besides the trapezes, prehistoric ceramic finds were also found there, and trapezes are known from sites from the Early Neolithic to the Late Copper Age in the territory of the country (KACZANOWSKA & KOZŁOWSKI 2012; TOLNAI-DOBOSI 1968; CSONGRÁDINÉ BALOGH 2009, 390).

One faces the same chronological issues in context with the retouched blade and segment (a geometric microlith) from Jászberény Site 115 (*Fig. 2. 1–2*). Although both pieces are highly patinated, their chronological positions remain uncertain. Both types appear, e.g., also in the Copper Age (CSONGRÁDINÉ BALOGH 2009, Fig. 26) and, as the area of the Jászság was densely settled in the Copper Age (PATAY 2005), the presence of a single segment cannot be considered unrefutable evidence of a Mesolithic occupation.

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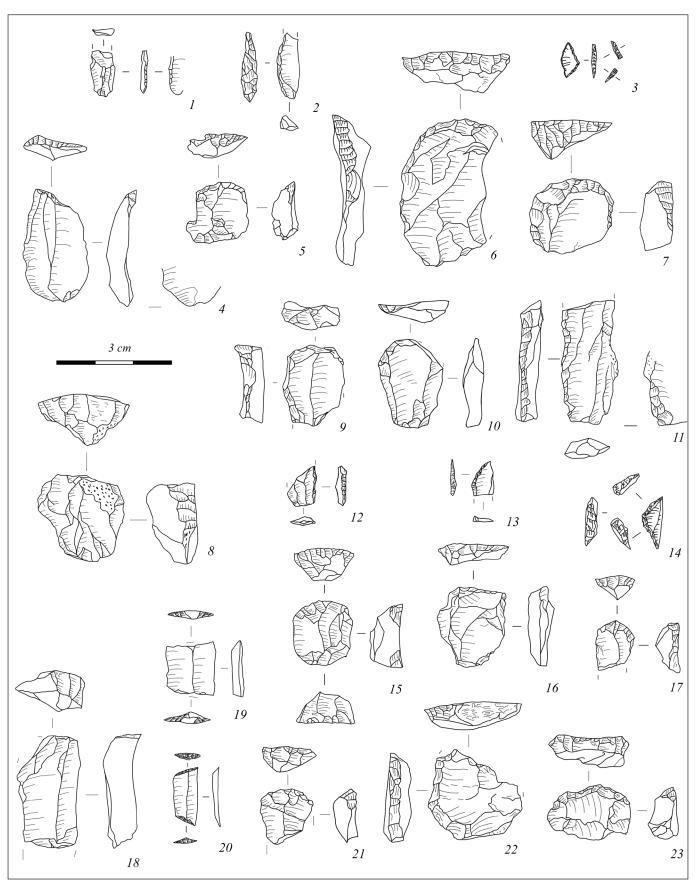


Fig. 2- Surface finds from the Jászság . Jászberény 115 – retouched blade (1), lunate microlith (2), triangle (3), obliquely truncated point (4), endscraper (5–7); Jászberény 30 – endscraper (8); Jánoshida 52 – retouched blade (11), obliquely truncated point (12–13), triangle (14); Jászberény 129 – endscraper (15–17 and 21–23); Jászberény-Északi-elkerülő – endscraper (18), trapeze (19–20)

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Even though only six characteristic endscrapers were found at Jászberény 129 (*Fig. 2.15–17, 21–23*), it yielded no characteristic armatures (e.g., composite arrowhead parts). Although, prehistoric ceramic fragments are not known from the site. However, the endscrapers gathered thus far are promising, as they were all made on flakes and fit into the French typological system of the Mesolithic (Rozoy 1968, 344–346).

VERY PROBABLY MESOLITHIC SITES

At present, three examined sites are considered very probably Mesolithic: Jászberény 98, Jánoshida 52, and Jásztelek 26.

Nine endscrapers have been found at Jászberény 98 (*Fig. 3.4–10; 12*), each made on flake blanks. One of them is a circular endscraper, the other ones are made on flakes of various shapes and sizes. Some pieces are highly patinated. Two retouched blades were found in the assemblage; one made on a triangular cross-sectioned irregular blade (*Fig. 3.2*), and a second, with semi-abrupt retouch, made on a slender blade blank (*Fig. 3.1*). The record also contained a flake borer (*Fig. 3.11*), but the most important find is an elongated isosceles-triangle microlith (*Fig. 3.3*). Unfortunately, the proximal end of the triangle is damaged, rendering it unsuitable for making further typological remarks. A non-prehistoric ceramic fragment is also part of the find material.

The find material of Jánoshida 52 includes two endscrapers made on flakes and two obliquely truncated points, one made on a limnic silicite flake and one on a radiolarite one (*Fig. 2.12–13*). Both fit the category of obliquely truncated points. A short scalene triangle was found, matching Classe IV.9 by BROGLIO

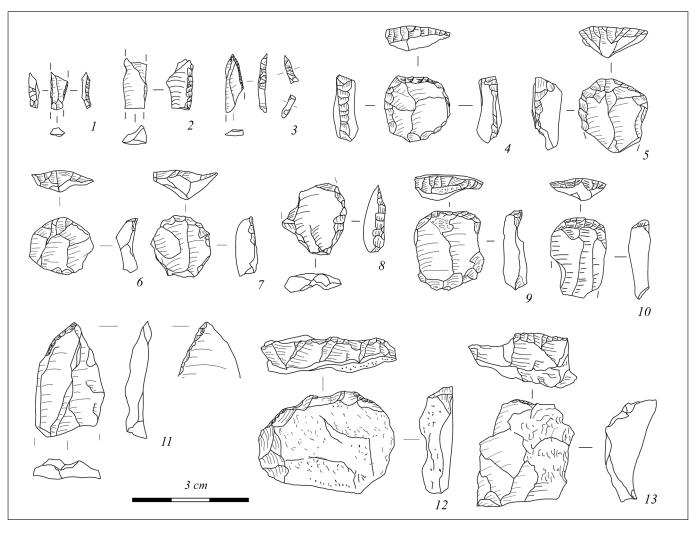


Fig.3. Surface finds from the Jászság. Jászberény 98 – retouched blade (1–2), triangle (3), endscraper (4–10 and 12–13), borer (11)

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& KOZŁOWSKI (1984; *Fig. 2.14*). This type appears in both the Castelnovian and Sauveterrian layers of the Romagnano Loc III rock shelter, one of the best-researched and absolute-dated Mesolithic sites in northeastern Italy, so it cannot be decided with certainty whether it is Late or Early Mesolithic. The presence in the record of the site of a retouched blade made on a regular blade blank also raises questions (*Fig. 2.11*). This blade has a facetted butt, and the overhang was not removed. These technological attributes point to the indirect percussion technique. As prehistoric pottery was also found on the site, it might also be a younger prehistoric settlement.

Jásztelek Site 26 yielded three endscrapers made on flakes (*Fig. 2.5–7*), an obliquely truncated point (*Fig. 2.4*), and a triangle (*Fig. 2.3*) matching Classe II.5 in the typological framework by BROGLIO & KOZŁOWSKI (1984), comprising an isosceles triangle with marginal retouch on the hypotenuse side of the triangle. Analogies to this type can also be found in the Mesolithic of Northern Italy, but only in a Sauveterrian context (BROGLIO & KOZŁOWSKI 1984). In conclusion, based on its typological traits, this triangle can be considered Early Mesolithic.

CONCLUSIONS

Despite all analysed materials being surface find collections, it could be demonstrated that comparative lithic typology can be a powerful tool to define archaeological materials. Armatures can define very probably Mesolithic sites worth further investigation.

Even though most sites in the Jászság area are heavily affected by the Holocene soil degradation caused by thousands of years of agricultural activity, we hope that some of the examined sites can be excavated in the future and yield reliable techno-typological data and absolute ages, thus contributing to further research on the Mesolithic in the Jászság.

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