

Preliminary report on the research of Early Holocene period in the NW part of Great Hungarian Plain

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ABSTRACT: In this paper the author publishes a material collected from the surface during a field survey at Jászberény I, a recently discovered Mesolithic site in the Zagyva basin in the NW part of the Great Hungarian Plain. This microlithic industry belonging to the Late Mesolithic period may throw a new light upon the Early Holocene history of the above-mentioned region. On the basis of the assemblage of typical implements found at Jászberény I the theory of a hiatus between the Paleolithic and the Neolithic in Hungary can be rejected. This site makes us to suppose that even the Great Hungarian Plain participated with equal importance in those processes which took place in the marginal areas of the Carpathian Basin at the end of the Boreal and at the beginning of the Atlantic period.

PREFACE

In spite of continuously made intensive topographic surveys in the country the Hungarian Mesolithic could be defined with great difficulties. The emergence of hypotheses often contradictory to each other, the pros and cons on the question of cultural continuity and general uncertainty itself in this matter are due first of all to the fact that this period is represented mostly by less characteristic find assemblages originated usually from surface collection therefore lacking stratigraphic data. The dating of these finds is different also because at certain sites prehistoric pottery was found together with the chipped stone implements. Since some types of those implements which were used in the Mesolithic are known from later periods as well, the chronology of these sites remains dubious because the lack of stratigraphy. On the basis of these "negative proofs" some experts suppose that between the Paleolithic and the Neolithic there was a settlement historical hiatus in the central areas of the Carpathian Basin. Systematic field surveys which had begun in the October of 1989¹ in the NW part of the Great Hungarian Plain in the Zagyva basin yielded convincing proofs of the presence of Mesolithic settlement at several places along the lower course of the river Zagyva. The Zagyva basin (called *Jászság* according to historical and ethnographical terminology) has a position within the Carpathian Basin which makes it highly suitable to answer several questions related to prehistory. It lies between the flattening hills of the Mátra piedmont area open to the S and the river Tisza. It has also some special geographic features (Fig. 1.). In this paper I deal with those finds which were collected on the surface at the site Jászberény I. In the autumn of 1990 we made also excavations at this settlement (KERTÉSZ 1990a, 1990b, 1990c) which revealed settlement features within a closed undisturbed layer. The results of the excavations are under study. It means that the surface finds are supported and confirmed by well identified stratigraphical evidences.

GEOGRAPHICAL FEATURES

The Zagyva basin is situated between the W side of the Gödöllő Hills and the Pleistocene alluvial fan of the river Tarna. From the N it is bordered by the Mátra Mts. while its southern boundary is formed by the river Tisza. This region is separated from the neighbouring areas not only geomorphologically but it has also a special geological structure. This sub-region is the westernmost member of the Early Holocene Northern Great Plain subsidence group. At the point of contact between the hills and lowland structurally it is a sub-basin of the Great Hungarian Plain. Its N part - the alluvial fan of the rivers Galga, Zagyva and Tarna - has an average height between 100-120 m over sea level, while its



FIG. 1. MESOLITHIC SITES IN THE NORTHERN PART OF THE CARPATHIAN BASIN.

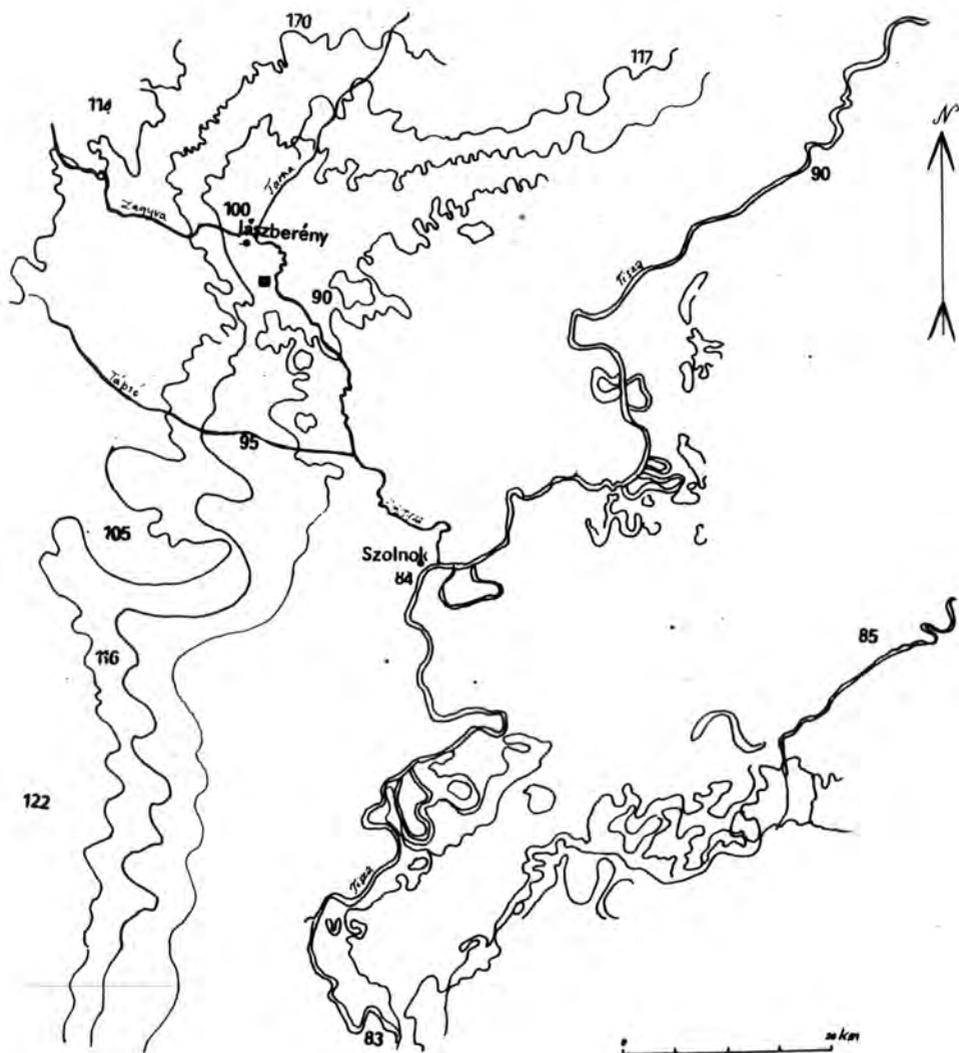


FIG. 2. CONFIGURATIONS OF THE TERRAIN IN THE ZAGYVA BASIN.



FIG. 3. RECONSTRUCTED PALEOHYDROGEOGRAPHICAL MAP OF THE ZAGYVA BASIN (FODOR 1942.)

completely flat southern part reaches only a 85-95 m's height (Fig. 2). These two different parts of the basin can be divided morphologically into four further sub-regions.

The main catchment of the geographical region is the Zagyva, a tributary of Tisza, which gathers the streams of the E part of the Cserhát Mts. of the W side of the Mátra Mts. and of the Gödöllő Hills. The most important tributary of the Zagyva is Tarna which gathers the waters of the F part of the Mátra Mts. The local subsidence formed in the direction of the central axis had a great influence upon the hidrography of the Zagyva basin, because at the end of the Pleistocene Zagyva and Tarna, running down on the slopes of the Mátra ran still along the western and eastern margins of the area, respectively (Fig. 3.); they have been directed toward the central parts by tectonic movements only later. A whole network of abandoned river beds of Zagyva and Tarna can be traced in the lower, southern part of the basin (BALLA 1958, BULLA 1962. 56, 97-98, 372, FODOR 1938. 1942. 4 - 13, 20-38, 56-63, RÓNAI 1985, 66-95, 317-331, SOMOGYI 1969. 67-76, SZÉKELY 1954. 1958. 80-86, 166-181, URBANCSEK 1961. 18-21, 23-28, 65-70, 80-103).

The Mesolithic site is situated in the former inundation area of the Zagyva just below the mouth of the Tarna, in a marshy, damp hollow.

TOPOGRAPHY

The site is at 7,5 km to the S from the town Jászberény (Jász-Nagykun-Szolnok county) in a land called Meggyes-pele in the side of a by now dried up Zagyva-meander.² The microlithic tools and fragments of animal bones together with the carbonate clay which had got over the surface of the recent humus were found accumulated in spots of 12-17 m's diameter. Parts of the settlement spots were situated directly at the edge of the former riverside while the others are situated to some distance from the river bed. Six settlement spots near to each other were identified within the locality.

Those spots which were directly at the edge of the riverside had been considerably destroyed because of terrain regulations and intensive cultivation. We could observe that one of the southeastern marginal spots territorially touched with a Neolithic locality.³

LITHIC INDUSTRY (Tables I-VI.)

(Lithic finds from the site are inventorized under M^{OS} 90.4.1. - 90.4.689. in the Archeological Collection of the Damjanich János Museum at Szolnok).

Among scrapers made on flakes appear semicircular ones (T. I. 1-3), oval ones with pointed part (T. I. 4) but the overwhelming part of the scrapers consists of irregular flake scrapers (T. I. 5-12). In this group there is also a scraper-lateral burin combined tool (T. I. 14). A roughly made flake scraper (T. I. 13) differs from the above described tools as regards both its size and manufacture.

One of the borers was made on a broad flake (T. I. 15); it has a finely manufactured point.

As for the burins two bec-de-flûte types were made on blades (T. II. 1-2) and three ones on flakes (T. II. 5-6, T. III. 20). The left edges of two tools from the latter mentioned three ones (T. II. 5., T. III. 20.) are shaped by a single slanting blow, while their right edges are retouched. Both edges of the piece on (T. II. 6) are retouched. Two blade tools (T. III. 3-4) belong to the atypical bec-de-flûte burins. Among lateral burins there is only one specimen made on a blade (T. II. 7); it is a lateral burin with its working part on its right side. All the other typical lateral burins are made on flakes (T. II. 9-11, 14) and all of them have working parts on their left part which are shaped by blowing. Among atypical lateral burins there is a piece with a working part on the right side (T. II. 8) which was made on a blade. The left side of an atypical lateral burin made on a flake is manufactured on its left edge (T. II. 12).

The single blade point found in the site (T. II. 15 a-b) has an altern retouch. The right edge of the tool has an arched truncature from the dorsal surface while the left edge was retouched from the ventral surface.

Among the few retouched blades there are tool truncated diagonally (T. IV. 10) and obliquely (T. IV. 16) at their distal ends.

Retouch and traces of use can be observed in the distal part of the right edge of the ventral surface of two blades (T. IV. 14 a-b, T. V. 1a-b) and in the medial part of the left and right edges of the ventral surface of two other blades, respectively (T. V. 2a-b, 3a-b). The distal part of one of these blades (T. IV. 14a-b) is obliquely cut off and on the other blade (T. V. 2a-b) both the distal and proximal ends are cut off on the ventral surface. Altern retouch can be seen along the edges of a blade both the distal and proximal ends of which are cut off (T. IV. 18a-b). The right edge of this blade is retouched from the dorsal surface and its left edge is retouched the ventral surface.

There are two notched blades in the tool assemblage. One of them is retouched along its right edge in the medial part and at the distal end (T. V. 5). The other blade has an angular notch in the medial part of its left edge (T. V. 6).

Geometric microliths: Both isosceles (T. V. 7-8) and asymmetrical triangles (T. V. 9) occur. Among the three trapezes one is a symmetrical, regular piece (T. V. 12) while the lateral edges of the two other pieces are not parallel to each other (T. V. 10-11). On the medial part of the right edge of one of these latter mentioned two tools the crust of the original nodule has remained where the implement is not worked (T. V. 10). The right side of the trapeze is concavely truncated (T. V. 11). Crescent-shaped knives (segments) play also an important role in the microlithic assemblage (T. V. 13-14).

Blades with smooth edges are predominant in the microlithic blade industry (T. III. 1-17). Supermicroliths are also present (< 15 mm). The ventral surface of one of the microblades with smooth edges is ribbed (T. III. 8). Besides blades cut off diagonally (T. III. 18-19, T. IV. 1-9) and obliquely (T. IV. 11-13, 15) and their distal ends there is a blade cut diagonally at its both ends (T. IV. 17). At the distal end of a blade with smooth edges there are visible traces of working (T. V. 4). The medial fragment of a bulky smooth-edged blade (T. IV. 19) and a trapeze-shaped medial fragment of another blade (T. IV. 20) are considered to be half-made tools. The distal end of the latter mentioned blade is retouched.

Among worked flakes there is a large bifacial implement (T. V. 15a-b). This implement which differs from the other implements in the material as regards both its size and the quality of manufacture is retouched on its surface here and there with scaly retouch and its base is shaped to be saw-like. The implement is most probably a scraper with three working edges the distal part of which had broken off. Among manufactured flakes a piece obliquely truncated at its distal end (T. VI. 2), a blade-like flake retouched on its right edge (T. VI. 1) and a retouched trapeziform flake (T. VI. 3) are worth to mention.

As for cores the classical conical and cylindrical types are missing. The overwhelming part of the cores found at the site belongs to a more or less spherical form; they are often "multi-oriented" with negatives of irregular blades and flakes. Pieces with a plane base (T. VI. 4a-b-c, 5a-b-c) as well as those with single and double bases (T. VI. 6a-b-c, 7a-b-c) are also present.

The majority of lithic pieces consists of worked flakes (e.g. T. II. 13).

Tool-manufacturing techniques include pearly, fan-shaped and scaly retouches and backed pieces. The industry is mostly microlithic (< 35-40 mm), the tools are manufactured finely and carefully. The few larger pieces are roughly shaped, only their working parts are shaped. The raw material of the finds with a very few exception, like an obsidian core, is hydroquartzite originated from the Mátra Mts. The surface of most of the hydroquartzite tools is covered by white patina.

On the basis of the uniform microlithic character of the industry, of the presence of geometric microliths - first of all that of trapezes which represent a younger component among geometric types - and also on the basis of the technological features we think that the material belongs to the Late Mesolithic.

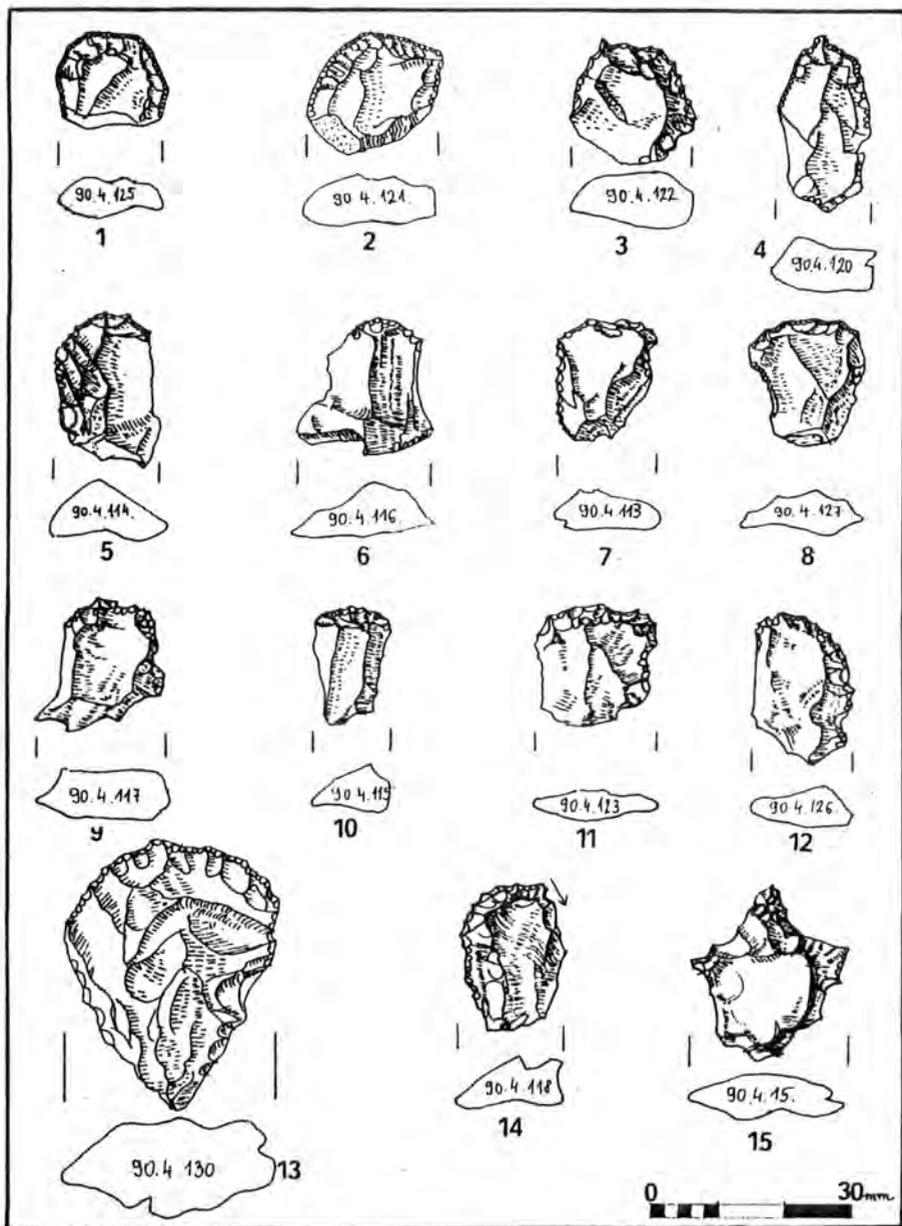


Table I

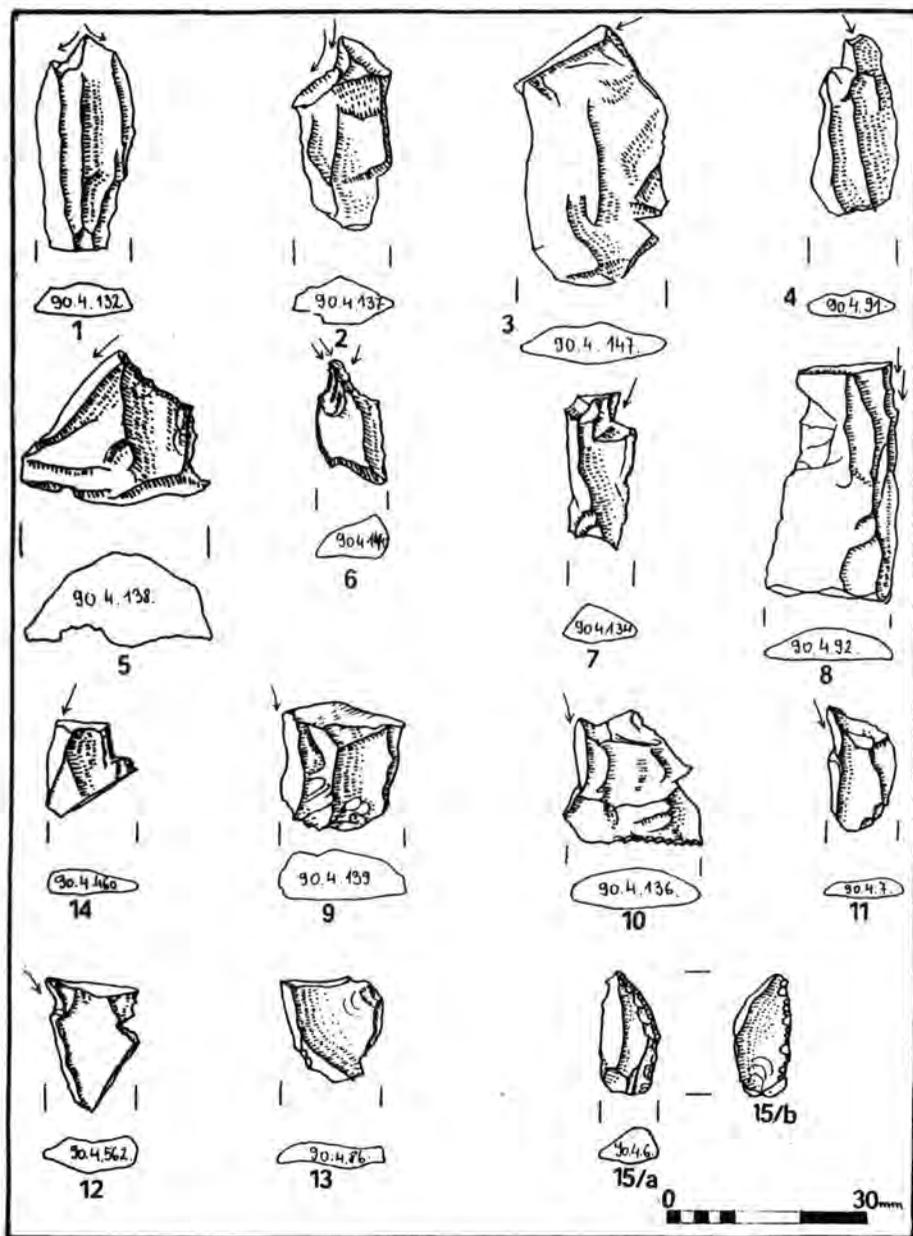


Table II

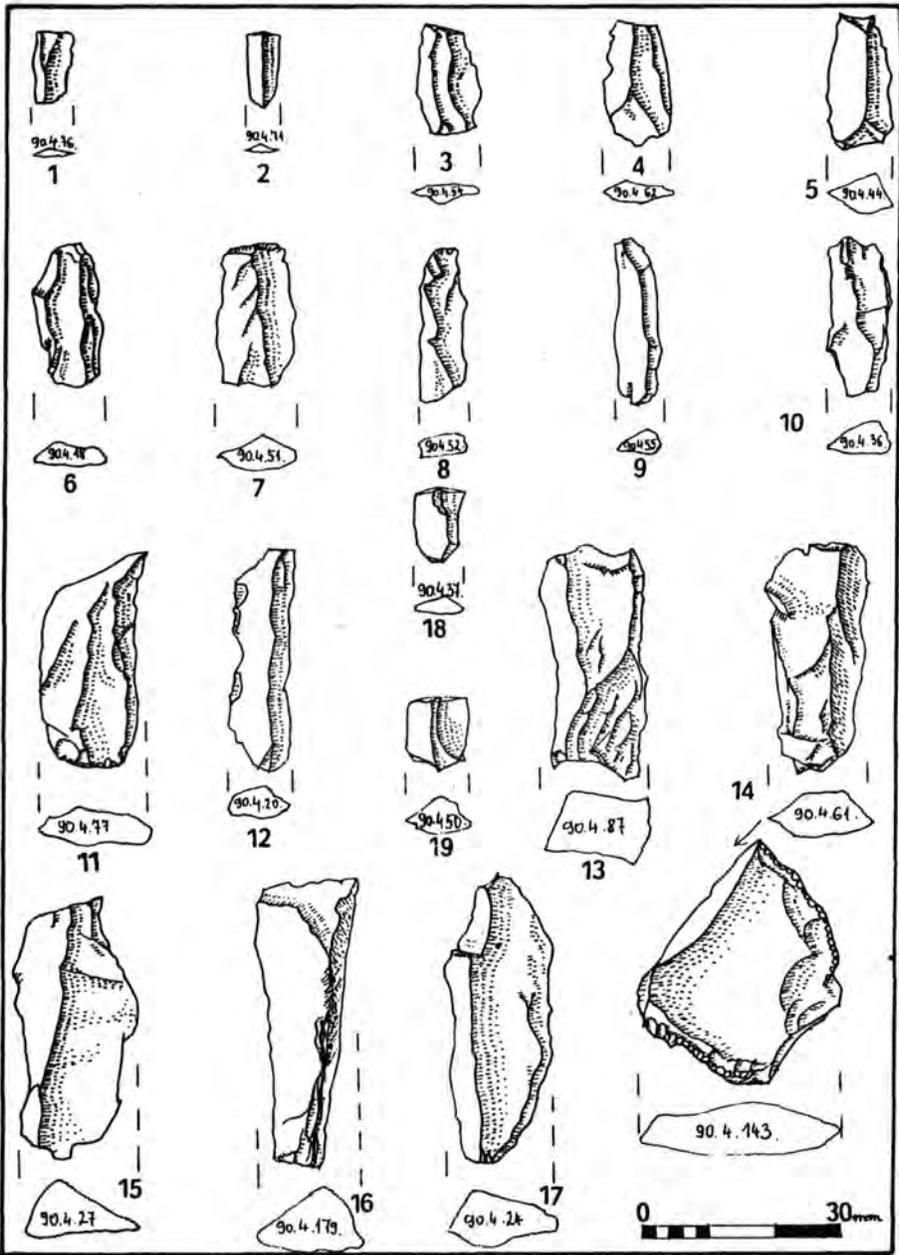


Table III

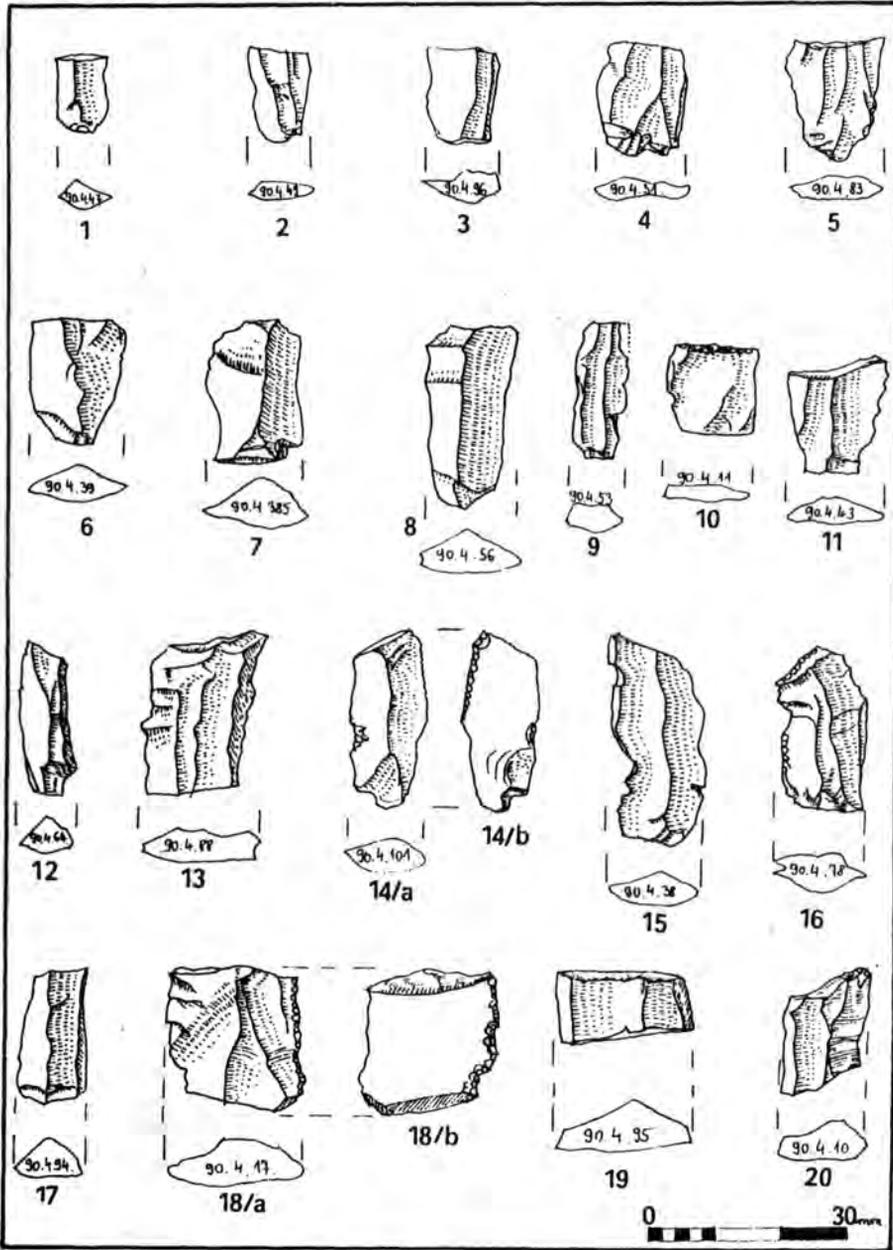


Table IV

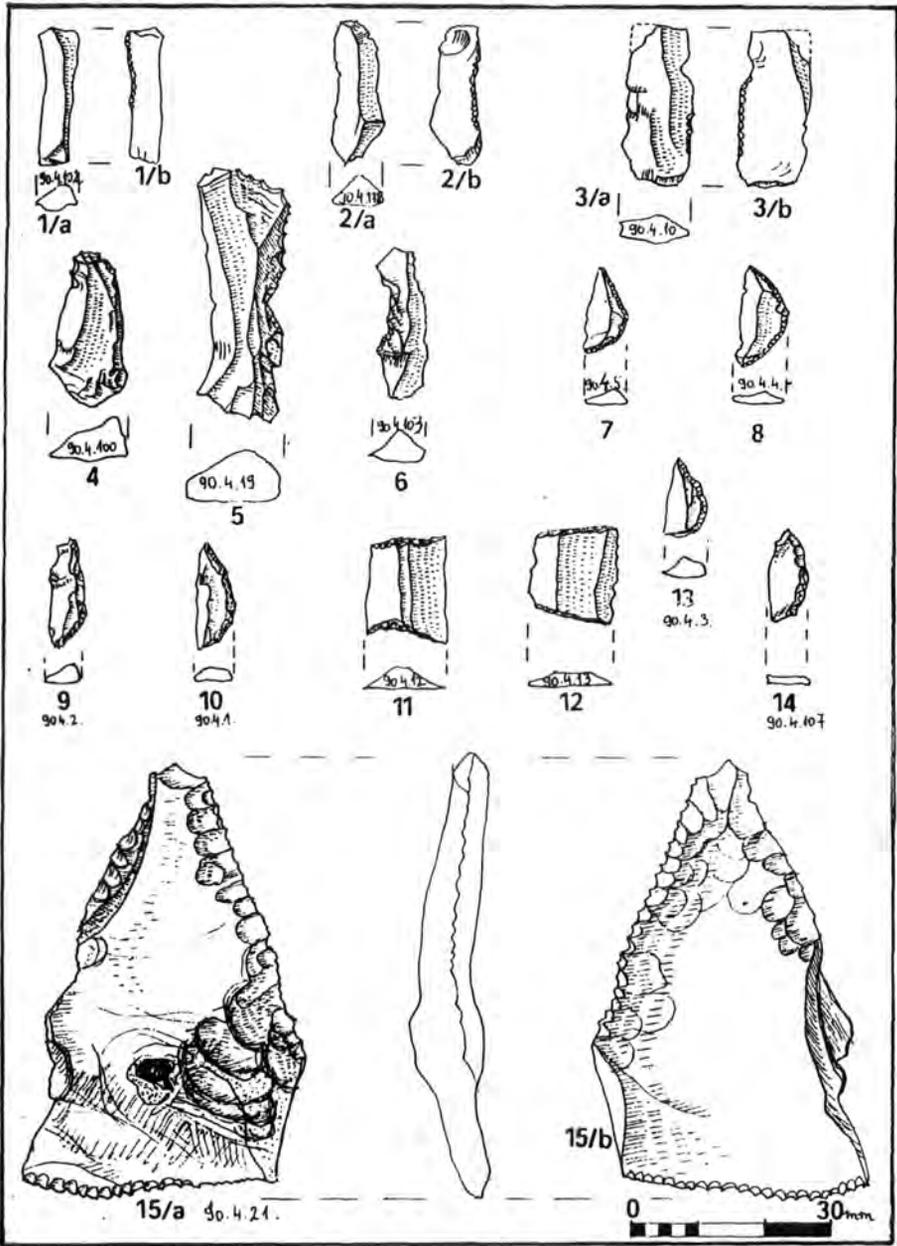


Table V

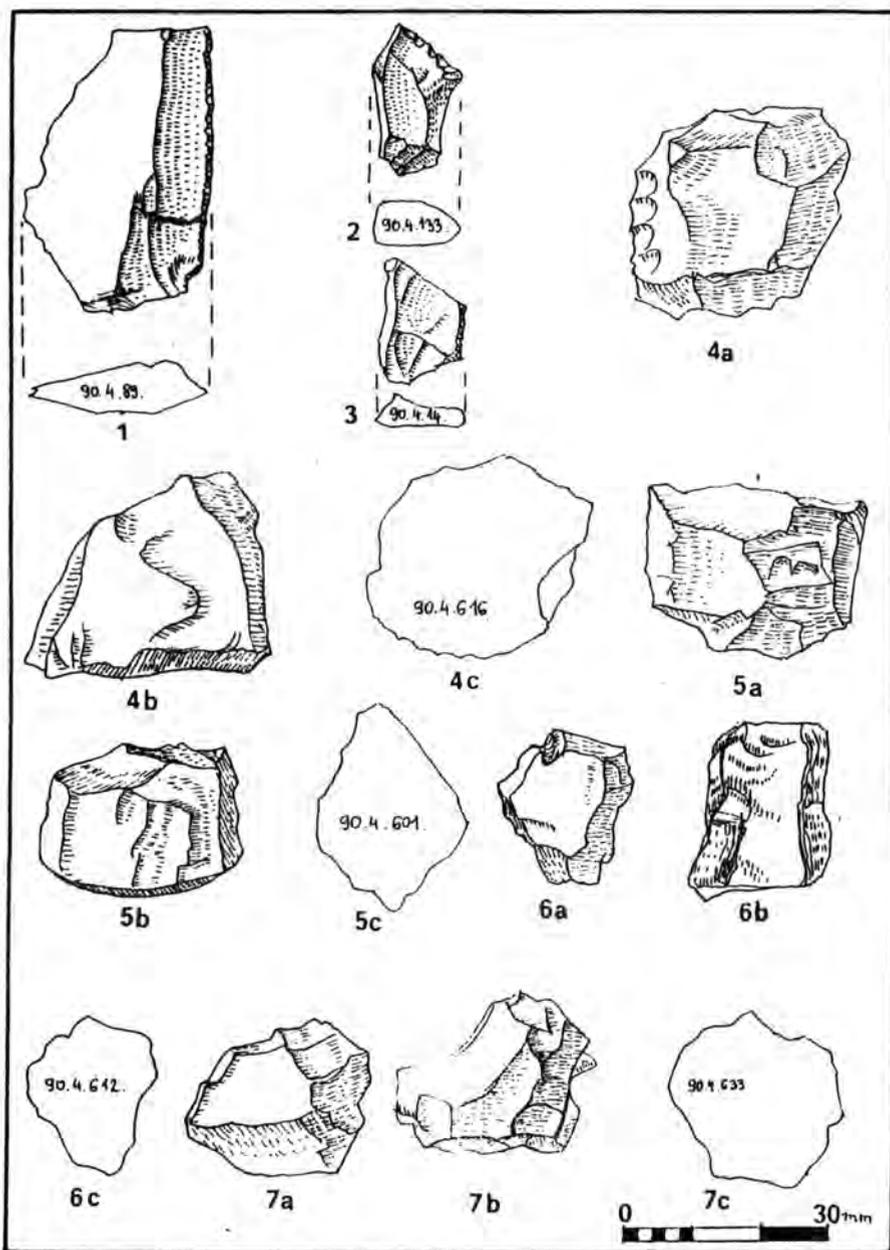


Table VI

CHRONOLOGICAL EVALUATION

Mesolithic archeological material in Hungary as it was mentioned above is mostly atypical and uncertain. Besides the Jászberény material Mesolithic implements have been described so far from the Great Hungarian Plain from Tószeg-Áldozóhalom (HILLEBRAND 1925), Huguaj-Érpatak (HILLEBRAND 1925, 1937, 25), Szelevény (KALICZ 1955, 35, 1957, 16, 83, GÁBORI 1956, 180), Tarpa-Márki tanya (DOBOSI 1969, 1975, 71, 1983, SZATHMÁRY 1977), Békésszentandrás-Harcáspuszta (DOBOSI 1975, 71, RÍRÓ 1984, 28), Nagyléta (SZATHMÁRY 1978), Hajdúbágyos-Legelő (SZATHMÁRY 1978) and Tarpa-Kishegy-Szipa part (SZATHMÁRY 1988). Apart from their lack of stratigraphical evidence only a small part of these materials is suitable for comparative studies. Unfortunately most of the sites in the Great Hungarian Plain yielded only a few quantity of finds quite unsuitable for a morphological evaluation. Most probably it is the tool assemblage of Tarpa-Márki tanya which could be placed into the same horizon where also the finds of Jászberény I belong to. From Tarpa-Márki tanya the excavator reports, among others, trapezes (SZATHMÁRY 1977).

The excavations made in the rock shelter Rejtek N^o I in the Bükk Mts. yielded only modest archeological material (JÁNOSY 1961, VÉRTES 1965, 216) therefore it would be unreasonable to compare it with the Jászberény industry. The Mesolithic settlement excavated in the sand dunes at Sződliget near the Danube (GÁBORI 1956, 1968) which belongs to the few authentic Mesolithic sites in Hungary is older than the Jászberény I settlement. In the Sződliget material a survival of Late Gravettian traditions can be observed and geometric microliths are missing (GÁBORI 1956, 1968, 33, 36) while at our new site already some characteristic features Late Mesolithic industry assert themselves.

Among Transdanubian sites the closed find assemblage found at Szekszárd-Palánk in the inundation area of the Sió (VÉRTES 1962, 1963, 1965, 191-194) is - like Sződliget - older than the Jászberény site. At the same time the lithic industries around Győr in the NW part of Transdanubia (GALLUS-MITHAY 1942, 14-31) could be correlated with the tool assemblage at Jászberény. In the variegated blade industry found at the sites near Győr geometric microliths are represented by both triangles and trapezes. However, because of the uncertain circumstances of their discovery the authenticity of the finds from Győr environment is questionable (VÉRTES 1965, 215, BARTA 1972, 63, 1973, 60). It is advisable to be skeptical also as regards most part of other "Mesolithic" sites in the Transdanubia, it is enough to mention here Vöröstó and Mencshely (LACZKÓ 1929, MÉSZÁROS 1948).

The tools published from Kaposhomok, e.g. the scrapers, the blade point with arched truncature, notched blades and trapezes (PUSZTAI 1957, 99-103) are present also in our material at Jászberény yet in Kaposhomok there are no triangles and crescents which are present in the Jászberény assemblage. At the same time at Jászberény, among others, backed blades are absent. Like in case of Tarpa-Márki tanya it is the presence of trapezes at both Kaposhomok and Jászberény which allow us to put the two sites into the same chronological horizon.

The Jászberény I settlement has no really confirmed analogies among the Late Mesolithic sites in Hungary. Apart from typological analysis there are no stratigraphical-chronological evidences available for us to determine the more exact age of the usually poor industries. The question would be answered after the excavation of the above-mentioned sites.

Nearest confirmed analogy of the tool assemblage of Jászberény finds is known from Roumania where the dune settlement called Ciulesti II in the NW part of Transylvania yielded a variegated lithic assemblage found between two sterile layers (PĂUNESCU 1964, 321-336, 1970, 31-33, 268-269). The following elements of the Ciulesti II industry are considered to be analogies of certain tools at Jászberény: the scrapers, the point, the obliquely truncated blade, the blade retouched in its medial part, the notched and angularly notched blade, though at Ciulesti II both sides of the blade were worked. Like at Jászberény among the geometric microliths found at Ciulesti II triangles and symmetrical and asymmetrical trapezes are present as well as those with concavely retouched sides. Crescent-shaped bladelets also appear. At the Roumanian site the smooth-edged blades are predominant, there are only a few retouched blades. This proportion holds true also of our site. At the same time there is a difference as regards the raw material of the implements, namely at Ciulesti II the ratio of the obsidian is 40 percent (PĂUNESCU 1964, 325) while at Jászberény I the majority of

the implements was made of hydroquartzites from the Mátra Mts. and only one obsidian core was found.

The implements found at Bárca I in Eastern Slovakia (PROŠEK 1959) have numerous similar features to the implements in Jászberény. In the Bárca material the following elements refer to connections with the Jászberény finds; the blade point with arched truncature¹², an obliquely truncated blade³, worked and unworked microliths¹⁴ and among geometric microliths isosceles and asymmetrical triangles⁵ and also an atypical trapeze¹⁶. The Bárca industry was made exceptionally of obsidian.

In SW Slovakia at the site Sered I a variegated tool assemblage made first of all of radiolarites includes, like the Jászberény I site, several types of microlithic tools, eg. scrapers, borers, bec-de-flûte and lateral burin types, blade points with arched truncature, retouched blades, notched pieces, isosceles and asymmetrical triangles, trapezes and crescents (BÁRTA 1957. 5-72, 1965. 159-161, I. LXII-LXIII., 1972. 57-69, 1973. 53-64, 75, 1981. 295-299). Smooth-edged blades are present, among them supermicrolithic pieces as well, in a great number at Sered I. The ratio of retouched blades is insignificant. Yet the Sered I industry differs from the Jászberény tool assemblage in several respects. At our site certain tool-groups e.g. end-scrapers, circular scrapers, several types of points, blades with a convex truncature at their distal parts, denticulated pieces, backed blades are absent so far while they are present at Sered I. Furthermore there is also difference between the two sites as regards the ratio of the tools represented at both places.

It is possible that the Jászberény finds have some contacts also with the tools found at another site in SW Slovakia, at Dolna Streda (BÁRTA 1959, 241-246, 256, 1965. 161, I. LXIV., 1972. 69-70, 1973. 64-65, 1981. 295).

CONCLUSIONS

The cultural position of analogous Mesolithic sites in the N part of the Carpathian Basin is judged differently by different authors. Namely Ciumesti II is claimed to be an Epitardigravettian site (KOZŁOWSKI, J. K. 1973. 321, 330), Bárca I to be a Beuron-Coincy site (KOZŁOWSKI, S.K. 1981. 301) and Sered I is considered to be Sauveterrian (BÁRTA 1981. 296). Some experts already called attention to the presence of certain similarities between some of these sites. J. Bárta established the so-called Tisza valley Mesolithic and the Sered culture (BÁRTA 1972, 1973, 1981) and J.K. Kozłowski and S.K. Kozłowski determined the main tendencies of Central European Mesolithic (KOZŁOWSKI, J.K. 1973, KOZŁOWSKI, J. K. - KOZŁOWSKI, S. K. 1979, 1983, KOZŁOWSKI, S.K. 1973, 1981).

The above-mentioned Late Mesolithic settlements of the Carpathian Basin, including also Jászberény I, may belong to the same chronological horizon, namely to the end of the Boreal and to the Early Atlantic period. A common feature of the majority of these Late Mesolithic industries is besides several other intercultural relations, the presence of trapeze. Trapeze turns up in this region at about 6000 B.C. (KOZŁOWSKI, S.K. 1976). Evolutionary tendencies prevailing all over this region and within this period refer most probably to the existence of intensive cultural interactions among the above-mentioned sites¹⁷.

NOTES

1. The costs of field surveys were covered by the Economic Experts' Committee of the Jász-Nagykun-Szolnok County Scientific Coordination Committee. I express my many thanks for their support here.
2. I discovered the site together with Gyula KERÉKGYÁRTÓ on the 11th of March, 1990. I should like to express my many thanks for his efforts.
3. There are no connections between the Mesolithic and the Neolithic settlement features, neither has the Mesolithic lithic industry any connections with the Neolithic finds. The nearness of Neolithic locality does not query the authenticity of the Mesolithic finds because the material of the two periods are separated horizontally, they are not mixed up with each other. For example at Dolna Streda in W Slovakia there were also Neolithic settlement features besides the Mesolithic ones (BÁRTA 1959). In the Jászberény I site also Celtic and Arpadian age ceramic fragments were found as stray finds besides the Neolithic ones.

4. PĂUNESCU 1964. Fig. 4. 5, 11.
5. PĂUNESCU 1964. Fig. 4. 21.
6. PĂUNESCU 1964. Fig. 4. 12.
7. PĂUNESCU 1964. Fig. 4. 4.
8. PĂUNESCU 1964. Fig. 4. 14., 1970. Fig. 19. 29.
9. PĂUNESCU 1964. Fig. 4. 19, 24.
10. PĂUNESCU 1964. Fig. 4. 8-9. 13, 16-17, 22-23. 25, 27.
11. PĂUNESCU 1964. Fig. 4. 26.
12. BARTA 1972. Fig. 10. 13.
13. BARTA 1972. Fig. 10. 28.
14. BARTA 1972. Fig. 10. 29, 31. 33-36.
15. BARTA 1972. Fig. 10. 1-7.
16. BARTA 1972. Fig. 10. 26.
17. Here I should like to express my many thanks to Viola T. DOBOSI for her help during the study of the material and for reading the manuscript of this paper.

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