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CADASTRE OF PALAEOLITHIC FINDS IN HUNGARY STATE OF ART 2005

A survey of known localities with Palaeolithic finds in Hungary was published 30 years ago, comprising 158 sites from the Palaeolithic and the Mesolithic period (DOBOSI 1975). The necessity of collecting recent data can be argued not only on the strength of the round anniversary but also the increase in the number of sites and the increase of available information. The past few decades has brought about important changes in the assessment of the chronological-cultural features of the Palaeolithic period in Hungary. The enrichment and modifications in the patterning can, in itself, give ample grounds for a new summary.

New cultures have been 'born':

Bábonyian (RINGER 1982)

Jankovichian (GÁBORI-CSÁNK 1993)

Ságvárian, later on, the Ságvár geochronological unit (GÁBORI-CSÁNK 1978; DOBOSI–VÖRÖS 1987).

As a result of ongoing revision of the finds, a range of old technical terms lost their relevance, such as:

– 'Loess Palaeolithic': after the failure to apply the classical French system to Hungarian material, the second half of the Upper Palaeolithic period was summarised under this term. The name raised the embedding media (loess) to the rank of essential importance as eponym element of a period, instead of the archaeological content; it is true, only for a short time and even then, not perfectly consistent with the known data.

– The few years of existence of the so-called 'Pilisszántó culture' or 'the cave Eskimo culture' came to an end when on open-air sites in the vicinity of Pilismarót, backed bladelets, leading and almost exclusive finds of the 'Pilisszántó culture' came to light. They supported the hypothesis that the Late Glacial layers of North-East Transdanubian caves were not specific of a highly specialised culture but the cave sites had special function. That is, they represent no independent cultural identity but the heritage of the transitional hunters' camps of the Late Palaeolithic Gravettian population.

– By the delineation of the Jankovichian culture, the term 'Transdanubian leaf-point culture', earlier Transdanubian Szeletian culture has to be annulled from Hungarian Palaeolithic nomenclature.

– The term 'grobgerätige Mesolithikum' (Mesolithic with coarse tools) is the result of a long-life misunderstanding and erroneous interpretation. It has got gradually frayed from technical literature.

On the basis of recent studies, we can annul from the list of Palaeolithic sites mentioned in 1975 the followings:

– Zalaegerszeg-Brickyards (MARKÓ 2000b, 77)

– Tarkő rock shelter – When authenticating the finds supplied by B. Estók, L. Vértes found no Pleistocene layers in the rock shelter.

The author, personally, has doubts about the human origin as well as the Palaeolithic age of the scratches described from the Hillebrand Jenő cave, comprising an elaborate system of cavities (VÉRTES 1965, 182). The neighbouring Kőlyuk cave, in itself not a typical 'dwelling cave' yielded cave bear skulls interpreted by Vértes as cultic deposit (VÉRTES 1965, 181). Till the full publication of the excavation documentation the communication indicating cave-bear cult should be treated with due caution. Just on the strength of its potential cultural historical significance, such statements would deserve authentic resources.

The chronological framework of our notions on the Palaeolithic period were also extended and modified. Till the discovery of the Vértesszőlős settlement, all finds older than the Würm Glaciation were classified summarily as Lower Palaeolithic. Since then, the assessment of chronological order has been greatly refined.

The fundamental changes in the Palaeolithic chronology can be largely attributed to radiometric dating, getting more and more reliable, refined and calibrated by other methods as well. It seems that the debate between the followers of short and long chronologies has precipitated in Hungary as well, not so much about the principles but the chronological position of certain sites, sometimes not lacking a personal motive.

In the opinion of the author, the actual value of a site does not depend on mere chronological dates (see, e.g. the young age of Gönnersdorf, Pincevent, or the Sungir cemetery does not diminish their incredible scientific value!), and it is no way the task of the archaeologists to manipulate with these dates.

The possibilities of adopting global chronological systems like oxygen isotope dating and possible sources of error has not been treated by Hungarian research as yet. It is not without interest to us how much we can generalise experiences obtained in the Gulf of Mexico or the Greenland ice sheet, and make them a basis of local chronologies now when the importance of regional factors, the mosaic-like development is getting more and more attention.

Hungarian Palaeolithic research has inherited and newly generated problems. Some are theoretical, like the question of leaf-points. They seem to attract discussion. Basically, problems in the interpretation started with the excavation of the Szeleta cave when H. Obermaier considered the excavated leaf-points to be fakes and induced a long debate with Ottó Herman, fighting for the acknowledgement of the Hungarian Palaeolithic, who took it as an attack against his personal honour. The origin, entity, connections and chronology of our leaf-point industries have been treated by heaps of Hungarian and international technical papers and it seems that we cannot reach a solution acceptable to everybody as yet.

An important motive in the research of the Szeleta culture was the international symposium on related problems in 1966. The summary of the proceedings, worked by L. Vértes and consented by the participants is a concise summary of the view expressed in the 1960-ies (VÉRTES 1968). The new developments can be best seen compared to this document.

One of the roots of the problem is the theoretical basis.

There is no objective definition, checklist to define criteria of an archaeological culture. For the assignment of certain implements, typological features supported by technological characteristics can be adequate. For the identification of a Palaeolithic culture, however, the totality of typological characteristics observed can be only the minimal condition, observed in similar ways at several sites and in statistically rateable quantities. It is even more convincing when the characteristic tool-kits, 'industries' can be fit into wider units, can be characterised by a biocoenosis, its distribution has definable geographical and chronological framework, with known hunting preferences, settlement strategy and possibly all provable data are collected; at least, as much as we can.

The practice of defining culture on merely typological basis should be revised; in respect of the leaf-point industries, this is specially necessary. The metric and morphological differences between leaf-shaped tools of certain sites can be significant, and it is difficult to accept that a wide range of contemporary leaf-point industries separated at least on the facies level used to exist in the same narrow geographical region.

Recently, leaf-points have been found on a range of authentic sites with good stratigraphical record where the basis of cultural assignment are the dominant 'accessory elements' found together with the leaf-points.

Terminology in such cases is far from being a formal problem alone. The decision, whether we consider these find assemblages as Gravettian with leaf-points of as developed Szeletian can raise a number of further problems (origin, distribution, descendants, chronology etc.).

On the basis of the above mentioned experiences we have to consider that the leaf-points are not culture-specific but function-specific, and localities of the developed Szeleta are hunting camps with special functional tool kit.

In several papers, Á. Ringer demonstrated a direct line of development concerning the Middle Palaeolithic Bábonyian – Early – Developed (Solutroid)-Szeletian cultures (RINGER 2001, 94), therefore his recently expressed opinion is rather surprising: 'It seems that the supposition that the descent of the Szeleta-culture is in close relation to that of the Gravettian. The Szeletian industry, formed on the basis of the Bábonyian proves a direct transition between the Middle Palaeolithic and the Upper Palaeolithic on the territory of Central Europe' (RINGER 2001, 82).

K. Simán has a different opinion on the issue of Bábonyian-Szeletian. She wrote: '...what Ringer calls 'Bábonyian' is actually a series of Szeletian workshops, which may include different phases with stronger or weaker Middle Palaeolithic traditions and which are related to the more or less permanent hunters' camps in the nearby caves' (SVOBODA–SIMÁN 1989, 307).

Moreover, 'There is no direct genetical contact between the lower and the upper bifacial-leptolithic industries in the Szeleta-cave. The leaf-shaped implements indicate formal and functional similarities and not cultural ones' (SIMÁN 1990a, 192).

A minor issue is the so-called 'Epipalaeolithic' or 'Epigravettian' problem.

The foreword 'epi' can be applied, on the strength of its actual meaning, which is not simply following the antecedents chronologically (in this sense, the prefix 'post' would be appropriate, meaning Holocene

cultures); the prefix 'epi' implies also genetical connections. The Late Glacial settlements in Hungary seem to belong to the Gravettian entity s.l., that is, the potential descendants in the Holocene would be correctly covered by the collective term Epigravettian. The term 'Palaeolithic' is reserved here in any combination (geological-stratigraphical-botanical-faunistical sense) to the general denomination of Ice Age cultures.

The other great circle of problems is the local continuity. This problem cannot be raised reasonably yet for the Hungarian Lower and Middle Palaeolithic. The great chronological gap could not be bridged so far by convincing, interdisciplinary scientific efforts. The question of local transition between the Middle and the Upper Palaeolithic, and to some extent, between the Palaeolithic and the Mesolithic, has been raised frequently. This question is of great importance, not only from scientific aspect but also in respect of methodology and semantics. Does 'transition' mean the moment of changes, when a given cultural complex is just turning into another? Can such moment be materialised in the static condition of single layer/settlement unit of one site? If the answer is affirmative, what is the minimal quantity and quality of finds that is enough to catch the changes objectively? The big cultural gap between the Middle and the Upper Palaeolithic is still heavily infiltrated by human evolutionary changes. The actual lack of anthropological finds, unfortunately, cannot be substituted with typological evidences, neither with radiometric dates. We have to give heed to the categorical opinion expressed on the occasion of the Upper Danube region sites often raised as analogies of Hungarian Middle Palaeolithic industries (the Bábonyian-kinship) '...analysis of rich archaeological materials, human skeletal remains and chronostratigraphic data allows the following conclusion to be drawn. The Upper Palaeolithic of the Suabian Jura begins abruptly with the appearance of the Aurignacian'. As they have ample anthropological evidence there, it is evident that the Neanderthal forms are accompanied by Middle Palaeolithic finds while the sapiens forms occur together with Upper Palaeolithic finds. '...Although we assume that interaction occurred between modern humans and the indigenous Neanderthal population, the archaeological record of the Suabian Jura lacks conclusive evidence for this interaction...' (CONARD–BOLUS 2003, 365). And, 'interaction' is very far from a continuous internal development! To solve the question in Hungary, we definitely need more data and evidences.

From the analysis of the Hungarian material, K. Simán drew the following conclusions: 'The greatest change was that from the Middle to Upper Palaeolithic which included not only technological and cultural changes but also anthropological ones from Neanderthal to modern man. It was the last cold wave of the Würm.....and created a more-or less empty zone ready to accept the new waves of population' (SIMÁN 1990b, 19).

Just because of that, the real content of 'transition between Middle and Upper Palaeolithic' has a major historical significance surpassing mere terminology. It is clearly proven that the Upper Palaeolithic can be connected to the *Homo sapiens fossilis* while the Middle Palaeolithic is the age of (generalised or specialised) Neanderthals. The archaeological term 'transitional culture' indicates a transition between the heritage of the two types of men which is a bold and not proved statement in itself; to argue, that this historic change would take part on the territory of present-day Hungary is a far-fetched hypothesis without actual proofs.

The other part of the problems of Hungarian Palaeolithic research is of technical character. We can reckon the disappearance of unexplainable white spots on the map as clear success. The detailed and precise field surveys conducted by A. Péntek and S. Béres in the western and southern parts of the Cserhát Mts., the eastern fringes of the Galga valley yielded a vast number of sites. A. Markó joined these field surveys and has been performing authenticating excavation on the most important sites. Their so far unpublished data are mentioned here as Péntek-Markó p.c., gratefully acknowledged by the author. Further white spots, like the Somogy and Zala hills, the Mecsek and the Bakony Mountains are awaiting for similarly devoted and successful surveyors.

Part of the localities yielded no organic materials due to unfavourable fossilisation conditions. On such sites the reconstruction of the living environment can be essayed only using indirect proofs. This phenomenon is not confined to Hungary and we cannot change it very much.

Let us make some comments on the structure of the Cadastre. The author took over the collecting points/sites from the 1975 Cadastre that were either supported by new evidence or have not been annulled by negative proofs. New interpretation was added where new data emerged.

It is a difference compared to the former Cadastre that this time *only* the Pleistocene (or determined at least partly Pleistocene) sites were enumerated.

The Cadastre has been constructed in a uniform manner: after a short general introduction, the data are arranged according to cultural units in the order of chronology – topography – typology – localities. The

list of references is confined to the absolutely necessary items. Though all efforts were made to include relevant data, the possible incompleteness of the Cadastre is the responsibility of the author. Should any data of importance be left out, it is sincerely hoped to be made up in the next Cadastre.

The somewhat simplified outlines of Hungarian Palaeolithic according to universally accepted conventional schemes is given below:

LOWER PALAEOLITHIC

On the level of technical evolution when we can already speak about conventional tools and types, there are two large phyla separated all over the Old World: 'hand-axe industries' and 'pebble industries'. The former one is represented in Hungary only by some archaic forms on certain sites (archaic *technology,* in itself, is not merely a Lower Palaeolithic feature!). Leaf-point industries of the Middle Palaeolithic are probably distant descendants of these hand-axe cultures.

The only Lower Palaeolithic site in Hungary, published and supported with full scientific argumentation, Vértesszőlős belongs to the tradition of pebble industry.

The chronological position of pebble tools found in North-East Hungary is mainly supported by indirect proofs only and without large-scale excavations they are lacking the accompanying finds that would support their age and cultural identity. Hand-axes of Lower Palaeolithic forms described from several spots on Miskolc-Avas (RINGER 2001a, 69) seem for the author not convincing to accept them as immediate Lower Palaeolithic antecedents of the bifacial Middle Palaeolithic industries.

Á. Ringer enumerated in several studied objects, worked fragments/tools that were

- picked up from sediments of Lower Pleistocene age, determined in course of his own stratigraphical studies,
- separated on typological grounds from mixed materials representing several archaeological periods.

Instead of entering into discussion on the his rather peculiar terminology and the loosely treated chronological framework, the author enumerates here from Ringer's recent summary that were listed there as of Lower Palaeolithic age.

Chronology

The 'proximal end' of the chronological framework seems more certain; the Lower Palaeolithic lasted till the Riss/Würm or Eemian interglacial, the end of the 5c Emiliani zone, in absolute dates, around 130 thousand. The beginning in the Carpathian Basin can be dated on the strength of a wide variety of direct and indirect absolute chronological dates: at Miskolc-Kiskőbánya, the interglacial red soil of the Lower Palaeolithic with worked quartzite pebbles was dated by pedological argumentation and paleomagnetic dating older than 730 kyears (RINGER 2001a, 67).

Finds from Vadna-Temetődomb were also in red soil, dated to Old Pleistocene (RINGER 2001a 67–68).

The age of the Vértesszőlős samples varied between 370 and 180 thousand, depending on the sampling site and the method used. The site, however, is firmly dated by paleontological evidence to the different phases of the second (Mindel) Glaciation (KRETZOI–DOBOSI 1990), independent of short or long absolute chronology. The most convincing argument for the Lower Palaeolithic age of the site is the *Archantropus* remains.

Topography

The current knowledge on the distribution of the localities reflects state of research and cannot show us the actual distribution, even less, the coeval needs of the Lower Palaeolithic communities.

Typology

The few single hand-axes described as Lower Palaeolithic stand alone and represent no coherent industries.

Typology of pebble tools is firmly based on the experiences obtained on 8 thousand artefacts from Vértesszőlős. The average size of the tools is 3–4 cm, made partly on silex, partly on quartzite pebbles, approximately in 50-50 % ratio. The 5800 standard tools could be classified into 50 types. Most frequent among them were choppers-chopping tools (45 %) and scrapers (37 %). Within the 5 cultural layers of the settlement, there is an obvious development in the quality of working, definite tendency in the formation of size and the ratio of silices is growing compared to quartzite.

Localities

Vértesszőlős (KRETZOI–DOBOSI 1990)

Miskolc

The *Bársony-house* hand-axes, with uncertain age and culture; even the typological determination of the tools is questionable; we call them hand-axes only respecting Ottó Herman and tradition of research, because they are really not hand-axes, rather large leaf-points.

Kiskőbánya (RINGER 2001a, 67–68) From two Lower Palaeolithic layers, artefacts made of quartzite pebbles and a leaf-shaped point came to light.

Avas-hill at several point, artefacts were found '*probably of Lower Palaeolithic age*' (RINGER 2001a, 559)

Korlát - Ravaszlyuktető

The site has been investigated for several decades (excavated by J. Csalogovits, P. Patay, L. Vértes, J. Korek, A. Saád and K. Simán, with numerous field surveys); however, the debate over its cultural identification could not be closed.

There are basic differences in the interpretation of the site between the two researchers currently dealing recently with the site Korlát Ravaszlyuktető (and, in a parallel way, Miskolc-Avas). In the debated question of chronology, Á. Ringer opened the chronological 'scissors' down, till the Lower Palaeolithic, (RINGER 2001, 69) while K. Simán opened it upwards. In her opinion, at both localities we can see workshop materials of mixed age (even Neolithic or Bronze Age), planted each on an important source of raw material. (SIMÁN 1995, 57): 'At the present state of analysis, the workshop is attributed to the Upper Palaeolithic, although some features suggest that earlier and later production may be considered' (SIMÁN 1995, 41)

In her later paper, she dated the site from the Upper Palaeolithic till the Bronze Age, without actual proofs on Lower Palaeolithic, noting:

'There is no way currently available to us by which we can separate the apparently one-layered deposits spread over vast area, folded by cryoturbation, dissected by dry washes, weathered by erosion, according to different chronological periods' (SIMÁN 1999, 36)

Edelény - Akácos hill (RINGER 2001a, 68). In the upper parts of the nearly 10 meters high sediments deposited along the high terraces of the river Bódva, artefacts made of quartzite and silex as well as fabrication debris were found.

Vadna - Temetődomb (Cemetery hill) (RINGER 2001a, 68) On the river terrace, two Lower Palaeolithic choppers made of andesite were found.

Mónosbél In Middle Pleistocene calcareous tuff, non-local pebbles were collected by I. Skoflek.

Budapest - Buda, Castle Hill At several localities under the Úri street, worked fragments came forth from calcareous tuff contemporary with the Vértesszőlős deposits.

MIDDLE PALAEOLITHIC

The past three decades brought about important new results in the study of this period. A new culture was delineated (Bábonyian), the revision of a group of old sites solved crucial questions (Jankovichian), by the help of new localities, fresh analogies, related industries could be connected (Tata and the Taubachian)

For an outline of grouping the Hungarian Middle Palaeolithic cultures, the typological scheme of the lithic industries were used with inferred genetic connections, without possible local facies: (DOBOSI 2000a)

bifacial (Lower Palaeolithic) antecedents < → Bábonyian → Early Szeletian
→ Jankovichian

Pebble-working (Lower Palaeolithic) anteoedents < → Tarbachian
→ Charentian

Classical Moustérian: Subalyuk

BÁBONYIAN

A bifacial Middle Palaeolithic industry spread from France till the river Volga, characteristic of temperate climate belt in Europe, the Hungarian variant of Micoquian. Separated by Á. Ringer on the basis of his field surveys between 1966–80. Considered its age one step older than classical Micoquian, but supposed the same roots on the basis of identical type spectra and bifacial technology.

Chronology

Dated by TL on the sediments of *Sajószentpéter - Margitkapu dűlő* pedocomplex between 130 and 93 thousand BP, the end of the Eemian interglacial and the beginning of the Würm at oxygen isotope stages 5e-5c (RINGER–ADAMS 2000, 119).

At *Sajóbábony - Méhésztető*, the TL age of the loess under the Eemian interglacial soil was measured 157.9 ± 23.5 and 173.0 ± 14.2 ka, respectively (RINGER 2002a, 41)

Topography

The settlement strategy of this culture, known mainly from open-air sites so far can be fairly well estimated on the basis of the eponym site. Located to the North of Miskolc, the settlement is situated on the western side of the wide alluvial valley of the river Sajó. It is lying in the north-eastern forelands of the Bükk Mountains on the eastern margin of a former foothill surface, at an average altitude of 350 meter a.s.l. The Méhésztető itself is a 202–205 meter high hill-top on the southern bank of the Bábony-stream, running from west to east. The location of the site is ideal: the plains to the North of the fork of the rivers Sajó and Bódva as well as a considerable part of both river valleys can be seen from this spot.

In the decade following the identification of this cultural unit the known distribution area was confined to a narrow region. This was due to the lack of available information. According to the recent state of research, the limits of the distribution area are close to the Danube. The coeval bifacial industry known from North-Eastern Transdanubia, the Jankovichian culture (or at least some technological features characteristic of this industry) is 'spreading' towards the East. If, finally, we will have authentic, stratigraphically supported direct chronological information on the two bifacial descendant cultures with identical roots, we can anticipate the re-phrasing of their cultural definitions.

Typology (RINGER 1982, 91–92)

The industry abounds in archaic triangular hand-axes (6 %) with asymmetrical cross-section, and a dividing ridge on the ventral side. The basis of the tool is often chopped off, straight or obliquely. The finish of the edge is also asymmetrical; the average length of the tools is 10–12 cm.

Apart from the hand-axes, there are numerous scrapers on geometrical blanks, Moustérian scrapers (29 %), often with transversal edge, typically with trapeze form outlines.

Most specific types are the knives: Bockstein, Volgograd, Pradnik, Bábony type knives have been described.

The ratio of types with Upper Palaeolithic character is 14 %.

The dominant raw material is Szeletian felsitic porphyry (80 %), basically influencing technology. Besides, hydroquartzite varieties from Avas and Korlát comprise essential quantities (14 %, RINGER 1982, 58).

Localities

Sajóbábony
– *Méhésztető*
– *Kövesoldal*
Mályi
– *Öreghegy II.*
– *Öreghegy III.*
– *Téglagyár (Brick factory)*
Miskolc
– *Szabadkatető*
– *Kánástető* (RINGER 2001, 78)
Sajószentpéter - Nagykorcsolás (SIMÁN 1985)
Szob - Öregfalu dűlő I: The well-known bifacial tool was collected by A.J. Horváth, described by A. Markó as Volgograd-knife (MARKÓ 2002 49).

From the find assemblage of old localities, some objects were classified into this unit on typological-technological basis:

Szeleta cave
Diósgyőr - Tapolca cave (with Taubachian types as well)
Balla cave (RINGER 2001a, 78)

Till the complete elaboration of the finds, some new bifacial assemblages from the territory of the Cserhát Mts. have been *pro tempore* introduced as Bábonyian:

Galgagyörk environs, surface collections (MARKÓ et a. 2002)
– *Öreghegy*
– *Komárka* (with Upper Palaeolithic and younger implements)
– *Csonkás* (with Upper Palaeolithic implements)
Legénd - Káldy farm 1–3

JANKOVICHIAN (GÁBORI-CSÁNK 1993)

In two famous Hungarian caves, spectacular in themselves as well as their natural environment, namely the Szeleta-cave and the Jankovich cave near Bajót, excavations were started in the early days of Hungarian Palaeolithic research. The concept 'Transdanubian Szeleta culture' was born on the basis of the bifacial tools found in the latter, generating a range of problems. The differences between the types and the technology of the two tool assemblages were evident and a range of studies dealt with the problem and suggested different ways for bridging the apparent differences. On the basis of the excavations in the Upper Cave at Máriaremete, with ample faunistical finds and the occurrence of *Homo neandertalis* remains, V. Gábori-Csánk could accomplish a revision of the cave finds in the Gerecse-Pilis-Buda Mts. The independent Middle Palaeolithic bifacial industry was described first in 1973 under the name Jankovichian, published in details in form of a monograph in 1993 (GÁBORI-CSÁNK 1993).

Chronology

The biostratigraphical data set the age of the assemblage to the period between the Early Würm and the end of Würm 1, that means in absolute chronological terms between 50 and 35 ka, on the grounds of C-14 dates (GÁBORI-CSÁNK 1993, 89).

According to Á. Ringer, the industry could be dated to the middle of the Middle Palaeolithic period around the cold maximum of the Würm 1 at 72-60 thousand (RINGER 2001a, 81).

Topography

Originally, the distribution area of the culture was confined to the manageable and well confined area of North-East Transdanubian caves. Recently, some localities from the Bükk Mts. emerged. With the exception of one stray find from open-air context, it is known from caves only.

Typology

This is a bifacial Middle Palaeolithic industry with Acheuléan tradition with analogies of the Central European Micoquian – (Altmühl group, Upper Danube region).

The leading type is the 'scraper-point', i.e., leaf scrapers retouched on their surface chonchoidally, slightly asymmetrical to their axis, with an average length of 60–70 mm. Their ratio on the eponym site reached 35 %.

It is a flake industry, the basis of the tools thick, the bulbus is often minced, the talon facetted. The cross-section of the tools is plano-convex (with a peak), the dorsal side is often only partly retouched or smooth.

Besides the leading types, general Middle Palaeolithic types occur like Moustérian scrapers, denticulated and notched implements in the usual size range, i.e. 40–60 mm.

No Upper Palaeolithic trend was observed.

On the eponym site, 60 % of the tools and 81 % of the complete industry was made of radiolarite from the Gerecse Mts. (GÁBORI-CSÁNK 1993, 69–71). In course of the revision of the old excavation material in the Hungarian Geological Institute, a Szeletian felsitic porphyry flake was found in the fauna of the excavations by Hillebrand (BÁCSKAY–KORDOS 1982), further extending the proofs of the connections between the Gerecse and the Bükk Mts. in the Middle Palaeolithic period.

Localities

Jankovich cave

Szeleta cave related pieces separated in layer 3 of Kadić (RINGER–MESTER 2001, 15)

Háromkút cave (RINGER 2001a 81) GÁBORI-CSÁNK 1993, 131–143.:

Kiskevély cave

Pilisszántó II cave

Csákvár rock shelter

Szelim cave B layer (probably also C)

Bivak cave

Remete-Upper cave

Galgagyörk - Májóka 3 (leaf-point made of Szentgál-type Transdanubian radiolarite) (MARKÓ et al. 2002, 256)

Hont

– *Csitár* unpublished excavation by M. Gábori, the Middle Palaeolithic bifacial tools mentioned by V. Gábori-Csánk (GÁBORI-CSÁNK 1984a, 21).

– *Babat (?)* there were several efforts to identify the topography of the sites around Hont, most recently, by the author and K. Simán. (DOBOSI–SIMÁN 2000) Leaf-points from the Babat-puszta came to light 10 years before the excavations of M. Gábori at Csitár, unpublished. In the recent field surveys by A. Markó it turned out that the two sites are separated by a deep valley; only the settlement Csitár could be identified with certainty. (A. Markó, p.c.)

– *Molnárhegy* (field survey by A. Markó, p.c.).

TAUBACHIEN

Tata - Porhanyó is one of the earliest known Hungarian Palaeolithic settlements. Its special, in Hungarian relation unique set of finds offered the possibility of several terminological essays. The finds were most thoroughly treated by L. Vértes; he reserved himself for an exact definition of the culture, risking only a general relation to the small-size pebble working industries (e.g., Micro-pontiniano). In his paper published after his death he tried to introduce the term 'Epichopper (Zitrus)-industry' (VÉRTES 1970), but his suggestion did not penetrate the professional routine. Probably the same fate will be shared by the suggestion of L. Bánesz, collecting the industries of the Szepesség (Spiš) region travertine sites under the collective term *Gánovcian.* (BÁNESZ 1991, 58)

The site complex *Weimar-Ehringsdorf-Taubach* became known since the 2nd half of the 19th century. Its member dated to the Eemian interglacial period, *Taubach* is thy eponym site of an independent cultural unit since 1969.

Besides the eponym site, the Moravian *Kůlna cave* comprising the finds of several cultures is especially suitable for clarifying the stratigraphy and chronology of this culture.

By the end of the 1980-ies, Á. Ringer used the term (Taubachian) for all the Middle Palaeolithic pebble tools older than the Würm glacial in Hungary. Moreover, he separated the relevant industries regionally. He described a Bükk-Taubachian, and within this unit, separated a cave- and an open-air Taubachian in partly different chronological position (RINGER 1989, 53). This minute division seems not adequately founded, given the scarce quantity and quality of the find material.

Accepting that the character of any Palaeolithic industry is basically determined by the average size of the tools, the abundant assemblage of Tata, comprising several thousand tools in very narrow size range, that is, uniformly small size, produced of pebbles, the site can be assigned to s.s. Taubachian. A technologically related complex occupying narrow geographical limits and bridging vast time-horizons can be delineated (MONCEL 2003). It is more realistic, though, that the seemingly related microlithic industries present from the Lower Palaeolithic to the end of the Middle Palaeolithic should be considered different facies of certain time horizons.

Chronology

The stratigraphy of the *Kůlna cave*, its palaeontological and absolute chronological data helps us to date the eponym site *Taubach* to the second half of the Eemian interglacial.

The Th/U radiometric date obtained from the Tata calcareous tuff section for the age of the cultural layer yielded 99.4±0.1 kyear (SCHWARCZ–SKOFLEK 1982, 590). It is corresponding to the 5th oxygen iso-

tope stage of Emiliani approximately, contemporary with the Bábonyian culture of the Eastern Bükk region.

Topography

The distribution of the culture is confined to Central Europe, from South-Eastern Germany, across Bohemia and Moravia to Slovakia and Hungary (Taubach, Szepesség, Tata); till the Bükk Mts., it is known along the foothill regions surrounding larger basins, close to thermal springs (KAMINSKA 1999, 26). Its apparent connection to travertine limestone is one of the specific features of the industry. In Central Europe, there are no travertine sites known with handaxes; however, the microlithic pebble industries can occur in cave sites. That is, not all the microlithic pebble industries are in travertine, but all the travertine sites contain microlithic pebble tools, i.e., chopper-derivatives, under any name.

Typology

The biggest quantity of tools, suitable for statistical analysis as well was found at the Tata - Porhanyó site. In altogether 12 excavation seasons, conducted by several archaeologists, (T. Kormos L. Vértes, V. Dobosi–J. Cseh) and a continuous collection of stray finds altogether 25 600 inventoried items got into the Hungarian National Museum.

The 1996 season of the excavations by Dobosi and Cseh yielded comparable material in size to the 1958 campaign of L. Vértes. According to the statistics compiled for the conference devoted to the microlithic Middle Palaeolithic industries, held in Tata (2003), there were:

5.3 % standard types, 6.6 % geometrically split non-standardised tools and 88.1 % flakes and production debris.

Among the standard tools, there were pebble tools of Lower Palaeolithic character (5.1 %), Middle Palaeolithic scrapers and points (77 %), the ratio of Upper Palaeolithic types was 17, 4 %.

The average length of the artefacts hardly reached 30 mm. Most of the tools were made on liver-coloured local radiolarite pebbles with very fine texture, on 60 % of the tools, the pebble cortex is visible.

As Vértes observed, 'The Tata tool-kit is highly standardised and locally specific, a bifacial Late Moustérian ...' (VÉRTES 1965, 109).

Localities

Tata - Porhanyó

Diósgyőr - Tapolca (RINGER–MONCEL 2002)

Old localities, classified as Taubachian in recent revision:

Szeleta-cave in the 2nd layer according to Kadić (RINGER–MESTER 2001, 14).

Büdöspest cave 3rd layer

Lambrecht Kálmán cave.

South-East European Charentian

The base culture is a characteristic and rich industry of South-Western French origin (Charente county). It could probably reach the Carpathian Basin from its original (?) homeland along the Ligurian coast and the south-eastern fringes of the Alps. The caves of the southern Bükk cave mean its (current) distribution limit in the north-eastern direction. Due to its large distribution area, several local variants could be separated within the big unit.

The tool kit and the technology could preserve its original character in spite of the changes naturally occurring on such a long way. In Hungary, the finds of the *Érd* Middle Palaeolithic settlement served as a basis for the identification of the new industry. According to the original description of the industry: 'The culture of the Érd settlement is one of the forms of appearance of the Moustérian [i.e., Middle Palaeolithic, TDV] cultures, with several local features and special characters ... (GÁBORINÉ CSÁNK 1971, 31).

'The culture of Érd stands closest to the Charentian culture on the basis of tool spectrum, without immediate contemporary connection or direct descent' (GÁBORINÉ CSÁNK 1971, 34)

For these considerations, she suggested the attribute 'South-East European' to distinguish from the original French culture.

The industry belongs to the Middle Palaeolithic pebble-working tradition. Its only site that has yielded enough material for statistical elaboration is Érd. The tool kit is varied, with standard, unified types made of egg-shaped pebbles using retouch typical of the processing of quartzite.

Chronology

The palaeontolological-palaeobotanical-pedological arguments dated the complete existence of the site concordantly to the Early Würm period. Over the characteristic red interglacial clay, the traces of deterioration of the climate heralding the first cold waves of the Würm glacial are evident.

Compared to this firm relative chronology, the absolute chronological data seem a little 'short': the upper layer of the settlement was dated to 35 300, the lowermost layer to 50 000 (GÁBORI-CSÁNK 1968, 105–107).

Topography

The culture has no special needs in respect of territory. Starting from open-air environment, in the South-Eastern Alps it is known as 'cave-dweller'. At Érd, the representatives of this culture used to live among very specific circumstances, but in open-air settlement, in two side-valleys of a deep valley cutting through the Érd plateaux and leading towards the

Danube, staying here for several occasion and for a long time. The site was selected with excellent sense for strategy; it was inhabited according to the testimony of radiocarbon dates for more than 15 thousand years. Among the two cave sites, the Szelim cave is situated from Érd about one day's walking distance along the Vál valley. The stations towards North-Eastern Hungary (if they really reached so far) are not known as yet.

Typology

Its specific tool-working technology distinguished the Charentian industry from the great Middle Palaeolithic complex. Its specific tool type differentiating the industry from the other Middle Palaeolithic cultures is the simple, convex, Quina-type scraper with thick back, made on pebble slices.

As becomes to a pebble-working tradition, the raw material used comprised fist-sized, 10–12 cm large mainly quartzite (collected from Helvetian gravel beds that cropped out at Érd in the vicinity of the site.). The base form of tools were pebble slices, segments and other geometrical pebble derivatives, split using a technology reminding to Lower Palaeolithic industries. As a result of the pebble-form raw material, most of the tools preserved a smaller or larger amount of cortex. The laminarisation trend is weak. Most of the talons are smooth, occasionally of Clactonian character (wide, unworked, with obtuse angle to the dorsal side of the flake.

Scrapers constitute about 80 % of the tool inventory on each site. The edges are often worked from both sides.

The generalised Middle Palaeolithic types are represented with double scrapers, denticulated and notched tools (the latter being not very frequent). Some high-crested end scrapers show the antecedents of the Upper Palaeolithic technological innovations.

Localities

Érd (GÁBORI-CSÁNK 1968)
Szelim - cave
Subalyuk - cave, upper layer complex (MESTER 1989)

MOUSTÉRIAN

The first Middle Palaeolithic culture known for certain received its name after the finds of a small cave in the Dordogne. The concept of the term underwent important changes. For a long time, the term 'Moustérian' was used as synonym of the Middle Palaeolithic. Today this 'professional slip' is a grave mistake. In the multitude of new Middle Palaeolithic industries growing constantly, the term Moustérian can be used exclusively for the industries analogous with the material of the eponym site. The finds from the lower cultural layer of the Subalyuk cave, we can say, come up to the French standard. Knowing the significant differences between individual sites belonging to the same culture within the Carpathian Basin, this phenomenon is one of the enigmatic features of the Hungarian Palaeolithic.

Chronology

This culture is dated in Hungary to the end of the Riss-Würm interglacial and the beginning of the Early Würm. The lower cultural layer of the Subalyuk cave (typical Moustérian, rich in scrapers) used to exist in the early interstadials of the Würm glaciation (RINGER 2002, 43); in absolute chronological terms, the underlying layer of the 'Moustérian-like' tools of the Szeleta cave was dated 42 360 ± 860 (RINGER 2002, 49).

Topography

The representatives of this culture are known from the caves of the southern fringes of the Bükk Mts.

Typology

The industry of layer 3. from the Subalyuk cave was described by L. Vértes as classical developed Moustérian. The leading types are regular points of 55 mm average length, among them, many elongated, blade-like forms. Half of the tools are scrapers, made of block silex. The characteristic method of working is step-like retouch, with 60° angle.

The surface of percussion is worked in about half of the instances; the ratio of bifacially worked tools is below 10 %. The tools are carefully finished on flat, wide flakes. Denticulated tools, Quina types and knives with thick back are missing.

After H. Lumley-Woodyear, a facies was separated within the classical Moustérian with very high index of scrapers under the name '*Moustérien typique rich en racloirs*'. Zs. Mester assigned the industry of the lower layer of Subalyuk cave to this unit (MESTER 1994, 62–63).

Localities

Subalyuk lower layer (MESTER 1989, 1994)
Farkaskő rock cavity
Mexikó cave
Görömböly - Tapolca cave
Szeleta cave layers 3-6, described as Moustérian I and II (it is not evident from the publication that it is a merely stratigraphical or a cultural differentiation) (RINGER–MESTER 2001, 14).

MIXED (UNCERTAIN) MIDDLE PALAEOLITHIC

Büdöspest cave from the mixed material of the cave, at least three Middle Palaeolithic industries could be identified (Subalyuk- and Quina-type, as well as Bábonyian).

Kecskésgalya cave
Ballavölgy rock cavity
Sólyomkút cave from the material, the felsitic porphyry tools
Tokod manuport and charcoal in freshwater limestone
Süttő: charcoal and pebble fragments from loess: possible analogy to Tata (?)

Different Moustérian Facies Separated On Typological Grounds

Miskolc - Avas: Levalloiso-Moustérian and Moustérian II (same as in Szeleta?) (RINGER 2001a).
Eger - Kőporos Excavations were performed on the site by L. Vértes, and numerous field surveys completed the material (M. Rozsnyói, F. Legányi, L. Fodor and S. Béres). It is certain that Eger-Kőporos lost its former fame as eponym site of a (Mesolithic) cultural unit. What it really can be, however, is still debated. Possible variations include: mixture of finds from several cultures, a Middle Palaeolithic industry heralding the Upper Palaeolithic, an archaic Upper Palaeolithic or, the most wanted transition between the Middle and Upper Palaeolithic, raised but not adequately proved in connection of several localities.
Csákvár rock cavity: Tata-type tools with Upper Pleistocene fauna (VÉRTES 1965 113).
Budapest-Corvin-square In 1997, '*...some small settlements inhabited by humans*' were excavated. Its material, without analogies, was described by the excavator as transitional between the Middle and Upper Palaeolithic and wide chronological limits ('not younger than 30 thousand' ... 'extending back to 100 thousand years', than one year later, 'older than hundred thousand years') (HABLE et al. 1998, 13).
Legénd - Káldy farm 5 (MARKÓ–PÉNTEK in press).

Early Szeletian Culture

The Szeleta cave, as archaeological site and culture named accordingly is the most famous Hungarian Palaeolithic culture, attracting most research workers and most debates. This is even more characteristic for Hungarian research with a slight subjective element. The amount of scientific papers related to the culture and the industry is vast. The author of the most substantial monograph on the Szeleta drew attention to several important points of view that should be considered on a typological-technological evaluation: '...The figure for the Early Szeletian includes a number of bifacially worked tools so much affected by cryoturbation that their original shape and classification can no longer be ascertained with confidence.'(ALLSWORTH-JONES 89). He also accepted the significance of raw material used in the applied technology: '...the vitreous quartz porphyry tend to appear in the form of 15-20 mm thick slabs, and Vértes has, therefore, very plausibly suggested that it was the raw material itself which called forth, or at least facilitated, the sudden dominance of bifacial technique at Szeleta' (ALLSWORTH-JONES 88–89).

The revision concerning the material of the Szeleta and Istállóskő caves, started in 1999 has not produced 'decisive' results as yet. It can be inferred from the preliminary publication that supporters of the short chronology can feel themselves supported (ADAMS 2002). The 'generalised'(or idealised?) stratigraphical columns from the Szeleta and Istállóskő caves, compiled by Á. Ringer, raise some problems. The stratigraphy seems to recall the demand for continuity of the periods of the French system. An unresolved contradiction, e.g., that in the sediment assigned to the Eemian interglacial there are dates of 42 kyear. (RINGER 2002b, 49) We are also expecting the traditional documentation of the numerous Middle Palaeolithic industries separated in the find material.

As in the Szeleta cave there are several cultural layers containing different Middle Palaeolithic archaeological material over the Early Szeleta layers, it is justified to assign this culture to the Middle Palaeolithic. The typological arguments, however, suggest certain caution. The backed bladelets occurring in the lower Szeleta are not characteristic of the Middle Palaeolithic industries. The leaf-points themselves were exposed to heavy cryoturbation according to the generally accepted opinion, therefore the technological observations are not realistic.

Chronology

The age of the Early Szeleta culture can be put to the interstadials of the Early Würm, according to absolute chronological data, around 41–42 thousand years.

Stratigraphically, it corresponds to the paleosoils 1 and 2 at Miskolc-Avas (Günde and Moershofd interstadials). Its relative chronological position, in respect of archaeological sequence, can be placed partly to the age of '*Middle Palaeolithic with denticulated tools*' as well as the *Subalyuk-type Charentian* (older phase), while the younger phase is contemporary with the Aurignacian I (RINGER 2002a, 43). The mutual proof of coeval age is an early Szeletian leaf-point in the Aurignacian I. layer of Istállóskő cave and the presence of an Istállóskő-type bone point in the Szeleta cave.

Topography

The two cave sites are situated in the Eastern part of the Bükk Mts., and some more stray finds are known from the Northern Mid-Mountains. On the basis of such a few authentic sites, not much can be ascertained for the topography.

Typology

It is difficult to believe, that the many times counted-measured-elaborated finds of the Szeleta-

cave yielded problems not only for typology and terminology, but even number of pieces. Allsworth-Jones summarised, after careful argumentation altogether 259 tools and 9 cores from the eponym site and stratotype, the lower cultural layer of the Szeleta cave (layers 3–4 by Kadić 3–4).

Their distribution is the following:

Leaf points 43.6 %, denticulated-notched tools 20.4 %, scrapers 11.5 %, Upper Palaeolithic section 16.2 %. The average length of the implements is 57.6 mm, width 31 mm, thickness 11.3 mm (ALLSWORTH-JONES 1986, 88–89).

The cross-section of the blades are thick triangular, their bases are cut off (VÉRTES 1965, 138).

The dorsal and ventral side of the leaf points is slightly convex or plan-parallel, the surface is worked with scalar retouch, on the edge, alternating or step-like retouch. In evaluating the retouch of the edges we have to consider also the effects of cryoturbation.

Localities

Szeleta cave layer 3. or 4.
Balla cave
Lökvölgy cave
Puskaporos rock shelter 'transitional Szeleta workshop'

SITES WITH LEAF-POINTS OF UNCERTAIN CULTURAL AFFILIATION

Parád-Marhádtető Gy. Varga collected from the surface a 'Bockstein-knife' from Szeletian felsitic porphyry raw material (BIRÓ 1984, 6)

There is little attention paid to two sites at the Northern margin of the Bükk Mountain, published by M. Rozsnyói still in the times when the term 'grobgerätige Mesolithicum' was in use

Bükkmogyorósd-Hosszúbérc and *Nekézseny-Határtető.* (ROZSNYÓI 1963) Part of the finds got into the collection of the Hungarian National Museum when the Ózd Museum collection was annulled.

The list of Middle Palaeolithic localities published below is the result of unpublished field surveys by A. Péntek and A. Markó, from courtesy of the collectors:

Vanyarc
- *Szlovacka dolina*
- *Tovi*

Becske
- *Büdöstó-hegy*
- *Júlia-major*

Legénd -Rovnya
Acsa-Provosznya

UPPER PALAEOLITHIC

The Upper Palaeolithic period lasted in geochronological terms from the second half of the last glaciation till the end of the Ice Age. Human evolution reached its current level, the pace of technical and cultural development got faster. The large cultural units are made up from a colourful mosaic of smaller groups. At the same time, the action radius of these small groups got larger. For separating phases within the UP, among the many possibilities, the best suited to local needs is the so-called Pavlovian convention (MUSSI – ROEBROEKS 1996). It is adequately liberal and elastic to cope even with the atypical Hungarian material.

Early Upper Palaeolithic:
(possible antecedents: Early Szeleta?) → Upper (Developed) Szeleta.
(antecedents?) → Aurignacian

Middle Upper Palaeolithic (antecedents?) → Gravettian entity / Pavlovian

Late Upper Palaeolithic
(antecedents: Pavlovian) → Gravettian entity / Epigravettian
(antecedents: Pebble-working industries?→?→?) Gravettian entity / Ságvárian

This division is especially 'well suited' to Hungarian needs, because it reflects the chronological pulsation recognised for a long time in our find assemblages. In the inter-periods (that is, on open-air localities connected to fossil soil horizons) the representatives of new cultures seem to appear in waves, while in the cold period, the population of the Carpathian Basin waned. The absolute chronological gaps tend to be smaller between the settlement waves with the accumulation of new data, but the hiatus is a stratigraphical reality as proved by some actual examples (superposition of Pavlovian and Epigravettian, separated by one meter thick layer of loess!).

We speak and write a lot about the two cultures of the EUP, but we know fairly little. The developed Szeleta is not more than a few score of leaf-points: it is true, they are of perfect finish. The Aurignacian was represented, for long, by two cave sites only. In view of the new and extremely young dates regarding the developed Szeleta, if we accept them, no statistical magic can rank this culture to the Early Upper Palaeolithic period any more. Important changes can be expected in respect of the Aurignacian culture with the discovery of new open air settlements.

The Middle Upper Palaeolithic phase is represented in Hungary by the Pavlovian industry. The name was put forward by H. Delporte some 50 years ago, describing the topographically strictly related industries. Since that time, its meaning was extended to the older phase of the Gravettian entity (30-25 kyear BP, VALOCH 1996, 205). Not the least important feature about this cultural unit that they are the last real mammoth-hunters. Among the localities classified here,

there are two important general settlements of large extensions, Bodrogkeresztúr and Megyaszó fit the image very well, though the characteristic shouldered point of the Pavlov-Willendorf-Kostenki-circle is altogether missing from the Hungarian material.

The original eponym tool of the period, the Gravette-point is, however, present and therefore it is more appropriate to use the term Gravettian entity, of which the attribute 'Eastern' has already abraded. According to the chronological data, its first appearance should be sought for in our immediate neighbourhood, in Central Europe, possibly in the tribal quarters between Wachau and Pavlov. Its first appearance in Central Europe known so far is layer 5 of the settlement Willendorf II. About the antecedents, we know practically nothing: 'L'origin du Gravettien de l'Europe Centrale, tout comme la plupart des cultures paléolithiques, est inconnue' (VALOCH 1993, 208).

From here, in the early phase of the appearance of the culture – with the first wave – they could reach the Carpathian Basin and the northern stripe of Hungary, from where we know rich settlements of the Pavlovian.

Developed Szeleta Culture

Elevating the few perfect leaf-points found in the upper layer of Szeleta cave and some single surface stray-finds to the rank of a culture is still lacking convincing arguments, however, the concept made a sweeping career.

Chronology

C-14 dates from the upper (4–6) layers of the Szeleta cave yielded ages between 22–25 BP (ADAMS 2002, 54), contemporary with the second settlement wave of the Gravettian culture.

Topography

The culture is only known from the eastern half of the Bükk Mts., from a very small distribution area.

Typology

We use here Allsworth-Jones' data on terminology and number of pieces; it should be noted, however, that discrepancies extend here to stratigraphy as well. He mentioned, as upper cultural layer, layers 5–7 of Kadić 5–7; in the work of Ringer, it comprised layers 4–6.

He enumerated 216 tools and 5 cores (both in the early and the developed Szeletian tool-kit, the number of cores is strikingly low. This should be taken into consideration defining the function of the site!)

Leaf-points 36.6 %, denticulated-notched tools 17.1 %, scraper 15.3 %, Upper Palaeolithic section 20.8 %.

Average length 88.7 mm, width 36, 6 mm, thickness 11.1 mm (ALLSWORTH-JONES 1986, 88–89). The identical thickness of the early and the developed tools is probably the result of the use of the same platy-foliated raw material, and not the identical technology.

The tools are carefully, symmetrically worked, even the finish of the Middle-Palaeolithic types (e.g., scrapers) is different from the traditional routine.

Localities

Szeleta cave
Puskaporos cave
Miskolc-Molotov street
Istállóskő cave

The following sites were not authenticated yet, but can be assigned here on typological grounds:

Sárospatak - Sötét oldal on the southern side of the mountain, a poplar-leaf shaped point made of felsitic porphyry
Aszód - Tarackás - the authentication of the site was not successful.
Miskolc - Petőfi street

Aurignacian

The first genuine Upper Palaeolithic blade industry, always connected to *Homo sapiens fossilis*. Concerning its cultural antecedents, several theories has been expressed, that can be grouped basically around two theories:

– in the interpleniglacial, from the Moustérian substrate, the culture of a progressive Neanderthalian population evolved to Upper Palaeolithic

the Levantean theory: the technological innovation appeared first in the Eastern Mediterranean along the hypothesed route of the early sapients. The different proofs seem to reinforce each other and are quite convincing. It can be raised against this theory, however, that the absolute chronological dates of the Levant are so far younger than, e.g., the French ones.

The spread of the typologically and technologically crystallised culture can be followed with certainty from the Balkans. It proceeded in two directions:

– to the north-east, towards the Crimean peninsula and the Don-bend where their characteristic tool kit was equally spotted,

– towards the West, along traceable route across the Danube-valley (Bulgaria, Moldova, Middle-Danube Basin, Willendorf, Moravia, Suabian Jura, Thüringen) and, according to the absolute chronological data, in a relatively short time reached the Western border of the Iberian peninsula. Here, the younger phases of the culture appeared in the great abundance and density of finds and sites typical of those regions (DJINDJAN–KOZLOWSKI–OTTE 1999, 162).

Chronology

The European development of the culture is divided into three large phases: early (Pleniglacial A),

developed (interpleniglacial, Arcy interstadial) and late, in absolute chronological terms, from 38 thousand to just after 30 thousand years (DJINDJAN–KOZLOWSKI–OTTE 1999, 161–168).

The most recent data in Hungary followed the revision of the site and material of the Istállóskő cave, initiated ad lead by Á. Ringer. Details of the research has yielded several radiocarbon dates as well. In 2002, these data were published by two authors. They agree upon the age of the younger, upper cultural horizon (Aurignacian II by L. Vértes):

Between 32-28 thousand years (this conforms well to the chronological system of the Aurignacian culture (RINGER 2002, 51, ADAMS 2002, 54).

Concerning the age of the lower layer with split-base bone points (Aurignacian I), Adams accepted the result of the new measurements and renders the age of the culture likely around 33 thousand years (ADAMS 2002, 54), while Ringer dated the Aurignacian I, on the basis of archaeo-stratigraphical arguments, some 10 thousand years before, at around 44 thousand years (RINGER 2002, 49).

Both of them strengthened the old observations on the contemporaneity of the two phases of the Aurignacian culture with the two chronological levels of the Szeleta culture.

Topography

The number of localities in Hungary is too low to express regularities in the location of settlements.

Typology

There are few Palaeolithic cultures which can be delineated as exactly on typological grounds as the Aurignacian. The strangled blade, the carinate end-scraper, the busced burin, the nosed end-scraper or part of these characteristic Aurignacian types helps the identification of this culture with reliable certainty. In the Hungarian material, for several decades only the split-base points in two of our caves proved the presence of this culture. The lack of open-air sites was due to deficiency of research.

It has to be noted that the finds of cave sites and open air sites are basically different. In our caves, that used to serve probably for transitional hunters' camps, the stone tools encountered as accessory material to the bone points, seem not to come up to expectation. On the open air sites, there were no bone points found (probably due to conditions of fossilisation), and they are rather far from the cave sites.

Speaking about the broken Olschevian point of the Jankovich cave, V. Gábori-Csánk excluded the possibility that this bone tool (or any other bone implements from the cave) could be related to the Middle Palaeolithic Jankovichian (GÁBORI-CSÁNK 1993, 28). At the same time, these caves could well serve as stations for the drift of the Aurignacian II. culture towards the West.

Localities

Cave sites:

Istállóskő-cave: Developed Aurignacian (Aurignacian I.), Late Aurignacian (Aurignacian II., Olschevian

Peskő-cave: excavations by Gy. Éhik, O. Kadić and L. Vértes

Jankovich cave

Kecskésgalya cave (MESTER 1994, 85)

Farkaskő cave (MESTER 1994, 92)

Sólyomkút cave (MESTER 1994, 100–101).

Open-air sites

There are some sites which can be perhaps classified here on the basis of indirect proofs:

Ostoros - Rácpa: besides regular leaf-points and fragments with excellent finish, high and short *Acsa-Rovnya* Surface collections by S. Béres and A. Péntek, authenticated by excavations of V. Dobosi V. in 2002 and 2004. The elaboration of the finds is in progress.

Szob - Komár-földek S. Gallus found an 'Aurignacian scraper' there. It should be noted, that the term Aurignacian was used for long as a synonym of Upper Palaeolithic in general.

Verőce - Fehérhegy One Aurignacian scraper is known from here (MARKÓ 2002, 49)

Miskolc - Harsány crossing (mentioned by RINGER 2001a, 100, not published in details)

Andornaktálya

– *Zúgó dűlő*, field survey by Ringer, probably an Aurignacian settlement (RINGER 2001b, 136)

– *Szukszerdomb* the site is identical with the locality mentioned as *Alsó-tető* from a 1974 field survey

Galgagyörk - surface collections, together with other Palaeolithic younger cultures, characteristic Aurignacian types also came forth (MARK" et al. 2002)

– *Májóka*

– *Komárka*

– *Szárhegy*

Aurignacian scrapers were found here. As leaf-points were found several times together with Aurignacian tools, the priority in determining the culture is given here to high scrapers

Sólyomkút cave The dotted chert from Swiecziechów became popular in the beginning of the Upper Palaeolithic; according to Zs. Mester, these finds of the cave cannot be older than the beginning of the UP (MESTER 1994, 101).

Miskolc-Tapolca rock cavity The site was assigned to this unit on stratigraphical- typological grounds (RINGER 2001a, 112).

Herman Ottó cave its tool kit comprising some 200 pieces is still a subject of debate that could not settle after 90 years from the excavations. Part of the tools and the two pierced red deer canines can be Aurignacian (as well).

PAVLOVIAN

For the denomination of the Middle and Late phase of the Upper Palaeolithic, the author is suggesting the

use of the collective name *Gravettian entity*. This term relates to the chronologically well defined unit, the members of which follow similar way of life, sharing settlement strategies, belonging to the great cultural unit under the name Pavlov-Willendorf-Kostenki cultural complex, uniting Central and Eastern Europe from Wachau (on the Danube) till the river Don. (GRIGOR'EV 1993) Apart from some tools known as '*fossile directoire*' (in the first place, the eponym Gravette-point), it is a medley of varicoloured regional and local cultures. On the actual content of the cultural entity, V.M. Masson wrote the following:

'Though this indicates that such unities existed during the entire Late Palaeolithic, it still remains unclear what historical realities and events lie behind such stable and far-flung configurations of similar artifact types'(MASSON 1993, 19).

The population of the Gravettian entity is known from the largest number of sites in Hungary.

Chronology

The following Pavlovian settlements yielded C-14 dates:

Püspökhatvan	Deb 1901	27 700 ± 300 BP
Megyaszó	Deb 53780	27 070 ± 300 BP
Hont-Parassa, Orgonás	Deb 5027	27 350 ± 610 BP
Bodrogkeresztúr	Deb 2555	26 318 ± 365 BP
	GxO 195	28 700 ±3000 BP

The localities are concentrated to the interpleniglacial / Denekamp interstadial / Paudorf period.

Topography

The settlement strategy, settlement forms and features are identical in the case of all three significant settlements of the Pavlovian culture (Bodrogkeresztúr, Hont, Megyaszó). The sites are located on 230–240 meter high hill-tops, more or less isolated from the neighbouring hills by steep slopes.

Fresh water is easily accessible: sometimes more of them, e.g., at Bodrogkeresztúr, the rivers Takta, Bodrog and Tisza, at Megyaszó, the Gilip stream and a little further the river Hernád, at Hont, the river Ipoly. The important raw material sources are situated in tangible distance (in the case of Megyaszó, hydrothermal silices are locally available; Bodrogkeresztúr is just in the heart of the obsidian-region). Different biological niches offered a variety of sources of food. According to the experiences of the excavation, there was no need to utilise the advantages of the ideal setting to the maximum. Though all three settlements were of large horizontal extent, dispersed over several hundred square meters, the cultural layer itself is fairly sporadical, the intensity is below the values of the younger settlements. The fossilisation of animal bones is variable depending on the character of the enclosing sediment. Ashy patches, grains of charcoal and ochre, a loose array of flakes and tools make up the settlement surface. The traces of permanent constructions, made of lasting material, either on the ground or below the surface, as well as different objects of art, unfortunately, are not known from Hungary as yet. (The polished disc with incised margin from Bodrogkeresztúr received less publicity than it would deserve).

Typology

The find assemblage appearing in layer 5 of Willendorf II can be characterised by the presence of blunted microblades (around 10 %), burins (20 %) and scrapers (20 %).

The industry is blade based, with all possible technological consequences. The quality of finish differs by period and facies, but the presence of Gravette-points gives a reliable signal.

Localities

Bodrogkeresztúr - Henye (DOBOSI 2000b) In the course of excavating the well-known Copper Age 'Bodrogkeresztúr cemetery' on the estate of count Széchenyi Wolkenstein (which is, eventually, on the territory of the village Bodrogszegi), J. Hillebrand identified the site on field surveys. Apart from several subsequent collections, the settlement was excavated by L. Vértes (1963) and V. Dobosi (1982).

Hidasnémeti-Borház dűlő (SIMÁN 1989a). Specific elements found on the site are shouldered points (not Kostenki-points!), unique in the Hungarian Upper Palaeolithic. The typological image is characteristic of the younger settlements of the Pavlovian circle.

Hont - Parassa III – Orgonás, lower cultural layer (DOBOSI-SIMÁN 2001)

Sahy (Ipolyság) - Mayer's site (GÁBORI 1957)

Megyaszó - Szelestető: Following field surveys by I. Kókai and N. Czagányi, the site was authenticated by V. Dobosi and K. Simán in 1993–94 (DOBOSI–SIMÁN 1996).

Nadap - Stone quarry Artefacts collected by A. Dér got into the HNM by the mediation of D. Jánossy. The site was authenticated by V. Dobosi and B. Jungberth in 1985 (DOBOSI et al. 1988).

Püspökhatvan

– *Diós* Attention was drawn to the site and the potential sites on the Cserhát hilltops by I. Kiss, neglected for long by archaeological research. After field survey by P. Patay and V. Dobosi, the excavations were performed by É. Csongrádi-Balogh É. and V. Dobosi, parallel to the excavations on the site

– *Öregszőlő* (CSONGRÁDI-BALOGH–DOBOSI 1995).

Sajószentpéter

– *Nagykorcsolás* (SIMÁN 1985)

– *Margitkapu dűlő* (RINGER–HOLLÓ 2001).

Verseg-Kertekalja (DOBOSI 1991) One of the few Palaeolithic sites where younger prehistoric settlement was found in immediate superposition.

Püspökhatvan-Takácshegy Field survey by A. Péntek (p.c.).

SÁGVÁRIAN

This culture used to exist in the early period of the Late Upper Palaeolithic, in the interstadials around the last cold peaks of the Würm glaciation. Its eponym site, Ságvár is one of the open air sites known first in Hungary. Its acknowledgement as an independent culture started fairly recently. Several students of the period observed the mosaic-like character of the Late Palaeolithic archaeological material in Hungary, the different cultural image of certain groups of sites. For the chronological-cultural clarification of the problem, it was necessary to demonstrate the Ságvár-Lascaux interstadial (GÁBORI-CSÁNK 1978) and several new sites were needed. The roots, formation time and place as well as distribution of this culture are hardly known. It seems a strong and populous culture within the interior parts of the Carpathian Basin. Its settlements are large having several habitation layers.

Chronology

The following C-14 dates are known from the Ságvárian:

Mogyorósbánya	Deb 9673	19 000±250 BP
	Deb 1169	19 930±300 BP
Ságvár lower layer	GrN 1783	18 900±100
Ságvár upper layer	GrN 1959	17 760±350
Madaras	Hv 1619	18 805±405 BP

The lower and upper cultural layers of the Ságvár settlement represent the time span of the Ságvár geochronological phase. They are separated by one meter of steril loess. The two cultural layers can be associated with a micro-interstadial phase each (Laugerie-Lascaux/Ságvár). The sedimentation of the loess represents about 1000 years of cold climate between the interstadials.

Topography

It can be deduced from the few known settlements of the Ságvárian culture, that the complexity of the localities is the highest among the sites of the Palaeolithic period in Hungary. The settlements consist of several habitation units (Mogyorósbánya); the only semi-subterrain hut is also known from this unit, the hut from Ságvár (GÁBORI–GÁBORI 1958). At Mogyorósbánya, the habitation complex comprised at least four units: there were four oval concentrations of finds separated by 20–30 meters wide sterile strips of land. At Madaras, several large hearth-places indicated intensive settlement features.

Typology

The Ságvárian culture occupied similar ecological niches like the coeval blade industries, adopting to the same ecological conditions in somewhat different ways. There are differences in the tool types, the ratios of the type list, the dimensions of the tools and the selection of the raw material.

Instead of the traditional and predictable long blades the people of the Ságvárian culture returned to pebble working. Due to this technological feature, the character of the industry is rather fragmentary, atypical, and the cortex is preserved on many of the tools. The tool types are the same as in the other cultures of the Gravettian entity, but the blanks are more like slender flakes than blades and the finish on these support flakes is slubbered.

Localities

Ságvár: (GÁBORI 1964, 30–50)

In the defiles of the loess hills in Külső-Somogy, the Palaeolithic settlement was already spotted in the 1920-ies. The first excavations were conducted by J. Hillebrand, D. Laczkó and I. Gaál, followed by S. Gallus, J. Csalogovits I. and M. Gábori. Their research served as a basis of many subsequent studies and the site itself became the eponym locality of this unit.

The significance of the site surpasses that of a simple settlement. It could foster the clarification of the Ságvár-period, in respect of various branches of natural sciences. According to the revision of the fauna, the potential bearing capacity of the Külső-Somogy area was 1665 reindeers. The Palaeolithic and current hunting of reindeer are both regulated by the migration of the herds, two times a year. Their route could lead along the Danube from High-Germany as well as the Carpathes towards the heart of Transdanubia (VÖRÖS 1982, 71).

Madaras - Téglavető (DOBOSI 1989).

In the long profile of Madaras-Téglavető (brickyards) there were several levels of habitation marked by scattered charcoal grains and continuous burnt patches. The scanty archaeological and palaeontological material was centred around large fireplaces, some of them with ring-like structure, connected to each other, i.e., used several times. The function of the settlement could be storage / processing of different nutrients, basically meat.

Mogyorósbánya - Újfalusi dombok

The site was located by I. Homola in course of field survey. V. Dobosi performed here authenticating excavations in six seasons. The elaboration of the material is in progress.

Szob - Ipolypart

After collecting and excavations by A. J. Horváth, S. Gallus, M. Mottl, G. Laczus and the Gábori couple, A. Markó analysed in his university thesis the material of the site with the fossil trinket snail depots (MARKÓ 2002).

EPIGRAVETTIAN

Two phases of this culture can be separated. The older phase can be connected to the embryonal soil horizons of the Ságvár-Lascaux intestadial around 18–16 000 BP, partly contemporary with the Ságvárian culture. The younger phase can be dated to the end of

the Ice Age. This latter phase is hardly known as yet, therefore we cannot describe it as an independent culture. On the Epigravettian settlements of the Jászság region and Pilismarót environs, immediately under the humus, typically in heavily disturbed position we can find a layer with finds. We guess its independent settlements at the localities with 1–2 stray finds found in sediments dated 13-11 BP (estimated dates).

The Epigravettian in general can be considered as a little 'distorted', atypical descendant of the Pavlovian producing regular blade tools.

Chronology

The following C-14 dates are known from the Epipalaeolithic:

Jászfelsőszentgyörgy	Deb 1674	18 500± 400 BP
Szeged-Öthalom	Deb 3344	15 920 ± 170 BP
Budapest-Csillaghegy	Deb 3160	15 940±150 BP
Esztergom	Deb 1160	16 160±200 BP
Arka lower cultural layer	GrN 4038	17 050±350 BP
Arka upper cultural layer	GrN 4218	13 230±85 BP
Pilismarót-Pálrét	Hv 12 988	13 130±100 BP
Lovas	ETH 15199	11 740±100 BP
Szekszárd-Palánk	Hv 408	10 350±500 BP

Topography

Currently, all the settlements of both phases of the Epigravettian culture seem to be isolated small temporary hunter's camps. The preserved Gravettian lifestyle and tool working / typology means more an optimal adaptation to conditions of the Ice Age than clinging to cultural traditions.

The 'ad hoc' settlements / sites are typically found on classical Gravettian settings, hillsides along the margin of loess-covered terraces of large rivers. The terraces are dissected by dry or active stream valleys, opening the way for the migrating herds of animals to the river and its shallows or the alluvial plains. On the Alföld, the Epigravettian has been mainly on loess covered ice-age relict surfaces, in embryonal soil of loess sequences several meters below the current surface.

From this period we know the only pole supported tent-base from Hungary, from Dömös. This type of dwelling is generally spread on Palaeolithic sites elsewhere. Its foundation was surrounded with antlers (GÁBORI-CSÁNK 1984b).

Typology

The ad hoc character of the settlements is reflected also in the tool kit of the Epigravettian culture. The basic blank form used is blade, and on the localities we can find all types expected on a settlement belonging to the Gravettian entity. The settlements, however, yielded poor materials, scattered and less intensive. The tools are also scanty and they are not the top-products of the industry. On the other hand, the far-fetched contacts of the communities are adequately proved by distant raw materials, trinkets and amber.

Localities

Cave sites

The typically exceptionally scanty material of the caves that can be dated to this period makes cultural assignment very difficult. Mainly, they are classified here on the basis of

Among the mixed finds of the cave, a smaller assemblage can be selected showing Late Ice Age typological stratigraphical position.

Herman Ottó cave features.

Diósgyőr - Tapolca cave: In 1973, in the course of rescue excavations preceding the extension of the thermal bath some implements of Upper Palaeolithic character were found. (HELLEBRANDT–KORDOS–TÓTH, 1976)

Görömböly - Tapolca cave: from the upper yellow layer of uncertain age three small blades, pierced deer canine and a human occipital bone belonging to *H. sapiens* group were found. (VÉRTES 1965, 210)

Uppony I. cave collection of M. Rozsnyói (?)

Uppony II. cave excavation by L. Vértes L

Rejtek rock shelter (Répáshuta)

Farkaskő rock cavity

Kiskőoldal rock cavity The low lying rock cavity was excavated by J. Hillebrand in 1927. The top layer was yellow cave loess, yielding a blade assigned to Magdalenian (Gravettian) (MRT 5.51)

Csővár – in a 4 meter long, 3 meter wide rock shelter, traces of human activity (MRT 9 74)

Bivak cave (Pilisszentlélek) The cave was excavated by T. Kormos, M. Gábori, L. Vértes and D. Jánossy. From the upper yellow layer of the cave some lithic finds came to light, that were still essayed to be fit into the French terminology (e.g. Azilien)

Pilisszántó I. cave;

Kiskevély cave (Csobánka): from the mixed material of the cave, J. Hillebrand described Magdalénian objects, L. Vértes assigned them to the Pilisszántó culture. In course of the 1994 revision of the material it was ascertained that the asymmetrical type set with deficient type spectrum is the result of the function of the lack of the sites. Both caves were visited temporarily by hunters who took shelter here. (DOBOSI–VÖRÖS 1994.)

Szelim cave (Tatabánya): Upper Palaeolithic objects found on the excavations of I. Gaál.

Istállóskő cave excavations by L. Vértes

Peskő cave (Felsőtárkány): excavation by O. Kadić in 1934.

Petényi cave (Felsőtárkány).

Balla cave (Répáshuta): from the layer of cave loess, skeletal remains of a child and some blades with sharp edges came forth.

Ballavölgy rock cavity (Répáshuta): excavated by M. Mottl in 1939.
Jankovich cave (Bajót): excavated by J. Hillebrand in 1913–1914 and L. Vértes in 1956.
Baits cave excavation by J. Csalogovits in 1931.
Szalay Ákos cave collection of J. Csalogovits.

Open-air localities:
Arka - Herzsarét (VÉRTES 1962, 145). The excavator separated from each other the workshop site planted on local hydroquartzite raw material and the living quarters.
Budapest - Csillaghegy (GÁBORI-CSÁNK 1984a, 8):
Dömös - Táncsics Mihály street
Dunaföldvár - Göböljárás
Compared to the scanty quantity of finds, this site is unusually popular. Students of the period keep on searching for the classical mammoth-hunters' camp; this site, however, did not prove one. Excavations were performed here by J. Csalogovits, Gy. Rosner, V. Gábori-Csánk and field surveys were performed by Á. Ringer, I. Vörös and V. Dobosi.
Vác 44-Csipkés
Palaeolithic objects were found here during the rescue excavation by L. Simon preceding the construction of road 2/A running parallel to the Danube. The settlement was situated on the slightly sloping south-eastern part of the plateau at 150 meter a.s.l. Probably it used to serve as a transitional hunters' camp. The find assemblage comprise some 30 typical tools and 350 flakes. The classification of the culture was made on the basis of some Gravette-points, end-scrapers and burins.
Esztergom - Gyurgyalag (DOBOSI–KÖVECSES 1981):
One of the most beautiful and most typical assemblage with backed blades from Hungary. A large number of trinket snails and a surprisingly high ratio of distant raw material make the site especially important.
Hont
– *Templomdomb* (GÁBORI 1956)
– *Parassa III/Orgonás* Upper cultural layer in trench 1., in loess (?) (DOBOSI–SIMÁN 2003).
Jászfelsőszentgyörgy (DOBOSI 2001):
– *Szúnyogos* The site was found on field survey by Gy. Kerékgyártó. On authenticating excavations by V. Dobosi, bone and eggs of Lagopus were found, suggesting a late spring date for the use of the settlement (VÖRÖS 1993).
– *Székesdűlő* Field survey by Gy. Kerékgyártó, registered as site Nr 28 in his field-notes
Jászberény - Nevada farm finds in brown sand layer: according to R. Kertész, '*it can be placed to the Epipalaeolithic following the younger period of the Palaeolithic*' (KERTÉSZ 1997, 129).
Tarcal - Citrombánya E. Krolopp spotted the Palaeolithic site in course of malacological sampling. On authenticating excavations by V. Dobosi, on a western side-hill of the Kopasz Mt. a small settlement surface, left intact from the stone quarry could be opened.
Lovas
The site underwent various chronological and cultural classification. By the new C-14 date, the position of the site seems adequately settled (DOBOSI 1999).
With grooving tools made of Alces bone (DOBOSI–VÖRÖS 19979, 24), weathering products of dolomite coloured red by iron oxide was extracted here by the end of the Ice Age.
Miskolc - Rózsáshegy
According to the charts published, there were hardly more than 20 tools found here, which, according to the excavator, Á. Ringer can be classified as : '*...late Palaeolithic industry having Magdalenian-like typological and technological features...*', and Gy. Lengyel, publishing the material drew attention to similarities with Central European Epiaurignacian (LENGYEL 2004).
Pilismarót
The confines of this village stood in the centre of attention of Hungarian Palaeolithic research since the beginning of relevant studies.
Data have been accumulated from the excavations of A.J. Horváth, S. Gallus, A. Radnóti, G. Laczus, M. Gábori, as well as field surveys of G. Gyombola, I. Horváth, Á. Ringer and the Archaeological Topography of Hungary (MRT) project.
The classical site is located beside the reformed church, known under the name *Öregek dűlő*. From the classical loess profile of the *Basaharc-brickyards,* at several points, palaeontological, less frequently, archaeological material could be collected.
From the 1980-ies onwards, the author performed several excavations along the terraces trimming the right angle bend of the river Danube from the south-west at the following spots:: *Basaharc-summit, Pálrét, Tetves, Diós, Bitóc I–II, Bánom.*
G. Gyombola noticed further collecting points at: *Motocross-grounds, Hegyeshegy, Sárgadomb, Zagrajt, Kishegy.*

The evaluation of the finds is in progress. The small settlements are located within sight and hearing, separated from each other by active or dry valleys. So far, we have only indirect proofs on the contemporaneity of the sites, e.g., the specific and distant raw material rock crystal found at several locations (DOBOSI–GATTER 1996, 50).
Szeged-Öthalom
The settlement came to light when cutting into the Öthalom hill protruding from the alluvial plains of the river Tisza, lying at 90 meter a.s.l. in 1935. Apart from its scarce finds, two circumstances secure an important role to this site: its topographical location and the occurrence of Prut flint among the raw materials. The site is located along a possible route from the sources towards Esztergom-Gyurgyalag. Authenticating excavations on the site, performed in 1981 on the request of O. Trogmayer produced no results.
Szekszárd-Palánk dated to the end of the Ice Age.

Upper Palaeolithic Stray Finds

Csákvár rock cavity the two pierced red deer canines found together with the Middle Palaeolithic finds were obviously in Upper Palaeolithic layer.

The following collecting points from the Cserhát Mountains are unpublished results from field surveys

by A. Péntek and A. Markó, included here from their courtesy:
Csővár-Aranyhegy
Püspökhatvan
– *Takács hill*
– *Viszoki hill*
Galgagyörk - Kelemen föld
Szokolya-Huta (MARKÓ 2002)
Dömös – Pattantyús. Field survey by I. Horváth, G. Gyombola and Á. Ringer; authentication of the site by V. Dobosi was unavailing.
Dunaalmás - loess road Collected by I. Skoflek, from the loess cover of the Northern foothill regions of the Gerecse Mts. along the right bank of the Danube.
In many places at the village *Hont*, implements of probably Upper Palaeolithic age were collected, awaiting for further topographical and cultural identification:
– *Iskola (School), Bánat street, Konyic, Várhegy (mixed with other prehistoric finds!) Epres, Kőmályi szőlők* (DOBOSI–SIMÁN 2000).
To the west of the Parassa-puszta border station till the border of the county there are several sites known (DOBOSI–SIMÁN 2000, 324–325):
– *Ipolyvölgy I-II-III*
– *Parassa II-Kápolna, Parassa III-Forrás*
Szentlőrinckáta (mentioned also under the name *Pusztamonostor*), field surveys by Gy. Kerékgyártó at the localities Bata and Tábor-hegy (authenticating excavations by Dobosi brought no results).
Arka
– *towards the road leading to Boldogkőváralja* in clay,
– *Hidegoldal*, field survey by V. Dobosi
– *Karpos* - field survey by L. Tóth and Á. Ringer
– *Vineyards,* collection by P. Solt
Nagytevel
– *Bakonyér* in Late Pleistocene sandy loess, flake core made of Tevel flint. (BÁCSKAY–BIHARI 1989)
– *Csuszkáti dűlő* retouched wide flake made of Tevel flint (K. Biró p.c.).
Fony
– *Messzelátó,*
– *Tömlöc*
Hidasnémeti
– *Omlástető* East from the Borház (Wine-house) on the hillside;
– *Őrház, II* collected by K. Simán K (WOLF–SIMÁN 1986, 348)
Bodrogkeresztúr (DOBOSI 2000, 10)
– *Téglagyár* (Brickyards) (VÉRTES 1963),
– *Kavicsbánya dűlő,*
– *Kastélytábla,*
– *Dereszla*
Tarcal
– *Quarry beside the railway station* Collected by D. Jánossy between the reformed church and the Henye hill, along the earth road in the valley,
– *Terézia chapel* Field survey by V. Dobosi in 1982.
– *Deák-hill and Kövesd-hill*, data from G. Gyombola
Tiszaörvény-Varjashát
Tószeg (riverbed of Tisza)
Tiszalök In the course of the construction of a water-plant in 1951, I. Méri obtained an unretouched blade made of chalcedony from the depth of 4 meters of undisturbed loess.
Emőd-Tehéntánc dűlő, rock crystal flake from the surface (LENGYEL 2001)
Kistokaj - Kültelek: field survey by V. Dobosi
Miskolc - Széphegy (WOLF–SIMÁN 1986, 351)
Jászfelsőszentgyörgy
Collecting spots 2, 31, 42 in the field notes by Gy. Kerékgyártó (archives of the Damjanich Museum, Szolnok).
Mátraderecske: communication by M. Kretzoi: in the village sandpit, mammoth bones and a large chalcedony blade was found by J. Dancza.
Kerecsend L. Vértes found a blade made of hornstone under a cryoturbated profile.
Demjén - Szőlőhegy: surface collection by V. Dobosi.
Verseg - Tatárdomb E. Bácskay drew attention to the site form where eroded-weathered leaf-points had been collected. The authenticating excavation was not successful.
Apc - Sand quarry From the loess of the Late Pleistocene terraces trimming the Zagyva valley from the East, an endscraper on blade was found.
Tihany - Gödrös: I. Homola collected Szentgál type radiolarite artefacts and flakes on the surface. In the course of authenticating excavations, finds from younger prehistoric cultures were found as well as a single tool in the loess.
Villány-Wertmüller's vineyards Gy. Török found here in the depth of 2 meters mammoth bones, burnt bone flakes, charcoal and three atypical silex flakes.
Torbágy - Köszörűkőhegy, in the profile of a 15 meter deep clayey road-cut, B. Gunda found the fragment of a shouldered point. There were several field surveys devoted to the location of this important tool, so far without success by L. Vértes, V. Gábori-Csánk, É. Csongrádi-Balogh and A. Markó.

In the course of her fieldwork in Nógrád County, K. Simán found the following localities (SIMÁN 1993):
Jobbágyi - Nagy-hársas
Pásztó - Béka-sós dűlő
Szurdokpüspöki - Budai domb
Felsőpetény - Fácskás (SIMÁN 1993, 248)

Similarly, K. Simán identified the localities of Nógrád County stray finds stored in various collections (SIMÁN 1993):
Romhány:
– *Fenyves;*
– *Nyári akol* (SIMÁN 1993, 248)
– *Diós road* The site was found by G. Gyombola. It is obviously deserving further research.

The left side of the Danube-bend is for eight decades in the centre of Palaeolithic research. Recently, A. Markó summarised existing knowledge on the Palaeolithic between the fork of the river Ipoly and Vác. He mentioned the following collecting spots (MARKÓ 2002):
Nógrádverőce
– *Téglagyár (Brickyards)* On the south-eastern border of the village, in an abandoned clay pit A. J. Horváth observed

traces of a hearth place and collected obsidian and silex flakes.
– *above the Helemba cellars* donated to the Hungarian National Museum by G. Laczus from the heritage of A. J. Horváth.
Szob
– *Huszár telke* scraper, flakes and animal bones (MRT 9 315)
– *over the Jewish cemetery*, collected by A. J. Horváth
– *Steiner-cellar,* palaeontological remains and hearth-place
Vác - Kishermány road (MARKÓ 2002, 51)
Zebegény Szőnyi I. street (MARKÓ 2002, 51)
Kosd-Cindróka (MARKÓ 2000a, 5)

In the 1960-ies, L. Fodor (Eger, Dobó István Museum) made regular field surveys in the big tectonical valley separating the western parts of the Bükk and the Mátra Mountains. In the stream valleys of the Eger, Laskó, Ostoros streams and their morphologically dissected side valleys, on the top of 250–280 m high hills he collected an essential quantity and high quality Palaeolithic material (FODOR 1984). The continuation of Fodor's work and recent field surveys by S. Béres are currently authenticated by K. Zandler in his university diploma work. In the Cadastre, the list of L. Fodor's sites are presented; the exact cultural identification will be the task of Zandler's work. The localities are the following (FODOR 1984):
Eger
– *Kőporos,*
– *Nyerges,*
– *Pünkösdhegy*
Ostoros
– *Rácpa,*
– *Csúnyamunka*
Andornaktálya
– *Pünkösdtető,*
– *Szukszerdomb*
between Egerszalók and Demjén
– *Hegyeskőtető*
– *Hegyeskőbérc,*
– *Egerlátó dűlő/Kővágó dűlő*

*

In the followings, the workshop sites are listed that probably date back to the Upper Palaeolithic period
The typical workshop assemblages planted on known primary sources (hydro-and limnoquartzites of the Tokaj and Mátra Mountains, Transdanubian radiolarites) *may* have easily been used since the Upper Palaeolithic.
Regéc
– *Barátláz*: Following information by S. Kormos, V. Dobosi and F. Losits conducted field surveys to the east of Regéc, on the slight slope trimming the stream along the road from the north-east. In a stripe of cca. 100 meter, coarse stone artefacts of Upper Palaeolithic character were collected.
– *Puskás stream* Field survey by V. Dobosi and F. Losits, 2–300 meters to the south of Békáskút on the first terrace of the stream, traces of knapping obsidian and hydroquartzite were found.
Fony - Agyagos: Following information by S. Kormos, several field surveys were conducted here and macrolithic tools similar to the Arka industry were collected.
Mátraháza - Sombokor The site was discovered during several field surveys by Gy. Varga, K. T. Biró and V. T. Dobosi (BIRÓ 1984).
Erdőbénye
– *Sás stream* Around primary outcrop of limnic opalite, authenticating trenches were opened by E. Bácskay. The technological features indicate Upper Palaeolithic age for the beginning of the exploitation (BÁCSKAY 1995, 400).
- *Ligettető, beside the spring*, worked fragments donated by F. Király.
Hercegkút - Pogánykút (BÁCSKAY 1975)
Tolcsva
– *Sajgó-hegy* Collected by J. Noszky.
– *Beszkidek* (BÁCSKAY 1975)
– *Bellő-dűlő* (BÁCSKAY 1975)
Hasznos-Gombástető Collected by K. T. Biró and P. Solt
Gyöngyössolymos Data by K.T. Biró
Szurdokpüspöki - Derzsi workshop processing limnoquartzite and andesite (Szeletian?) (SIMÁN 1993, 248).

Finally, let us list here the localities the cultural affiliation of which cannot be given as yet due to the scarcity of finds.
From the courtesy of A. Péntek and A. Markó (the finds are under elaboration):
Acsa
– *Viszoki hegy*
– *János-hegy*
Bér
– *Öreg-hegy*
– *Szárhegy*
Vanyarc
– *Öreghegy I.*
– *East of Hribik hegy*
Püspökszilágy - Nagy Cseres
Galgagyörk
– *Szál-hegy*
– *under the Hegyes hegy*

From the left side of the Danube, due to the afore mentioned intensive research we know a large number of collecting point without the possibility of exact chronological classification.
The finds have been accumulated during decades in different museums, grace to the activity of A.J. Horváth, M. Mottl, M. and V. Gábori as well as G. Gyombola. In the field survey project of the Archaeological Topography of Hungary (MRT), part of them could be identified, in some cases, however, the site was given too loosely and on the territory dissected by valleys, roads and running waters, often completely built in they could not be located any more.

Verőce (Nógrádverőce) - Téglagyár (Brickyards)
Zebegény - Cemetery
Rád
Kismaros
Nagymaros
– *Törökmező, Alsó-földek, Szamaras, Templom-valley, Békás-meadow, Danube-field, Rigóhegy, Martinovics hill, Újhegy street, Téglagyár (Brickyards), - Elsővölgy, Mihály-valley* (MRT 9, 232–233)
Márianosztra
– *Magyarmál* (MRT 9, 244)
– *Fehérhegy,* defile
Verőcemaros, G. Gyombola collected at several spots material which is mixed.
Some could be identified from the registers of MRT, but some remained unidentified as yet.
– *Svejci dűlő, Guruntyi dűlő, Fenyves-dűlő*
Szokolya
In course of the field surveys in connection with the Archaeological Topography of Hungary (MRT), several known collecting spots were identified in the Szob and Vác districts as well as new ones were found.
Veresegyház –Hárskőhegy (MRT 9. site 37/42)
Püspökszilágy
– *Malató-hill* (MRT 9. site 24/5)
– *Torma-valley* (MRT 9. site 24/29)
Csomád-Hátulsó hill (MRT 9. site 3/10)
Nagybörzsöny-Rózsadűlő (MRT 9. site 18/15)
Perőcsény-Bányatető (MRT 9. site 23/29)
Kemence-Rajnis-Katolya (MRT 9. site 11/19)
In the quoted paper by K. Simán, the culturally unidentified data from the field surveys of G. Gyombola in Nógrád County were also published: (SIMÁN 1993)
Berkenye
– *Fenyves oldal*
– *Nőtincs crossing*
Diósjenő
– *Csehvár*
– *Kámor valley*
Drégelypalánk
Nógrád - Kálvária
Bánk - Vasút street
Cserhátsurány - Szécsény road
Szanda - Váralja (under the Castle)
Nógrádsipek - Nyesés
Szente - Orroshegy
Romhány
– *Gesztenyés*
– *Új szőlők (New vineyards)*
Jobbágyi
Pásztó
Szurdokpüspöki

Further Uncertain Palaeolithic Localities

Piliscsév - Átjáró cave '...the cave can be considered only among the uncertain Palaeolithic localities' (MRT 5, 280)
Demjén
– *Pünkösdhegy* field survey, surface stray finds collected by V. Dobosi in 1973; further pieces collected by P. Mihály in 1977
Felsőzsolca - Quarry pond In the course of field survey 5 pieces of blade-like flakes came forth. (LENGYEL 1999, 6)
Between Rakaca and Irota - on the ridge of the Kecskepad collected by Á. Jámbor, 1958
Sátoraljaújhely
– from unknown locality
– *Akasztódomb* field survey by V. Dobosi, K. Biró and P. Gyarmati in 1982
– *under Szicsok hill*
Füzér - Vár (Castle) From the heritage of I. Skoflek, items collected by A. Varga in 1974
Tállya - uncertain fragments from 1910, selected during revision by L. Vértes
Erdőbénye - Becsk Collected by K. Simán in 1989. New finds by K. Biró from the same spot (Biró p.c.)
Tokaj Quartz and chalcedony flakes from loess, over the top fossil soil, collected by M. Pécsi.
Tolcsva - Kopasz hill Artefacts collected by J. Frits in 1877 (value of cultural history)
Megyaszó - Répásárok Collected by J. Horváth.
Zsujta - Haraszka-hill
Miskolc - carrion pit
Tolnamözs Regular end-scraper on blade made of silex, excavated by Gy. Mészáros from under Roman layers.
Tiszaladány - Nagyhomokos Á. Salamon transferred to the Hungarian National Museum in 1974 a box of worked tools from the sand pit Nagyhomokos-Ürgehát, collected by J. Czibak from the surface in 1963. The author conducted a field survey on the site in 1977, and found no chipped stone tools, only scattered prehistoric and Roman period shards.
Dunaszekcső - Várdomb (Castle Hill) Mixed finds, including stone artefacts collected by O. Szabolcsi and V.T. Dobosi
Mikóháza - Obsidian tools collected by L. Pentelényi, geologist, to the East of Palack-hill, in vineyards . He transferred the material to the museum in 1970. It is one of the 'obsidian localities' of uncertain age and no sherds.
Kovácsvágás - to the west of Akasztódomb Collected and transferred by L. Pentelényi in April 1970.
Eger - Császártető: Collected by V. Dobosi in 1974.
Nyerges Donated by F. Legányi
Ivád - beyond the Castle Hornstone flake collected by I. Z. Nagy
Kisgyőr 9 pieces of felsitic porphyry flakes, collected by F. Legányi in 1933.
Balkány - Bajusz Transferred from the Geological Institute in 1973 as coming from Würm 3 sediments.
Harcsáspuszta (*Békésszentandrás ? Berettyóujfalu* ?) Donated by L. Tihanyi
Arácsi valley
Szokolya - Huta (Glass Furnace) Artefacts collected by J. Szabó, geologist in 1876; having outstanding value in research history.
Jászkisér - Magashatár-mould Traces of burning, bones and stone tools reported by Gy. Kerékgyártó.
Jászjákóhalma
Kisczell (?)
Pomáz - Szmolina Donated by S. Sashegyi.

Pilisszentlászló - Sikáros Data by G. Gyombola.
Nagyegyháza - Bicske, Collected by I. Homola from the vicinity of a Roman site
Nyergesújfalu - Sándor stream Collected by I. Homola
Esztergom - Irtványföldek
Bajót - Buzáshegy Field survey by I. Homola in 1988
Süttő - Diósárok T. Kormos collected from loess stone flakes and observed traces of a hearth-place.
Velence - Vineyards An archaic burin made of radiolarit was found here, with large dimensions, 74 x 39 mm.
Dörgicse - Sági puszta
Sorokpolány – One stone artefact was found in course of the excavation of a Mediaeval cemetery, from clayey loess. Transferred by J. Nemeskéri.
Z. Schréter, geologist collected during three decades of fieldwork in the southern part of Borsod County considerable amount of surfact finds that have not been authenticated as yet.
Sály - Latorút Fragment of flake scraper made of hydroquartzite, coarse radiolarite blade collected in 1934,
Felsőkéked - Szurokhegy Obsidian flake collected in 1947,
Emőd - Nagyhegy Fragment of a point made of chalcedony, collected in 1934,
Kiscsermőke - Hidegvölgy 17 flakes made of hydroquartzite,
– *Pokloshegy* 9 flakes made of hydroquartzite, collected in 1933
Betweem Mocsolyás and Bekény 7 flakes made of felsitic porphyry, collected in 1915,
East of *Szendrő*, hydroquartzite flake
Tolcsva - Patkóhegy Osidian source area (prehistoric locality ?), 15 worked flakes were collected by Schréter, together with M. Roska on 6th of June 1956.
Mád - Pádihegy (?)
Miskolc - Kőgölő (?)
Tornyosnémeti - Mézestábla (WOLF–SIMÁN 1982, 124)

In this Cadastre, 368 archaeological entities were enumerated. They comprise altogether 151 localities with several topographical points and chronological horizons. Compared to the previous summary, the increase is spectacular and very promising. There are some collecting points that we seem to roll without further increase of information but we have to keep them in mind anyway. There are also new localities and cultures awaiting for research and excavations, questions to be answered that will give enough work for generations of students of the Palaeolithic period.

LIST OF SITES

The sites are listed in chronological order and according to cultures. The sites are subsequently numbered. In the case when in one city/village there are several sites, only the individual palaeolithic localities are numbered. In the case of cave sites, the administrative unit is given afterwards in brackets.

Lower Palaeolithic (Fig.1)
Pebble industry
1. Vértesszőlős
2. Edelény - Akácos hill
3. Vadna -Temetődomb (Cemetery hill)
4. Mónosbél
5. Budapest - Buda, Castle Hill

Hand-axe industries :
Miskolc:
6. Bársony-ház (Bársony-house)
7. Kiskőbánya
8. Avas - Alsószentgyörgy
9. Avas - Felsőszentgyörgy
10. Korlát - Ravaszlyuktető

Middle Palaeolithic (Fig.2).
Bábonyian – Old Szeletian:
Sajóbábony:
11. Méhésztető
12. Kövesoldal
Mályi:
13. Öreghegy I.
14. Öreghegy III.
15. Téglagyár (Brick factory)
Miskolc:
16. Szabadkatető
17. Kánástető
18. Sajószentpéter - Nagykorcsolás
19. Szob - Öregfalu dűlő I
20. Szeleta cave (Lillafüred)
21. Diósgyőr-Tapolca cave (Miskolc)
22. Balla cave (Répáshuta)
Galgagyörk:
23. Öreghegy
24. Komárka
25. Csonkás
26. Legénd - Rovnya

Jankovichian:
27. Jankovich cave (Bajót)
28. Szeleta cave (Lillafüred)
29. Háromkúti cave Ómassa)
30. Kiskevély cave (Csobánka)
31. Pilisszántó II. rock shelter
32. Csákvár rock helter)
33. Szelim cave (Tatabánya)
34. Bivak cave (Pilisszentlélek)
35. Remete-Upper cave (Máriaremete)
36. Galgagyörk - Májoka
Hont :
37. Csitár
38. Babat
39. Molnárhegy

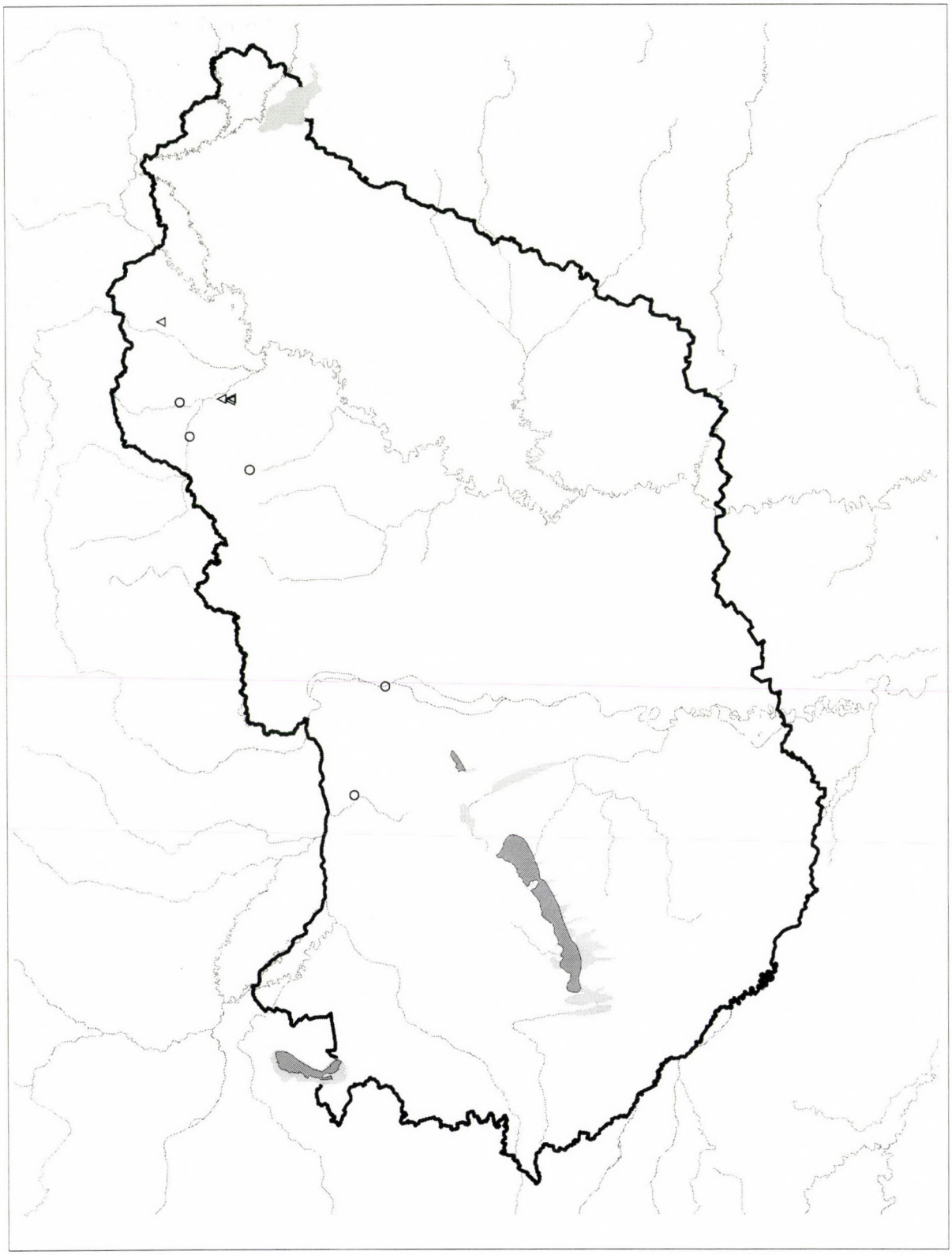

Fig. 1 Lower Palaeolithic sites: Key of symbols: Pebble industry: open circle ○, Hand axe industry: open triangle △

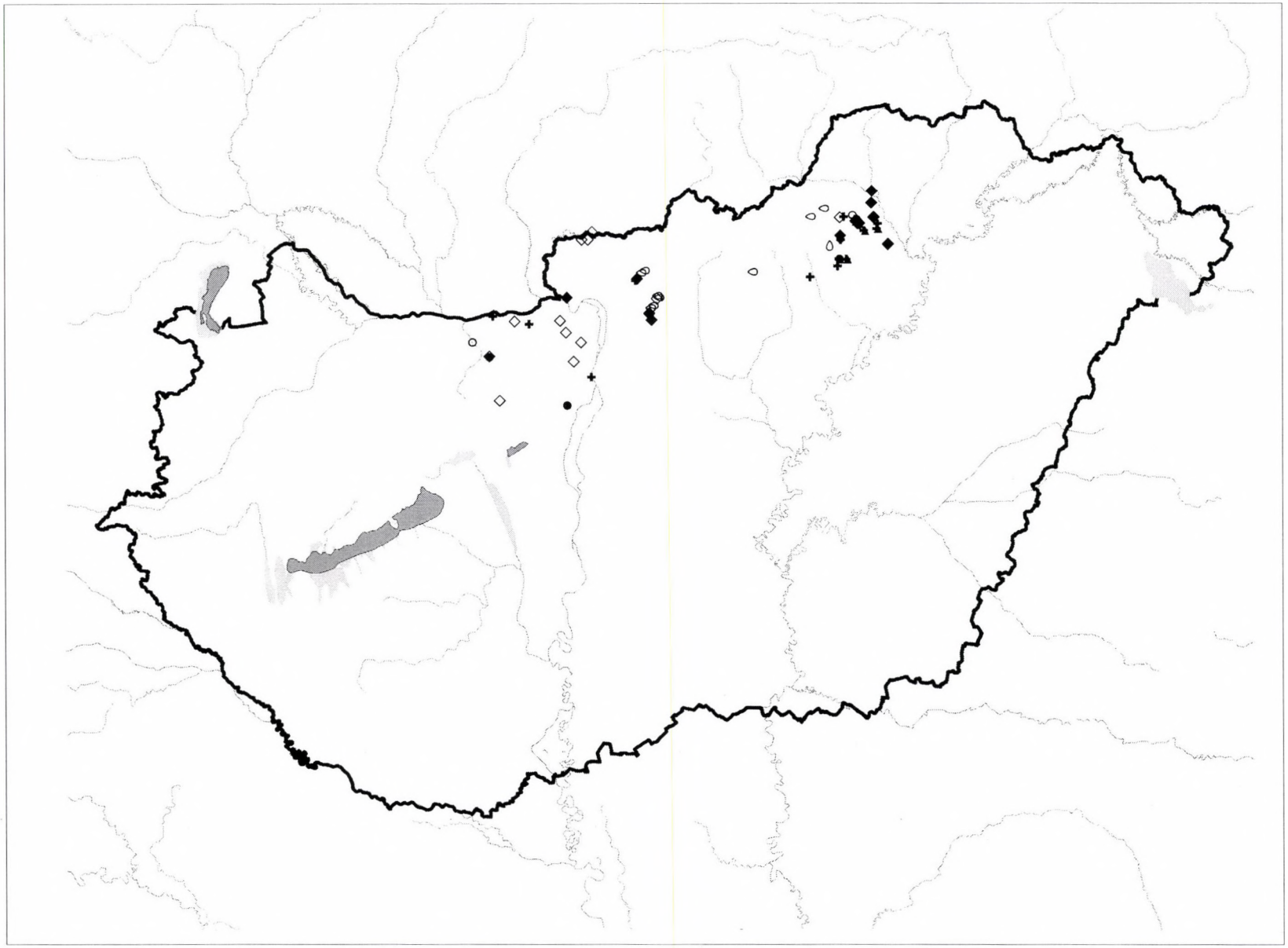

Fig. 2 Middle Palaeolithic sites: Key of symbols: Bábonyian: black lozange ♦ Early Szeletian: open lense vertical ◊, Leaf points: open lense horizontal ○, Jankovichian: open lozange ◇, Taubachian: open circle ○, Charentian: black circle ●, Moustérian: black triangle ▲, Non-specified Middle Palaeolithic: cross +

Taubachian:
40. Tata - Porhanyó
41. Diósgyőr - Tapolca cave (Miskolc)
42. Szeleta cave (Lillafüred
43. Büdöspest cave (Miskolc)
44. Lambrecht Kálmán cave (Varbó)

Charentian:
45. Érd - Parkváros
46. Szelim cave (Tatabánya)
47. Subalyuk cave (Cserépfalu)

Moustérian:
48. Subalyuk cave, lower layer (Cserépfalu)
49. Farkaskő rock cavity
50. Mexikó cave (Miskolc)
51. Görömböly - Tapolca cave (Miskolc)
52. Szeleta cave (Lillafüred)

Mixed, uncertain Middle Palaeolithic
53. Subalyuk cave, lower(1-2.) layer (Cserépfalu)
54. Farkaskő rock cavity (Cserépfalu)
55. Mexikó cave (Miskolc)
56. Görömböly - Tapolca cave (Miskolc)
57. Szeleta cave, layers 3-6 (Lillafüred)
58. Subalyuk lower layer
59. Mexikói cave (Miskolc-Diósgyőr)
60. Büdöspest cave (Miskolc)
61. Kecskésgalya cave (Cserépfalu)
62. Ballavölgy rock cavity (Répáshuta)
63. Sólyomkút cave (Ómassa)
64. Tokod
65. Süttő
66. Miskolc - Avas
67. Eger - Kőporos
68. Csákvár rock cavity
69. Budapest - Corvin-square
70. Legénd - Káldy farm 5.

Early Szeletian:
71. Szeleta cave, layer 3. (Lillafüred)
72. Balla cave (Répáshuta)
73. Lökvölgy cave (Felsőtárkány)
74. Puskaporos rock shelter (Lillafüred)

Culturally uncertain localities with leaf-shaped artefacts,
75. Bükkmogyorósd - Hosszúbérc
76. Nekézseny - Határtető
77. Parád - Marhádtető
Vanyarc
78. Szlovacka dolina
79. Tovi
Becske
80. Büdöstó-hegy
81. Júlia-major
82. Acsa - Provosznya.

Upper Palaeolithic (Fig.3-4)
Developped Szeletian:
83. Puskaporos rock shelter (Lillafüred)
Miskolc
84. Molotov street
85. Petőfi street.
86. Istállóskő cave (Szilvásvárad)
87. Sárospatak - Sötét oldal
88. Aszód - Tarackás.

Aurignacian:
89. Istállóskő cave (Szilvásvárad)
90. Peskő cave (Felsőtárkány)
91. Jankovich cave (Bajót)
92. Kecskésgalya cave (Cserépfalu)
93. Farkaskő rock cavity (Cserépfalu)
94. Sólyomkút cave (Ómassa)
95. Acsa - Rovnya
96. Szob Komár-földek
97. Verőce - Fehérhegy
98. Miskolc - Harsányi elágazás
Andornaktálya
99. Zúgó dűlő
100. Szukszerdomb
Galgagyörk
101. Májóka
102. Komárka
103. Szárhegy

Uncertain Aurignacian:
104. Ostoros - Rácpa
105. Sólyomkút cave (Ómassa)
106. Miskolc - Tapolca cave (Miskolc)
107. Herman Ottó cave (Miskolc)

Pavlovian:
108. Bodrogkeresztúr - Henye
109. Hidasnémeti - Borház dűlő
Hont
110. Parassa III, Orgonás
111. Sahy, Mayer's site
112. Megyaszó - Szelestető
113. Nadap - Kőbánya (Stone quarry)
Püspökhatvan
114. Diós
115. Öregszőlő
116. Takácshegy
Sajószentpéter
117. Nagykorcsolás
118. Margitkapu dűlő
119. Verseg - Kertekalja

Ságvárian:
120. Ságvár - Lukasdomb
121. Mogyorósbánya - Újfalusi dombok
122. Madaras - Téglavető
123. Szob - Ipolypart

Epigravettian:
124. Herman Ottó cave (Miskolc)

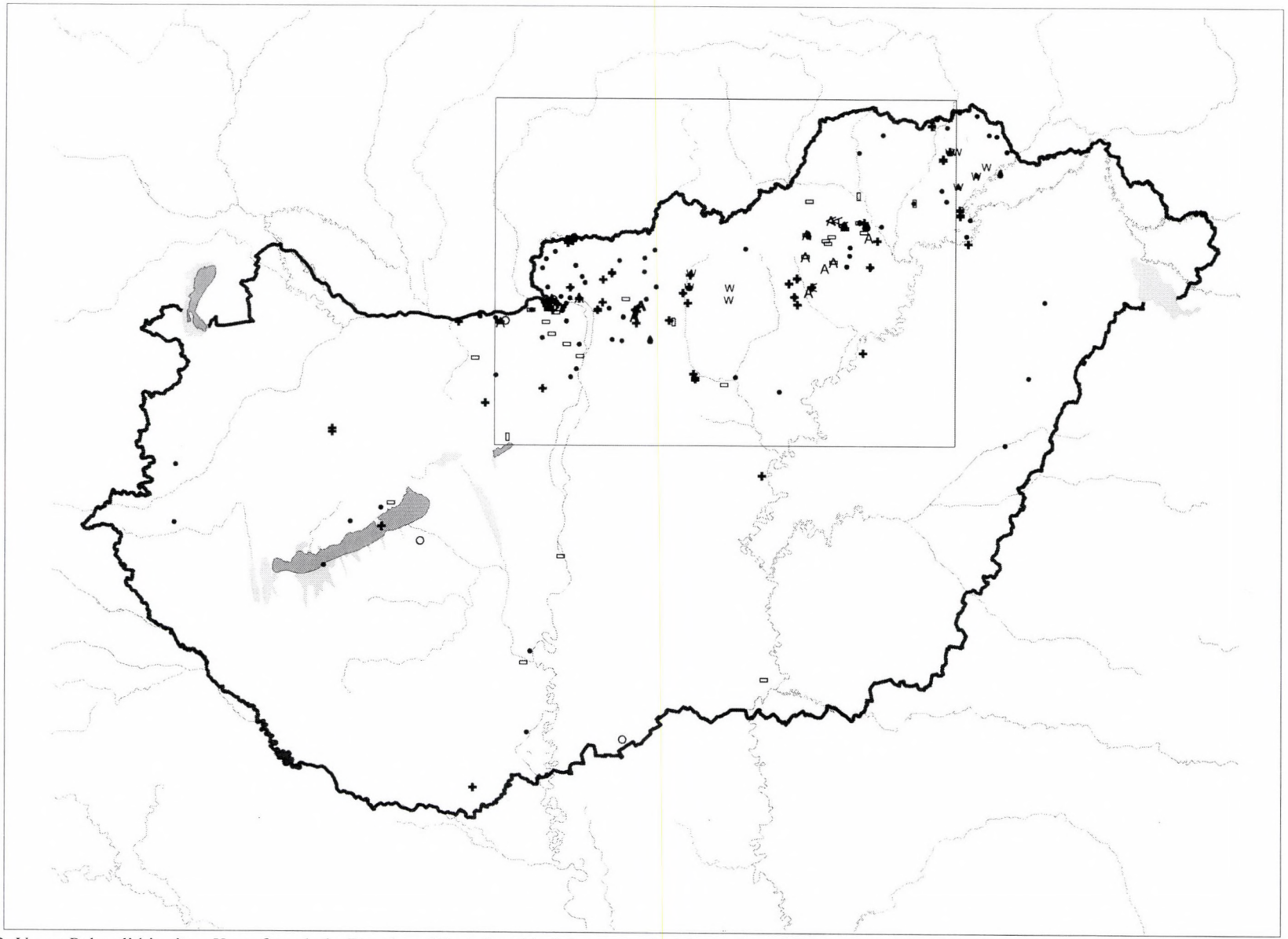

Fig. 3 Upper Palaeolithic sites: Key of symbols: Developed Szeletian: black lense, vertical ♦, Aurignacian: A, Uncertain Aurignacian: lying A, Pavlovia: open rectangle, standing ▯, Ságvárian: open circle ○, Epigravettian: open rectangle, lying ▭, Upper Palaeolithic stray finds: cross +, Opther stray finds: point ●, Workshop: W

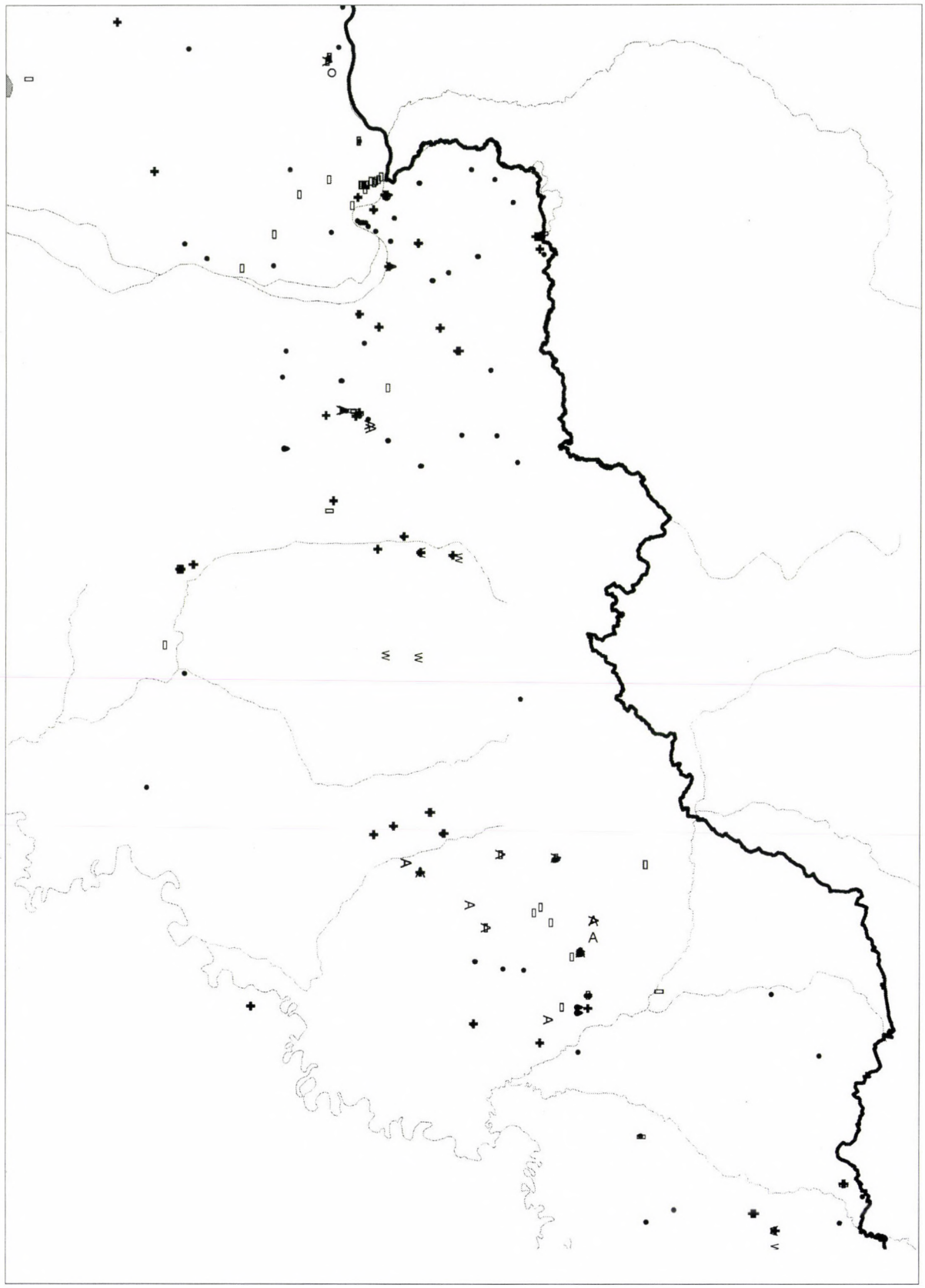

Fig. 4 Upper Palaeolithic in Northern Hungary (part of Fig. 3). Key of symbols: see Fig. 3

125. Diósgyőr - Tapolca cave (Miskolc)
126. Görömböly -Tapolca cave (Miskolc)
127. Uppony I. rock shelter (Uppony)
128. Uppony II. rock shelter (Uppony)
129. Rejtek rock shelter (Répáshuta)
130. Istállóskő cave (Szilvásvárad)
131. Peskő cave (Felsőtárkány
132. Petényi cave (Felsőtárkány)
133. Balla cave (Répáshuta)
134. Ballavölgy rock cavity (Répáshuta)
135. Farkaskő rock cavity
136. Kiskőoldal rock cavity
137. Csővár rock shelter (Csővár)
138. Bivak cave (Pilisszentlélek)
139. Pilisszántó I. cave (Pilisszántó
140. Kiskevély cave (Csobánka
141. Szelim cave (Tatabánya)
142. Jankovich cave (Bajót)
143. Baits cave (Bajót)
144. Szalay Ákos cave (Bajót)
145. Arka — Herzsarét
146. Budapest - Csillaghegy
147. Dömös - Táncsics Mihály street
148. Dunaföldvár - Göböljárás
149. Esztergom - Gyurgyalag

Hont
- 150. Templomdomb
- 151. Parassa III / Orgonás

Jászfelsőszentgyörgy
- 152. Szúnyogos
- 153 Székesdűlő

154. Jászberény - Nevada
155. Lovas - Mackóbánya
156. Miskolc - Rózsáshegy
157. Nagymaros - Sváb hill (?)

Pilismarót
- 158. Öregek dűlő
- 159. Basaharc-tet
- 160. Pálrét
- 161 Tetves
- 162. Diós
- 163. Bitóc I
- 164. Bitóc II.
- 165. Bánom
- 166. Basaharc-Téglagyár (Brickyards)
- 167. Motocross grounds
- 168. Hegyeshegy
- 169. Sárgadomb
- 170. Kishegy

171. Szeged - Öthalom
172. Szekszárd - Palánk
173. Tarcal - Citrombánya
174. Vác 44 - Csipkés

Upper Palaeolithic stray finds:

Andornaktálya :
- 175. Pünkösdtető 2
- 176. Szukszerdomb

177. Apc - Homokbánya (Sandpit)

Arka
- 178. On the road towards Boldogkőváralja
- 179. Hidegoldal
- 180. Karpos
- 181. Szőlők

Bodrogkeresztúr
- 182. Téglagyár (Brickyards)
- 183. Kavicsbányadűlő (Road to gravel pits)
- 184. Kastélytábla
- 185. Dereszla

186. Csákvár rock cavity (Csákvár)
187. Csővár - Aranyhegy
188. Galgagyörk - Kelemen föld
189. Demjén - Szőlőhegy
190. Dömös - Pattantyús
191. Dunaalmás - loess road

Eger
- 192. Kőporos
- 193. Nyerges
- 194. Pünkösdhegy

Egerszalók and Demjén
- 195. Hegyeskőtető
- 196. Hegyeskőbérc
- 197. Egerlátó dűlő / Kővágó dűlő.

198. Emőd - Tehéntánc dűlő
199. Felsőpetény - Fácskás

Fony
- 200. Messzelátó
- 201. Tömlöc

Hidasnémeti
- 202. Omlástető
- 203. Őrház II

Hont
- 204..Iskola (School)
- 205. Bánat street
- 206. Konyic
- 207. Várhegy (Castle Hill)
- 208. Epres
- 209. Kőmályi szőlők (Kőmály vineyards)
- 210. Ipolyvölgy I.
- 211. Ipolyvölgy II.
- 212. Ipolyvölgy III.
- 213. Parassa II / Kápolna (Chapel) 1
- 214. Parassa III / Forrás (Spring)

Jászfelsőszentgyörgy and environs
- 215. Site nr. '2' in Kerékgyártó's field-notes
- 216. Site nr. '31' in Kerékgyártó's field-note
- 217. Site nr. '42' in Kerékgyártó's field- notes

218. Jobbágyi - Nagyhársas
219. Pásztó - Békasós dűlő
220. Kerecsend
221. Kistokaj - Kültelek
222. Kosd - Indróka

Nagytevel
- 223. Bakonyér
- 224. Csuszkáti dűlő

225. Miskolc - Széphegy

Nógrádverőce
- 226. Téglagyár (Brickyard)
- 227. Over the Helemba cellars

Ostoros
228. Rácpa
229. Csúnyamunka
Püspökhatvan
230. Takács hill
231. Viszoki hill
Romhány
232. Fenyves
233. Nyári akol
234. Diós street
Szentlőrinckáta
235. Bata
236. Tábor-hill
Szob
237. Huszár telke
238. Over the Jewish cemetery
239. Steiner-cellar
240. Szokolya - Huta
241. Szurdokpüspöki - Budai domb
Tarcal
242. Quarry beside the railway station
243. Between the Reformed Church and the Henye hill
244. Terézia Chapel
245. Deák-hill
246. Kövesd-hill
247. Tiszalök - Water Plant
248. Tiszaörvény
249. Tihany - Gödrös:
250. Torbágy- Köszörűkőhegy
251. Tószeg
252. Vác - Kishermányi road
253. Verseg -Tatárdomb
254. Villány - Wertmüller vineyard
255. Zebegény - Szőnyi I. street

Other stray finds
Acsa:
256. Viszoki hill
257. János-hill
258. Arács
259. Bajót - Búzáshegy
260. Balkány
261. Bánk -Vasút utca
Bér:
262. Öreg-hegy
263. Szárhegy
Berkenye:
264. Fenyves oldal
265. Nőtincs road crossing
266. Cserhátsurány - Szécsény road
267. Csomád - Hátulsó hill
268. Demjén - Pünkösdhegy
Diósjenő:
269. Csehvár
270. Kámor valley
271. Dörgicse
272. Drégelypalánk
273. Dunaszekcső - Várdomb (Castle Hill)
274. Eger - Császártető
275. Emőd - Nagyhegy
276. Erdőbénye - Becsk
277. Esztergom - Irtványföldek
278. Felsőkéked - Szurokhegy
279. Felsőzsolca - Bányató
280. Füzér
Galgagyörk
281. Szál-hill
282. Below the Hegyes hill
283. Ivád
284. Jászjákóhalma
285. Jászkisér - Magashatár-halom
286. Jobbágyi
287. Kemence – Rajnis
288. Kisczell (?)
Kiscsermőke
289. Hidegvölgy
290. Pokloshegy
291. Kisgyőr
292. Kovácsvágás - Akasztódomb
293. Kismaros
294. Mád - Pádihegy
Márianosztra:
295. Magyarmál
296. Fehérhegy
297. Megyaszó - Répás árok
298. Mikóháza - Palackhegy
Miskolc :
299. Dögtemető
300. Kőgölő
301. Mocsolyás
302. Nagybörzsöny - Rózsadűlő
303. Nagyegyháza
Nagymaros:
304. Törökmező
305. Alsó-földek
306. Szamaras 3
307. Templomv-alle
308. Békás-rét
309. Duna-mező
310. Rigóhegy
311. Martinovics hill
312. Újhegy street
313. Téglagyár (Brickyard)
314. Elsővölgy Mihály-valley
315. Nógrád - Kálvária
316. Nógrádsipek - Nyesés
317. Nógrádverőce - Téglagyár (Brickyard)
318. Nyergesújfalu - Sándor stream
319. Pásztó
320. Perőcsény - Bányatető
321. Piliscsév - Átjáró
322. Pilisszentlászló - Sikáros
323. Pomáz
Püspökszilágy
324. Malató-hill
325. Nagy Cseres
326. Rád
327. Between Rakaca - Irota
Romhány
328. Gesztenyés
329. Új szőlők
330. Sály - Latorút

Sátoraljaújhely:
331. Akasztódomb
332. under Szicsok
333. Sorokpolány
334. Süttő - Diósárok
335. Szanda - Váralja
336. East of Szendrő
337. Szente - Orroshegy
338. Szokolya - Huta
339. Szurdokpüspöki
340. Tállya
341. Tiszaladány - Nagyhomokos
342. Tokaj
343. Tolcsva - Patkóhegy
344. Tolnamözs
345. Tornyosnémeti - Mézestábla
Vanyarc
346. Öreghegy I.
347. East of Hribik hill
348. Velence
349. Veresegyház - Hárskőhegy
Verőcemaros
350. Svejci dűlő
351. Fenyves-dűlő
352. Guruntyi dűlő
353. Zebegény - Cemetery
354. Zsujta - Haraszka.

Workshops
Regéc
355. Barátláz
356. Puskás stream
357. Fony - Agyagos
358. Mátraháza - Sombokor
Erdőbénye
359. Sás patak
360. Ligettető
361. Hercegkút - Pogánykút
Tolcsva
362. Sajgó-hegy
363. Beszkidek
364. Bellő-dűlő
365. Hasznos - Gombástető
366. Gyöngyössolymos
367. Szurdokpüspöki - Derzsi
368. Budapest - Denevér utca

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