DATA ON THE RELATIONSHIP BETWEEN
THE MIDDLE AND UPPER PALAEOLITHIC
IN HUNGARY

ABSTRACT — The end of the middle palaeolithic cultures and the appearance of the earliest upper palaeolithic cultures fall in the middle Würmian period, geochronologically on the end of Bőrjúp Ménde boreal brown soil; Hegyelföld/Marhalac double soil complex, probably Denekampi Ménde Upper interstadial soil.

Palochronologically the pleistocenic A pollen zone cannot be dated, during the interstadials, however, arboreal vegetation can be found even on the Hungarian Great Plains. Palaeoecologically in the Székefenyes Istállók and Moson area of the Utrecht phase the ratio of the upper palaeolithic steps fossil elements increase pushing back the care bear.

Archaeologically the Middle Palaeolithic Pebble Industries had no contact whatsoever with the Upper Palaeolithic cultures. The end (1) of the Transdanubian Jankovitschian and of the older cultural horizons of the Székely in the Bükk Máta are contemporary to the first Aeginaecian wave. It demonstrates even direct contact with the latter: a marginal contact of two contemporary populations living in the same ecological sphere.

Up to date no definite evidence on genetic links between the Middle and the Upper Palaeolithic in Hungary has been found.

KEY WORDS: Hungary — Early Würm — Stratigraphy — Palynology — Palaeontology — Middle and Early Upper Palaeolithic.

Starting from the few and sometimes doubtfull absolute chronological data, it is a circa 20 thousand years interval where this contact can be examined. This is the period when different industries of mosaic-pattern development could live side by side in a relatively narrow time interval occupying geographically isolated ecological spheres of different characteristics.

Drawing the chronological borders, the principal problem is in the elimination of the significant difference between the geochronological and absolute chronological data. There is an at least 30 thousand years gap between the estimated geochronological and the measured absolute data in favour of the latter, what cannot be explained, still it has to be considered. When the difference between the geochronological and various absolute chronological data reaches the 60 ky (!) (e.g. in case of the middle palaeolithic site of Táska) there is only one explanation: there must be an error in calculation, sampling or measuring. The theoretical attempt to eliminate these controversies, which indicate that the middle palaeolithic populations would have long survived on certain territories, lacks the objective basis. The correlation of data from different chronological measurements is still missing, and much more data will be needed for a final solution.

Biochronology and the rhythm of sedimentation can only yield reliable data within topographically and chronologically delimited cases. The reason is the
contradiction between the slow pace of change in plant and animal species and a demand for detailed chronology.

Carbon dating of non archaeological sites are considered (Krook, 1977, Table 1.) the discussed period may put with some reservation between 50 and 150 years, which is important for our purposes. 

According to classical pleistocene terminology from the end of the Brügur till Pandur, in Northeast European was a period of the Holocene and the dendrochronology (Zagwijn 1974, Kukla 1981).

G. Bosinski dates the transition of the Middle Paleolithic in Upper Paleolithic to the Hengelo interstial. The cold peak of the pleniglacial A, partitioned by several soil forming interstials, can be put to this with middle paleolithic industries (Bosinski 1988, 39E).

Hengelo interstial as the ecological back- ground of the great switch over seems evident from Hungarian data, too. Our problem concerns once more the absolute chronological data. Starting from the local stratigraphical situation there is a shift of a whole waxenial between the interstials periods, bearing the same name, on two relatively close territories, M. Pesti set up a slightly more idealized and general- ized layer sequence from the Hungarian loess stratigraphy (Pesti 1977, 103). Here this period is the interval between the deposition of the Bascharase lower soil complex and the level of the Mende Upper humus zone. In the index sequence this 20 m thick sediment series is called the Mende-Bascharase complex (Pesti 1977, 97–103).

It can be characterized as follows. The early Würm interstial (Brügur, Amersfoort!) is identical with the Bascharase. The middle Würm type soil with high clay content formed under thick, well-developed forest-steppe vegetation. Its colour is dark brown depending on the lime content (Pesti 1977, 101).

The Bascharase double complex formed during the warmest phase of the Würm is a well definable phenomenon in Hungarian sequences: a doublesteppe soil separated by a 20 to 80 cm thick layer. The somewhat 1.25m thick Bascharase complex develops only under long interstial circumstances. According to the classical periodization it is identical with the Brügur. This remains without question of the Mende Upper soil complex. The upper, younger level of the double, asymmetrically developed soil is dated by C-14 to the end of the Pandur. It is present in the whole country usually in double form. The upper layer is a slightly developed chernozem, the lower a stronger developed similar soil complex. It is a middle forest soil, covering an intensive vegetation (Pesti 1977, 97–98). The two soils are separated in the upper, younger layer a meter of deluvial loess. The physical — chemical quality of the developed soils is defined first of all by the local relief situation, which is mostly forested. However, the significant amelioration of the climate was needed or at least the interstialal climatic condition.

Northermally, the sedimentation pace of the loess layer of various thickness, dividing the soils, is regular discordance; hiatus or redeposition can often be supposed (Pesti 1965, 330–331). As the earliest Upper Paleolithic sites were found in caves, the analysis of the cave deposits and their comparison with their presence, is important. By the known size, the Istállókö-phase the characteristic species of the lower Würm disappear, the ratio of the cave bear decreases, and the characteristic changes begin of the later dominant species (Vörös 1984, 20–21).

The growing of the A. roesica in the micro- forms indicates a mottler period. From a strictly ecological view the first faunal phase of the two, best identified in the Istállókö cave, seems to be Middle Paleolithic as suggested, among others, by the cave bear dominance, while the younger levels contain interstialal fauna i.e. they suppose a more recent living conditions. 

The living conditions of the molluscs allow no general climatic implications in this period. The analysis of materials from open-air sites may better help a micro-ecological reconstruction.

Regarding the problem of Middle/Upper Palaeo- lithic transition I would like to emphasize that there are no direct proofs attesting that the local Middle Paleolithic industries were the genetical pre- decessors of the Upper Paleolithic cultures. As suggested by the different dating methods all the main Middle Paleolithic cultures in Hungary are situated over the peak of Würm I, even as long as the Pleniglacial A. This concerns, however, only cultures on the whole, and not the local conti- nuous development to the latest Middle Paleolithic facies. The following lines will deal with the possibility of their contacts.

The late-working Middle Paleolithic industries in the northwestern part of Transdanubia (Gábor-Csók 1968; Vértessy et al. 1964) may be omitted.

No genetical contact with the Upper Paleolithic can be supposed. Those Upper Paleolithic industries which use pebble raw material, usually younger (at least) a short pleniglacial phase. They developed outside the Carpathian Basin, have a different ecological background and their type-technological features are primarily of an unified cultural circle. Their ‘inclusion’ for pebble working may go back to local reasons.

The origin of the Upper Paleolithic, Middle Paleolithic technocomplexes using flake- blade blanks can be examined. In Hungary the use of flake-blades is common from the lower layer of the Sábyalka cave is restricted to a few, in the Bukk Mts. 908 artifacts, among them only 67 are less than 12 cm. The lower faunal layer (Ayres Myers (Bartucz et al. 1938). This industry is too old to have any contact with the Upper Paleolithic. The size and the number of the mentioned complex is quantitatively richer (5 255 artifacts, among them 704 tools), although it is restricted to a smaller topographical unit (Bartucz et al. 1938, 140).

The cultural attachment of this younger unit is discussed. The ‘cold’ features of the cave sediment suggest that it existed during the Würm 1, according to Gábor-Csók it is contemporary to the Erzs (Gá- bor-Csók 1980). 

From among the middle palaeolithic cultures the Jankovichian is the best analysed one. Gábor-Csók gave a detailed analysis of the industry in her dissertation. The newly described culture is a local manifestation of the Micouian facies developed from the Acheulian base culture. The industry has a double Middle Paleolithic char- acter: on the one hand it is a levallian type Montre- zian, on the other, it consists of leaf-shaped elements (Gábor-Csók 1986, 217). The Upper Paleolithic tools do not surpass 8%.

Gábor-Csók describes the leaf-shaped tools from the eponymous site (Jankovich cave, Northwest Trans- danubia) is 57 mm, (Tab. 1.)

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The late Acheulian-Micouian traditions are mirrored in the oblique form of the base of the leaf- shaped tools.

The schematic drawing of the leaf tools with angles (Fig. 1): It is important to note that J. Hillam formulates the model of an early Esetian (1) leaf tool during his excavations in the Jankovich cave in 1915 (Gábor-Csók 1986, vol. II, Table III-b, 3.).
The raw material of the leaf tool is the glassy quartz porphyry, the source area of which is a well defined territory in the Bükk Mts. This is also the basic raw material of the Szeleta industry, to which the find can be attributed typologically. Thus the importance of the tool lies in the fact that it indicates the contact between the early Szeklőian of the Bükk Mts with the Jankovichian.

FIGURE 1. Schematic drawing of leaf-shaped tools of the Jankovichian culture with base and top angles.

The local development of the Jackovichian cannot be observed, there is no evidence of its contact with Upper Palaeolithic cultures.

Since all the lower leaf-shape tools, defined earlier as Transdanubian Sleetian, belonged to the Jankovichian, the classical Sleetian is restricted to where it came from: a few caves in the Bük Mts.

Another industry in Northeast Hungary, which may also be considered as a lower leaf-shape tool industry, is Bányóc. This industry was described in the last few years. It is characterized by the distinct and stratigraphic position of the material, collected from the surface of lower hills along the eastern and northern foothills of the Bük Mts, is not clarified. It is referred to the Middle Pleistocene. The industries are developed from Archaic traditions. Typo-paleontologically it can be attached to them, still its appearance is greatly influenced by the most common raw material, the lamellar glassy quartzphyllite.

The chronological place can be deduced with the help of analogies, in another question if the rough biconical industry of some caves in the Bük Mts, earlier defined as early Sleetian, could be attached here. The publication contains material only from open air sites (Ringer 1982, 7–157), still the caves are not alien for biconical industries derived from the Microwear.

Comparing the technical data and the schematic drawings (Fig. 2) of the Bányóc tools with the Jackovichian one observes that the traditions appear more distinctly when comparing the total industries. Our impressions, namely, may easily influence the view of basically different raw materials (a very fine liver-brown radiolarite of silky lustre from Transdanubia in the Jankovichian and mostly flint, flint-based, in the homogenous grey quartzphyllite in the Bányóc).

The technical data of the bifacial in the Bányóc are the following: (legend see at Jankovichian) (Table 2).

The Stretta cave is of basic importance (Gabóri 1964). Microwear analysis, chaînon strati- graphic, the quantitatively and qualitatively important archaeological material has also been placed in the focus of research (Allworth-Jones 1988).

All the problems arising from the chronology, origin and further development of the culture can be solved only after the careful reevaluation of the data. This task is being carried out by K. Síman. Circumstances reconstructed by this method, the justification of new results need, in ideal case, the complex excavation of a new site. Now we give a short description of the facts.

The ratio of the bifacial tools in the lower cultural layer with leaf-shape tools in the eponymous site is around 29%. It is very difficult to recognize the original use of those tools as the edges were subjected to strong cursturation. It may be noted, in the same time, that the tools in such a river valley are more symmetrical and slender than the leafshaped scrapers of the Jankovichian. The ratio of the blades and Upper Palaeo-

The technical data of the leaf-shaped tools of the developed Sleetian level are: (legend see at Jankovichian) (Tab. 2.). Schematic drawing of the leaf-shaped tool with the angles (Figs. 3–4).

Two researches dealing with this period give totally different interpretations: the contrast of the two layers of the Stretta culture, its origin and the features of the Bányóc.

Ringer states that the Central European Microwear of Bányóc type substitutes in its area the Montenegrin Acheulean traditions.

This denomination would be as justified as the above one. Probably it would be more effective to stress the special character of the industry (i.e. the leaf-shaped implements). Gravettian, as a technical term has lost from its real contents as the bulk of information gained. Peripheral differentiation of local sites is a common synonym for the generalized Upper Palaeolithic characteristics.

J. Kozlowski in his recent study mentions Hungarian palaeontological phenomena from the Meravian in the Bányóc. He also lack the authentic, full documentation of the Banyoca cave. For him it is doubtful if the Upper Palaeolithic culture of Bányóc can be an integral part of the upper industry with leaf tools (Kozlowski 1988, 554).

Several of these assemblages may help to define the evolution of the industries with leaf-shape points, and their relation to the cultures of Upper Palaeolithic populations arriving in that developed form. These forms are situated on the western foothills of the Bük Mts. The leaf-shaped finds are found mostly from the hill tops around Eger, partly from excavations but mostly from surface collections (Vértés 1951, 154–190; Dobosi, 1972, Tab. 1–VI).

The original cultural definition can no longer be held. A revision or verification is an urgent task.

For sake of curiosity the first leaf point found in Hungary will be published once more. The "horseshoe" leaf from the Miské or Sági site in 1930. This find Kozlowski and Sándor rejected the sceptical scientific world about the need of new finds. The discovery of a hitherto unknown task cannot be reconstructed but it has an inestimable cultural value (Fig. 7).

The earliest upper palaeolithic culture in Hungry is the Aurignacian, although it is well isolated phase menon in two caves of the Bük Mts. The open-air site of Saib-Parasz was originally also published as Aurignacian (Gábori 1957, 207–210). In the later publications he corrected this nomination, and attached it to the Gravettian (Gábori 1960, Fig. 2.).

The history of research of this culture is long and successful. The last archaeological review appeared in Hahn’s monograph (Hahn 1977). The author could not only outline the stratigraphies and identifying the Hungarian finds. A short monograph on the bone points was published somewhere by Albrecht et al. (1972). Here the authors defined the bone points, acting as index types in the Hungarian material as well as a special cultural characteristic of the Aurignacoid techno-complex (Albrecht et al 1972, 82.). The argumentation is the worth noting: the bone points with split base can be identified only as a few stone tools. So the coves must have been killed and short-term hunting residences (Albrecht et al 1972).

The recent Hungarian special literature did not deal with the sites or the industry. Usually the theoretic concept of Kozlowski has been fixed on the culture (Vértés 1965, 172–176), where the author summarized his excavations results (Vértés et al 1965, 101–291).
FIGURE 3. Typical leaf-shaped points from the upper settlement horizon of the Scarita cave. Schematic drawing with base and top angles.

FIGURE 4. Schematic drawing of the leaf points from the Scarita cave with base and top angles.
Intiallóško cave is a large (45 m long, 14 m broad) cave with favourable setting on the western side of the Bakók Mts. Several scholars carried out excavations in it since 1913 more and more mixing the already disturbed layer series. The archaeological material was published together, without topographical indications.

At the start of his excavation Vértes thought that earlier the material must have been collected only from the upper cultural layer, as he tells about the implements in his summary (Vértos 1905, 172). It is, however contradicted by a sentence of Hildebrandt from 1917 (Hildebrandt 1919, 10), namely, that they dug everywhere till the rocky bottom. From the early publications Kadilí's statement is also to be cited: From the lack of caves and flakes he deduced that the cave must have been used temporarily during the winter time (Kadilí 1944, 53), what is in harmony with recent observations on the role of the caves.

**FIGURE 6.** Scattered leaf point from Aszód. Bifacial from Ostoros-Békoz.
K. Valoch touches the Hungarian Aurignacian problem in one of his earlier articles. He considers theienoid implements as definite tools, based on French finds. A similar role is attributed to the Modél bone points from the Istállósőkő and a Székelő leaf-shaped point, both in the Obekhian culture (Valoch 1968, 329). F. Bordei connects the bone points with the function of the cave in his review of the paper: “This is clearly a hunting site, not a living site” and regards the bone points as a decisive criterion for the Aurignacian culture (Bordei 1968, 269).

Lately I. Városi reconstructed the stratigraphical position of finds from the Istállósőkő cave (Városi 1986, 7–31).

Altogether 13 excavations were carried out in the cave. The most important observations are:

- the materials divided by Vértes into two cultural layers were found in at least five cave deposits of different characteristics or colour. The layer complex of the younger ‘obekhian’ material called by Vértes Aurignacian II, consists of at least three intercalated hearth levels, while the older lower cultural layer (Aurignacian I, with the bone points with split base) contains at least two settlement levels.
- with the help of the complex archaeostratigraphical analysis of the fauna it can be told about the two Aurignacian levels of the cave that the lower cultural layer (Székely faunal phase, Würm II) was used as a hunters’ residence (see “kill-site!”) during the summer-autumn period specialized on the spring-summer appearance of the cave bear, with an estimated population of 15–20 persons per settlement level, and altogether an estimated population of 30 to 40 persons in the three settlement levels.
- A secondary butchering site might have existed around the entrance and in the rear part of the cave.
- In the levels of the upper cultural layer (Würm II/III, July average temperature 17.4) a house base settlement must have existed during the autumn-winter-spring periods. There was a butchering place at the entrance and a secondary butchering place and for depot in the rear part. The estimated number of population in the upper two settlement levels is around 25 persons. (In case of the not Aurignacian settlement in the uppermost part of the sequence an Upper Paleolithic temporary site can be found in traces indicating the presence of about 3–4 persons) (Városi 1984, 18).

The archaeological material in the levels of the lower cultural layer contains 114 bone objects, 31 of which are bone points with split base, 46 are stone implements which belong to the Aurignacian techno-complex as rightly defined by Albrecht (Albrecht at al. 1973, 83).

In the upper layers only 5 of the 31 bone objects are spear-heads, and there are 107 stone implements.

Among the latter we can witness the appearance of the micro-tools, parallelly as the Aurignacian tendencies appear on the open-air sites of the Gravettian, being more or less contemporary to the upper cultural layer of the Istállósőkő (Görgókertesd–Henyő, Vértes 1986, 5–14). Concerning its connection with the two layers of the Székely cave:

- the cultural layers of the two caves are contemporary. It is attested, beside the geological facts by the material evidences of the neighbouring populations in both caves. There was a fragment of a Székely leaf-shaped scraper in the lower cultural layer of the Istállósőkő and a Székely leaf-shaped point in the upper layer. Both Simáni and Ringer suppose an isolated Aurignacian settlement in the 2nd layer of the Székely cave (Simáni 1988 a.; Ringer 1988). The contemporaneity of the older cultures of the Székely and Istállósőkő caves is underlined by the fact that there are undoubtedly cryoturbated tools in the Székely, and according to Hahn “Knyereszuch” can be observed on the tools in the lower layer of Istállósőkő as well (Hahn 1977, 122). It means identical or at least similar ecological/climatic circumstances.

Finally let us repeat that there have never been found any direct, well supported proofs showing a development from the Middle to the Upper Palaeolithic in Hungary. The Aurignacian I, as the earliest Upper Palaeolithic culture dated to around the Hengelo interstadial, was a short and isolated episode in the Hungarian Upper Palaeolithic. There are no traces of its further development. The material of the upper cultural layer of the Istállósőkő is closer to the contemporary open-air sites, its genetic relation to the material of the lower cultural layer of the Istállósőkő cave is more dubious.

REFERENCES


