

Microlithic Middle Palaeolithic assemblages in Central Europe and elephant remains

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SUMMARY: Some isotopic stage 5 sites in Central Europe have yielded microlithic assemblages which are not an answer to specific raw material conditions. The settlements are often linked to water springs and the fauna assemblages are composed of one or two great herbivores. Sometimes, the elephants belong to this fauna. Their low frequency and the partial skeleton seem to indicate a scavenging in most cases. But some sites have yielded a higher frequency of these herbivores, which are often young animals. Are we dealing with anticipated specialised settlements in favourable areas for animals, dead or alive ? These great herbivores have been dismembered by very small flakes, showing the diversity of the human technical behaviour adapted to all subsistence behaviour.

1. INTRODUCTION

For 40 years ago, stage isotopic 5 sites from Central Europe have yielded microlithic assemblages with some Neanderthal remains. Some of these assemblages have been named Taubachian (Valoch 1984). These assemblages are often related to hot water springs, and the animal remains are especially those of one or two great herbivores (bovines, horses). Among the fauna, there are also remains of large mammals as elephants and rhinoceros. In some assemblages, these remains are quite numerous (for example Gánovce in Slovakia or Taubach in Germany). Most of the sites in Europe contain remains of these two great mammals in small numbers, often together (Auguste *et al.* 1998). Their presence in these Central Europe sites is, consequently, not so surprising. What is more amazing is sometimes their high frequency, and their relationship, whatever the number of remains, with the location of the site and the size of the artefacts, which are microlithic. These sites are also located in the same geographical area (small plains and basins inside Central Europe). Most of them are dated to the isotopic stage 5^e (Eemien) or to the beginning of the last glacial period (Valoch 1996).

Through their originality, these sites show evidence of a specific human behaviour. They also raise questions about specific activities near water spots, favourable areas to animal and vegetal life. Humans would have come to hunt or scavenge on dead or injured animals. Therefore, the human activities would be anticipated. The frequency of elephants, whatever the range of each species, would have a particular meaning; it would be not a matter of coincidence.

To illustrate this pattern, two sites have been chosen, providing a great deal of information about human technical behaviour. The first one is Kulna in the Czech Republic, in particular, level 11. The second one is Tata in Hungary.

2. KULNA AND TATA

The Kulna cave is located in the Moravian Karst. It was excavated by Karel Valoch, between 1961 and 1976 (Valoch 1988). Under several Micoquian layers, one level, number 11, has yielded a microlithic assemblage with an age estimated by the fauna and the microfauna remains from the isotopic stage 5 and the beginning of 4. During the deposit, a small river probably flowed through the cave.

	Kulna (level 11)	Tata
kind of location	cave a small river flowed through the cave	open air travertine
age	isotopic stage 5 and beginning of the stage 4	Brørup or end of the stage 5 U/Th between 70 000 +/-2000 B.P. and 116 000 +/- 1600 B.P.
fauna remains	<i>Cervus elaphus</i> <i>Alces alces</i> <i>Equus taubachensis</i> <i>Ursus spelaeus</i> <i>Mammuthus primigenius</i> <i>Coelodonta antiquitatis</i> <i>Rangifer tarandus</i>	poor assemblage <i>Mammuthus primigenius</i> <i>Ursus arctos</i>
lithic assemblages	> 10 000 artefacts	> 20 000 artefacts
raw materials	silicites-radiolarites > 50% quartz 33 % quartzite 15% some long distance stones (>50-100 km)	silicites-radiolarites 88% quartzite 11% others
technical behaviour	main debitage activity a very small shaping activity flakes : 10-30 mm long 10-15% tools	

Fig.1 - Patterns from Kulna and Tata.

Tata is an open air location, in a travertine deposit. It was excavated by L. Vertès in 1958 and 1959 (Vertès 1964). First dated from the Brørup period by the fauna remains and ¹⁴C dating, new radiometric dates would place the site at the end of the last interglacial time (Schwarz & Skoflek 1982).

The fauna remains are more numerous in Kulna than in Tata. They are dominated by cervids and horses in Kulna, associated with great mammals like elephants and rhinoceros. In Tata, the assemblage is poor, especially composed of remains of young elephants. According to the latest studies, only parts of elephant or rhinoceros skeletons compose the bone assemblages, contrary to the other species. Otherwise, in Kulna, numerous bones have crushed marks, perhaps the result of the tool making.

The industry of the two assemblages is microlithic and this size is specifically chosen. The local collecting of very small pebbles from various raw materials has been established and this collecting was not imposed by the environmental patterns. Large pebbles were present around the sites, in various good quality stones. The production, which took place on the site,

provided very small flakes (10-30 mm long) and some micro-choppers (10 to 30-40 mm long). The debitage system is similar in the two assemblages. It can be described as a treatment of the volume of small pebbles, with regular rules using the cortical faces and the pebble morphology (Moncel et Neruda 2000). The flakes are thick or thin; some have a back. The tools are rather rare and these are side-scrapers or points. In Kulna, the retouch is ordinary and, above all, on one face, while in Tata, the bifacial retouch is more frequent, associated to points. This kind of reduction sequence is also observed in ancient sites, as Bilzingsleben or Vertesszölös, dated older than the isotopic stage 5 (Mania *et al.* 1980; Kretzoï & Dobosi 1990). It also punctually exists in all Central and Eastern Europe during the isotopic stages 5 and 4, even if some originalities are observed, explained both by the diversity of the activities and perhaps different technical traditions.

3. SPECIALISED SETTLEMENTS?

While in the eastern part of Europe, the microlithic assemblages are linked with various kinds of sites, they are more often associated to

hot water springs in Central Europe. Why should there be this type of location? Some lucky discoveries could explain it; the excellent preservation of remains in the travertine deposits as well. However, in spite of the current state of knowledge about sites in this geographical area, because of their specific location, it is possible that these sites have been for the most part one type of settlement for human groups with a microlithic tradition. They may have provided evidence of original human settlements in favourable areas for animals and vegetation, and the presence of remains of great herbivores, as elephants and rhinoceros, would be explained by this favourable environment.

The elephant skeletons are not entire, but some of the Kulna bones show human cutting marks (Valoch 1988). They are most likely the result of a human scavenging in the surroundings. However, hunting could not be discarded. In some sites, the high density of artefacts and bones seems to indicate that men could have regularly occupied the water spring banks, why could not it be so for the hunting of great herbivores such as elephants and rhinoceros. For example, in Taubach (in Germany), the high frequency of young rhinoceros (*Dicerhorinus mercki*) in the bone assemblage and associated with *Bison priscus*, could be a proof of a easy prey hunting (cf. Bratlund Bodil study in Jahrbuch RGZM 46, 1999), as we believe occurred in some sites of western Europe (Auguste *et al.* 1998). It would be the same case in Gávnoce with both *Elephas antiquus* and *Dicerhorinus mercki*. While Kulna level 11 yields some elephant remains, the Tata assemblage yields young elephant remains as a main component. But they are unfortunately too few to provide a discussion on the evidence of hunting or scavenging.

The technical analysis shows a great technical community among the sites and it is difficult to imagine that such an original kind of raw material use is only present in these settlements. If it was the case, why did they make such small flakes?

If it seems to be very difficult to admit that the small tools which have been preserved,

have been used for hunting, it is conceivable, on the other hand, to believe that they could have been used for much of the animal processing. These flakes, held in the hand, could have been used alone. The palaeontological studies give evidence of a different type of hand prehension for the Neanderthal man. The flakes could also have been used alone or grouped on a wooden blank. They also could have been remains of the preparation of wooden tools, frequent raw material in a forest environment.

At least, the assemblages show that elephants are associated with humans in Central Europe. Their frequent presence in assemblages from water spring locations is not only due to our good fortune. It is most likely evidence of deliberate behaviour on the part of some European Neanderthal groups who knew the extraordinary richness of life living around the natural springs.

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