



MARTIN OLIVA

EXCAVATIONS IN THE PALAEOLITHIC SITE OF MILOVICE I (SOUTHERN MORAVIA) IN THE YEAR 1988

ABSTRACT — *The site of Milovice I consists of several loci with finds designed as sections A—P occupying the area of about 2 hectares. In the year 1988 in section B we have discovered the centre of a large concentration of mammoth bones. The prevailing finds of the stone industry are rough tools of local raw materials. West of the dwelling in section G (cf. Oliva 1988) a mammoth skull with one tusk pulled out and a big "Lyngby-axe" of a reindeer antler have been found. The Gravettian hearth in the upper layer of section L, 22 kyr B. P., is a finding-place of a leaf point made of hornstone of a Krumlov-forest type. The underlying fossil soil sediments contain the Aurignacian industry made of various kinds of hornstone. The industry is related to the RC date of 29 200 B. P. and it is the only known pre-Gravettian cultural layer in the area of the Pavlov Hills.*

KEY WORDS: *Milovice — Mammoth-bone accumulation — Bone industry — Leaf point — Aurignacian — RC dating.*

In the year 1988 the research in all the main parts of the locality continued. In section K we have uncovered a mammoth bone accumulation in the west and the north-west sections. While the finds in the western limit of the trench are relatively rare, the north-western part is a place rich in bones, where we have found, among others, two undisturbed tusks. Area B is a centre of mammoth bones accumulation (*Fig. 1*), the northern edge of which was uncovered in the year 1986. The bone accumulation of the central part of the area is 0.5 m thick and in some places is even thicker. The longer axis of the concentration goes down the slope, which could cause some slope flows. However, the distribution of bones does not show any big translocation (of several metres) and with the exception of gley horizons there are no proofs of the existence of a permanent pool. Approximately 90 % of all the represented animal species are mammoths, the rest are horses, reindeer and wolves. The range and generic structure of the

excavated accumulations prove an even more intensive specialization in mammoth hunting in comparison to Dolní Věstonice I and Předmostí. It was only these two localities that offered the analogical amount of the hunted biomass in the Gravettian. It becomes more and more evident that the described accumulation was not a mere reject-zone. This is proved by ash spots under big flat bones, by a row of apparently arranged long bones in the southern margin of concentration B, by columns of vertebrae in an anatomic position and by a frequent occurrence of heavy-duty tools as well as rough pebbles evidently used for the crushing of bones.

In section G our attention was concentrated to the research of the southern, western and north-western vicinity of a hut (Oliva 1988). It was observed that in the southern direction the ash-coloured cultural layer was rising slightly and then it disappeared soon. A smaller accumulation of flint and some radiolarite artefacts was found only immediately

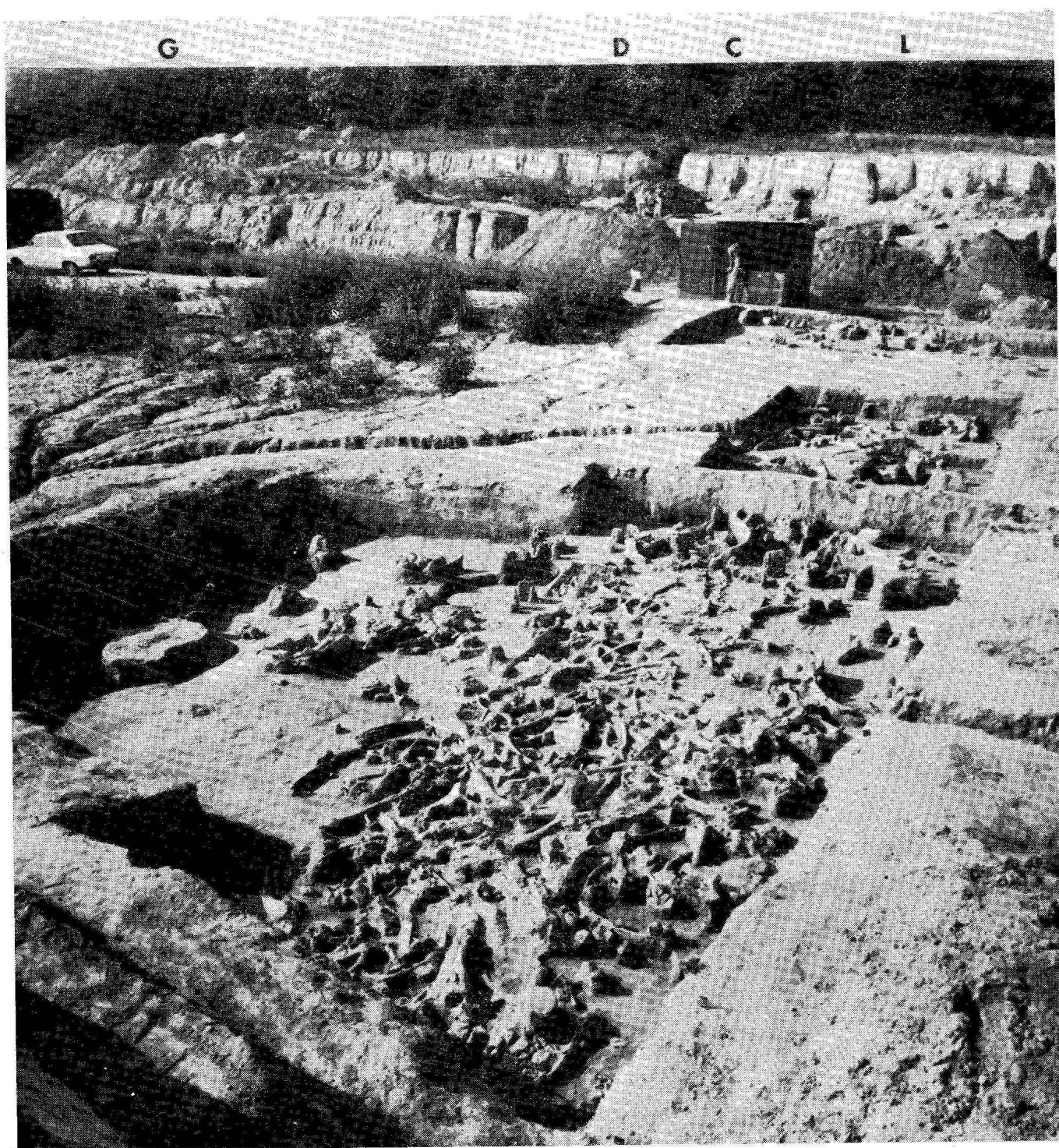


FIGURE 1. Accumulation of mammoth bones in section B. G, D, C, L: sections bellow the upper loess wall, (Photo L. Píčová).

behind the hut remains. A extraordinarily large end-scraper of finely coloured silicite was found (Fig. 3) lying not far from the large conch of a Tertiary mollusc. The excavation in the opposite direction (north-west) of the dwelling remains proves our observation from the previous year — here the rich cultural layer with Gravettian points is disappearing without any obvious increase of the number of animal bones. More interesting results were reached during the excavation in the western direction, where

a concentration of mammoth bones (including pelvises, shoulder-blades or fragmentary skulls) was found. It reached under the actual loess profile (the excavation boundary 1988) in a band about 7 m wide. Having removed the upper small bones, we found a mammoth skull in the middle of the mentioned area. One tusk of this skull was pulled out and the other broken, probably as a result of an unsuccessful attempt to take it out from the alveolus. East of the skull there was a used piece of ivory and the bones of a lion

paw, south of it there is another tusk without a point and several ribs covering an extraordinarily strong "Lyngby axe" of a reindeer antler (Fig. 2).

On the basis of the evidence at hand we can try a functional reconstruction of the dwelling neighbourhood: the area with the ash lenses and with numerous radiolarite gravettepoints north of the

supposed entrance of the hut was probably the place of the most intensive working and social activities, the eastern area (in the direction down the slope) with some artefacts and bones could be a zone of communication and the southern part might be the end of the whole settlement — during the loess extraction we observed only ash levels without any

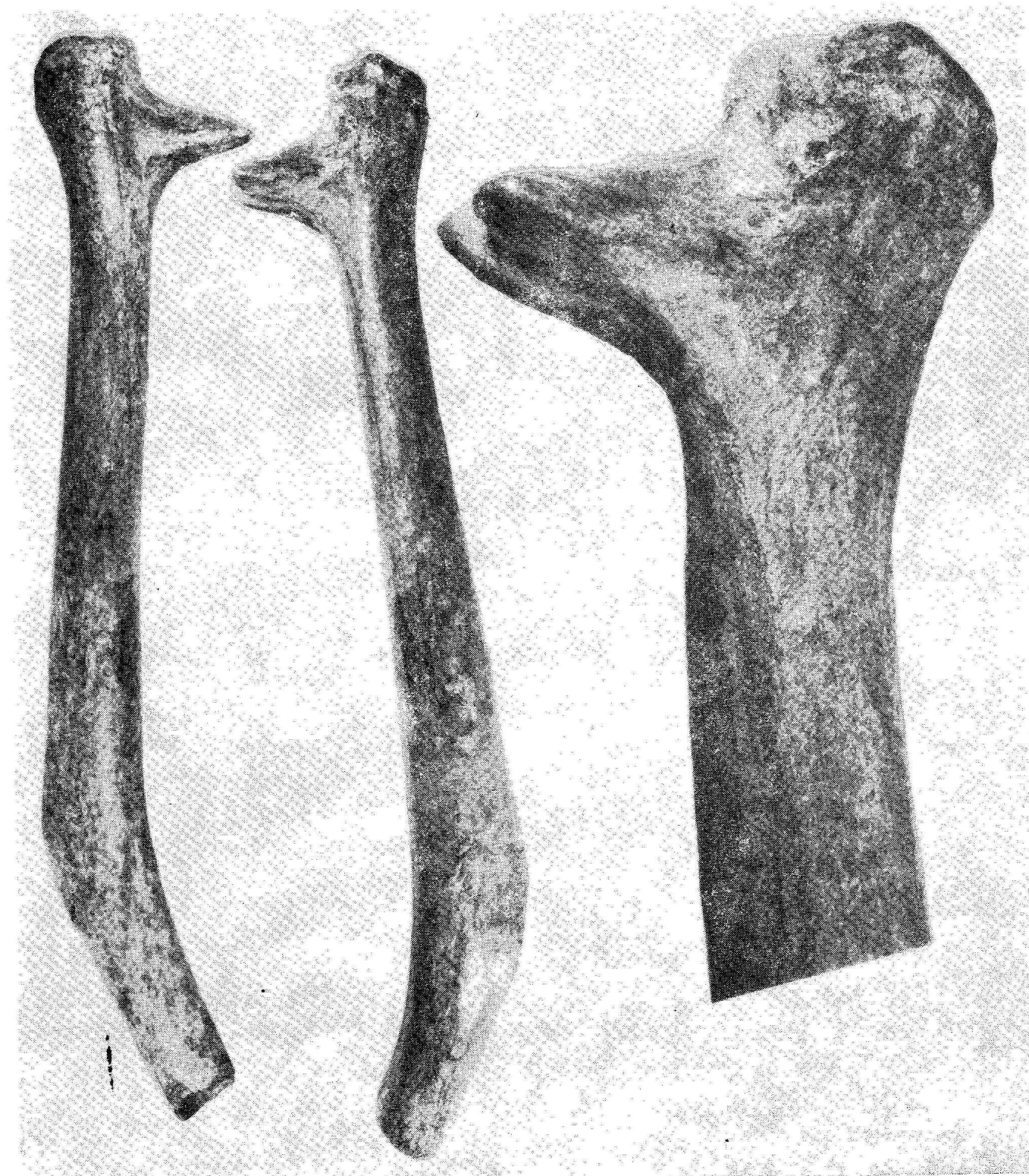


FIGURE 2. "Lyngby axe", section G. (Photo L. Píčová).

finds. The area with bones west of the structure is less clear. It may contain the remains of various nonsimultaneous activities (a working zone, material piled for the construction of a dwelling, later a reject zone etc.).

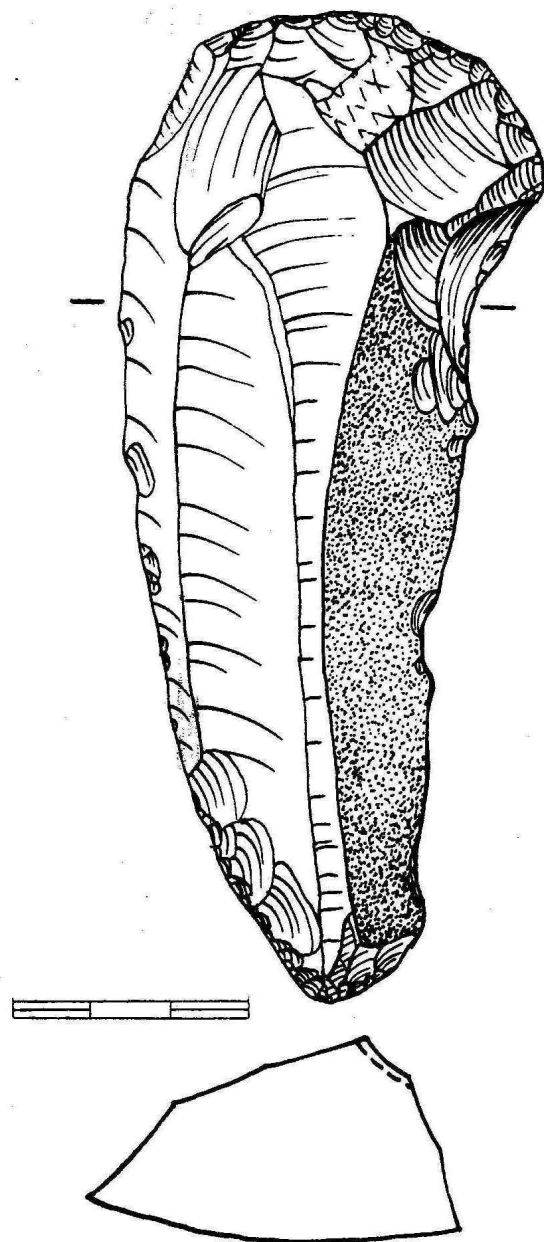


FIGURE 3. Large end scraper from section G, (Drawing T. Berková).

Relevant results were reached during the investigation of section L, which touches the northern edge of sections C and D studied in the year 1986. The radiocarbon date (GRN 14825: $22\,100 \pm 1\,100$ BP) ranks this area with sporadically scattered (mostly mammoth) bones, two hearts and flint tools among the youngest traces of the Gravettian settlement of Moravia. The most interesting finds is a leaf point of hornstone (a Krumlov forest type) with a broken and reworked base (Fig. 4) found directly in charcoals of the hearth margin,

When considering similarly dated points of Trenčianské Bohuslavice (Bárta 1989) it is possible to express the hypothesis that 23—20 kyr ago a certain revival of this prestige weapon took place both within the framework of the Gravettian and of the Epiaurignacian industries (Langmannersdorf, 20—21 kyr BP, and a lot of analogical units in Moravia: Kohoutovice, Určice, Ondratice II, Slatinice etc.). However, it is not clear if the local production of leaf points or the collection of old implements prevailed.

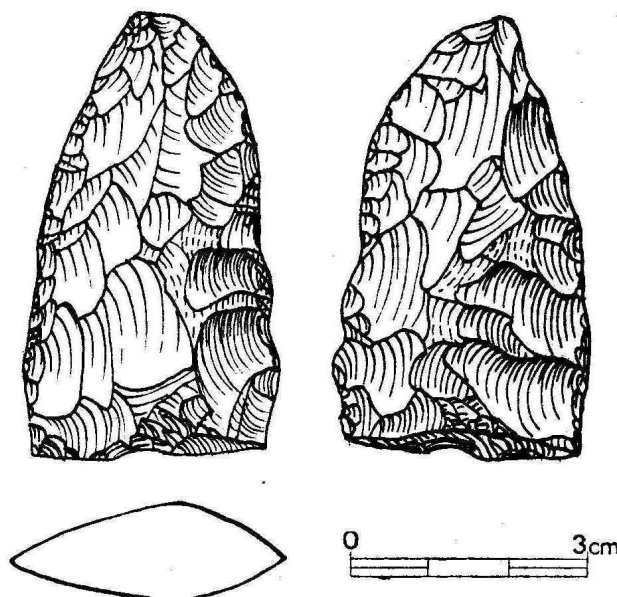


FIGURE 4. Leaf point from section L, upper layer, (Drawing T. Berková).

Below the gleyed Upper Würmian loess with Gravettian finds there were dark-brown to ochre layers containing the Aurignacian lithic industry in several places (L, M, C, D, A, G). The intensive perturbed bands of charcoals and ash create an impression of rapid irregular sedimentation; however, the existence of red-burned places, here and there even in a fourfold superposition (Fig. 7), and a typical concentrated occurrence of chipped hornstones in accumulations as thick as 0.5 m show that there was not any important natural flow of the layers with finds. Bones, with the exception of some fragments of horse and mammoth teeth, have not been found, trees are represented mainly by firs. The chipped industry has several specific features: both blades and prismatic cores with parallel scars are very rare, however, bladelet-like retouch can be found on carinated and nosed scrapers representing the fundamental part of retouched types. Other implements do not occur so often: flat end-scrapers, burins (usually simple variants), retouched blades, notches and denticulates. Finely worked small side scrapers and abruptly retouched flakes are very interesting, (Figs. 5, 6). The prevailing used raw materials are various types of Jurassic and Cretaceous hornstones probably obtained from the near-by

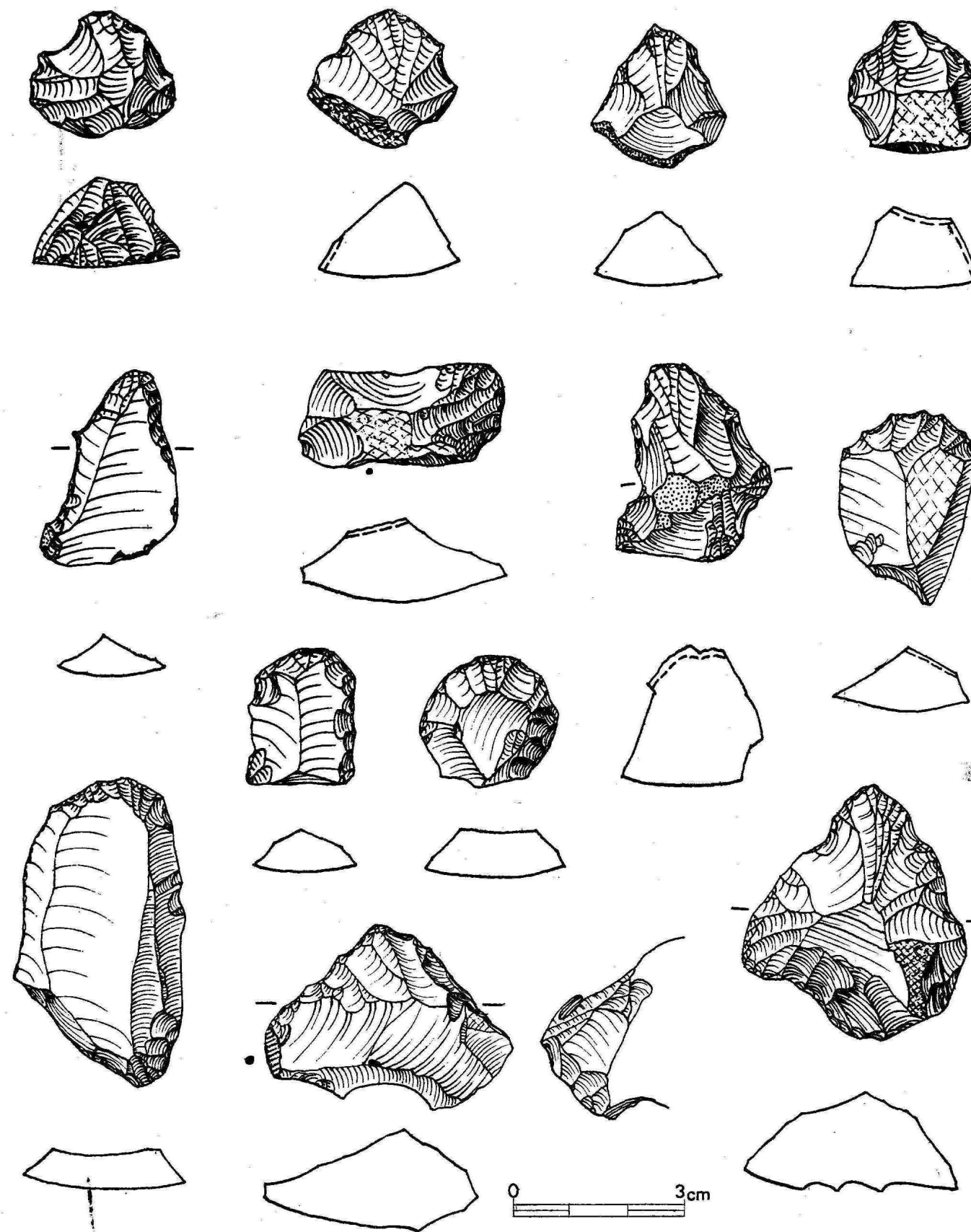


FIGURE 5. End scrapers from section L, Aurignacian, (Drawings T. Berková).

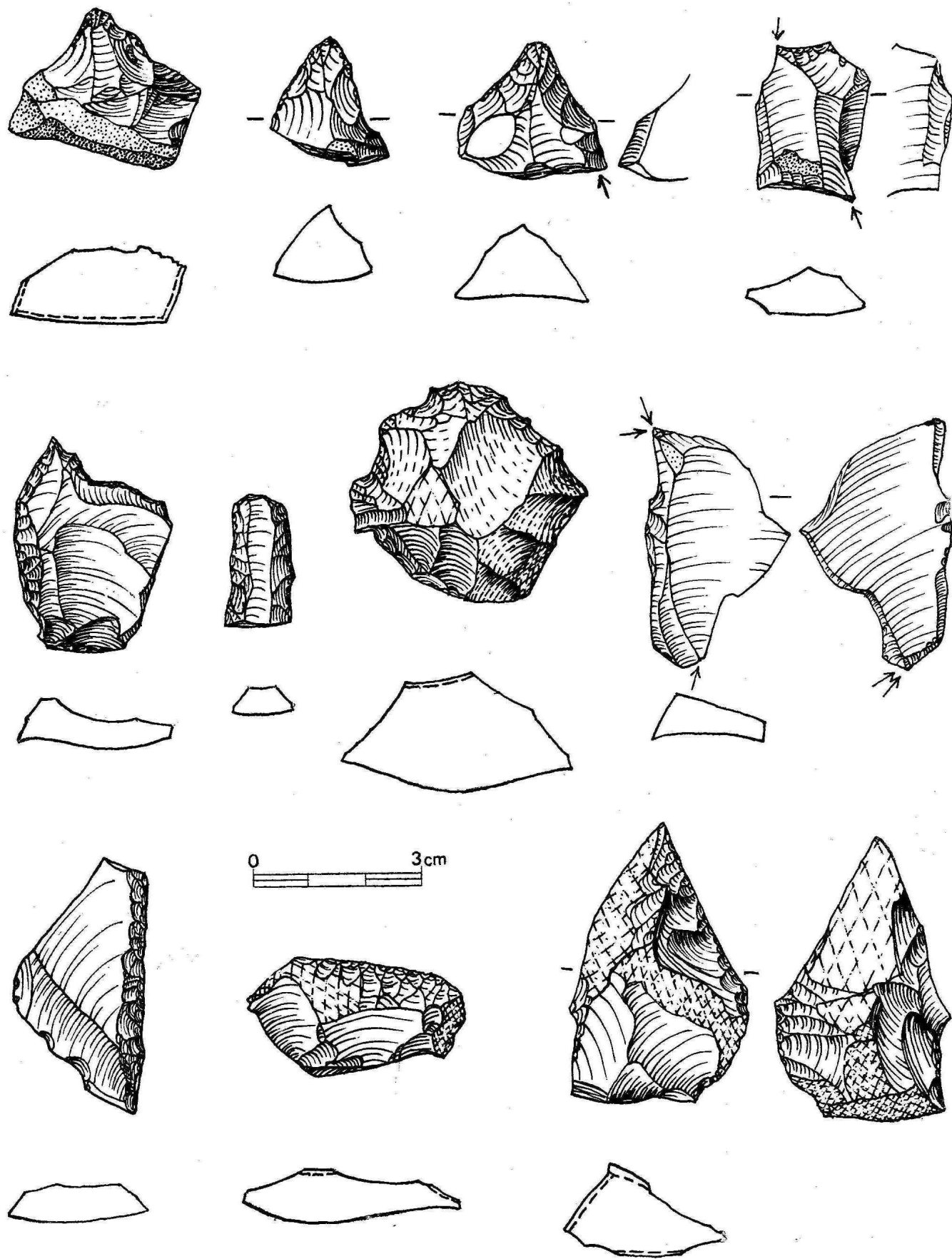


FIGURE 6. Different tools from section L, Aurignacian, (Drawings T. Berková).

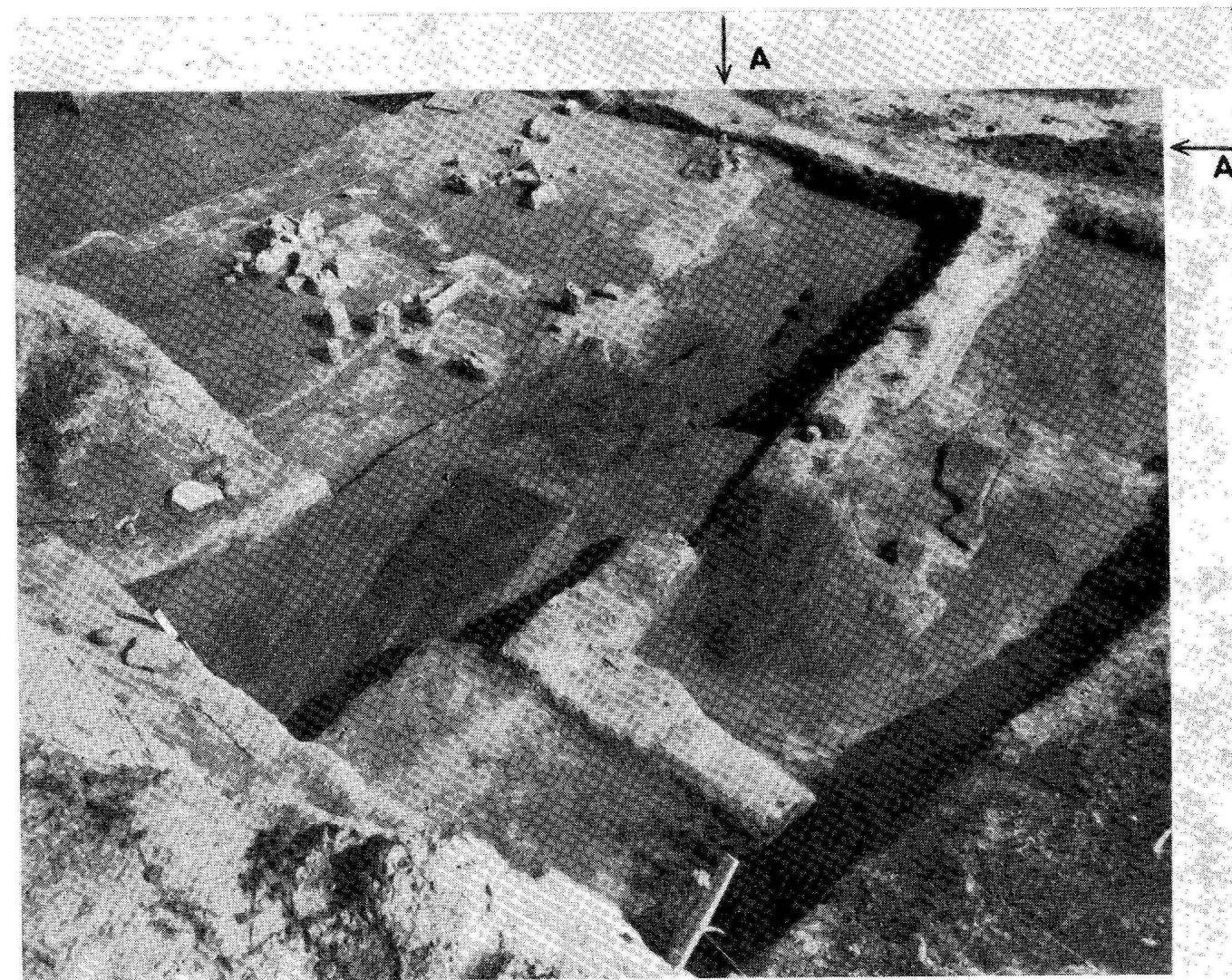


FIGURE 7. Superposition of burnt places in section L, Aurignacian layer (in the foreground). A: the hearth with a leaf point in the upper layer (Gravettian), (Photo L. Pichová).

environs. In this layer it is also possible to find radiolarite, flint and local rough-grained rocks. The outlined typological structure of this unit is similar to the near-by localities along the lower stream of the Svatka River (Oliva 1984; 1987), where there is also a strong archaic component (Diváky, Křepice, Klobouky) in the industry with prevailing high scrapers, while cores (together with unexploited ones) lack a blade character (mainly Vojkovice). The relatively recent date — GRN 14826: $29,200 \pm 950$ BP — coming from the intensive charcoal position in trench D reveals that the occurrence of characteristic Middle Palaeolithic types in these South-Moravian industries is a locally surviving specific feature, which proves my earlier hypotheses (Oliva 1987, 14). The Aurignacian layer in Milovice is the first stratified and culturally classifiable evidence of the antegravettian settlement in the region of the Pavlov Hills.

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Dr. Martin Oliva
Anthropos Institute
Moravian Museum
nám. 25. února 6
659 37 Brno
Czechoslovakia