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NEANDERTHAL PARIETAL BONE FROM KŮLNA CAVE, CZECHOSLOVAKIA

ABSTRACT. — *In 1971 a part of right parietal bone was found in late middle palaeolithic layer with moustérian stone tools. With the help of the mirror image reconstruction the transversal brain case section and other morphological features were studied.*

These demonstrate the Kůlna Cave brain case was nearest to classical west European neanderthals (La Chapelle aux Saints) and different from upper palaeolithic Central European Homo sapiens sapiens.

During the archaeological investigation of the Kůlna cave in the northern part of the Moravian Karst, there was found, in 1970, a large part of the right parietal bone of a Neanderthal individual. The Kůlna cave lies about 35 km north of Brno, in the central area of Czechoslovakia. During excavations by the Anthropos Institute, Brno, a stratigraphical complex of fourteen archaeological layers has been uncovered in superposition. This circumstance makes the Kůlna cave stratigraphically one of the most important sites in Czechoslovakia. Mousterian and Mousterian-like cultures occur in four layers, the youngest of which, where the above parietal bone was found, belongs chronologically to the end of the first cold part of the last (Würmian) Glacial Period (Würm I) and is 40–50,000 years old. This is not the first discovery of Neanderthal remains made here. In 1965, part of the upper jaw of an immature male (c. 14–15 year old) was found in the same layer (Jelínek 1966).

The measurements of the upper jaw demonstrate that the face of this individual was relatively high, similar to those in western European finds of this period. On the other hand, the morphology and size of the teeth were not different from those of *Homo sapiens sapiens*. Only the presence of small secondary cusp in canine is interesting.

The fact that the sagittal suture, partly preserved on the parietal bone found in 1971, was completely open, shows that it belonged to a young individual, who had not yet reached the age at which the obliteration of the sagittal suture takes place. The thickness of the parietal bone (9–11 mm) indicates in all probability a man. This fact brings the possibility that both finds — the maxilla of 1965 and the parietal bone of 1971 — belonged to the same individual, even if their positions in the same layer were 20 m apart. The thickness of the parietal bone is quite great even for an adult male. For a 14–15 year old boy, however, it would be exceptional. The edges of the bone are broken. The bone seems to have been struck when the skull was broken, most probably on removing the brain, and then discarded. In spite of all efforts, not even the smallest bone chip or fragment was found in the vicinity of the discovery, although the content of the layer was washed. The bone, therefore, had not been broken in the place where it was found. The discovery speaks for the anthropophagy of the Moravian Neanderthals of that time.

When discriminating the parietal bones of *Homo sapiens sapiens* from those of *Homo sapiens neanderthalensis* one important difference is the transversal curve of the bone illustrating the transversal arch of the cranial vault. While this trans-

verse arch is relatively flat with typical west European, so-called classical Neanderthals, that of *Homo sapiens sapiens* is more gabled, which is evident from the transverse cross-section of the braincase or

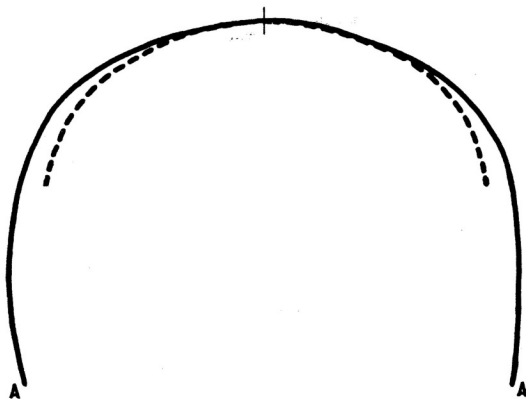


FIGURE 1. Transversal section of the Kůlna (---) parietal bone compared with La Chapelle palaeolithic skull.

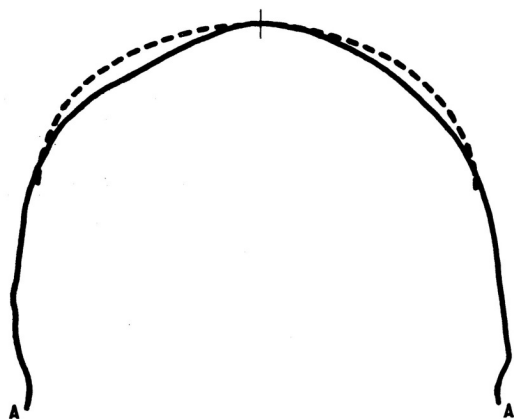


FIGURE 2. Transversal section of the Kůlna (---) parietal bone compared with Předmostí palaeolithic skull.

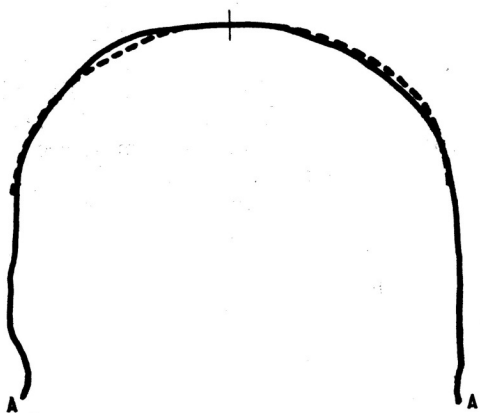


FIGURE 3. Transversal section of the Kůlna (---) parietal bone compared with Pavlov palaeolithic skull.

in the occipital view of the skull. I therefore made a mirror image of the Kůlna parietal bone and using the preserved part of the coronal suture, placed the two bones in their original position. The possible variations in their angle of contact are slight, and it is quite clear when the two bones are placed together that they correspond to the cranial arch of the classical Neanderthals. Then I made a further comparison. I made moulds of the parietal bones of various examples of *Homo sapiens neanderthalensis* and *Homo sapiens sapiens*, and placed the Kůlna cave parietal bone directly in them so that it was apparent at first sight whether the overall curvature and shape of the bones were similar or different. The most striking similarity is with the La Chapelle parietal bone, less with La Ferrassie, Spy, Le Moustier, still less Ehringsdorf. A distinct difference is apparent from a comparison with the fossil remains of *Homo sapiens sapiens* from Mladeč and Předmostí and the greatest difference is seen when compared with modern man. I compared only male parietal bones to avoid the differences which may arise from sexual dimorphism. We find, therefore with the Kůlna cave discoveries, that the bone material of the Neanderthal remains has characters similar to the west European, so-called classical Neanderthals but the morphology and size of the teeth are similar to *Homo sapiens sapiens*. Unfortunately, well-dated and more numerous *Homo sapiens neanderthalensis* finds are for the time being very rare in central Europe. The morphological variability of the Ehringsdorf (Virchow 1920, Behm Blancke 1960) finds give rise to some deliberation. The Subalyuk cave discovery from northern Hungary (Bartucz 1939) also shows a series of characters similar to the classical Neanderthals. On the other hand, the frontal bone from Šala in Slovakia has a series of progressive characters (Vlček 1964). It is undoubtedly necessary to defer final judgement until further new finds are available.

REFERENCES

- BARTUCZ L., 1939: Der Urmensch der Mussolini Höhle. *Geologica Hungarica*. Ser. Palaeontologica, Fasc. XIV; 47–105.
 BEHM BLANCKE G., 1960: Altsteinzeitliche Restplätze im Travertingebiet Taubach Weimar Ehringsdorf. *Alt Thüringen* IV.
 JELÍNEK J., 1966: Jaw of an Intermediate Type of Neanderthal Man from Czechoslovakia. *Nature*, No. 5063: 701–702.
 VIRCHOW H., 1920: *Die menschlichen Skelettreste aus dem Kämpfcheschen Bruch im Travertin von Ehringsdorf bei Weimar*, Jena.
 VLČEK E., 1964: Neuer Fund eines Neanderthalers in der Tschechoslowakei. *Anthropologischer Anzeiger*, Jg. 27, H. 2: 162–166.

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