Czech Republic

Palaeolithic series of Moravia Samples submitted by P. Neruda, Anthropos Inst., The Moravian Museum, Zelny trh 6, 659 37, Brno, Czech Republic.

Čertova Díra Cave, Northern Moravia, 49:58N 18:11E

OxA-18568	bone, *Equus cabalus*, CD2007-1, $\delta^{13}C = -20.1‰$	42 400 ± 550

Comment (P. N): Čertova Díra Cave is one of two Palaeolithic caves in the hill of Kotouč in northern Moravia. Recently it was completely destroyed by a modern limestone quarry. Excavation was carried out by K. J. Maška at the end of the 19th century. He distinguished two Middle Palaeolithic layers with two hearths. A first unstratified ^{14}C sample was dated in the Groningen Laboratory but the burnt bone had no collagen. The result of 29 430 $\pm \frac{200}{180}$ BP (GrA-29904) must probably be older in reality. It is interesting to stress that no artefacts correlated to this age have been found. A new sample (OxA-18568) was obtained from the upper Middle Palaeolithic layer III (according to K. J. Maška) and it was related to stone artefacts. The result (42 400 ± 550 BP) fits quite well to the expected chronological position of this layer at the end of the Middle Palaeolithic and the beginning of the EUP complex. Neanderthals probably used this cave at the same time as the cave of Šipka.

Sipka Cave, Northern Moravia, 49:58:0.00N 18:11:59.99E

P21170	bone, *Equus cabalus*, SIPKA2007-1	FAILED due to no yield
OxA-X-2256-42	bone, *Equus cabalus*, SIPKA2007-2, $\delta^{13}C = -20.8‰$	> 41 100

Comment (P. N): Šipka Cave is a most important site, located in the hill of Kotouč in northern Moravia. It was excavated by K. J. Maška at the end of the 19th century concurrently with the excavation of Čertova Díra Cave. There are two major problems related to the cave. The first concerns the dating of a hearth where a Neanderthal lower jaw was found in layer III in 1880. A sample of burnt bone with the right spatial and stratigraphical position was dated in the Groningen Laboratory. Due to the lack of collagen, the date of 39 940 $\pm \frac{550}{440}$ BP (GrA-29904) must be greater than 40 000 BP. A new sample of a bone with the same position was chosen for comparison, but this one failed due to no yield.

The second important question concerns the existence of two Middle Palaeolithic layers, noted by K. J. Maška as layers III and IV. A critical revision of faunal remains did not confirm this division. A bone located in a corridor of Krápníková Chodba was a component of the accumulation of both lithic and faunal remains, noted originally as layer IV. Due to the very low yield of collagen, the date of the Neanderthal occupation is approximate and it is difficult to compare with the Groningen date from layer III. A new sample from layer III is being processed.

Kůlna Cave, Moravian Karst, 49:39:59.99N 17:12:59.99E

OxA-18567	bone, animal, KULNA2007-1, $\delta^{13}C = -19.1‰$	52 700 ± 2300

Comment (P. N): the cave of Kůlna is the most important Palaeolithic site in Moravia. The complex of layers contains the remains of Middle Palaeolithic occupation from the end of the

penultimate glaciation (OIS 6) to the end of the lower Weichselian glaciation. The most important question is the temporal relationship between layers 7a and 6a. Micoquian layer 7a is dated around 45 kyr uncal BP by ^{14}C and 50 kyr BP by the TL method. Theoretical calibration of ^{14}C therefore fits to the TL data quite well. The uppermost Middle Palaeolithic layer 6a is not dated by radiocarbon. Within the context of the project one bone with intentional cut marks was selected for dating. The position of this sample is well defined in sector E. The supposed age, around 40 kyr BP, was not confirmed. The 52 700 BP age exceeds the age from layer 7a, but from the chronological point of view it must be younger. Both layers were easily controlled because they differed in colour. Now it is difficult to decide which factors affect the dating. It is clear more data from both layers are necessary to solve this problem.

Balcarka Cave, 49:37N 17:15E

OxA-18494	charcoal, Balcarka 2007-1 S0701U2, $\delta^{13}C = -23.3‰$	10 810 ± 45
OxA-18495	charcoal, Balcarka 2007-2 Sample 11, $\delta^{13}C = -23.9‰$	28 360 ± 140
P21385	bone, Balcarka 2007-3 P4	FAILED due to no yield

Comment (P. N): the cave of Balcarka (Moravia) was excavated at the end of the 19th century. Magdalenian, Epimagdalenian and probably Middle Palaeolithic occupations were documented. New adjustment of the entrance to the inner cave system resulted in a rescue excavation of Pleistocene sediments in the posterior part of the first cave hall. The main goal was to reconstruct the original stratigraphic sequence and codification of the Magdalenian or Middle Palaeolithic horizons. Unfortunately, only limited stratigraphy was documented.

The rest of the cave soil was found on the small wall bank and contained charcoal and teeth of reindeer. We supposed that this level indicated the original position of the Magdalenian/Epimagdalenian horizon (Valoch and Neruda 2005). OxA-18495 (charcoal) was submitted to date this layer. The result (28 360 ± 140 BP) is surprising and opens the question of possible human occupation in this time. Unfortunately, we cannot correlate the date with any archaeological records. However, it must be stressed that this part of the cave was destroyed by modification of the entrance to the cave system in the first half of the 20th century. The lower layers uncovered during the rescue excavation have not been dated because sample P21385 (bone) failed due to no yield. According to the layer mentioned above we can just estimate the age of the lower Weichselian glacial.

One probe was situated on the left side from the entrance to describe the stratigraphy in front of the cave. Sample OxA-18494 (charcoal) fits to the stratigraphy quite well. It was situated on the base of the Holocene soil complex and there is only limited residual volume of the Pleistocene sediments on the slope from the entrance to the valley.

Lostice, 50:12N 17:32E

OxA-18493	charcoal, *Alnus glutinosa*/*Carpinus*, 2007-1, $\delta^{13}C = -25.6‰$	4317 ± 30

Comment (P. N): Loštice (Moravia) is an open-air site and has been excavated by the staff of the Anthropos Institute since 2006 (Neruda and Nerudová in press). The majority of the site has been destroyed by a quarry. There are remains of a Magdalenian layer with burins of Lacan situated only 40–60 cm under the recent surface that was changed during prehistoric and/or recent times. Sample OxA-18493 was obtained from macroscopically intact sediment but a botanic analysis of charcoals indicated probable contamination by material from a

younger layer. The result confirms Eneolithic occupation demonstrated by ceramic rests fragments. Dating of the Magdalenian occupation must be determined by different methods (e.g. TL) or by the opening of concentration 2 where a Magdalenian horizon looks less disturbed.

Romania

Pestera Cioclovina, 45:35N 23:07E, Romania Samples submitted by E. Trinkaus, Dept. Anthropol., Campus Box 1114, Washington Univ., St. Louis, MO 63130-4899, USA.

OxA-16328	bone, *Ursus spelaeus*, Cio05-3, $\delta^{13}C = -20.3‰$	40 550 ± 600

Comment (E. T.): the date helps to secure the age of the one remaining stratigraphic column in the Pestera Cioclovina.

Pestera Muierii, 45:12N 23:46E, Romania

OxA-16380	bone, *Panthera spelaea*, Mui05-8, $\delta^{13}C = -19.1‰$	47 500 ± 900
OxA-16381	bone, *Ursus spelaeus*, Mui05-9, $\delta^{13}C = -20.3‰$	40 950 ± 450
OxA-16382	bone, *Ursus spelaeus*, Mui05-10, $\delta^{13}C = -20.2‰$	42 700 ± 550
OxA-16383	bone, *Ursus spelaeus*, Mui05-11, $\delta^{13}C = -20.7‰$	> 52 400

Comment (E. T.): this series of dates relate to a Middle to Upper Palaeolithic stratigraphic sequence in the Galeria Principala of the Pestera Muierii, Baia de Fier, Romania, one of the more important Palaeolithic sites in southern Romania.

OLD WORLD NEOLITHIC AND LATER

Great Britain

Dog Hole Cave, Haverbrack Dog Hole Cave, Haverbrack in southern Cumbria (NGR SD 486803) was first excavated by J.W. Jackson in 1912. Further excavations were carried out in the 1950s (Benson and Bland 1963) and by ourselves in 2003. Since our 2003 excavations, renewed caving activity has exposed more bones. Samples submitted by D. M. Wilkinson, Dept. of Biological & Earth Sciences, Liverpool John Moores Univ., Byrom St, Liverpool, L3 3AF.

OxA-15994	bone, *Homo sapiens*, Dog Hole 3, $\delta^{13}C = -19.9‰$	1734 ± 30
OxA-15995	bone, *Canis familiaris*, Dog Hole 3, $\delta^{13}C = -20.2‰$	1890 ± 30

Comment (D. M. W.): OxA-15994 on a human bone from excavations in the 1950s has a date statistically indistinguishable from our previous date on a bone from a different human from the site (OxA-14173). This shows that at least two of the humans excavated during the 1950s died around the third century AD.

The dog bone (OxA-15995) was collected from material disturbed by recent caving activity. It had clearly come from sediments underlying the position of those excavated in the 1950s. The date suggests that (while still Romano-British) it is probably somewhat earlier than the two dated humans.