

The Faunal Remains from Level 11

Excavation and Collection of the Faunal Remains

Excavation of Level 11 produced a rich assemblage of Taubachian lithic tools associated with masses of animal bones, excavated using a metre square grid system with coordinates combining numbers and letters of the alphabet, laid out in the cave (see **fig. 2**). Finds, faunal remains included, were not recorded three-dimensionally, but assigned to a distinct unit of the grid system or, in areas where the density of finds was low, several units combined together. Depth was recorded using artificial spits, usually of 10–20 cm (Valoch 1988; Neruda 2017). The faunal remains were stored in large cardboard boxes measuring 50 cm × 34 cm × 25 cm. Six smaller cartons, labelled A–F, filled with bones from a defined unit and spit were packed into each of the larger boxes. For example, carton A in box 130 contained finds from Level 11a found in the 1966 excavations in metres II–14/II, between heights of 740–760; finds from

Level 11a found in 1967 in metres 15/D between heights of 660–680 had been placed in carton C and so on.

In this study, two assemblages of faunal remains from Level 11 were analysed. The first one, referred to here as the »main bone assemblage« comprises the bulk of the faunal remains recovered during excavation and stored in the Moravské zemské muzeum (access number: MZM/002-05-10/173002, subcollection Další – Anthropos-osteologie). The second, smaller assemblage, comprises finds which bore traces of anthropic activities and were deliberately selected by Karel Valoch during excavation (see Part 2). This assemblage is also stored in the Moravské zemské muzeum (access number: MZM/002-05-10/173002, subcollection Další – Anthropos-archeologie). The latter assemblage is referred to in this study as the »selected bone assemblage«.

The First Faunal Analyses

Rudolf Musil and his team undertook the first analysis producing detailed lists of counts of faunal remains from Level 11 in the individual boxes and cartons. Where possible, finds were identified to species or genus and skeletal element, e.g. »*Equus* sp. dens molar sup.«. More fragmentary remains were listed separately, e.g. »costa prox. ep.« (proximal epiphysis of a rib) or »ossa longa – diaphyse« (diaphysis of

a long bone). The counts were then summed up as follows, for example in box 130: »218 ks (= numbers of finds identified to species/genus) and 515 fr (numbers of fragmentary finds)«. Musil's counts for the boxes 129–173 are shown in **table 1**. Counts of faunal remains in boxes 138 and 174 are not included, since this material derived from different levels.

Tab. 1 Counts of faunal remains from Levels 11a–d and 11 (boxes 129–137 and boxes 139–173) recorded by Musil. Taken from original documentation stored in the Moravské zemské muzeum in Brno.

Level	Number of identifiable finds	Number of fragments	Total faunal remains per level
11a	363	954	1,317
11b	31	0	31
11c	1,613	4,275	5,888
11d	162	291	453
11	7,716	44,485	52,201
Totals	9,885	50,005	59,890

11a & 11b	11c & 11d
	<i>Rhinoceros</i> sp.
	<i>Mammuthus primigenius</i>
	<i>Elephas</i> sp.
	<i>Equus taubachensis</i>
	<i>Canis lupus</i>
<i>Ursus</i> sp.	<i>Ursus taubachensis</i>
	<i>Alces alces</i>
	<i>Cervus elaphus</i>
	<i>Capreolus capreolus</i>
	<i>Dicerorhinus kirchbergensis</i>
Bovidae	

Tab. 2 Presence of animals identified in Levels 11a–d at Kůlna by Musil. Taken from R. Musil in: Valoch 1988, tab. 8.

Musil recorded almost 60,000 faunal remains, recovered during excavations of Level 11 between 1962 and 1968. The bulk of these finds, 52,201 pieces, are from deposits designated as »11«. 11c produced some 5,888 faunal remains and lower counts of finds were

recovered from 11a (n = 1,317), 11b (n = 31), and 11d (n = 453).

Specimens identified by Musil to species and genus in Levels 11a–d are shown in **table 2**. Musil interpreted the larger mammal assemblages from 11c and 11d as comprising mainly warm-loving species, indicating continental conditions with open wooded areas (parkland). For 11a and 11b he noted a mixed fauna mainly comprising species inhabiting steppe environments, but also some animals more typical of wooded conditions (R. Musil in: Valoch 1988). The mammalian faunal remains from the Middle Palaeolithic levels in Kůlna Cave were also studied by Marylène Patou-Mathis and Patrick Auguste (Patou-Mathis et al. 2005). Auguste analysed the faunas from Levels 14 to 7a, including Level 11 and Patou-Mathis studied the fauna from Level 6. Auguste concluded that the dominance of steppe bison and horse in the faunal assemblage from Level 11 corresponded to a mosaic of steppe and woodland under continental climatic conditions, but with no indications of pleniglacial conditions. In fact, sampling for isotopes indicated an open steppic environment in every layer, confirming the hypothesis of Neanderthals hunting predominantly in open areas (P. Auguste in: Patou-Mathis et al. 2005).

The Recent Zooarchaeological Analyses

Following an invitation from Karel Valoch to visit Brno and view the fauna in November 2007, an out-of-state loan agreement between the general directors of the Moravské zemské muzeum and the former Römisch-Germanisches Zentralmuseum was signed in May 2009. 44 boxes of finds from Level 11 (main bone assemblage) were brought from Budisov Castle to a store at Rebešovice, close to Brno, prior to their final transport to Monrepos in June 2009. In 2013,

the smaller assemblage of bones (selected bone assemblage), not available for loan in 2009 due to an ongoing study in Brno, was brought separately to Monrepos by Petr Neruda to be included in the analysis. All of the faunal remains were returned to Brno in December 2014. The bone retouchers and other tools were re-loaned for a further, detailed analysis in late 2015 and finally returned in 2017.