

shells (Fig. 23) well corresponds to location of these settlement units, while the pattern of bone industry and chipped bones distribution differs (Fig. 22).

The excavation continued to the north, in another oblong space measuring 7 x 14 m. Our excavation during the summer joined here the area studied by B. Klíma. This area forms lower part of the second settlement agglomeration, sloping from the top of the elevation, and its publication will make subject of another study. After the close of the salvage actions at the western slope, industrial exploitation destroyed the surface of the Pavlovian horizon completely.

STRATIGRAPHY

The key section at the western slope was formed by step of one of the etages, along the isohypse of 225 m above the sea level (squares A1 - A23). During further excavations several perpendicular sections completed the stratigraphic picture. Deeper exploitation revealed the subsoil, formed by a complicated sequence of slope sediments, limestone rubbish, loess, soils and soil sediments of Middle and possibly Lower Pleistocene age.

The section at the spot of the male burial (section No 5) has already been described (Svoboda 1989a, Fig. 1). After consultations with J. Kovanda, T. Czudek, P. Havlíček and other geologists we may summarize that the base (section No 3, Fig. 4) is formed by loess with partly corroded carbonate blocs (layer 9), followed by brown humic soil with charcoal (8) and by loess, including darker strips and lenses with charcoal (7). The cultural layer (6) is developed on this loess. Its base is sharp, with charcoal concentrations; at some places (not in the picture) is visible the upper, partly removed part of the layer, penetrating into the overlying loess. The thick upper loess layer (5-1) is separated by light ochreous and ochreous/light brown strips and lenses, comparable to the so-called gley horizons of B. Klíma (1958), and by irregular rusty smudges and stains with coagulated Fe-hydroxides.

In the squares A 18 - A 22, the cultural layer filled a shallow depression, where the Paleolithic burial (Fig. 5) was discovered on 28.04.1987. In this space (square A-20) two earth monoliths were removed from the section No 5, located along the skeleton, and transmitted to L. Smolíková for paleopedological investigation. J. Kovanda and H. Svobodová sampled the section No 1 (squares A7 - A8) on 5.05.1987 for malacozoological and palynological analyses. Sample numerations after the various authors are correlated in tab. 1 and their reports are enclosed to this article.

Chemical composition of the underlying and overlying loess was investigated in search for possible material sources of the earliest ceramic production (Vandiver et al. 1989). The results demonstrate that 60 - 75 % is composed by SiO_2 and 10 - 21 % by Al_2O_3 , while CaO , MgO , TiO_2 , P_2O_5 , FeO , Na_2O and

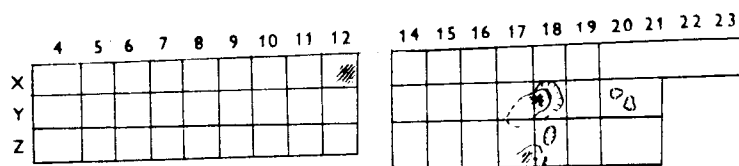
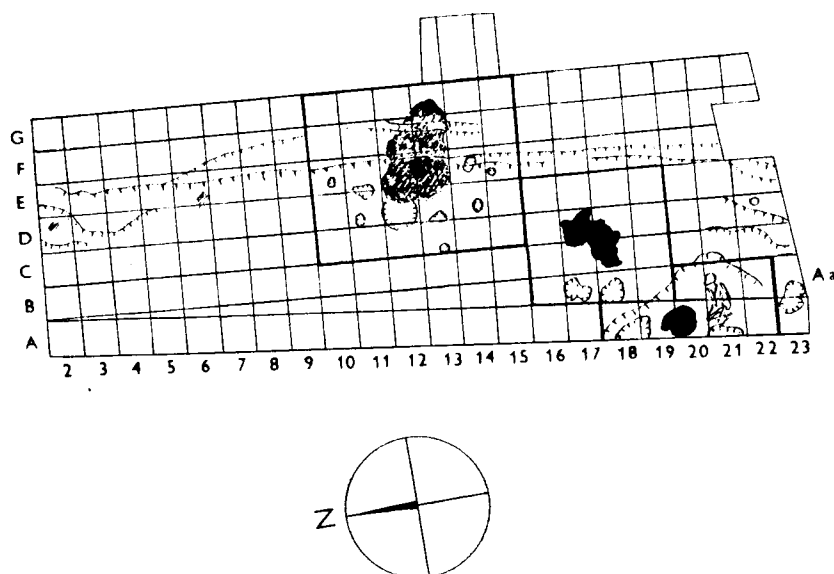
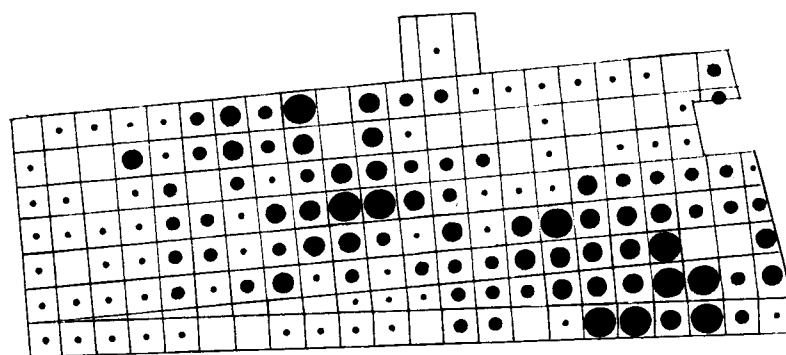
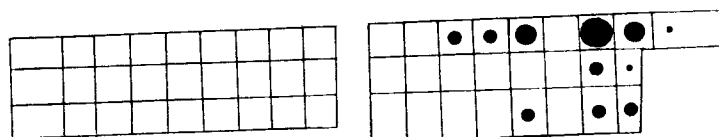


Fig. 2 (above). General plan of the settlement agglomeration at the western slope. From South to North the settlement units Nos 1, 2 and 3. - Fig. 3 (below). Spatial distribution of lithic artefacts.



- > 200
- 199 - 100
- 99 - 50
- 49 - 0



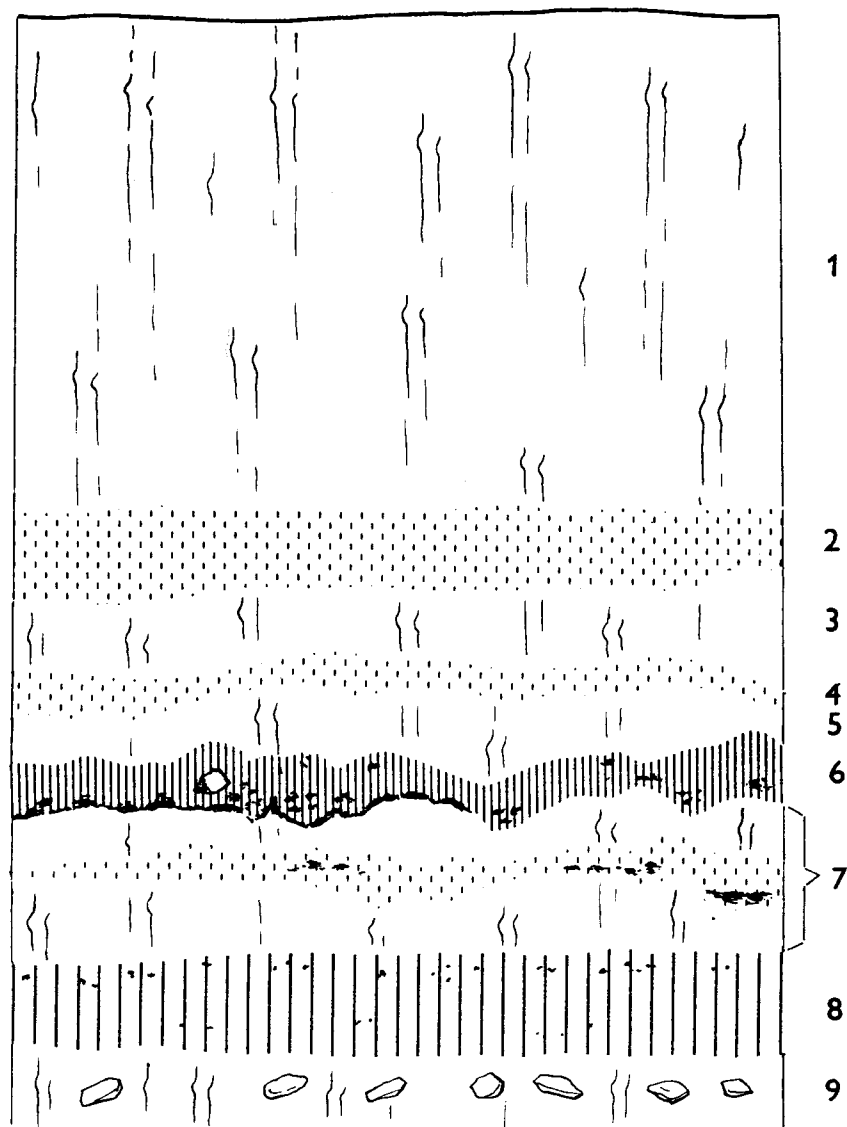
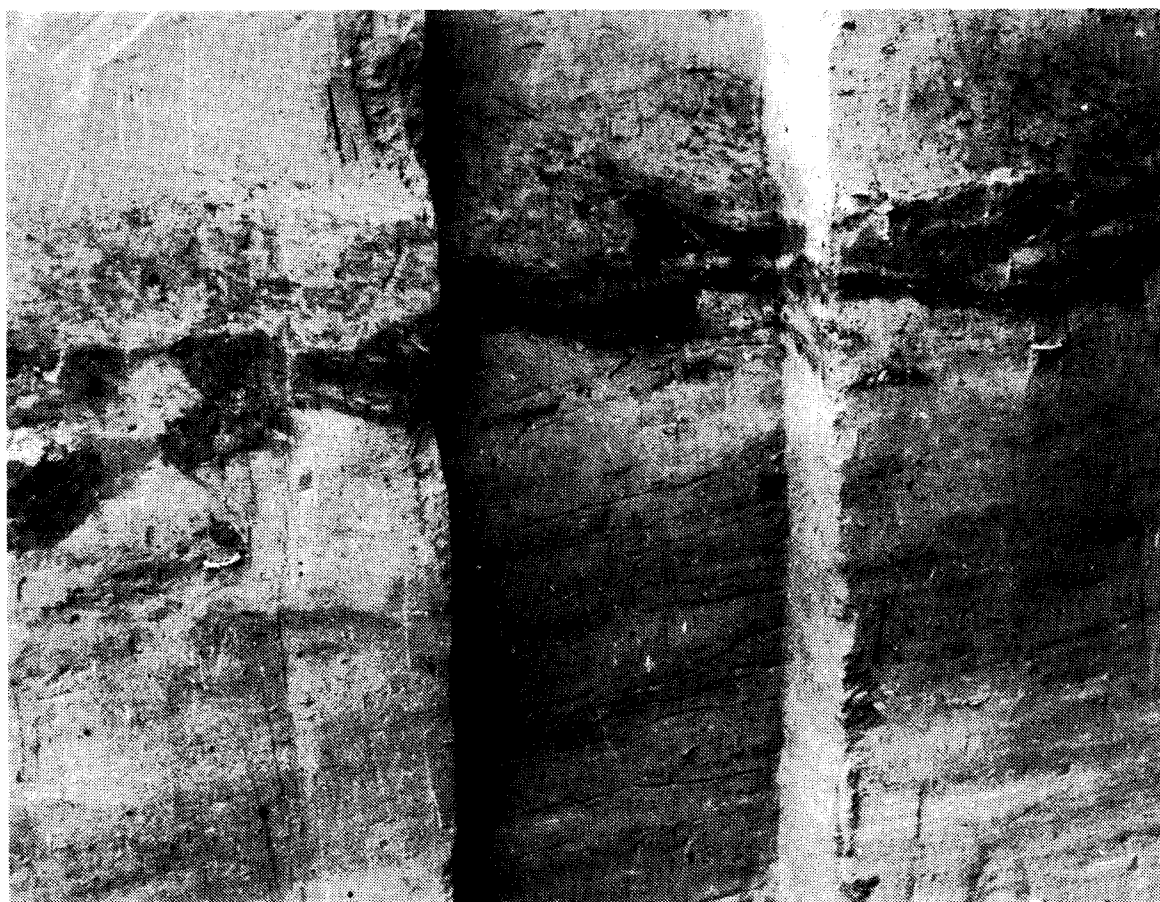


Fig. 4 (above). Section No 1 at the western slope. Stratigraphic description in text. - Fig. 5 (opposite). Section No 5, next to the skeleton DV XVI, layers 9-5.



Tab. 1. Numeration of samples after the various authors

Stratigraphy Fig. 3	Pedology L.Smolíková	Pollen analysis H.Svobodová	Molluscs J.Kovanda	Dating C14
1-loess	-	-	6,7	-
2-pseudogley	-	-	-	-
3-loess	-	8	5	-
4-pseudogley	7	7	-	-
4-pseudogley	6	-	-	-
5-loess	5	6	4	-
6-cult.layer	4	5	3	X
7-loess	-	4	2	-
7-grey lenses	-	3	-	-
7-loess	-	2	1	-
8-soil	3	1	0	X
9-loess	1,2	-	-	-

K₂O are represented by lower percentages.

RADIOMETRIC DATINGS

Samples for radiometric dating were taken from layers 8 and 6 (especially from hearths) and send to laboratories at Groningen (contribution by W.G. Mook), Prague (contribution by J. Šilar) and Illinois. The charcoal layers in the archaeologically sterile underlying soil (layer 8) yielded two data:

GrN	15280	27 900 + 550 B.P.
CU	749	24 725 ± 2163 B.P.

The second date, gained by the Charles University Laboratory in Prague, is too recent. After J. Šilar, its high deviation is due to small amount of the sample and to its dilution. Only after adding double deviation we arrive to a realistic value. In the brickyard section, a stratigraphically comparable soil was dated to 28 300 + 300 B.P. (GrN 2092, Klíma et al. 1962). Corresponding soil was recently found by excavation at nearby Milovice; at this site it included atypical Aurignacian and it was dated to 29 200 ± 950 B.P. (GrN 14826, Oliva 1989).

Earliest data for the Pavlovian (29 000 - 28 000 B.P.) are provided from the brickyard section, where the brown soil 8 lies in direct contact with the above cultural layer 6 (Klíma et al. 1962). In the upper part of the site a more or less thick loess deposit 7 separates the two layers.

Numerous data from the cultural layer at the new excavations, including the mammoth-bone deposit, range between 28 000 - 22 000 B.P. (cf. Klíma 1990, Svoboda 1989 etc.). The series of data from the western slope agglomeration fits into this interval. The Groningen data, however, are usually earlier (27 500 - 25 000 B.P.), while the Prague data of the same features and settlement units are generally more recent (about 25 000 - 22 000 B.P.). This evidence is supplemented by two Illinois data: 26 390 + 270 B.P. and 22 630 + 420 B.P. Elaboration of a fine chronology on the basis of such a range of datings, therefore, seems impossible. We suppose that the cultural layer was formed during longer time-span and in changing environments. The settlement agglomeration would be the result of repeated settling of the same space.

The overlying loess deposit is dated in the brickyard section (Klíma et al. 1962) to 18 400 + 700 B.P. (depth of 5,5 m) and to 15 350 ± 1 000 B.P. (depth of 4 m).

CHARACTERISTIC OF FORMATION PROCESSES OF THE SECTION

Studies by L. Smolíková, H. Svobodová and J. Kovanda enabled characterisation of formation processes of the section and its separation into three cycles: the subsoil of the cultural layer, the cultural layer, and the overlying deposit.

The lower cycle (layers 9-7). The time-span before the Pavlovian settlement covers sedimentation of the loess, its