The Middle Palaeolithic Site of Hezerwater at Veldwezelt, Belgian Limburg

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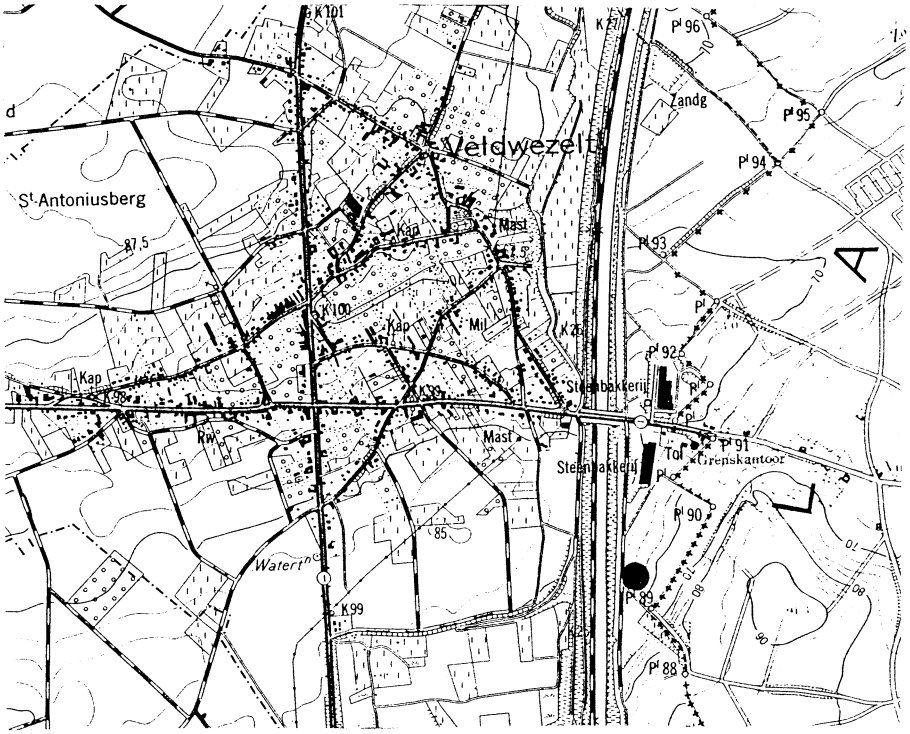
Résumé

Une première campagne de fouilles a été organisée en 1998 dans une carrière de limon à Veldwezelt, lieu-dit Hezerwater. On y a trouvé des artefacts en silex du Paléolithique moyen en relation avec le pédocomplexe du dernier interglaciaire. Ce pédocomplexe est extrêmement bien conservé sur une surface limitée. Les trouvailles suggèrent un débitage de technique Levallois sur place.

A. Introduction

Following the discovery of some Middle Palaeolithic artefacts, research began in 1996 in the *N.V. Vandersanden* brickyard pit, which exploits the south-east facing valleyside of the Hezerwater, a tributary of the river Maas (Gullentops *et al.*, 1998). The pit is situated about one kilometre south-east of Veldwezelt, Belgian Limburg (fig. 1), latitude 50° 51' 15" N and longitude 5° 38' 45" E. From July 20 until August 28 1998, the Laboratory for Prehistory at the Catholic University Leuven, in collaboration with the Gallo-Roman Museum Tongeren and the Institute for the Archaeological Patrimony of the Flemish Community, organised an excavation in search of an artefact concentration. The excavation uncovered about 200 m² and was situated in the western part of the brickyard pit. A preliminary report of the excavation and some refitting efforts is presented here.

Fig. 1 – Localisation of the site.



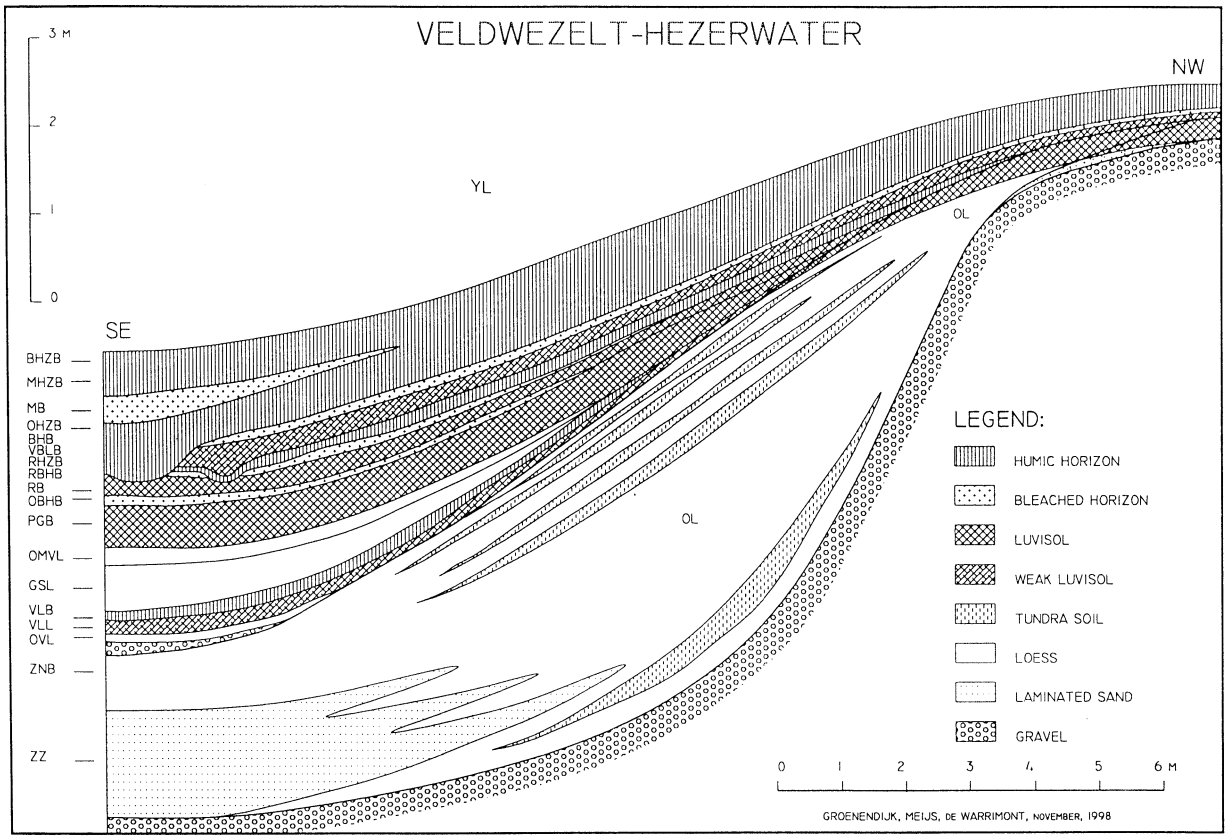


Fig. 2 – Preliminary interpretation of the interglacial litho- and pedostratigraphy.
The present day surface is about 5 to 6 metres above the top of this profile drawing.

B. Litho- and pedostratigraphical record (fig. 2)

The Hezerwater excavation is situated in a complex pedostratigraphical sequence. It covers a series of older loess (OL)[1] filling the valley side, cut into deposits of a Maas terrace. It is overlain by younger loess (YL) of Weichselian age.

Several horizons of the stratigraphical sequence can be related to a pedogenesis, mainly to the development of clay illuviation horizons. From bottom to top we recorded the following horizon sequences (fig. 2) :

- VLL/VLB : This palaeosoil formed in clayey silt-loam. The lower VLL horizon is identified as a weak Bw horizon, with few patchy yellowish brown clay coatings and greyish mottles. The overlying brownish horizon VLB shows greyish mottles and has a humiferous appearance. Both horizons are intensely bioturbated, while mainly the latter contains quite some charcoal.
- GSL : Few, discontinuous gravely and sandy layers with locally thick laminae containing common manganese nodules.
- PGB/OBHB : The PGB is a reddish brown horizon with patchy, dark yellowish brown clay coatings. The overlying OBHB is a yellowish brown E-horizon. Vertical, greyish pseudogley tongues penetrate into the underlying PGB. The tongues are connected by numerous subhorizontal cracks that are filled with the same material. In a horizontal section the tongues form a polygonal pattern with an average diameter of about 30 cm. This horizon is interpreted as a moderate to strongly developed B-horizon of a luvisol.
- RB/RBHB/RHZB : This sequence is interpreted as the Bt/E/A-sequence of a luvisol. The RB ('Bt') is an orange-brown horizon with yellowish red clay coatings. The RBHB ('E') has a beige colour. Vertical tongues penetrate the RB. In a horizontal section they form a polygonal pattern with an average diameter of 50 cm. The RHZB ('A') is pale brownish. To the north this horizon sequence is merged with the overlying VBLB (fig. 2).
- VBLB/BHB : The VBLB is a weak grey-brown, mot-

[1] According to its mineralogical composition this OL is of Saalian age (Meijs, in preparation).

tled Bw-horizon with an overlying greyish E-horizon (BHB). Vertical, greyish pseudogley tongues are penetrating the underlying VBLB and form, in a horizontal section, a polygonal pattern with an average diameter of 50 cm. The tongues of this polygonal network are intersecting the beige tongues of the underlying network. Apparently, also an indistinct brownish A horizon, which is totally disturbed by crotovinas that are filled with greyish and dark brownish material from beneath and above, can be discerned. Channels filled with dark brown clay and organic material are penetrating from this humiferous horizon into the subsoil until the RB. The boundary to the overlying humiferous horizon is diffuse.

- HZB : This is a humiferous horizon that can be divided in several subhorizons. In the humiferous material above horizon OHZB we could trace the peak of volcanic minerals of the Enstatite tephra (Rocourt tuff). The upper subhorizon BHZB shows some hydromorphic phenomena and in a horizontal section a polygonal network is present with an average diameter of 25 cm.

The sequence is thought to represent a detailed climatic succession of the last interglacial s.l. It seems devoid of cryoturbations and is severely affected by several phases of rill- and gully-erosion. As a consequence, the preserved surface is quite limited and is subdivided by a large gully into a northern and a southern excavation area.

C. Spatial artefact distribution

C.1. Vertical artefact distribution

Artefacts were discovered at different levels within the pedostratigraphic units. It is not yet completely clear how many different artefact horizons can be defined. It is possible that some of the recognised ones are merging together in higher positions, which we will try to detect next season. Given the present state of the research we will discuss the artefacts according to two assemblages, one on top and one below the PGB.

The older assemblage corresponds with the pedostratigraphic units VLL/VLB. Excavation of these lower levels has been restricted to a small surface thusfar (fig. 3), but it is quite clear that we are dealing with two different artefact horizons, more or less

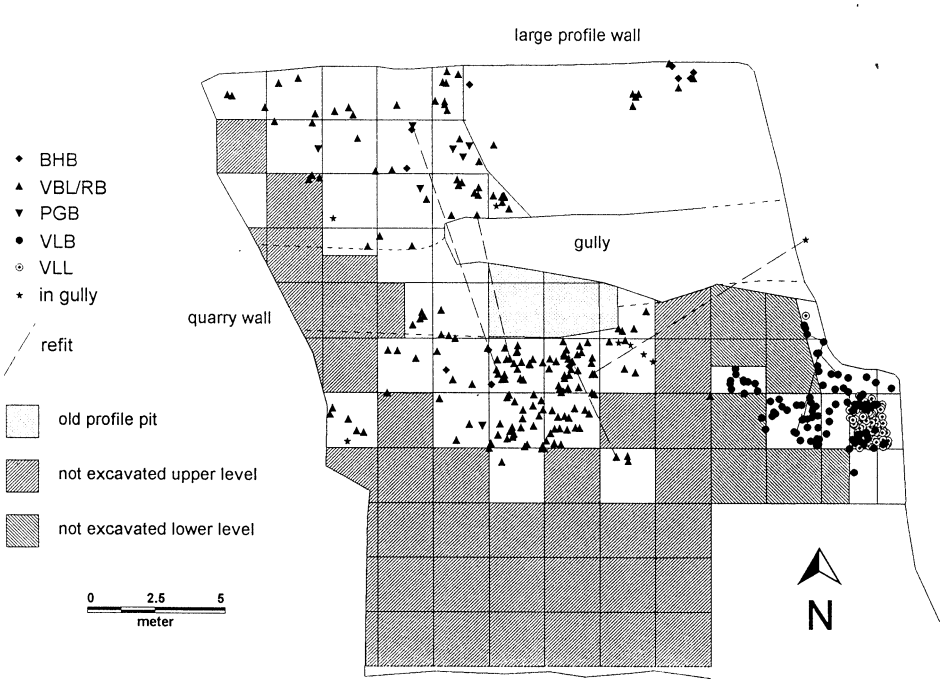


Fig. 3 – Horizontal artefact distribution with indication of the refitted artefacts.

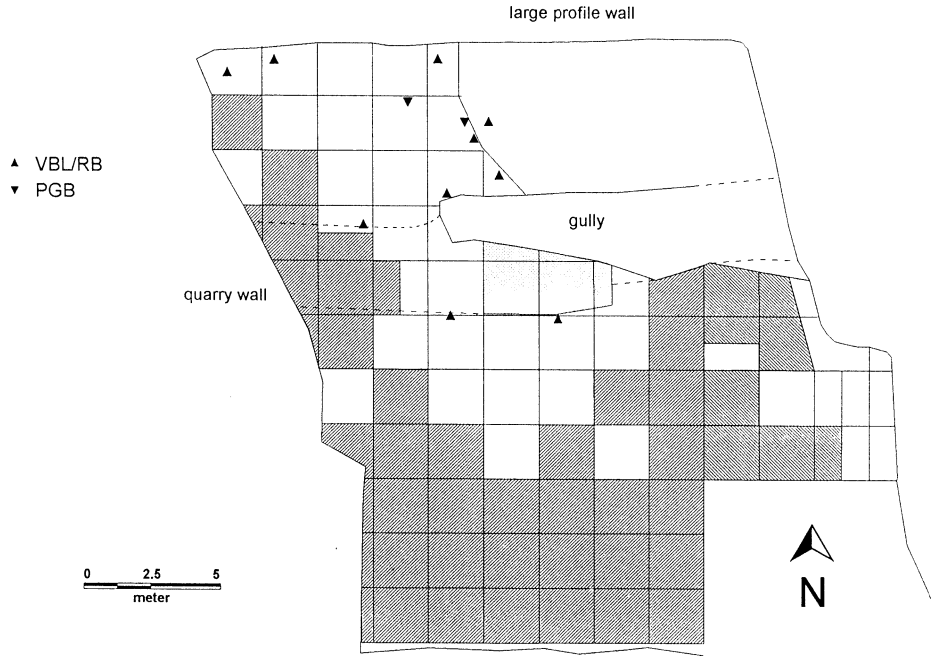


Fig. 4 – Horizontal distribution of the artefacts larger than 50 mm.

corresponding with VLL and VLB. Refitted artefacts have not connected the two levels so far.

The youngest assemblage is chiefly situated in the VBLB. The artefacts display a vertical scatter of about 30 cm. Some artefacts have been discovered scattered in the overlying bleached and humiferous horizons. In the north-western part of the excavation some artefacts were uncovered from the upper five to ten centimetres of the PGB. One of two conjoining artefacts was vertically positioned in this PGB, whereas the other was located in the overlying VBLB-horizon (fig. 6e).

C.2. Horizontal artefact distribution

Given the restricted surface on which the lower VLL and VLB was excavated thusfar, we can not draw final conclusions on their horizontal distribution. Small artefacts as well as ones up to 7 cm large were collected from these levels. Five refits could link artefacts over a distance of 0.5 to 3.5 m (fig. 3).

For the upper level, nearly the entire surface that was preserved and could be uncovered has effectively been excavated. The bulk of the artefacts was recovered from a surface of about 16 m^2 in the southern part of the excavated surface. These are mostly small flakes up to about 3 cm. Larger flakes are almost completely lacking in this area. The ten larger artefacts, measuring more than 5 cm in their largest dimension, were found more to the north (fig. 4). Three out of four refits join a flake of the southern excavation area with one of the northern part or even - in one case - with an artefact recovered from the filling of the large gully (fig. 3).

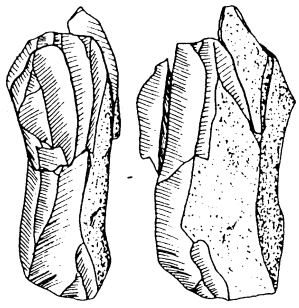


Fig. 5 – Lower lithic assemblage : core for blade-like flakes. Scale : 2/3.

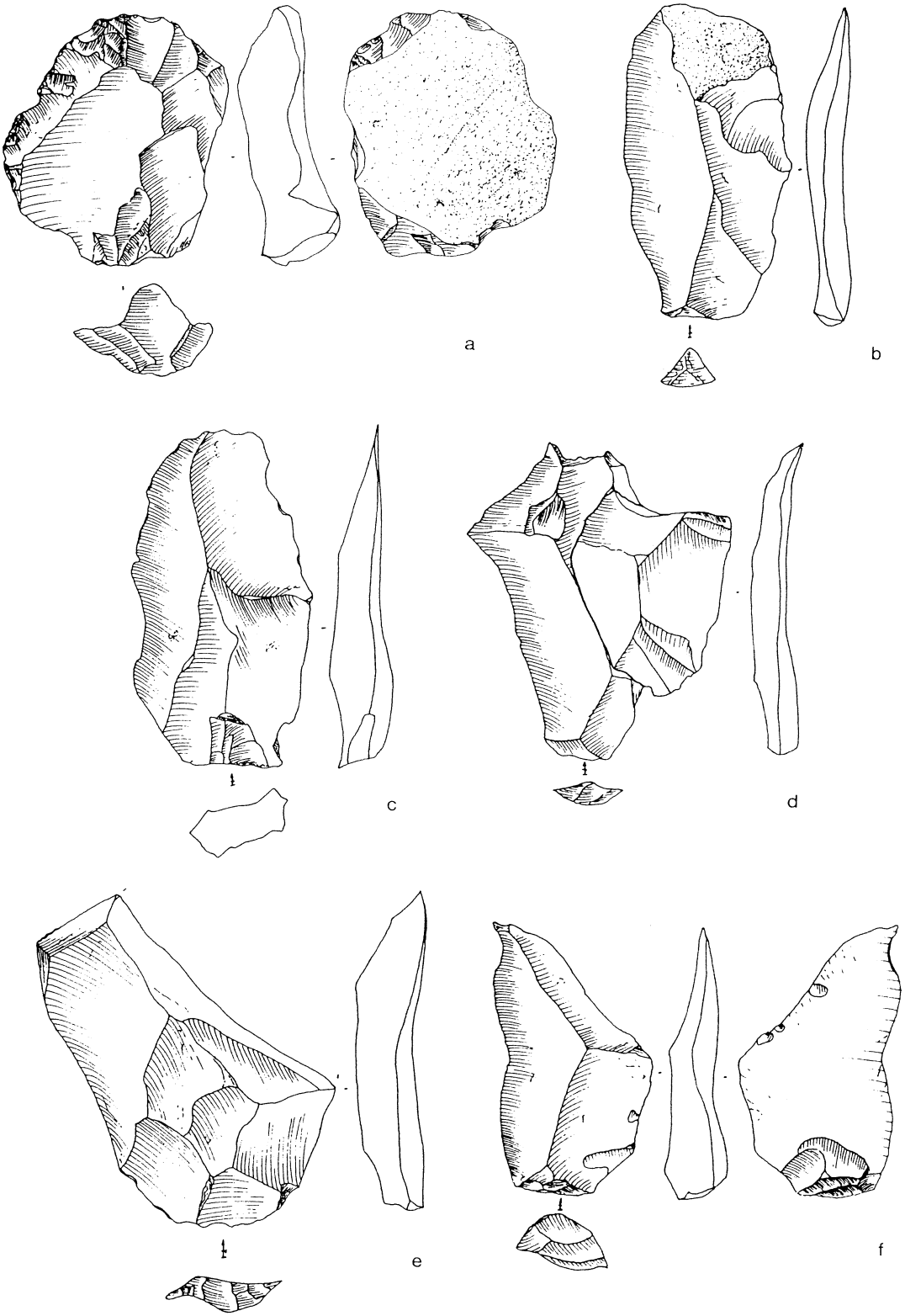


Fig. 6 – Upper lithic assemblage : artefacts produced by the Levallois method.
6a. Levallois core, reworked as a single convex side scraper;
6b. Atypical Levallois flake; 6c-f. Typical Levallois flakes. Scale 2/3.

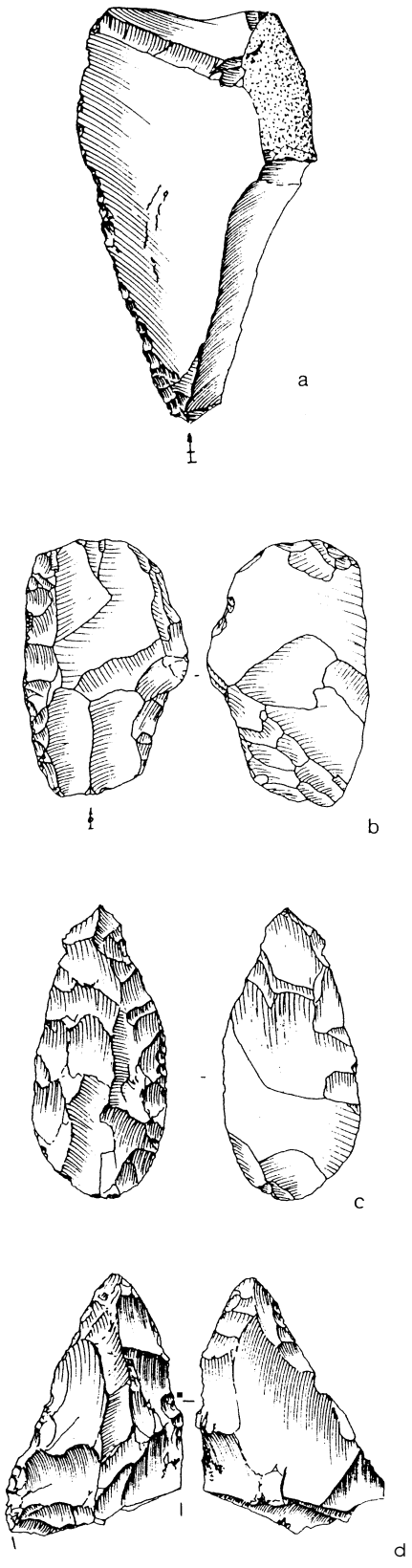


Fig. 7 – Upper lithic assemblage. 7a. Single, straight side scraper; 7b. Bifacial, single convex side scraper; 7c. Bifacial point ; 7d. Tip of a hand axe. Scale : 2/3.

D. The lithic assemblages

D.1. Lower assemblage

About 100 artefacts were recovered from each of the two major soil horizons. For the raw material, rolled flint cobbles, similar to those from the nearby terrace deposits, were used. The edges of the artefacts are quite sharp. The most meaningful artefact so far is a small core for blades, to which two flake fragments could be refitted (fig. 5).

D.2. Upper assemblage

The upper assemblage comprises of about 200 artefacts. Most artefacts are of a remarkably fresh nature and can be assigned to a limited number of reduction sequences. Another series of artefacts does not make up part of any of these sequences. The raw material is flint and was collected from rolled cobbles. The quality varies from fine to coarse with quite some impurities and is mostly speckled or even dotted, light to dark grey or in some cases even dark brown.

Six artefacts have been produced by the Levallois method. One of them is a core that was reworked to create a single, convex side scraper (fig. 6a). All five others are Levallois flakes, four typical and one atypical (fig. 6b). One flake (fig. 6c) has a flat butt, the four others a faceted one. Another has been refitted with a flake that broke during the production (fig. 6d). The broken flake was produced from a striking platform opposite to that of the later Levallois flake.

From the other artefacts found, one is a bifacial point (fig. 6i) produced on a rather thick flake, and two are side scrapers: a single, straight side scraper (fig. 6g) and a bifacial side scraper (fig. 6h). The latter was reused as a small bipolar core for the production of blade-like flakes and is, in fact, a "Kostienki knife" (Escutenaire, 1997).

E. Interpretation

The excavation has disclosed important remains of Middle Palaeolithic occupation(s) in the pedostratigraphical context of the last interglacial *s.l.* The excavation surface is affected by rill- and gully-erosion, while the artefact distribution is disturbed by bioturbation processes. Aside from this, the authors have the impression that the horizontal artefact distribution may still reflect the original one. This, together with the nature of the artefacts and the presence of many chips, indicates that some artefact production was performed on the spot. All this should be confirmed by further research.

F. Acknowledgements

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G. References

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