Summary

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The Belvédère loess and gravel pit, situated northwest of the town of Maastricht, has been the object of an intensive archaeological-geological investigation since 1980. The aim of the research was to study the remains of human activities during the last and penultimate glaciation and the deposits containing archaeological finds. The pit has been exploited for almost a century now, but until 1980 no Palaeolithic artefacts had ever been discovered there. The interdisciplinary research of the pit, which consists largely of a virtually uninterrupted series of archaeological rescue excavations, is still being continued. New discoveries may lead to a different interpretation of the geological context of the archaeological finds than that presented in this volume.

Chapter 2 (The geology of the Belvédère pit and its wider geographical setting) gives a brief outline of the geological history of South Limburg, with particular emphasis on the Pleistocene, and continues with a more detailed description and interpretation of the deposits found in the pit. In total, five lithostratigraphical units were distinguished in the Pleistocene deposits (III up to and including VII). Unit III, consisting of coarse gravel and sands of the Caberg Middle Terrace deposits, is interpreted as a deposit formed by a river with numerous tributaries under cold climatic conditions. The following Unit IV deposits were formed under warmer conditions, presumably by a meandering stream. The Unit V deposits consist of a sequence, fining upwards, of fine sands and displaced loess. Unit VI consists of (reworked) Weichselian loess deposits. Unit VII, finally, is interpreted as a typical loess deposit from the Pleniglacial period of the last glaciation.

The faunal remains recovered from the various deposits present a picture of the climate and the environment at the time of the formation of the lithostratigraphical units and the archaeological assemblages found in them. In addition, they constitute a reliable basis for the *relative* dating of the deposits in the pit. The dates of the individual deposits resulting from this relative dating method are confirmed by the *absolute* dates (obtained with the aid of Thermoluminescence and Electron Spin Resonance). The Unit IV-C deposits are the most interesting from an archaeological and palaeontological point of view because they appeared to contain several archaeological assemblages in a primary context and also large amounts of palaeontological material (mammal and molluscan remains). These Unit IV-C deposits were formed in a warm-temperate period in the Saalian which presumably corresponds to the Hoogeveen interstadial (see chapters 2 and 8). The absolute dates indicate an age of 200-250 ka (see chapters 2 and 8), on the basis of which a correlation with Stage 7 of the oxygen isotope stratigraphy is proposed. That this correlation is only one out of several possible options is demonstrated in chapter 8 in a critical analysis of the presuppositions of such correlations.

Chapter 3 up to and including 7 contain the results of the archaeological research carried out from 1980 to 1985 and also a brief description of later excavations. Figure 20 gives a schematic survey of the stratigraphical positions of the different sites (A up to and including K) discussed in this volume, while figure 5 shows their positions in the pit.

The methods used to record the find scatters in the field were always a compromise between our own wishes and the commercial interests of the firm exploiting the pit, which of course affected the degree of detail in the recording. Since 1985 the main aim has been to record find scatters over the largest possible area. On some occasions the finds were collected per square metre in rescue excavations.

Some of the themes dealt with in the interpretation of the data presented are the role of the transport of flint artefacts in the formation of flint assemblages and the relation between flint artefacts and bone.

The evidence obtained in refitting flint from the Unit IV sites indicated that these 'sites' represent only one stage of a complex system of production, transport and discard of artefacts. For example the flints recovered from Site C appeared to be the products of at least six different flint nodules or Raw Material Units. Of some of these nodules mainly decortication flakes were found (figs.52 and 53), whereas another nodule had been introduced into the excavated area in the form of an already largely reduced core (figs.60 and 61). These and other observations, particularly at Site G, led to the assumption that the *transport* of flint objects largely accounts for the great technological and typological differences in the artefact composition of Middle Palaeolithic find complexes. The underlying theory is that the production of flint artefacts intended to be used elsewhere results in different assemblages than the ad hoc production of flakes for local use. Chapter 9 (The Belvédère data: implications for the interpretation of hominid behaviour in the Middle Palaeolithic) discusses this assumption in a wider context: data from other sites indicate that there is indeed a relation between, for example, the transport of flints and certain 'economical' forms of core reduction. In addition, frequently retouched objects (such as handaxes) are usually found at a greater distance from their raw material source than artefacts that show no or virtually no signs of retouching. In this chapter it is also suggested that the spatial incongruity of the various stages of flint processing could provide a key to the 'Mousterian problem' -a topic already introduced in the discussion of two Unit VI (Weichselian) sites in chapter 7.

The archaeological record shows that the distances over which objects were transported by hominids increased substantially in the course of the Pleistocene, as is discussed in chapter 9 (see fig.140).

The associated occurrence of artefacts and -usually poorly preserved- bone at some of the Belvédère sites led to speculations on the origin of these spatial associations. How are we to differentiate between, on the one hand, faunal elements that occur on a distribution map as part of the natural background fauna and, on the other, elements introduced by hominids? If the evidence suggests that we are indeed dealing with elements introduced by hominids, as was for example the case with the results of the analysis of wear traces on the finds from Site G (figs.148 and 149; see Van Gijn, Appendix I), we must then decide whether these elements are attributable to scavenging or hunting. This problem is discussed in the descriptions and interpretations of the individual sites and in the more interpretative chapter 9, in which it is suggested that the currently available data do not yet permit us to choose between these two options and that our present interpretations are based more on our views on the 'humanness' of these early hominids than on actual sound evidence.