

## 20. THE UPPER AND LATE PALAEOOLITHIC IN THE NETHERLANDS (1991-1995)

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### EYSERHEIDE (MAGDALENIAN)

In 1991, excavations continued at a Magdalenian site near Eyserheide, in the southeastern part of the province of Dutch Limburg (Rensink 1992). The site is located in a hilly loess landscape, on a slight slope near the southern border of a loess plateau. The geomorphological position of the site corresponds with those of other Magdalenian sites known from the region (Sweikhuizen, Mesch).

During the campaign of excavation in 1990, a central area of 100 m<sup>2</sup> had already revealed two small concentrations of lithic artefacts (cluster A and B) and an area with dispersed finds. In cluster A, about 390 flint artefacts were exposed over an area approximately two meters in diameter, including 24 tools or tool fragments. In spatial association with these artefacts, small fragments of stones were found mainly in the centre of the cluster. Among them, two are covered with reddish material, probably hematite. A few other stone fragments are red-coloured, indicative of heating, which could be refitted to fragments recovered from the ploughzone. In cluster B, about three meters to the south of cluster A, more than 100 flint artefacts (including 12 tools or tool fragments) were found in a semi-circular area about 1.5 x 0.8 meters in size.

In 1991 a small area of ca. 24 m<sup>2</sup> in the southwestern part of the excavation area was further investigated. As in 1990, finds from the ploughzone were collected in 1 x 1 meter squares, while those identified below the ploughzone were recorded three-dimensionally. In this section flint waste and a few flint tools were found rather dispersed, with a small cluster of artefacts in square 49/196. During the 1991 excavations it could be observed that this section of the site is severely affected by biological activity, making it difficult to establish its exact nature and relation to the parts of the site excavated in 1990.

In total, more than 3400 artefacts have been recovered from the surface and during the 1990-1991 excavations at Eyserheide, most of which (63%) were recorded three-dimensionally below the ploughzone. Among the finds 130 tools have been identified, the main tool classes being burins (22%), endscrapers (11%), borers (6%), retouched blades (14%), and blades and flakes with use retouch (28%). Among the burins, dihedral burins are far more numerous than the truncated variety. The percentage of backed blades (4%) is low. For the production of blades and tools, good quality flint materials were used, originating from locally available flint sources.

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Study of the flint materials has focused on refitting, micro-wear analysis and the study of the spatial distribution of raw material units over the excavated area. Thanks to the procedures followed, information has been obtained about the locations of debitage of individual nodules and about the spatial relationship between different clusters of artefacts.

#### VENLO (FEDERMESSER, AHRENSBURGIAN AND EARLY MESOLITHIC)

In 1994 and 1995 a series of Late Palaeolithic sites has been subject of investigation by the University of Amsterdam (Instituut voor Pre- en Protohistorische Archeologie), in co-operation with the archaeological service of the community of Venlo. The sites are located near the town of Venlo (province of Limburg), on a terrace along a former meander of the river Maas (DEEBEN 1995: fig. 3). In the same area, at the eastern side of the meander, a number of Late Palaeolithic sites had already been discovered earlier during field surveys. Among them, a Federmesser site and parts of an Ahrensburgian or early Mesolithic site have been excavated in 1989, while from the meander filled in with organic sediments samples were taken for palaeo-ecological investigations (Bos 1992). The present research makes part of an extensive research project, dealing with the archaeology and ecology of the Late Palaeolithic-Early Mesolithic transition in the southern Netherlands (DEEBEN & BOS 1989; DEEBEN 1995).

In 1994-1995 excavations have been carried out along the northern side of the meander, in an area where archaeological sites were possibly threatened with destruction due to the development of an industrial area. Up till then, no Late Palaeolithic finds had been reported from this area, probably as a result of the presence of an ancient cultivation soil or *es*-layer, completely covering the local sandy deposits. After removing the *es*-layer, concentrations of archaeological materials were searched for by means of drilling (20 cm) in a network and sieving of sediment. This procedure in the first instance provided no clear indications for the presence of concentrations and only low numbers of lithic artefacts were found. After other parts of the *es*-layer had been removed, artefact concentrations were found in stratigraphical position on different locations. Located in an area of four hectares, six sites have been further investigated by means of sieving of sediment (width of mesh 4 mm), extracted from small sondages measuring 50 x 50 cm and 2 x 2 meters.

The results of the fieldwork show that five sites consist of one single concentration of stone materials and low densities of finds, whereas one site is characterised by three concentrations and relatively high quantities of finds. As is mostly the case in the coversand area of the southern Netherlands, there is no preservation of bone materials. Also, charcoal as indication for the presence of a hearth is absent and, as a result, no radiocarbon dates are available. On typological grounds five of the sites have provisionally been assigned to the Federmesser culture. The other site probably belongs to the Ahrensburgian culture, though an Early Mesolithic age can not be excluded. In most concentrations burins are the dominant tool category. In two of the sites relatively many pieces of ochre were found. In the other sites this find material is completely absent.

In addition to Late Palaeolithic finds, the area has yielded archaeological materials dating to the Neolithic, Bronze Age and Iron Age.

#### BAKEL-MILHEEZE (LATE PALAEO-LITHIC AND EARLY MESOLITHIC)

In 1992 archaeological fieldwork by means of drilling has been carried out at Milheeze (province of Noord-Brabant). This area is well-known for its rather high density of Late Palaeolithic sites located on a coversand ridge. In this area two Federmesser sites (Milheeze Ia and Milheeze Ib) and an early Mesolithic site (Milheeze II) have been investigated by A. Bohmers in 1958-1960 (Biologisch-Archeologisch Instituut, Groningen) (ANONYMOUS 1959; BOHMERS 1960). Another Federmesser site (Bakel-De Rips) was subject of excavation in 1968 (HEESTERS & WOUTERS 1970). The coversand ridge is situated along the west side of a Late Glacial lake, nowadays filled in with organic deposits (BOS 1992; DEEBEN & BOS 1989). Some of these date to Alleröd interstadial, whereas on top of the coversand ridge a so-called Usselo soil of Alleröd age is present.

Finds assigned to the Federmesser culture have been found just under, in and above the bleached horizon of the Usselo soil. In 1988 a radiocarbon date of the Usselo soil containing flint artefacts has been obtained:  $10,810 \pm 60$  BP (GrN-16508). The basis of the gyttja, with underneath some flint artefacts, is dated by radiocarbon to  $11,445 \pm 35$  BP (GrN-16509) (DEEBEN & BOS 1989). Mesolithic finds generally occurred in the A- and B-horizon of a podzolic soil.

Organic remains recovered from the settlement area consist of fragments of burned bone. For these fragments no further species determination is possible, with the exception of a left dental of a pike (*Exos lucius*) (personal communication F. Laarman, Rijksdienst voor het Oudheidkundig Bodemonderzoek, Amersfoort). Up till now, one piece of worked wood has been found in the gyttja that can be related to the prehistoric occupation (Arts 1988:294).

In 1992 fieldwork principally consisted of drilling using an auger with a diameter of 20 cm (VAN DER KROFT & SLOOT 1995). On the coversand ridge about ten sites have been discovered by means of drilling at random in an area of 1,5 km x 200 m. Since the number of artefacts that can be dated typologically is low, dating of the sites is problematic. However, the stratigraphical position of the finds point to a Late Palaeolithic age of most of the sites. In total, at present about 20 sites on the coversand ridge have been localised

#### DOETICHEM (FEDERMESSER) AND OUDEHASKE (EPI-AHRENSBURGIAN)

In Doetichem in the eastern part of the Netherlands a Federmesser site has been excavated in 1994. The site is located on a sandy ridge, in prehistoric times not far away from a small stream. The excavation revealed an area with red-coloured sediment, probably representing the location of a hearth at the time of occupation. The finds include fragments of burned bone and some retouchers,

resembling those documented from the Late Palaeolithic site of Niederbieber in the German Rhineland (WINTER 1987). The site has not been published yet.

Also, in 1991 investigations continued at a Late Palaeolithic site at Oudehaske near Heerenveen in the province of Friesland (DIJKSTRA *et al.* 1992). Oudehaske is one of the few documented Epi-Ahrensburgian sites north of the river Rhine in the Netherlands. Other Epi-Ahrensburgian sites with similar tool inventories include Gramsbergen (STAPERT 1979) and Oudega (NIEKUS and STAPERT 1994). Since the artefacts were already reworked into the plough layer, fieldwork at Oudehaske concentrated on sieving of sediment from the ploughed topsoil. As in the case of the other Epi-Ahrensburgian sites, the good quality of the blades is striking, in contrast to those from Mesolithic sites. The site has not been published in detail yet.

## REFERENCES

Anonymous 1959,

Milheeze, gem. Bakel. *Archeologisch Nieuws. Nieuwsbulletin van de Koninklijke Nederlandse Oudheidkundige Bond* 12, 24p.

ARTS N., 1988,

A survey of final Palaeolithic archaeology in the Southern Netherlands. In: M. Otte (ed.) *De la Loire à l'Oder. Les Civilisations du Paléolithique Final dans le Nord-Ouest Européen*. Oxford, British Archaeological Reports, International Series 444, p. 287-356.

BOHMERS A., 1960,

Milheeze, gem. Bakel. *Archeologisch Nieuws. Nieuwsbulletin van de Koninklijke Nederlandse Oudheidkundige Bond* 13, 249p.

BOS J.A.A., 1992,

*Palynological studies in the development of the vegetation around archaeological sites in Noord-Brabant and Limburg (the Netherlands) during the Late Glacial and early Holocene*. University of Utrecht, unpublished manuscript.

DEEBEN J., 1995,

Human occupation of the southern Netherlands during the Younger Dryas (extended abstract). *Geologie en Mijnbouw* 74, p. 265-269.

DEEBEN J. AND BOS J.A.A., 1989,

*Archon, Jaarverslag over 1988*. Den Haag, Nederlandse Organisatie voor Wetenschappelijk Onderzoek, p. 44-45.

DIJKSTRA Y., NIEKUS M. and STAPERT D., 1992,

Het onderzoek van de Ahrensburg-vindplaats te Oudehaske (Fr.) in 1991. *Paleo-aktueel* 3, p. 37-43.

- HEESTERS W. and WOUTERS A., 1970,  
De Tjongerkultuur in de Rips (gem. Bakel). *Brabants Heem* 22, p. 2-20.
- KROFT P. van der and SLOOT A., 1995,  
*Archeologisch onderzoek op een heideterrein bij de Stippelberg (gem. Bakel en Milheeze, N. Br.): prospectie, projectie en protectie*. Amsterdam, Instituut voor Pre- en Protohistorische Archeologie.
- NIEKUS M. and STAPERT D., 1994,  
Een vindplaats van de overgang Laat-Paleolithicum/Mesolithicum bij Oudega (Fr.). *Paleo-aktueel* 5, p. 17-21.
- RENSINK E., 1992,  
Eyserheide: A Late Magdalenian site on the fringe of the northern loessbelt. *Archäologisches Korrespondenzblatt* 22, p. 315-327.
- STAPERT D., 1979,  
Zwei Fundplätze vom Übergang zwischen Paläolithikum und Mesolithikum in Holland. *Archäologisches Korrespondenzblatt* 9, p. 159-166.
- WINTER D., 1987,  
Retuscheure des spätpaläolithischen Fundplatzes Niederbieber, Neuwieder Becken (Fläche 50/14 - 56/20). *Archäologisches Korrespondenzblatt* 17, p. 295-309.