

IX. Summary

The subject «The Neolithic Settlement Between The Cologne-Bonn Rhine Plain And The Elevations Of The Bergische Land» is divided into five parts. It starts with an introduction to the question if highland ranges were part of the neolithic economical system and is followed by a description of the geography, history of research and archaeology of the Bergische Land (cf. p.1, Karte 1 for the geographical position in Germany). In the third part an examination area is defined and its archaeological qualities are considered. The fourth part deals with the archaeological remains of the neolithic sites and their chronological position. In the last part the sites, their artefact associations, topographical properties and their distribution in the area of focus are examined.

The use of highlands in the Neolithic

Looking at the archaeological research on the Neolithic carried out in German Highlands one has to accept that the appearance of isolated axeblades finds is a typical phenomenon but depending on the state of research. It was MILDENBERGER who in 1959 and 1969 argued that all single finds of axeblades are thunderbolts for magic purposes, which were dislocated from their original sites and brought into the highlands in historical times. This happened indeed, but never in the extent he claimed. Although one still finds this opinion sometimes in recent literature this one-sided interpretation must be dismissed. The highlands seem to be rather areas of particular advantage in the Neolithic which raised them at least in Linearbandkeramik to regions of supplement which could not be missed in the system of landscape use (KALIS & ZIMMERMANN 1988). It is to assume that a tradition in the use of highlands by neolithic populations developed at that time. The hiatus since the early mesolithic settlement in highlands ends.

The Bergische Land

The term „Bergische Land“ has a historic background and refers to a landscape ruled in medieval times by the Counts and Dukes of Berg (1101-1348). Its borders are formed to the west, north and south by the rivers Rhine, Ruhr and Sieg (p.11, Karte 2). The eastern border is a historical-political one and today identical with the border between the governmental districts of Cologne and Arnsberg, which separates the Bergische Land from the Sauerland. It consists of different landscapes, the eastern Rhine Plain in the west and parts of the slate mountains east of the Rhine. While the western part is situated in the climati-

cally favoured area of the Lower Rhinebasin the climatic conditions and soil quality deteriorate in the eastern hilly country. In the same degree as the environmental conditions get worse from west to east agriculture makes way to forest and pasture economy.

For decades the archaeological research was focused on the tumuli at the western border of the Bergische Land, which date from Late Neolithic until Iron Age (Tumulus Culture of the Lower Rhine Plain). Besides a short essay by BUTTLER 1936, Arthur Marschall, Karl J. Narr and Rafael von Uslar (MNU) presented 1954 the first work on the pre- and early history of the Bergische Land including a detailed catalogue (MARSCHALL et al. 1954). At that time only a few neolithic artefacts were known in the hilly regions of the Bergische Land. However MNU doubted the general opinion that mountainous regions are hostile to neolithic settlements and therefore lack neolithic sites.

Between 1954 and 1991 amateur archaeologists discovered 590 new prehistoric places in the area where 385 were already known in 1954. These 975 places are described in the catalogues (Katalog I + II) and their distribution is shown in the folded maps 14 to 18. On many of these places several archaeological periods are mixed. For that reason they contain 1.235 sites, each period on a place defined as a single site. From those 404 sites are neolithic plus 97 sites where only isolated flint axeblades were found. All these finds were collected from the surface by amateur archaeologists whose activities form clusters of sites in the maps.

The examination area

The amount of neolithic sites spread over a territory explored heterogeneously, depending if amateur archaeologists were active or not, made it necessary to define an examination area. Therefore in the area of highest site concentration a west-east directed area of focus consisting of six topographical maps 1:25000 (TK25) was chosen (p.21, Abb.4; Karte 3). It contains the change from the Rhine Plain to the hilly country of the Bergische Elevations and measures 35 by 22 km (770 sq.km). This area covers 20% of the whole Bergische Land and holds 559 prehistoric sites that is 45% of all sites. 144 of these sites are neolithic and 25 sites with isolated flint axeblades are added.

This high portion of sites in the focused area is caused by intense activities of amateur archaeologists and particular efforts by the author to get a complete record beyond the informations offered by literature. So 328 sites published until 1990 could be supplemented with 231 more sites not

published so far. Topographical data were taken for these 559 sites and included in the catalogue.

The analysis of the sources in the focused area has shown that their knowledge depends on the factors landscape conditions, cultural properties of the archaeological groups and the care of professional and amateur archaeologists. The high density of sites shows that these factors correspond positively in the area of focus.

Neolithic artefacts

The finds consist almost entirely of stone-artefacts which frequently come from places of several periods. It was with the help of typological and technical criteria that 14 artefact groups with 417 neolithic artefacts from 158 sites could be isolated and analysed.

To get these finds into a chronological frame despite the lack of ceramics, the lithic types established by FIEDLER 1979 from neolithic sites in the Rhineland dated by ceramics were used as *fossiles directeurs*.

It turned out that a neolithic settlement in the area of focus starting from Upper Middle Neolithic continuing to the Later Neolithic of Michelsberg and beyond until the time of Bell Beakers/Corded Beakers and the Early Bronze Age is very likely. As far as we know today the majority of settlement activities took place in the Michelsberg times but one has to keep in mind that from this time striking finds as axeblades with pointed necks and pointed blades may be over-represented.

Flint tools that possibly belong to Metal Ages like axeblades and certain types of arrowheads have been considered. But the bulk of finds from many surface sites shows an uniformity in the supply of raw material which is mainly westeuropean flint, particularly from Rijckholt/NL, that differs significantly from the mixed supply with silica-stones recognised for the Metal Ages in the Rhineland by ARORA 1985 and SIMONS 1989. Furthermore Metal Age potsherds, well known from many Metal Age sites in the examination area, are missing at those neolithic sites. So the mass of finds are interpreted as remains of a neolithic settlement through several phases.

Neolithic phases

Opposite the examination area, west of the Rhine in the loess zone, settlements of Linearbandkeramik populations are well known. They are still missing in the focused area (cf. MARSCHALL et al. 1954,28-29). The few adzes and shoe-last axes found may also be connected to Middle Neolithic people.

Besides the lack of a definite proof two reasons stand against an existence of Linearbandkeramik settlements in the area of focus.

- Linearbandkeramik settlements are usually easily recognisable. They should have been discovered first among the numerous neolithic sites (RADDATZ 1972b,348-349; SCHWELLENUS 1985,121-122).
- There is a loess region (Burscheider Lößterrassen) in the examination area and an active amateur archaeologist¹⁵³ well experienced with the Linearbandkeramik sites in the loess zone west of the Rhine.

Consequently we have a region with a soil (loess) preferred in Linearbandkeramik times and an active amateur archaeologist familiar with Linearbandkeramik remains. But the suitable finds are missing. So one can draw the conclusion that permanent Linearbandkeramik settlements never existed in the regions attended by amateur archaeologists.

This is not to deny a seasonal use e.g. for herding as in the model by KALIS & ZIMMERMANN 1988. Then the adzes and shoe-last axes mentioned above could be interpreted as remains of temporary sojourns by Linearbandkeramik people. Yet there are two arrowheads of Linearbandkeramik type known from two sites south of the focused area (cat.840; 842) indicating that one has to expect remains from the Old Neolithic phase. If it were people from the Rhenian Loess Zone who left these finds they had to cross the Rhine first. It seems easier to enter the from the Westphalian loess area north of the Bergische Land.

A settlement of the examination area during the Middle Neolithic is likely. There are sites with sherds of Roessen type near Porz-Westhoven (cat.129) and outside the area of focus at Troisdorf (cat.760) and Altenrath (cat.855) that leave no doubt as to their chronological position. But these sites are at the western border of the Bergische Land while we still miss neolithic potsherds within the hilly country, except one sherd of a late neolithic beaker. Comparing the stone tools with the *fossiles directeurs* established by FIEDLER 1979 for the Rhineland Neolithic several of the artefacts fit into the frame of the Middle Neolithic. The quantity and association of the artefact types at many sites indicate settlements.

The mass of the sources points to a settlement in younger neolithic times whose chronological position cannot be defined exactly as ceramics are missing. But it is quite sure to say that beside a

¹⁵³ Wilhelm Farnung, Leverkusen-Alkenrath.

Michelsberg stratum we also have the following „Later Neolithic II“ represented in the artefacts. This is indicated by the sporadic appearance of artefacts made from Lousberg-Flint mined at the Lousberg in Aachen (Aix-la-Chapelle) at the end of the Michelsberg Culture (WEINER & WEISGERBER 1981,107).

It is difficult to decide only on the stone tools whether there was a settlement in the examined area during the End Neolithic of the Beaker Cultures. There are rock axes with rectangular cross-section and arrowheads that belong into this phase but also point beyond it to the Early Bronze Age. A striking fact is that the arrowheads come for the most part from settlement sites. It is not very satisfying to interpret them as shot points the more so since arrowheads also appear as grave goods. There are tumuli of the End Neolithic at the western border of the Bergische Land near Altenrath (cat.843; 852) and the only potsherd in the hilly country definitely dated to the Neolithic comes from a corded beaker (cat.105). Referring to this background it can be assumed that the settlement of the Later Neolithic is followed by a End Neolithic and Early Bronze Age settlement. Considering the finds it seems that the intensity of settlement is weaker at that time. But this may be a delusion as the record for End Neolithic settlements is low in general.

Raw material

The rock tools, in particular the axeblades, are likely to be of local production. Although petrographical analysis could not be done in this work it has to be pointed out that deposits of similar and suitable raw material exist in the area of focus. There is a single find of a flint axeblade found close to a modern quarry of grauwacke-sandstone near Fenke, comm. Lindlar (cat.124) and a deposit of flint axeblades at Kemmerich (cat.123) is in sight of the recent rock quarries at Lindlar (p.71, Karte 6). It is striking to have these flint tools close to deposits of potential rock raw material.

The raw material of the flint artefacts comes for the most part from the Belgian-Dutch flint district. In particular the variant of Rijckholt/NL was reported frequently. It is evident that blades (plate 21,2; 3) probably also semi-finished products of axeblades were imported from there (cf. BRANDT 1941; GABRIEL 1974; WEINER & WEISGERBER 1981,97). The find of a whetstone for axeblades proves the polishing of these artefacts in the area (cat.65; plate 4).

Artefacts with cortex are rare. The cores of westeuropean flint are mostly secondary used axeblades (plate 9) and the rare cores without polishing marks may also be remains of axeblades (plate

21,1). The chips that normally belong to the stone-tool production are rare and several come from axeblades (plate 13,5-7). The high ratio in working off useless axeblades from westeuropean flint reflects the shortage of this raw material. These tools were remodelled into smaller axeblades after damage (plate 5,2; plate 6; plate 7) or used as cores for the production of other tools (plate 13,2-3; plate 20,4).

The examination area was not an isolated region in the Neolithic as the numerous imported products show. The trade with semi-finished products is a very efficient way to provide regions distant from the sources of raw material. Some tools of Baltic flint from the glacial end moraines indicate that people knew where to find substitutes but of minor quality¹⁵⁴. As mesolithic and neolithic artefacts are often mixed at the surface sites, tools of Baltic flint were dated to Neolithic only if they were definitely neolithic types.

Neolithic sites

Physical-geographical context

The analysis of topographical aspects has drawn not only some dividing lines between meso- and neolithic sites but also between different categories of neolithic remains. Places in favourable topographic positions have been used in both periods. The sites with isolated finds of flint axeblades showed a certain conformity with the topography of settlement sites but differ strongly in the choice of soil quality by yield index.

It turned out that the people of the „pure“ neolithic settlement sites preferred the brown loamy soils to the brown sandy soils. Among the loamy soils those with the highest yield index (today) were of top preference. The contrary choice was made for „pure“ mesolithic sites. It was feared that present cultivated land, which is the precondition for amateur archaeologists to collect artefacts, is selected by modern agricultural criteria that means only the best available soils are cultivated. The significant differences in soil quality of unmixed meso- and neolithic sites prove that this is not the case.

Assuming that the modern yield index somehow reflects the soil quality in the Neolithic one has to explain the strong connection of the neolithic sites to the best soils available with an economy which

¹⁵⁴ Manfred Sönnecken reports from the Märkische Sauerland, a highland east of the Bergische Land, that the „less good“ tools (chips and chunks) are made of baltic flint from glacial deposits but the „very good“ tools (points, scrapers) are nearly all produced of westeuropean flint (Ausgr. u. Funde Westfalen Lippe 4 1986,270).

also must have focused on agriculture. A few finds of flint blades with wear traces (gloss) support this idea, particularly as wear traces which can be identified macroscopically are generally rare (plate 14,2; NARR & LASS 1985,459). So there are probably many flint artefacts with unidentified wear traces among the finds. It is speculative to interpret the blades known so far as inserts for harvesting tools. But the existence of inserts for composite tools was proved by the analysis of the laterally and end-retouched flint blades.

The distribution of the sites in three different natural areas crossed by the area of focus has shown a strong influence of research history which favoured the Metal Age tumuli for decades. It was useless to get back to this distribution for an interpretation of settlement history.

Dislocated finds and deposits

The discussion about thunderbolts by Mildenerger included the Bergische Land as it was shown in the archaeological map published by MARSCHALL et al. 1954 (MILDENBERGER 1969,11-12). This debate can be finished now. Of course this phenomenon exists and has to be checked in all cases of isolated finds of axeblades, but is of neglectable influence. There are enough associations of axeblades with typical settlement inventories in the area and the remaining single axeblades are situated mostly near the settlement sites. In two cases a dislocation of finds in historical times can be assumed (cat.162; 163), in all other cases it is unlikely.

The neolithic settlement of the examined area is clearly visible in spite of all distortions that have been considered. So the singularity of these artefacts, the basis of Mildenerger's criticism, is eliminated.

It can only be speculated how far the isolated axeblades are deposits for ritual reasons. The site of Kemmerich (cat.123) already mentioned indicates that more deposits may exist. In all other cases a clear proof was not possible.

The distribution of the sites

The mapping of the sites (Karte 5-13) reflects very clearly the activity centres of the amateur archaeologists (p.69,Karte 4). Therefore these maps are unsuitable to interpret the settlement process.

Outlook

It must be emphasised that the neolithic artefacts represent a wide chronological frame starting from the Upper Middle Neolithic until the transition to Bronze Age. Future work needs the following to differ the neolithic phases at the level of each site.

- Excavations to locate neolithic ceramics.
- A detailed analysis of all stone artefacts known so far, as it was neither planned nor possible in the frame of this work.
- Future surface finds must be mapped at least in a square meter grid for spatial analysis of the artefact distribution.

The example of the well explored region around Dabringhausen (p.69,Karte 4) shows that different neolithic phases are not only present in the same region but also appear on the same sites (e.g. cat.111). One cannot generalise the conditions in this well attended region but here one must expect a continuity of settlements including several neolithic phases. Examples of such a continuity proved by a ceramic sequence are known from sites near the Rhine (Porz-Westhoven; cat.129) and at the south-western border of the Bergische Land outside the examination area (Altenrath; cat.855). At both sites we have sherds of Roessen and Michelsberg type. The gradual shift from Middle to Later Neolithic described by LÜNING 1969 for the ceramic sequence in southern Germany can also be assumed for the area of focus. So one can conclude that there is a continuity of neolithic occupation in the examined area.

It is not possible to define the starting-point(s) for the neolithic occupation of the Bergische Land. At the actual knowledge it is difficult to face the plausible assumption that the settlement of highlands starts from the big river valleys, the Rhine in this case¹⁵⁵. At present we can only look at the state of research in the much better explored valley and loess zones that lets us suggest an expansion of settlements into the Bergische Land during the Neolithic. The starting-points next to the Bergische Land would be the loess zones west of the Rhine and in Westphalia, north of the Bergische Land. In both regions old- and middle neolithic settlements are well known. As it may have been difficult to cross the Rhine further to the east the entrance from then north seems to offer an easier access.

The most types of the lithic artefacts indicate westeuropean connections¹⁵⁶. Also types of eastern¹⁵⁷ and north-eastern¹⁵⁸ origin appear but are chronologically mostly younger than their westeuropean equivalents. Finally the finds reflect

¹⁵⁵ Cp. LÖHR 1991 for the partly ideologically influenced ideas of invasion in the history of research.

¹⁵⁶ e.g. a pointed blade made of Grand-Pressigny flint (cat.121).

¹⁵⁷ e.g. transverse arrowhead with concave sides, plate 20,2.

¹⁵⁸ e.g. rock axes with rectangular cross-section, two from outside the section (cat.10; 43; 84; 88; 95; 97; 146; 322; 453).

relations and contacts, not necessarily the origin of the population.

The preceding explanations have shown that there are abundant lithic sources. Comparing today's archaeological record in the region around Burscheid and Dabringhausen with the archaeological map published by MARSCHALL et al. 1954, when exactly a handful of single artefacts was known¹⁵⁹, one sees clearly that the knowledge of sites is extremely dependent on the activity of amateur archaeologists. In 1969 Mildenerger drew the conclusion from the mentioned map that „the eastern parts of the region were presumably unoccupied in the Neolithic as the single stone axes found may have been dislocated later.“ (MILDENBERGER 1969,12). In the same year Hans-Jürgen Volkmann and Martin Jeremias, two amateur archaeologists from Dabringhausen, made their first finds in this area.

In 1954 the „first breach“ was made by Marschall, Narr and Von Uslar in favour of an archaeological report (MARSCHALL et al. 1954,VIII). In the meantime many amateur archaeologists and professional scientist have built up the basis for a re-study of the sources. It is still a landscape that does not give rise to sensational expectations. But the small gap through which we look at prehistory has been widened a little bit more in the Bergische Land. The sources have not changed. They still are surface-finds as excavations by the Archaeological Monument Service of the Rhineland took place in a few necessary cases only and these were not neolithic sites. The Bergische Land with its high portion of forest and grassland but little building activities only rarely offers the opportunity to the Monument Service to get active. It is more like a vault for archaeological research, opened only a bit yet. The present examination lets us assume that there are sources in this vault that would contribute to an essential improvement of knowledge but would need its own research programme.

(translated by the author)

¹⁵⁹ Four stone axeblades and one grinding stone (cat.98; 107; 108; 411; 566).