

X Archeologie - Archaeology

Rijckholt-type flint and the Michelsberg Culture in the Dutch River District.

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One aspect of my investigations to the prehistoric occupation of the Dutch river-district, seems to me of special interest to the archaeologists, who are working on the neolithic flint exploitation in the chalk district of Limburg. To name it at once, it is the occurrence of finished artifacts and of long unworked blades of Rijckholt-type flint in some well-dated and culturally well-defined domestic assemblages at a distance of 110 to 160 kms of their supposed source.

Those, who are informed about the distribution of flint from Limburg flint-mining area, by the work of BRANDT, GABRIEL, WILMS and LÖHR⁽¹⁾, will not be very surprised by these discoveries. But nevertheless, they fill a gap in our knowledge and replace speculations and suppositions by facts, that fit very well to the data, already available.

The first site to be mentioned is the Hazendonk ('Hare's Hill'), situated 30 kms to the east of Rotterdam. It is a small, late glacial or early holocene river dune, outcropping through the peat- and clay-deposits, of which the district is made up. These sediments cover most of its slopes. They were laid down under the direct control of the rising sea-level and offer an excellent natural stratigraphy. The dune, an isolated dry point in the marshes, attracted people from the mesolithic onward, and especially during the neolithic period. This was revealed during excavations carried out in the years 1974-'76 by the National Museum of Antiquities⁽²⁾.

A series of old surfaces, each of them with occupation refuse, was found stratified in the peat next to the dune, and dated to the period 3400-1700 B.C., which is the complete neolithic of that region. They offer the opportunity to study landscape, subsistence and material culture and their changes over 17 centuries in a sequence of the following occupation phases:

- 1) a western variant of the late Ertebølle Culture (3400 B.C.),
- 2) a Dutch facies of the Michelsberg Culture (3100 B.C.),
- 3) a newly-defined local group, called Hazendonk-3 (2900-2800 B.C.),
- 4-6) three phases of the Vlaardingen Culture (2700, 2400, 2100 B.C.),
- 7) late Bell Beaker occupation (1800 B.C.).

The analysis of all aspects of this occupation sequence is in progress. We restrict ourselves here to the flint-inventory.

No detailed work is yet done, since first of all the computerwork to separate the various domestic assemblages must be carried out. It is, however, clear that in all cases flint river pebbles were collected, carried to the site and worked there. The nearest possible source of these pebbles lies at a distance of 30 kms⁽³⁾. Almost exclusively small, irregular flakes were produced, that show only modest traces of use. Only in the earliest phase flint working is of a better quality, with some finely retouched blades.

In the phases 2 and 3, i.e. the period 3100-2800 B.C. a modest number of relatively big tools and long, worked blades stands out. They are made of light to dark gray flint, sometimes slightly banded and with small light-coloured dots or patches. A macroscopic comparison makes Rijckholt, or a mine that produced a similar flint, the most probable source⁽⁴⁾. This means at any rate the eastern Belgian - South Limburg area.

The main artefact-types are:

- both long and round scrapers, big and with steep retouche;
- long blades with retouched sides, especially at the distal end;
- triangular and lozenge-shaped arrow-heads.

This set of implements is familiar, if not characteristic, for the Michelsberg Culture in Belgium and the Rhineland, comparable to that of Osterwick (Westfalia)⁽⁵⁾, Inden - 9 (Aldenhoven area)⁽⁶⁾,

Thieusies, Gué du Plantin and Kemmelberg (SW Belgium)⁽⁷⁾.

No worked blades were found, nor flakes or blades with fresh ('Bergfrische') cortex, which indicates that only the finished tools were brought to the site⁽⁸⁾.

Rijckholt-type flint in this form is absent in the Vlaardingen-layers, significantly from 2400 B.C. onward, when the amount of finds is big enough for such a statement. The absence in the lowest level must not be given too much weight in view of the modest number of finds from this level.

So far about the Hazendonk. A second site, that gives important additional information, is situated in the eastern part of the river area, 60 kms east of Hazendonk and 110 kms north of Rijckholt, so considerable nearer to the flint source, as measured along the natural trade route, i.e. along the river Meuse. This settlement site, the Kraaienbergh ('Crow's Hill') near the village of Beers, was discovered in 1978 by amateur-archaeologists of the district. A small rescue excavation could be carried out before the site was completely destroyed by sand-dredging works⁽⁹⁾.

The pottery, with carinated bowls and storage vessels with 'Schlick-Rauhung' and 'Tupfenleisten' is closely related to the Michelsberg assemblage of the Hazendonk. Here the flint inventory consist also of two components. First the working of flint pebbles, collected from the Meuse gravels, available in the neighbourhood. The flakes and blades are not larger than 5 cm in length and width. They were used only in a modest extent and no artifacts made on them were found. This contrasts sharply with the series of blades and implements, 7-15 cm in length, made from quarried Rijckholt flint. This group is considerably more common here than at the Hazendonk and its composition has marked differences: many unworked blades and flakes with the characteristic thick porous cortex were found, but no cores, caps or rejuvenation flakes. Of the greatest significance is a small hoard of three big blades, struck from two successive platforms of the same core and fitting together. The finished implements comprise the same types as named from the Hazendonk.

A short remark on a third site called 'Het Vormer' not far from the 'Crow's Hill', where amateur-archaeologists collected domestic refuse with both Hazendonk and some 'Michelsberg' pottery, together with some flint. Here again: small pebbles, used as a raw material for the production of small flakes (max. 4 x 4 cms) together with some longer blades of Rijckholt-type flint, all worked into implements. They are of similar types as those of both other sites, but slightly smaller. Two show a fresh cortex. Let us try now to formulate some conclusions, based on this new evidence and that already available.

- 1) A new regional group of the later Michelsberg Culture, provisionally dated c. 3100 B.C. can be distinguished in the southern part of the Netherlands. It is characterized by the occurrence of storage pots with roughly smeared surfaces and carinated bowls.

The last mark undeniable affinities to the contemporaneous Early Neolithic of Great Britain, esp. to the Grimston-Lyles Hill bowls that have c. 3250 B.C. as the earliest reliable C14-dates⁽¹⁰⁾.

This Dutch Michelsberg group is situated north of the 'true' Belgian group⁽¹¹⁾, that seems to be restricted to Hainaut and Brabant, while the more northerly finds of Antwerp and Lommel must be included in the Dutch group. No carinated bowls and no roughly smeared surfaces occur in the Belgian group⁽¹²⁾.

There is a local development in the river district, comprising the loss of the open bowl forms, the addition of 'decoration' (better be considered as a surface-roughening) and deterioration of the coil jointing technique, which resulted into the 'Hazendonk-pottery'.

- 2) The distribution of the so-called gray western flint (i.e. Rijckholt-type flint) seems exclusively to be restricted to the extent of the Michelsberg Culture, as delineated now. It occurs as far

- as Mainz, Frankfurt, the Weser river, Münster and the Dutch river district and to the west over an unknown distance; the frontier between Rijckholt and Spiennes (the history of which runs parallel to a large extent) is unknown. It seems that 'Rijckholt' had a central service function within this culture and that the export did not cross the frontiers of it⁽¹³⁾.
- 3) The form in which the distribution⁽¹⁴⁾ of the flint from Rijckholt took place, was primarily as unworked blades, possibly also as finished tools (that might, however, been made half-way or at the reception point as well), but not as prepared or unprepared blocks. I exclude here the spread of the axes in various stages of finishing as a separate subject. Cores of dimensions that they could have produced (or used for the production of) blades of the dimensions as those named before are not known to me in the lower Meuse Valley. In the mining centre itself cores are common finds, while regular blades are rare and then mostly product of core preparation.
- 3) A find of special interest in this respect was published in 1955 by MADELEINE OPHOVEN and JEAN HAMAL-NANDRIN⁽¹⁵⁾. This is a hoard ('cache') of 21 blades of 15-19 cms in length, most of them fitting together in pairs or couples of three. They lay packed together at a depth of 1.40 m. in one of the ateliers of Rijckholt. It is a unique find for this site and also in wider respect quite exceptional. I consider it as material ready for distribution. For Spiennes similar observations and conclusions were made by VERHEYLEWEGHEN⁽¹⁶⁾. He points to the numerous cores and the very restricted number of good blades at the site.
- 4) It is more difficult to get an idea about the mechanism of distribution, especially to make a choice between two possibilities:
- a) the blades were made by others, than those who used them at the settlement sites;
 - b) these were the same people.
- There are, however, some clues that might lead to future solution of this question.
- a) The miners and those who made the rough-outs for axes and struck the blades at Rijckholt were the same. This is proved by the use of cores and axe rough-out faillures to make mining picks and the use of them in mines⁽¹⁷⁾.
 - b) The people that used the blades practised a sharply contrasting flint working on small local pebbles or erratics (Osterwick). This contrast in techniques does, however, not imply the work of different people, but can be explained as an adaptation to different raw materials⁽¹⁸⁾.
 - c) There are considerable differences between the various receiving settlement-assemblages in quality and quantity of the Rijckholt-type flint import. These might be for a part of chronological value, as for instance the difference between 'Het Vormer' and Kraaienbergh.
- We are not able at this moment to formulate the arguments, based on differences between synchronous sites, that would lead to a choice between both possibilities mentioned above.
- 5) The period of widespread profusion certainly was the younger or MK III/IV phase of the Michelsberg Culture, or the period 3200-2800 B.C. Earlier dates are not available, neither from the northern distribution area, nor from the production centre; but at Aldenhoven they are at the MK II-site Inden-9⁽¹⁹⁾. The history of Rijckholt seems to run parallel with that of Spiennes, where the flint of the MK II site of Gué du Plantin⁽²⁰⁾ can be linked to the early exploitation phases of Spiennes (Spiennien I/II). Later use is documented at Spiennes by SOM-pottery⁽²¹⁾, at Rijckholt by the single, be it characteristic flat base sherd, excavated by VAN GIFFEN⁽²²⁾. But in the Vlaardingen Culture no flint from these sources seems to have been used. The characteristic black, glossy flint with thin, white cortex might originate from Western Belgium⁽²³⁾ (Obourg), while axes were produced at Valkenburg⁽²⁴⁾ and Lousberg⁽²⁵⁾.
- 6) A handicap for the identification of distribution-patterns of mined Rijckholt-flint is the lack of some special characteristics, its occurrence as river pebbles in terrace deposits and the colour changes of its surface in certain soil conditions. It seems however worth-while to make an inventory of the rich flint collections along the Meuse river: to separate flint from different sources and to look for artifact assemblages, similar to those of Hazendonk, Kraaienbergh and Vormer.

NOTES

- (1) Wilms (1978), Gabriel 1974, Brandt 1970, Löhr 1972, 1974, 1975.
- (2) Louwe Kooijmans 1976
- (3) This is the sand district of the western part of the province of North Brabant. A point of origin in the 'Land van Maas en Waal', about 60 kms to the east, seems, however, more likely in view of links to that area, reflected in the pottery and the import-flint discussed here.
- (4) Mr. F. Hubert showed during this colloquium examples of flint from the mines at Orp-le-Grand (Hesbaye, Belgium) that were very similar to the flint of Rijckholt, with the exception of the cortex.
- (5) Wilms (1978).
- (6) Kuper a.o. 1972, p. 347-349; 1975, p. 197-201.
- (7) Vermeersch/Walter 1975, Van Doorselaer a.o. 1974, De Heinzelin a.o. 1977.
- (8) Not necessarily straight from the flint mines, but possibly via intermediary sites.
- (9) A full report is in preparation. Preliminary note in the Annual Report of the National Museum of Antiquities, Leiden, over the year 1978.
- (10) It seems good to be more cautious about the Ballynagilly-dates, than I was earlier (Louwe Kooijmans (1976, p. 266). The earliest date of Broome Heath cannot be given to much weight.
- (11) As distinguished by Scollar 1959 and Lüning 1967.
- (12) Mr. P.M. Vermeersch pointed me out, that another difference seems to be the presence of flake axes in some quantities in the Hainaut-group, that are absent in the Netherlands. Both sites in Westfalia (Coesfeld and Harle) have no carinated bowls (simple wide bowls prevail) but there are storage vessels with Schlickrauhung. The last are considered by Lüning (1967) as a southerly MK-element, that is lacking north of Frankfurt, but it reappears in the north in the new assemblages.
- (13) In respect of the problem of the meaning of our neolithic 'cultures' (defined by the pottery) for the prehistoric communities, this is a interesting phenomenon: perhaps our cultures had prehistoric sense!
- (14) I prefer the more neutral word 'distribution', instead of 'trade' or 'export', both suggesting something about the mechanism of distribution.
- (15) Ophoven/Hamal Nandrin 1955.
- (16) Verheyleweghen 1963, p. 12, 34.
- (17) Pers. comm. Mr. W.M. Felder during the congress. Verheyleweghen (1963, p. 12) made the same observation at Spiennes, phase III.
- (18) Pers. comm. Mr. M. Newcomer, during the congress.
- (19) Kuper a.o. 1972, 1975.
- (20) Heinzelin a.o. 1977.
- (21) Hubert 1971.
- (22) Van Giffen 1925, p. 498 and PL. 4. VII. 35
- (23) Pers. comm. Miss M.E. Th. de Grooth.
- (24) Felder 1975.
- (25) Löhr 1975, p. 96.

REFERENCES:

- BRANDT K., 1970 - Steingeräte der Bandkeramik aus Belgien, den Niederlanden, aus dem Rheinland und Westfalen, Präh. Zeitschr. 45, p. 226-235.
- DOORSELAER A. van a.o., 1974 - De resultaten van zes opgravingscampagnes op de Kemmelberg, Arch. Belg. 161.
- FELDER W.M., 1975 - De Valkenburg-voorstenindustrie in Zuid-Limburg, Staringia 3, p. 81-85.
- GABRIEL I., 1974 - Zum Rohmaterial der Silex-Artefakte im Neolithikum Westfalens und Nordhessens, Festschrift Kurt Tackenberg zum 75. Geburtstag, Bonn, p. 25-45.
- GIFFEN A.E. van, 1925 - De Zuid-Limburgse voorhistorische voorstenindustrie tussen Rijckholt en St. Geertruid, Tijdschr. Kon. Ned. Aardr. Gen. 42, p. 481-503.
- HEINZELIN J. de a.o., 1977 - Le Gué du Plantin, Diss. Arch. Gand. 17.
- HUBERT F., 1971 - Fossés néolithiques à Spiennes, premier rapport, Arch. Belg. 136.
- KUPER R., a.o., 1972, 1975 - Untersuchungen zur neolithischen Besiedlung der Aldenhovener Platte II, V, Bonn. Jahrb. 172, p. 344-394; 75, p. 191-229.
- LÖHR H., 1972, 1974 - Betrachtungen zu den neolithischen Steingeräte der Aldenhovener Platte I, II, Bonn. Jahrb. 172, p. 388-391; 174, p. 475-482.
- LÖHR H., 1975 - Zum Verbreitung von Feuerstein aus den Bergwerken in der Umgebung von Maastricht in Deutschland, Staringia 3, p. 95-97.
- LOUWE KOOIJMANS, L.P., 1974 - The Rhine/Meuse Delta, thesis Leiden, Oudh. Meded. Leiden 54-55.
- LOUWE KOOIJMANS, L.P., 1976 - Local Developments in a Borderland, Oudh. Meded. Leiden 57, p. 227-297.
- LÜNING J., 1967 - Die Michelsberg Kultur, Ber. Röm. Germ. Komm. 48.
- OPHOVEN M., & J. HAMAL NANDRIN, 1955 - La Station Néolithique de Rijckholt-Sainte-Gertrude (Limbourg Hollandais), Illme article, Bull. Soc. Préh. Franc. 52, p. 415-421.
- SCOLLAR I., 1959 - Regional Groups in the Michelsberg Culture, Proc. Preh. Soc. 25, p. 52-135.
- VERHEYLEWEGHEN J., 1963 - Evolution chronologique du néolithique au 'Camp à Cayaux' de Spiennes, Helinium 3, p. 3-28.

VERMEERSCH P.M. & R. WALTER, 1975 - Site néolithique à Thieusies,
Arch. Belg. 177, 9-13.
WILMS Chr., 1978 - Zwei Fundplätze der Michelsberger Kultur aus dem
Westlichen Münsterland, thesis Münster.

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