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Early populations in the delta of the river Scheldt¹⁾ |

by

P. J. VAN DER FEEN

Zoölogisch Museum, Amsterdam

1. INTRODUCTION.

The deltas of the rivers Rhine, Meuse (Dutch: Maas), and Scheldt (Dutch: Schelde; French: Escaut) are connected so intimately that it is impossible to trace exact boundaries between them. Together they form a strip of *Holocene* deposits (clay, sand and peat), about 50 km wide, lying between the North Sea to the west and northwest and the Pleistocene region of the Netherlands to the east and southeast. The delta of the river Scheldt is the southern part of the joint deltas of the three rivers; it is nearly identical with the present province Zeeland of the Netherlands.

Secular fluctuations of the average level of the sea in relation to the land, both positive and negative, together with sedimentation and erosion, from the earliest times onward to the present day, continuously modified the local boundaries between land and water. The changing influx of salt water and the rate of drainage of the land always deeply influenced the vegetation and the whole character of the region. Moreover, since the Roman occupation in the beginning of our era, man had an ever increasing influence on the course of the river branches and on the water level in the rivers and ditches.

At the sea side one or more rows of sand dunes (height 10 to 40 m. above sea level), interrupted by broad estuaries, border the land. The latter is rather flat, varying only from 1.5 m. above to 1.5 m. under N.A.P. (Normal Amsterdam Gauge), and is, since about 1200 A.D. or somewhat earlier, for a large part occupied by „polders”. (A polder is a piece of land which is kept free from the influx of the surrounding water with the aid of artificial dikes and sluices. The land of a polder is drained originally only when the surrounding waters have temporarily a low level. In later times an unfavourable difference between the water levels in and outside the polder, for draining purposes, is surmounted artificially by pumps driven by windmills or other engines.)

Some of the soil profiles in the polder land show a layer of peat, resting on marine clay or sand, and covered by about 1 m. of clay and

¹⁾ Received April 10, 1951.

sand. After shrinking by drainage and by pressure of the overlying clay or sand, the thickness of the peat layer is now, varying from locality to locality, from 0.1 m. up to 4.0 m. In other spots the peat is lacking and the profile shows only clay and sand. It is evident that the peat has been formed in a fresh water environment. The clay, and sand, however, are marine deposits, as we know from the fossils included in them (e.g. shells of the edible cockle, *Cardium edule* L.).

During a transgression the surf on a gently sloping sandy beach gives rise to parallel bars (Timmermans, 1935). During a succeeding regression the sandy bars are transformed into a row of dunes. On the Dutch coast a series of alternating transgressions and regressions brought into ex-

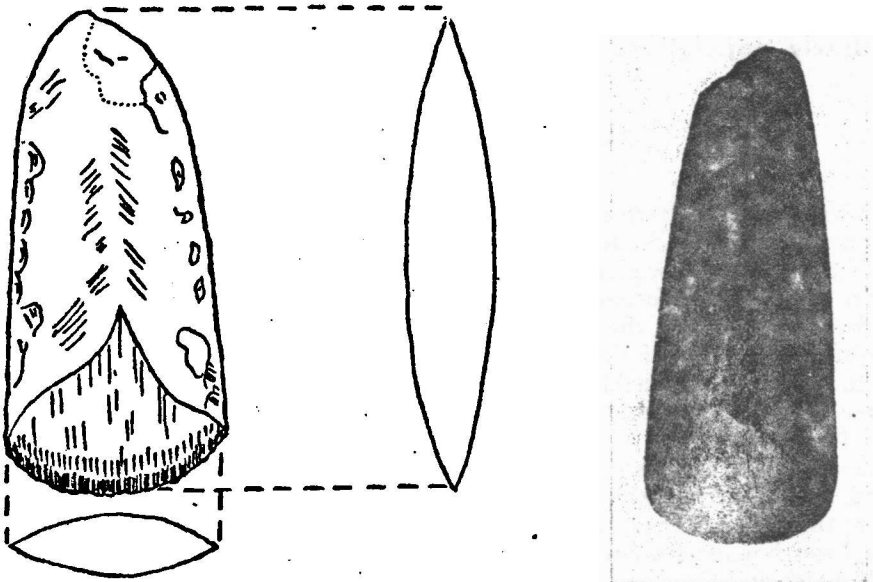


Fig. 1. Polished flint axe, thin butted, with thin lateral sides (Western type, Åberg). 139 x 76 x 25 mm. Found 1903 at Terneuzen, in the peat at 2.5 m — N.A.P. (Normal Amsterdam Gauge), during the construction of a new sluice and harbour. Now in the Rijksmuseum van Oudheden, Leiden, i 1903/3,1, catalogue 1908 no I 317. Mentioned ÅBERG, 1916, p. 11 and p. 3 No. 42.

istence two or more zones of old and young dunes (TESCH, 1920—1930, VAN DER MEER, 1949). The rising of dunes during a regression probably allowed the influx of sea water only in rather narrow estuaries, and the whole delta region, insufficiently drained, was transformed into an extensive peat area. If the formation of dunes along the sea shore and the growing of peat inside are correlated in this manner, we cannot wonder that we find the earliest signs of the presence of men in the delta of the Scheldt both in the peat layer and in the oldest parts of the present dunes.

2. A POLISHED FLINT AXE IN THE PEAT.

Up to now no palaeolithic or mesolithic objects have been found in

the delta of the Scheldt. The only trace of a neolithic culture is a polished flint axe (fig. 1) found in the peat. Such an isolated piece can be dated only with much uncertainty. The type belongs to the so-called *Western or Atlantic neolithic culture*, occurring in the Western parts of Continental Europe and in Britain. Axes of this form were made as early as one or two centuries before 2000 B.C., but the same type was probably still in use couple of centuries later, together with more modern tools.

3. ARROWHEADS OF FLINT ON SANDY HILLS.

Several times big parts of the dunes have been destroyed by the sea or displaced inward by the wind. Both from a geological and from an archaeological viewpoint the dunes of the southwest part of the island of Schouwen are considered as the oldest dunes in the region of the

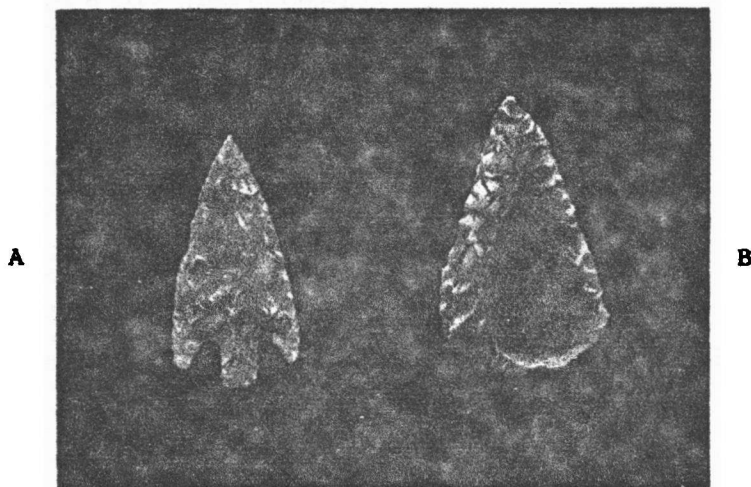


Fig. 2. Arrowheads of flint. A tanged and barbed, 35 x 18 mm. Found by J. A. HUBREGTSE in the dunes at Haamstede (one specimen of A, three specimens of B). Now in the Museum van het Zeeuwsch Genootschap der Wetenschappen, Middelburg.

Scheldt. This very restricted area was the only one in the delta of the Scheldt, which has remained continuously free from sea water during these last four millennia. Meanwhile, the dunes themselves have changed, like a desert, continuously in form and height. In this highly interesting dune region of Schouwen the late J. A. HUBREGTSE, teacher in the primary school at Burgh (Zeeland), has collected from 1911 to 1940 innumerable remains of all periods from Bronze Age to the 16th century A.D., all scattered in the valleys between the ever changing sandy hills. Here he collected four arrowheads of flint (fig. 2). They are made with the "wood-bar technique" or "pressure-flaking". One of them (fig. 2 A) is highly characteristic in its form, with a tang to fasten it to the stem of the arrow and a barb at both sides.

Another arrowhead of flint (fig. 3), tanged (but not barbed), made in the same technique, has been found on a Pleistocene or late-Pliocene hill at the southern border of the delta of the Scheldt.

A few arrowheads of flint, of the same and related forms, have been collected in the old dunes in the delta of the Rhine (Katwijk-Binnen; PLEYTE, 1877—1903, ABERG, 1916; Hillegom; Rijksmuseum van Oudheden, Leiden, h 1930/7.9). They are abundant in the Pleistocene districts of the Netherlands, mostly scattered in heath or inland dunes, rarely in barrows.

The described arrowheads of flint in the delta region may be considered as subtle traces of a migration of the *Bell Beaker Folk* in the centuries after 2000 B.C. on their way from Inner Spain, through Western and Central Europe, to Britain. The finds are too scarce to



Fig. 3.

Fig. 3. Arrowhead of flint, tanged, 22 x 17 mm. Found 1910 by Dr TESCH at De KAUTER (Nieuw Namen), which is a Pliocene or Late Pleistocene hill at the southern border of the delta of the river Scheldt. Now in the Museum, Middelburg. P. TESCH, 1911, Tijdschrift Kon. Ned. Aardrijkskundig Gen. (2) 28, 97.

allow any further conclusion. The *Bell Beaker Folk* was, at least originally and during its early treks in Europe, purely *brachycephalic*; only in later times, in Central Europe, it blended with *dolichocephalic* elements (HAWKES, 1940, 1949; CHILDE, 1947; CAMERON, 1934; KEITH, 1948). Tentatively the question may be put, whether there is any connection between the *Bell Beaker Folk*, still purely *brachycephalic* or already blended, passing through the delta of the Scheldt in the early second millennium B. C., and the purely *brachycephalic* rural populations living there in the late Middle Ages.

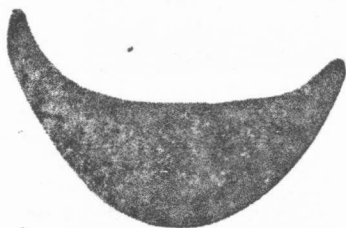


Fig. 4

Fig. 4. Bow of a bronze fibula of leech form. 51 x 22 mm. The bow is massive. Locality, collector and Museum as Fig. 2.

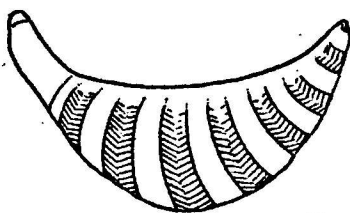


Fig. 5

Fig. 5. Drawing of the same item, showing the fine decoration of the surface.

4. IMPORTED BRONZE FIBULA AND WEAPONS.

The finds described above can be dated before 1500 B.C.

From the period 1500 to 1000 B.C. in the delta of the Scheldt nothing has been found. Next in time are three items dated between 1000 and 500 B.C.

A fibula of leech form (fig. 4 and 5) has its exact analogues in Italian specimens (fig. 6) which are dated between 850 and 750 B.C. It leads to the conclusion that commercial relations with Italy existed in this period. Finds of Italian fibulae from the same period in England prove the existence of Italian import in Britain as well.

A bronze arrowhead and a bronze spear head (fig. 7 and 8) may be dated between 1000 and 500 B.C. and have their analogues both in Continental Europe and in Britain.

Fig. 6

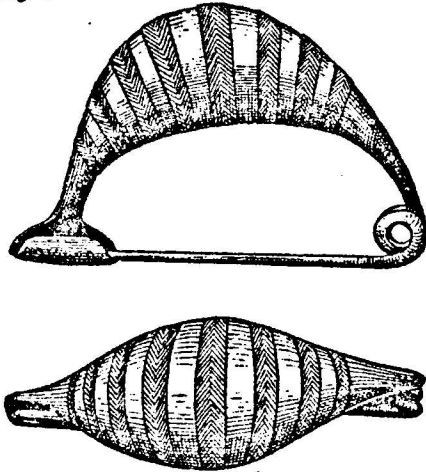


Fig. 8



Fig. 7

Fig. 6. Bronze fibula of leech form. Found in Italia. O. MONTELIUS, 1895; *La civilisation primitive en Italie*, 1 pl. VI Fig. 60. N. ÅBERG, 1930, *Bronzezeitliche und früheisenzeitliche Chronologie*, 1, 67, Fig. 179.

Fig. 7. Bronze arrowhead, 30 x 16 mm. Locality, collector and Museum as Fig. 2.

Fig. 8. Bronze spearhead. 120 x 25 mm. Locality, collector and Museum as Fig. 2.

7. REFERENCES

- ÅBERG, N.
1916 *Die Steinzeit in den Niederlanden*.
- CAMERON, J.
1934 *The skeleton of British Neolithic man*.
- CHILDE, V. GORDON
1947 *The dawn of European civilization*.
- HAWKES, C. F. C.
1940 *The prehistoric foundations of Europe*.
- HAWKES, J. & C.
1949 *Prehistoric Britain*.
- KEITH, A.
1948 *A new theory of human evolution*.
- MEER, K. VAN DER
1949 *The formation of the dunes, Boor en Spade* 3, 149.
- PLEYTE, W.
1877—1903. *Nederlandsche oudheden*.
- TESCH, P.
1920—1930 *Duinstudies, Tijdschrift Kon. Ned. Aardrijkskundig Gen.*
- TIMMERMANS, P. D.
1935 *Proeven over den invloed van golven op een strand*.

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