

The Bromme Culture

Notes on Denmark's most ancient culture
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The Bromme Culture is one of the most sensational finds made in Denmark, in the island of Seeland near the village of Bromme, east of Korsør between 55°—56° n. lat. in the years 1945-46.

This culture dates from the end of the palaeolithic era, and is some thousands of years older than the Danish Klosterlund culture found near Klosterlund in central Jutland and dating from the period of 8000—7000 B. C.

This culture was generally regarded as Denmark's oldest culture until the Bromme culture was discovered. As a matter of fact a number of single objects had already been found scattered all over the country. They were made of silex, reindeer antler and bone, as for instance the silex arrowhead of Nørre Lyngby in the north of Jutland, and a few horn implements.

The finding of the above mentioned arrowhead and a haft for securing a small ax or point that was found in the same layer, led people to speak rather rashly of Lyngby "Culture" although no supplementary material had been found. It is indeed fortunate for the creator of this term, that ample material has been excavated both in Northern Germany and Denmark of late years.

One of the most recent additions to this Lyngby culture has lately come to light in the island of Seeland.

It is also a handle originating from approximately the same layer as the arrow-head and intended to hold small axes and/or points. These results are confirmed by ethnologic parallels of North-America. However a great deal of caution is essential here. The geological — botanical examination showed that the Lyngby-culture is considerably older than the Klosterlund culture which dates from the pre-boreal era.

Since regular habitation sites and material have been found near Melendorf in North Germany, dating from the earlier dryas period, as well as material near Ahrensburg, closely related to the Danish Lyngby culture and dating from the later dryas-period, there was every reason to expect that similar finds, dating from the late- or Gotiglacial epoch would be made in Denmark.

These finds were indeed made in the years 1945—46.

The remains of the Bromme culture were found on a fairly level ridge of sand.

Where this ridge comes to an end, there is a somewhat lower stretch of land filled with peat through which flows a brook called Aalerenden disembling into a marsh named Glarmose.

The surrounding land is slightly undulating but not very high.

The ridge of sand stands about 28 metres above sea-level, the lower land from 26—20 metres.

The greatest height in the immediate vicinity is about 60 metres above sea-level. The land lower than the ridge of sand gradually slopes towards the Glarmose marsh. Some 12 000 years ago a small group of hunters lived here, with hunting and fishing as their means of subsistence in a country that was still half tundra.

Some remains of bones found on the site in the best preserved part of the culture layer have been studied.

These studies and particularly the geological and pollenbotanical examinations that were made with meticulous care have enabled us to conclude that the Bromme culture must have fallen in the comparatively short period in which a somewhat more favourable climate prevailed. This period occurred approximately in the middle of the still arctic late- or Gotiglacial epoch, proper when a tundra vegetation was predominant.

In Geology this milder spell is denoted by the term Alleröd period. At that time the climate became comparatively mild so that, for instance *Betula* and *Pinus* were able to survive in a soil that was still half tundra.

Especially the *Pinus* was abundant in the pollen-diagrams, and so was Gramineae and *Dryopteris* Lin. The latter two rather frequently found in subarctic woods. The correctness of this conclusion was proved by the discovery of pollen of Scandinavian alpine plants, in the lower parts, such as *Polygonum viviparum*, *Selaginella selaginoides* and *Saussurea alpina*. The pollenanalytical examination of the soil above the layer that contained traces of the culture also proved that, after the milder interval, a part of the vegetation was doomed to disappear.

As to the fauna, we also have a good deal of information because of the many finds made in Alleröd layers elsewhere.

These layers yielded numerous remains of *Cervus megaceros*, *Bos priscus* and *Ursus*.

At Bromme the following finds were made: *Gulo gulo*, *Alces alces*, *Rangifer tarandus*, *Castor fiber*, *Cygnus cygnus*, *Esox lucius*, *Equus caballus* and *Capreolus capreolus*?

Further: *Vertigo genesi*, *Vallonia pulchella*, *Buliminus obscurus*, *Bythynia* Leachi.

The correctness of the dating is further borne out by the fact that shell-fish occur in Alleröd layers in Southern-Sweden.

Here also the *Vertigo genesi* was discovered.

Moreover, *Vallonia pulchella* and *Buliminus obscurus*, which so far were only known to occur in postglacial strata. Of even greater importance is the fact that the *Bythynia* Leachi was found which occurred almost exclusively in layers dating from the mild period of the postglacial era.

These layers yielded six kinds of shell-fish in all four of which had not been found until quite recently in late glacial strata in Denmark.

The country surrounding the find spot of the Bromme culture consists mainly of moraine clay in the west and north, whereas the eastern hills consists largely of sand.

The ridge in which this culture was found has a core of moraine clay covered by a layer of sand. The greater part of the implements are concentrated in a clearly marked but fairly thin layer, which consists of charcoal and sand and consequently is rather dark in colour.

Most tools are found directly on the moraine. The culture may be called pure and is in most cases undisturbed, being covered with a protective layer of equally undisturbed sand.

Close to the brook or the grounds between the brook and the ridge of sand the culture layer is also to be found.

There are no traces of it, however, on the other side.

Unfortunately no vestiges of dwellings or huts were found.

Even the bone and horn objects which must have been there, had got lost in the course of time.

All that could actually be excavated were flint implements and a considerable amount of silex flakes, chipped off when the tools were shaped.

Points. (Double shouldered points, Fig. 1).

The most characteristic weapons of the Bromme culture were large points or arrow-heads, that have often been compared with Lyngby-points wrongly so, in my opinion.

The find consists largely of these points of which no less than 63 specimens have been excavated. They all have a large shaft, while the bulb of percussion has been preserved in most specimens. The length varies considerably.

It averages some 10.5 to 5.0 centimetres. The points are broad rather thick, made of not too regular blades with unretouched tips. Only a few show some slight signs of trimming, either on the arrow-head or at the tip intended to remove small irregularities or to sharpen a point by means of a few strokes.

Scrapers. (End- and double-end-scrapers, core- and round-scrapers, Fig. 2.)

An enormous number of scrapers was found, mostly, single-end-scrapers made of blades and flakes, with a regularly curved edge and as a rule rather short, preponderated.

There are but a few double-end-scrapers among them.

Furthermore a few core- or round-scrapers.

There is not a single specimen with retouches all round such as we know from earlier periods, like those of the Aurignacian-, Magdalenian- or Hamburg-culture. No less important and very characteristic is the rather sloping retouch. The scraping edge does not present so steep a slope as that of mesolithic- and neolithic scrapers. It is remarkable that these scrapers have been retouched with the greatest accuracy.

Gravers. (single- and double faceted ordinary-gravers, single blow gravers, polyhedral gravers, Fig. 2.)

The gravers of the Bromme culture, however, outnumber both points and scrapers. The ordinary gravers, burins-*bec-de-flûte*, are as a rule made of broad flakes of regular shape.

The others were also made of flakes but they were more or less irregular. There were also gravers with the prepared edge on one side of the blade, but none with oblique-or transverse-retouches, a phenomenon that frequently occurs in the younger, mesolithic, cultures. There are some polyhedral gravers too, but they are few in number.

These gravers, which are particularly useful for working bone and horn, give rise to the supposition that these materials must have played an important rôle.

It is all the more regrettable that nothing should have remained but a few tiny fragments which unfortunately bear no direct traces of having been worked.

We are certainly justified in assuming that the implements of bone and horn must have been the same as those found in Northern-Germany near Meiendorf and Ahrensburg.

Similar gravers have been encountered here in considerable quantities. Besides the three main and most important forms, points, scrapers and gravers a few other objects in silex have been excavated, which cannot be called characteristic of this culture.

There are 22 smoothing planes, 4 slender knives made of fairly regular blades, 2 borers, awls, and a so called hammerstone.

As it is, these and similar tools are of frequent occurrence in the mesolithic period. A microborer encountered on this site was a rare find.

This object is often found in the Danish Gudenaa-culture which belongs to the mesolithic epoch. However, we must not attach overmuch importance to one specimen as long as similar finds have not been made on other sites.

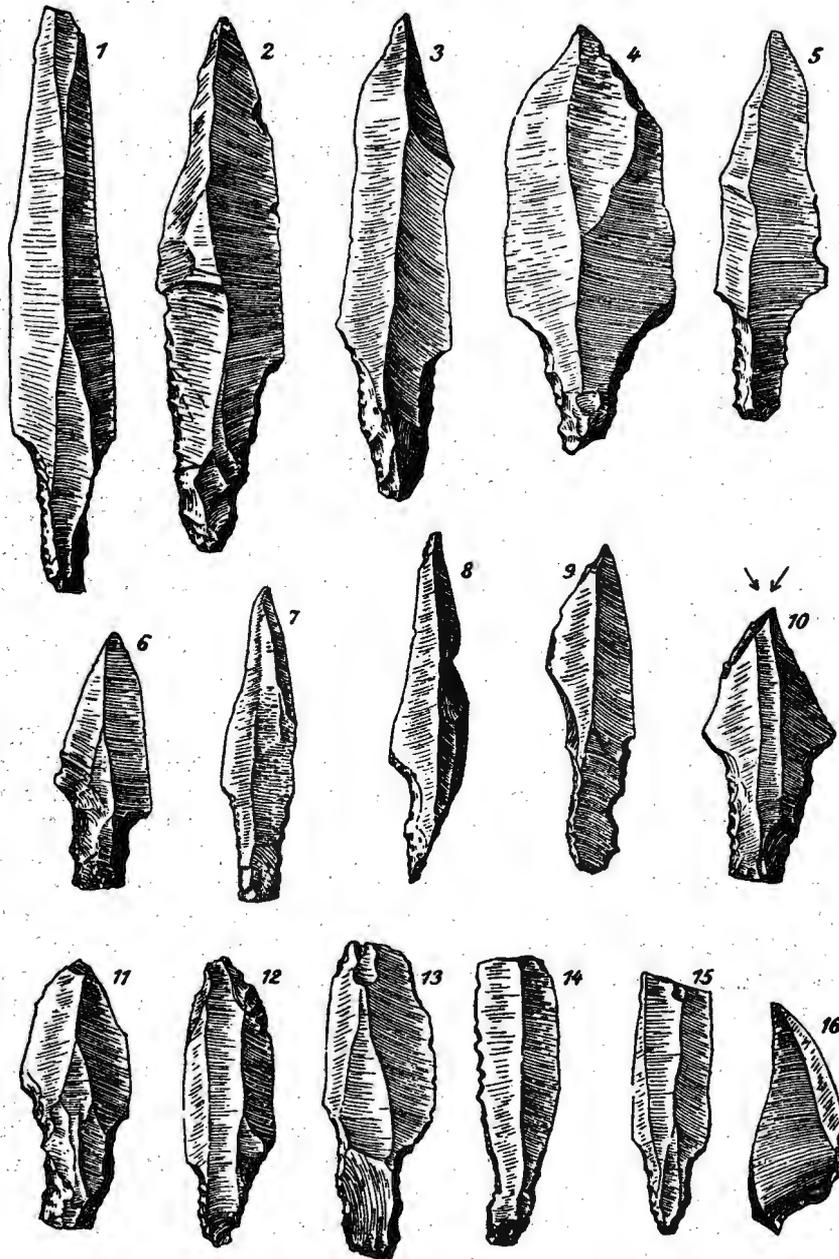


Fig. 1 Points of the Bromme Culture (after Aarböger 1946) 2:3

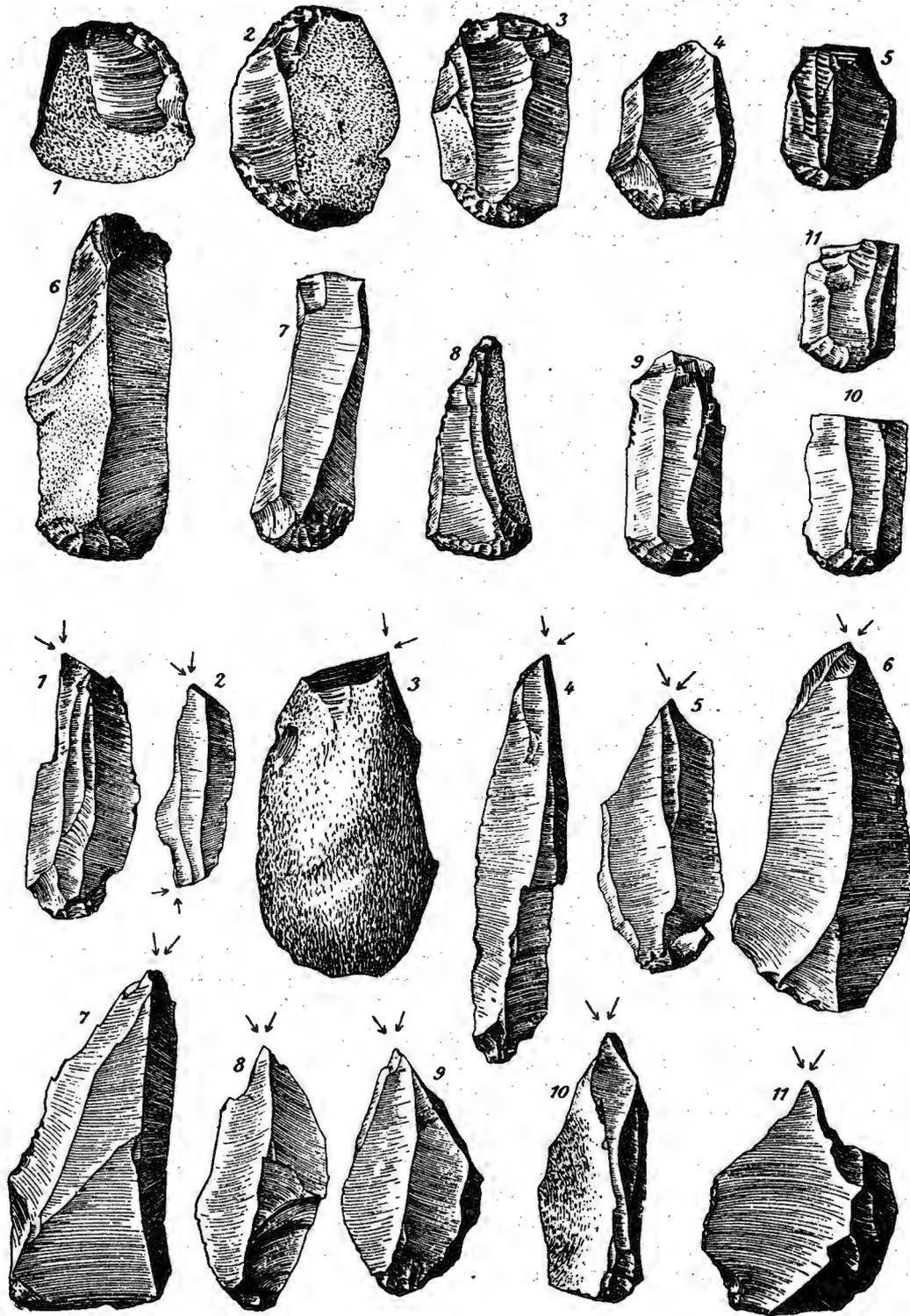


Fig. 2 Scrapers and Gravers of the Bromme Culture (after Aarbøger 1946) 2:3

When comparing the material found at Bromme with the other Danish cultures, for instance the Lyngby-Klosterlund- or Gudena-culture, we must admit that there are indeed points of resemblance, although there is no doubt that the Bromme culture is a more primitive phase. On the other hand, the differences in shape, technique and inventory are too considerable to allow us to draw conclusions from them. If we study the Bromme culture more closely the thought inevitably suggests itself that we have to do here with a young palaeolithic culture derived from Eastern Europe or rather the Asiatic continent.

The Bromme culture would then be part of the group of European-Russian cultures which have in common points with shafts, scrapers with gradually sloping retouches and a large number of gravers. This group of cultures extends from England via France, Holland, Germany and Poland to the depth of Russia as well as northwards to Northern Norway (Komsa-culture).

But also outside Europe this point is fairly common. It is found in Capsian, North-Africa, in China, Mexico and with the Esquimaux. Of course such an obvious form may be created quite independently, quite suddenly, in the remotest corners of the Earth. It may be the result of necessity or something accidental. Personally however, I am inclined to believe in affinities of thought, where such countries as Mexico are concerned, since typologically, and also in time, there are considerable differences between the Bromme arrow-heads and those of Mexico.

However, we know of a number of tools found in Russia which are in many respects similar to those of Bromme as regards both technique and inventory. What I have in mind here is the Aurignacian findspot Borševo I near Woronesh, Russia.

The find comprised a number of shafted arrows, awls, coarse gravers made of inferior and irregular flakes and blades, short end- and double-end-scrapers, with-and without-transverse retouches, core- and round-scrapers having the same gradually sloping retouche as the scrapers of the Bromme culture, Châtelperron points, drills made of flakes, and finally small points rather like microliths.

Many other sites in Russia yielded material, especially scrapers, which had the peculiar gradually sloping retouches.

The same may be said of the scrapers of Kostienki I, which are regarded as belonging to the Magdalénian culture and those from Borševo II. The latter are in every respect reminiscent of the material found at Bromme. Another culture that shows some resemblance is the material encountered at Swidry in Poland, Swidèrian, as well as that found at Předmost, of which we know that, in addition to such objects as scrapers, there occur shafted arrows similar to those of Bromme.

The same may be said with regard to the Swidero-Tardenoisian culture in East-Germany. The Bromme culture has also some features in common with the Ahrensburg culture of North-Germany, but deviates from it in character in some respects.

When judging cultures we naturally must bear in mind that two contemporaneous cultures are never entirely identical as to the shape of their implements. It is quite possible and even proved by ethnologic parallels that the implements made by a son or uncle display a character different from that of the tools made by the father, or his brother.

So the differentiation of the families and individuals or rather that of the tribes which existed in the country simultaneously must be taken into account.

We know also that, both the modified late Aurignacian culture from the East and the Western Magdalénian culture have their roots in the late Aurignacian cultures which were, on the other hand, interrelated.

In my opinion the Bromme culture must belong to the young-palaeolithic period of the Russian — Siberian regions, in other words: the Russian — Siberian late Aurignacian culture lasted until the end of the young palaeolithic period and consequently may be regarded as contemporaneous with the Western Magdalénian- and Solutréan.

So a direct derivation of the Bromme culture from the Western-Magdalénian may be regarded as out of question here.

A closer examination of the Hamburg culture may throw some light on the matter.

To those who observe the facts with an open mind, this culture reveals the power to expand peculiar of the modified late Aurignacian culture of the East, which appears to be present also in the Bromme group.

		VEGETATION		Culture periods		Tentative correlation with glacial morphology	
HOLOCENE	PRE-BOREAL	Pineforest or Birchpineforest		Klosterlund	Lyng-	FINI-GLACIAL	
LATE-GLACIAL	Late III Dryastime	Park-landscape with Birches and Pines		rel. oceanic	rel. high Empetrum %	Ahrensburg by Salpaiss elka St.	
	Alleröd- II Oscillation	Pine-Birch forest Birch-forest		rel. continental		Usseloo BROM-ME Wehlen	
	Older Dryastime	Earlier Ic Dryastime	Treeless landscape (or with few Birches)		Tree-Line		GOTI-GLACIAL
		Böllingtime Ib	Park-landscape with Birches (Nr. Pines)		Tree-Line	Hamburg II Hamburg I	
		Earliest Ia Dryastime	Treeless vegetation		Artemisia rise		
PLENI-GLACIAL		Treeless „Arctic“ vegetation (At least during a great part of this time) (Dryas-Flora with Steppe-elements)				DANI-GLACIAL Pomerian stadial ect.	
		„Temperate Flora“			Aurignac?	First interstadial	
		„Subarctic Flora“				First stadial	
						Saale-Weichsel interglacial	

after v. d. Hammen 1951

The fact that the West-German Hamburg culture shows both Eastern and Western characteristics may be explained as follows: In North West Germany there were two co-eval population groups, one originating from the East, the other from the South West, showing but slight differences with regard to culture. They interblended and afterwards represented the people of the Hamburg culture. The similarities as regards the material, which may be observed between the Hamburg-, Bromme- and Ahrensburg-cultures give rise to the supposition that they all had their roots in or originated from the same place, namely the Russian — Siberian regions or better the country of the late Aurignacian culture.

The occurrence of the so-called Lyngby points in the Bromme culture, which in my opinion have no more to do with Lyngby points than the points of the Russian — Siberian late Aurignacian, has led some archaeologists to regard the Bromme culture as an early phase of the Lyngby culture.

Another supposition which I am inclined to disbelieve is that only the Eastern element of the Hamburg culture should have penetrated to Denmark in a somewhat later period, when the fusion of the elements of two populations had already become a fact.

Since the Lyngby culture derives directly from the Hamburg culture, as Rust supposes, Bromme would rank between the Hamburg and Lyngby groups as regards the material.

But a thorough investigation of these cultures proved to me that several shapes of tools occur in the Hamburg-culture which are entirely lacking in the Bromme culture.

The latter can hardly be a part of the Hamburg culture in view of what has been said above, neither can it belong to the Lyngby culture, as Rust's investigations have proved that the Lyngby culture is a continuation of the Hamburg culture, in spite of the fact that this culture contains elements which indicate that it has been influenced by the Bromme culture.

What I have in mind here are some characteristics in the technique of these Lyngby points.

On the other hand, there is a close relationship to the Hamburg culture, also as regards the inventory of implements or better the culture habitus.

Summing up we arrive at the following conclusions:

In the North West part of the young palaeolithic area we find a culture complex which betrays more or less clearly the influence of the modified Eastern late Aurignacian culture.

The most important phenomenon is the point or shafted arrow.

It is quite possible that for the origin of various implements of the Lyngby culture, particularly of the technique and shape of its points we have to look to the Bromme culture whose most important phenomenon is the point in which elements and peculiarities of both Eastern- and local origin are apparent.

There is no reason at all to suppose that we have to do with Magdalénian influences of the younger Dryas period or the Allerödperiod, which would have been conveyed eastward via Northern Europe.

The idea rather suggests itself that these influences were absorbed in north Germany and the adjoining area, and that, as regards the Bromme culture, we have to do with a completely new immigration.

On this occasion some essential characteristics were absorbed by the Bromme people when came into contact with those who represented the Hamburg culture. After having studied these cultures one cannot but draw the conclusion that, in the case of the Bromme culture, we have to do with an entirely independent phase of culture, in other words, as has already been said, with a new immigration from the East.

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