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ORIGIN AND AREA OF SETTLEMENT
OF THE FENNO-UGRIAN PEOPLES

By

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ORIGIN AND AREA OF SETTLEMENT OF THE FINNO-UGRIAN PEOPLES

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Hitherto the opinions held by N. A. Castrén and E. N. Setälä about the origin and the extension of settlement areas of the Finno-Ugrians, which were principally based upon the results of linguistic studies, had been acknowledged. Accordingly, the original home of the Finno-Ugrians could have been situated somewhere at the bend of the middle Volga and along the banks of its tributaries. From there a part of them gradually turned westwards, after the Ugrian branch had migrated off elsewhere, yet some tribes stayed behind at intervals. The tribes migrating to the west separated from the groups left behind, and so linguistic distinctions emerged. Finally, about the time of the birth of Christ, a part of the so-called Baltic Finns arrived in the Baltic area. Based on archaeological finds, however, this colonisation of the Baltic area was found to have taken place considerably earlier – even within the first millenary B.C.

Supported by numerous prehistoric discoveries we are now able to distinguish the movements of the tribes at that time and thereby establish quite new and also different opinions concerning the origin and the extension of the settlement areas of the Finno-Ugrians. In this outline I can only render a short summary of the synthesis of the examined prehistoric material. In doing so we cannot just restrict ourselves to the real question, but our contemplation must begin with the terminal phase of the glacial period. At that time our whole country, or better the whole of Balto-Scandinavia, was still covered with ice. The southern border of this glacial area extended from Denmark to the present-day Russia, covering northern Germany, East Prussia, Lithuania, and Latvia, as may be seen in Fig. 3. This period is called Dani-Glacial, and dates back about 18,000 to 20,000 years. It was the end of the early Stone Age when men chiefly lived from hunting reindeers. Reindeer herds used to stay near the borders of the ice region and immediately migrated farther north when the receding ice had released new tracts of land in the course of centuries and millenaries. Thus the hunters of that time, too, settled not very far from the ice borders and migrated farther north into those new areas offered to them by nature.

The end of the early Stone Age showed an abundant, highly developed and many-sided culture (Fig. 1, 2) by the Cro-Magnon man or an original European

Fig. 1. Various working and hunting tools from the end of the early Stone Age. (Solutrean and chiefly Magdalenian times.)

1) Harpoon made of horn from the settlement Mas d'Azil. Dep. Dordogne. France.

2) and (3) burin and arrowhead made of flint found in La Madeleine, Dordogne, France. (1-3 according to Menghin, cf. Oswald Menghin, *Weltgeschichte der Steinzeit*, Wien 1931, Fig. XIV: 15, 1, 8.)

4) Arrowhead made of horn with conical point found on the Tulle River, Souillac, France (cf. Armand Viré, *Abri sous roche de "la rivière de Tulle" près de Lacave, canton de Souillac. Magdalénien. L'Anthropologie XX. - Nr. 34, Paris 1909, p. 278, f. 4).*

5) Axe made of stag antler with reconstructed edge evidently from the Solutrean time, found in Germany, district of Ziegenrück, Ilse Cave near Ranis Castle (Landesanstalt für Volkskunde. Museum In Halle, Nr. 4: 194). 1-1/3; 2 and 3-2/3; 4-2/3; 5-1/11 of natural size.

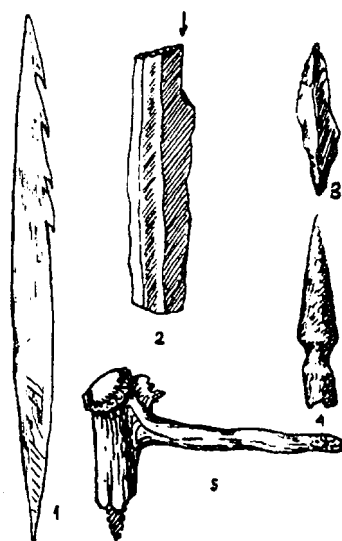


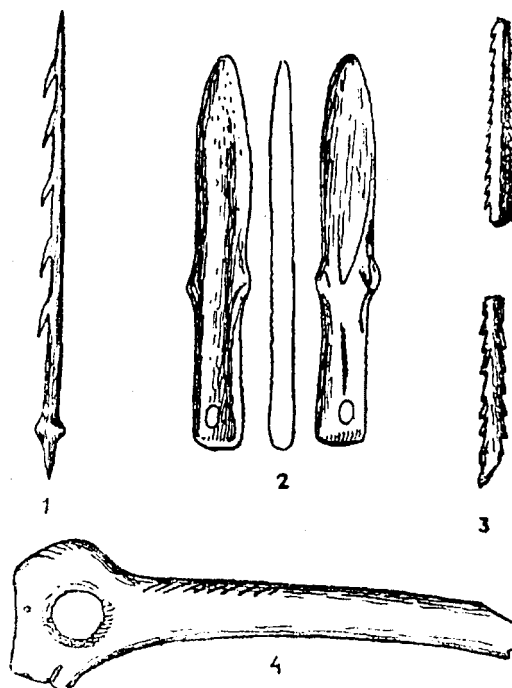
Fig. 2. Implements from the early Stone Age (Magdalenian) made of bone and horn.

(1) Harpoon from Bruniquel.

(2) Dagger from the Laugerie Haute.

(3) Fragments of a javelin from Mas d'Azil.

(4) Arrowshaft and spearshaft-stretcher from Placard. (cf. H. Breuil, *Les subdivisions du paléolithique supérieur et leur signification: Congrès International d'Anthropologie et d'Archéologie préhistoriques. Compte rendu de la XIVE session Genève, 1912. tome I. Genève 1913, p. 165-230, Fig. 32:8; 31:5, 6; 25:4; 23:1.*)



who was already very much similar to the present-day man in his development. These were the reindeer hunters who followed the receding ice to the north. The harpoons and notched spearheads, as the illustrations show, appeared towards the end of the early Stone Age (towards the end of the Magdalenian). The area of common usage was western and central Europe, but did not reach beyond Moravia

in the east. From these districts the harpoons were brought farther north by the fishermen-hunters.

By 10,000–8,000 B.C. ice had already disappeared from the area of Estonia. Finland was still partly covered with ice, which extended from there to central Sweden, whereas Norway was almost completely covered with ice (Fig. 3). At that time a harsh tundra-climate prevailed in south Scandinavia as well as in the eastern Baltic countries, permitting a scanty vegetation of pigmy birches, bilberry-bushes, etc., among which – almost exclusively – reindeer herds grazed. From this time there are no vestiges of men to be found in Estonia, though reindeers already lived there according to discoveries. The earliest traces of men have been found in the Latvian area, though it may be supposed with certainty that men had already settled in Estonia too.

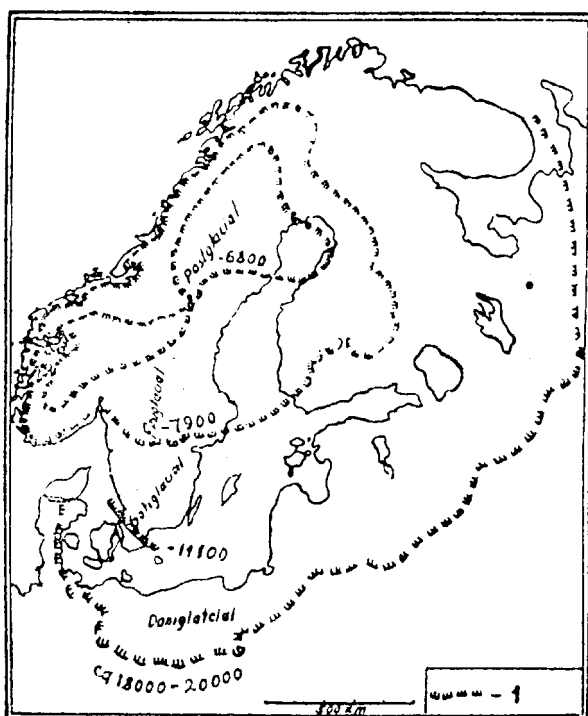


Fig. 3. Boundary-lines of the last Glacial Period according to traces left in the landscape caused by ice and melted snow. The time when the ice still reached as far as Denmark is called "Dani-Glacial" (about 20,000–18,000 years back), the following time is the "Goti-Glacial" (11,000 B.C.), the "Finni-Glacial" (7,900 B.C.), the "Post-Glacial" (6,800 B.C.) according to M. S a u r a m o.

The ice receded more and more quickly. By 7,000 B.C. it only covered the Scandinavian mountains (Fig. 3): the ice frontier then almost corresponded to that of the Post-Glacial period.

The climate had become perceptibly milder. The eastern Baltic countries, Finland and most parts of Scandinavia were now covered with vast pine and birch woods. The same hunters who descended from the Cro-Magnon man of the early Stone Age and who had followed all the time the receding ice together with the reindeers, now came from western and central Europe to southern Scandinavia and

the eastern Baltic countries, also to Estonia and southern Finland. From here the reindeers soon migrated to the colder zones in the north, to the tundra. Simultaneously with the formation of the woods an abundant fauna appeared, headed by the elk. Owing to the plenitude of animals in the woods the hunters were no longer forced to migrate after the reindeers to the colder districts. The fact that already some tribes from Asia had settled in the tundra, was another reason for keeping off the hunters who had stayed in the south, from migrating farther; because people depending on hunting think it unwise to settle close to others.

The very same descendants of the Stone Age men, of the original Europeans, who had got to Balto-Scandinavia, the area of Europe most abounding in rivers, lakes, etc., now began to apply themselves to fishing and bird-catching in addition to hunting. This protected them from hunger, in case the hunt did not succeed.

Their culture in tools did not distinguish itself from that of the early Stone Age, but retained former shapes even in details (see Fig. 4 and 5, and compare the harpoons, notched spearheads, conical arrowheads, daggers, arrowheads made of flint, burins and axes, shown in Fig. 1, 2). During the Mesolithic Period the technique of boring large holes into the antler and stone tools was added. Because the elk-antlers do not have such long and smooth branches as the reindeer-antlers, making it impossible to procure from the former an axe together with handle all in one piece (Fig. 6:3), a hole was bored into the part used as the axe and a wooden handle was fitted (Fig. 6:1). This new invention soon spread widely and also prevailed in the times that followed.

Already during the early Stone Age stone axes came into use which were fitted to perforated wooden or antler sleeves. They are partly trapezoid-shaped and thin, partly more oval and somewhat larger. From these original shapes, as well as obviously from the antler-axes, developed a series of stone axes (Fig. 7:1-3,5) during the Mesolithic Period. Initially they were primitively shaped, all the more so since the technique of grinding stone had hardly developed, and especially in

Fig. 4. Hunting and working tools found in Balto-Scandinavia from the Mesolithic Period.

- (1) Arrowhead with conical extension made of bone.
- (2) Harpoon made of bone.
- (3) Arrowhead made of flint.
- (4) Burin made of quartz. Nr. 1, 3, 4, cf. R. I n d r e k o, Vorläufige Bemerkungen über die Kundafunde. Sitzungsbericht der Gelehrten Estnischen Gesellschaft 1934. Tartu 1936/ -- Indreko, Kunda/P. 268, Fig. 12:1, P 244, Fig. 7:1, p. 247, Fig. 7:8, 9. No. 2 cf. R. I n d r e k o, Über die vorgeschichtliche Fischerei in Estland. Abhandlungen der Fischereikammer. Tallinn 1937, p. 6. flR. 2:4.
- (5) Harpoon made of bone found in Svaerdborg on Zealand, Denmark (cf. Johannes Brondsted, Danmarks oldtid I. København 1938, p. 56, fig. 30, 1). 1, 3, 4-2/3; 2- about 1/3; 5-1/3 of natural size.



those districts where mostly flint was used. This is a very hard stone and hence difficult to grind. When split up, however, sharp edges were obtained, well fit for cutting and hewing. In the northern districts (especially in Finland and the northern Baltic countries) almost no flint is found, or only in small pieces. Here axes were made of “eruptive” stone that had to be ground first in order to render it fit for cutting. The axes to be found in the Baltic countries are only ground at the edges; at the sides only the roughest bits were hewn. The technique of grinding, however, improved rather quickly so that already during the Mesolithic Period the complete surface of the axes was ground and thereby acquired a certain shape. From these, well-ground and well-marked shapes developed which, being of the Neolithic Period, are to be found in the Baltic countries and generally in the north-east of Europe in the forest area. People of the early Stone Age had reached a remarkable

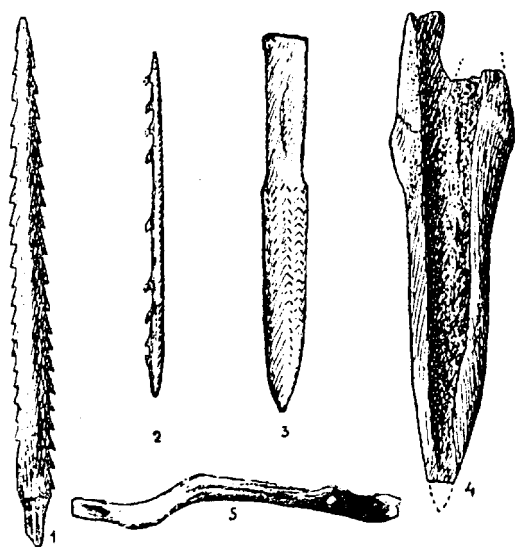


Fig. 5. Implements made of horn and bone from Estonia and East Prussia of the Mesolithic Period.

(1), (2), (4) – Javelin head, harpoon and ice pick from Kunda.

(3) Dagger from the Pärnu River.

(5) Arrowshaft and spearshaft-stretcher with the head of an aquatic bird. East Prussia, Plauten, district of Braunsberg. (1), (3), (4) – about 1/3; (2) – about 1/6; (t) – about 1/2 of natural size.

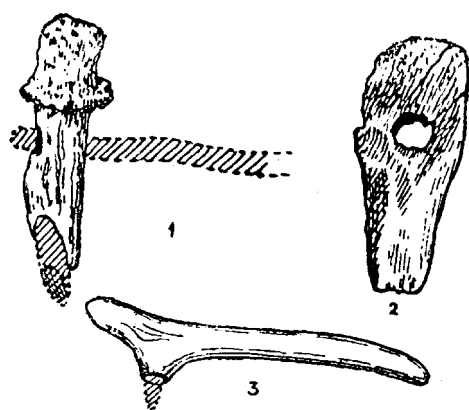


Fig. 6. Axes of the Mesolithic Period.

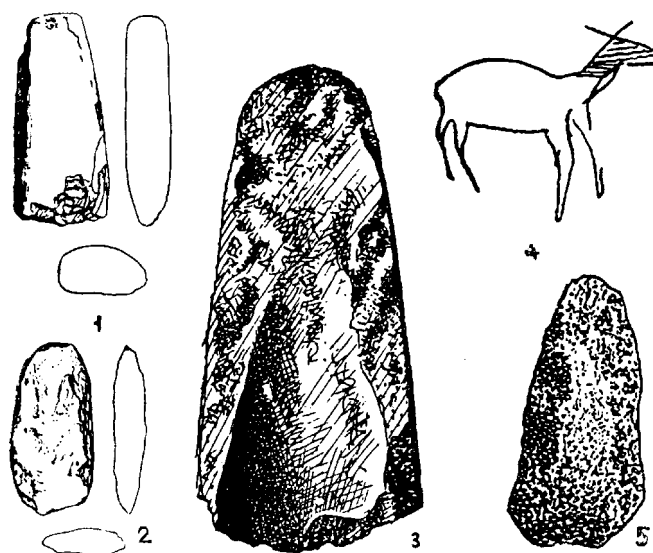
(1) Axes made of elk antler with reconstructed handle and edge, found in the Pärnu River, Estonia (cf. R. I n d r e k o, Eesti muistsed elanikud, RK “Teaduslik Kirjandus”. Tartu 1940, p. 16. fig. 4:7).

(2) Axe made of elk antler with edge found in Kunda, Estonia (cf. R. Indreko, Kunda p. 274, fig. 17:1).

(3) Axe made of reindeer antler with reconstructed edge found in Norre-Lungby, Jutland, Denmark (cf. J. G. D. C l a r k, The mesolithic settlement of Northern Europe. Cambridge 1936, p. 79 ff. Fig. 27:3) (1) – about 1/5; (2) – 1/4; (3) – about 1/10 of natural size

level in artistic respect as well. Farther to the north and in the environments of the Baltic Sea the finds become less important. This may be sufficiently explained by regional conditions: in the north the country was more level, caves and cliffs were missing which had been the cultural centres of the inhabitants in the mountainous central and western parts of Europe. Nevertheless, the fishermen-hunters would undoubtedly have carried out their rites and ceremonies in the north, too, but this had to be done under far more unfavourable conditions and at unsuitable places, so that no traces were left behind. Yet their culture continued to exist in pigmy-sculptures, in drawings and ornaments on the surface of stone and antler axes (Fig. 7:4). There are, to be sure, only a few finds of this kind from the Mesolithic Period, as there are very few relics only from this time to be found compared with those of the Neolithic Period. The few examples, however, show the gradual transition to the late Stone Age that represents a golden age of art.

Fig. 7. Stone axes from Kunda/Estonia of the Mesolithic Period and the animal drawing made on a horn implement from Ystadt, Skåne, Sweden. (cf. Johannes Brondsted, *Danmarks Oldtid. I.* København 1938, p. 73, Fig. 46a). (1), (2) – about 1/4; (3), (4) – 2/3; (5) – 9/19 of nat. size.



The early Stone Age and Mesolithic Period have seen one implement in common use, namely the “command-staff”. These existed in a plain make like finds from the early Stone Age in the Peter's Cave (Baden) and in the Pärnu River (Estonia). Numerous finds still show various ornaments and sculptures, e.g. a find from the Magdalenian Period in Placard (Fig. 2:4) and a staff with the head of an aquatic bird in Plauten, district of Braunsberg, East Prussia, which is said to come from the Mesolithic Period (Fig. 5:5). In Ystad, Skåne, southern Sweden, a horn implement with a drawing of an animal was found which is also attributed to the Mesolithic Period (Fig. 7:4). In Denmark, pigmy sculptures have been discovered which are also said to belong to this period (these statements, however, are not proved). In some cases also human figures have been engraved on horn or bone – these finds certainly come from the Mesolithic Period.

A very peculiar implement was an “ice pick” (Fig. 5:4) that was first used in northern Germany towards the end of the early Stone Age and the beginning of the Mesolithic Period. This implement was also found in the eastern districts and shows the way taken by the people of the time in migrating to the north. In eastern Baltic countries implements from the Mesolithic Period as well as from the Neolithic Periods exist, while within the Russian forest belt chiefly finds from the Neolithic Period are known (Fig. 10). Still more distinct becomes the picture of the Stone Age peoples’ migrations when considering the range of distribution of the conical arrowheads (Fig. 1:4, 4:1, 14:2). In France they belong in the early Stone Age, in eastern Baltic countries in the Mesolithic and Neolithic periods – some pieces perhaps even in the Bronze Age (Fig. 11). The range of distribution of the harpoons included almost the whole of central and western Europe during the early Stone Age, and further consideration will yield the same result in a similar chronological order. In support of this matter, a series of examples could be given, above all from among the number of flint tools. Forms of tools used at the time of the early Stone Age became also known further north and north-east, retaining almost exactly their original shape. These detailed particulars try to prove that the early Stone Age culture expanded towards the north and the north-east. When, on the other hand, one is considering the culture of the tribes that migrated from Asia during the early Stone Age, one is immediately struck by the considerable difference between the two spheres of culture.

Approximately towards the end of the early Stone Age a branch of the original Europeans moved across the present southern Russia to Asia and arrived at the upper course of the Yenisei River. There they met with the original Mongolian people with whom they gradually intermixed. There existed an independently developed culture that was influenced from Asia Minor. Relics of this culture, similar to those that were used in Europe during the middle Palaeolithic Period at the time of the Mousterian and Aurignacian civilisation instead of axes, round disc-like tools were in use for striking with sharp and leaf-like edges, also large spearheads, enormous harpoons completely different from those found in Europe, etc. This centre of culture was very conservative and preserved its shape of tools right until the late Stone Age (Fig: 8 and 9).

When the Proto-Europeans reached the Yenisei River, they also brought along with them European civilisation from which the Asiatic people accepted quite many things, e.g. harpoons with irregular barbs on both sides (Fig. 9:3).

Also in Asia, just like in Europe, a displacement to the north towards the coast of the Arctic Ocean took place. These tribes not only stayed in the Asiatic area, but in the course of millenaries migrated along the coast in western direction farther on to Europe, even as far as Scandinavia. They hunted sea animals, but of course also reindeers, and had a peculiar, primitive civilisation (see Fig. 8 and 9). This type of culture, which had penetrated the Arctic Zone, lacked almost completely the good tools used in the sphere of civilisation; in the centre of Europe even the axe was not known. In comparison with that there were quite a number of implements in the Asian sphere of culture that were absolutely unknown to the people that came from the centre of the European sphere of civilisation.

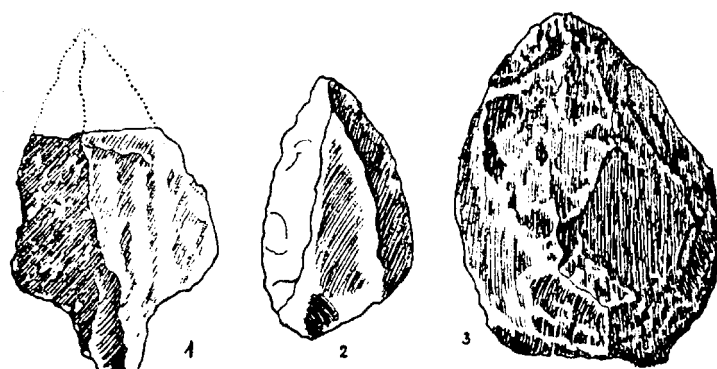


Fig. 8. Implements used by the Arctic people (Finnmark culture) from northern Norway of the Mesolithic Period, which represent tool types of the Middle Palaeolithic Period (early Stone Age)
 (1) Spearhead from Vedbotneid.
 (2) Leaf-shaped cutting tool from Seilmesket.
 (3) Cleaving tool from the Kobbholmfjord which represented the axes used in Balto-Scandinavia (for particulars cf. Johs. Boe an. N u m m e d a l, *Le Finmarkien. Les origines de la civilisation dans l'extreme-Nord de l'Europe* Institutet for Sammenlignende Kulturforskning Serie B; Skrifter XXXII. Oslo 1936, Pl. LXXXI: 343a, XXV: 87. X: 17). (1) – 23; (2) – 12; (3) – 3,10 of natural size.

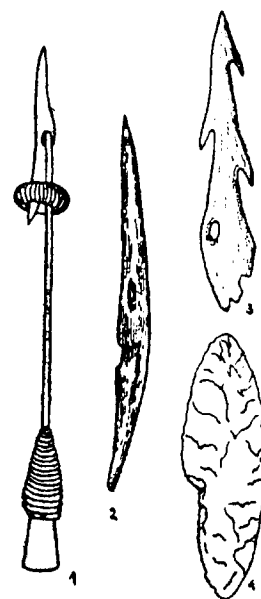


Fig. 9. Harpoons and arrowheads used by the Arctic people of the Neolithic Period and an iron harpoon of the later past.
 (1) Iron harpoon still recently used by the Finnmark Laplanders.
 (2), (3) Bone harpoons of the Neolithic Period found in Skipshelleren and Jorunvag, Halså, Sor-Trondelag (cf. J o h s. Boe, *Boplassen i Skipshelleren pa Straume i Nord-Nordland. Norges steinalder. Norsk Arkeologisk Selskap. Oslo 1945, Fig. 48:3*).
 (4) Spearhead made of flint, found in Gjovik, Lyngen, Troms (cf. Gutorm Gjessing, *Yngre steinalder i Nord Norge* Institutet for Sammenlignende Kulturforskning, Oslo 1942, P. 15, fig. 117).
 (1) – 1/11; (2) – 1/2; (3) – about 1/4; (4) – 1/4 of natural size.

A branch of the intermixed sea-hunters now came into contact once more on European ground with the original Europeans having come from the south and, as later civilisation shows, a gradual intermixing of all those peoples and their cultural standards began so that it is difficult to state cultural difference in the Neolithic Period. In the course of millenarities a mixed race thus came into being in

the north, of original Mongols and original Europeans, as we recognise it still today in the Laplanders and the Samoyeds.

Approximately between 5,000 and 4,000 B.C. the climate had changed in the Balto-Scandinavian area. It became milder, moister and consequently vegetation increased (Atlantic or Litorina period). The former fishermen-hunters remained in their districts of settlement; their culture retained the same level, except for a few innovations. Nevertheless, an alteration of the area of settlement can be traced; caused partly by a considerable increase of population and partly by the impulse to migrate from the south to the north, branches of the inhabitants moved farther and farther into the forest zone of the present central Russia.

Soon, however, pottery was invented, boiler-like vessels with round bases, the outside surfaces decorated with rows of dimple-like dents and ribbon-like rows of comb-ornamented marks. According to this kind of ornaments those vessels are called comb ceramics (*Kammkeramik*, Fig. 12) and the whole area of culture is called comb ceramic civilisation (*Kammkeramik-Kultur*, Fig. 13). Indeed it was the same type of civilisation as that of the fishermen-hunters, which was under discussion all the time; the fact of potteries coming into use was merely a new element.

As may be seen from Fig. 14, the arrowhead with a tapered extension continued to exist, just as it had been used during the early Stone Age (Fig. 14:2); the harpoon too is of the same type as the one used during the early Stone Age, but had become plainer looking and wider in form (Fig. 14:4); axes were made of one piece as during the Mesolithic Period. Of course the people of the comb-ceramics culture had among their tools some stone axes and other gadgets, which showed a progress compared with those used during the early Stone Age and the Mesolithic Period. Potteries were also developed elsewhere; about the same time they became known in a vast area, only shapes and ornaments were different according to prevailing conditions.

In Scandinavia another fate befell the fishermen-hunters. Newcomers advanced to that area from the south; in the most southern parts the hunters got mixed with them and thus lost their originality. In middle Scandinavia one section remained purebred and also took part in a gradual intermixture with Arctic tribes. The culture of comb-ceramics, however, spread right up to the Ural Mountains and even beyond. In the south its boundary stretched from the mouth of the Vistula River across northern Poland, across the upper course of the Dnieper, across the Don to the Oka River and then turned from the middle Volga to the Ural Mountains. But the mixed races of the north had by now also adopted the before mentioned civilisation.

From the time of the comb-ceramics culture, perhaps even earlier, but also from the border districts of the comb-ceramics culture areas, there exist proofs in the Finno-Ugrian language.

Philologists state that the Finno-Ugrian languages are related to the Samoyedic languages. This section in the development of said languages is called the original Uralic language, which is temporally placed in about the fourth millenary.

This linguistic relationship alleged by philologists chiefly existed in mutual loan words. As to their race the Samoyeds with their Mongoloid characteristics completely differ from the Finno-Ugrians. The Samoyeds are that mixed race mentioned above who settled near the Finno-Ugrians as early as the Mesolithic Period. Intermixture took place very slowly and there were but extremely few points of contact so that the linguistic ties were very weak, yet strong enough to be ascertained by philologists.

Almost the same can be said of the Laplanders whose language is also tied to the linguistic root of the Finno-Ugrians. The Laplanders have stayed in the neighbourhood of the Finns until today and thus adopted by far more loan words into their vocabulary than did the Samoyeds.

The original denominations of the fauna and flora in the Finno-Ugrian languages allow the conclusion that those peoples must have lived in forest districts that reached in the south to the southern limits of wooded country and extended in the east to the Ural Mountains. How far this area spread in the north and west cannot be ascertained from linguistic researches. Some archaeologists have now connected the culture of comb-ceramics with the Finno-Ugrian people; it is their opinion that the whole area of the comb-ceramics culture belongs to the Finno-Ugrians. As I have mentioned above already, the culture of the comb-ceramics developed from that of the original Europeans and belongs, though not fully, to the Finno-Ugrians. The origins of the Finno-Ugrians could have their roots in the early sections of the same culture that developed from the centre of the European Palaeolithicum, whereas the middle and older sections should belong to another culture (Fig. 10, 11). As was mentioned before, the Asiatic centre of culture showed considerable deviations; from there no communication existed with the woodland zone of eastern Europe.

A continuous tendency to change from the south to the north-east is, for reasons of natural conditions, logical and obvious. Today this tendency can still be traced according to special maps and areas of settlement of people (to be sure, the present state of settlement of mankind is given, yet it dates back to prehistoric



Fig. 10. Area of distribution of the ice pick.

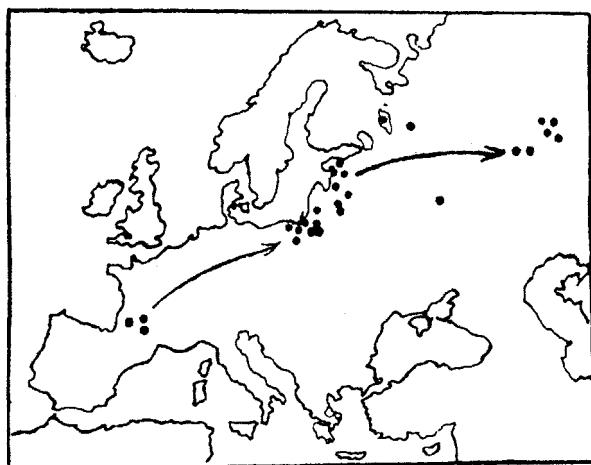


Fig. 11. Area of distribution of arrowheads with a conical edge.

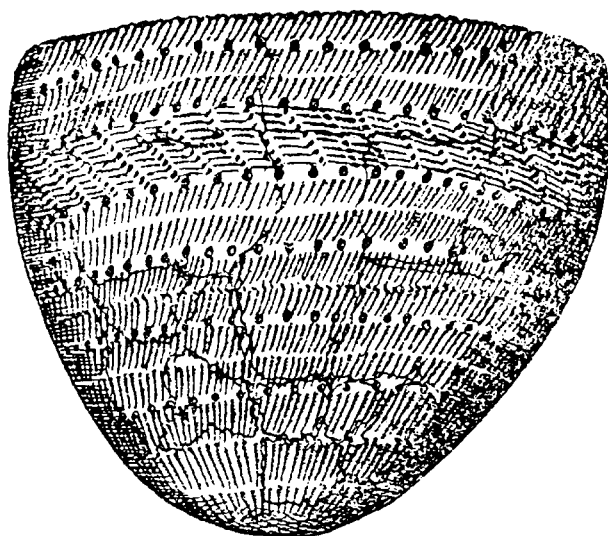


Fig. 12. Comb-ceramics from Estonia, district of Jõelähtme, Stone Age settlement in Jõesuu. The pottery is decorated with rows of dimple-like dents and traces of comb-ornamented marks. 1/3 of natural size.

times with some exceptions). Mankind has always adjusted itself to the most favourable conditions of nature and pushed farther on to the east according to their limits. I did not bring this as a fact, but as a mere example that may explain the mentioned prehistoric dislocation of peoples and may serve as a logical connecting link. Nature indeed was of high importance to mankind, because the number of animals depended upon climatic and regional conditions and in turn the fishermen-hunters depended upon the fauna. Later on, of course, the husbandman depended upon agriculture that developed best in a zone climatically and regionally favoured.

As to the western boundary-line of the Finno-Ugrians, the tribal borders are said to have extended to the Baltic Sea, to the Vistula River and beyond this as far

as northern Poland. The northern boundary-line, however, did not reach beyond the Gulf of Finland. Though the first fishermen-hunters reached southern Finland and even the area farther to the north already during the Mesolithic Period, these few settlers were absorbed by the mixed race settling there in the course of thousands of years. Further to the north-east the boundary-line proceeded from Lake Ladoga to Lake Onega and from there to the Ural Mountains. Looking at the settlement areas now, one will discover that many small tribal sections of Finno-Ugrians are living within the confines just outlined.

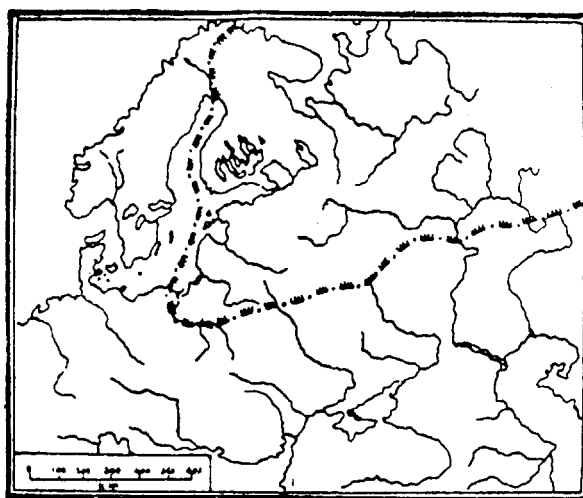
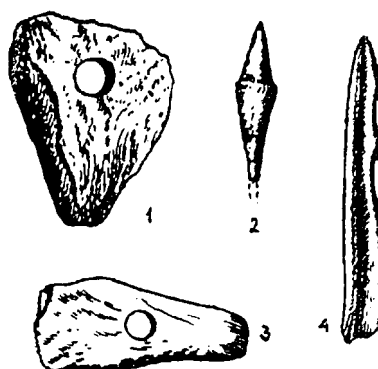


Fig. 13. The southern and western boundary lines of the comb-ceramics area (according to A. M. Tallgren).

Recapitulating: we saw that the culture of the Finno-Ugrians' forefathers originated from the culture of the hunters that prevailed in Europe towards the end of the early Stone Age (Magdalenian Period). The products of this culture can be traced quite exactly, due to preserved shapes, to the end of the Neolithic Period (see Fig. 5–7).

Fig. 14. Implements of the comb-ceramics culture in Estonia of the Neolithic Period.

- (1) Horn axe, dug out in the Pärnu River together with fragments of comb-ceramics.
- (2) Arrowhead with conical extension, found in the comb-ceramics settlement Konsa, district of Võnnu on the Lake Peipsi.
- (3) Axe made of elk antler, found in the Pärnu River, belonging to the comb-ceramics culture according to its type.
- (4) Harpoon made of bone, found in the Pärnu River, belonging to the comb-ceramics culture according to construction and type. (1) – about 1/5; (2) – about 1/2; (3) – about 1/7, (4) – about 1/4 of natural size.



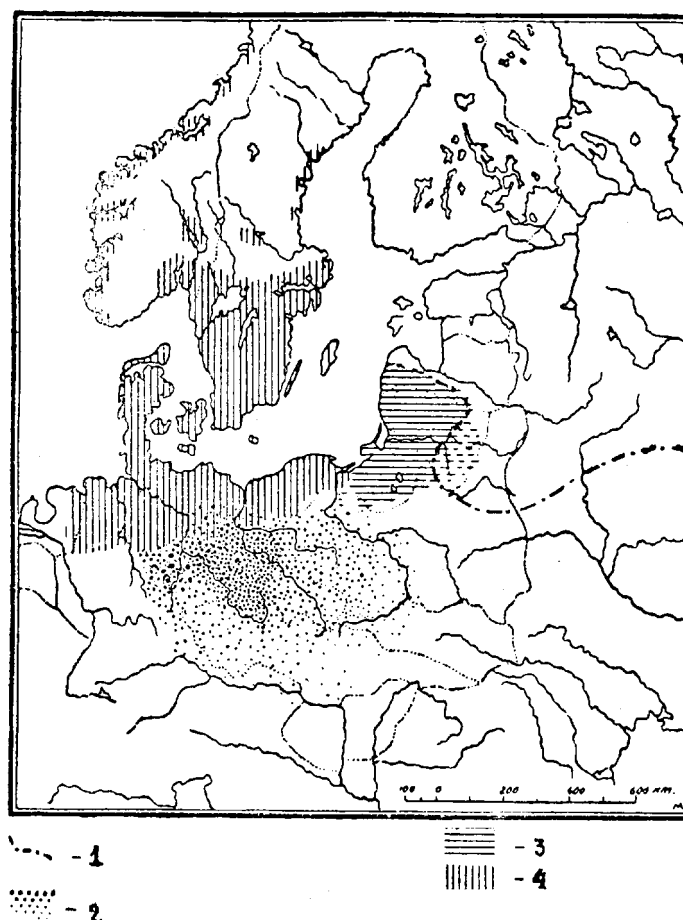


Fig. 15. The area of settlement of the Estonian-Finnish people and their neighbours in the environments of the Baltic Sea by 1000 to 800 B.C.

- (1) The southern boundary-line of the Estonian-Finnish area of settlement.
- (2) The centre of the Lausitz Culture and its influence on the neighbouring areas.
- (3) The Baltic peoples (Latvians, Lithuanians, Prussians).
- (4) The Germanic peoples.

They came to eastern Baltic countries and across the east European woodland zone to the Ural Mountains as early as the Mesolithic Period, later on even beyond these to the Asiatic zone. In contrast to that were the mixed races of the north in the so-called Arctic zone with their culture, the features of which were wholly unknown to the corresponding European civilisation. In the north, axes and other important tools were missing (compare Fig. 5 and 6). In the course of thousands of years, approximately at the beginning of the third millenary B.C., and even earlier, the mixed races had accepted linguistic and religious features from the Finno-Ugrians, when living with them side by side, and above all, most of their material

culture. Besides that, old tools wholly unknown to the Finno-Ugrians were being used (see Fig. 9) which originated from Norway at the end of the Stone Age. Fig. 9:1 shows a harpoon that was in use until present times. In the neighbourhood of Lake Onega and the White Sea, drawings on rocks have been found which remind us in their style of the culture of the middle period of the Old Stone Age (Aurincian), i.e. of the same culture from which the strange tools originate (cf. Gutorm Gjessing, *Norges steinalder*. Norsk Arkeologisk selskap. Oslo 1945, p. 258ft). Skeletons that were found in more than 150 graves on Olenij Island in Lake Onega, confirm the conjecture – in the opinion of anthropologists – that a mixed race has lived there. Several other facts, too, clear up these distinct differences also in the late Stone Age.

Towards the end of the Stone Age, at about 2000 B.C. a great change took place in the life of the nations, especially within the Balto-Scandinavian area. Between 2000 and 1800 B.C., the cord-ceramic people (*Schnurkeramiker*) or bearers of the boat-axe culture (so designated after their boat-shaped axes) pressed forward from central Germany to Scandinavia and the eastern Baltic countries but also to the south-east of Finland and across Lithuania to central Russia into the area of the Volga and Oka Rivers. These cord-ceramic people are considered to be the original forebears of the Indo-European.

The bearers of the boat-axe culture brought with them their own culture when invading the east Baltic and other countries, a culture quite different from the native one. They had flat earthen vessels with outwardly curved brims, hitherto unknown boat-shaped battle-axes and other, straight-edged axes (formerly there were only cross-edged axes here, i.e. the edge was crossways to the handle), harpoons with barbs on both sides, horn buttons, etc. Now it had also become customary to bury the dead. All this had not been known formerly. In the east Baltic the newcomers came to an area scarcely populated by the fishermen-hunters where they found enough space to settle down.

The representatives of the boat-axe culture took possession of the whole district in the south of the eastern Baltic countries. In the area of northern Latvia and Estonia they settled more dispersedly among the indigenous population who lived more closely together and this fact soon had its consequences. One part of the immigrants obviously turned towards Finland. Though initially the people in the Estonian and Latvian area lived isolated side by side, a fusion soon occurred. The utensils of the boat-axe culture blended with those of the comb-ceramics people, moreover – further development of the boat-axe culture took its independent course which was distinctly different from what the areas situated more to the south had to offer. The former cross-edged axes again prevailed; the comb-ceramics enjoyed a further development; the harpoons with barbs on both sides disappeared, etc. All this took place towards the end of the Stone Age, at about the time up to 1200 B.C.

From this time onward the picture of the final inhabitants of the eastern Baltic region began to crystallise. Within the area of southern Latvia, Lithuania and Prussia the culture of the original Indo-Germans prevailed everywhere, after the

sporadically settled fishermen-hunters (Finno-Ugrians) had been absorbed by them.

From them the later Latvians, Lithuanians and the extinct Prussians developed. In the area of northern Latvia and Estonia the newly arrived Indo-European original peoples merged with the inhabitants living there. The conjecture that a part of the bearers of the boat-axe culture migrated off from Estonia to Finland is based on the finds of boat-axes (cf. Aarne Laitakari: *Die Schaftlochäxte der Steinzeit. Suomen Muinaismuistoyhdistyksen Aikakauskirja XXXVII No. 1.* Helsinki-Helsingfors 1930 and N. Luho: *Eräiden kivilajien käytöstä kivilikaudella.* Terra. Suomen Maantieteellisen Seuran Aikakauskirja 58:2, 1946, p. 61 ff.) According to Laitakari, a portion of the boat-axes found in Finland comes from the eastern Baltic countries. They are chiefly older forms made of porphyry. This material is characteristic of the eastern Baltic countries and is not found in Finland.

On account of his investigations the well-known Finnish philologist *Kettunen* supposes that the Baltic Finns must have absorbed some Baltic tribe. So the northern part of the Baltic countries was inhabited by the Finnish-Estonian peoples (Fig. 15). On the map the tribal boundaries in the Baltic area are drawn as they may have been by 1000 B.C.

Original Germanic peoples settled at the southern and western shores of the Baltic Sea, the Baltic peoples together with the peoples of Estonian-Finnish origin settled in the east of the Baltic Sea. To the south of the Germanic and Baltic peoples is the area of the so-called "Lausitz Culture", indicated with dotted lines. The representatives of the latter have not as yet been definitively ascertained. On the one hand it is supposed that the original Slavs settled there, on the other, the bearers of said culture are supposed to have been Illyrians. At that time this culture strongly influenced the neighbouring areas.

From the time when the Baltic peoples crystallised, approximately towards the end of the second millennium B.C., no change worth mentioning took place in these cultural groups. Within the whole Baltic culture specific national trends evolved; their development can be traced in a straight line right to the end of the prehistoric times.

During the second millennium B.C. in Scandinavia the fusion of the original Indo-Europeans, having advanced into this district, with the inhabitants took place (the latter had meanwhile already mixed with the people representing the Megalithic graves culture). From this fusion the original Germanic people evolved, who developed a strongly marked expansive trend. Already in the beginning of the first millennium B.C. part of them reached northern Germany and from there advanced into the region of the Baltic peoples.

During the Bronze Age intensive commercial relations developed in northern Europe, by land as well as by sea. During this time the Finno-Ugrians also adopted agriculture. The scattered settlements (having been a typical phenomenon of the fishermen-hunters) were abandoned. Those settlements had been situated mostly along the smaller tributaries and in the woods: but then the settlers gathered on the banks of the larger rivers that had become routes of commerce. With commerce

developing more and more, trading centres formed, around which larger settlements grew. On account of increasing invasions, fortified towns or strongholds were immediately built. This change in the form of settlement, from scattered settlements to larger communities, caused by the segregation of some tribes and clans which, according to geographical conditions for the distribution of natural products and to their possibilities of movement, formed larger groups by themselves. So the central and northern part of the Baltic area may be considered as such a group. It received its trading goods from its own country as well as from the extremely sparsely settled district beyond Lake Peipsi and chiefly traded with Baltic and Germanic peoples. A second group formed around the upper course of the Volga River and a third one along its middle course. But to delineate all these formations of groups in detail would lead too far. The same classification can also be made when taking into account fortified towns or strongholds.

The close contacts that had existed among the hunters had now become looser. People were tied to house and homestead; thus the tribes formed individual groups who lost contact more and more.

In the course of the centuries and millenaries they increasingly grew apart from each other also in linguistic respect. This explains the linguistic distinctions and the radical transformations here, which started already towards the end of the Stone Age. In consequence, the migrations to the shores of the Baltic Sea, presumed by linguistic investigations, become untenable since something like that could never have taken place according to prehistoric finds. It is improbable that our ancestors who already in the first millenary B.C. were assiduous husbandmen (according to linguistic research the Finno-Ugrians are said to have come to Estonia about this time) had left behind their fortified towns, fields, houses, etc. in order to migrate with their herds elsewhere where already other people lived. At the same time such an immigration of foreign people would have left traces in the material culture, as has been the case through the invasion of the representatives of the boat-axe culture, and also at other places of northern Europe. Also in the linguistic sphere there would then have been a lot of foreign place-names in our country. But this is not the case.

With the introduction of the metal-culture, seafaring also developed. Only with metal tools such big vessels could be built for longer sea voyages. Metal was mainly brought to those districts which were nearest to the metal-mining centres or which were situated along the centres of transportation. In this respect the areas in a southern or western direction from us were more favourable. They were able to use metal tools much earlier and also on a larger scale than we did. For this reason maritime culture over there developed much earlier than in our country. These first pioneers were undoubtedly our teachers from whom we took over the experiences in maritime culture. It is quite natural that this newly created branch was adopted together with its terminology, for it had been unknown to us formerly. If, for instance, there had been a designation for the sea in our language already in former times, this designation gradually disappeared or adopted another meaning and a new designation came into use that harmonized with the starting

and developing sea culture. Innumerable similar cases are known. Thereby many changes can be explained which are related to the sea and which have led philologists astray. But we see that it is not necessary to expel the Finnish peoples from their hereditary native country simply and solely for reasons of the designation of the sea, in order to let them migrate to the shore during the Bronze Age (according to philologists even not earlier than during the Iron Age) for taking over such designation from foreigners.

Moreover, J. Kalima points out that the loan words taken from the language of the Baltic peoples and existing in the language of the Baltic Finns would be older than those taken from the Germanic source. According to the research conducted by Bj. Collinder, loan words from pre-Germanic sources are completely missing in the language of the Baltic Finns, where original Germanic foreign words are very scarce.

These explanations are also understandable, for the earliest points of contact were given with the Baltic people who reached our neighbourhood already in the beginning of the second millenary B.C. On the other hand, however, a meeting with pre-Germanic people could not have taken place at all, because at that time the sea was still an impassable obstacle. At the time of the original Germans, seafaring was still a novel activity. A more lively communication only started about 1000 B.C. or somewhat later.

At the time of the Bronze Age, about 1000 B.C., the Baltic people had roughly crystallized and grouped themselves particularly in the south of the Baltic area (Fig. 15). The development of the Finnish people could continue quietly and without interruption. The national boundary line, which had already formed itself towards the end of the Neolithic Period, remained the same for a longer time and only advanced slowly towards the north under pressure from the Baltic people. This advance was accelerated only during the Iron Age. One reason for this may have been the emigration of some Finnish tribes from Estonia to Finland during the early period of the Iron Age. This evidently took place from economical considerations in order to get metal tools and implements, weapons, ornaments, etc. that were rather expensive compared with the Estonia products. Therefore ways and means were sought to produce as much as possible. The most valuable barter-objects were furs that were mainly in demand in the southern countries and by their peoples. Undoubtedly fur animals had become extinct in some areas of Estonia that were closer settled. Large woods, still existing today, offered possibilities for hunting, for instance in central and eastern Estonia, in the Pernau district and also in southern Estonia. In the woods of Pernau and Fellin relics of the hunters from the Iron Age are frequently found, from which hunting excursions into those areas may be concluded. In a far more difficult situation were the inhabitants of the islands as the woods were not so large there and game, prevented by the sea, could not follow, while the density of population increased. It may be supposed that the population could not maintain its standard of living and had to look for other possibilities. The fact that beyond the Gulf of Finland extended vast uninhabited woods, was undoubtedly known to the inhabitants of

the islands. At the beginning only hunting excursions were made to that area. Due to an increasing economic pressure, however, parts of the population definitively settled in southern Finland. There “Tarand-burial” utensils, ornaments, etc. appeared which were characteristic of Estonia. This emigration also explains the fact that the number of inhabitants of the island of Saaremaa (Ösel) and of the environments of the Väina River decreased more and more. The latter area was the border-country to the Baltic peoples who now occupied the country vacated by the emigrants. Hence follows the continuous advance of the Estonian frontier towards the north during the Iron Age. In Finland the settlement began by the population coming from Estonia who pushed the Lapplanders still farther to the north. Undoubtedly Finland was also settled from other areas of Estonia, but this cannot be demonstrated so well on the basis of archaeological finds, as it can be done in the case mentioned above.

Such migrating treks from Estonia to Finland took place later on as well, yet these questions are not connected with the topic under discussion, and for this reason they are not being dealt with here.