Early Iron Age settlements in the western part of the White Sea

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Abstract

The Early Iron Age in the western part of the White Sea is characterized by the spread of two leading ceramic types: Luukonsaari and Anan'ino (Fig. 1). The appearance of Anan'ino ceramics in the southern part of the White Sea is connected to the infiltration of eastern populations from the basins of the North Dvina and Mezen rivers in the 6th and 5th centuries BC. Luukonsaari ceramics are of local origin.

The south-western part of the White Sea is a contact area distinguished by the presence of a hybrid ceramic type that combines features of the Luukonsaari and Anan'ino types. During a certain period, two different ethnic groups inhabited this territory. Investigations of Iron Age sites in the western part of the White Sea area are very important for studying the problem of the origin of ethno-cultural groups of Sámi people.

Already in the 3rd century BC, local inhabitants of the western part of the White Sea adopted the technology of iron production in furnaces, i.e., boxes constructed from stone slabs. Following the spread of iron, stone wood-working implements, arrowheads, spearheads, and knives fully disappear from the archaeological record.

Keywords:
clay vessels, lithic industry, iron production, settlement history, formation of the Sámi ethnos.

Luukonsaari ware at the settlements in Karelia

Iron Age settlements in Karelia are dated to the period from the 6th and 5th centuries BC to the 4th and 5th centuries AD. Ceramics of this period can be divided into three groups (types): 1) Luukonsaari, 2) Pozdnekargopolskaja and 3) Anan'ino.

Luukonsaari ware

Luukonsaari ceramics were for the first time distinguished in Karelia by M.G. Kosmenko (1988; 1993). It should be stressed that Finnish archaeologists divide this group further into two leading types: Anttila and Luukonsaari (Lavento 2001). On the other hand, several Iron Age ceramic types in Finland (Anttila, Luukonsaari, Sirnihta, Kjelmøy) have a number of common traits. According to Lavento (2001, fig 2.8) all of these can be considered as variants of just one type, which is known in Finnish archaeological literature as Sär 2.

Currently 56 settlements dated to the Early Iron Age are known in the western part of the White Sea. Altogether 22 of them were discovered during the last decade (Žul'nikov 2005). Sites located in the south-western part of the White Sea are the most thoroughly investigated, and thus 43 of the settlements of this period have

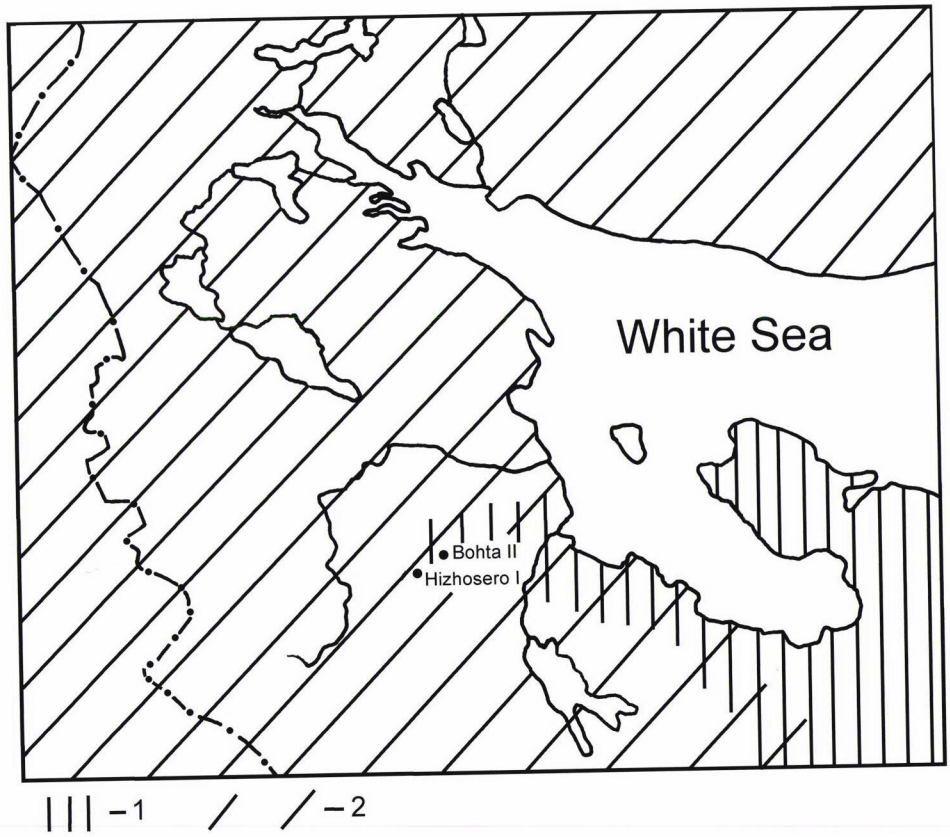

Fig. 1. The spread of Anan'ino ceramics and Luukonsaari ceramics in the western part of the White Sea

1 – Anan'ino type
2 – Luukonsaari type.

been found here. Among them, altogether 19 sites have been excavated. Ceramic fragments of vessels of Luukonsaari type are known from 40 sites, and 214 vessels can be distinguished. The biggest site of the Early Iron Age in this region is the Bohta II settlement. It is located in the Tunguda River (the left tributary of the Vyg River) basin. Fragments of 108 vessels of the Early Iron Age have been found at the settlement.

The north-western part of the White Sea is archaeologically much less well studied. Only 13 settlements of the Early Iron Age are known there, and they have provided only 15 vessels of the Luukonsaari type. The easternmost discovery of Luukonsaari ceramics is the vessel from the Tamitsa settlement in the south-western part of the Onega Peninsula (Foss 1952, fig. 74:5).

The most important distinguishing trait of the Luukonsaari ceramics from the western part of the White Sea is the wide use of "dragged" motives in decoration (grooving, "dragged stamp") and curved compositions (Fig. 2: 7–11). Ceramics with similar ornamentation are known in settlements of the Suomussalmi region in North-

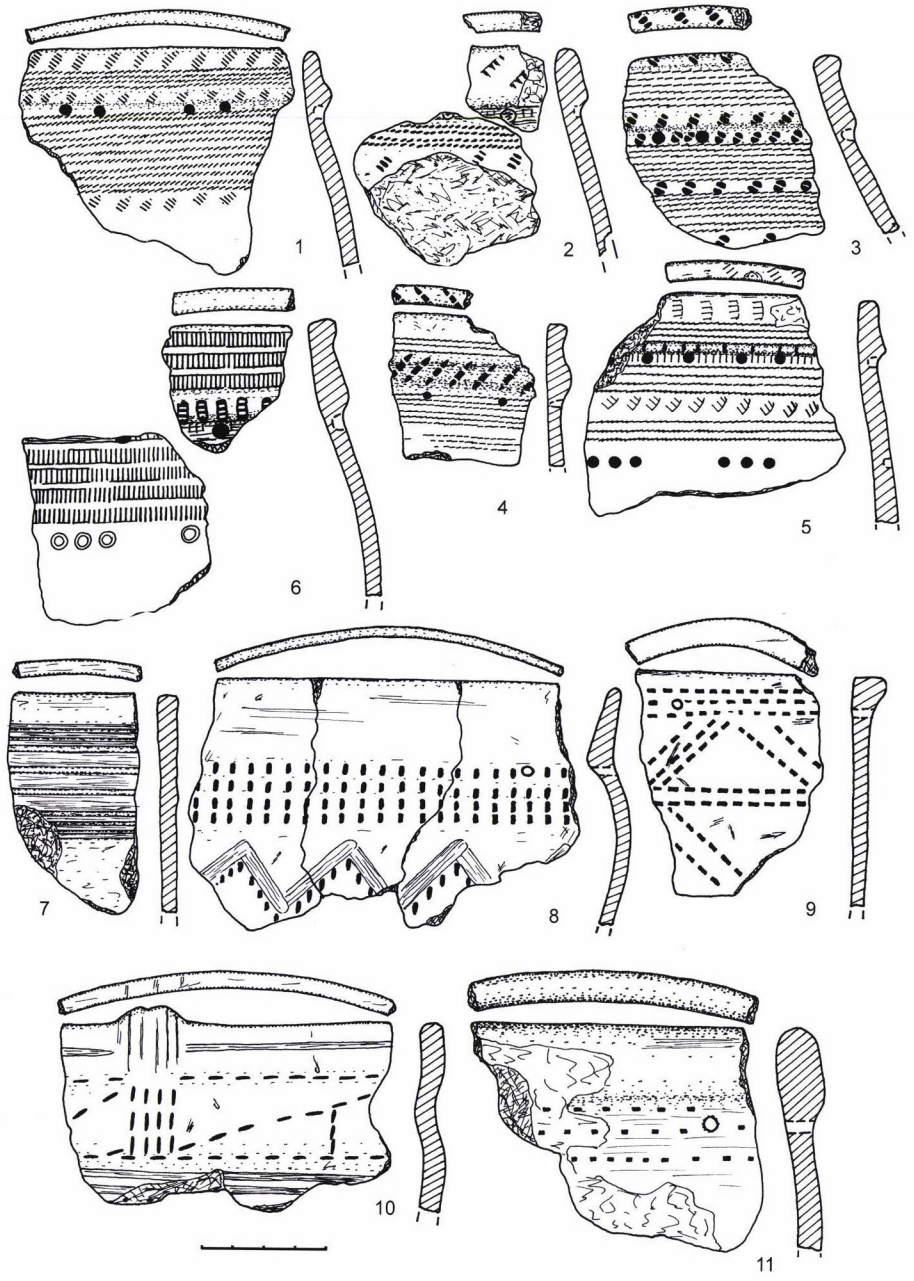

Fig. 2. Anan'ino ceramics (1–6) and Luukonsaari ceramics (7–11) from the Bohta II settlement.

ern Finland (Suomussalmi Kianta Kalmosärkkä, Suomussalmi Juntusranta Mikonsärkkä). This sort of ceramics can be considered as the northern variant of the Luukonsaari type.

A series of C14 dates is available for Sär 2 ceramics from Northern Finland. Most of them belong to the period from the 8th century BC to the 1st century AD (Lavento 2001: 366). Luukonsaari ceramics from the western part of the White Sea can probably be dated to the same period.

Anan'ino ware

Ceramics of Anan'ino type are known from 13 settlements in the south-western part of the White Sea. The most eastern finds originate from lakes in the headstream of the Tunguda River.

Similar Anan'ino ceramics – with "bolsters", "collars", belts of pits (usually grouped in three), and corded decoration – are well represented on settlements in the Onega Peninsula in the southern part of the White Sea (Foss 1952). There are 15 settlements there, and they have provided 52 vessels of this type.

Further to the east, in the basins of the North Dvina and Mezen rivers, a series of settlements with Anan'ino ceramics has been investigated. Here the vessels are distinguished by earlier traits than the Anan'ino ceramics from the western part of the White Sea, and the Anan'ino ware is dated from the 8th to the 6th centuries BC (Ašihmina 1977; Vereščagina & Ašihmina 1980). Anan'ino ceramics from the western part of the White Sea, according to their properties, must have existed during a very short period. Based on eastern analogies, it is possible to date them to the 6th – 4th centuries BC.

In the western part of the White Sea, the areas of occurrence of Anan'ino and Luukonsaari ceramics partly overlap. Because of this, the investigation of the dynamics of their interaction is of great interest. The results of such an analysis must have great importance for studying the complex ethno-cultural situation that existed here in the beginning of the Iron Age. Settlements in the Tunguda River basin provided about 10 vessels that have traits of both Luukonsaari and Anan'ino ceramics. Among unequivocal traits of Anan'ino type on Luukonsaari vessels, "collars" and corded impressions (sometimes grouped in three) can be named (Žul'nikov 2005: 36). Farther to the west, there are only single vessels with Anan'ino traits (Suomussalmi Juntusranta Mikonsärkkä (NM 19879: 9), Kemijärvi Juuniemi Anttila 1 (NM 14344:5)).

Kjelmøy ware

M.G. Kosmenko has distinguished vessels with curved motives in ornamentation (Arctic type) on a number of sites in Northern Karelia. These ceramics, in his opinion, have analogies in the Kjelmøy ceramics of Northern Norway and Northern Sweden (Kosmenko 1993). Vessels of Kjelmøy type have a number of characteristic traits: a flat cut rim, usually with a thickening on the outer side, and ornaments on the upper part of the vessel's body with motives of horizontal belts combined with crossing and zigzag lines that are curved or made with the aid of combed stamps. Round pits are absent in the decoration. Sometimes curved or combed elements are combined with oval depressions. On some vessels of Kjelmøy type, there are horizontal stepped lines that look like bolsters and were produced by evening the vessel's walls by using a plain stamp with a sharp verge (Hulthén 1991). Among the 9 vessels attributed by M.G. Kosmenko to the Arctic type, only one has specific traits of Kjelmøy ceramics (Elmenkoski settlement: Kosmenko 1993, fig. 44:5).

The settlement of Bohta II in the south-western part of the White Sea provided two

vessels that can also be considered as belonging to the Kjelmøy type (Žul'nikov 2005, fig. 145:4, fig. 146:8). As long as these remain only single finds, we have no grounds for including the territory of the western part of the White Sea into the Kjelmøy area.

Iron production

Unequivocal evidence of early iron production in the western part of the White Sea has been discovered in 4 settlements (Hižozero I and II, Tunguda XII, Kandalakša XIII). One furnace has been investigated in the Tunguda XII settlement. It is a box built of stone slabs and dated to 2200±70 BP (TA–2139) (Žul'nikov 2005). The Hižozero I and II settlements contain only Luukonsaari ceramics. Kandalakša XIII is dated to the Early Iron Age based on shore displacement. Besides this, in the north-western part of the White Sea iron slag and asbestos ware (of the Early Iron Age) have been discovered at the Nilmozero IV and Kolvitsa IX settlements.

Iron objects (celt, arrowhead, humpbacked knife) have been found at three settlements in the Tunguda River basin: Bohta II (Žul'nikov 2005, fig. 156:11), Hižozero I, and Berezovo XXIX. Objects most likely related to bronze casting of the Early Iron Age period have been found at the Tumča (Gurina 1961) and Bohta II (Žul'nikov 2005) settlements. At the Elmenkoski settlement, one half of a casting mould made of talc for a celt with Anan'ino features has been discovered (Kosmenko 1982, fig. 2:1). A double-sided talc casting mould for an Anan'ino celt, found near the village of Babja Guba in the Muezerskij district of the Republic of Karelia, is well-known in the archaeological literature (Brjusov 1940, fig. 1). On the Šoirukšin Island site, a rectangular convex plate with a fake-corded decoration along the perimeter has been discovered and is dated to the first half of the 1st millennium BC. The Zolotec X settlement provided one bronze ornament, namely a pendant, the shape of which imitates a comb with zoomorphic termination (Titov 1969). This item has analogies among ornaments of the Northern Ural dated to the first half of the 1st millennium BC. One pendant imitating a comb has been found in the Pečora River basin in a grave of the Šikhovskij cemetery (Vaskul 2002, fig. 20:1).

Excavations at Hižozero I

In 2005, the archaeological expedition of the State Museum of Karelia investigated the ancient settlement of Hižozero I in the south-western part of the White Sea. This is the first fully investigated settlement with a pure Early Iron Age assemblage in northern Karelia. In total, 320 m^2 have been excavated there.

The artefacts

One concentration of finds (3 m x 4 m) was found in the northern part of the trench. The finds were concentrated around a fireplace. Outside this concentration there were no finds. This pattern allows the assumption that an on-ground house was placed here in ancient times and that it was inhabited during the winter period. If we draw a line through the widest distribution of the fireplace finds, an almost rectangular figure appears. The house most likely had a rectangular or oval shape. The fireplace was located closer to the western short wall.

The assemblage consists of 3355 fragments of calcinated bones, 86 big and 191 small pieces of Luukonsaari ceramics, 7 broken and 1 complete iron items, 36 pieces of iron slag, and 39 pieces of clay luting (?).

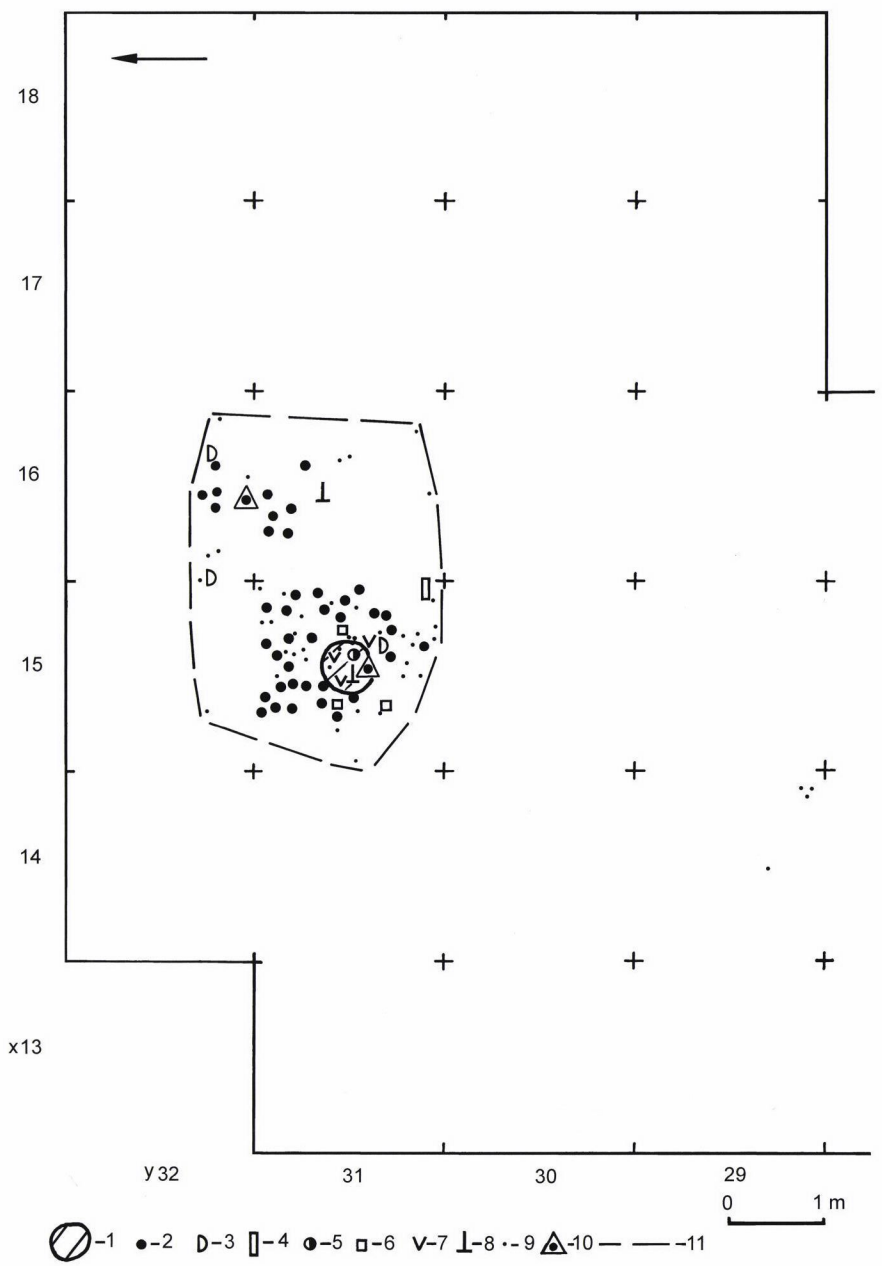

Fig. 3. On-ground dwelling of the Early Iron Age from the Hižozero I site

1 – fireplace, 2 – a piece of Luukonsaari ceramics, 3 – scraper, 4 – whetstone, 5 – broken iron object, 6 – iron slag, 7 – calcinated bone, 8 – core, 9 – quartz flake, 10 – concentration of Luukonsaari ceramics, 11 – proposed contours of the dwelling.

The lithic assemblage

The lithic assemblage obtained in the excavations at Hižozero I is of particular importance, because it provided an opportunity for studying the properties of the Early Iron Age lithic industry in Northern Karelia for the first time.

There are 194 tools: 32 quartz cores, 2742 quartz flakes, 19 flint flakes, and one piece of flaked slate.

Scrapers prevail among the tools: 167 of them are made of quartz and 6 are made of flint. Series of big (Fig. 4: 25, 35) and micro (Fig. 4: 14–17, 36) scrapers should be distinguished, because earlier Bronze Age settlements from this region are characterized by the prevalence of middle-sized scrapers, while big and small ones have been very rare. Some of the scrapers were produced from exhausted cores.

In addition, 7 pieces of broken grinding slabs of granite and quartzite, 4 whetstones of quartzite, and 2 hammerstones were encountered on the site (Fig. 4:34).

There is also one pick-like implement made of soft slate.

Other tools are a flint piercer, a concave scraper, a slate cobble with traces of grinding (whetstone?), 3 quartz flakes, and one flint retouched flake.

Quartz flakes and tools dominate in the assemblage, while flint artifacts absolutely prevail on Bronze Age settlements from this region. Most of the cores found on the site are exhausted (Fig. 4: 37–41) and show traces of bipolar reduction. Both quartz cobbles and pieces of vein quartz were used for making flaked implements at the site.

Knapping floors are located close to some of the fireplaces. These are areas from 20 cm x 30 cm to 30 cm x 40 cm in size with a high concentration of flakes and microdebitage. Most of the tools, flakes, and microdebitage were found within a distance of 2–3 m from fireplaces, and part of this material was in the fillings of fireplaces.

Clay vessels

Ceramics are mostly shattered. Most of the ceramic pieces were found in fireplaces. All discovered fragments belong to the Luukonsaari type (Fig. 4: 1–13). The assemblage contains fragments of at least 10 vessels, which can be distinguished based on particular traits of vessel rims and wall decoration. Two of the vessels are made of clay tempered with tiny pieces of smashed asbestos (Fig. 4:5), one vessel is of clay tempered with both sand and organics (Fig. 4:9), and for seven vessels, only organic temper has been used.

One of the fragments is from the flat bottom of a vessel (Fig. 4:10). Five vessels have rims bent outwards; the rims of the other vessels are straight. Based on the peculiarities of their edge, the rims can be divided into the following groups: slanting inwards, slightly thickened (2 examples), rounded without thickening (3), narrowed (2), and straight-cut without thickening (2). Only one rim is decorated on its edge with a zigzag line of comb impressions (Fig. 4:7).

The above-mentioned vessels have even walls. There is decoration on eight of them. Ornamentation covers only the upper part of the vessels, just below the rim:

1. (Fig. 4:9): A belt of pinholes close to the rim;

2. (Fig. 4:1): A horizontal belt made by a dragged comb stamp; rows of rare comb impressions with very thin teeth can be seen below and above the belt;

3. (Fig. 4:3): Horizontal zigzag made by a dragged 5-tooth comb stamp; the zigzag has a frame of comb impressions grouped in two;

Fig. 4. Assemblage of the Hižozero I settlement

1–13: Luukonsaari ceramics
14–17, 19–33, 35–36: quartz scrapers
18: iron arrowhead
34: hammerstone
37–41: quartz cores

4. (Fig. 4.8): Horizontal zigzag made by a dragged 3-tooth comb stamp;

5. (Fig. 4: 4,11,12): A belt (?) of slanted or grouped zigzag comb impressions. One fragment with an impression resembling that made by a cord probably also belongs to this vessel;

6. (Fig. 4:2): Two horizontal belts of dragged comb stamps. In the upper part of this vessel, there are rare slanted comb impressions;

7. (Fig. 4:7): Ornamentation close to the rim with a horizontal zigzag of comb impressions; a belt made by a half-rounded stamp below the zigzag. Farther down, there are two belts of horizontal zigzags made by comb impressions grouped in two. The composition is finished with a horizontal belt of slanted comb impressions;

8. (Fig. 4:13): Only one fragment survived from the vessel; slanted comb impressions are discernible on it.

Other finds

There are no wood-chopping tools, spearheads, or knives in the assemblage of Hižozero I. It is likely, though, that during the occupation of the settlement the tradition of producing these implements out of iron was known. Pieces of iron slag and broken iron objects found on the site can be considered as indirect evidence for this proposition.

One of the most important finds is the iron arrowhead discovered in one of the fireplaces (Fig. 4:18). Similar iron arrowheads on settlements of the Gladenovo culture are dated to the first centuries AD. The territory where sites of the Gladenovo culture are known covers the Upper and Middle Kama River region and the European north-east, including the Vyčegda River basin (Vaskul 1997).

Analogies to the arrowhead from Hižozero can be found among arrowheads originating from graves in the Mologa River basin south of the Onega Lake. These graves are C14-dated to the 2nd century BC – 1st century AD (Bašenkin 1996). Based on this data, the Hižozero I settlement can be dated to the end of the 1st millennium BC – the first centuries AD. Characteristics of the lithic assemblage and the late traits of the ceramics of Luukonsaari type found on the site do not contradict this conclusion.

The latest discoveries

In 2006, the expedition of the State Museum of Karelia discovered a group of Early Iron Age sites with Luukonsaari ceramics and pieces of iron slag on the northern coast of Kandalakša Bay within a short distance from the White Sea shoreline. The lithic assemblages consist of quartz scrapers, cores, and flakes. Single flint flakes are also present. The settlements occupy positions at 11 m to 16 m above the sea level. In this region the known Bronze Age and Eneolithic settlements are located at elevations 20–30 m above the sea level. Neolithic and Mesolithic sites are situated even higher (Pesonen 1978). These facts allow for the conclusion that all sites found in the northern part of Kandalakša Bay belong to pure complexes of the Early Iron Age, which are very rare for the western part of the White Sea.

The study of the process of formation of Luukonsaari and Anan'ino ceramics, as well as the character of their interrelation, is substantial for understanding the character of interrelations between ancient ancestors of Western and Eastern Fenno-Ugrian people. It is equally important for the research of the dynamics of formation of the Sámi ethnos.

References

Ašihmina, L.I. 1977 = Ашихмина Л.И. 1977. Раннеананьинские поселения на верхней Мезени. *Материалы по археологии Европейского Северо-Востока.* Вып. 6. Сыктывкар.

Ašihmina, L.I. & Vaskul, I.O. 1977 = Ашихмина Л.И. & Васкул И.О. 1997. Памятники ананьинской культурной общности. *Археология Республики Коми.* Москва.

Bašen'kin, A.N. 1996 = Башенькин А.Н. 1996. Домик мертвых Куреваниха XX на р. Мологе. *Древности Русского Севера.* Вып. 1. Вологда.

Brjusov, A. Ja. 1940 = Брюсов А.Я. 1940. История древней Карелии. *Труды Государственного исторического музея.* Вып. 9. Москва.

Foss, M.E. 1952 = Фосс М.Е. 1952. Древнейшая история Севера Европейской части СССР. *Материалы и исследования по археологии СССР* 29. Москва-Ленинград.

Gurina, N. N. 1961 = Гурина Н.Н. 1961. Древняя история Северо-Запада Европейской части СССР. *Материалы и исследования по археологии СССР* 87. Москва-Ленинград.

Hulthén, B. 1991. On ceramic ware in Northern Scandinavia during the Neolithic, Bronze and Early Iron Age. *Archaeology and Environment* 8.

Kosmenko, M.G. 1982 = Косменко М.Г. 1982. Стоянка Елменкоски на оз.Куйто. *Поселения каменного века и раннего металла в Карелии.* Петрозаводск.

Kosmenko, M.G. 1988 = Косменко М.Г. 1988. Поселения периода бронзы и железного века в Карелии. *Поселения древней Карелии.* Петрозаводск.

Kosmenko, M.G. 1993 = Косменко М.Г. 1993. *Археологические культуры периода бронзы – железного века в Карелии.* Санкт-Петербург.

Lavento, M. 2001. *Textile ceramics in Finland and on the Karelian Isthmus.* Suomen Muinaismuistoyhdistyksen Aikakauskirja 109.

Pesonen, P.E. 1978 = Песонен П.Э. 1978. Мезолитические памятники Кандалакшского берега. *Мезолитические памятники Карелии.* Петрозаводск.

Titov, Ju. V. 1969 = Титов Ю.В. 1969. Бронзовое украшение со стоянки Золотец X. *Советская археология* 3.

Vaskul, I.O. 1997 = Васкул И.О. 1997. Памятники гляденовской культурной общности. *Археология Республики Коми.* Москва.

Vaskul, I.O. 2002 = Васкул И.О. 2002. *Шиховской могильник раннего железного века (первые результаты исследований).* Сыктывкар.

Vereščagina, I.V. & Ašihmina, L.I. 1980 = Верещагина И.В. & Ашихмина Л.И. 1980. Раннеананьинские поселения в бассейне Северной Двины. *Материалы по археологии Европейского Северо-Востока.* Вып. 8. Сыктывкар.

Žul'nikov, A.M. 2005 = Жульников А.М. 2005. *Поселения эпохи раннего металла Юго-Западного Прибеломорья.* Петрозаводск.

Abbreviation

NM = Finnish National Museum, Helsinki: catalogue number