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NEW ARCHAEOLOGICAL EXCAVATIONS IN VIIPURI

Results of field investigations of the 1998 – 2001 seasons and current research problems of urban history

Abstract

In the summer of 1998, a new stage of archaeological investigations began in Viipuri. The work is conducted by the Vyborg (Viipuri) archaeological expedition of the Institute of History of Material Culture (St. Petersburg, Russia) under the leadership of PhD Aleksandr Saksa.

During the 1998-2001 field seasons, parts of the building sections of the town from different times were archaeologically investigated. This permitted us to obtain new basic information about the urban culture of Viipuri (Sw. Viborg, Ru. Vyborg) in medieval and post-medieval times. This article discusses the main results of these archaeological investigations.

The history of the town is understood as the process of formation of an *urban environment*. The reasons, character and results of this development are discussed here with special reference to the results of recent archaeological research. We proceed from the archaeological material and investigate factors of change in material culture over the course of six centuries.

The article is divided into a number of autonomous research topics: central research problems of the history of Viipuri castle and the early development of the town itself with emphasis on topographical features of the environment, archaeological investigations of the town wall and its building history, the character of the cultural layer with special regard to problems of chronology and the description of certain categories of the find material. Each of these should be a subject for further studies. Nevertheless, as a whole they illustrate different features of urban culture in its entirety. It is already possible to carry out comparable analyses of the finds with materials from other towns although in many respects this is a subject for future investigations.

Thus, in this article we address a double task: on the one hand we present the main aspects of recently discovered archaeological materials from the latest field seasons, and on the other hand we phrase in precise terms the actual problems of research in urban culture, relevant in the present stage of studies concerning Viipuri. This is done on the basis of both well-known historical facts and new archaeological materials.

Keywords: Viipuri (Sw. Viborg, Ru. Vyborg), field archaeology, urban history, fortifications, domestic buildings, street system, ceramics, metal artefacts, coins, leather finds, Medieval and post-medieval archaeology.

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INTRODUCTION

In order to illustrate the development of the material culture of Viipuri, reference should be made to the historical development of the castle and the trading site which later became an international trading town. The first stages of military, economic and political development are mainly known from written sources. On the part of the 13th and 14th centuries and the beginning of the 15th century, archaeological data is almost absent and it cannot be discussed as separate from historical sources. From the second half of 15th century onwards the situation is different. Rich archaeological find material has now become available for investigation. The urban development of the town can be described primarily in the light of archaeological evidence. Here, the historical data is used as an explanation for changes in the character of the find material and contacts with nearby areas and towns in the Baltic Sea area.

The present article is the result of collective work of the members of the Viipuri archaeological expedition. The working group was headed by PhD Aleksandr Saksa. The historical development of Viipuri, characteristic features of the topography and the cultural layer are described and discussed by Stanislav Belsky who has also studied the metal finds and coins. Aleksandr Kurbatov investigated the leather finds and Nadezhda Polyakova was responsible for treating ceramic material. Mervi Suhonen collected research literature published in Finland and collated the contribution of the Finnish literature to various topics in the article.

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THE ESTABLISHMENT OF THE CASTLE

The castle of Viborg (the original Swedish name of the castle is used in this context) was founded in 1293 on a small and rocky island close to the mouth of River Vuoksi on the Baltic shore of the Karelian Isthmus.

In the middle of the 13th century the political and economic situation in Sweden allowed for the first time significant intensification of military building activity. These developments became possible as the consequence of three new phenomena: the consolidation of royal power, the regulation of the taxation system, and the reorganization of military forces (Lovén 1996:40, 56). These changes took place during the reigns of Valdemar Birgersson (1250-75) and especially of Magnus Ladulås (1275-1290) and Birger Magnusson (1290-1318).

The second half of the 13th century was the first of the two periods of intensive building of medieval castles in Sweden. During this period, altogether 13 new castles were founded by Swedish kings. Among these were the castles of Stockholm and Kalmar (Lovén 1996:64-101, 192, Fig. 71). According to Lovén's classification, only four stone castles had been previously founded in Finland. Only one of these, the fortified hillfort of Hakoinen (Janakkala parish, Häme), was situated in the eastern part of the kingdom, in Finland. It has been suggested that this hillfort was rebuilt into a medieval castle. According to J-P Taavitsainen (1990:236) this idea is plausible but there is no archaeological or other evidence to support it.

The establishment of Viborg castle was analogous to similar political acts of the Swedish king. Although each case is unique, the general chronology of these events is very interesting. Altogether five castles – the castle of Åbo (about 1280), the castle of Tavastehus (Fi. Hämeenlinna; late 1280s – the beginning of 1290s), Viborg (in 1293), Kexholm (Fi. Käkisalme; the attack of the Swedes on the Karelian fortress in 1295) and Landskrona (in the year 1300) - were founded over a fairly short time (Fig. 1.). Drake (2001a; 2001b:209-216) has recently taken the chronology of the castles of Åbo and Tavastehus under discussion. None of the two castles is mentioned in written sources before the beginning of the 14th century. This is why Drake considers it probable that they were not founded before that date. This does not change the general conception that all the five castles mentioned above were established during a short period. It seems that in Karelia the building of the next castle was only started after accomplishing the first building phase of the previous one. Also, the three castles in Karelia,

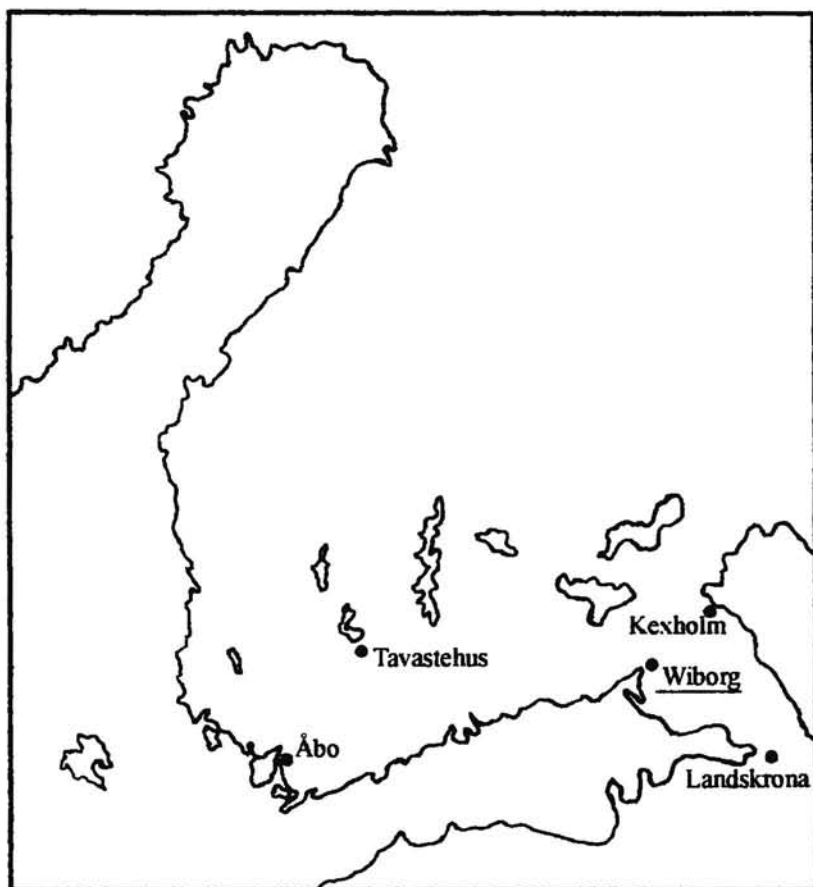


Fig. 1. Crown castles in Finland, Karelia and the Neva region.

Viborg, Kexholm and Landskrona, resulted from initiative of a single person, marshal Tyrgils Knutsson.

In almost all of these cases the topographical conditions are quite similar. Each of the castles was established on an island and with the exception of Tavastehus all of them are close to river-mouths. Especially similar features are noticeable in the cases of Åbo and Viborg. Both castles are also placed at the end of a gulf protected by numerous islands. In addition, some of their architectural forms appear to be similar (Drake 1996:29-34).

It appears to be quite possible that all these fortresses were planned to serve as the strategic points of an established policy of eastward advance to control both politically and economically the inner territories of Finland and Karelia. This was realized during the lifetime of one generation.

THE STRATEGIC LOCATION OF THE CASTLE

The castle of Viborg was founded in a back-country district. The lands in this part of the Karelian Isthmus were not suitable for intensive agriculture which elsewhere formed the subsistence base of the Karelian population in the Late Iron Age. Central area of the spread of Karelian culture was the eastern part of the Isthmus and the north-western Lake Ladoga district (Saksa 1998:22, Fig. 1).

According to V.A. Tjulenev, one of the most important questions of the history of Viipuri is the possible existence of a local settlement before 1293. This may be traced either on the small island which later became the castle island or elsewhere in the area nearby (Tjulenev 1995:15). The present authors maintain that the importance of this question does not need to be underlined. The

question of a possible Late Iron Age settlement or a fortification in this area is central for studying the history of the Iron Age cultures on the Karelian Isthmus (see Saksa 1998). As regards the history of Viipuri as a North-European urban centre the problem is remote. Instead, in focus is the question of reasons for the transformation of the *crusaders' castle* into a fairly large and influential trade centre of the eastern Baltic sea region. Taking this point of view, the erection of the castle can be considered as the primary instance of building activity in Viipuri.

The River Vuoksi is the main water route of the Karelian Isthmus. From the perspective of Sweden it was clear that control of this river would provide an opportunity to keep control over the whole of Karelia. As a site for a trading centre – a town or a port initially established for international trade connections – the Gulf of Viipuri may even not have been the best of all alternatives. For example, Björkö (Fi. Koivisto) is known as a probable trading place since the end of the 1260s (FMU I, 140). The castle of Viipuri was founded at the mouth of the River Vuoksi for a different reason: to control the inner regions of Karelia.

The military strategy of the so-called crusader army is of great interest. In the first stage, a well-armed group of rather moderate size proceeded a long distance from a central area and started to build a new stone fortress. This fortress could be used as a well-protected base for the subsequent conquest of the surrounding area. Such a strategy had already been well known at an earlier stage. The crusaders to the Near East had carried out a similar strategy in the 12th and early 13th centuries. Nor did they try to force any large area under their control at once. Instead, they also began immediately to create powerful fortresses in the conquered areas. In Karelia, large numbers of professional warriors cannot be expected to have participated in the campaign of the 1290s. But there were probably mercenaries from Central Europe among them who were in the service of the Swedish king. Inviting professional soldiers from abroad was common practice in medieval Sweden (Lovén 1996:56). These people were able to pass on the military tradition of the crusaders of the Near East (Svanidze 1999:229-231). As a matter of fact, the advance of the Teutonic Order in Curland and Livonia

in the end of 11th and the beginning of the 12th century had proceeded in the same manner.

The advance of the Swedish crusader army into the inland of Karelia and to the regions around the River Neva took place synchronously with Novgorod's interests in the same area. Before long, the kingdom of Sweden encountered the active resistance of Novgorod (Saksa 1998:108). In both countries the power of the nobility was consolidated. At the same time territorial expansion was necessary because of growing economic interests. A conflict was imminent. Western Karelia was included in the zone of Novgorod's interests somewhat later than areas in eastern Karelia. Novgorod's princes and nobles also exacted tribute from the local population but they never founded strong stone fortresses. Fortresses in Karelia and in Lake Ladoga region (Korela and Pähkinäsaari [Ru. Oreshek]) were Novgorod's retaliation against the Swedish castle of Viipuri. Initially, it was not any frontier point. On the contrary, the first border between the two states was defined in 1323 as a consequence of military conflicts that had already lasted for some decades.

FROM A MILITARY CASTLE TO AN URBAN SETTLEMENT

The Swedish castle of Viborg was situated in a quite remote area and in its first stages it was a fortress of fairly moderate size. Nevertheless, Viipuri's development into a significant trading port came under way very soon:

1. In 1336 Wiborg is mentioned as *civitas* (Lat.) 'town area' (FMU I, 443; Ruuth 1904:21).
2. In 1346 Wiborg is called *köpstad* (Sw.) 'trading place' (FMU I, 552; Ruuth *et al.* 1982:48, 71).
3. In 1351 an "area around dense settlement" – *ohaben* – is mentioned (FMU I, 594; Ruuth 1904:21).
4. In 1352 the congregation of Viipuri is mentioned in sources (REA p. 98).
5. In 1387 the settlement took on an independent administrative role opposite the castle (FMU I, 957; Ruuth 1904:21).
6. In 1393 the Town Hall of Viipuri is mentioned (Ruuth 1904:51 < Archiv für die Geschichte Liv-, Est- und Curlands, III Folge, III Band; Revaler Stadt Bücher III, p. 61)

7. In August 1403, 110 years after the founding of the castle, King Eric of Pomerania granted Viipuri its first town privileges (FMU II, 1173; Ruuth 1904:51-52).

This process required active political action on the part of the central authorities in Sweden. Important measures were the attracting of migrants from Sweden to Viipuri and the founding of the administration of the province of Viipuri (Sw. *Wiborgs län*) (Kirkinen *et al.* 1994:48). The activity of the Catholic Church also contributed to these developments. The establishment of the Dominican and Franciscan monasteries in the town in the late 14th century confirmed Viipuri's central importance as a religious centre (Hiekkänen 1993:126; 1994:32-39).

In the 13th century and in the first quarter of the 14th, the location of the castle of Viipuri cannot be described as that of a centre close to Swedish border area because no border line had even been defined. The castle served as a military stage in a more ambitious plan. Swedish expansion towards the east and southeast continued immediately after the establishment of a military fortification on the Gulf of Viipuri.

At the same time, Sweden was *de facto* at war against Novgorod. Only one year after the founding of the castle of Viborg, in 1294, Novgorodian forces attacked the castle island but with no success. In the next year the Swedish military forces made a counter-attack to Kexholm (Saksa 1998:95-96, 107-108). For Sweden, Kexholm and Landskrona would no doubt have been fortresses of no less military value than Viborg. According to Lovén (1996:454), the strategic location of Landskrona is even comparable to Stockholm and obviously more favourable than that of Viborg. The new castle of Landskrona could be kept by the Swedes for only one winter. In 1301, the fortress was attacked by the Novgorodians and destroyed.

The importance of the Neva water route is well illustrated in economic sphere. The fact that Sweden could not stabilize control over the region of the River Neva later led to numerous conflicts between the Swedish kingdom and Hanseatic League. During the 15th and 16th centuries the League was involved in active trade relationships with Novgorod along the River Neva, thus passing Viipuri (Ruuth *et al.* 1982:75, 82, 91).

Accordingly, the conflicts between Sweden and Novgorod from the 1280s until the 1320s were due to competition over ownership of the resources of the inland areas. These territories did not belong to any state and from the point of view of the Catholic Church they were inhabited by pagans. The lengthy conflicts were ended by a compromise known as Treaty of Pähkinäsaari (Oreshek, Sw. Nöteborg, Ger. Schlüsselburg) in 1323. Sweden did not gain control over the River Neva or Ladoga Karelia. On the other hand, Novgorod could not acquire Viborg or eliminate Swedish influence in Western Karelia and Häme. Although military conflicts continued in Finland and Karelia throughout the 14th century and in the first half of the 15th (warfare in 1337, 1338, 1348, 1350, 1377, 1396 and 1411), the Treaty of Pähkinäsaari reconfirmed general balance of power in the border area for a long time. In Russia, the problem of access to the Baltic became topical only later, at the end of 15th century.

Aggressive movement towards the east did not permit any stabile economic development in Viipuri. It was only after the Treaty of Pähkinäsaari in 1323 that the area around the Gulf of Viipuri started to gain importance as an eastern coastal outpost of the Kingdom of Sweden. Through the creation of a new border, the location of Viipuri became politically relevant at the level of state. Constant tension in the border area was a precondition for dynamic development. From the second quarter of the 14th century onwards Viipuri rapidly grew into a trading port of international importance.

In the 14th century and during the rest of the Middle Ages the rulers of the castle and the province were noblemen who needed both well-armed military forces and luxury items. This called for weapons, clothing, wine and entertainment. For the castle, general representation was essential, and Viipuri ceased to be a military point only. During the 14th century Viipuri grew into an attractive site for craft and commerce, including international trade. On the other hand, the castle could secure safe conditions for trade between foreign traders and the Karelian population of the inland areas. The growing number of inhabitants in the trade place required a larger area for living and the settlement occupied areas outside the walls of the castle island. The new settled area was not protected against military attacks. But in

which part of Europe would life be safe in those times? Also, for the society result of wars could be twofold. Restless times effected every day life not only in a negative way. Necessity to protect the living environment, constant everyday danger, also intensified building and, therefore, trade and craft activity.

According to Swedish laws trade could only be carried out in a town only. In addition, the burghesses possessed right to trade in the countryside on market days (Kirkinen *et al.* 1994:56). During the second half of 14th century trade in Viipuri had intensively grown and thus the town privileges of 1403 meant only formal recognition of the actual situation. During the 80 years from the Treaty of Pähkinäsaari to the new status given by King Eric of Pomerania Viipuri had developed into a significant economic centre on the Baltic coast.

DEVELOPMENT OF THE URBAN ENVIRONMENT

The topographical character of the medieval town area and the specific features of its relief are of central importance for understanding the whole subsequent history of Viipuri. In the beginning of 20th century J.W. Ruuth (1904) published his conception of the early development of the area. According to him, the location of the first settlement was the western shore of the rocky peninsula east of the castle island. The main criteria for his assumption is that this shore seems to be suitable for a harbour. The harbour could be protected by the castle and could be used by traffic both from the sea and from River Vuoksi (Ruuth 1904:20-21). This general concept is disputable in many aspects.

After the Middle Ages, and especially in the second half of the 19th century and in the beginning of the 20th century, the shore line in the harbour area has changed quite drastically. The original medieval shoreline can no longer be traced.

A closer study of a present map of Viipuri makes it clear that the peninsula on the eastern side of the castle might not necessarily have been any reasonable choice for the location of early settlement. In strategic terms, the east was the most dangerous direction. Secondly, an open settlement would not have been protected by the sea from any direction. Viipuri was attacked by the

Novgorodians on several occasions. The gulfs surrounding the peninsula formed no real barrier to the attacking forces. Thirdly, in the centre of the peninsula there is a steep rocky area rising 21 metres above sea level and bordered by a shallow bog to the south-west. Thus, space suitable for building was very restricted. Around the highest point there are three separate areas where the landscape is less steep. In the 15th century, the three medieval stone churches of Viipuri were placed exactly in these areas of more even topography. But with reference to the archaeological material, the history of the 14th century and even the beginning of the 15th century in Viipuri remain blank at present.

In a number of written sources from the 16th – 19th centuries the place-name Old Viipuri (Sw. Gamble Wijborg) appears (Nissilä 1957:156-162). It is not out of question that it had been an Iron Age settlement or trade site before the invasion of the Swedes (Nissilä 1982:19-23). On the other hand, the Swedish place-name *borg* 'castle' (> Viborg) could hardly have been applicable to a non-fortified settlement. In each case there are quite convincing arguments that a place called Old Viipuri was located on the large island known Linnansaari on the northwestern side of the castle. In the 16th century a settlement of suburban type grew up in the eastern part of the island. This area was called Siikaniemi and from 1583 an independent congregation was established there. The area had already been suitable for settlement in earlier times because of its favourable topography.

The question of the potential predecessor of the settlement which later existed in the town area of Viipuri might be answered by archaeological material. The earliest finds from the castle island can be dated to the 11th -13th centuries. In addition, there is one find from the 12th century from the churchyard of the town church and two stray finds of 12th–14th centuries from the island of Kirkkosaari to the west of the castle island (Tjulenev 1995:16-18; Kopisto & Paloposki 1967:27). But no archaeological finds from the period in question are known from Linnansaari island.

It cannot be excluded that the first harbour of Viipuri (or one of two synchronously existing harbours) with buildings adjoining it was located on the island of Linnansaari after the establishment of the

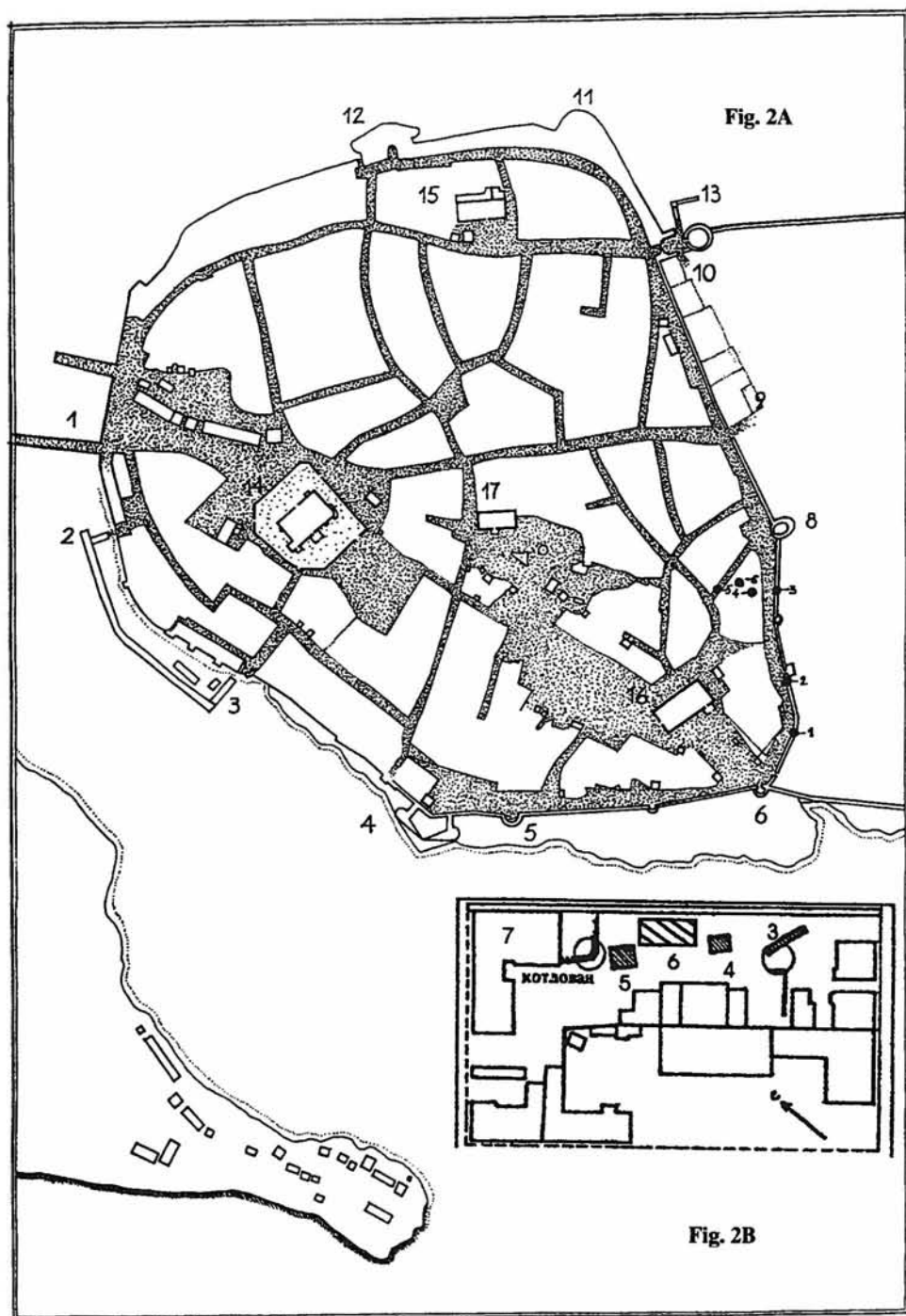


Fig. 2. a) Map of Vyborg during the period of the "unregulated" plan. Excavation sites marked with black dots (1-6); 2 – the Raatitorni tower.
 b) The corner of Titova and Storozhevoy bashni streets: excavation sites of the 2000-2001 seasons; 7 – new building.

castle. The place-name Old Viipuri could well be connected with the harbour and settlement which no doubt would have grown in the vicinity of a port. The attribute "old" is relative and in documents from the 16th century or later times it can well refer to a place which gained importance only in the first half of 14th century.

There is no archaeological evidence of residential buildings or other constructions of the 14th century neither from the medieval town area nor from Linnansaari. The first archaeological traces of building activity on the peninsula to the east of the castle date back to the middle or the second half of 15th century, the time of prosperity of medieval Viipuri (Tjulenev 1995:59; Kirkinen *et al.* 1994:57-58).

In the medieval town area, the system of streets began to take shape during the second half of the 15th century. It has been documented in the earliest map of Viipuri which was drawn at the end of the 1630s (Kartor utan känd proven. nr 439, Riksarkivet, Stockholm). Dominating aspects of the town were the town church, the churches of the Dominican and the Franciscan monasteries and the medieval town wall. One of these monuments of stone architecture was studied by the archaeological expedition in Viipuri during the field seasons of 1998-2000 (Saksa 2000; 2001) (Fig. 2).

THE ARCHAEOLOGICAL INVESTIGATIONS OF THE TOWN WALL

In September 1495 a Russian army approached Viipuri and laid siege to the town. During two months the besiegers made assaults on the fortifications but with little success. The final storming took place in November 30th, the Feast of Saint Andrew. Three of the towers of the town wall were destroyed before the attack came to an unexpected end. A heavy explosion in the tower of St. Andrew beat the army of Ivan III.

These events were part of a lengthy war between Russia and Sweden. In the late 1460s the conflicts between the Kingdom of Sweden and Novgorod had again led to an open state of war. In the middle of the 1470s the situation had remarkably changed. Novgorod had lost its independence and Sweden had been forced to confront a significantly more dangerous enemy, Moscow. In Viipuri, the Lord of the Castle Erik Axelsson

Tott had faced the new threat by pursuing a massive building project. On his initiative, the town of Viipuri was surrounded by a stone fortification (Ruuth *et al.* 1982:104; Härö 1997:31-46).

Owing to several fundamental rearrangements of the town area in the 18th and 19th centuries and in the beginning of 20th century, the medieval town wall was devastated almost totally. In medieval times, the wall had several towers. Of these only one, the Raatitorni tower ("Tower of the Town Council", Sw. Rådtornet, Ru. Ratushnaya) is standing at present. As a result of numerous reconstructions it, too, has lost its original profile (Sinisalo 1971:6-9; Tjulenev 1995:43-48).

From the archaeological point of view, the research of the town wall concentrates on the following points of interest:

1. architectural features of the wall and its towers: initial profiles, subsequent acts of rebuilding and reasons for these;
2. the exact location of the wall and the towers on the present map of the town;
3. the approximate location of the perimeter of the built town area in the 1470s and its relationship to the course of the wall.

These were central tasks of study for the present Viipuri expedition.

Archaeological fieldwork started at the foot of the Raatitorni tower in 1998 and part of the town wall itself was cleaned for documentation. During the following two field seasons, excavation areas were opened on both sides of the wall. In course of the excavations, some technical details of the building and later reparations of the wall could be observed (Saksa 2000; 2001).

The Raatitorni tower and the stone wall were built synchronously. Nevertheless, the three lowermost courses of stones in the town wall were laid close to the wall of the tower. Here the two walls did not have any structural connection with each other whereas the upper courses of the town wall were walled up into the tower (Fig. 3). The average height of the wall in the excavated area was 3 metres. Originally, the wall was 5,2 m high at the Raatitorni tower. Its original width was only 2 metres. During the fieldwork, the latter measurement was taken from the level of ground surface at the foot of the wall.

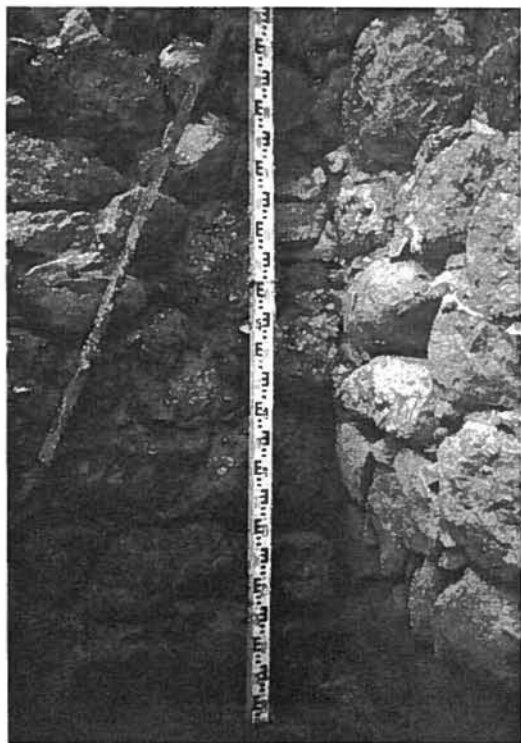


Fig. 3. (right): The lowest part of the SW wall of the Ratusnaja Tower; (middle): The lowest courses of stones of the medieval town wall. Photo: A. Saksa

During the building of the wall, lack of mortar caused constant difficulties. Consequently, the inner space of the wall was filled with rather large stones instead of using small stones with mortar. As a matter of fact, in some parts of the wall there is virtually a dry-stone construction. This made the wall quite defenceless against cannon fire. At the same time, it was vulnerable to influences of adverse weather conditions.

Outside the wall, adjacent to its foot, there was a thick layer of burnt wood. This is probably a trace of the Russian siege of 1495. The wall fulfilled its task with success. But very soon it started to decay. In order to save it from collapsing, King John III ordered in the 1580s that the wall should be propped with palisade constructions (Ruuth *et al.* 1982:192). In the archaeological excavations of 1999 and 2000 both traces of the decay of the wall and constructions for its support were discovered. The latter appeared to be frame constructions made of planks and filled with earth and stones



Fig. 4. Wooden constructions outside the medieval town wall: the remains of "palisade" constructions possibly supporting the wall. Photo: A. Saksa

(Fig. 4). This corresponds to the royal orders from the end of 16th century.

The uneven surface of the bedrock also caused difficulties for the builders of the wall. The horizontal base for the wall had to be constructed artificially by filling numerous pits with small stones. In case the surface sloped very steeply, frame constructions filled with earth, stones and pieces of brick were also used under the wall.

In addition to the observations at the foot of the Raatitorni tower, the town wall has also been archaeologically discovered in other places. This allows us to follow the line of the wall. In summer 1999, remains of the wall were found in an excavation area which was opened 25 metres south of the tower (research area No. 1 in Fig. 2). The area is located between the Raatitorni tower and the tower of the south-eastern corner of the town wall known as Munkkitorni ("The Monks' Tower", Sw. Munkstornet, Ru. Monasheskaya). Here the direction of the wall could be detected

on the base of the lowermost course of stones of the wall itself and by observations of flecks of mortar on the bedrock. In the oldest map of Viipuri illustrating the town before regularization, it can be clearly seen that the wall turns between these two towers. The archaeological evidence very well matches this picture.

During the field season of 2000 remains of the wall came to light in excavation area 3 near Titova street (Fi. Possenkatu) (Figs. 5, 6). This place is located between Raatitorni tower and the Tower of St. Andrew (research area No. 3 in Fig. 2). Here the orientation of the wall was SW-NE. This also fully corresponds to the old map.

Observations of variation in the orientation of the wall raise questions. Until the 17th century, the area east of the medieval town wall was marshy (see Ruuth & Halila 1974:47-48). Even the present topographical situation in the eastern part of the old town permits the conclusion that in the whole section between the round tower and the port the rock descends at a steep pitch towards the east and the north-east. The town wall was built along the edge of the slope, thus creating an artificial extension to the natural obstacle formed by the relief. Significant sloping of the bedrock could be observed in all three excavation areas where parts of the town wall were discovered. In all cases the steep slope was outside the wall. Thus, the present authors maintain that the location of the wall depended on the relief of the bedrock. The extent of the built town area was only a secondary factor. In one area the town wall may have crossed the built area, thus forcibly cutting through it. At the same time in another place the wall could be built in an uninhabited free area. Written sources contain no data about the location of the perimeters of settlement in the late 15th century. The search for the actual border of the medieval town before it was surrounded by the wall remains an archaeological problem.

ARCHAEOLOGICAL INVESTIGATIONS OF DOMESTIC BUILDINGS AND THE STREET SYSTEM

In 2000 and 2001, salvage excavations were carried out in the easternmost part of the medieval town area due to the construction of a residential building

(Saksa 2001). Altogether five excavation areas were opened at the corner of Titova (Fi. Possenkatu) and Storozhevoy bashni (Fi. Vahtitorninkatu) streets (Fig. 2b). In the summer of 2000, there were three archaeological excavation areas in the building site. These could be placed in area not disturbed by the ongoing building activity yet. They were 24 m² (area No. 3), 32 m², (area No. 4) and 24 m² (area No. 5) in size. The distance between areas 4 and 5 was 22 m. In 2001, an excavation area of 96 m² (area No. 6) was opened between the locations excavated during the previous field season.

Wooden constructions were discovered during the fieldwork. The study of these must be considered as one of the main achievements of the present archaeological expedition in Viipuri. Also, for the first time during the whole archaeological research history of Viipuri organic find material has now been carefully gathered and examined.

The latest archaeological observations definitely show that the material culture of Viipuri was quite similar to other Baltic towns both in medieval and post-medieval times. In the cultural layer, the urban material culture is represented from the end of 15th century to the present day.

The general character of the cultural layer

In the excavated areas the thickness of the cultural layer varied from 2.8 to 3.5 metres. The good preservation of organic material was due to two main factors. First, close to the modern ground surface there were basements of buildings from the end of 19th or the beginning of the 20th century and stone pavements from the same period. In several cases, these had not caused any serious damage to the lower layers. In the research area there has not been any building activity after the Second World War. Secondly, there are significant depressions in the surface of the bedrock in which ground water remains standing. Thus, the cultural layer is compressed between two surfaces preventing the free passage of oxygen both from above and below.

The cultural layer was generally composed of dung, wooden chips and pieces of birch-bark. In some places lenses of clay were observed. In all excavated areas there were numerous stones (both scattered and as parts of constructions) and crushed bricks. Also, large amounts of bones of animals and birds were discovered.

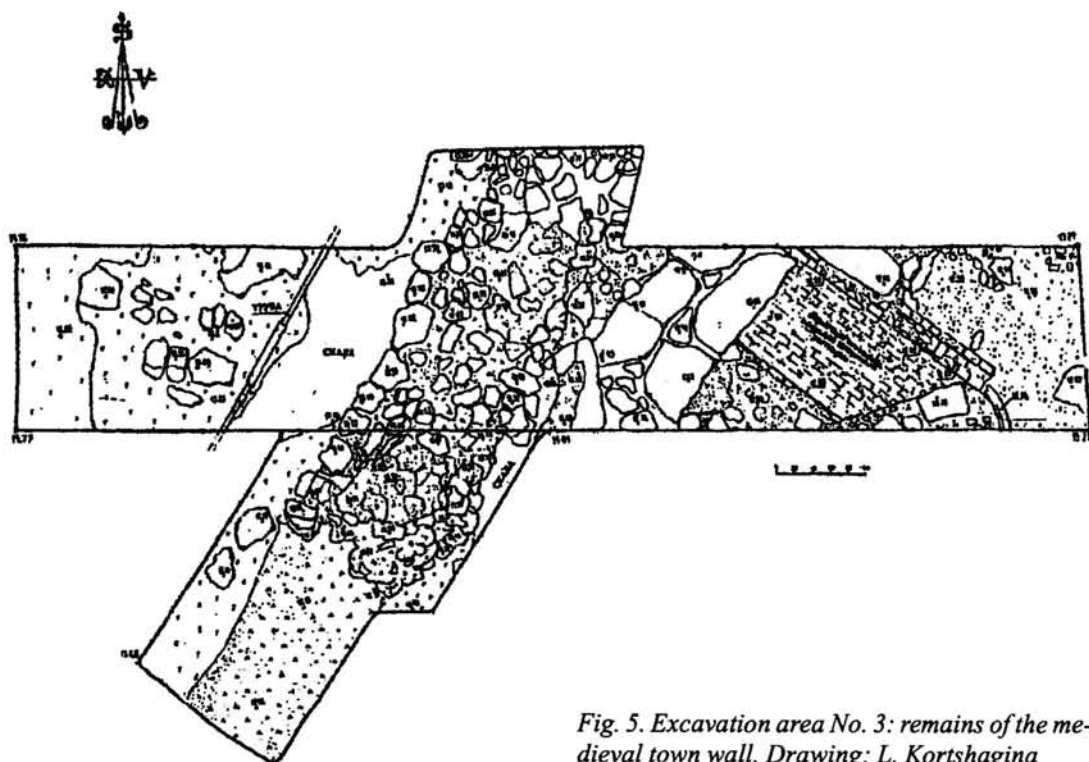


Fig. 5. Excavation area No. 3: remains of the medieval town wall. Drawing: L. Kortshagina

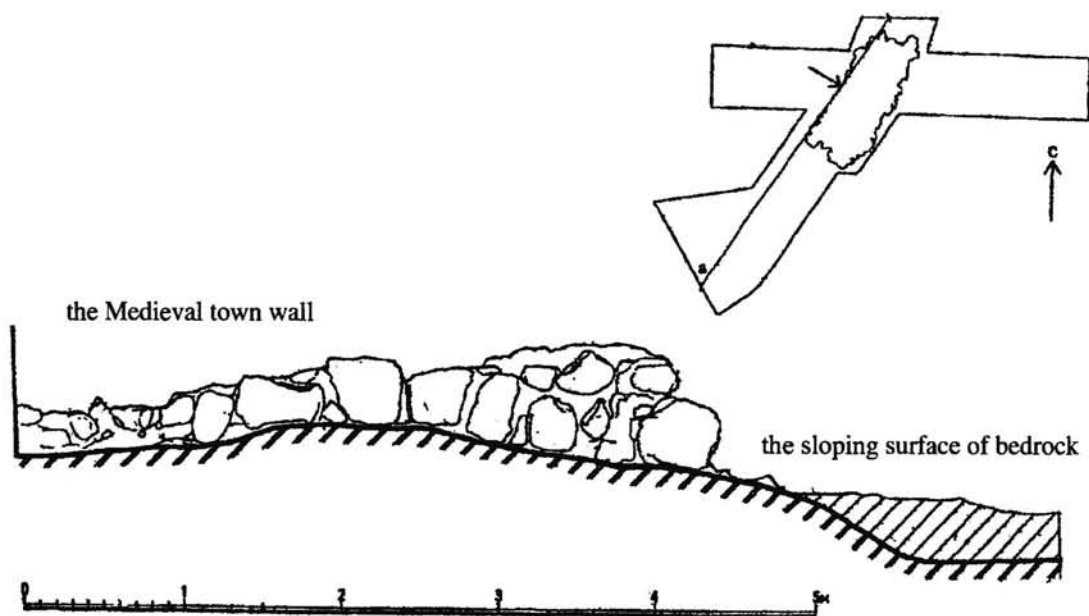


Fig. 6. Location of the town wall on the bedrock. Drawing: L. Kortshagina

The distribution of finds was uneven in the excavated horizons. The majority of finds were found within the frames of wooden constructions or in their close vicinity. On the other hand, in street areas between domestic houses there were very few finds. In some cases thin layers of dung and wooden chips could be distinguished that lacked finds. These kinds of layers were observed between horizons rich with artefacts. The lowermost excavated horizon which lay on the bedrock totally lacked finds.

The lowermost horizon: problems of chronology

The construction of the new building had started before any archaeological investigations had been made in the area (No. 7 in Fig 2b). In the pit originally dug for the foundation of the building only the SW and SE profiles could be cleaned for archaeological documentation (marked by a circle in Fig. 2b). Intact cultural layer could be observed only in the lowermost part of the profiles, approximately 2 m below present ground level. The thickness of this layer was about 0.4 m and immediately under it there was the bedrock. The horizon in question consisted of brown compact humus with large amount of wooden chips.

In the excavation areas 4, 5 and 6 mentioned above, remains of the first building activity in this part of the medieval town area came to light. The bedrock is granite and it was reached at a depth of 2–3.5 m below modern ground level (Fig. 7). The surface of the bedrock is uneven and there are a lot of depressions. One of the most interesting observations was that they had been filled on purpose before laying the first building elements on the rock. In the largest and deepest pits there were wooden, frame-like constructions which had been filled with dung and wooden chips. Even quite low depressions in the rock had been filled with same type of mass. It was also discovered under a stone pavement which formed part of the lowermost horizon in the excavation area 5. The thickness of the organic filling under it was 0.10–0.15 m (Fig. 7b). Accordingly, in excavation area 4 the lowermost wooden constructions had been founded on organic filling layer, not directly to the rock surface (Fig. 7a).

The building material of the frame constructions was mainly pine. In excavation area 6 there was significant sloping of the bedrock. The relief had been levelled by wooden frame constructions – even here filled by dung and wooden chips. This

artificial horizontal plane formed the lowermost (4th) horizon of the cultural layer. A characteristic feature of this layer was that it lacked finds. Only some nails belonging to the frame constructions were found. This fact supports the hypothesis that the layer in question has not accumulated during a long time span. Rather, it was spread on the rock surface quite rapidly and in purpose. This seems to have been a standard practice before starting of any other building activity.

In 1538 and again in 1540, the burgesses of Viipuri appealed to King Gustavus Vasa with a petition to pay attention to the terrible sanitary conditions of the town. Without delay the king issued a decree according to which the streets should be enlarged at each crossroads and houses standing too close to the edges of streets should be moved to the yards. The streets were to be paved by stones and all cowsheds were to be placed outside the town area. In order to improve safety in the town, the king also gave other orders. All buildings which had been built too close to the town wall had to be moved to a distance no less than 10 ells (Sw. *alnar*; approximately 6 metres) from the wall. Because of the risk of fire, all bath-houses should be moved to the area outside the town wall. In 1555, Gustavus Vasa visited Viipuri and to his great annoyance he realized that his ordinance had been obeyed only partly. Thus, he repeated his decree with a new order that all dung must be removed from the town area and wet pits on the rock surface must be filled with stones and sand (Ruuth *et al.* 1982:197–198 < Arwidsson, A.I. Handlingar I: 315–323; Privilegier II Nr 168 et.: 7,13; Gustav I:s registratur XXV: 520, XXVI: 187,188, XXVIII: 283; Privilegier II Nr 250).

The wooden constructions of the lowermost horizon which were discovered in excavation areas 4, 5 and 6 are situated in the same area, the condition of which drew the attention of Gustavus Vasa. It seems possible that prior to the ordinance of the king the depressions and pits on the rock surface had been filled with any readily available material. Obviously dung was abundant and thus it had been used for this purpose. According to a special royal ordinance, the pits were to be filled with sand or stones instead. On the other hand, dung had to be removed from the town. Thus, it is probable that the lowermost part of the cultural layer rich with dung formed before the mid-16th century.

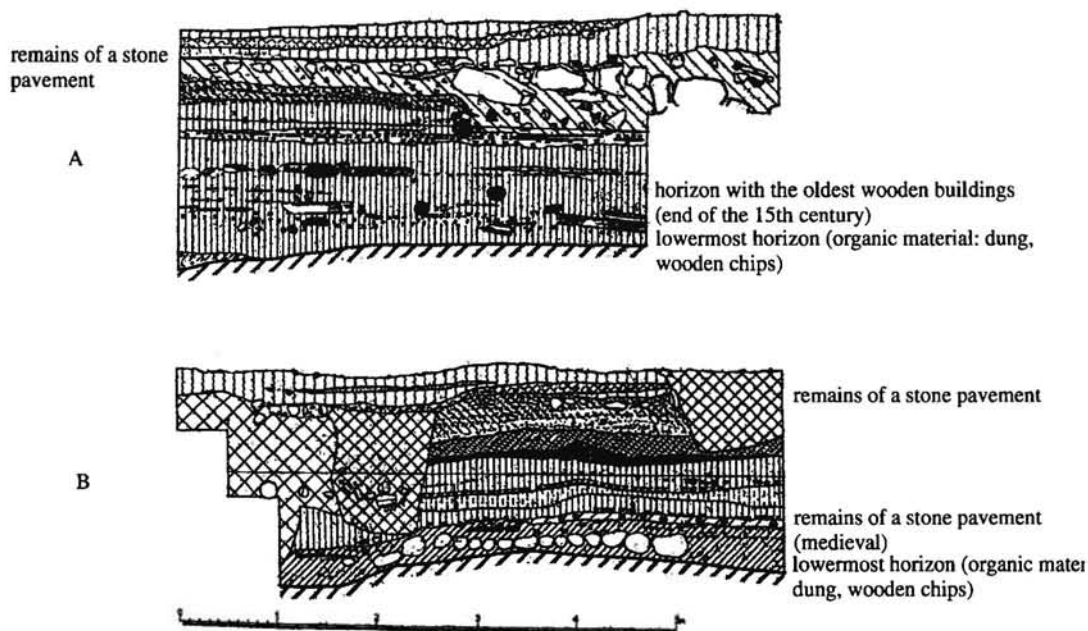


Fig. 7. Stratigraphy of the cultural layer.
 a) SE profile of excavation area No. 4
 b) SW profile of excavation area No. 5

According to the present knowledge, archaeological find material call for the conclusion that the first buildings were erected in the eastern part of the medieval town area no earlier than the end of 15th century. It follows that this part of the later town area was unsettled until the building of the medieval town wall. Nevertheless, the building of domestic houses started very soon after the area had been surrounded by fortification.

On the basis of written documents it can be considered as a fact that the Novgorodians attacked Viipuri in March 1411. The town partly burned down. According to a Novgorodian chronicle only one of the soldiers of the attacking army lost his life in these events (PSRL 1848). The losses on the Swedish side remain unknown. During the conflict, the inhabitants of Viipuri found protection in the castle. It is not out of the question that the eastern areas of the town had been inhabited before 1411 but due to the devastation of the siege the area was temporarily abandoned.

Thus, the boundary of the inhabited area in the 14th century and in the first half of 15th century is not known. As regards possibilities of finding

traces of early urban settlement close to the eastern edge of the urban area in the future, one of the most promising areas seem to be the vicinity of the Dominican monastery.

Characters of the cultural layer and street system of the "irregular" period (beginning of the 16th century until 1640s)

In two excavation areas intact cultural layer had been well preserved above the lowermost, late-medieval layer. These were areas 4 and 6. In both areas the medieval layer was documented as the 4th excavated horizon and in both cases the 3rd and 2nd horizon above it could be dated to a period from the beginning of the 16th century to the 1640s. In the urban history of Viipuri, this period can be described as "irregular". From the orientation of both wooden and stone constructions it can be clearly observed that they had been built before the so-called regularization or total renovation of the street system. The walls of houses were not oriented according to the modern street system which in turn is result of the regularization of the town.

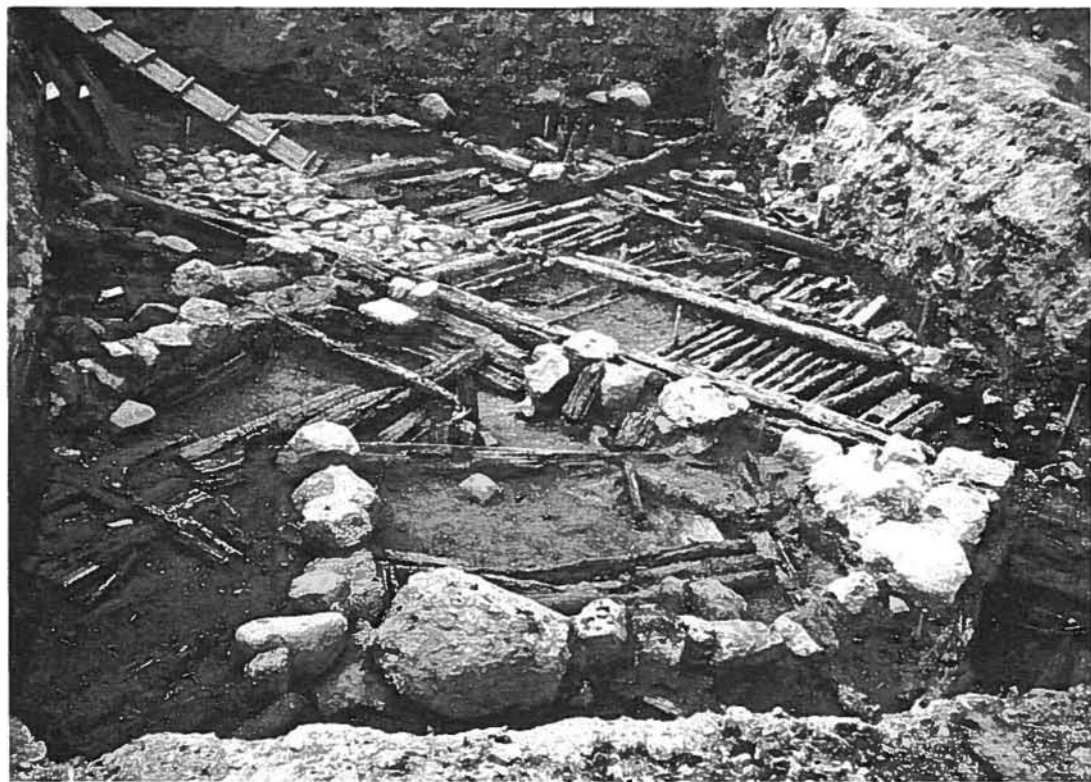


Fig. 9. Excavations in Vyborg 2001: stone pavement and wooden constructions from the 16th century. Photo: A. Saksa

of a stone pavement which was discovered in the southern corner of excavation area 5 in the previous year (Fig. 8). This was 2.1 m wide and it can be interpreted as part of a medieval street which led from the Dominican monastery to the tower of St. Andrew. On the northern side of the street there was the stone foundation of a building. It measured 2.2 x 3 m and its wall adjoined the street line.

In excavation area 6 the approximate orientation of the street was SW-NE (Fig. 9). There did not seem to have been any major changes in its line between the mid-16th century and 1640s. But, in the course of the fieldwork it became clear that the surface of the street line had been renovated several times. Even in same excavated horizon and on the same absolute level there were two kinds of street surface: a layer of thin logs and a cobble-stone pavement adjacent to each other. Above these, there was a second covering of the same street which consisted only of thin logs. Part of this wooden cover had been removed in order to replace it with a stone pavement which, nevertheless, was never finished. It is not out

of question that these interesting rearrangements were due to the orders given by Gustavus Vasa in the 1540s and 1550s. Nevertheless, the king's orders had been fulfilled unwillingly, and thus the changes remained half-finished.

In excavation area 6 the majority of the finds came from the inner spaces of buildings or from the near vicinity of their outer walls. In the street area the number of finds was considerably smaller. In medieval Viipuri the streets were kept clean – although everything is relative – and the placing of waste in yards was carefully determined.

2) Wooden buildings

One of the most significant results of the field season of 2001 was the discovery of two main types of domestic buildings. The first type consisted of houses built of round logs with the horizontal timber blockwork technique.

The second type entailed buildings constructed of both vertical and horizontal elements.

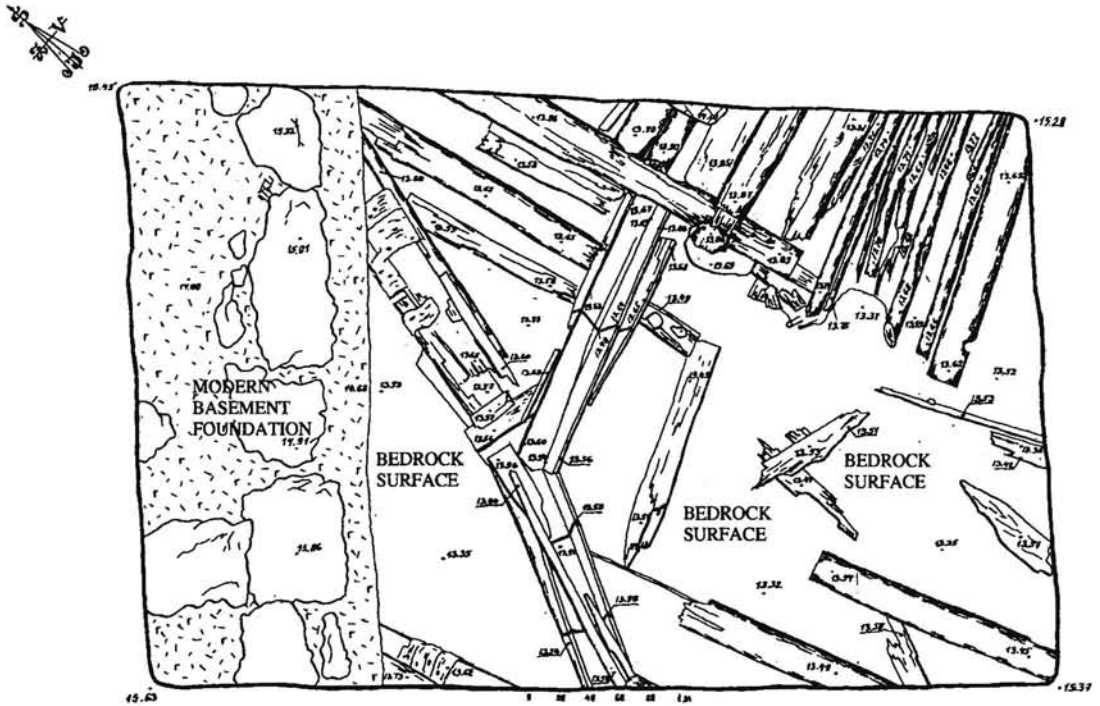


Fig. 10. Excavation area No. 4: oldest discovered wooden structure, late 15th c.

The footing of this type of building is a framework of square timber laid on stones which keep it from sinking. In order to isolate the timber from moisture, birch-bark was placed under it. In this framework, there are square holes into which vertical posts were placed. The posts support another framework in the top, which in turn keeps the ceiling and roof in place. The footing frame is supported by poles.

This kind of vertical solution is in clear opposition to timber blockwork technique which does not require any upright elements. The alternative technique in question represents a combination of two technical solutions, that of wooden buildings and stone building technology. Scattered pieces of crushed brick and small lenses of clay which were observable in the cultural layer probably originate from this type of wall construction. This is the first time buildings constructed with this technique were investigated in the archaeological material of Viipuri. This type originated in German territory where it was widespread in the 12th and 13th centuries, the period of intensive building of many new towns. To the Eastern Baltic Sea area it was brought by migrants from Central

Europe (Jansons 1969:239–258; Caune 1984:83–84).

In excavation area 6 there were two constructions of this type. They were almost connected with each other and adjoined the street mentioned above. In addition, a large number of different kinds of fragments of hewn timber, in some cases in combinations of two or three logs or square timbers, were found all over this excavation area. These are also remains of wooden frameworks. Some of the vertical posts of buildings were joined to wooden foundations by mortise and tenon joints. In the course of the excavations many different types of joints were observed: there were both separate posts with coaks and logs with mortise holes. Many of the logs and other wooden elements were re-used at least once for a secondary purpose.

All these details represent numerous rebuilding phases. This makes a study of the different building techniques quite a challenging task. At present, the total size of excavated areas still remains fairly restricted and thus no statistical conclusions can be made about the variations in building technology yet. It seems clear, though, that

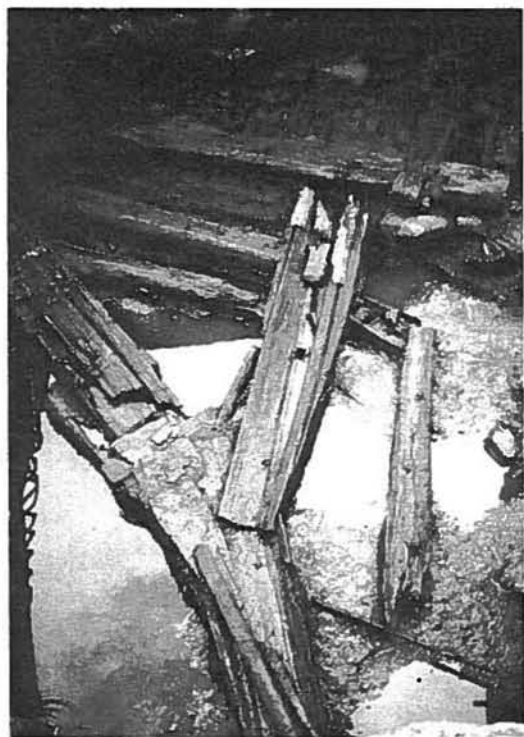


Fig. 11. System of wooden water channels on the bedrock from the late 15th century. Photo: A. Saksa

from the end of 15th century through the 16th century two construction techniques coexisted within a short distance of each other in the same area of Viipuri.

In the excavated area none of the wooden houses was in its original shape. This is not surprising in view of the numerous rearrangements of this part of the town in the 16th century. One possible explanation is connected with the royal decree. The residential quarters had been redeveloped. This can be concluded on the basis of the map of Viipuri drawn in late 1630s, some years before the regularization of the street system. The boundaries of both the quarters and streets are at some distance from the town wall – as had been advised by Gustavus Vasa several decades earlier.

3) The remains of a building with drainage

In the lowermost horizon of excavation area 4, the corner of a log house could be investigated (Figs. 10, 11). In connection with it there were some burnt stones. These constructions lay in the depth of about 1,8 m below present ground surface. Two of the logs

have been dendrochronologically dated to AD 1478 and 1480 (Laboratory for Dendrochronology, University of Joensuu, Finland). The speciality of this building was a water conduit. There were two wooden drains covered by birch-bark. One of them led out of the log house. The two troughs joined each other at an acute angle and from the junction a larger drain led to an area which has not yet been excavated. The width of both narrow troughs was 0.4 m and of the whole water conduit about 2 m were in the excavated area.

Close to the construction described above was a find of special interest: a bundle of sheets of birch-bark. All the sheets were of the same size (25 cm x 25 cm). Birch-bark was used as material for insulating wooden surfaces and objects from moisture.

4) The drainage system

The vertical technique described above is a fairly light construction which does not require any massive foundation to be built into the ground. Due to this architectural fact the cultural layer under many of the wooden constructions now discovered in Viipuri was not disturbed by the following building phase. Thus, the different building periods formed separate horizons which could be clearly distinguished in the excavations.

On the other hand, the light frameworks soon lost their stability because of the influence of water and moisture on them. This in turn required the construction of a complex drainage system in the yards and along the streets. In the area in question this was realized by constructing a system of wooden drains covered by birch-bark (see Fig. 13). In connection with these there were basins of a special type: wooden barrels lacking both bottoms and lids. They were sunk into the ground. Water ran through the drains into these vats. In the water there were a lot of small particles (sand, litter etc.) which easily could block the drains. In the barrels the precipitate gathered on the bottom and it could be removed every now and then. The vats also served as the junctions of drains leading to different directions in the drainage network. In the excavated area two barrels of this type were found. They had probably been placed on the borders of living quarters. The same type of drainage system was in use both in Eastern and Central Europe (Novgorod: Medvedev 1956:208–227; Lübeck: Berndt & Neugebauer 1968:67–68).



Fig. 13. Excavations in Vyborg 2001: wooden constructions from the end of the 17th century. Photo: A. Saksä

also belonging to the "regular" period of Viipuri's history. The find material from the pit supports this dating.

Among constructions from the early "regular" period in excavation area 6 there was the masonry basement of a small building and a floor belonging to the same building (Fig. 13). The basement had partly destroyed a construction from an earlier period. Above the floor there were wooden footings of two houses built in the timber blockwork technique. The orientation of these buildings was also that of the regular street system.

In excavation area 5 the uppermost stratigraphical horizon was a well-preserved modern stone pavement from the end of 19th and the beginning of the 20th century (Fig. 14, see also Fig. 7b). Below the pavement, there was a thick (approximately 1.5 m) layer of mixed humus which contained pieces of bricks and stones. It had formed as the result of numerous rebuilding activities of the 19th and 20th centuries

Part of the same stone pavement was discovered close to the modern ground in excavation area 4. It had survived at a depth of only 0.3 – 0.4 m. The excellent preservation of this pavement

well illustrates the importance of studying architectural elements of later times in the townscape (see Fig. 7a). Together with remains of earlier constructions these form an essential part of a whole picture of the urban culture.

In summary, the stratigraphical observations in excavation areas 4, 5 and 6 give a solid basis for future studies, the aim of which will be to investigate the whole development of the cultural layer in Viipuri. It can be followed from the very surface of the bedrock to the time of the Second World War. During the war, wooden buildings in this area were damaged and they were demolished later.

THE FIND MATERIAL FROM THE 1999-2001 EXCAVATIONS: CHARACTERISTICS OF THE MATERIAL CULTURE OF VIIPURI IN THE 15th – 19th CENTURIES

Clay vessels

The collection of ceramics from Viipuri is not very large. It can be clearly divided into two groups: home production and import vessels. The group

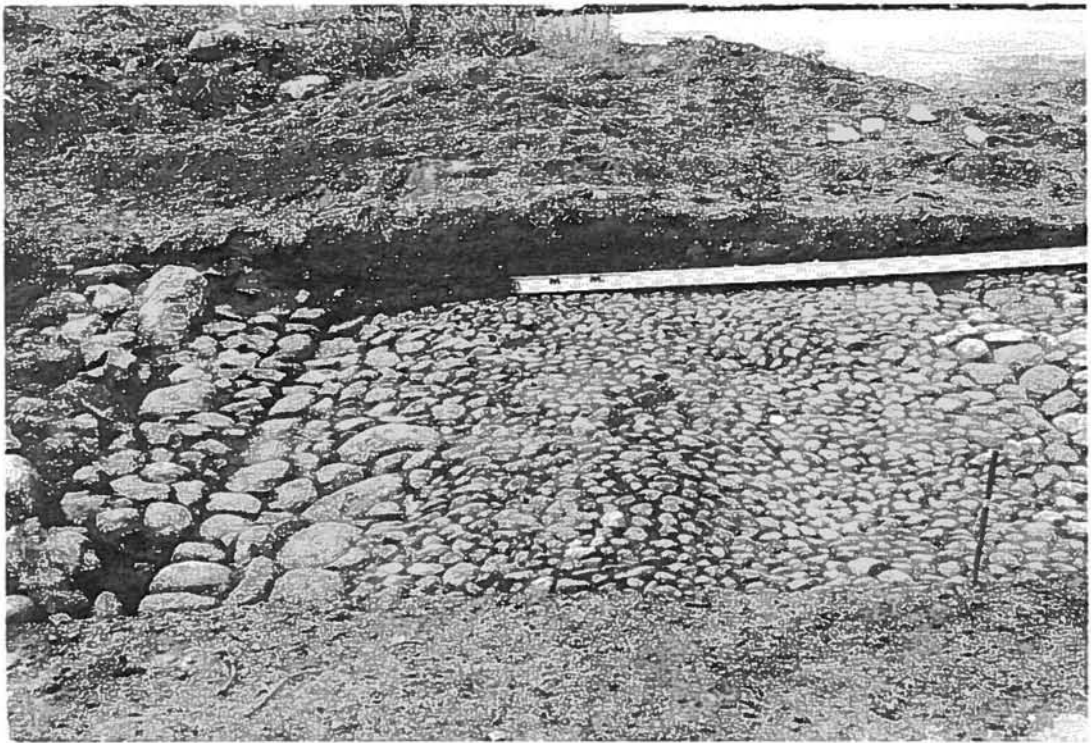
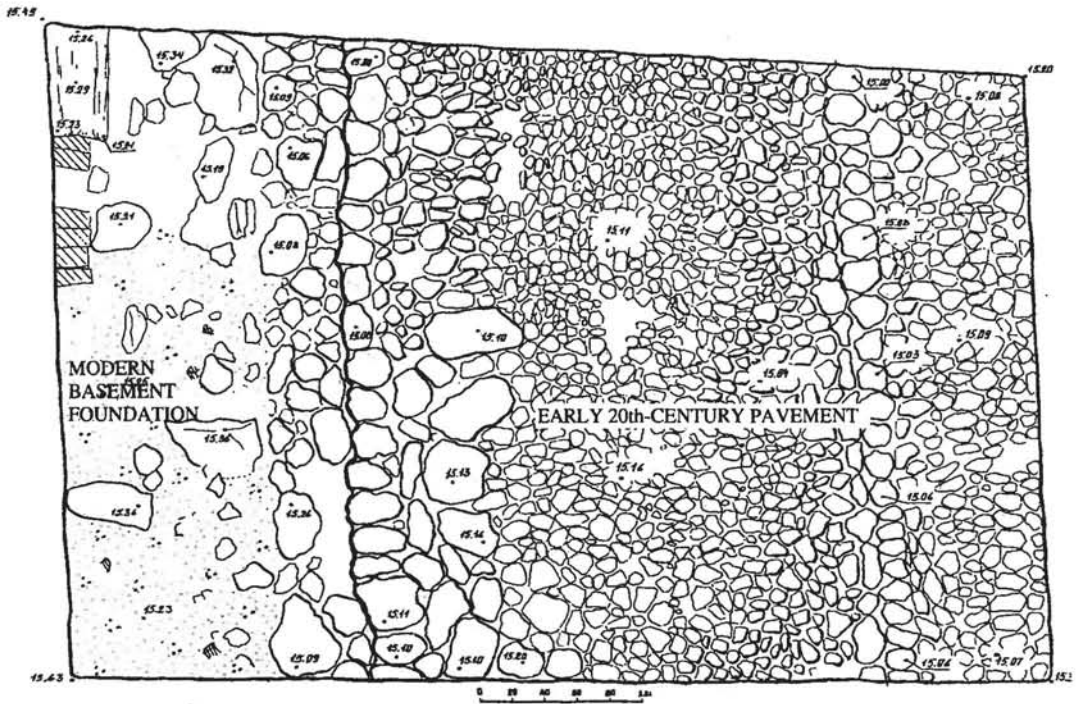


Fig. 14. Excavation area of 4: pavement from the late 19th - early 20th century. Photo: A. Saksa

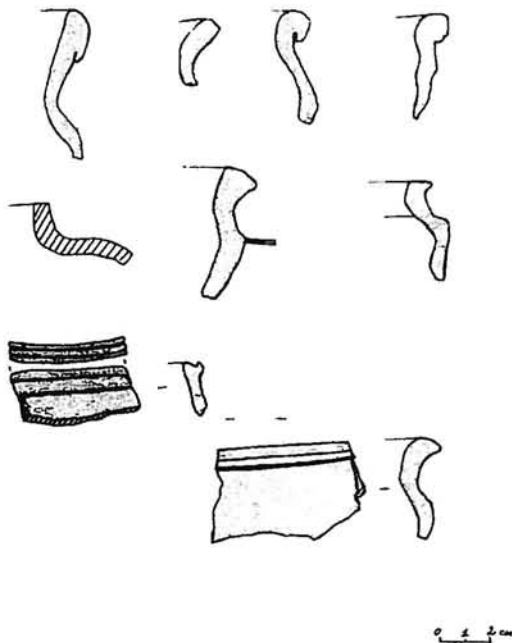


Fig. 15. Russian white ware. Drawing: N. Polyakova

of vessels of home production consists of three-legged pots (Ger. *Gräpen*) and other kitchen ceramics. This vessel type is known from practically all medieval towns in Germany, Scandinavia, the Baltic countries and NW Russia. Fragments of them were also abundant in the cultural layer of Viipuri (35 rim sherds, 15 pieces of spouts, 30 legs of pots). All of the *gräpens* were glazed on the inside, some of them on both the inner and outer surfaces. Both the form of the vessels and their stratigraphical contexts suggest a dating to the 16th – 17th centuries.

In the find material there are many sherds of clay vessels produced in the towns of NW Russia. The largest subcategory is white ware (Fig. 15). In this case, the paste is of low quality and possible tempers are grass, coarse sand and mica. Uneven burning is a characteristic feature. The diameter of the vessels varies from 18 to 22 cm. This type is known from several towns, e.g. from Käkisalmi, Oreshek, Staraja Ladoga, Pskov, Novgorod and Moscow (Koval 2001:98-109). In Viipuri this pottery can be dated to the 16th – 17th centuries.

Import ceramics in Viipuri are represented by German stoneware from Cologne, Frechen, Westerwald and Siegburg. In the material there are

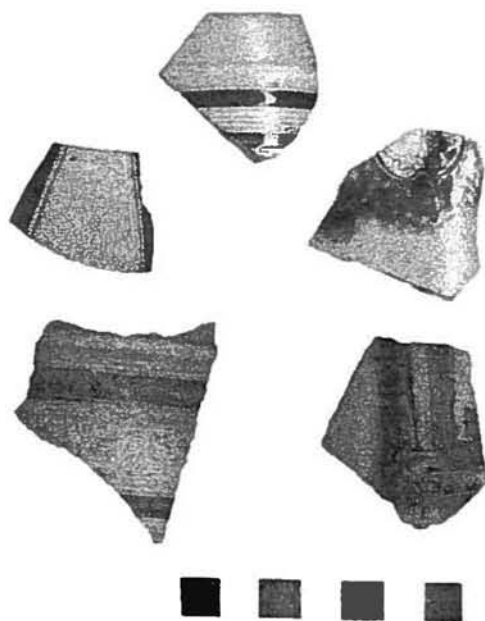


Fig. 16. Sherds of Westerwald jars. Photo: N. Polyakova

5 sherds of *Bartmannskrug* jars. One of these is a rim sherd 6 cm in diameter. It has light brown salt glazing both on the inside and on the outside. It originates from one of the ceramic manufactories of Köln - Frechen and it can be dated to the second half of the 16th century (Gaimster 1997:198-199; Falke 1908:48).

Also found in Viipuri were 10 sherds of vessels produced in Westerwald between the middle of the 16th century and the end of 18th century (Bolshaja illustrirovannaya entsiklopediya drevnostey 1980:160). This pottery can be described as *Blauwerk* ("blue ware") because of the cobalt glazing on its grey paste. Characteristic of the relief decoration is the alternation of grey and blue colours (Fig. 16).

Among the Viipuri ceramic material there is a base of vessel with cordons, a tankard (ca. 10 cm in diameter) (Fig. 17a). It is burnt. This type of ceramics was made in Siegburg and can be dated to the second half of the 16th century (Gaimster 1997:181-184). Three sherds of red ware plates decorated with inscriptions form an interesting subtype of import ceramics. The average diameter of these flat vessels is 22 cm. The glazing is opaque. On two of the sherds there is an inscription in Latin letters and a picture of a bird with

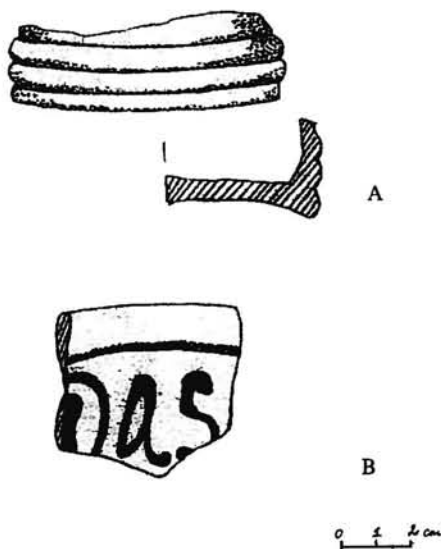


Fig. 17. a) Sherd of a Siegburg tankard
 b) Sherd of a plate decorated with an inscription.
 Drawings: N. Polyakova

stylized flowers under it (Fig. 17b). The third example is a base sherd of a vessel decorated with a semiabstract tulip pattern. Analogies to such vessels can be found in Eastern Saxony (Lausitz), where plates like this were produced between the 1660s and the end of the 18th century (Nemetskaya keramika 1984:16, 20).

The presence of stoneware in the archaeological material of Viipuri indicates the significance of the town in Baltic trade. In this respect, Viipuri can well be compared to e.g. Tallinn, Turku, Stockholm, Amsterdam and several other trade towns in the Baltic sphere. On the other hand, clay vessels imported from Russian towns illustrate lively contacts with the Russian Empire.

Metal finds

Among the versatile find material from Viipuri, the metal finds stand out as a very interesting group. As expected in a medieval town, the majority of these items are knives.

In everyday life, the knife was one of the most important implements. The total number of knives found during three field seasons is 27 and their condition of preservation is quite satisfactory. Nevertheless, knives are one of the find groups

that will allow detailed investigations of typology, manufacturing techniques, places of production, use etc. only after more examples have been gathered in much larger areas than it is the case at present. Metallurgical analyses must necessarily be part of this research. At present it is possible to make some preliminary conclusions.

1) Manufacturing techniques

The production techniques used for the knives found in Viipuri was simple and adapted to mass production. All the knives are made of wrought iron and none of them had any core of steel in blades. The carbonization of iron is a slow process and it was thus not economically profitable for an individual smith to produce steel. Even to Central Europe steel was imported from Sweden, Russia and Spain. In Viipuri no traces of steel import have been recognized.

All the knives found in Viipuri were produced in the town or in nearby areas where apparently local ore was used for iron production. In all cases, both the blade and tang of the knife were forged from a single piece of iron. Hardness was created by hammering and immediate chilling. This technique had developed both in Russia and in Western Europe since the 14th century and in the 15th – 17th centuries it was the prevailing one. As the knives from Viipuri date from this period, it can be seen that the development of cutlery here followed all-European lines. As distinct from knives produced in Western Europe, there are no marks on the blades of the knives in Viipuri. This supports the hypothesis of local knife production.

2) The forms of knives

Among the knives from Viipuri there are two prevailing forms: knives with triangular blades and knives with straight backs. In both groups there are examples of both narrow and wide blades. The length of blade varies from 5 to 13 cm. Unfortunately no typology of knives from the 15th – 18th centuries has been published either in Russia or in Western Europe. On the other hand, finds from Viipuri can well be compared with the European material from earlier times that has been published (Cowgill *et al.* 1987).

One of the knives has a long and narrow blade (13 cm x 1 cm). This item was found in excavation area 6 in the 2nd excavated horizon which dates from the second half of the 17th century.

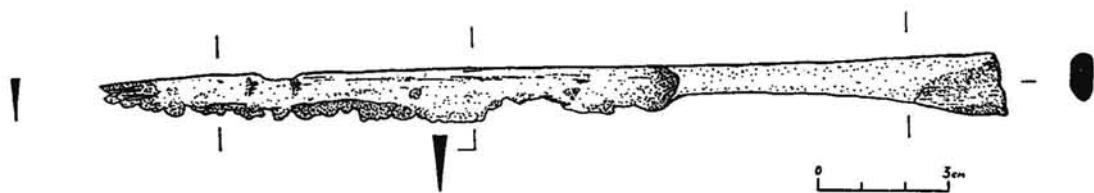


Fig. 18. Medical knife – scalpel?, first half of the 16th century. Drawing: S. Belsky.

In the European material knives of this type are known from throughout medieval times. Opinions on the use of this type of implement varies. The most usual interpretation is that they are scalpels, knives for medical operations (Fig. 18).

In four cases handle of the knife had been preserved. Three of these are made of bone, one of them is a wooden handle. One of the bone handles is ornamented with small stamped bull's eye designs. The bone handles are affixed to the tang with small rivets as was common practice.

3) A seal ring

In addition to the knives, one more metal find from Viipuri calls for special notice here. This find is a seal ring of bronze (Fig. 19). Exact corresponding finds are known from two graves. These are a destroyed burial in Roiu, Estonia, and a cemetery near the village of Voinosolovo on the Itje zora plateau, Leningrad region, Russia (Valk 1991:182–199, Tab. XXX, 8; Spitsyn 1896:51–52, Tabl. 27, No. 26)¹. Generally seal rings of this type were widespread in the Eastern Baltic Sea region, in Karelia and Finland, in the 15th–17th centuries (Sarvas 1973:41–61). The type was now found for the first time in Viipuri. The Voinosolovo find has been given a coin dating. In the same find context with the ring there were coins minted in Tallinn in the end of 15th century. Thus, the item from Viipuri can be dated as one of the earliest examples in the fairly large collection of known rings of this type. It was made no later than the beginning of the 16th century, possibly at the end of the 15th century.

The metal finds from Viipuri illustrate the urban culture of burghesses. Different manufacturing traditions could well coexist and the use of implements was many-sided. As a whole, the metal finds from Viipuri are well suited to the picture of material culture of a medieval town in Eastern Baltic Sea region.

4) The coins

The coins found in Viipuri during the fieldwork periods of 1999–2001 form a series in which all major periods of the history of the town are represented. There are coins of the Kingdom of Sweden, the Russian Empire and the Republic of Finland.

The earliest coin found in the three fieldwork season of 1999–2001 is an *artie* from the episcopacy of Tartu (Derpt, Dorpat) struck by Bishop Andreas Peper (1468–1473) (Fedorov 1966:34, No.19; Haljak 1997:78). On this item there are the letters A.V. and a sword between two stars; the circumscription is ANDREA.E, RV. On the other side of the coin there is the emblem of the episcopacy, a sword and a key placed crosswise; of the original circumscription MONETA TARBAT the letters MO – A.T are legible (Fig. 20). The find context of this coin is of great interest. It was namely found not far from the town wall in a stratified horizon in which there were remains of wooden buildings. The horizon can be dated to the end of the 15th or the beginning of the 16th century. So far, this *artie* is the only example known from the town area of Viipuri or from neighbouring areas. It indicates the direction of the trade connections of the town in the 15th century. Connections between Viipuri and the Baltic region have not been studied on the basis of archaeological materials, and this remains a promising area for future research.

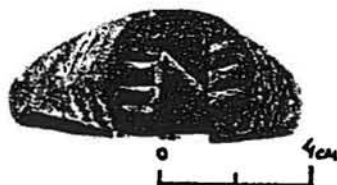


Fig. 19. Bronze seal-ring, beginning of the 16th century. Drawing: S. Belsky



Fig. 20. *Andreas Peper* (1468-73), *Dorpat Episcopacy*, silver orrtrug. Drawing: *S. Belsky*

Also during the field seasons 1999-2001, the following Swedish coins were found²:

- 1) John III (1568–1592): 3 coins: 2 examples of 2 öre coins from 1573, copper, and 1 half-öre coin from 1581. Silver. These coins were found in excavation areas 4, 5 and 6 in horizons dating from the 16th century (Gluck *et al.* 1974:41-42, No. 51, 51c, 73).
- 2) Queen Christina (1632–1654): the largest group of coin finds, 6 items: ¼ öre from 1634, 1637, 1638, 1640 and 1634–42. Copper. One of these coins was found in the excavation area 5 in the summer of 2000, the others in the excavation area 6 in the third excavated horizon which on the basis of other material groups can be dated to the 17th century (Gluck *et al.* 1974:94, nos. 92-101).
- 3) Charles XI (1660–1697): 3 coins: 1/6 öre from 1666 and 1667. Copper. One of these coins was found in excavation area No. 1 near the Raatitorni tower in 1999, the two others in excavation areas 4 and 6 in contexts which can be dated to the end of the 17th or the beginning of the 18th century (Gluck *et al.* 1974:112, Nos. 235, 237).

Some of the coins were found in intact layers and thus their archaeological context is informative. They can be studied not only from numismatic viewpoint but also as archaeological objects. Because of this, the most interesting items are coins of Sweden kingdom. They represent coin types

which are fairly usual for a town in the eastern Baltic area. Most of them were found in stratified layers which could be dated even by other criteria, in the first place by dendrochronology. At present, it is hard to make any exact conclusions about the distribution and the deposition processes of coins in the cultural layer of the town. But, it has become clear that in Viipuri individual coins remained in circulation for a short time only. This archaeological observation confirms the commonly known historical fact that there were intensive trade connections between Viipuri and the rest of the Baltic region in both medieval and post-medieval times.

Leather production (Fig. 21)

During the field seasons of 1999–2001, the total number of leather finds was more than two and a half thousand (excavation areas 1 and 4: altogether 997 items; excavation area 6: 1682 items). There are also some finds of other materials – the wooden heels of shoes and pieces of felt – which are connected with shoe production. The average number of leather finds per square metre did not exceed 10-15 items and in some parts of the excavated area it was even less. This kind of distribution can be considered as typical for the cultural layer of a town in medieval Russia, too (Kurbatov 1997:277).

A feature of a special interest in Viipuri is the small number of off-cut finds as compared to ready products, fragments of such and pieces cut from whole items. This gives good reasons to suppose that there has not been any leather manufacture in the area now under investigation or in its near vicinity. Pieces cut from shoes and other leather items show that the town dwellers repaired used articles at home.

In addition to shoes, many other leather find categories usual in medieval towns are represented in Viipuri. These are fragments of mittens, different kinds of bags and pouches, belts and scabbards.

1) Shoes

The most usual type of footwear consists of low shoes. Almost all the fragments of shoes found in Viipuri belong to this category and the same is true of whole items.

The most simple type is a shoe made of one single piece of leather. The forepart is cut in

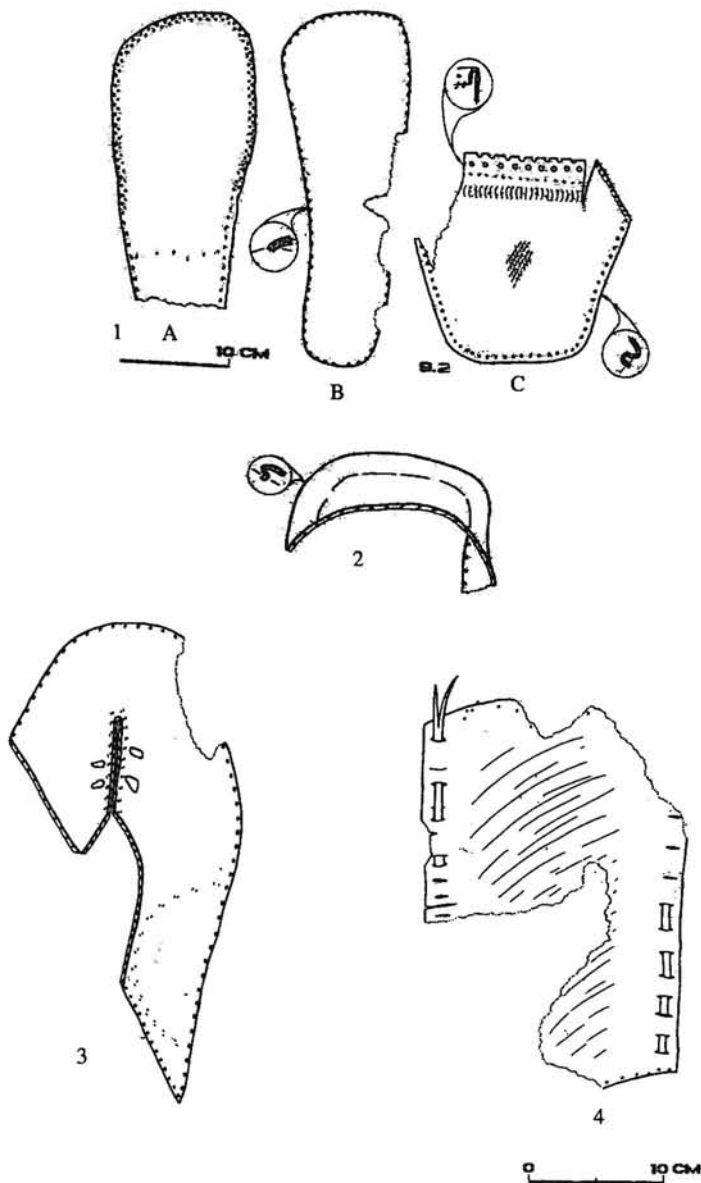


Fig. 21. Main types of shoes from Vyborg: 1 – round-toed shoes, 2 – “bull’s eye” shoe, 3 – upper of turn shoe, 4 – one-piece shoe. Drawing: A. Kurbatov

trapezoid shape. The usual raw material for this shoe type is thick cattle hide. Characteristic for this group is its uniformity both in form and style. This points to a local workshop with its own specialized tradition in the fabrication of this shoe type. The closest corresponding finds seem to be those from the town excavations of Ivangorod (Leningrad region, Russia) (Kurbatov 1991:71-72, Ris. 1).

Other typical groups of footwear in Viipuri are turn-shoes. There are different types of shoes that differ from each other in form and style. In the find material there are both asymmetrical and straight soles. Usually the upper was joined to the sole by using a narrow extra strip of leather in the seam, a rand. This both strengthened the shoe and made the seam impenetrable to water. Large numbers of fragments of these were also found in Viipuri.

Two main types of boots could be distinguished among the finds. There are fragments of both open and closed boots. A narrow leather thong was used for attaching the boot. Corresponding finds for this boot type are known from the Netherlands where they belong to the archaeological material of the town of Dordrecht and the monastery of Heveskesklooster (Province of Groningen) (Goubitz 1997, Fig. 23; Goubitz & Boersma 2000, Fig. 6).

The well-known shoe type of the 16th century, the so called "bull's eye shoe" is present in the find material from Viipuri. In the rubbish dump in excavation area 4 (second half of the 17th century) fragments of slippers were found. This type of footwear was used both as an everyday shoe and as part of festive dress.

2) Analogues to the shoe finds from Viipuri

One-piece shoes correspond to shoe finds from the 16th–17th centuries in several Russian towns. Russia was the only area in Europe where the production of this simple type of footwear continued through medieval times parallel with professional shoemaking. The geometrical form of cutting the upper part of this shoe type is analogous to examples found in Ivangorod, Novgorod, Pskov and Staraja Ladoga.

In details of the boot finds from Viipuri there are also similarities with leather products from Russian towns. A distinctive feature is embroidery in the legs of a few boots which can be considered as a rarity in the first half of 16th century (Kurbatov 1997:71-74). Altogether only four corresponding items are known in the find material from Ivangorod, Moscow and Kazan. In addition, this kind of decoration in boots has been recognized in Tver where it dates from the 14th century or the first half of the 15th century.

At the same time, some other types of footwear found in Viipuri are similar to Western European shoe fashions. One of these is a round-toed shoe which was called the "bear paw" in Italy, the "duck beak" in England and *Kuchmeiler* in Germany. It was quite popular among noblemen, warriors and rich merchants from the beginning of the 16th century all over Europe. In the archaeological material this fashion is known from Stockholm, Groningen

and the monastery of Saint Martine in Vevey, Switzerland (Helgeandsholmen, 1982, Fig. 185; Goubitz, 1987, Afb. 1; von Marquita & Volken 1996, Tafel 2).

OTHER FIND CATEGORIES

Several other find categories are represented in the archaeological material recently discovered in Viipuri. These will be treated as separate research topics and thus they are not a matter of discussion in the framework of the present article.

The wooden material is large. It includes fragments of kitchen vessels, e.g. wooden plates and other vessels produced by turning on a lathe. Small stave vessels were not found. But there were bottoms of barrels and staves of larger vessels.

An interesting find group is fishing equipment. In this category there are numerous net weights (stones wrapped in birch-bark), floats made of pine bark and net markers cut from birch-bark. On these there are so called housemarks, marks of the owner of the net. Marks of this type can also be recognized on several other types of utensils. Other articles made of birch-bark are shoes (3 items) and knapsacks (3 items).

In the moisture conditions which prevail in the lower part of the cultural layer of Viipuri fragments of textile have also been preserved. Stone was used as the raw material for spindle whorls and for a mortar.

Glass appears to be quite a rare find group in Viipuri. All the fragments of glass vessels found so far are very small.

Altogether 44 bowls of clay tobacco pipes were found. On 29 of these there is a stamp. Four of the pipe bowls are decorated. The majority of them were found in mixed layers of the 18th century. There are also a few examples of pipes from the end of the 17th century. Their countries of origin are England, Holland and Sweden.

CONCLUSIONS

At the present stage of research, the general picture of Viipuri as a lively international port of trade is partly supported by the archaeological material. Of great interest are the changes in the geopolitical

position of the town through the centuries and their effect on the living standard of the town dwellers, and in the physical structure of the townscape (fortifications, other public buildings, infrastructure of the town area etc.). At the same time, the detailed study of remnants of domestic buildings and the find material connected with them permits a discussion of the everyday lifestyle which in some cases seems to have been less prosperous.

In this article some of the major characters of the cultural layer of Viipuri, constructions discovered in archaeological fieldwork and find material have been described. The material now available offers a wide range of possibilities for future research which is still in its initial in Viipuri. The work of the present expedition will continue both in the field and in the form of studying the different material groups.

Some major questions concerning the topography of the town and the early development of the townscape have been touched upon here. The development of domestic housing, street system and the defence fortifications remain areas of further investigations. Many of the preliminary interpretations and ideas which now are actual matters of discussion in Viipuri require more material both from excavations in Viipuri itself and as corresponding observations from other towns of the Baltic area.

In spite of a few exceptions, most of the archaeological information gained during the work of the present expedition concerns the 16th, 17th and 18th centuries. The very end of the 15th century is represented by the town wall, a silver coin of the Tartu episcopacy, some types of ceramic vessels and shoes. The development of the eastern part of the medieval town area, the area now under investigation, may have started somewhat later and thus the transition from medieval times to the post-medieval era is not clearly observable in the material culture yet. In the near future, archaeological work can hopefully spread to other sites in the town area and some light can be cast on the 14th and 13th centuries which so far have remained uncharted in the archaeology of Viipuri.

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