

The Defense Wall in the Northern Part of the Lower City of Olbia Pontike

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The first investigations of the defense wall in Olbia took place in the beginning of the 20th century, so this complex of problems has attracted the attention of researchers for about 100 years. Certain parts of the defense walls, the towers and gates, were of special interest to different researches since the beginning of archaeological excavations in Olbia. Now we know that the defense system of Olbia and its *chora* existed for centuries¹. However, it was changed, redesigned, rebuilt and modernized several times during this period according to the military strategic plans and the shape and size of the protected territory.² The most prominent parts are the remains of the defense wall of the Hellenistic period and attached to them towers of the Roman period excavated by B.V. Farmakovskij in the southwestern part of the settlement, the remains of the defense wall of the Roman period in the central part of the Upper and Lower City (Sectors I, R-25 and NG), the remains of the northern (excavated by B.V. Farmakovskij)³ and western gates (excavated by S.D. Kryžickij)⁴ coordinated with the grid of the city streets and the system of large roads radiating from the city to the settlements of Olbia's *chora*. However, not all of problems concerning the dynamic of the development of the system of the defense walls of this ancient Greek city, its arrangement, localization and system of building, are solved yet.

At the present time the best preserved and investigated parts are remains of private and public buildings and defense structures in the Upper City. Here the main lines, contours and directions of the defense walls and other ancient military installations of the Classical, Hellenistic and Roman periods can be traced. Furthermore specific characteristics of the construction of the defense walls of different periods were revealed. In the territory of the Lower City the only known remains of the defense wall dating to the Roman period were found in Sector NG. The Roman wall reduced the inhabited and protected territory compared with the previous periods. The remains of house blocks of the Hellenistic period in the Lower City covers a much larger area but the defense wall of the most prosperous period of the city was not found. Logically, they had to be located in the area of Sector NGS in the far northern part of the Lower City in continuation of the defense wall of the Upper City in Sector I, but in this sector during the excavations of 1985-2006 were mainly found Hellenistic house blocks. At the end of 1980s and the beginning of



Fig. 1. General view of the northern part of Sector NGS. 1 – Sections in the foundation trench; 2 – Locations of human skulls; 3 – Excavated stratified and yellow clay foundations of the defense wall; 4 – Reconstructed defense wall foundation area.

1990s under the direction of N.A. Lejpunskaja a massive layer of yellow clay was found here.⁵ The excavator was of the opinion that this layer was to be related with the military defense installations in this part of the city built of mud bricks analogous to the remains found near the western gate and that it had accumulated as a result of the destruction of the wall after Zopyrion's siege of Olbia not later than the last third of the 4th century BC. In the course of these excavations Hellenistic materials was found in the very upper part of this yellow clay massive layer only. However, neither the layout nor the character, the approximate scale and dimension of the defense wall were then determined.⁶

The results of the last years of excavations in the far northern part of Sector NGS revealed new material and evidence for the defense wall in the northern part of Lower City of Olbia. These data provided us with an opportunity to reconstruct the line of the defense system in this part of ancient city during the Hellenistic period (Fig. 1).⁷

In our excavations in 2003 in the eastern part of northern edge of Sector NGS, the section of a large layered foundation # 757 was found in the eastern face of the riverside cliff. This is a specific Olbian building technique used to increase the strength of the construction of the massive walls. This building technique consisted of horizontally alternating layers of yellow clay and ash grey clay filled into the foundation trenches under the massive walls. Remains of these strata were found in the foundations of many important buildings especially of the central part of the Upper City. The discovery immediately attracted our attention because this building technique was used among other places in the defense walls of the Upper City, while in the Lower City layered foundations were almost unknown at that time.

Trial trenches in the northern part of Sector NGS showed that the layered foundation continued there with a width of about 3.80 m. It crosses the coastal line in an east-west direction towards the natural steep slope and terraced area. The layered foundation and its foundation trench were traced in the western direction where it was revealed that the layers gradually merged and turned into the large yellow clay foundation built in the same foundation trench.⁸ The discovery of the 3.80 m wide wall foundation obviously testifies to the existence of the defense wall which was the main purpose of our investigations in this area in recent years. The result of this work was the uncovering of traces of different architectural features all connected to the large foundation trench, the direct evidence of the existence of a defense wall in the northern part of the Lower City of Olbia. The structures uncovered are a large clay foundation (# 770), a complex of yellow clay foundations (# 773, 774, 775), a ceramic pavement (# 772) and in the north-western part further remains including a wall (# 780), a large pile of rubble (# 781) and traces of a large trench on the western slope in the transition to the terrace area.

The large clay foundation (# 770) was rectangular and trapezoidal in form, oriented east-west (Fig. 1). The southern border is defined according to the



Fig. 2. Large foundation # 770. South view.

northern part of the pottery pavement (# 772) and the complex of yellow clay foundations (# 773, 774, 775). The northern border is delimited by the rubble heap excavated earlier which prevented the uncovering of the original surface of the large clay foundation. The eastern part is inaccessible because of the recent cement construction over the remains of the first centuries AD stove excavated earlier. The western border has not been determined yet. It is obscured by the intermediate border of the trench. According to the results of earlier stratigraphic observations in the eastern part the large clay foundation gradually changes into the large layered foundation (# 757) investigated here in 2005.

The uncovered southern edge of the large clay foundation formed a practically straight line. The foundation was located directly under the layer of turf formed here since the excavations of the 1980s-1990s at the height of 10.40-10.15-9.96 m over the estuary level dropping towards the east. The area of the foundation surface investigated is 17.40 x 1.30/1.70/2.50 m.

The foundation is constructed of a thick layer of very dense and hard light yellow clay soil of clumpy structure similar in hardness to the yellow clay foundation in Sector I⁹ (Fig. 2). The soil definitely consists of a mixture of bed rock clay and yellow loess, admittedly with an admixture of river sand. The mixture was very hard packed under the pressure of great weight. The structure revealed practically no finds causing a serious problem of dating it.

The upper layers of the foundation were significantly damaged by later interferences and distorted by a few heaps of stones excavated here in 1989-1990. This was the reason for the comparatively small part of the top of the foundation being preserved, especially along the northern border of the cleaned area. However, we argue that the foundation had a relatively flat, horizontal, yellow clay surface.

Two notable fissures uncovered in the upper layers of the top of the



Fig. 3. Complex of foundations # 773, 774, 775. Northern view.

large foundation are of special interest. The fissures, 3.40-4.20 m long and 0.12-0.20-0.26 m wide, run across the foundation. They are bow-shaped curving east towards the estuary coast. The cuts are wedge shaped and filled with dark yellow clay soil eroded from the upper levels. The presence of these fissures is evidence of the considerable pressure created by the massive walls causing the soil to erode towards the estuary.

The complex of yellow clay foundations (# 773, 774, 775) consisted of three parallel foundations from east to west. Discovered in 2006 these foundations are situated south of the large foundation (# 770) and almost perpendicular to it (Fig. 3). They are all roughly rectangular with a N-S orientation. Their northern edge was delimited by the large foundation. The southern edge is limited by the intermediate border of the trench. These foundations are found at the height of 10.30-10.00-9.50 m over the estuary level dropping towards the east, but stratigraphy shows that the height of their original surface was more even. The discovered length of the foundations are 2.90-2.93 to 3.62-3.64 m. The distance between them is 1.92-2.00 (# 773-774) and 2.42-2.60 (# 774-775) accordingly. They are all made of hard yellow clay 0.42-0.65 m wide, the average width about 0.50-0.54 m. The soil is a comparatively homogenous mixture of bed rock clay and yellow loess and did not contain any finds. The nature of the soil and their construction is similar to the neighboring large rampart.

Over the south part of foundation # 773 (near the intermediate border) was discovered a small heap of rubble with a N-S orientation. The shape of this heap is roughly rectangular (0.52-0.66 x 0.60-0.64 m) following the line of the foundation. The stones are rough without traces of processing. The largest among them measures 0.34-0.42 x 0.24-0.28 x 0.08 m. The others are typical rubble of average size for this excavation area. Probably the heap is the remains of the wall built over the foundation or it appeared as a result of the destruction and dismantling of the wall.

We consider the three foundations and the large foundation to have con-



Fig. 4. Ceramic pavement # 772. Western view.

stituted an integral complex as they appeared around the same time and were used during approximately the same period. The parallel foundations represent the substructures of a building constructed directly under the defense wall, perhaps of military function.

Unfortunately, the main body of the large yellow clay foundation and the complex of parallel foundations were very poor in artefacts creating a serious problem of their dating. The evidence for dating the building of the defense city wall in the first half (or may be the first decades) of the 3rd century BC are (1) rare finds of the sherds of the Hellenistic period and (2) the fact that the construction of these foundations were cut into the ceramic pavement dated to the 4th century BC. However, to answer the question of the exact date of the building of the defense wall, further excavation and special investigations are needed.

The ceramic pavement (# 772) (6.14-6.47 (E-W) x 2.70-3.46 (N-S)) was found south of large clay foundation (Fig. 4). Its shape and size is not determined, but it is cut by the large foundation (# 770) and the three parallel foundations (# 773, 774, 775). The other borders are not found and as such they were delimited by the intermediate borders of the trench. The pavement is situated between foundations # 773, 774 and 775 and west of foundation # 773.

The pavement consists of flaky, yellow, dark yellow, gray and brown clay soil mixed with many ceramic sherds and sometimes with ash, sand and charcoal. The majority of the sherds were found in the western part of the pavement to the east and west of foundation # 773. The western part contained numerous river shells and sand lying as amorphous layers and lens shaped

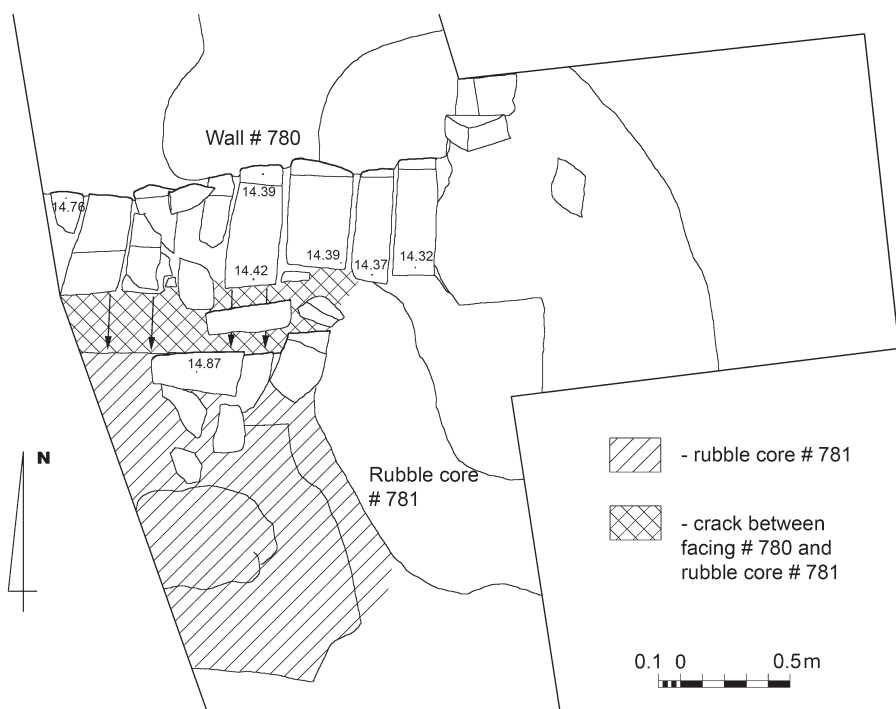


Fig. 5. General plan of northwestern part of Sector NGS.

pockets. The central and eastern parts of the pavement contained fewer sherds but had a considerable density of the hard soil. The majority of the material of the pavement is dated to the 5th and 4th centuries BC consisting mainly of amphorae, table and kitchen wares. The most interesting finds are the remains of a small grey pot and the bottom of red clay vessel with the dark red glaze, the thin part of which was hollowed out in ancient times probably for cult purposes. Infrequently, unworked stones were found in the pavement their size averaging $0.17-0.12 \times 0.15-0.10 \times 0.15-0.07$ m.

This kind of pavement is typical for Olbia and especially for the Sector NGS. In the southern part of NGS was found a ceramic pavement in the street dividing blocks VI and VII. The thickness of the pavement was 1.5 m. Thus based on its thickness, the ceramic pavement # 772 could be the remains of a street, which was later destroyed by the building of the defense wall. Yellow clay from the foundation trench of the defense wall covered this pavement in all the excavated area. Accordingly, the presence of the defense wall prevented the occupation of this area after the 4th to the first half of the 3rd century BC.

Trial excavations were made for the discovering the continuation of the line of the large yellow clay foundation in the northwestern corner of Sector NGS which is on a steep slope. As a result remains of the lower levels of the



Fig. 6. Northeast view of wall # 780.

large stone wall of the Hellenistic period were found represented by remains *in situ* (# 780) and a large heap of rubble (# 781) (Fig. 5). They were located on the slope and covered by the turf and a stratum of dark yellow clay soil eroded from the slope.

Wall (# 780) was located north of the rubble core and 4.80 m north-west of the northwestern corner of Sector NGS. Because of the erosion caused by the natural slope, the wall drops towards the estuary to the east and a little to the north towards the northern ravine, the northern border of the Olbian settlement. The wall was cut into the soil of the steep slope at comparatively horizontal levels (Fig. 6). The bottom course formed in a series of steps following the slope. Three levels of the bottom course were uncovered 0.66-0.96 m from the border of the western trench during the 2006 season. The highest level was found at the height of 14.76-14.70 m, the lowest at 14.48-14.32 m over the estuary level.

The bottom course consisted of large, approximately rectangular, limestone slabs, roughly worked, their surfaces flat and carelessly smoothed. They were



Fig. 7. Line incised in the slabs in wall # 780.

all stacked flatly on a layer of marl which could be the bed rock. Almost all the slabs were arranged lengthwise. The size of the slabs was about 0.70-0.80 x 0.32-0.40 m. The height of every course is about 0.19-0.22 m. A straight line was cut into the surface of all the slabs approximately 0.05-0.12 m from their northern (outside) edge. The line shows the position of the slabs in the next course of the wall (Fig. 7). Generally, the bottom course of foundation walls in Olbia protrudes. The facade of the wall which would have been straight was distorted by the gradual collapse of the wall caused by the natural slope.



Fig. 8. General view of rubble heap # 781. Southeast view.

The lowest level was the best preserved the uncovered length being 1.68-1.73 m. The slabs of the lowest level were the largest. They measure 0.89-0.90 x 0.32-0.39 m. The slabs were stacked closely, and the space between them usually did not exceed more than 0.01-0.02 m, but in a few cases as much as 0.04 m. This space was filled with soil similar to the surroundings. In the upper and second levels two of the large slabs were broken and the line of the wall was distorted. The second level consisted of only one large, rough limestone slab.

A large heap of rubble (# 781) was located south of wall # 780. The shape was amorphous oriented N-S and the level dropped towards the east to the estuary (Fig. 8). It was uncovered at the height of 15.20-15.03 to 14.57-14.48 m over the estuary level. The heap consisted of small, middle, and large size rubble and middle and large size limestone slabs of polygonal shape. The size of the individual rubble stones is 0.28-0.15-0.09 x 0.24-0.07-0.04 x 0.16-0.12-0.03 m. The heap was stratified. In 2006 three strata were excavated. The thickness of the strata was about 0.10-0.25 m. The space between the rubble was filled with dark yellow clay and ordinary yellow clay soil but few ancient objects. Based on the character, we conclude that the heap was formed as a result of the collapse of the inner part of the defense wall – the rubble core – as the mass of the soil was mixed with stones.



Fig. 9. Regular stones in rubble heap # 781 and fissure to the north of it. Eastern view.

An interesting discovery was a few large limestone slabs stacked regularly in the rubble core (Fig. 9). These slabs are of polygonal and trapezoidal shape. They are stacked horizontally along the northern edge of the rubble core parallel to the south face of wall # 780. The south side of the stacked slabs was of irregular shape and mixed with stones from the rubble core. Two slabs were found *in situ* on top of each other in 2006 cut into the natural slope of grey clay (bed rock). The size of the slabs to the north was 0.68-0.45 x 0.16-0.12 m, the width 0.34-0.40 m. Obviously, these slabs were laid down close to the southern edge of wall # 780 in Antiquity. The arrangement of the limestone slabs could be a structural response to the construction of such a major work as the city defense wall.¹⁰ However, as a result of the erosion of the outer surface of the wall caused by the natural slope to the north, a large fissure appeared between the slabs of the facing (wall # 780) and rubble core (heap # 781), about 0.46-0.50 m wide, gradually filling up with congestive soil and fallen down limestone fragments and slabs.

South of the large rubble core on the eastern edge of the trench, a channel filled with yellow clumpy clay soil with inclusions of grey clay soil and crushed limestone was cut into the dark grey and ash soil rich in small pieces of charcoal and ash inclusions (Fig. 10). This cut is traced 0.70 m from the

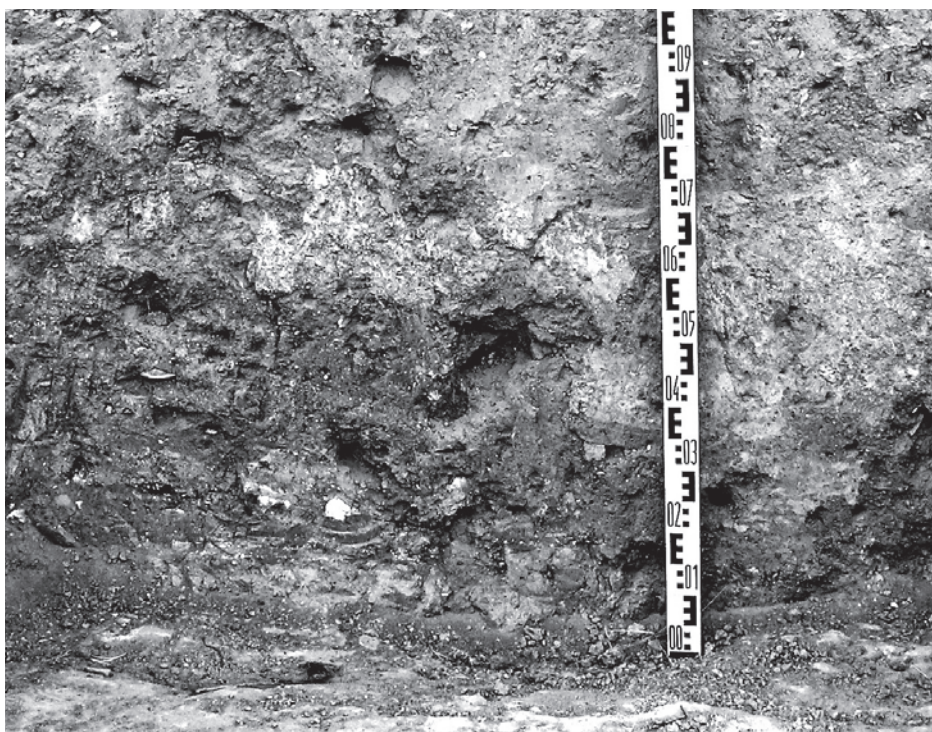


Fig. 10. Section of the trench of the city wall foundation in the northwestern part of Sector NGS. Eastern view.

large rubble core and 4.30 m from the northern face of wall # 780. This line was definitely the southern border of the trench excavated in ancient time for the building of the defense wall which included wall # 780 and rubble core # 781. However, if we take into consideration the width of the fissure which appeared as the result of the northern face of the wall eroding (about 0.5 m) and exclude this distance, the general width of the ancient foundation trench including wall # 780 and rubble core # 781 and the space in front of the trench edge is about 3.80 m, which is equal to the width of large foundation # 770 and layered foundation # 757 corresponds to the width of the defense wall in the eastern area.

An interesting find was an almost intact adult human skull crushed by the stones of the upper levels of the large rubble core # 781. This skull ended up in the heap of rubble core by coincidence already after full decomposition among the rubbish on the slope. Remains of individual human bones are quite common for the northern part of the Sector NGS, but never found in anatomical sequence. E.g. at least six human skulls were found in different layers in 2006 (Fig. 11). One skull was found outside the wall, whereas at least three skulls were unearthed in the yellow clay layer covering the ceramic pavement. One of the skulls had traces of violent death, an oval hole in the coronal bone. Also

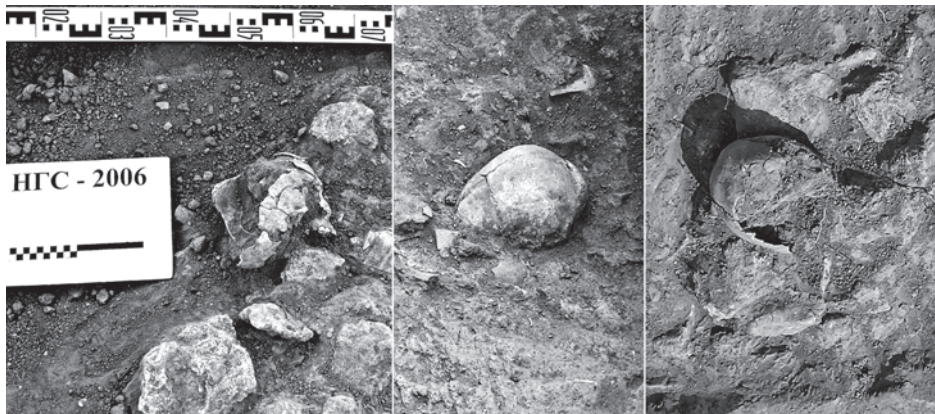


Fig. 11. Human skull found in the northern area of Sector NGS.

found were human bones with traces of dogs picking and biting. However, only the one sample from the rubble core # 781 was found in association with building remains in the defense wall area. Evidently, all the finds of human bones in the cultural strata are the evidence of an ancient battle occurring in the area. After the battle the region was definitely deserted and only reoccupied by new inhabitants much later. The human bones and skulls found in the level which appeared as a result of the construction of the defense wall we surmise came from a battle preceding the building of the wall and they can probably be concerned with the Zopyrion's siege of the city. The human bones and skulls found in the upper levels of the yellow clay layer and over the remains of the destructed defense wall can be connected either with the ruining of the mentioned Zopyrion strata or with later remains too.

The described construction of the defense wall consisted of exterior and interior faces of ashlar and a rubble core filling the space between them, which was quite typical for the Classical Greek tradition of building defense walls. As an example we can mention an interesting analogy of the defense wall in Troy of the Hellenistic period¹¹. This part of the wall was dated to the third quarter of the 3rd century BC and repeated the general scheme of the construction of the wall and in addition repeated the techniques of building as transverse slabs of the outer face and regular stacking of the slabs of the rubble core along the edges of the exterior and interior faces of ashlar¹².

To sum up, the results of the new excavations show us the general direction of the line of the defense wall of the Hellenistic period in the northern part of the Lower City of Olbia (Fig. 12). It also informs us of constructional aspects of city defenses. The foundation of the city wall constituted of a large straight trench 3.80 m wide filled with the yellow clay foundation which was substituted by the large layered foundation # 757 in eastern coastal part. Analogous remains of yellow clay and layered foundations of the 4th century BC were found in Sector I in the Upper City – the excavation area closest to Sec-



Fig. 12. View of the general direction and line of the defense wall in the northern part of the Lower City of Olbia. Eastern view.



Fig. 13. Diagnostic finds in the northern part of the Lower City of Olbia.



Fig. 13. Diagnostic finds in the northern part of the Lower City of Olbia.

tor NGS.¹³ Approximately 50 m of the foundation trench can be reconstructed from sections of the interior face of the foundation. The largest uncovered part of the yellow clay foundation in the central part of Sector NGS is more than 17 m long. The eastern end is delimited by the layered foundation # 757. In the northwestern part of Sector NGS remains of a stone wall (# 780) was excavated. The alignment of this foundation wall was disturbed due to the pressure of the rubble core (heap # 781) and the weight of the wall.

On the inside of the defense wall, in the central part of the excavated area remains of buildings were traced by the yellow clay foundations similar to those of the defense wall (complex of parallel foundations # 773, 774, 775). Probably these buildings had a military function concerned with the defense of the city.

This city wall was built in the beginning of the 3rd century BC on the cultural strata of the 4th century BC as evidenced by the ceramic pavement # 772 dated no later than the end of the 4th century BC and situated in the central part of the explored area which was cut by the trench of the defense wall foundation. Accordingly, the wall is later than the Zopyrion siege. Based on stratigraphic observations, the defense wall was built at the site of a battle suggested by the numerous finds of human skulls and bones of pre-wall period, admittedly concerned with Zopyrion's siege.

Notes

- 1 Kryžickij 1985; Bujskich 1991.
- 2 Kryžickij & Lejpunskaja 1997, 85-93; Kryžickij et al. 1999, 103-105, 161-166.
- 3 Farmakovskij 1926.
- 4 Kryžickij & Lejpunskaja 1988, 10-32.
- 5 Lejpunskaja 2007, 48-52.
- 6 Lejpunskaja 2007, 48-57.
- 7 A preliminary version of the ideas presented in the paper were provided in a poster at the international conference, the *Bosporan Phenomenon*, St. Petersburg November 2007.
- 8 This phenomenon as well as the layered foundation plan and photos were published and described by Lejpunskaja (2006, 250-252; 2007, 48-57).
- 9 Slavin 1941, 294.
- 10 A similar arrangement of limestone slabs was found in the remains of the heap of rubble to the north of foundation # 770 excavated in 1990s, but the levels of the outer wall were not preserved.
- 11 Aylward & Wallrodt 2003, 100-101.
- 12 Thanks are due to Jens Nieling for turning our attention at this fact and let us have the information concerning these excavations.
- 13 Slavin 1941, 294.

Bibliography

- Aylward, W. & J. Wallrodt 2003. The other walls of Troia: a revised trace for Ilion's Hellenistic fortifications, *Studia Troica, Band 13*, Mainz am Rhein.
- Bujskich, S.B. 1991. Fortifikacija ol'vijskogo gosudarstva (pervye veka našej ery). Kiev.
- Farmakovskij B.V. 1926. Otčet o raskopkach v Ol'vii v 1925 g. SGAIMK.
- Kryžickij S.D. 1985. Ol'vija. Istoriografičeskoe issledovanie architekturno-stroitel'nykh kompleksov. Kiev.
- Kryžickij, S.D. & N.A. Lejpunskaja 1988. Kompleks zapadnykh vorot Ol'vii, *Antičnye drevnosti Severnogo Pričernomor'ja*, Kiev.
- Kryžickij, S.D. & N.A. Lejpunskaja 1997. Ol'vija. Raskopki, istorija, kul'tura. Nikolaev.
- Kryžickij, S.D., Rusjaeva, A.S., Krapivina, V.V., Lejpunskaja, N.A., Skržinskaja, M.V. & V.A. Anochin 1999. Ol'vija. Antičnoe gosudarstvo v Severnom Pričernomor'e. Kiev.
- Lejpunskaja N.A. 2007. K voprosu ob oboronitel'nykh sooruzhenijach v Nižnem gorode Ol'vii (predvaritel'nye itogi rabot), *Bosporskie issledovanija XVII*, Simferopol', 48-57.
- Lejpus'ka N.O. & O.V. Karjaka 2006. Rozkopky na diljanci NGS v Ol'viji v 2005 r., *Archeologični doslidžennja v Ukrajinі 2004-2005 rr., Kyiv, Zaporizžja*, 250-252.
- Slavin L.M. 1941. Ol'vijskie gorodskie kvartaly Severo-Vostočnoj časti Verhnego goroda, *Sovetskaja archeologija*, VII. 292-307.