

ИСТОРИЯ. ЭТНОЛОГИЯ

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SPECIFICS OF THE RUBAS FORTIFICATION'S TOPOGRAPHY AND LAYOUT (EASTERN CAUCASUS)

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В статье рассматриваются новейшие материалы раскопок Рубасской фортификации – монументального оборонительного комплекса середины VI в., открытого в 2014 г. в долине реки Рубас, в 20 км южнее г. Дербента. По основным показателям (монументальность и функциональная направленность) этот объект относится к серии заградительных рубежей Западного Прикаспия, возведенных Персией в V-VI вв. В 2016-2018 гг. проводились раскопки сооружения арочной конструкции и оборонительной стены. На данном этапе исследования памятника выявлены существенные особенности топографии и планировки монументального фортификационного комплекса, которые не соотносятся с принципами организации обороны, учитывающими специфику местоположения защитных сооружений. Оборонительные объекты расположены на левом низком берегу реки Рубас ($\pm 41,93$ м), в непосредственной близости от ее русла. Они сооружены на уровне дна долины реки, перпендикулярно к ее руслу. Направление потока речной сели (С – Ю), затопившего фортификационные объекты, не совпадает с нахождением современного русла реки Рубас к югу от памятника. В статье выдвигается и обосновывается ряд версий относительно проблемных вопросов, дающих возможность раскрыть стратегические задачи возведения Рубасской фортификации. Рассмотрение указанных вопросов способствует решению как практических задач по дальнейшему изучению нового памятника археологии, так и реконструкции международной системы стратегической обороны на Восточном Кавказе в период раннего средневековья в целом.

Ключевые слова: Рубасская фортификация, магистральная оборонительная стена, арочная конструкция, заградительные рубежи Западного Прикаспия VI в.

The Rubas fortification is a complex of monumental military structures, located in the valley of the river Rubas, near the village of Kommuna, Derbend region of the Republic of Dagestan, Russian Federation. The archaeological site is 20 km south-west of Derbent (Fig. 1).

It was discovered in February 2014. The diggings of the monument were conducted in

2014, 2016-2018. Two objects were discovered – a monumental stone wall (a 28 m long segment was examined) and a stone structure with an arched design (Fig. 2).

At this stage of the study of the engineering and construction complex on the river Rubas, its functional purpose and monumental character have been established; the main orientation of the defensive wall, the



Fig. 1. Map of the Caucasus. 1 – the location of the Rubas fortification



Fig. 2. The Rubas fortification. 1 – monumental defensive wall; 2 – arched structure. View from east. Aerial drone shot. 2016.

design features of the discovered structures, the composition of building materials and the technological methods for the construction of fortifications have been determined. Analysis of the data obtained indicates a high technical level of both the engineering and construction project, and the professional skills of those who turned it into reality.

According to preliminary conclusions, based on the characteristic features of the stone block processing technique and the presence of specific details on them, the

Rubas fortification is typologically close to the Derbent stone fortifications dating from the 6th century [1, 31; 2, 113; 3, 1-16].

Given the monumental nature of the archaeological site on the river Rubas and its functional orientation, it can be attributed to a series of defensive lines built by Persia with the help of Byzantium in the Western Pre-Caspian region during the Great Human Migration (5–6th century). At the same time, according to a number of indicators (location, orientation, peculiar building ma-

terials, facade construction, the use of stone blocks and slabs of super large sizes, etc.) the Rubas fortification differs significantly from the monumental defensive structures preserved in the Western Pre-Caspian, such as Barmak, Gilgilchay and Derbend lines of defense. All of them blocked the Primorskplain in the narrowest places, and also protected mountain passes, leading to the countries of Transcaucasia [4, 267-287; 5, 357-390]. Their main purpose was to prevent the penetration of nomadic tribes that settled on the territory of the Western Pre-Caspian region in the 4–7th centuries into the territories of Transcaucasia and the Middle East – dependencies of Persia and Byzantium.

The location of the Rubas fortification differs fundamentally from the other defensive lines of the Western Pre-Caspian region. It is situated in the contact area of the seaside lowland and foothills of the Caucasus, 10 km west of the Caspian coast, in the valley of the river Rubas (Fig. 1). Moreover, the main wall of this complex is not oriented in the latitudinal direction, as the well-known defensive lines of the Eastern Caucasus, but in the meridional, i.e. parallel to the coastline of the Caspian Sea (Fig. 2). Such an arrangement of a defensive structure presupposes that it had other functional tasks in comparison with the remaining fortifications of this region.

The definition of specific functional tasks of this object, as well as the objectives of its geographical reference to the specified terrain, is very difficult due to the limited data obtained at this stage of the study. However, it is relevant to determine the features of the topography and layout of the Rubas fortification. The unusual location of the defensive object within the Rubas River valley has been previously mentioned here. In the process of studying the monument, other features of the fortification object, related to its layout, the shape of the main wall, its constructive solutions, etc., have also been revealed.

The Rubas fortification has another distinct feature. It is located 20km south-west

of Derbend (Fig. 1). Both fortifications typologically close to their construction techniques (the use of massive stone blocks in the construction of facades and stone filling in the formation of the body of walls), though there are some differences. Taking into account the presence in this region of the adobe fortifications of Derbend of the 5th century, and the stone ones of the 6th century, the construction of another defense line in its close proximity does not seem reasonable. It is possible that the dating of both objects differs in time, but it also could be that they performed different functional tasks, complementing each other.

Written sources do not provide any reliable data on constructions of heavy fortifications near Derbend. All other sources of the 5–8th centuries about «walls» and «fortresses» in the Pre-Caspian pass aren't any differ in providing actual information on their location [6, 128; 7, 88; 8, 69; 9, 9; 10, 31]. However, there is a detailed description of the debris of the defensive line, which location is tied to the downstream of the river Rubas, charted in 1747. Its author is a German doctor, Johann Lerche, who accompanied the Russian embassy to Persia [11, 304].

The author describes in detail the route of the Russian embassy from Derbent to the location of the section of the defensive structure on the Rubas River, with indication of the local toponymics, which has remained to these days – the Rubater (Rubas) River and Melukent, the villages of Arablar and Mullakent, the Toprak-kale (Toprakh-kala) fortress. The source text states: «Crossing the Rubater river, on which the village of Arablar is located, and where supposedly Arabs have been living since the ancient times, [we travelled] 15 versts and 5 more to the forest near the ancient high wall, which starts 6 versts lower the seacoast, close to Mullakent, and goes up to the mountains. In some places, its height reaches 20 fathoms. Alexander the Great is said to have it built on the border between the Persians and the Tatars; however,

he later ordered to build the high wall near Derbent, which runs through the mountains up to the coast of the Black Sea (Translation from German. Excerpt from: K. V. Trever [4, 272]).

Basing on the J. Lerche's description, the distance from Derbent to the village of Arablär, where the crossing of the Rubas River was made, constitutes 15 versts (a little over 15 km). The distance from the river crossing to the remained section of the defensive structure, located in the forest, constitutes 5 additional versts. The author also states that the beginning of the aforementioned defensive structure is 6 versts from that section, near the sea, close to the village of Melukent.

According to the source, the embassy, having crossed the Rubas River in Arablär's vicinity, directed to the south-west; they travelled 5 more versts, where the remained section of the defensive structure was located. This location now is approximately in the region of the modern village of Rubas. The author also mentions the main landmark of the location of the Rubas fortification – between the Rubas and Melukent river valleys.

The fortification on the river Rubas is defined as «Ball» in the text, and the Derbent defensive line as «Mauer» [wall, barrier]; in relation to each structure, the definition of «high» is applied.

On the map titled «The Caspian seacoast from Bunak to Kura. 1747» the Derbent fortifications are indicated by the Latin term «Murus» [wall], and the Rubas structure as «Vallis». In both cases, the author conveys the definition of the defensive structure on the river Rubas through the Russian term «вал» [bank]. It seems that Lerche observed the remains of the structure in the form of a bank. Information about the length of the structure, its height and time of construction, as well as the extension of the wall from Derbent to the Black Sea, was undoubtedly obtained from the local residents.

In the information, provided by J. Lerche, it is worth noting the location of the defen-

sive structure in the river valley of Rubas, approximately 15 km to the south of Derbent, and its identical to the town's one orientation [West – East].

In the 50s of the 18th century, it was possible to observe well-preserved sections of the Rubas wall in the foothill areas of the Rubas valley, as Lerche points out. Yet, N. O. Tsillossani, who in 1880 studied the Palasa-Syrt burial mound of the Great Migration period, located on both sides of the Rubas River valley on the same hill, doesn't mention any fortification ruins in that area [12, 462-474]. Apparently, by that time the upper level of the Rubas wall had been practically dismantled, and the lower level had previously been absorbed by the debris flows of the river.

All scholars' attempts to reveal this fortification both in the 30s of the 20th century, and at the end of the same century, did not yield any results [13, 43; 4, 271; 14, 33]. In this regard, a number of researchers considered the J. Lerche's data on the Rubas defensive line not having a real basis and contrary to the logic of choosing the place of its construction, given the fact that there was already a strategically advantageous Derbent pass [14, 33]. However, a detailed description of this wall, the presence of its layout, as well as detailed data on the route to its debris, indicating the distances between the settlements located in the lower reaches of the river Rubas, gave well-known scholars reasons to trust the data of J. Lerche and include this structure into the system of defensive lines built on the territory of the Western Pre-Caspian region in the period of the Great Migration [13, 43; 4, 271-272]. The Rubas wall, as noted, was accidentally discovered in the Rubas river valley in 2014, 267 years after its discovery by the German doctor J. Lerche.

At this stage of the research, despite the definition of this archeological site as a monumental fortification, many problematic issues associated to it have not been resolved.

The author of the paper puts forward a number of versions for each of the unusual

facts that are intended to reveal their essence, as well as to reconstruct in a certain way both the original image of the fortification and to reveal the intent of the project itself of this monumental structure.

This is the first attempt in historiography to consider material of a large defensive structure from the specified stand. The analysis of the data of the monument is based both on the results of its excavations conducted in 2014, 2016-2018, and a detailed survey of its location, as well as on information from written and literary sources.

The question stated in the article is relevant, as it contributes to the solution of practical tasks for further study of this mon-

ument of archeology, and the reconstruction of the early medieval international system of strategic defense in the Eastern Caucasus as a whole.

The detailed description of the location of the archeological site, the circumstances of its discovery in 2014 and the state of preservation prior to the beginning of the study contributes to the objectivity of the considered versions regarding the existing problematic facts. The data on the results of the excavations of this monument serves the same goals.

Location of the archeological site.

The fortified structure is located on the left lower bank of the river Rubas, at the point

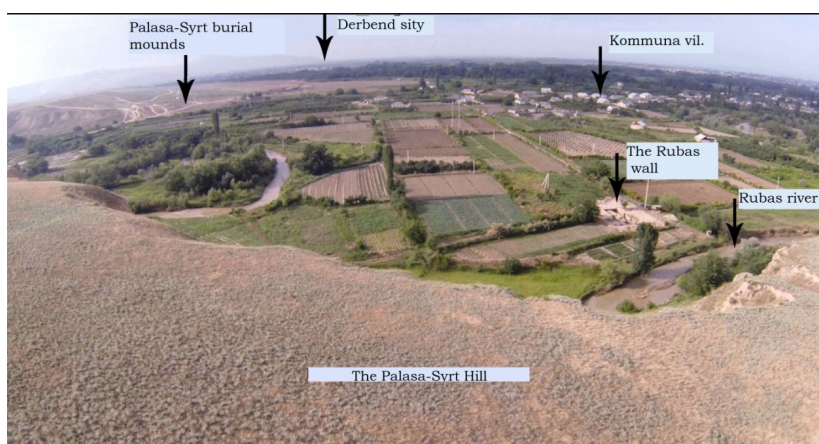


Fig. 3. The Rubas river valley. 1 – the Rubas fortification. View from south. Aerial drone shot. 2016

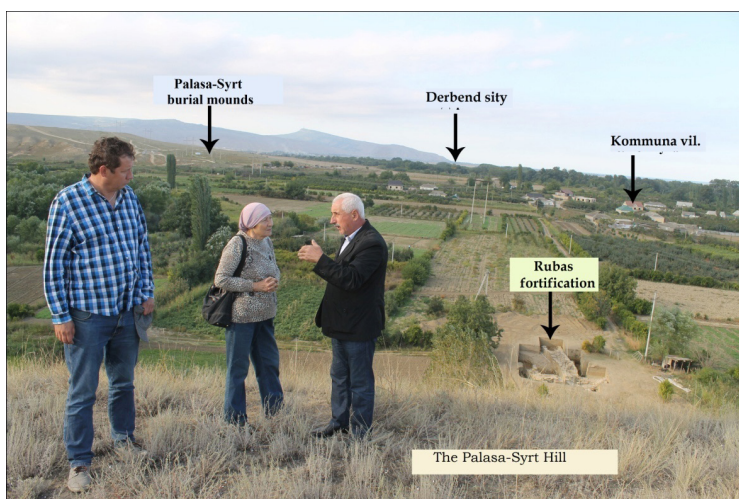


Fig. 4. The Rubas river valley. 1 – the Rubas fortification. View from south. 2018

of its exit from the Caucasus' foothills to the seaside plain (GPS: 641.876785,48.300411). It was discovered 32 m north of the river bank (Fig. 3).

The opposite bank of the river, formed by the slope of the Palasa-Syrt hill, has a prevailing height of ± 85.42 m (Fig. 4).

The Rubas river valley cuts through the flattened Palasa-Syrt hill (Turkic – «anhydrous ridge») from west to east, dividing it into two separate massifs. On both massifs there are large areas of the Palasa-Syrt burial mounds of the 4th – 5th centuries, remained after nomadic tribes, which settled in the region during the Great Migration Period [15, 110-162]. On the right, elevated bank of the river there is a multi-layered Palasa-Syrt settlement of the 3–6th c., the middle cultural layer (4–5th c.) of which is synchronous to the burial ground of the same name, and the upper final one is dated by the high-quality ceramics with specific decor (jugs with grooved surface and zoomorphic spouts with characteristic features of aboard) of the mid-5th– first half of the 6th century [16, 159]. Ceramics of this type became widespread at that time in the Western Pre-Caspian region from Derbend to Absheron Peninsula [16, 160, 162]. The Palasa-Syrt settlement is located 500 m west of the Rubas fortification, upstream of the river Rubas.

The river valley is quite wide (450-480 m) in the area of the Rubas fortification. The territory adjacent to the left bank of the river is leveled by all-year tillage (Fig. 3-4). Until the 70s' of the 20th century, relict deciduous trees (oak, poplar) and shrubs grew in the area of the structures of the Rubas fortification.

Circumstances of the discovery.

The Rubas defensive complex was discovered accidentally in February 2014. During the regular tillage of the crop fields by the local residents, the upper level of the masonry structure was hit by a plow, revealing massive stone blocks. Some of its structures were significantly damaged by the villagers, who had

removed 30 large stone blocks of 110-180 cm long from the territory of the monument and brought to the village of Kommuna. Some of the blocks were sawn into small pieces for building purposes [17, 63].

The state of the archaeological site before the start of the research.

The monument was investigated in February 2014. A pit of 9x7 m with a depth of more than 3 m was found at the place of its discovery. It was filled with fragments of stones of different sizes covered with a white substance, possibly mortar. On the territory adjacent to the pit there were several stone blocks of medium size and the soil extracted from the surface of the site.

Archeological investigation of the Rubas fortification.

Rescue excavations of the monument were carried out in the summer of 2014. During the clearing of the northern slope of the pit with construction debris, formed as a result of the removal of 30 large stone blocks from building structures by the local residents, a 3-m section of the main defensive wall 2.2 m high oriented north-south was found. The southern end of this wall connected to the wall of another structure, directed from west to east. Both walls were built of large, processed blocks, laid in horizontal rows; however the second wall had a base of crushed raw stone. The segment of the wall oriented in the meridional direction was not damaged by the locals, while the upper level of the wall on the foundation was disassembled (only 1-2 levels of masonry stone blocks remained) [17, 63-64].

On the territory, adjacent to the western slope of the pit and undamaged by the locals, within the digarea of 20 square meters, a separate construction of the arched structure with an overlap of stone slabs with a length of more than 2.5 m was found.

The rescue excavations of the archaeological site of 2014 confirmed the preliminary conclusions about its fortification nature and monumentality, as well as identified the char-

acteristic features of the layout and design solutions of open military constructions.

In 2016-2018, full-scale excavations of construction sites discovered in 2014—the main defensive wall and arch structures – were carried out. The area of the excavation was 296 sq. m. [17, 64-67] (Fig. 5-7).

Defensive wall. The investigated section of the defensive wall is oriented in the meridional direction. It has a continuation both to the south (to the river) and to the north. The southern section of the wall was

able to be identified within the foundation pit formed at the site of the structures of this grand fortification destroyed by local residents (Fig. 5, 6, 8).

The western facade of the wall was excavated over a distance of 28 m – from the northern to the southern borders of the dig (Fig. 5). The lower rows of the masonry and the adjoining backfilling were revealed. The greatest height of separate sections of the western facade of the wall is 2.2 m (Fig. 9-11).

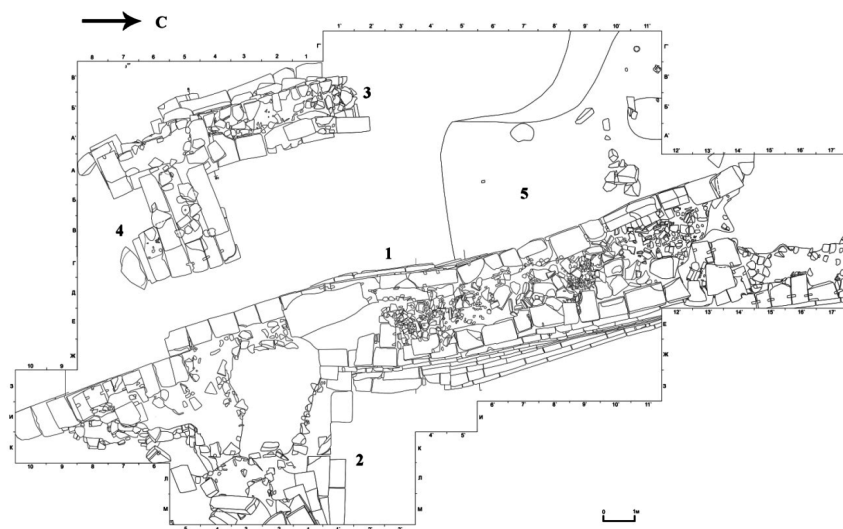


Fig. 5. The Rubas fortification. The layout of defensive structures. 2018.

1 – the wall №1; 2 – the monumental defensive wall; 3 – the wall №3; 4 – the arched structure; 5 – pebble mudflow deposits



Fig. 6. The Rubas fortification. 1 – monumental defensive wall; 2 – arched structure; 3 – ruined section of the structure; 4 – pebble mudflow deposits. View from south. 2018



Fig. 7. The Rubas fortification. 1 – monumental defensive wall; 2 – arched structure; 3 – pebble mudflow deposits. View from north. 2017



Fig. 8. The Rubas fortification. 1 – monumental defensive wall; 2 – pebble mudflow deposits; 3 – ruined section of the structure. View from north. 2017



Fig. 9. The Rubas fortification. 1 – monumental defensive wall; eastern facade; northern section; 2 – pebble mudflow deposits. View from south. 2017

The eastern facade of the main wall was explored over 16 m from the point of contact with the wall oriented west-east to the northern border of the excavation (Fig. 5). The investigated section of the eastern facade of the main wall has a height of 2.4 m. Below this level is groundwater, the source of which is not indicated (Fig. 7, 12).

The excavation of the main wall established its monumentality (the width of the wall at the top level is 3.5 m) and the use of technology, modern to the time of the construction (massive stone blocks masonry with the «shell» bonding and back filling with crushed stones, pebbles and soil). The use of various methods for laying blocks, based on

tactical defense objectives and the degree of potential external load on various sections of the long wall was also determined. The stone blocks were fitted at the place where the walls were laid, and various techniques for their support were used, which testifies to the great experience of construction workers, their craftsmanship and creative approach to the formation of an architectural object (Fig. 9-12). The Rubas defensive wall demonstrates a high level of professionalism of architects who inserted a massive structure into a complex terrain – across the river valley, basing on the tactical objectives of protecting the territory. Simplicity, laconism, extensive use of local building traditions, as



Fig. 10. The Rubas fortification. Monumental defensive wall; western facade; central section. View from west. 2017



Fig. 11. The Rubas fortification. Monumental defensive wall; western facade; southern section. View from north-west. 2017

well as the right choice of building materials (Shelly limestone, sandstone) characterize engineering solutions in the construction of the wall.

Construction of the arched structure.

As it had been established by the excavations, this object was a separate structure – a tower of original planning and construction. The tower consisted of two monolithic supporting bases of rectangular shape and an arched ceiling of massive stone slabs more than 2.5 m long between them. The archway 1.5 m wide was overlapped in ancient times by four slabs, two of them remained as a whole, one – split into two parts (Fig. 5-7). The construction of the arched structure, judging by some techniques, was multi-level (2-3 floors) and, apparently, performed not only a defensive function, but also a signal one [17, 65].

As established by the excavations, the

main defensive wall and the arched structure belonged to the united system of the monumental defensive complex on the Rubas River [17, 65].

Features of the topography of the defensive wall.

As stated, the fortifications are located in the river valley of Rubas, particularly, at its bottom (± 41.93 m). The section of the main wall with a length of 28 m is oriented in the direction transverse to the river – from south to north-west, i.e. from the modern riverbed to the foothills of the Caucasus (Fig. 5).

The location of the investigated sections of the Rubas fortification contradicts the main principle of defensive structures and defensive lines. They, as a rule, were erected on hills, and, to enhance their defensive functions, took advantage of terrain features of an area (ravines, mountain spurs, high riverbanks). The long



Fig. 12. The Rubas fortification. Monumental defensive wall; eastern facade. 1-2 – stone blocks with carved images. View from south-east. 2017



Fig. 13. The Rubas fortification. Right bank of the river Rubas, indicating the anthropogenic impact. View from north. 2016

wall of the Rubas fortification is located on the low bank of the Rubas River, while its opposite bank occupies the dominant height of the area (± 85.42 m) (Fig. 3, 4, 13).

A low qualification of engineers and architects who designed and implemented this project is irrelevant in this case. An investigation of the open areas of the fortification showed that the technological methods for the construction of this structure were complex, and the level of construction works was high. Probably, the riverbed was located at the opposite northern side of the valley during the construction period. This is confirmed by mudslides of river pebbles and coarse sand, revealed during excavations along the western facade of the main wall over the 7 m distance. Moreover, they are the end section of mudflows, the largest sediment thickness of which is fixed at the northern edge of the pit (Fig. 5,6,9). Within the rest of the pit, adjacent to the western facade of the wall and the construction of an arched structure, were deposits of coarse-grained river sand of amber color. The revealed factors of sedimentation of the mudslides indicate that the river flow came to the location of the fortification from the north side, whereas the modern riverbed of Rubas is located south of it.

According to the written sources, when Arabs settled in Derbent, a canal was built in the period of Caliph Rashid (786–809). The canal transferred the waters of the river Rubas to the city to irrigate the agricultural plots of military settlers. In the historical work «Asari Dagestan» by Hasan Alkadari (1834–1910), among other important historical events, this fact was especially noted: «In 173, in the 790 year according to the Christian faith, Harun al-Rashid sent a ruler in Derbent named Huseima ibn-Hazim with a detachment of up to two thousand warriors. This new ruler, having forced to dig a ditch from the river Rubas, laid on water supply to the Derbent lands, ordered to plant gardens, orchards, arable lands and build mills below this ditch» [18, 28].

In an earlier historical essay «Derbend-nameh», which dates back to the 17th century, the same events were noted without mentioning the source (meaning the Rubas River), from which water was supplied for irrigation of Derbent: «In the year of one hundred seventy-third (789–790), Harun Rashid sent Huseyma ibn-Hazim with an army. He restored the destroyed parts of Derbend, lay on running water, built bridges in different places, beautified and modernized the city...

Harun Rashid himself arrived in Derbent and did a lot for the improvement (of the city). He laid water canals to Derbend, built mills, ordered to planta lot of orchids and gardens...» [19, 39]. Perhaps, Alkadari clarified the data of his predecessors with the information of the second half of the 19th century about the river Rubas as a source of water for the agricultural needs of Derbent. Canal Rubas-Derbent runs to this day (Kuybyshev canal). In relation to the researched area of the Rubas fortification, the canal is to the north of it at a distance of 500 m.

It is possible that the defense structures on the river Rubas were flooded by a mudslide from this canal. The upper level of the mud deposits at the excavation site is blocked by cultural layers of the late settlement, which lived by the destroyed long wall, judging by the ceramic material, in the 10–11th centuries, i.e. after a short period after the flood (Fig. 6, 9).

Whether the flooding was caused by natural forces, or specially organized to seize a powerful fortification on the Rubas River, is difficult to answer without material evidence. However, written sources provide evidence that during the assault of Tiflis in 627 by the combined forces of the West Turkic Khaganate and Byzantium Empire, the waters of the river Kura were blocked by water skins filled with gravel and pebbles, which caused flooding of the fortified part of the city [7, 109]. This fact indicates that a similar tactical maneuver was used in the storm of fortifications in the early Middle Ages.

It is also possible that the Rubas fortification was periodically flooded by the waters of the river. On the surface of the blocks of the eastern facade of the arch structure (7 rows of masonry), the coating in the form of a thin black film preserved. It had no integral structure, was cracked and lacked in places (Fig. 14).

The same coating is recorded on the edges of the stone blocks of the masonry of the central section of the main wall, located opposite the construction of the arched structure (Fig. 11). The chemical composition of this substance has not yet been established, but this might be the residue of bitumen (a derivative of oil), which covered the lower level of the fortifications to protect against high humidity. As noted, shell rock (sedimentary rock), which is less resistant to high humidity, was widely used for the construction of fortification. Apparently, it was intended to protect the buildings from periodic floods.

According to the survey of the coastal territory of the river Rubas, adjacent to the location of the fortification from the south, its layout during the period of functioning appears to be different.

In the course of the river Rubas, the presence of processed stone blocks of various sizes and shapes was recorded. According to the processing technology and the specific indentations and cuts, they are identical to the stone blocks from the masonry of the long wall (Fig. 15-16). The presence of stone blocks in the riverbed has a local character and is limited to a section of about 50 m.

It can be assumed that the stone blocks, which undoubtedly originated from the monumental fortifications, fell to the foot of the high right bank of the river, as a result of washing out of soil from under the architectural structures located within it by rain streams.

It is also possible that the defensive wall started at the level of the surface of the Palasa-Syrt hill (± 85.42 m), descending along

the slope of the right bank of the river to the flat part of the valley and continuing further to the north. A visual examination of the slope of the right bank of the river revealed traces of vertical directional debris on its surface that violated the integrity of the vegetation cover (Fig. 13). This factor testifies to the consistency of the process of destruction of vegetation in this part of the slope of the high bank of the river, which may be due to the presence in its depths, as mentioned, the debris of the monumental stonewall.

Examination of the edge surface of the elevation of the right coast line, as well as analysis of photographs, taken by the air drone, shows that two sections have traces of human impact. In the eastern section, located above the indicated line with disturbed vegetation cover, an elongated hollow about 2 m wide was carved in a thick layer of shale (Fig. 13, 17, 19). In the western section, 41 m from the east, there is a large, triangular hollow in the ground, directed the pointy end to the south, and the wide side to the north, to the coastal edge of the hill (Fig. 13, 17-20)

These sections of violation of the integrity of the terrain might be the attaching point of the upper level of two parallel-passing fortress walls, built on the steep slope of the right bank of the river. According to the drone shots, there is a strip of arcuate shape in the marginal section of the Palasa-Syrt hill, which closes from the south the section between the triangular groove and the eastern steep slope of the coastline (Fig. 18, 19). Geophysical studies of this swell-like strip in 2018-recorded significant changes in the ground, possibly related to the remnants of the structures. It is possible that on a hill there was a fortress, from the side walls of which two long barrier walls stretched away (Fig. 19). The debris of the eastern one was accidentally discovered in 2014 on the left, low bank of the river. Attention should be paid to the fact that the processed building blocks found in the riv-



*Fig. 14. The Rubas fortification.
Arched structure. Eastern facade. View from east. 2017*



*Fig. 15. The Rubas fortification.
Stone blocks with signs of processing in the Rubas' shoreline.
View from the south-east. 2014.*



*Fig. 16. The Rubas fortification.
Stone blocks with signs of processing in the riverbed of Rubas.
View from south-west. 2014.*



Fig. 17. The Rubas fortification. Right bank of the river Rubas with indication of areas of anthropogenic impact (1–3). View from north. Aerial drone shot. 2016.

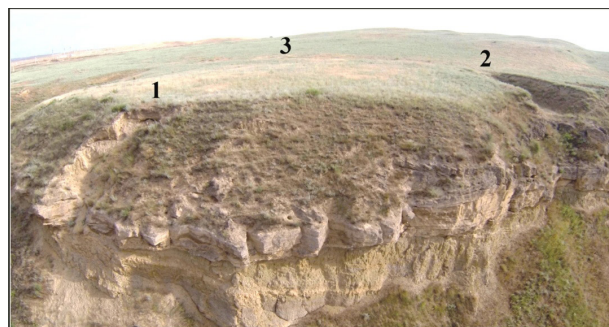


Fig. 18. The Rubas fortification. Right bank of the river Rubas with an indication of areas of anthropogenic impact (1–3). View from north. Aerial drone shot. 2016

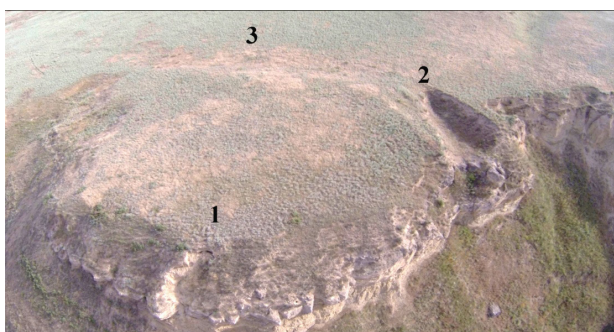


Fig. 19. The Rubas fortification. Marginal area of the Palasa-Syrt hill with an indication of areas of anthropogenic impact (1–3). View from north. Aerial drone shot. 2016



Fig. 20. The Rubas fortification. Marginal area of the Palasa-Syrt hill. 1 – cavity of triangular shape. View from east. 2018

erbed are located on a site similar in length and location to the coastal edge area bounded by artificial hollows. It is possible that the flat section of the second monumental wall is located to the west of the investigated one, 40-50 m from it.

The presented reconstruction of the topography of the Rubas defensive complex resolves many of the problematic issues associated with its unusual location and transversal to the river bed orientation. It appears that the complex included a fortification, which was located at the prevailing height of the area (± 85.42 m), and two fortification walls extending from it. The Rubas fortification was protecting a strategically important passage in the lower reaches of the Rubas River, leading to the mountain trails of the Eastern Caucasus. The space between walls, apparently, was occupied by urban areas.

Features of defensive wall's layout and construction.

The monumental long wall of the Rubas fortification (a 28 m segment, which has been cleared) is unusual in its form and construction technique. Its northern section with a length of 16 m is structurally connected with a massive construction, previously defined as a detached tower. This section of the wall has an arched shape: the eastern facade is convex, the western one is concave (Fig. 2, 5, 8). The curvature of the wall was achieved by a special technique. The wall is connected to the northern facade of the tower at an angle of 90° , and for 4 meters is directed south-north. Yet, the stone blocks of the masonry of the eastern facade on the 5th meter were installed at a slight angle, which gave a curvature to the outer shell of the wall and led to its deflection to the north-west (Fig. 5, 12). Accordingly, to give a concave shape to the western facade in a certain segment, the installation angle of the plates in the body of the wall was also changed (Fig. 5-8).

The adjustment of the layout of large-scale fortifications (long walls), as a rule, was determined by the specifics of the terrain or

the tactical objectives of the defense of the object. The long Rubas wall was erected on a flat patch of terrain. Its direction to the north-west, associated with time-consuming techniques of installing blocks into the wall, was undoubtedly due to the important factors of a tactical or strategic plan.

The construction of the Rubas fortification's wall also has a number of peculiarities. Its eastern facade is built in a form of a terrace, with the width of the steps decreasing towards the north-west (Fig. 5-8). With a bare wall height of 2.4 m, the presence of steps was revealed both on the upper and lower levels of the eastern facade.

The utility of the stepped facade of the wall in terms of defense is unlikely. However, this terrace technique in the formation of the external facade of the wall strengthened the stability of the massive structure and increased the width of the wall at the base (the width of the wall at the top level is 3.5 m, at the bottom is 4.0 m). It also helped in creating its arched shape. We can assume that the lower level of the outer stepped facade of the wall overlapped with dense soil (clay), similar to the northern wall of Derbend [1, 30], but in the process of its clearing, mostly loose sediments of the cultural layer adjacent to the eastern facade were revealed. Backfilling of the external facade of the main wall with soil is also ruled out for the fact that at a height of 1.2 m from the lower level of its clearing, two large blocks with carved images are installed in the wall's body (Fig. 12).

The western (concave) facade of the wall, in contrast to the eastern one with an identical, self-faced technique of bonding does not have ledges (Fig. 9-11). A massive, quadrangular tower with a ledge to the east was built in its central part. For its construction a different method of bonding stone blocks was applied. In particular, its western side is laid out by the «header-stretcher» technique (English bond) (Fig. 10). Moreover, some of the plates differed by increased massiveness

(1.7-1.9 m length). The body and the eastern side of the tower are significantly damaged by the local residents (Fig. 2, 6, 8). From this very structure 30 large stone blocks were removed. Its backfill was mortared, in contrast to the backfill of the main wall, where regular soil was used.

The peculiarity of the form of the defensive wall of the Rubas fortification (concavity of the western facade and convexity of the eastern facade), as well as the degree of construction of the external, eastern facade of the wall, as established by archaeological and paleoseismological surveys in 2018, were due to natural phenomena. At the location of this archaeological monument an active fault zone has been revealed, the movement of which led to the displacement and distortion of the early medieval monumental defensive wall [20, 91-103]. Significant tectonic destructions were also identified by experts at other military engineering constructions of the Rubas fortification – a wall oriented in the east-west direction, and at the construction of an arched structure (Fig. 5-6). Paleoseismological studies were conducted by employees of the Schmidt Institute of Physics of the Earth, RAS.

The dating of the Rubas fortification is set preliminarily in the period of the 6th – 10th centuries. A military-engineering structure on the river Rubas was destroyed by a powerful earthquake with a magnitude of 9.0, following by a severe flooding. The time of its construction dates back to the 6th century, basing on the typological similarity of the construction technique used in the erection of the Derbend fortification. No artifacts of material culture, dating back to the middle of the VI century, have been found on the site. Apparently, cultural layers earlier than the 10th century were destroyed by flooding. In 2018, layer-by-layer selection of ground samples from different levels of stratification (3m thick excavation edges) for laboratory analysis with the use of natural-scientific methods, including radiocarbon dating (C^{14}), was made.

The research is complete, but data analysis has not yet been issued. A Doctor of Biological Sciences, Professor E. V. Abakumov (Department of Applied Ecology) [Saint-Petersburg State University, Department of Applied Ecology], carried out the work.

Some Concluding Remarks.

1. The Rubas fortification is a complex of monumental military-engineering structures of the middle of the 6th century, discovered in 2014.

2. It is located in the river Rubas (lower course), 20 km South-East of Derbend (the Eastern Caucasus)

3. The excavations of 2014, 2016-2018 revealed 2 construction objects – a monumental defensive wall (a section of 28 m has been examined) and an arched structure. Both structures are connected by a common system of gate locks.

4. The structures are built of massive stone blocks (0.6-1.0 m long) and slabs (2.5-2.6 m), laid with the use of «header-stretcher» technique.

5. Typologically, the Rubas fortification belongs to a series of defensive lines, built by the Persian Empire with the financial support of the Byzantine Empire in the Western Pre-Caspian region during the Great Human Migration (Barmak, Gilgilchay, Derbend lines).

6. The main function of the defensive lines of the Eastern Caucasus was to prevent the penetration of migrant tribes into Transcaucasian countries (Caucasian Albania, Armenia, Iberia) and Near East (Persia, Byzantium, etc.).

7. The structure of the defensive lines of the Eastern Caucasus of the 5–6th centuries included 2 key elements:

a) a long wall, that blocked the marine plain in its narrowest places along the east-west line (3-6 km long);

b) Local sections of the wall in the mountain area, which blocked the penetration to mountain passes, leading to the countries of Transcaucasia.

8. By a number of indicators (location, topography, lay-out, structure of the site, building material), the Rubas fortification differs from other monumental defensive structures of the Eastern Caucasus.

9. Features of the Rubas fortification:

9.1 Its location in the foothill area 10 km west of the Caspian Sea coast.

9.2 The presence of military-engineering objects in the valley of the River Rubas, in the place where it goes out of the Caucasus' foothills and discharges into the marine plain.

9.3 The fortification sites, revealed by the excavations, are located at the bottom of the river valley, near the low left bank of the modern riverbed of the Rubas River (+41.93 m). The opposite high bank of the river is located on the surface of the Palasa-Syrt hill (± 85.42 m).

9.4 The main wall (28m long section) crosses the river valley along the south-north line, i.e. at an angle of 90° .

9.5 The Rubas fortification's topography contradicts the principles of construction of monumental defensive structures (safety of location, the use of advantageous terrain, low accessibility for enemies, etc.).

9.6 The layout of the main defensive wall has a curved shape (the outer eastern facade is convex, the inner western one is concave), not due to the features of the topography.

9.7 The structure of the eastern facade has a stepped form on all levels of the masonry, functionally unreasonable.

9.8 The absence of remnants of the fortress as the main object in the structure of fortifications.

10. Historical reconstruction of the monumental defensive structure on the river Rubas (Eastern Caucasus):

10.1 Sources for reconstruction: results of archeological excavations; data of a detailed site examination; analysis of the aerial drone shots of the surrounding terrain; the revealed facts of anthropogenic impact on the terrain in the high bank of the river Rubas; the re-

vealed facts of natural impact on the objects of military-technical structures of the Rubas fortification.

10.2 The facts of anthropogenic impact on the terrain of the high bank of the Rubas River, associated with the topography and layout of the Rubas fortification: a) the presence of 2 elongated cavities 3-4 m long on the marginal surface of the right high bank of the Rubas River, located 41 m from each other; b) the presence of a swell-like arcuate strip, which closes the area between the cavities oriented along the south-north line;

10.3 The facts of natural impact on the objects of military-engineering constructions of the Rubas fortification:

a) signs of deformation of the structures – the concavity of the western facade of the main wall; the convex and stepped nature of the eastern facade of the wall; the destruction of the western base supports of the arched structure; deformation with displacement of the wall blocks oriented in a west-eastern direction; b) establishing the fact that the active fault zone is at the location of the Rubas fortification, the movements of which led to the displacement, distortion and destruction of its objects.

The information source – the archeological and paleoseismological surveys, conducted by the employees of the Schmidt Institute of Physics of the Earth, RAS, c) establishing the fact of the destruction of the object as a result of severe flooding caused by an earthquake of 9.0 magnitude. The information source: fixation along the western facade of the main wall of the Rubas fortification of pebble and ground sediments of mudflow.

10.4 The version regarding the topographical location and layout of the Rubas fortification: a) the defensive complex on the river Rubas may have included: an oval-shaped fortress (citadel) located on the right high bank of the river Rubas and two long barrier walls extending from the side

walls of the fortress along the steep slope of the right bank of the river to its valley; b) the river Rubas during the operation of the fortification may have been located at the right side of the valley, at a distance of 500 m to the north of it.

The presented reconstruction removes the main problematic issues related to the

location and layout of the Rubas fortification.

11. The time of the construction of the Rubas fortification is preliminarily referred to the middle of the 6th century, based on the typological similarity of the technological methods of building Derbend fortifications.

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SPECIFICS OF THE RUBAS FORTIFICATION'S TOPOGRAPHY AND LAYOUT (EASTERN CAUCASUS).

Keywords: *Rubas fortification, main defensive wall, arched structure, defensive lines of the Western Pre-Caspian region of the VI century.*

The paper presents the latest material of excavations of the Rubas fortification – a monumental defense complex of the mid-6th century, discovered in 2014 in the valley of the river Rubas, 20 km south from Derbent (Darband). According to the main indicators (monumentality and functional purpose), this object belongs to a set of defense lines that were erected by the Persians in the 5-6th century in the Western Pre-Caspian region. In 2016-2018 excavations of the construction of the arched structure and the defensive wall were carried out. Features of topography and layout of the fortification complex have been revealed. Defensive objects are located on the low bank of the river Rubas (± 41.93 m), at the level of the bottom of the river valley, perpendicular to its riverbeds. The author suggests and reasons a number of versions, which makes it possible to reveal the strategic objectives of the construction of the Rubas fortification, reflected in its layout. Consideration of the stated issues contributes to the solution of both practical challenges for further study of the new archaeological monument and the reconstruction of the international system of strategic defense in the Eastern Caucasus during the early Middle Ages as a whole.

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