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THOUGHTS ON THE KUSHAN DEFENSIVE STRUCTURES OF NORTHERN BACTRIA (THE EXAMPLE OF TOWERS)

КУШАН ДООРУНДАГЫ ТҮШТҮК БАКТРИЯДАГЫ КОРГОНУУЧУ ТУРУКТАР ЖӨНҮНДӨ ОЙ-ПИКИРЛЕР (МИСАЛ КАТАРЫНДА МУНАРАЛАР)

РАЗМЫШЛЕНИЯ О КУШАНСКИХ ОБОРОНИТЕЛЬНЫХ СООРУЖЕНИЯХ СЕВЕРНОЙ БАКТРИИ (НА ПРИМЕРЕ БАШЕН)

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THOUGHTS ON THE KUSHAN DEFENSIVE STRUCTURES OF NORTHERN BACTRIA (THE EXAMPLE OF TOWERS)

Abstract

This article presents some considerations about towers (burjs), which were an important element of the urban protection system and fortresses in Northern Bactria during the Kushan period. In this context, the defense structures at the Dalvarzintepa and Zartepa sites in Northern Bactria, as well as at the Dilberjin located in Southern Bactria, are analyzed. Defense structures became an integral part of the city and ensured the security of governance. Almost all urban sites with preserved cultural layers from the Kushan period were surrounded by walls and moats. Even the defense of small villages or fortresses was given special attention, and in some cases, their defense structures were comparable to those of the cities.

Keywords: defensive structures, fortification, Kushans, defensive wall, loophole, tower, corridor, shahristan, citadel

КУШАН ДООРУНДАГЫ ТҮШТҮК БАКТРИЯДАГЫ КОРГОНУУЧУ ТУРУКТАР ЖӨНҮНДӨ ОЙ-ПИКИРЛЕР (МИСАЛ КАТАРЫНДА МУНАРАЛАР)

Аннотация

Бул макалада Кушан доорунда Түндүк Бактриядагы шаарлар менен чептердин коргонуу системасынын маанилүү элементи болгон мунаралар (бурждар) жөнүндө айрым ойлор берилет. Бул контексте Түндүк Бактриядагы Далварзинтепа жана Зартепа археологиялык эстеликтериндеги, ошондой эле Түштүк Бактриядагы Дилбаржин эстелигиндеги коргонуу түзүлүштөрү талдоого алынат. Коргонуу түзүлүштөрү шаардын ажырагыс бөлүгү болуп, башкаруунун коопсуздугун камсыз кылган. Кушан дооруна таандык маданий катмарлары сакталып калган дээрлик бардык шаар эстеликтери дубал жана арыктар менен курчалган. Атүгүл чакан кыштактар же чептердин коргонуу системасына өзгөчө көңүл бурулган, айрым учурларда алардын коргонуу түзүлүштөрү шаарлардыкына салыштырмалуу деңгээлде болгон.

Ачкыч сөздөр: коргонуу түзүлүштөрү, фортификация, кушандар, коргон дубал, ок атуучу көзөнөк, мунара, коридор, шахристан, цитадель

РАЗМЫШЛЕНИЯ О КУШАНСКИХ ОБОРОНИТЕЛЬНЫХ СООРУЖЕНИЯХ СЕВЕРНОЙ БАКТРИИ (НА ПРИМЕРЕ БАШЕН)

Аннотация

В данной статье приводятся некоторые соображения о башнях (буржах), которые являлись важным элементом системы обороны городов и крепостей Северной Бактрии в кушанский период. В этом контексте проанализированы оборонительные сооружения на памятниках Далварзинтепа и Зартепа в Северной Бактрии, а также на памятнике Дильберджин, расположенном в Южной Бактрии. Оборонительные сооружения стали неотъемлемой частью города и обеспечивали безопасность управления. Почти все городские памятники с сохранёнными культурными слоями кушанского периода были окружены стенами и рвами. Даже защите небольших деревень или крепостей уделялось особое внимание, и в некоторых случаях их оборонительные сооружения были сопоставимы с городскими.

Ключевые слова: оборонительные сооружения, фортификация, кушаны, оборонительная стена, бойница, башня, коридор, шахристан, цитадель

Introduction

The early evidence of defense structures in Central Asia appeared during the Eneolithic period in the Geoksyur region Southern Turkmenistan. In the Northern Bactria region, the first settlements with defense structures is observed in the late Bronze Age culture – Sopolli. with the Sopolli culture. The multi-layered settlements with defensive walls and defensive ditches recorded in Achaemenid sites (Эшов, 2008, с. 208-227).

The study of the Kushan-period defensive structures in Northern Bactria began in the first half of the 20th century. During the archaeological investigations carried out by the Termez Archaeological Complex Expedition under the leadership of M.E. Masson several defensive structures were identified at various parts of the Old Termez site. It was emphasized that some of these structures belonged to the pre-Islamic or early feudal periods (Массон, 1945, с. 123-153).

Subsequent research on the defensive structures of Kushan-period monuments in Northern Bactria is associated with the name of L.I.Albaum. He conducted investigations at city-fortress sites such as Dalvarzintepa, Zartepa, Khaitobodtepa, and Khairabadtepa, where cultural layers from the Kushan period have been preserved. These studies provided the first foundational information about the defensive structures of these monuments (Альбаум, 1960, с. 7-61).

Materials and methods: This article provides a brief analysis of key studies conducted by various expeditions, archaeologists, and architectural scholars on the defensive structures of the Kushan period. The results of archaeological research conducted to date on the Kushan period, diagrams reflecting the layout of the defensive structures of Kushan age fortified cities, as well as observations made by the author of the article in 2021-2024 at Dalvarzintepa, Zartepa, Kampirtepa, and Khayrabadtepa, are the main sources of this study. The research methods used in the study included observation, comparative analysis, and a historical-descriptive approach.

Results and discussion. In particular, excavations carried out on the defensive wall of Dalvarzintepa led to conclusions that the founding of the city dates back to the 3rd-2nd centuries BCE, while the construction of the shahristan's defensive wall belongs to the 1st century BCE (Leriche, Pidaev, 2008, p. 61-62). This not only laid the foundation for future research at these sites, but also provided key scientific results that could serve as a basis for comparison in subsequent excavations.

V.D. Jukov, who conducted research at Khairabadtepa, also provided general information about the site and briefly addressed its defensive structures. He noted that the walls reached up to 10 meters in height and up to 8 meters in thickness, and that there were towers (burjs) projecting slightly outward and standing somewhat higher than the wall itself (Жуков, 1961, с. 177-179).

During the Soviet period, the studies of K. Sobirov played a significant role in the exploration of Kushan-period fortification structures. The researcher conducted excavations at the defensive structures of Zartepa, Khairabadtepa, Khaitobodtepa, and Mirzakultepa, and carried out comparative analyses involving sites of Northern Bactria such as Old Termez, Dalvarzintepa, Karabagtepa, Shahrinav, Kuhna-Qala, Yavan, and Kaykubodshoh, as well as sites of Southern Bactria like Emshitepa, Shahribonu, Ai Khanum, Dilberjin, and Surkh Kotal.

Based on excavations at Zartepa and Khairabadtepa, he identified four construction phases spanning from the 1st century BCE to the 4th century CE. Furthermore, he analyzed ancient fortifications in Central Asia and categorized them into three types, assigning the fortifications from

the 3rd century BCE to the 4th century CE — characterized by corridors, solid towers, and arrow slits (shinaks) — to the third type (Fig.1-2) (Сабиров, 1979, с. 11-16).

Fig.1. The Towers of the Zartepa Settlement (Author of the article, 2023)

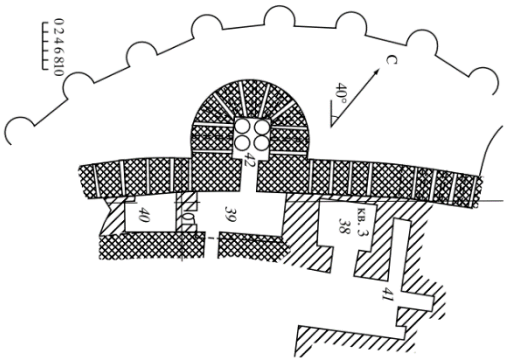

Fig.2. The Towers of the Jighatepa Monument (Pugachenkova, 1979).

After the initial research carried out by L.I. Albaum on the defensive structures of Dalverzintepa, further expanded studies were conducted in the 1970s by G.A. Pugachenkova and E.V. Rtveladze. Through archaeological excavations, the defensive systems of the shahristan and the citadel of Dalverzintepa were examined. In the research which was conducted under the leadership of Pugachenkova, the defensive walls of other Kushan-period sites in Bactria were comparatively analyzed, and as a result, the general structure of Kushan-era fortification walls was classified into the following types::

Type I — the walls and towers were constructed in a monolithic form, and the defense of the fortress was mainly carried out from the walkway atop the wall and the platforms in the towers. In such cases, defenders may have been protected from precipitation only by wooden coverings.

Type II — included an internal shooting gallery within the wall, with loopholes allowing for archery, enabling defenders to fire from both the top of the wall and the tower platforms in coordinated action.

Based on these classifications, the Dalverzintepa shahristan wall was analyzed, and it was concluded that its first construction phase belonged to Type I. During the reign of the Great Kushan rulers, the wall was reinforced and, in this later period, it exhibited the characteristics of Type II (Fig.3-4) (Пугаченкова, Ртвеладзе, 1978, с. 12-32).

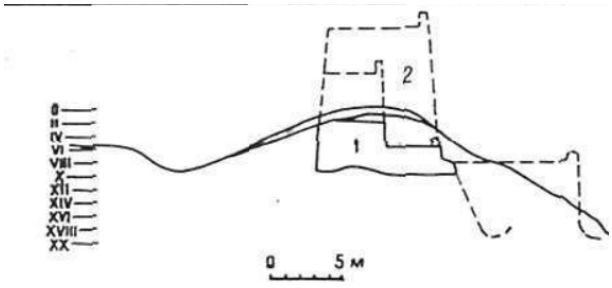

Fig.3.The Tower of the Dalvarzintepa Settlement (G. A. Pugachenkova, 1978)

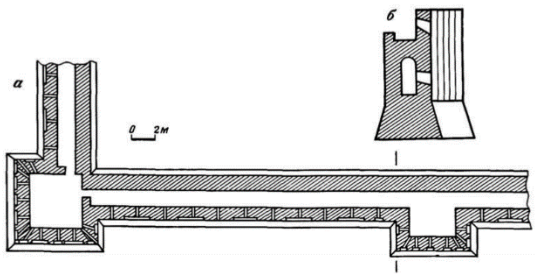

Fig.4. The Towers of the Dilbarjin Monument (V. S. Dolgorukov, 1984)

The research conducted at the Kampyrtepa site marked a new stage in the study of Kushan-period defensive structures and, for the first time, created the opportunity to fully excavate and study

a fortress with cultural layers dating back to the Kushan period. In particular, from the 1980s until 2012, a group of local and foreign archaeologists and architects (including S. Bolelov, J. Ilyasov, K. Sheiko, N. Dvurechenskaya, D. Rusanov, S. Kurbanov, I. Azimov, A. Gorin, among others) under the leadership of E.V. Rtveladze, conducted research on the defensive structures of Kampyrtepa, aiming to uncover the fortification practices of the antiquity period, especially those of the Kushan era (Болелов и др., 2018, с. 32-35).

The subsequent research conducted at Old Termez, particularly by international expeditions such as the Uzbekistan-France, Uzbekistan-Spain, and Uzbekistan-Japan missions led by Sh. Pidaev, holds an invaluable place. In addition, researchers such as Sh. Pidaev, P. Leriche, J. Houle, Sh. Rakhmonov, T. Mamatmusaev, M. Guelin, and B. Tonnel carried out studies focused on examining and analyzing the defensive structures from different historical periods of Old Termez, as well as reconstructing certain sections of the city's fortifications. As a result, significant scientific findings were obtained regarding the multi-layered defensive structures of Old Termez, particularly those dating to the Kushan period.

The author of this article believes that the construction of defensive structures in Kushan-period urban planning should be classified into two types: 1) newly constructed and 2) reconstructed/fortified. This is because the main parts of cities with Kushan-era cultural layers were primarily built earlier, and during the Kushan period they underwent certain modifications, reconstructions or expansions.

In the defense systems of nearly all urban-type sites from the Kushan period—such as Dalverzintepa, Kampyrtepa, Zartepa, Khayrabadtepa, Dilberjin, and others—the following defensive structures have been identified:

a) Defensive walls - single or double (proteichisma);
b) Moats - both outer and inner city defense ditches;
c) Defensive towers - rectangular, square, circular or oval shaped;
d) Battlements/parapets.

Defensive towers (burjs) are considered a crucial element of fortification and appear simultaneously with the wall. Initially, the towers were circular in shape, but later, rectangular, square, and semi-circular forms became widespread. These towers provide the opportunity to conduct defensive operations over a certain distance and serve to protect the front, both sides, and the lower part of the wall (Сабиров, 1979, с. 14).

The earliest towers in the territory of Bactria are observed in semi-oval and rectangular shapes at the sites of Dashtli 1 and Dashtli 3. According to the order established by ancient urban planners (poliorcetics), the distance between the towers was not to exceed the range of an arrow shot. This arrangement ensured that when one tower was attacked, defenders in the neighboring tower could easily target the enemy with arrows (Ходжаниязов, 2007, с. 105-126).

In Central Asia, between the 3rd century BCE and the 4th century CE, rectangular towers (bastions) spaced 17 to 22 meters apart were widespread. However, at Zartepa, the towers were oval in shape, and the distance between them reached up to 34 meters (Сабиров, 1979, с. 17). In addition, semi-circular bastions have also been observed at archaeological sites such as Tepai-shoh in Northern Bactria, Bactra, Kuhna-Masjid, and Jiga-tepa in Southern Bactria, as well as at the Saka fortress located approximately 15 km from Kabul (in the Kabul-Kapis region). While rectangular towers are

found at Sirkap in Gandhara, semi-circular bastions have been identified at the Sirsukh site. Semi-circular bastions are also present at archaeological sites in Iran and Mesopotamia. In scholarly research, the issue of possible connections between circular towers in Iran, Rome, and Central Asia has been raised on several occasions, and various hypotheses have been proposed. Among them are efforts aimed at establishing a chronology for the towers of Central Asia (Литвинский, 1983, с. 81-82).

Archaeological studies have revealed that the rectangular tower of the fortress excavated in the second quarter of the Begram site was later modified into a circular form. The base of the tower wall was constructed from stone, while the upper part was built using pakhsa (rammed earth). The bastion has a diameter of 5.7 meters and a preserved height of up to 4 meters. It is also hypothesized that the tower had a second floor, which housed an inner chamber. The structure was dated to the 3rd century CE by the researcher R. Ghirshman (Литвинский, 1983, с. 82).

The towers (bastions) from the earliest construction phase at the Tepai-shoh site were circular in shape, with approximately one-third of their volume projecting beyond the city wall. The center of each tower consisted of a rectangular platform constructed from bricks measuring 40×40 cm; in the second construction phase, bricks of 38×38×14 cm were used. As a result of modifications during the second phase, the bastions were transformed into rectangular shapes with rounded corners. In the first phase, the towers projected 1.5 meters from the wall, whereas by the second construction phase, the projection extended up to 2.5 meters (Литвинский, 1983, с. 18-20).

Dalverzintepa, one of the largest cities in the northwestern region of Bactria, had a generally rectangular layout and was fortified with a defensive wall and a surrounding moat. The wall was reinforced with bastions. The city consisted of two main parts: the citadel (Ark-i A‘la) and the shakhristan (residential area). Three of the four corners of the Ark-i A‘la, excluding the northwestern corner, were protected by bastions. In addition, six bastions were located along the relatively well-preserved eastern wall of the citadel, while two intermediate bastions were identified along the southern wall. No bastions were found along the western section (Пугаченкова, Ртвеладзе, 1978, с.12-13). Recent investigations conducted in 2021–2022 revealed that the defensive wall of the shakhristan was reinforced with a total of 33 bastions. The average distance between the towers along the northern wall of the shakhristan was found to be approximately 24–28 meters, while the distance between the bastions on the western and eastern walls measured around 38–40 meters.

The Dilberjin site, located in Southern Bactria, had a square-shaped layout and was enclosed by a defensive wall. Excluding the towers situated at the corners and those on the northeastern and southern sides, each of the four walls was reinforced with 12 rectangular-shaped bastions (towers). The average distance between the bastions was approximately 17–20 meters (Долгоруков, 1984, с. 58).

When examining the defensive structures of the Kampirtepa shakhristan, it was found that the city was protected by a total of 11 bastions along the northern and northwestern sides. No bastions were identified on the eastern side, where the city was protected by natural cliffs. One of the bastions had a circular design, while the others were constructed in a rectangular shape (Болелов, 2018, с. 43-44).

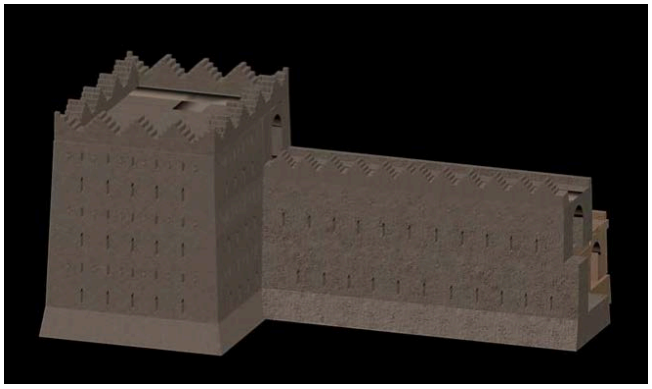

Fig.5. The Tower of the Chingiztepa Monument (J. B. Houal, 2007).

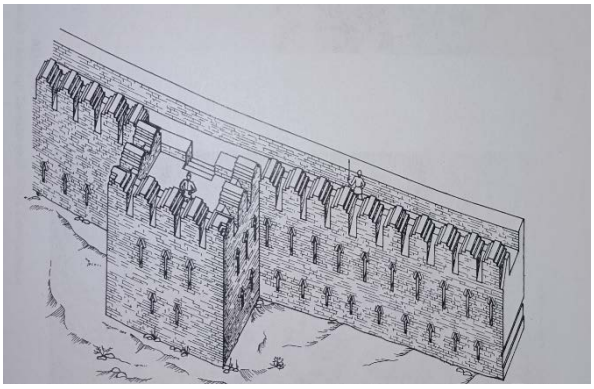

Fig.6. The Tower of the Kampyrtepa Settlement (E. A. Kurkin, 2018)

The defensive bastions of the city-fortresses built between the 2nd century BCE and the 4th century CE can be divided into two periods. In the earlier phase, most bastions were constructed in a rectangular or square shape (such as at Dalverzintepa, Dilberjintep, and Chingiztepa), whereas in the later phase, bastions with oval or semi-circular shapes began to appear (as seen at Zartepa, Tepai-shoh, Kuhna-Masjid, and Jiga-tepa)(fig.5-6). In city-fortresses that were built during the Greco-Bactrian period and continued to be used during the Kushan period (provided no significant modifications were made), the rectangular or square shape was preserved. It should be noted that this feature is not applicable to all monuments from the Kushan period. In some cases, unique features were observed in certain monuments, differing from the general pattern. For example, during the Kushan period, while the towers in the citadel of Kampyrtepa were generally rectangular in shape, a single corner tower was constructed in a circular form.

Conclusion. Research indicates that the fortification systems of this period can be classified into two types. The first type, rooted in Hellenistic traditions, featured solidly built fortress walls and bastions, allowing defenders to protect the fortress from a walkway atop the wall and from fighting platforms within the bastions. The second type, which developed later, involved a more advanced defensive system, incorporating arrow slits along the walls, enclosed shooting galleries, and arrow-shooting chambers within the bastions. Examples of monuments featuring the first type of fortification system include Ai-Khanoum, the initial defensive walls of Kay-Qubad-Shah, the defensive wall discovered 160 meters east of the Kampyrtepa fortress, and the 10-meter-thick wall constructed from mudbrick and *pakhsa* at the Qal'ai-Zahak-i-Maron site, located near the Bactrian border. The second type encompasses the fortification structures of numerous Kushan-period monuments, including Dilberjin, Jiga-tepa, Dalverzintepa, Qumqala, Zartepa, and Khairabadtepa, which are representative of this later fortification system (Болелов, 2018, с. 67-68).

At the same time, in the region of Northern Bactria, it has been observed that although the original construction of defensive structures followed the first type of fortification system, later reconstructions and renovations led to the development of elements characteristic of the second type. A notable example of such a transformation is the defensive wall of the Dalverzintepa shakhristan (Болелов, 2018, с. 68).

The first type of fortification structures, which are more commonly found in cultural layers dating to the 1st century BCE, had disappeared from the Bactrian region by the 1st century CE. City-

fortresses of the Kushan period were predominantly defended by fortification systems characteristic of the second type. However, by the mid-3rd century and early 4th century CE, in many sites (such as Zartepa, Dalverzintepa, and others), the arrow galleries and arrow-shooting chambers within the towers were sealed, and the fortifications reverted to the solid wall design typical of the first type.

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