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The defence of Takht-i Sangin

Mathilde Gelin

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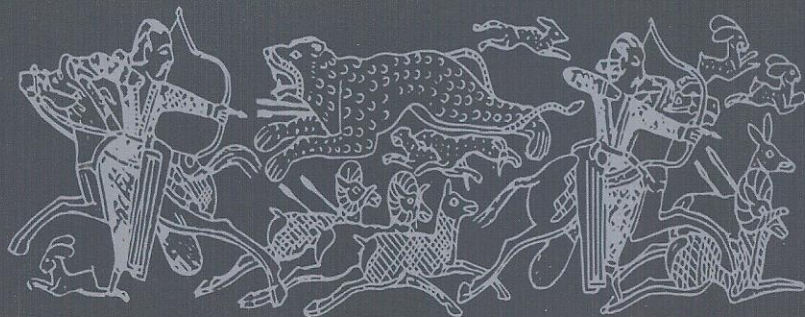
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**ТАХТИ САНГИН – НАМОДИ
ОМЕЗИШИ ТАМАДДУНИ
ШАРҚУ ҒАРБ**

**ТАХТИ-САНГИН КАК ПРИМЕР
СИНТЕЗА ЦИВИЛИЗАЦИЙ
ВОСТОКА И ЗАПАДА**

**TAKHT-I SANGIN AS AN
EXAMPLE OF THE SYNTHESIS
OF THE CIVILIZATIONS OF
EAST AND WEST**



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Национальный музей древностей Таджикистана

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Тахти-Сангин как пример синтеза цивилизаций Востока и Запада. Материалы Международного научного симпозиума, посвященного 2500-летию городища Тахти-Сангин (Душанбе, 4-6 октября 2023 г.) – Душанбе: Дониш, 2023. – 434 с.

Настоящий сборник посвящен 2500-летию одного из известнейших и уникальных памятников Центральной Азии – Тахти-Сангину. Статьи как отечественных, так и зарубежных ученых освещают различные аспекты исследования этого загадочного памятника, в том числе вопросы духовной и материальной жизни населения Тахти-Сангина. В статьях представлены также новые решения спорных вопросов, касающихся хронологии памятника и религиозной жизни тахтисангинцев.

Представленный сборник статей предназначен для молодых ученых, студентов и читателей, интересующихся историей таджикского народа, которые узнают о результатах археологических раскопок на Тахти-Сангине в последние годы, а также получают информацию о новых интересных находках, которые раскрывают некоторые тайны памятника.

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THE DEFENCE OF TAKHT-I SANGIN

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The Takht-i Sangin site is notable for the numerous remains of buildings on the surface over a vast area (83 hectares). From 1998 onwards, research¹, which until then had focused on the large sanctuary on the Oxus, was diversified to include the urban area. The entire urban area was then surveyed, as well as the outskirts of the town, and the chronological results, based on the study of the pottery and supported by C14 dating², show that their occupation is mainly from the Graeco-Bactrian period (middle of 3rd to second half of 2nd century BC: periods 4 to 7, see Table 1). However, earlier settlements dating back to the Seleucid period (late 4th-mid 3rd century BC: periods 2 to 4) were discovered in areas of limited extent (trenches Town South 3, Town North 1, 2, 4, see fig. 1) not far from the citadel, on which the sanctuary is located.

In 2013, from the very first fieldwork carried out by the French-Tajik mission³, we focused on the various steps in the creation and development of the city, as well as on determining the extension of the Seleucid foundation. In this context, the study of defensive systems—exploitation of the relief and fortifications—plays a major role in understanding these steps, the walls in particular indicating the urban limits and their evolu-

¹ Field research carried out from 1978 to 1991 by the Soviet archaeological mission led by B. Litvinsky and I. Pitchikian (see, in particular, *Эллинистический храм Окса в Бактрии [Южный Таджикистан]*), then carried out from 1998 to 2010 by the Tajik mission of the Donish Institute of History, Archaeology and Ethnography in Dushanbe, led by A. Drujinina (see the results in *ART* from 2000 to 2016 and in *Bulletin of Miho Museum* from 2006 to 2016).

² For the agglomeration, these relate to the City South2 trench (the one shown to the south of the citadel on our map, fig. 1); the results are presented in Kuvabara 2010.

Eight areas were excavated to the south of the sanctuary, five to the north and three in the area immediately north of the site. Surveys by foot extended into the valleys of the Kafirnigan to the west and north-west, and the Vakhsh to the east and north-east. All of these studies are set out in Drujinina 2012, which is reprinted in English and supplemented by a periodisation in Drujinina 2016. In order not to confuse the reader, we have used the nomenclature and periodisation of the Tajik mission for our descriptions.

³ The French-Tajik mission in Southern Tajikistan (directed by M. Gelin and Acad. Y. Yakubov, then M. Gelin with A. Karaev and T. Filimonova) was created in 2015, but began in 2013 with the French archaeological mission in Central Asia (directed by H.-P. Francfort), which launched our work at Takht-i Sangin. We would like to sincerely thank Mr H.-P. Francfort for the trust he placed in us.

tion. Our visits to the site were of very limited duration¹, making it impossible to complete our study, but we present here the results of our reflections².

Natural defence: protection by the relief

The city, set at the foot of a rocky ridge to the west and on the banks of the Amu Darya to the east, appears to be naturally protected by these two major relief components. The Aktau mountain range, which runs north-south, rises to the south-west of Dushanbe and disappears at its junction with the Amu Darya, 6500 m south of the citadel of Takht-i Sangin. It is made up of several parallel rocky ridges: at Takht-i Sangin, there are two of them, stretching 2 km east-west and rising 220-470 m above the town. The river, which today reaches a width of around 280 m at the level of the citadel (up to 800 m with its small meanders), flows in a bed over 1300 m wide, reflecting its many movements and overflows. Small islands appear depending on the season, and the right bank is covered in vegetation. The course of the Vakhsh, which is currently around 200 m wide, follows a north-south defile between two rocky areas (including the Aktau to the west), around 2500 m wide to the east and west, for almost 9 km before it joins the Pandj. Similarly, the Pandj follows an east-west defile some 6200 m long before its junction with the Vakhsh, but narrower, 230-520 m wide north-south³.

Exploiting the relief for defence purposes is one of the characteristics of Greek military strategy which, although it may have been used in all periods, was a systematic practice of the Seleucids to guide their choice of locations for the future cities and strongholds they founded.

¹ Due to circumstances beyond our control, we were able to stay only briefly at Takht-i Sangin (a visit in 2013 – two days; excavations in 2014 – two weeks; excavations in 2017 – one week) and could not return there subsequently. The short duration of our time on site was partly compensated for by very quick and easy access to field data, targeting areas that were both informative and easily accessible: sections caused by the bulldozing of a track through the site (walls 526 and 705; northern rampart of the citadel); sections of a large crevasse created naturally by water runoff in the stone base on which the citadel (and the Temple of Oxus) rests; finally, we could begin excavating the south-western corner tower of the citadel, the only one that was both accessible and not excavated by our predecessors.

² Our sincere thanks go to Mrs A. Drujinina for the discussions we had on the fortifications of Takht-i Sangin; our reflections partly concur with her own conclusions and also point to other avenues. We would also like to thank Mr J.-M. Gelin for his critical review of this text, and Mrs N. Khodjaeva for her involvement in organising this symposium.

³ River widths were measured in March.

At Takht-i Sangin, on the summit of the ridge overlooking the town, to date not only has no wall or tower been found that could be associated with a system of protection for the town below, but also, despite the height, the site remains accessible in several places, either via the beds of the seasonal streams that flow into the town, or via various points where the relief drops¹. These passages are not very easy and were probably seldom used for everyday purposes, but they are still accessible to assailants. The western ridge could have been crossed by a low altitude passage some 350 m south of the citadel, which would probably have provided access to the thalweg opposite the citadel. In any case, at around 3200 m to the south of the citadel, the difference in height between the two ridges is small enough to allow passage and ends a further 3300 m to the south: a simple bypass was therefore possible, providing direct access to the southern part of the site. The mountain could even have been a point of weakness for the town, as any attacker who managed to reach it would have found himself in a dominant position.

In addition, the study that we carried out in 2017 on the crevasses opened up in the stone accumulation immediately to the west of the citadel at the foot of the thalweg² shows that the Greco-Bactrian buildings that once stood there have been covered by rockfalls. Similarly, excavations by the Tajik mission in an area to the south of the citadel showed that mudflows had invaded and covered the dwellings during the Greco-Bactrian period³. The mountain was therefore a risk of instability and a source of real danger.

On the eastern side, we were not allowed access to the riverbank. However, the river, known for its impetuosity, could also represent a danger, as evidenced by the erosion of the shoreline. The construction of small dykes also testifies to the need for the inhabitants to protect themselves from the risk of flooding⁴. In a non-rainy season, enemies would probably have been able to stand on boats to launch an attack, or on the islands.

For these reasons, the importance of the natural protection provided by the mountain and the river, although real, needs to be qualified.

¹ Two thalwegs located about 1300 m south of the sanctuary and facing it; a sort of cirque 550 m south of the sanctuary; an accessible slope about 700 m north of the sanctuary; see fig 1.

² Gelin, Blanc 2022, p. 153-154, fig. 1 à 5.

³ Drujinina 2012, p. 350. However, we have to qualify this statement because we do not know exactly whether these flows came from the mountain.

⁴ Drujinina, Khudjagueliev, Inagaki 2016, p. 280; Drujinina 2012, p. 371.

Built defence. The ramparts

The inner walls. The urban area is barred from south to north by five long walls parallel to the slope, that we interpret as elements of one or more defensive systems (fig. 1 and 2). In general, their exact date is not known: it is not impossible that some of them, such as the North2 and North3 walls, were built after the ancient town. However, as no late re-occupation has been discovered to date, they are generally associated with the Antique period. Running east-west and relatively straight, they join the foot of the rocky ridge, from where they probably ran all the way to the river (today they have largely been destroyed at their eastern end by the construction of tracks and barriers for border purposes). They range in thickness from 2 m to just over 3 m and variable lengths (from around 60 m to 350 m)¹, depending on the size of the terrace between the mountains and the river on which the site is located. They are all particularly visible, either because they form a mound or because lines of stones and earth mark out their course.

Approximately 1820 m from the citadel, wall n°157 is the most southerly: it can only be seen from the ground line of its facing, which is made of pebbles with a filling of rubble and earth, over a length of approximately 60 m and a width of 2.80 to 3 m. It continues to the east, its facings visible on the modern trackway.

Wall n°161, around 1790 m south of the citadel, appears as a low embankment made of boulders, which extends eastwards beyond the track, for a total retained length of around 40 m and a width of around 3 m.

Wall n°526/557² (fieldwork F2 in Gelin 2015 and Gelin, Blanc 2022), some 430 m south of the citadel, is the longest of these probable ramparts, of 350 m. Although it looks like a mound of earth scattered with boulders (fig. 3), at its base it is built with faces of unworked blocks and a filling of boulders and earth. At its junction with the modern track, where we excavated it, the wall is preserved to a height of 0.90 m and an original thickness of 2.10 m. The accumulation of earth on either side, forming a mound more than 12 m wide, testifies to the melting of a crude earth superstructure: we can therefore suggest that this rampart comprised a stone socle and a crude earth elevation (either pakhsa or mud bricks). The segment of the wall close to the track runs slightly different-

¹ Respectively walls n°157 and n°526/557.

² N°526 for the part west of the track, n°557 to the east.

ly from the axis of the western part of the wall, indicating a slight change in direction, although it is not known whether this represents a condition that occurred when the wall was built or whether it is the result of repair work. At the foot of the south face of the wall, a depression approximately 2 m deep from the top of the preserved wall and at least 8 m wide to the south, runs along its entire length.

To the north, around 550-560 m from the citadel, wall n°705/711¹ (site F1 in Gelin, Blanc 2022) also takes the form of a mound of earth and boulders, at least 170 m long and around 3 m wide. Our initial cleaning of this wall revealed only late constructions made of boulder facings filled with earth². At 60 m from the rocky crest, a protuberance doubles the width of the wall, but it is impossible to determine its nature at this stage, which we associate more with a late construction that may have encroached on the long wall. A depression runs parallel to the wall along its north face, approximately 1.60 m deep and at least 4 m wide (towards the north).

The Wall North2 (at around 1080 m from citadel), 115 m long and 2 to 3 m wide, appears to be a boulders levee. Its facings are partially visible and are made of unworked blocks of various sizes, the largest reaching up to 0.90 m. The small amount of earth visible on either side of the masonry suggests that the original elevation was probably not made of unbaked earth.

Finally, beyond the town, around 2530 m from the citadel, there is a sixth wall, called Wall North3, 200 m long and around 2 m wide; the mound it forms is made of boulders and earth. For 150 m from the rocky ridge, its course is slightly curvilinear (convex towards the south), then becomes rectilinear and turns towards the north-east. The area it borders with the wall North2 contains no settlements³, but does contain two thalwegs, one of which is particularly large⁴.

The citadel. The citadel, covering nearly 4 hectares (167 m from the north-west tower to the south-west tower, 238 m from east to west⁵), comprises two lines of defence, one immediately around the temple, the

¹ N°705 for the part west of the track, n°711 to the east.

² The excavation of this wall (P.-M. Blanc) could not be completed.

³ The Tajik mission located possible stone and earth quarries in this area, as well as a necropolis. Drujinina 2012, p. 367-368.

⁴ The rocky ridge opens out through the thalweg to a width of around 120 m north-south.

⁵ Litvinsky, Pitchikian 2000-2001, vol. 1, p. 49; the eastern boundary is beyond the frontier line.

other at the edge of the relief. The temple rampart¹ (around 85 x 100 m) is made of mud bricks and is almost 7 m thick. It includes solid towers at all four corners, three others are usually restored at the centre of the west, north and south curtain walls² (only the north and north-east towers have been fully excavated, and part of the south-east and north-west towers). In the centre of the eastern curtain wall, a door opens into the temple. This first line probably represents the surface area occupied by the sanctuary at a given point in its existence.

The second line of defence (fig. 4) is difficult to read in several places, particularly due to the spread of spoil from the previous excavations, which overhangs it. The entrance has not been clearly located, although it is presumed to be in the centre of the western rampart, where previous excavators seem to have uncovered towers that could have framed a passageway³. The fortifications are made up of curtain walls built partly from boulders linked by earth, as can be seen on the western rampart and the south-western tower, and partly from solid earth with a few stones, as can be seen in the section on the northern rampart. These variations are probably the result of rebuilding or repair work depending on the period of occupation of the citadel. According to the previous excavators, the preserved height of the curtains was 6 m and their thickness, as seen in the section cut for the purposes of the modern track on the northern rampart, reached a maximum of just over 6 m: at this point, two parallel masonries (M1 and M5) of solid earth with a few stones were revealed, separated by 2 m of earth, possible remains of a corridor⁴. In addition, here at least three stages of construction and two of destruction or partial levelling have been identified. The citadel walls also include two corner towers to the north-west and south-west, and former excavators restored two of them on the eastern side as well⁵, to which we could not have access and which has also been partly eroded by the river. A 3 m deep moat surrounded the citadel; after Pitchikian and Litvinsky, «in ancient

¹ See the restitution presented at this address <https://www.artefacts-berlin.de/portfolio-item/the-oxus-temple-3d-visualisation/>.

² Litvinsky, Pitchikian 2000-2001, vol. 1, pl. 13.

³ On site we mainly see excavated spoil with no clear indication of a wall line. Excavations of Pitchikian and Litvinsky included these two 'towers', but we could not find any information about them.

⁴ Gelin, Blanc 2022, p. 154-155 and fig. 6 to 9.

⁵ Litvinsky, Pitchikian 2000-2001, vol. 1, pl. 13.

times it was filled with water»¹, the origin of which they place to the north of the citadel. It is difficult to establish the reliability of this hypothesis outside periods of major flooding because, as we shall see, the substratum here seems to be particularly porous.

Towers?

In their current state, the inner walls of the town show no obvious signs of the presence of towers², even if two protuberances may be candidates, although it is difficult to interpret them as they stand. One can be seen on wall 705, around 65 m from the mountain ridge, and the other on the southern face of wall 526, 230 m from the base of the mountain. The Tajik mission excavated the latter and uncovered stone masonry n°544 (fig. 5), including a north-south wall located few metres from the rampart, which she interpreted as a tower³.

In the case of these two constructions on walls 526 and 705, however, it is difficult to establish with certainty whether they are located in the depressions parallel to the walls, which we interpret as moats associated with these inner walls (see the profile drawn up by R. Schwerdtner, fig. 6), or between the moats and the walls. Only cross-sections of the ditches up to the long walls would provide an answer to this question, both through the precise position of these «towers» in relation to the moats (if they are in the location of the moats, they are later and probably not directly linked to the walls) and through their stratigraphic link with the walls and moats.

It is delicate to attribute the presence or absence of towers to one period or another, because in the Seleucid and Graeco-Bactrian periods they were commonly used, particularly when the curtain walls barred a flat space or were perpendicular to the slopes of the relief, both of these patterns being present at Takht-i Sangin. In these cases, there are many towers at regular intervals⁴. By comparison, on a fortress built on a steep

¹ Litvinsky, Pitchikian 2000-2001, vol. 1, p. 49.

² Hypothesis based on visual observation; only by stripping the walls could their existence be verified.

³ Drujinina 2012, p. 347 mentions it (tower n°544) but without details. What we have seen (partly covered with earth) does not allow us to support nor contradict this hypothesis.

⁴ Whatever the size of the stronghold: ramparts on flat land or laid out perpendicular to the slope, for example in Seleucid Syria at Dura-Europos on the Euphrates (western wall, towers spaced 50 m apart), Cyrrhus (first southern wall, towers or setbacks every 55 m), Apamea on the Euphra-

slope, itself defensive, such as Uzundara in Uzbekistan dating from Euthydemus I, the towers are mainly located at the angles formed between the curtain walls or along their course, leaving long stretches of sometimes more than 240 m without any¹. At Takht-i Sangin, if more towers had existed on the long walls, it is likely that several would still be visible, and their apparent absence does not lead us to favour a Seleucid creation in which towers were systematically installed.

At the citadel, the outer rampart is a special case because, as we have said, there are corner towers to the north-west and south-west and probable towers flanking a gate on the western rampart. The eastern side has been partly eroded by the river and it is not known, although it may be assumed, whether there were towers at the corners. According to the reconstructions made by the former excavators, the «inner rampart» comprised seven towers².

Interpretation essays

An initial urban core. As we have already said³, the large size of the town in its current state, as well as the multiplicity and disparity of the walls, seem to rule out the creation of the town in a single time, and point more to successive advances in urbanisation. This hypothesis is reinforced by the findings of the Tajik mission, which identified: occupation from the Seleucid period on the citadel and in nearby areas; Graeco-Bactrian occupation throughout the town and citadel; occupation from the Kushan period on the citadel and probably in the northern part of the town, whereas this was absent from the southern part⁴.

We assume that the two walls 526/557 and 705/711 could have been fortifications with moats (the depressions along the two walls) and that they would represent the limits of an initial settlement grouped around the citadel⁵. Such an area, which would have covered around 43 hectares, had the advantage of offering only one access point from the mountain, via the seasonal stream opposite the sanctuary. The cirque to the south of

tes (herringbone or zig-zag wall, towers spaced 45 m apart); Greco-Bactrian Afghanistan at Ai Khanoum (northern rampart, towers spaced 30 m apart).

¹ Rtveldze, Dvurechenskaya et alii.

² Litvinsky, Pitchikian 2000-2001, vol. 1, pl. 13.

³ Gelin 2015, p. 40.

⁴ Drujinina 2012, p. 336, 370; Drujinina 2016, p. 2, 40.

⁵ Gelin 2015, p. 43; interpretation shared by Drujinina 2012, p. 371; Drujinina 2016, p. 40 et 48.

wall n°526 and the gentle slope to the north of wall n°705, which, as we have noted, are possible access points from the ridge towards the town, are both excluded from this first barrier of ramparts: provided that passage from the thalweg facing the citadel was defended, occupation between these two walls would appear to be relatively protected.

It is about 200 m north and south from the citadel, also in this area surrounded by these two ramparts, that the Tajik mission discovered remains dating from the Seleucid period. In addition, pottery shards from the Achaemenid period, found during surveys¹, point to a possible occupation at this time on the site or in the immediate vicinity, which could have encouraged the Seleucids to settle there. We could therefore assume that the Seleucid foundation was located between these two walls, preceding the Graeco-Bactrian buildings established there.

However, in the area from the thalweg to the citadel, the strong run-off carrying stones down by the course of the seasonal torrent is an obstacle to such an installation, and we have seen that constructions from the Graeco-Bactrian period had been buried (fig. 7)² and nothing had come after them. We will see it below, but it seems that the Seleucids were aware of this risk and, probably, they did not occupy this sector. In addition, although we have no doubt about the defensive nature of walls 526/557 and 705/711, we can also wonder whether they were also built to try to contain the spread of materials carried down the mountain by the torrents. They seem to be far away from the central ravine opposite the citadel to play a role in containing its flow, but they are close to the thalweg to the north of wall n°705/711 and the cirque to the south of wall n°526/557, these two openings in the mountainous relief being possible passages to pour out debris. In this case, we can assume that the urban area limited by our two walls would have been preserved from it, but the interest of this protection seems superfluous since there is nothing likely to slow down the run-off of the central thalweg in this zone. Only the citadel is protected against run-off, and it is mainly the height where it is located that protects it.

Furthermore, the technique used to build the wall 526/557 (fig. 3) does not evoke that usually used by the Seleucid Greco-Macedonian, even if it is not easy to estimate how these occupants would have adapted to the materials and techniques available for such a construction. Moreo-

¹ Gelin 2015, p. 42.

² Gelin, Blanc 2022, p. 154-155.

ver, excavation of wall 526/557 showed that it did not predate the Graeco-Bactrian period, as pottery from this period was found associated with its foundation¹. If, therefore, a first city existed within the limits of these enclosure walls, it was not a Seleucid creation, which must be sought elsewhere.

Strengthened access from the south?

At the southern end of the site, the two walls 157 and 161 are approximately 30 m from each other but, in the absence of targeted excavations, their state of preservation makes it impossible to determine whether they functioned at the same time or whether they were built one after the other. They block off the town at the point where the passage between the mountain and the river is at its narrowest. If they were built at the same time, this double wall could have been used to reinforce the defence (wall 157 could then be interpreted as an outwork) against incoming traffic from the south and west since, as we have said, at the mouth of the Kafirnigan valley, the rocky ridge can be bypassed just 1.2 km to the south of wall 157, and a small thalweg ends 220 m away. Finally, a possible passenger parking area for police control purposes could have been set up between these two walls.

The main reason for the existence of this succession of walls running the length of the town's on north-south axis is probably to control passageways, both for regional traffic and for pilgrims on their way to the sanctuary². The fact that their openings are not visible in this state³ suggests that any gates were located to the east, close to the river along which access to the town could have been made. The flooding of the river and modern works have taken their toll on these remains, preventing

¹ Gelin 2015, p. 44; Gelin 2019, p. 147. Ceramic dated by T. Khudjagueldiev. It should be noted, however, that our excavations took place on a section of the wall that follows a slight change of direction, as mentioned above, in relation to the western part of the wall: it cannot be ruled out that this could be the result of a reconstruction or repair, in the Graeco-Bactrian period, of a Seleucid wall. This is only a hypothesis that has not been substantiated in the field, in the absence of further excavations.

² On the interpretation of the existence of a pilgrimage, see Bernard 2015, p. 55.

³ Observations based on visual observation and in the absence of any stripping of the walls. To the south of wall no. 526, close to its section no. 557, between the modern trackway and the river bank, the presence of a few cut blocks leads A. Drujinina that a gate might have been located there (Drujinina 2012, p. 347). What we have seen does not allow us to support nor contradict this hypothesis.

us from verifying this hypothesis, which nevertheless seems to be supported by the fact that no permanent path seems to have existed from the rocky ridge, which would have justified openings on the western parts of these walls.

The citadel. In addition to the date of origin of the sanctuary, which is associated with the early Seleucid period¹, and the citadel's strategic location in the centre of the town, along the Amu Darya and facing a breakthrough in the mountain, the entire mound on which the Temple of the Oxus stands is particularly noteworthy for its state of preservation. Neither the mountain's run-off nor the river's floods have destroyed it (fig. 7) even if the eastern part is partly eroded, and the archaeological remains have stayed relatively intact², despite the fact that the building materials used to build the ramparts and other buildings include crude earth (mud bricks, mortar), which is particularly fragile when exposed to humidity. This mound is made up of a debris fan of material carried down from the mountain by the occasional torrent facing the citadel. It is 2 m thick at the citadel and rests on fluvial clayey silts³. It is made up of alternating accumulations⁴ of stones of various sizes and gravel, forming a drain that allows the summit to be completely isolated from water run-off and overflows; it was also not affected by the mudflow that spread to the south. This is a «useful» natural relief that was perfectly exploited by the first founders, a practice in keeping with the habits of the Seleucid military. This fact supports the hypothesis that this mound was chosen for the first Seleucid foundation⁵. In addition, the particular shape of the southern line of the citadel, which protrudes southwards towards the river bank, probably corresponds to the original shape of the debris fan⁶. This means that the mound would have been fully exploited and protect-

¹ In Litvinsky, Pitchikian 2000-2001, vol. 1, p. 183, Pitchikian attributed it to Alexander the Great, Litvinsky to the end of the 4th century and the beginning of the 3rd century.

² Victims of natural erosion from the summits, but well maintained at the base in the areas protected by rockfalls: the temple walls were preserved to a height of at least 5 m at the time they were excavated.

³ After Drujinina, Khudjagueldiev, Inagaki 2016, results of the soundings 17 and 18; see also fig. 7 and 8

⁴ Which we particularly observed in 2017 to the west of the citadel, see Gelin, Blanc 2022.

⁵ A. Drujinina hypothesises that it was located on the north-eastern part of the mound (Drujinina 2016, p. 20) on the eastern zone, covered by a modern concrete platform and which the Franco-Tajik mission was not allowed to explore.

⁶ Opinion shared by A. Drujinina 2012, p. 353; the author extends this assumption to the eastern edge of the citadel.

ed throughout its original extension, thanks to this isolating and natural pebble bed.

In this way, the Seleucids would have known that this place protected them from the various flows of water and would have been aware of its formation; in this hypothesis, it is conceivable that, in the area between the thalweg and the citadel, the accumulation of rocky materials of all sizes at times linked to variations in torrential flows was a known process for them. We might therefore wonder whether they had settled in this sector, where the accumulations could have been the greatest¹. Subsequently, it can be considered that the later occupants did not necessarily perceive this risk, since the Graeco-Bactrian buildings established in the area in question were built on a layer of earth (fig. 7) hiding the underlying stony layers; was it the result of a mudflow from the mountain?

Lastly, it is located at a good distance from the mountain in front of it (at least 150 m), where only powerful line weapons, positioned on the summits, would have been able to reach it. From this point of view, we can suppose that the Seleucids' main adversaries in the region preferred to use lighter weapons, for example of the type found in the excavations at the Temple of Oxus², which placed the occupants of the citadel in a relatively protected position.

From now on, based on the assumption that the Seleucid foundation was laid only on the debris fan, we began a study of the northern rampart in order to determine the chronology of the various fortifications enclosing the citadel and to check whether the earliest walls were indeed from the Seleucid period. Unfortunately, due to lack of time, we could not complete the work and only studied the constructions on the upper levels³, which probably belong to the Kushan period and cannot be considered with certainty to represent the layout of the Seleucid citadel.

It therefore remains to confirm the exact limits of the first foundation of Takht-i Sangin, that we localise on the current citadel of the city, for part or on the whole surface. In this case, it would be of limited dimensions (the citadel in its last state extends over an area of about 4 Ha)

¹ As we have noted, this is to be confronted with future excavations.

² For types of weaponry, see Bopearachchi, Vigouroux-Sachs 2001, and for the weapons found in the Temple of Oxus and presented by R. Pitchikian, see Litvinsky, Pitchikian 2000-2001, vol. 2, part I.

³ Security reasons kept us away from Takht-i Sangin. For the results of this study, see Gelin, Blanc 2022.

which would correspond more to a stronghold, whose vocation would then have been that of regional control by the soldiers, than to a city. The religious aspect brought by the sanctuary, although important, does not pose a brake to include the foundation of Takht-i Sangin in the category of fortresses. If we consider the Seleucid foundation of Ikaros-Failaka island in Kuwait, we see that a defensive establishment and a temple were not incompatible in Seleucid times, even if in terms of size the two strongholds are different. Takht-i Sangin may have originally been a Seleucid fortified settlement intended to control the crossing point joining the Vakhsh and Kafirnigan valleys along the Amu Darya, avoiding the mountain. Its development in Greco-Bactrian times shows that the importance of the sanctuary, the city and probably, the flow of people, had increased.

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THE DEFENCE OF TAKHT-I SANGIN

This outline of the defence of Takht-i Sangin, whether it is provided by the relief or it is built, proposes to characterise its defensive practices and constructions, in order to contribute to a better understanding of the extension of the urban settlement and to the location and nature of the first Seleucid foundation. We conclude that it was probably a stronghold, a fortress, and that the extension of the city took place mainly during the Graeco-Bactrian period. The hypotheses presented here will need to be verified in the field, but are based on our observations and excavations during our stays at the site, as well as on the publications of B. Litvinsky and I. Pitchikian, and A. Drujinina.

Keywords: *Takht-i Sangin, Hellenistic period, Seleucid, Greco-Bactrian, natural defence system, built defence system, fortifications, inner walls, citadel, urban space evolution.*

ОБОРОНИТЕЛЬНАЯ СИСТЕМА ТАХТИ-САНГИНА

Данное описание оборонительной системы Тахти-Сангина, независимо от того, обеспечена ли она рельефом или построена, предлагает охарактеризовать ее систему обороны и конструкции, чтобы способствовать лучшему пониманию расширения городского поселения, местоположения и характер первого фундамента, основанного Селевкидами. Исследование показало, что, вероятнее всего, сначала это был или опорный пункт, или крепость и что расширение города происходило главным образом в греко-бактрийский период. Представленные в статье гипотезы основаны на наших наблюдениях и раскопках на Тахти-Сангине, а также на публикациях Б. Литвинского, И. Пичикяна и А. Дружининой, но они требуют подтверждения дальнейшими раскопками на памятнике.

Ключевые слова: *Тахти-Сангин, эллинистический период, Селевкиды, греко-бактрийская система, естественная оборонительная система, построенная оборонительная система, укрепления, внутренние стены, цитадель, эволюция городского пространства.*

Table 1
Chronology

Established by the Tajik mission after the pottery
(Drujinina A., « The structure of the urban site Takht-i Sangin and its vicinity », *Bulletin of Miho Museum* 16, 2016, p. 39-40).

Takht-i Sangin 1	end 5 th – beginning 4 th century BC
Takht-i Sangin 2	2 nd half/end 4 th century BC
Takht-i Sangin 3	beginning 3 rd century
Takht-i Sangin 4	middle 3 rd century BC
Takht-i Sangin 5	second half 3 rd century BC
Takht-i Sangin 6	first half 2 nd century BC
Takht-i Sangin 7	third quarter/second half 2 nd century BC

Illustration





WALL 157



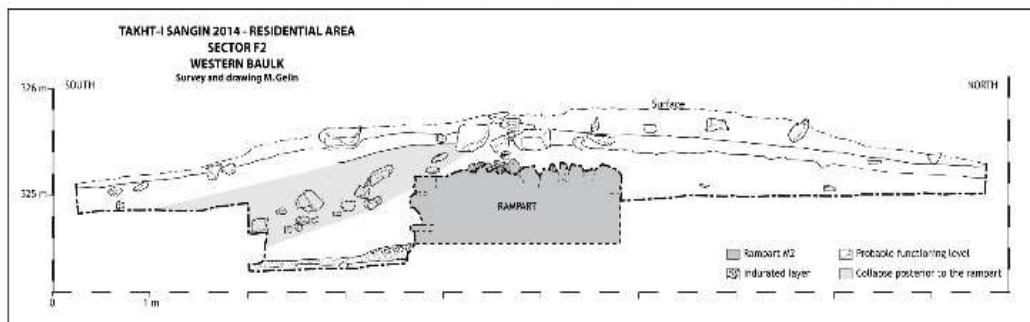
WALL 705



WALL NORTH2



WALL NORTH3



сороқиде Тажик - Сибгир

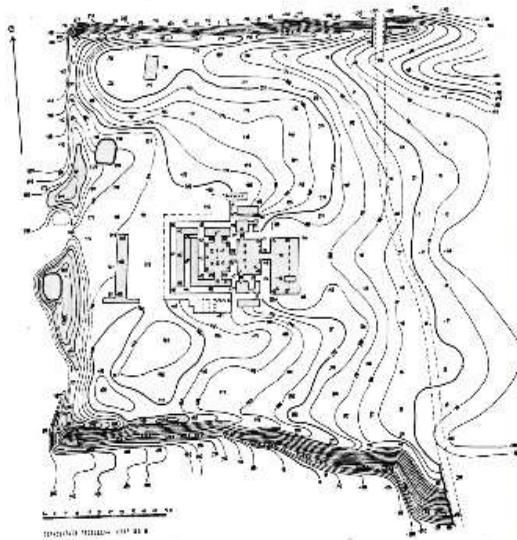
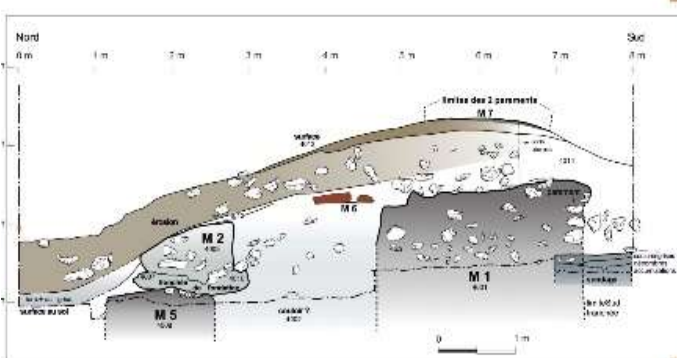


Таблица 11



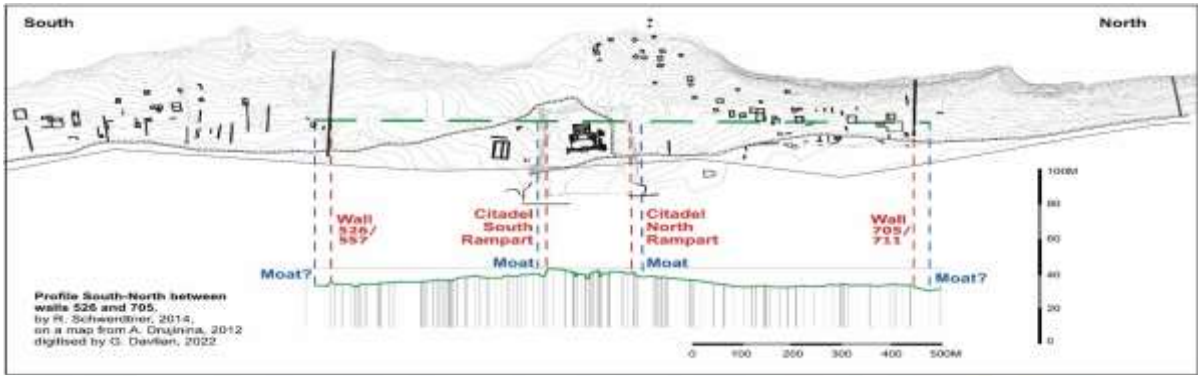


WALL 544 IN FRONT OF WALL 526



CITADEL, SOUTH-WEST TOWER





Captions

III. 1: Map of Takht-i Sangin. The wide arrows indicate possible direct access from the mountain to the town. Relief curves are shown every 5 m on the archaeological site and every 10 m on the mountain (altitudes according to Soviet military maps). North is on the right. Scheme by M. Gelin © MAFTTM, 2023, based on plans by M.I. Gafurov, R. Schwerdtner, N. Bolbolov, G. Davtian.

III. 2: Walls 157, North2 and North3 looking west, photos M. Gelin 2013 © MAFTTM; wall 705 is looking east, photo P.-M. Blanc 2013 © MAFTTM.

III. 3: Wall 526. Top: northern part, looking north-west; below, the wall looking east; below, the southern face of the wall, looking north, at the section created for the needs of the modern track; below, section of the wall. Photos and drawing by M. Gelin © MAFTTM.

III. 4: Citadel, fortifications. Top left: topographical plan surveyed by the Litvinsky-Pitchikian mission (Litvinsky-Pitchikian 2000-2001, vol. 1, pl. 11) showing the relief of the walls and the possible towers of the western rampart; right: western rampart looking south; centre: southern rampart partly covered by modern excavation spoil and flanked by a moat; bottom: northern rampart looking east and section to the east (walls M1 and M5 are contemporary). Photos M. Gelin, drawing M. Gelin, digitising by R. Douaud © MAFTTM.

III. 5: Towers. Top: wall 544 against wall 526, interpreted by the Tajik mission as a tower, looking north; centre, south-western corner tower of the citadel, looking east; bottom, inner face of the south wall of the south-western tower. Photos M. Gelin © MAFTTM.

III. 6: Profile of the area enclosed by the two walls 526 and 705, created by R. Schwerdtner in 2014 © MAFAC, based on a plan published by A. Drujinina in 2012 and digitised by G. Davtian © MAFTTM.

III. 7: Above, view of the site looking north: in the background, we can see that the citadel extends eastwards into the floodplain, and that, established on the debris fan, it has resisted to fluvial erosion and to water from the mountain; below, the mouth of the thalweg facing the citadel, looking west; below, the area where the rocky material deposited between the mountain and the citadel, looking south-east; below left, an example of the layers of boulders and gravels that allow the substrate to be porous; right, detail of a layer deposited by run-off from the mountain west of the citadel, covering a wall dating from the Graeco-Bactrian period. Photos M. Gelin, P.-M. Blanc © MAFTTM.

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