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## TABRĪZ, IRAN

### Ilkhanid Tabrīz. Architectural and Archaeological Research on the Rabʿi Rashīdī



Season 2019

**Tehran Branch of the Eurasia Department of the German Archaeological Institute**

by Thomas Lorain, Christian Fuchs and Lorenz Korn



e-FORSCHUNGSBERICHTE DES DAI 2022 · Faszikel 2

*Der Artikel stellt einige Ergebnisse der archäologischen Feldforschungskampagne auf dem Areal des Rab'-i Rashidi in Täbris (Iran) dar. Die Arbeiten umfassten u. a. eine topographische Aufnahme, geophysikalische Erkundung, punktuelle Grabungen sowie eine Dokumentation der erhaltenen Baureste auf dem gesamten Areal. Die Grabungen erbrachten erstmals Befunde einschließlich Bauresten aus der Ilchan-Zeit (frühes 14. Jh.) und belegen deren Nachnutzung in späteren Epochen, während die Aufnahme der Baureste neue Erkenntnisse über die Befestigung der Anlage bringen und weitere Fragen zur Organisation, zu einzelnen Strukturen und ihrer Funktion aufwerfen.*

*This article presents preliminary results of the 2019 archaeological campaign on the Rabʿi Rashīdī archaeological site in Tabrīz (Iran). The work undertaken included a geophysical survey, limited excavations as well as an architectural and topographical survey of the whole site. While excavations show for the first time structural remains from the Ilkhanid period (ie early 14<sup>th</sup> century) and their connections with later occupation, the topographical and architectural*

**Cooperation partner:** Iranian Cultural Heritage, Handicraft and Tourism Organisation (ICHHTO) East Azerbaijan; Tabrīz Islamic Art University; DAI Eurasien-Abteilung; Bamberg University, Islamic Art and Archaeology.

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**Team:** B. Ajourloo, M. Bouquet, H. Esmaili Atigh, Ch. Fuchs, B. Hoffmann, L. Korn, W. Kreibitz, T. Lorain, A. Luib, M. Moeini, A. Moradi, N. Qorbani, M. Touhidi, M. Rahmatpour.



1 Tabriz, Iran. Aerial photograph of the Rab'-'i Rashidi taken in 1956 (left; red dot marks the stair-like structure position) and interpretation of the 2019 geophysical survey's results (right). (Map: Eastern Atlas, Berlin)

*survey of the whole site bring new light on its organisation and fortification as well as new questions on specific structures and their meanings.*

- 1 Following a geomagnetic survey held in June (Fig. 1), a new archaeological and architectural campaign was undertaken on the [Rab'-'i Rashidi](#) archaeological site between September and October 2019. Based on the survey's results two trenches were opened. The first one (labelled XII) was implanted on the SE plateau of the site, which bears the marks of a large walled structure of c. 60 x 60 m. The second one (XIII) was settled to cover a group of walls and fireplaces on the NW plateau. In the meantime, a detailed study of the so-called stair-like structure, S of the SE plateau, was implemented and the overall topographical recording of the site was conducted.

### Trench XII: A window opened on a large 60 x 60 m square structure

- 2 The preliminary aim of Trench XII was to elucidate the characteristics of the hump marking the northern limit wall of the large 60 x 60 m square structure. Doing so, the second purpose was to understand its connections to the inner organisation of overall structure. A first long and narrow trench of 2 x 11 meters cutting this hump was then oriented in N-S direction. This band was later extended to the E with an additional surface of 3 x 5 m on the southern side of the hump (Fig. 2).
- 3 The northern hump is the remnant of a compacted rammed earth wall founded on one or two rows of rough quarry stones directly placed on virgin soil. It measures around 2.90 m width and is preserved on approximately 1.80 m above its foundations.
- 4 On its southern side, this wall presents a mudbrick facing extending over 2.40 m (Fig. 3). A perpendicular wall was found on both ends of this facing. The eastern one partly collapsed. It is made of several rows of mudbricks and is approximately 1 m large and 2.70 m long. Its western counterpart is even more badly damaged.
- 5 Inside the room created by these three walls forming a U-shape, two different levels of floor were discovered. The highest one abuts against the main northern wall with a pavement of square bricks laid into gypsum



2 Plan of Trench XII. (Plan: Thomas Lorain)

mortar. The top of a circular ceramic furnace (28.5 cm high and 40 cm in diameter) is flush with this floor. A tube is placed against a vent hole that is pierced at the bottom of the furnace. Both tube and furnace are on the top of the second level of flooring. It has the form of a brick pavement bonded together with flat stones into gypsum mortar.

6 This last floor, as well as the two parallel walls, are built on a strong structure (c. 60 cm high) which is rectilinear on its southern side. Its northern limit remains to be identified. This structure is made of mortar in which some stones and bricks are embedded and seems to be built on a well-prepared flat layer of lime mortar. S of the structure, this layer bears the traces left by vanished bricks displayed in a herringbone pattern and obviously used as a floor (Fig. 4). Further S, c. 2 m far from the structure, a floor made of flat flagstones is still visible and probably formed a common floor with the herringbone bricks. Easily removable, these bricks were certainly taken once the floor was abandoned and were probably reused somewhere else.

7 On top of the flat layer of lime mortar and against the hard structure, a demolition context layer was filled with many ceramic tiles (Fig. 4). These tiles were either unglazed or glazed, most of the time with a turquoise colour, sometimes with black. One piece also shows a very specific type of decoration: the surface is scratched to enhance the glazed motif while the background takes the colour of the paste. Among this material some of the tiles were still bonded together into mortar, showing geometric patterns and one fragment of muqarnas: they were originally designed to decorate walls and probably vaults.

8 This material is certainly the most interesting regarding the dating of the different contexts within Trench XII. Indeed, such a limited diversity in the tile decoration (unglazed, turquoise glazing and black glazing, or scratched glazed surface) suggests an early date in the history of glazed tiles for architectural decoration in the region. As comparative examples, the use of a combination of unglazed and turquoise tiles can be found close to Tabrīz in the portal of Ālākī caravanserai (c. 1330, Fig. 5) [1]. Comparative elements of scratched ceramic tiles combined with the *bannā'ī* technique [2] can also be found in monuments such the Uljāitū mausoleum in Sulṭāniyya (1305–1317,



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3 Tabriz, Iran. Trench XII seen from SW with the main wall in the background, and two floor levels with a furnace between the remnants of two walls. (Photo: Lorenz Korn)

4 Traces of herringbone pattern left by removed bricks in the ground mortar bedding (left) and examples of ceramic tiles (right) found in Trench XII excavations. (left Photo: Lorenz Korn, right Photos: Mathilde Bouquet)

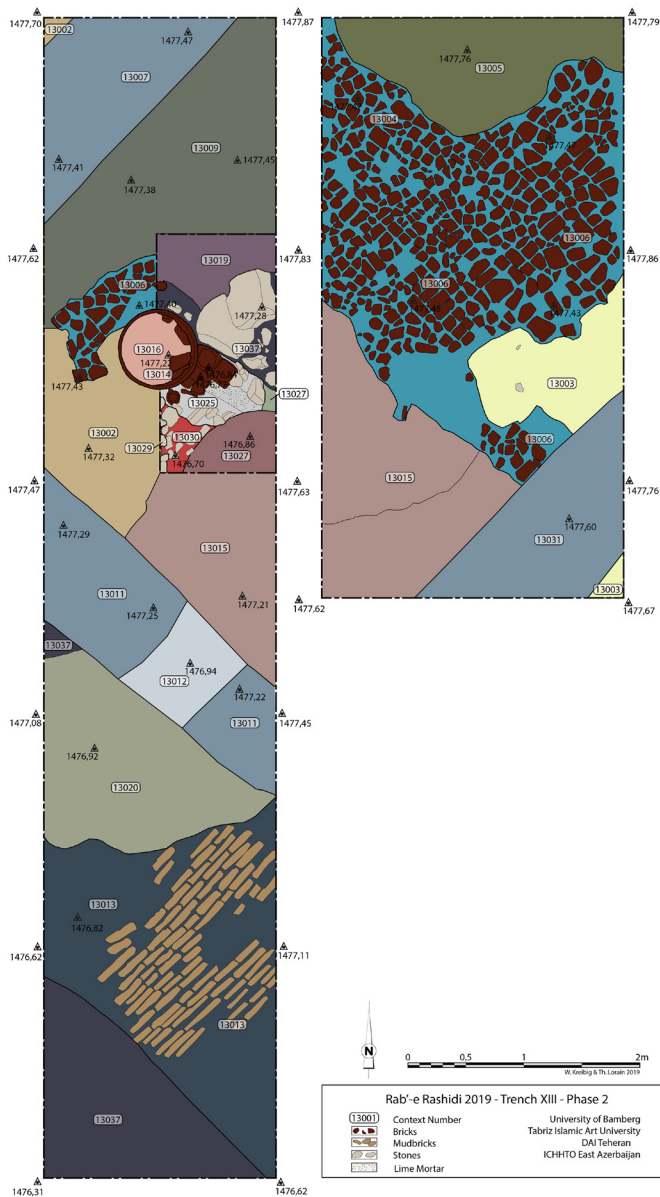
5 Comparative examples from Alaki caravanserai (left) and the cupola decoration of Uljāitū mausoleum in Sultāniyya. (left Photo: Lorenz Korn, right Photo: Sandra Aube)

Fig. 5) [3] or in the Masjid-i Jāmi‘ of Ushturjān (1315) [4]. Then, it is possible to propose an early 14<sup>th</sup> century dating to the ceramic tiles found in Trench XII, coinciding with the phase of the Ilkhanid period during which the Rab‘-i Rashīdī was founded.

- 9 The different contexts and structures unearthed in Trench XII can lead to some preliminary conclusions and hypotheses. It seems quite clear that the flag stone floor and the vanished herringbone pattern brick floor were contemporary. One convincing hypothesis would be to associate these floors to the hard structure. This structure could have been a wall foundation or a wall itself. Therefore, the ceramic tile elements found in this area could belong to the decoration originally applied to this wall and thus associated to the floors. This first phase of building can be associated to the Ilkhanid period. After the abandon of this building, the bricks from the floor were robbed before the tile decorations collapsed.
- 10 Later, the area saw new building activity. The two eastern and western parallel walls are built together on top of the hard structure remains and additional stone foundations, forming a U-shape with the northern wall. This area is associated to the two successive levels of floor.
- 11 If most of the relative chronology can be reconstructed, one question remains concerning the building period of the main northern wall. It is not yet clear if this wall is contemporary to the U-Shape area or if it was an older structure refaced with brick when this area was created. An Ilkhanid origin (or even earlier) is therefore also possible.

### Trench XIII: Insight on the NW plateau

- 12 The primary goal of trench XIII was to understand the nature and organisation of the architectural complex linked to the fireplaces detected by the geophysical survey. A narrow S-N space of 2 x 10 m was first excavated on this area and then enlarged at the E of its northern side by a 3 x 5 m square, giving Trench XIII an L-shape (Fig. 6).
- 13 Approximately 20 to 30 cm below the surface, three wall sections were found. Two of them run parallel (oriented SW-NE) and are spaced 4.60 m from each other. The third wall is perpendicularly oriented (SE-NW). All



6 Plan of Trench XIII. (Plan: Wiebke Kreibig, Thomas Lorain)

are slightly less than 1 m thick and made of compacted rammed earth. While their interconnection does not appear within the limits of the trench, they seem to belong to one period and to form three sides of one single room.

14 0.50 cm below the surface, the area between two parallel walls yielded a floor pavement made of brick or unglazed tile fragments. These fragments are approximately aligned and are laid in a mortar bed. This floor is better preserved in the NE part of the room whereas the southern part is more destroyed.

15 Next to the western corner of the room, the top of a circular furnace appears at ground level (Fig. 7). It measures about 0.65 m in diameter and approximately the same in height. It consists mainly of a large re-used ceramic vessel which was cut on purpose and equipped with additional elements for the use as a furnace. The body of the vessel was horizontally cut into two halves; the joint between the two section was smoothed and equipped with tongue and groove to ensure perfect fit of the upper part on the lower. This way, it was possible to lift the domical upper part of the vessel with its circular opening and to have unhindered access to the interior of the furnace at its full width. A ventilation hole was cut into the lower part of the vessel. An air shaft leading to this hole was placed in front, made of layered bricks, and slightly descending towards the hole, which could be closed by a ceramic fragment (Fig. 7). This fragment is a bottom sherd of a green-glazed sgraffito ware that can be dated to the 12<sup>th</sup> centuries or slightly later [5].

16 The furnace was placed in a pit dug into older layers and the virgin soil, and then tightly packed with earth fill. Inside the furnace, two different layers of filling were found: the upper one containing many animal bones and ceramic fragments, while the lower fill was intermingled with fine moulded ceramics, metal fragments and fritware beads (Fig. 8). Moulded ceramic can be dated between 13<sup>th</sup> and 15<sup>th</sup> century, whereas the fritware beads more probably belong to the 12<sup>th</sup> to 14<sup>th</sup> century [6]. For both types of fragments, an Ilkhanid period date is therefore possible.

17 Thanks to a narrow test trench directly dug SE of the furnace complex, a circular pit was also found. A little less than 1 m in diameter, this pit was used to mix gypsum mortar which was found hardened in the bottom together



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7 The circular furnace area in Trench XIII (right) and the bottom sherd used to close the vent hole of the furnace (left). (left Photo: Mathilde Bouquet, right Photo: Lorenz Korn)

8 Artefacts found in the Trench XIII furnace: moulded ceramic (left) and ceramic bead with turquoise glaze (right). (Photos: Mathilde Bouquet)

with fragments of bricks. Due to the limited area excavated in the test trench, the relative chronology between the mortar pit and the furnace cannot be yet asserted, but it cannot be excluded that the two are contemporary in use.

- 18 To summarize, trench XIII presents a rather homogenous ensemble. Rammed earth walls were probably erected directly on virgin soil and likely belong to one building campaign. The mortar pit seems contemporary to this building and was probably used for its construction. If it is certainly premature to assert that the furnace is contemporary to the pit and the walls, one can assume that the floor pavement was added in a later phase since it covers several layers that fill the mortar pit. The furnace was preserved and then used as a waste-bin. From the ceramic collections overlaying the floor pavement, compared to other ceramic finds, it seems that the chronological distance between the original constructions and the brick fragment pavement was probably not very large, perhaps less than a century.
- 19 This excavation in the area confirms the importance of the buildings that were primarily revealed by the geomagnetic survey.

#### Architectural survey: The ›staircase-like structure‹

- 20 The so-called staircase-like structure has been previously excavated during a campaign in the first decade of the 21<sup>st</sup> century [7]. The excavation was c. 8 x 20 m and reached a depth of c. 5 m. The recent examination of the structure aimed at clarifying its former function, its approximate time of creation, the definition of possible subsequent structural alterations and the background of its destruction.
- 21 The excavated part of the structure is located on the S edge of the S-E of the site (Fig. 1). The structure consists of two parts: A northern part that is located underground in a deep ditch. Its visible parts are c. 9 m long (in N-S direction). And a southern part which is an elevated, ramp-like structure. It is also c. 9 m long (Fig. 9).
- 22 The northern part is constructed prevalingly in an orderly brick masonry. The square shaped bricks are not re-used and all show dimensions around 26.50 x 26.50 x 6.50 to 7 cm. In some – very rare – cases, rubble stones (red



9 Tabriz, Iran. The ›staircase-like structure‹ view toward the S with its ›southern elevated extension‹. (Photo: Christian Fuchs)

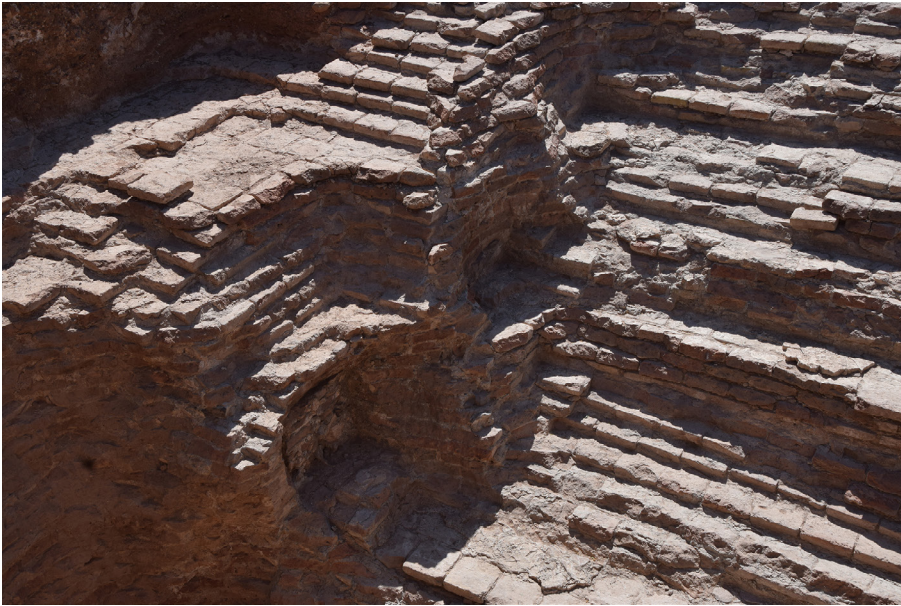
sand stones) are integrated into the masonry. The overall form of the northern part of the excavated structure looks like a staircase with eight highly irregular steps declining from S to N. These steps are c. 4 m wide.

- 23 Almost no facing masonry surface can be seen. Most of the exposed bricks show a rough, broken surface with traces of tooling. The mortar is a hydraulic lime mortar.
- 24 The southern part appears like an extension of the northern part. It has approximately the same width. Its masonry is rough and irregular, composed of rubble stones and broken re-used bricks.
- 25 Several architectural features give indications on the building history, possible alterations and construction-phases.
- 26 For the initial construction, a large pit was dug at least 4.5 m into virgin soil to insert the new building. This indicates that the structure was designed with an underground space. The unearthed remains represent the south-eastern corner of a formerly very large building. Its approximate dimensions can be outlined by a depression in the ground measuring c. 30 m in E-W and c. 20 m in N-S direction. None of that structure has remained visible above ground. The newly built structure featured a floor, at a level of c. 4.5 m below today's surface. It consisted of 3 layers of bricks placed on top of a layer of rubble stones and mortar. This floor probably belonged to an underground space with walls composed of very fine, unrendered brick masonry. The lower fraction of the eastern and southern wall has survived. They appear to continue well beyond the delimitations of the excavation pit.
- 27 Additionally, a large block of masonry is protruding towards S. It is c. 6 m by 6 m. It is an integral part of the first construction phase.

#### *Subsequent alterations*

- 28 Two subsequent structural alterations of the structure can be observed. They are limited to the obstruction of a niche and to the addition of a wall in N-E-direction. Both execution and materials are identical with the first phase. For that reason, these changes were presumably performed soon after the initial construction phase. It is well possible that the overall impact of these measures onto the complete building were considerable.





10 Tabriz, Iran. Detail of the brick carving on the eastern side of the ›staircase-like structure‹. (Photo: Christian Fuchs)

#### *A destructive intervention*

- 29 Two measures are part of a final intervention: In the area of the excavation, a remarkable amount of the masonry was removed. In many areas the surface of the brick masonry shows clear traces of tooling. Apparently, this process aimed at the deliberate creation of a stepped structure. The forms carved out of the masonry follow a pattern (Fig. 10) as they form eight irregular steps. In terms of width and inclination, these steps clearly refer to the southern elevated extension which shows a podium featuring just another ramp-like element. This feature implies that there is an overall idea or concept behind the carving process and secondly, the carving process and the construction of the southern elevated extension belong to the same construction phase.

#### *Concluding, two observations can be made*

- 30 One: The initial structure was part of a very large building with a basement floor. On its south-eastern corner it showed a protruding massive block of masonry – possibly a foundation. The quality of its construction techniques and of the used materials (bricks and mortars) are remarkable and support the idea that the building is part of a prestigious architectural complex. Furthermore, techniques and materials are unique and cannot be found in other architectural endeavours on the site. Thus there is a high probability that this structure was part of the Ilkhanid Rab’i Rashīdī complex of the early 14<sup>th</sup> century. Water keeping can be ruled out as possible purpose for the structure.
- 31 Two: The deliberately carved stepped structure and the added extension towards south can possibly be the remains of an infrastructure created to facilitate the recovery and the orderly removal of bricks from the structure. If so, the creation of a ramp like element would imply a thoughtful and well-organised process of gaining building material. The existence of a structure of that kind could indicate that the removal of bricks was carried out effectively and to complete depletion. This may explain the striking contradiction of clear indications for a large prominent building of which we can merely observe a void or large depression in the landscape.

### Overall topographical and architectural recordings

- 32 The documentation of architectural remains on the Rabʿ-i Rashīdī site was continued in 2019. A general plan of these remains was produced based on the available cadastral plan. The situation of fortification remains is visible with the remnants of the perimeter wall and round-fronted towers placed on the edge of the area on the NE and NW side, and the fortified wall running E-W. The latter divides the area in two parts, lower and rather flat in the S, more elevated and hilly in the N.
- 33 Beyond topographical mapping of curtain walls, towers and possible gates, the documentation of preserved architectural remains yielded information on materials and techniques. This will contribute to the structural history of the area and allow conclusions on attribution and dating. Thus, it is possible to postulate the existence of a further tower that was situated on the eastern side of the area, S of the present sports field. It is likely that the remnants of this tower collapsed only at some point within the last sixty years. This hypothesis results from the careful analysis of the adjacent walls and it is supported by evidence from aerial photographs (Fig. 1).

### Conclusions

- 34 The Rabʿ-i Rashīdī 2019 campaign allowed to complete information gathered in 2018 and bring evidence of an Ilkhanid occupation of the site thank to excavation of trench XII and XIII. Nevertheless, many question remain to be answer regarding the overall occupation of the site and its developments, but also regarding the use and forms of specific structure such as the ›stair-like structure‹ or the large square building partially unearthed with trench XII. Further research will undoubtedly bring new light on such matters.
- 35 The Project thanks for organizational and financial support: H. Chubak and R. Shirazi, ICAR Tehran; B. Omrani, RICHTO Tehran; S. Najafi, Gouv. Tabrīz; M. Abdār, ICHHTO Tabrīz; M. A. KeyʿNejad, President of the Tabrīz Islamic Art University (TABRIZIAU); M. B. Kasiri, TabrīZIAU.

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### Endnotes

- [1] See Wilber 1955, cat. 85, 176–177, Pls. 179–180, Fig. 55 and Moradi – Omrani 2014.
- [2] A decorative technic that creates geometric or epigraphic patterns made of bricks with one visible glazed side.
- [3] See Pickett 1997, Fig. 35. 36. 43. 48 and Wilber 1955, cat. 47, 139–141, Pls. 69–86.
- [4] See Pickett 1997, Fig. 59. 60. 61.
- [5] On Iranian incised ware, see for example Watson 2004, 252–271.
- [6] For a synthesis on the arrival of fritware in Iranian lands, see Watson 2004, 302–325.
- [7] Unfortunately, no written documentation on the structure and the excavation are available.

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