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KHONE-YE DIV. PRELIMINARY REPORT ON THE SECOND AND THIRD SEASONS OF IRANO–POLISH EXCAVATIONS (2009 AND 2010)

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Abstract: The report covers the second and third seasons (2009 and 2010) of excavation and restoration conducted at Khone-ye Div by an Irano–Polish (PCMA UW) archaeological mission. The ruins of a stone building were located on a rock spur in the Revand River gorge, in mountains about 40 km northwest of the city of Sabzewar. Building construction phases were reconstructed based on the results. The peculiar location and the substantial effort put in its construction suggest the exceptional function of the structure.

Keywords: *chahār tāq*, Khone-ye Div, stone platform, subsidiary structures

The ruins of a stone structure at Khone-ye Div were first investigated by an Irano–Polish archaeological mission in 2007 (Kaim, Hashemi 2010). The structure was located on a rock spur in the Revand River gorge (N 36°16'179"; E 56°44'594"), in the mountain chain of Revand, about 5 km north of the village of Foshtong and 40 km northwest of the city of Sabzewar. The peculiar location on a mountain top, in isolation from other structures [*Fig. 1*], and the substantial effort placed in its construction suggested the exceptional function of the structure.

A program of excavations and restoration work was carried out by the mission in 2009 and 2010. The original objective

was to reconstruct the ground plan, chronology and function of the building and this task was largely accomplished during the first season of investigations. Testing inside and around the structure and an architectural evaluation of the remains carried out during the first season permitted a plan of the structure to be drawn, but produced little straightforward evidence of chronology and function.

The building turned out to be a *chahār tāq* (meaning “four arches” in New Persian) considered the most characteristic form of Sasanian architecture. The central part consisted of four corner piers once supporting a dome [*Fig. 2*] and was closed by relatively thin walls. Short barrel vaults



*Fig. 1. Ruins of Khone-ye Div, view from the west
(All photos B. Kaim)*

Team

Season 2009

Dates of work: 21 September–19 October 2009, 10 September–20 October 2010

Director: Prof. Barbara Kaim (Institute of Archaeology, University of Warsaw); Hassan Hashemi (Teheran University), 2009, Mohammad Bakhtiari (Iranian Center for Archaeological Research), 2010

Archaeologists: Maja Kornacka (PhD candidate, Institute of Archaeology, University of Warsaw), 2009, 2010; Marcin Wagner (Institute of Archaeology, University of Warsaw), 2009; Maciej Grabowski (PhD candidate, Institute of Archaeology, University of Warsaw), 2010; Mohammad Bakhtiari (Iranian Center for Archaeological Research), 2010

Conservator: Joanna Lis (National Museum in Warsaw), 2009; Arkadiusz Ostasz (“Mesel” Konserwacja Architektury i Dzieł Sztuki Arkadiusz Ostasz), 2010

Engineer-constructor: Mieczysław Michiewicz (freelance), 2009

Architect: Witold Terlikowski (Warsaw University of Technology), 2010

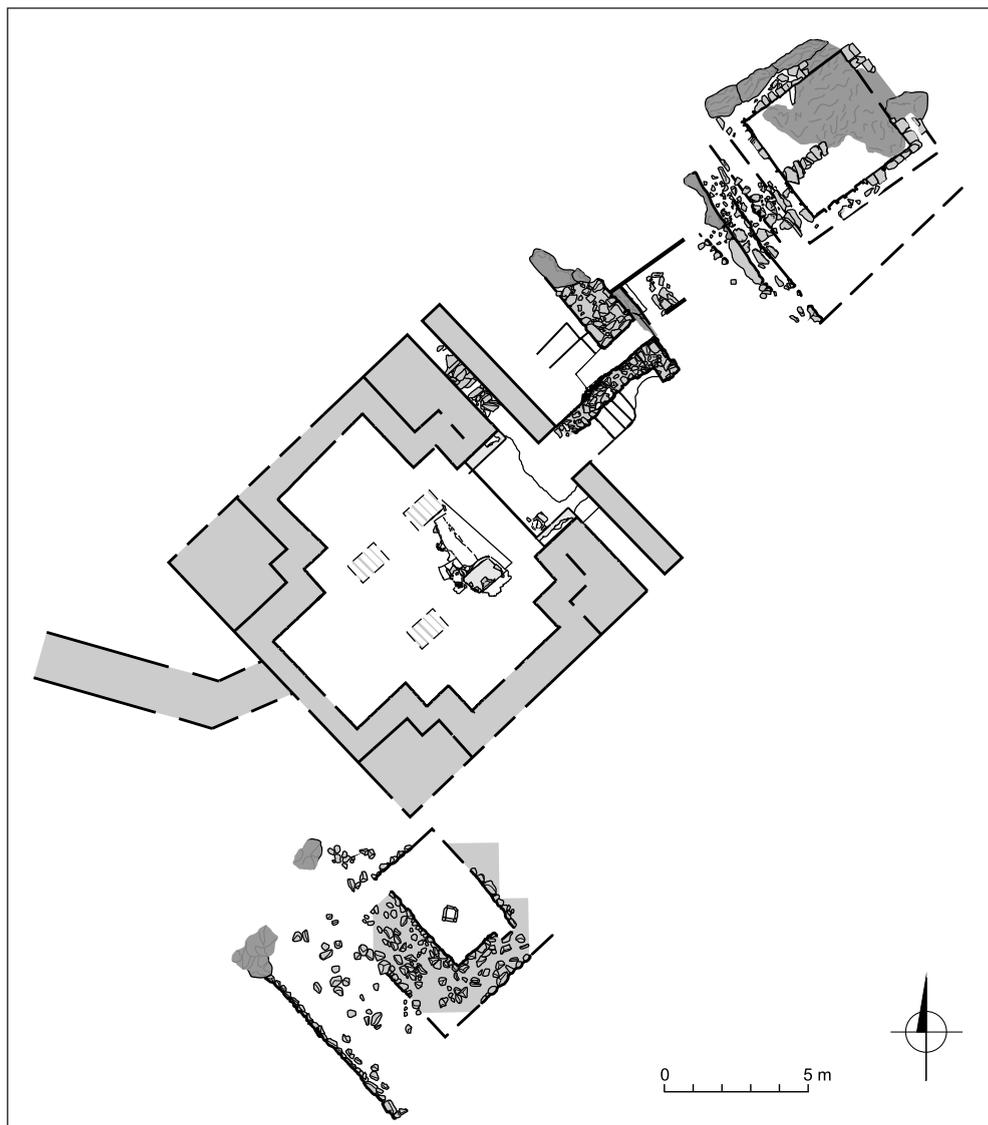
Student-trainees from Azad University of Noshahr and Chaloos

Acknowledgments

The mission was organized by the Polish Centre of Mediterranean Archaeology, University of Warsaw, in cooperation with the Iranian Center for Archaeological Research.

between the corner piers formed interior bays at the four axial intercepts of the domed room. It was possible to identify some of the furnishings of the domed

room. Moreover, digging in the area east of the main entrance to the building revealed a water reservoir and stone steps connecting it with the building (Kaim, Hashemi 2010).



*Fig. 2. Plan of the area excavated in the 2009–2010 seasons
(Drawing and digitizing M. Grabowski)*

RESULTS OF THE 2009 SEASON

The area inside the *chahār tāq* suffered from illicit excavations following the mission's first season at the site and the ruins, in the words of the employees of the Mashhad branch of the Iranian Center for Archaeological Research, "were put in order", the trench being backfilled and the area of the main room neatly leveled. This left the mission with no choice but to move new trenches outside of the main core of the structure.

A small T-shaped trench, designated as number 2, was located in the area encompassing an entrance bay and two narrow corridors running to the northeast. A floor covered by a thick layer of gypsum plaster was found at approximately 0.70 m depth. Mud-brick benches [Fig. 3, left] ran along the side walls of the entrance bay: the southeastern bench was 0.42 m wide and 0.48 m high, and the northeastern one 0.42 m and 0.56 m respectively. The bricks used were square (39 x 39 x 10 cm) and the surface of the benches was rendered with polished gypsum plaster. Traces of a red-painted wavy pattern were noted

on the top of the benches. The benches may have continued along the walls of the *chahār tāq*. Being set directly on the floor, they should be considered as one with the original construction phase, in similarity to the two platforms excavated in the main room during the first season.

The second building phase encompassed a small clay oven filled with ashes leaning against the southeastern bench [Fig. 3, right]. A layer of mud-brick fragments scattered on the floor seemingly represented the remnants of a collapsed vault. It was overlaid by a thick layer of mud-brick fragments mixed with stones which were occasionally coated with gypsum mortar and fragments of gypsum plaster.

Sealing this deposit was a layer of sandy earth, which is to be interpreted as an accumulation of dust resulting from wind erosion of the surrounding hills. Numerous fireplaces in this layer suggest that after the destruction of the upper parts of the building, its interior was used occasionally, probably by shepherds sheltering from the wind.

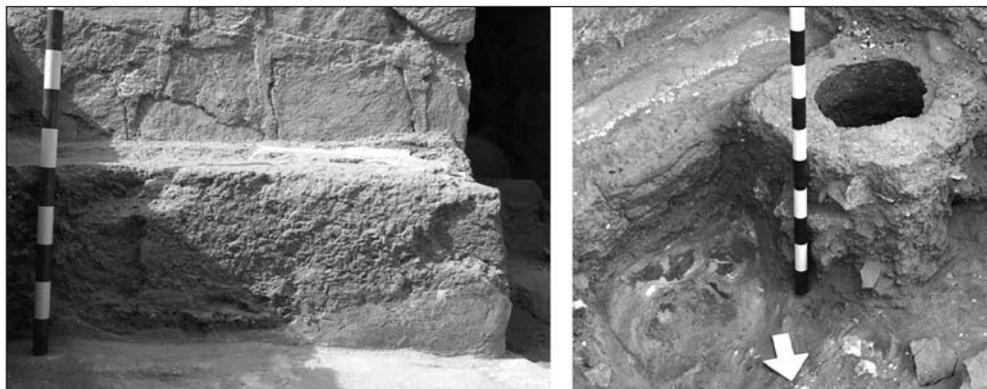


Fig. 3. Clay bench along the northeastern side of the entrance to the *chahār tāq* (left) and oven leaning against the southeastern bench



Fig. 4. Stone steps leading to the chahār tāq

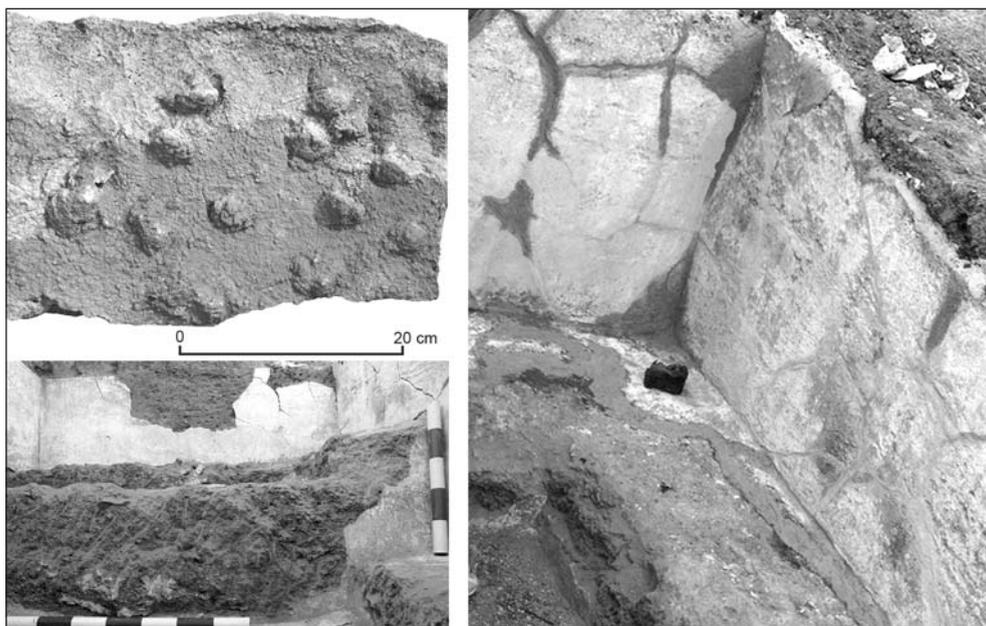


Fig. 5. Gypsum plastered steps in the ayvān (bottom left), and the wall plastering in the ayvān during conservation (right); back of a fragment of gypsum plaster showing the pock-marking of the bricks (top left)

Some stone steps were discovered in the northern part of a narrow corridor [Figs 1, 4], adjoining the northeastern wall of the *chahār tāq*. It is not clear to which phase they should be assigned. The corridor ends blindly just before the sharp edge of the hill, hence the steps should be seen rather as shelves of sorts.

The stratigraphy and building chronology were also observed in Trench 5, which had been traced originally during the 2009 season outside the building, near the entrance. At least three phases were represented. The oldest phase comprised four stone-slab steps (the fourth step remaining merely as an impression in the mortar) leading to the building entrance. The width of the steps matched the width of the entrance (1.75 m). The lowest step was located about 2 m from the facade.

In the next phase a room of the *ayvān* type (4.40 x 3.00 m) was built adjoining the northern part of the northeast wall of the *chahār tāq* and the fragment of wall parallel to the eastern part of the same wall. The west wall of the *ayvān*, constructed to the right of the entrance [see Fig. 1], hugged the exterior face of the *chahār tāq*, the north wall was set directly against the rock face. Both were built of mud bricks (46 x 46 x 10 cm). The lower part of the east wall was built of irregular stone rubble. A brick barrel vault may have covered the *ayvān*. Three high, L-shaped steps or benches were constructed inside the *ayvān* [Fig. 5, top], the top of the lowest one being level (1663.23 m a.s.l.) with the top of the third of the stone steps described above. The highest bench stood about 0.66 m above floor level. Just as the stairs,

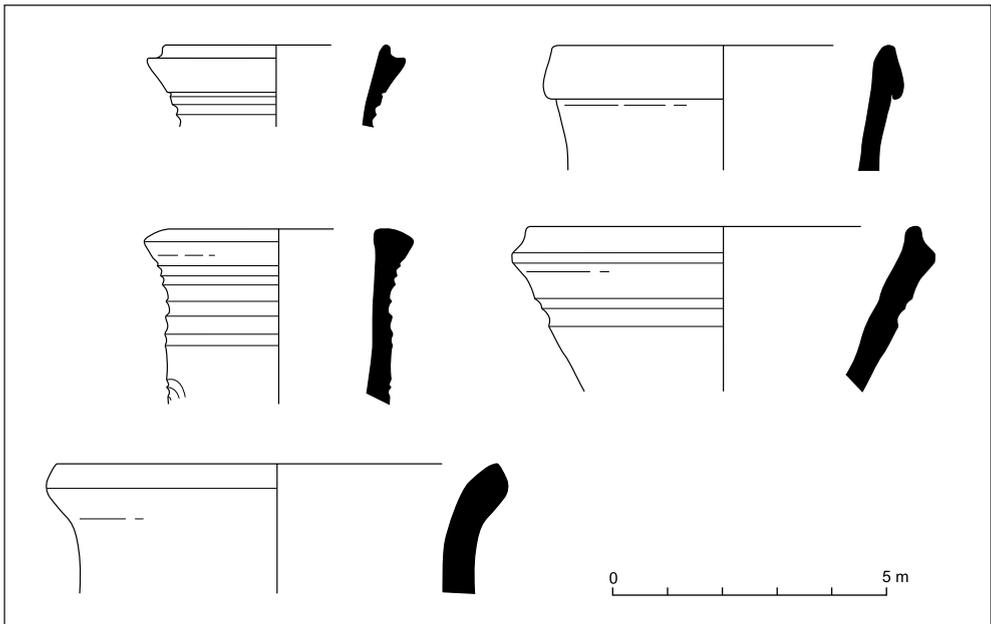


Fig. 6. Sasanian/early Islamic pottery
(Drawing and digitizing M. Wagner)

the benches inside the *ayvān*, as well as the walls and floor, were covered with a thick layer of gypsum. The bricks were pock-marked in order to increase the adhesion of the plaster [Fig. 5, bottom left]. In the case of the stone wall, the gypsum when wet could have penetrated into the cracks between the stones.

A successive building phase comprised a solid stone wall running E-W, perpendicular to the entrance. At the eastern end, the wall turned a corner to the south. It was constructed partly on the stone steps leading to the *chahār tāq*, so it cut off any direct communication between it and the *ayvān*. Henceforth, the latter could be entered solely through a free space between its east wall and the newly-constructed one, while the entrance to the *chahār tāq* was possible through a passageway between

the walls of the second and third phases. The area south of the entrance to the *chahār tāq*, enclosed by a stone wall, was probably unroofed. Prior to the construction of the wall perpendicular to the *chahār tāq* entrance, its function must have been connected with activities that took place in the *ayvān*. Unfortunately, in the absence of any parallels, the nature of these activities remains unknown. The pottery finds from the season included, early Islamic wares as well as some Sasanian vessels [Fig. 6].

A conservation program was carried out on the gypsum plaster of the walls of the water reservoir and the steps of *ayvān* [Fig. 5, bottom right] and a proposal was submitted to the Iranian Center for Archaeological Research on how to preserve the walls of the *chahār tāq* (drawn up by engineer M. Michiewicz).

RESULTS OF THE 2010 SEASON

Two areas were excavated in 2010: near the entrance of the building and behind the southern corner.

A small trench (Trench 6), 3.50 m by 1.50 m, was opened behind the stone wall enclosing the area to the left of the entrance to the *chahār tāq*. A stone platform was discovered, extending from the highest of a series of steps leading from the reservoir unearthed in 2007 and the wall parallel to the eastern part of the northeast wall of the *chahār tāq*. Not only the wall to the left of the entrance to the *chahār tāq*, but also presumably the southeastern part of the *chahār tāq* were built on this leveling platform. The southeastern side of the platform [Fig. 7] may have been higher and formed an enclosing barrier.

Trench 7 (4.50 x 4 m) was traced behind the southern corner of the building.

Excavations in this area revealed walls in dry-stone masonry, set in a brown, earthy mortar [Fig. 8]. They formed a room (3.30 x 2.00 m). The first floor inside the room was composed of a 0.20 m thick layer of pressed clayish earth lying directly on bedrock, which had been leveled prior to wall construction.

The absence of any kind of archaeological material on the floor makes any speculation about the function of the room impossible. However, the mere presence of the floor, which lies approximately 4.30 m (1658.78 m a.s.l.) below the floor of the main room of the building (1663.16 m a.s.l.–1663.25 m a.s.l.) suggests that the structure was conceived not just as a means of supporting the southeastern side of the *chahār tāq*. The hypothesis cannot be checked as any



Fig. 8. Excavation in Trench 7



Fig. 9. South side of the wall surrounding the area southeast of the chahār tāq; note leveled bedrock surface



Fig. 7. Southeastern side of the stone platform

excavation along this side of the *chahār tāq* could weaken its structure. The assumption that the bedrock in the entire area southeast of the building had been leveled is supported by the founding of the surrounding stone wall [Fig. 9] almost on the same level (1658.50 m a.s.l.) as the

bedrock beneath the floor of the above-described room. If so, then it corroborates the observation already made in the first seasons concerning the huge amount of work undertaken by the builders of the *chahār tāq* and the surrounding structures.

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