## PALMYRA

## ARAB CASTLE 1995

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The 1995 season of work in the castle was made possible thanks to the generous support of Fondation Max van Berchem, which provided full funding. As usual, the castle expedition was attached to the Polish archaeological mission in Palmyra headed by Prof. Michał Gawlikowski. The completing of our survey this year had become a necessity as our research coincided with the growing interest of the Syrian Directorate of Antiquities and Museums in the opening of the site to the public after a restoration campaign which is planned for the next year. As two years ago, the work was conducted by architects and excavators in conjunction. ${ }^{1}$

The architectural survey has been completed. Plans of all the floors and cross-sections were drafted and will soon be ready for publication. Excavations continued on the lower terrace of the castle where trial pits made two years ago unexpectedly revealed traces of buildings. It was the excavators' intention to explore this area more extensively to discover the layout of the defenses in the final stage of the fortress's construction, and with the hope of uncovering remains of food processing installations like ovens etc., which had not been found inside the building.

Bread ovens (tannurs) came to light immediately upon beginning work. They were installed on the highest level of the court, on top of earlier floors. One of them, built near the battlemented wall belonging to the last construction, was apparently associated

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Fig. 1. Excavation on the lower terrace of the castle.
with a device sunk in the floor, consisting of two compartments intended to separate two different substances (Fig. 1: northwest), but not thoroughly, since the two compartments join in an extension of one of them, where a mixture could be made. Four other ovens were unearthed immediately under the surface, all made of big round ceramic vessels (diameter c. 0.70 m ),
plastered on the inside. The ash fill was mixed with some pottery fragments indicating the time at which the ovens were in use. A bronze knob broken off a bigger object was found in the oven, along with potsherds.

The most important discovery this year was, rather unexpectedly, a mosque erected upon the lower terrace of the fortress, on the southeastern side, almost abutting the terrace of Tower XV flanking the entrance gate (Fig. 1). Its digging consumed almost all of the excavators' time. The two successive structures were explicit proof of two construction stages being present on the highest floor which, as should be kept in mind, postdated most of the fortress building phases. On the other hand, the excavation of the mosque and its immediate surroundings brought evidence arguing in favor of an Ayyubid date for the whole building.

The later mosque and its associated structures were uncovered first, abutting Tower XV; work later proceeded on the earlier and smaller mosque which was a small trapezoidal edifice with one mihrab placed roughly in the middle of its qibla wall (Fig. 2). Curiously enough, the mihrab seems to have had a double orientation. While the projection was oriented 25 degrees west of south, the mihrab was made to point almost exactly due south by a curving of its southern wall, enabling the faithful to pray in that direction. The northeastern corner of the mosque was occupied by a rectangular structure preserved only at ground level. This structure might have functioned as a minaret, although we are hardly inclined to locate a fairly high tower in this place. Instead, the probably hollow rectangular structure could have constituted a platform rising to the top of the mosque walls and supporting a pavilion from which the call to prayer was sung. The above interpretation has been inspired by the minaret arrangement in the so called Fadl mosque in Palmyra, built as an extra muros Friday mosque for the medieval city squeezed inside the Bel temple precinct. The Fadl mosque, probably a 13th or 14th century struc-


Fig. 2. Phase 1, reconstructed.
ture, has a solid tower built in the corner of its forecourt abutting the prayer hall. The tower, obviously accessible by external stairs, is as high as the mosque and there is the outline of a thin-walled structure to be seen upon it, probably enclosing a room for the muezzin.


Fig. 3. Phase 2, reconstructed.

In the case of the citadel mosque, the complete razing of the rectangular tower excludes the reconstruction of its original form. It would seem, however, that it was first built as a hollow structure, with an entrance door, and later filled inside with stone rubble set in mortar. An extension of the minaret to the northwest may represent the foundation of a stairway. The mosque
had its walls built of mud brick (a few bricks remain near the mihrab) on a foundation of stone debris bonded by yellow clay mortar. The walls were plastered inside and outside, and the inside was finished in a fine, smooth white plaster. Scanty remains of plaster finish of the mihrab niche, found beneath the floor of the later mosque, reveal that it was decorated with stucco relief. A simple muqarnas decoration can be suggested. The walls had some painted ornament as well to judge by a fragment of white plaster with red stripes that was discovered. The floor was covered with lime mortar; traces of successive replastering and several repairs are visible. The mosque could be entered both from the main gate in the "minaret" tower and through a gate pierced in the southwestern wall. The only element to remain from the first mosque is one stone foundation course and the plastered floor concealed under the new mosque floor. There is nothing to suggest the kind of roofing used in the building, but in such a small edifice timber beams are a plausible solution.

This early mosque seems to have been a freestanding structure. Communication was possible behind the qibla wall and along the eastern wall of the mosque, in the area of the defenses. The terrace of Tower XV was accessible by a flight of steps parallel to the curtain wall, similarly to the terrace of Tower XVI. Behind the qibla wall, remains of wall roughly parallel to the curtain wall testify to the existence of rooms and chambers. On the other side of the central passageway on this floor, there was a series of interconnecting rooms, now preserved only in foundations. Another passageway ran between these rooms and the western defenses. The terrace of Tower IV with its antechamber could be entered through three openings. Its central position made it the focal point of the entire communication system on this floor. Its commanding role and its obvious importance was preserved after the last comprehensive reconstruction, and its walls were repaired and reinforced with masonry of a different type.

Access to the higher level of the fortress (the higher court) was controlled by a wall with pierced entrance door (Fig. 2). The mosque had a kind of forecourt open to the central passageway, possibly through an arcade.

The new mosque used the space provided by the earlier one, but this space was extended to the east, encroaching on Tower XV. The extension had another, bigger mihrab placed eccentrically by the southwestern corner. The eastern wall of the earlier mosque was pulled down, as was the western one of Tower XV. The tower wall may well have crumbled on its own before the mosque was reconstructed, and the builders took advantage of newly provided space. But the foundations of both walls were preserved, and the floor of the new mosque was laid $30-40 \mathrm{~cm}$ above the previous one. The terrace of Tower XV could now be entered via stairs from inside the new mosque and became somehow related to it. The machicolations seem to have been blocked and went out of operation. Within the perimeter of the ancient mosque, the floor level was raised by laying two courses of mud brick. Only one course of mud brick was used to raise the dirt floor of the former eastern passageway, now included in the new mosque. The same dirt floor was cut into in order to build the new stretch of the northern wall of the mosque and the new mihrab opposite this wall.

Nothing has survived of the wall of the later mosque except a small fragment near the new mihrab, but the outline of the new floor which repeats the curvature of the old mihrab and respects in general the older perimeter, in addition to the double level of entrance, are sufficient arguments for the old walls having remained in use, replastered though perhaps without the fine finish characterizing the old building. Some architectural elements of the old building were abandoned, e.g. the large stones, probably elements of lintels, lying on the earlier floor. To the pained disappointment of the excavators, neither of the buildings bore any inscriptions, in similarity to other parts of the fortress; perhaps
the inscriptions had been removed. The construction of the new mosque entailed a rearrangement of the adjoining structures. The extended mosque and the terrace of Tower XV were incorporated into one unit. The tower terrace, was now extended to the south by a new wall which became also the back wall of the extended mosque.

The new mihrab did not protrude from the qibla wall as the old one had, but was hidden in the new wall. The floor level around the new mosque was raised. Stone aggregate was used to alleviate sagging, and almost all the area of the passageways on this floor was paved with a double course of mud brick. It is interesting to note that the new buildings erected after the destruction generally followed the pattern of former occupation. The mosque remained in use and the walls between it and Tower IV were rebuilt following the previous plan. This continuity can be explained to some extent by the availability of supporting walls and pillars, but it is also clear proof of the architectural tradition and functional idea surviving into the time when the reconstruction was made. In order to safeguard the preservation of the unearthed mosque, juss plaster was used to reinforce the remaining stone foundations.

The construction of the new mosque was necessitated presumably by a partial destruction of the earlier structure, which occurred after the castle had been in use for some time. Obvious evidence of damages to various structures were to be found in several loci, where the latest floor was removed to expose the earlier one. Subsidence of vaults, cracks in floors and fissures between curtain walls and towers may have not been all contemporary, but most of them probably can be associated with the major damage sustained by the western part of the building, i.e., the partial collapse of three towers and curtain walls, and repaired in the latest reconstruction.

The buildings of the second phase were totally ruined in later times and the rubble was removed to make room for a plain court, on which some crudely made walls were later erected of reused
masonry. The fact that two levels of construction are present on this floor makes the question of dating particularly difficult. Building activity can be discerned in various places beside the mosque. The floor near Tower XV (Fig. 1:7) evidently subsided leaving a sag which was subsequently filled with rubble and fragments of plaster finish from a ruined wall. The white floor (Fig. 1:6) was torn up when Tower XIV and adjoining curtain wall parted, leaving a longitudinal fissure. A crack parallel to the curtain wall is observed on the floor of the neighboring room. All these damages were filled up with debris and covered by mud brick pavement. In the mosque itself there is a crack in the floor and through the thickness of the underlying vault. The destroyed floor in unit 6 was made of a thick mortar course, but the new one was not even whitewashed - an indication perhaps that a roofed space adjoining the wall in the earlier phase was left open in the later one. In the immediate vicinity of this, a replastering of the floor following a local destruction is associated with a fragment of tricolor underglaze painted vessel which is to be dated to the 14th century. The replastered floor is earlier than the second mosque and it is the same one on which the new wall of Tower XV was erected, covering the earlier steps. This floor can be related to a mud brick wall on a higher level. The tricolor pottery fragment provides a post quem date for the second mosque.

Two successive dirt floors between the earlier mosque and Tower XV contained glazed pottery identifiable as 13th century products. The same is true for the remaining dirt floors in the passageway (Fig. 1:4) which was used with the first mosque. This locus, as was said earlier, also bears traces of destruction evidenced by the sagging floor near the exterior wall. Curiously enough, the dirt floors were removed from above the sag, a low wall was built beside it and the whole sector was filled up with debris coming from crumbled walls and covered with a new floor related to the new mosque. The fill covered at least one sherd which is easily


Fig. 4. Raqqa-type potsherd.
dated to the 13th-14th century (tricolor underglaze painted). A test trench in the floor of Tower XV revealed an earlier floor separated from the former by a layer of yellow stone gravel. In the immediate vicinity of the exterior wall a thick layer of ashes containing numerous potsherds was found. The sherds represent a variety of glazed types including luster painted, black-underturquoise glaze, in addition to unglazed molded ware. All of these seem to be dated to the 14th century, rather than the 13th, on stylistic grounds. The bright luster on manganese and a deep blue ground, the paneled ornament in black-under-turquoise glaze -


Fig. 5. Raqqa-type potsherd.
these elements suggest that we are not dealing with specimens of the original Raqqa type, but rather with a later development of the same tradition.

On the contrary, the floors correlated with the earlier mosque and the fill of accumulated rubbish between them contain sherds which can be attributed on stylistic ground to the second half of the 13th century. The same wares are represented in debris from fallen walls which was used in making mortar. Some of these walls evidently survived the destruction of the old mosque as their debris is found above the more recent levels (Figs 4,5).

Correlating the construction of the new mosque with the latest comprehensive restoration presented a difficult problem which we were unable to solve with certainty. In any case, the latest floor of Tower XV was obviously made already after its machicolations had been blocked with square stones, in similarity to the masonry of the last phase, in which the machicolations in general were abandoned and the destroyed ones were never restored. This observation would support the conclusion that the new mosque was part of the comprehensive reconstruction that followed serious damage to the fortress due to an earthquake or enemy attack. Unfortunately, it was impossible to ascertain the exact relation between the mosque and the new western wall. The western side of the court sustained much more extensive damages; all the terrace walls of the towers were pulled down and the surface was leveled. Ovens and food processing implements of undefined nature were installed in this area. A drain ran over this area to an outlet in the southwestern wall.

Excavations this year revealed an important and hitherto unknown element of the Palmyrene citadel. Even a modest Islamic fortress apparently had to be equipped with a facility intended for communal prayer and possibly Friday khutba. The location of the mosque on the upper floor and near the gate finds a parallel in the fortress of Qallat Najm on the Euphrates and could be considered possibly a standard solution in smaller, compact citadels where there is only limited space inside the enclosure. The absence of a mosque in the remaining ruins of the citadel of

Ar-Rahba could mean that it was actually built on a higher level which is no longer in existence.

Rather surprisingly, the fortress in Palmyra does not offer any real bathing facilities. A kind of substitute can be seen in the shallow cuvettes arranged in a row along the south-eastern gallery on the second floor. Toilet facilities in the castle are rare. Soldiery normally used the machicolations for this purpose. The only private cabinet is located near the mezzanine of Tower IV, suggesting the exclusively residential character of this part which communicates with the rest of the building by an easily removable wooden ramp. This comfortable arrangement suggests that the mezzanine of Tower IV might have been the commander's lodging. Another latrine is placed on the ground floor in a corridor off the gate, and seems to have been intended for common use. Finally, a latrine is located on the highest floor, near the terrace of Tower IV. Closer scrutiny of the higher terrace of the fortress above the two halls on top of the water cisterns revealed that some edifices existed there, as well as on the lower terrace, but no excavations could be attempted at the risk of destroying the underlying vaults.

This year's research brought indisputable proof that the fortress in its complete form was occupied in the first half of the 13th century and continued in use through the 14th century when some reconstruction was done. Pottery dating supports the initial observation that all the extensions were added within a relatively short period of time and that the construction activity in the high period of the fortress (late Ayyubid dynasty) was intense, in similarity to all the major fortresses of the time.


[^0]:    1 The team of architects included Mr. C. Socratidis, professor of architecture at the University of Geneva, assisted by two students: Miss Isabelle Bovey and Miss Valerie Steinmesse. The excavations were conducted by the author and Miss Anna Witecka from the University of Warsaw.

