



Daniel Lohmann

## **Giant Strides towards Monumentality – The Architecture of the Jupiter Sanctuary in Baalbek / Heliopolis**

### **Context**

Situated on the highest point of the Bekaa valley in Lebanon, and close to the watershed between the Orontes and the Litani sources, as well as directly in front of the embouchure of the valley of the source of Ras-el-Ain, the city of Baalbek occupies a geographically advantageous spot for almost 10000 years today<sup>1</sup>.

Baalbek is nowadays a small town on the Antilebanon foothills. The modern city extends over large archaeological areas, of which some were uncovered in the 20<sup>th</sup> century before the outbreak of the Lebanese Civil War (1975-1990). However, the monument that this paper discusses was never fully buried, and therefore neither ever forgotten nor entirely disused. The “acropolis” complex commonly called *Qalaa* was mainly excavated and cleared of the civilization layers of post-antique dwellings and uses after the visit of the German Emperor Wilhelm II in 1898<sup>2</sup>. The complex includes the well preserved so-called *Temple of Bacchus* and the large sanctuary for Jupiter Heliopolitanus, including the Jupiter temple itself, and a series of courtyards, halls, substructions, stairs and exedra architecture, all together forming a building of one third of a kilometer in length.

The adventurous development of centuries of megalomaniac planning, abandonment, re-planning, alteration and lamination, which has finally resulted in a unique monument of Eastern Roman architecture has never been fully studied. Observations so far were based on survey drawings of the first German excavations in 1900–1904, or later fast sketches, but never on detailed on-site observations, surveys or further archaeological soundings<sup>3</sup>.

Recent research in the framework of the joint German-Lebanese project of the German Archaeological Institute, the Brandenburg Technical University Cottbus and the Lebanese Antiquities Department in Beirut give detailed insights and new results about this morphology<sup>4</sup>. A clear correlation and construction chronology of the different parts of the sanctuary in their ground and upper floor have come within reach now.

<sup>1</sup> For a compilation of the most recent results of the current German Research Missions to Baalbek, see VAN ESS *ET ALII* 2008.

<sup>2</sup> The results are published in the famous issues of WIEGAND 1921.

<sup>3</sup> For a general history of research on Baalbek, see WIEGAND 1921, 1:1–12; see also RAGETTE 1980, 81–99, VAN ESS 1999. Concerning the architectural development, see HOFFMANN 1998, 279–290 and LOHMANN 2008, 153–154.

<sup>4</sup> Most recent results of this research programme are compiled in VAN ESS 2008. For the architectural and urban development see especially the articles by H. Wienholz, K. Rheidt and D. Lohmann.

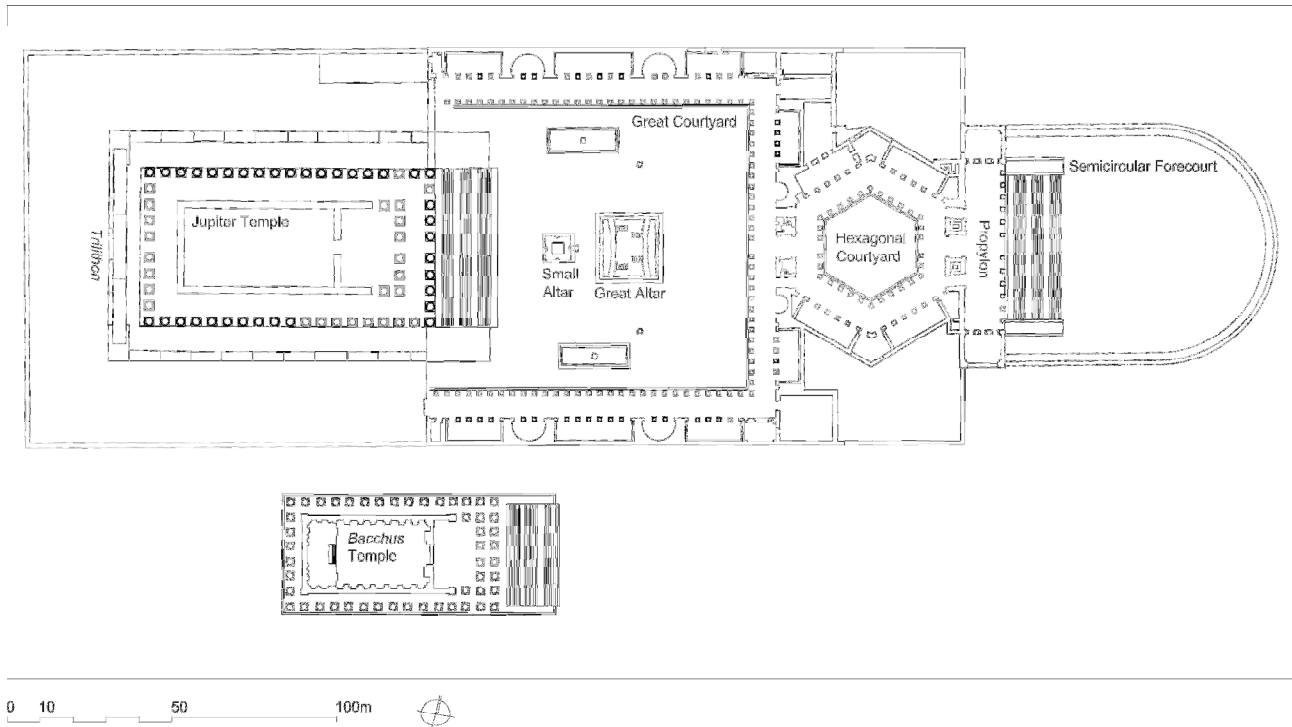


Fig. 1 - The Jupiter Heliopolitanus Sanctuary in Baalbek/ Heliopolis. Floor Plan (Drawing: Lohmann. Adapted from WIEGAND 1921, Kalayan (Archives, Direction Générale des Antiquités Beirut).

**Development of a sanctuary** (fig. 1)

Newest archaeological results from a previously unpublished deep trench of pre-civil war excavations of the Lebanese antiquities department in the central Great Courtyard show that Tell Baalbek, even though it can be considered rather marginal in size, was continuously inhabited since the pre-pottery Neolithic period.<sup>5</sup> Geographic advantages of this exposed position, controlling two fresh water springs which supply the fertile northern Bekaa plain, may have been the reason for the early settlers to inhabit a natural rock spur in front of the valleys mouth, slightly elevated above the surrounding area.<sup>6</sup> The Tell grew and was continuously occupied by dwellers and possibly cultic functions until at least Iron Age. It appears that some time after this period the dwellers were forced to move into the plain or the hill slopes around, when the entire artificial platform of the Tell was *architecturalized* with a purely cultic sanctuary. This happened several times, with the new construction enclosing the old.

Remains of pre-Roman monumental construction were found in excavations under the Roman floor level of the Great Courtyard in the time of French and Lebanese works in Baalbek<sup>7</sup>. Current survey and interpretation show, that a pre-Roman floor level about 5m lower than the late Roman Great Courtyard floor existed underneath the later eastern courtyard. The features include a freestanding podium monument, and an earlier stair flight, both suggesting an earlier sanctuary entrance.

Furthermore, the foundation wall underneath the peristasis of the early imperial pseudodipteral temple could be proven to be of pre-Roman date. This formerly T-shaped terrace was already a gigantic construction, at least five meters higher than the Tell and any platform construction. Due to the lack of remains

<sup>5</sup> Van Ess *ET ALII* 2008. Even the particular time of excavation and the reason for the deep trench are unclear. However, it provides archaeological material proving the existence and a preliminary dating of “Tell Baalbek”.

<sup>6</sup> RHEIDT 2008, 222. The existence of this rock spur underneath the sanctuary and the Tell was proven by geoelectrical resistancy measurements in the spring of 2008. BRAUNS 2008, 42–49; BAATZ 2008, 37–44.

<sup>7</sup> Only few publications mention these remains, none of them clearly analyzing them. KALAYAN 1969, 153. See also RAGETTE 1980, 27.

of temple architecture, it can be assumed that the temple that this terrace was built for was never completed or entirely destroyed before any new construction started (fig. 2).

The political and social changes of the late republican and early imperial Roman period – including the founding of the veterans colonies of Berytus and Heliopolis - brought forth major physical changes and a boost of urbanity in the city. The unfinished pre-Roman sanctuary construction was incorporated into a master plan of monumentalisation. Apparently challenged by the already huge pre-Roman construction, the early imperial Jupiter sanctuary shows both an architectural megalomaniac design and construction technique in the first half of the first century AD. The most famous example may be the *trilithon* forming the middle layer of the western temple podium by three blocks of 4 by 4 by 20 meters size. The podium can be considered as an attempt to hide the older, inconveniently shaped temple terrace behind a podium in fashionable Roman manner<sup>8</sup>, consisting only of three layers of masonry at the height of twelve meters. Just in front of it, the new sanctuary design created a partly two-storey platform of about 100 x 120 meters, embraced by two low walled courtyards to the east and west. The temple itself, located on its giant podium inside the western court, was nearly finished in the year 60 AD, as an inscription proves<sup>9</sup>.



Fig. 2 - Pre-Roman terrace wall underneath the Early Imperial temple peristasis, seen from the northwestern castle tower (Photo: Lohmann).

Incorporating the survey work of the recent research campaigns, the layout of the early imperial ground floor can be reconstructed now. Vaulted constructions were built, surrounding the Tell and all pre-Roman construction on three sides, thus preserving it in their center. Three cryptoporticoes of over 100 meters length each connect lower front and back walled courtyards. The tunnels are surrounded by symmetric pairs of vaulted rooms of different sizes, some accessible through doors, and some not. Wall strengths show that an upper floor construction was planned. Access to the platform seems to have been given by a staircase slightly cut into the raised platform. Possibly the older, pre-Roman staircase was still in use for the early imperial sanctuary, as foundation remains and masonry joints in the ground floor vaults suggest.

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As many details show, the platform construction progressed from north to south. The first layer of stones in the upper floor still has the same course height as that of the ground floor, indicating that the upper floor was begun, but not completed yet. However, the whole sanctuary design was apparently not executed entirely, and probably the early imperial monument lay unfinished for decades (fig. 3).

The chronology of the two high altars in the middle of the Great Courtyard is not entirely known. However, the “smaller” Altar, a building of 10 by 8.5 by 9 meters incorporates the oldest Altar in its center, and was later clad by a new façade in different style<sup>10</sup>. The new element of the “Great Altar”, a complex building of 15.5 by 16.5 by 18.5 meters just a few meters east of the small one, was introduced and finely con-

<sup>8</sup> HOFFMANN 1998, 291–294

<sup>9</sup> The inscription was first published by SEYRIG 1937, 95.

<sup>10</sup> COLLART and COUPEL 1977, 99.

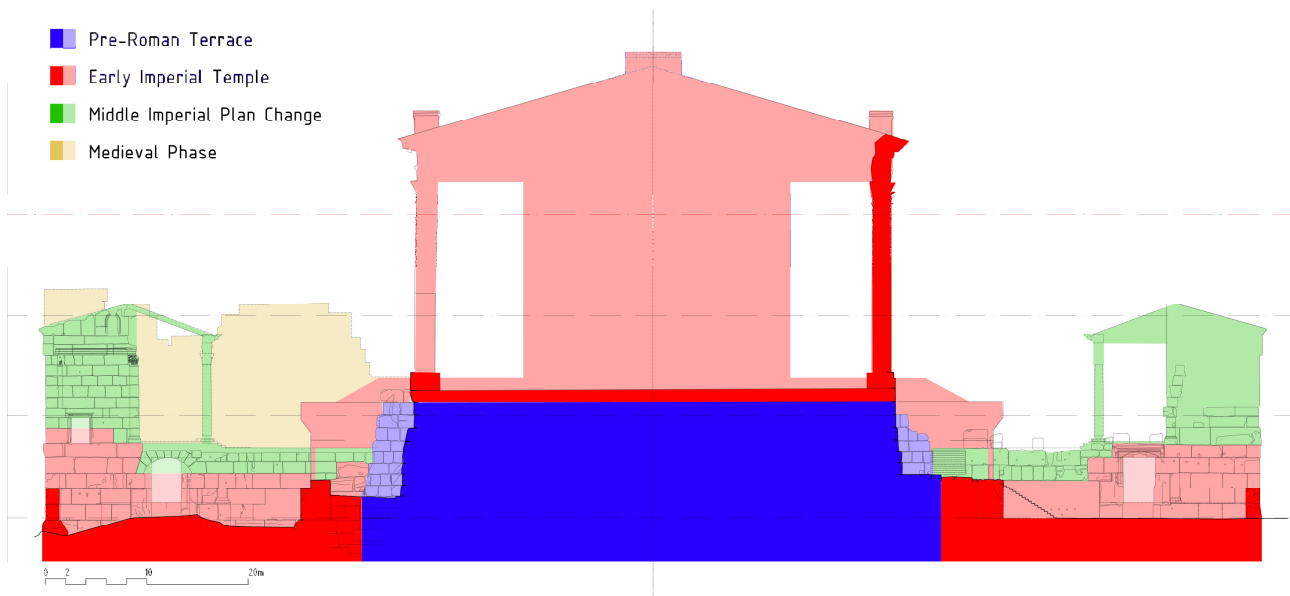


Fig. 3 - Cross-section of the sanctuary and Jupiter temple indicating the construction phases (Drawing: Lohmann).

structed<sup>11</sup>. Double staircases led to the roof, its surface the same height as the floor of the Jupiter temple Adytum.

The plan was slightly changed in middle imperial times, and construction began again with new funds and force at the beginning of the second century. Many details show traces of this phase of transition, and the adjustment of two designs. Wall mounts were added in the partly vaulted rooms of the ground floor to support the upper floor walls that were shifted about three meters to the east<sup>12</sup>. The two water basins north and south of the smaller altar showed that their slightly different position is due to the same shifting of the upper floor layout, the northern one corresponding to the original extensions of the central room of the ground floor, but the southern one following the later design.

The floor of the Great Courtyard was also remodeled in this period. The whole surface was either lowered by 50 cm or not fully filled to the originally desired level. This resulted in three extra steps at the bottom of the temple stairs (fig. 4), and the three stylobate steps surrounding the courtyard on all three other sides, underneath the hall peristyles erected in this period. The bottom of the base of the Great Altar is equal to the later Great Courtyard floor level suggesting a synchronous planning.

Due to several other changes in later times, the eastern side of the courtyard remains hard to analyze. With the major design change, the plan for eastern *exedrae* in the same design as the northern and southern ones arose, but the central staircase given up successively and replaced for an extension of the raised construction towards the east. Probably it was planned to continue all the way towards the Propylon, which was already built in its ground floor. However, this design was also only partly executed, as side room doors in the upper floor leading into the void show.

A solution to this spatial problem of access to the sanctuary was urgently needed. Only slightly later, an unusual shape was found to bridge the gap between the Courtyard and the begun Propylon. The famous hexagonal courtyard was introduced as an intermediating shape between older existing structures. Its size was once more monumentally maximized and tightly fit in between existing construction.

Unique not only in its hexagonal shape, but in its overall architectural concept, the design provides a space and allows a function that no other room within the sanctuary could serve as yet. The Courtyard was

<sup>11</sup> COLLART and COUPEL 1951.

<sup>12</sup> LOHMANN 2008, 155.

separable from the sanctuary by large flush mount portal doors facing inward. The surrounding four rectangular exedrae are geometrically oriented towards the central focal point of the courtyard. This focal point lies on the older, general symmetry axis of the sanctuary, which also is the linear connection of the two large portals over the court. Thus, the space is a concentrically organized single hall space on one hand, but an axially connected courtyard in the sequence of the sanctuary on the other hand. Along with this construction, the staircase, terracing and its entrance was moved further east. The Great Courtyard became a second, more intimate courtyard.

The Hall of the Propylon was the last thing to be erected, as masonry joints show. The other one of the only two building inscriptions for the construction of the Jupiter sanctuary dates the donation of capitals for the Propylon hall in honor of Emperor Caracalla to the early third century. The finalized façade is shown slightly later on coins of Philippus Arabs<sup>13</sup>.

It seems that an important urban function was given up when constructing the hexagonal courtyard in place of the earlier rectangular low court. Therefore, the sanctuary required another front courtyard as an urban connection to the growing late imperial city. Possibly, this requirement was fulfilled by the Semicircular Courtyard east of the Propylon. The chronology of these sanctuary parts is not resolved yet, and it is unclear whether the Semicircle is pre-dating or succeeding the Hexagonal Courtyard. This question is subject to further research.

Taking into account the position and the assumed extensions of the original Tell, the sanctuary development can be described as a successive axial growth eastwards. Axiality and symmetry were an early, even pre-Roman invention, but a concept that sustained until the very last antique additions to the building. Recent observations suggest that the middle axis is focusing on another geographically important spot and possibly another early sanctuary on top of the main city water supply at the end of an aqueduct<sup>14</sup>.

### ***Regional parallels***

In the history of research about Baalbek, parallels have been drawn to sanctuaries of Rome, Asia Minor, Mesopotamia, Egypt and Persia. In the limited time this paper provides, we shall only have a look at exemplary aspects from Eastern Roman sanctuaries in closer proximity, namely today's Jordan and Syria. Their geographic and urban situation, as well as the overall sanctuary layout and lastly particular architectural details provide comparable information for the comprehension of Baalbek's architecture.

### ***Urbanism and topography***

Common concepts are mainly the sanctuaries' positions in close relation to water supplies from sources and aqueducts for the connected agriculture and therefore economy, as well as topographic exposure. Baalbek's topographic and urban setting can be compared to those of Palmyra and Gerasa. The ancient city of Palmyra in the Syrian Desert is, just like Baalbek, located at the foothills and the mouth of a wadi, controlling the sources which supply fertile land in the following plain. The large sanctuary of Bel is situated on top of the prehistoric settlement hill in the same manner as it was done with Jupiter in Baalbek<sup>15</sup>.

The situation in Gerasa in northern Jordan is not such an apparent parallel, but still comparable. The temple of Zeus was not built atop the prehistoric Tell, but obviously in proximity and direct geometric relation to it. The geography of the smaller valley of Gerasa allowed a terraced and raised sanctuary without

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<sup>13</sup> WINNEFELD 1914, 149–154.

<sup>14</sup> RHEIDT 2008.

<sup>15</sup> DU MESNIL DU BUISSON 1966.

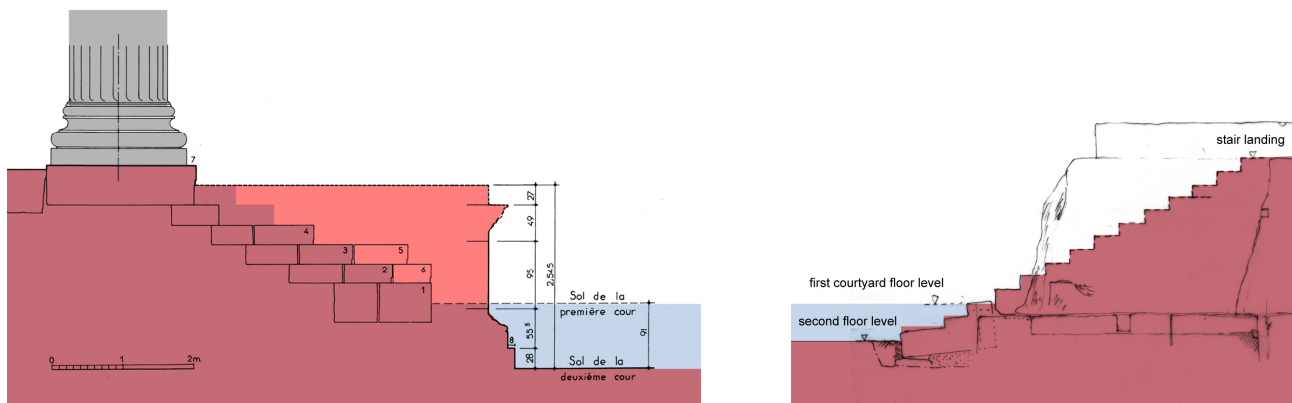


Fig. 4 - Lowering of the Temple Courtyard in Palmyra (left; modified from SEYRIG ET ALII 1975, Fig. 14) and in Baalbek (right; drawing: Lohmann).

using the Tell, which was difficult in Baalbek and Palmyra, where the dwellings had to leave the Tell to make space for the sanctuary terrace to use its topographic exposure.

### **Sanctuary architecture**

The architectural concept of their sanctuaries gives further hints. The T-shaped, partly artificial terrace of the Zeus sanctuary in Gerasa could give hints to the pre-Roman layout of Baalbek. Also in Gerasa, the middle imperial sanctuary of Artemis is apparently inspired by Baalbek's overall sanctuary layout. The same sequence of successively raised courtyards, Propylaea, Halls and Exedrae on vaulted cryptoporticus encompassing the temple and temenos, and a smaller trapezoid public frontal square with ample water installations, connecting the sacred place with the city and its traffic routes can be found here<sup>16</sup>.

### **Detailing**

Even particular architectural decoration details help to comprehend features comparable with those of Baalbek. A Romanization following a *Zeitgeist* was often assumed in Palmyra. In detail, this can be seen in the case of the Podium of the Bel-Temple and the associated lowering of the entire courtyard by several steps. The old crepidoma of seven steps was replaced with a three-layer Roman type Podium suitable for the the Bel temple's dimensions<sup>17</sup>. As we have seen now, this was following the same fashion as the monumental Podium in Baalbek. For parallels in decorative details, the temenos wall of the lower Zeus temple courtyard in Gerasa shows a mixture of an Ionic pilaster order with a Doric frieze, dated to 27/28AD<sup>18</sup>. The same unusual mixed order can be found in an early imperial ground floor exedra of Baalbek, possibly indicating a chronological parallel (fig. 4).

### **Conclusion**

Baalbek's monumentality was an early invention. As we have seen, a gigantic terrace was constructed already in pre-Roman times along a certain symmetry axis that all later Roman construction

<sup>16</sup> HOFFMANN and KERNER 2002.

<sup>17</sup> SEYRIG ET ALII 1975, 9–12.

<sup>18</sup> HOFFMANN and KERNER 2002.

followed. Building the final sanctuary however took centuries, when massive labor was interrupted by long periods of inactivity again and again.

The sanctuary architecture was continuously exposed to the requirements of the local cult. While the design for the first sanctuary was still a rather simple concept, growing numbers of pilgrims and worshippers required the sanctuary to be remodeled. The functions of the original sanctuary also could not fully meet the cult requirements, and therefore the sanctuary design can be regarded as a constant change, an architectural adaptation to spatial needs of a local cult.

Not only the monumentality and technical difficulties of the chosen design, but the quality of execution and the continuity and dimensions of building activity show, that the sanctuary of Jupiter Heliopolitanus received generous sponsorship.

Finally, an outstanding monument of Near Eastern Roman architecture extends over a third of a kilometer and remains exceptionally well preserved until today.

Enlarging the scope onto sacred places in the same Near Eastern Roman context in their relation to the surrounding topography, to the ancient settlements and Tells, to watersheds and agricultural land, but also in their tendency to architecturalize and connect consecutive platforms and propylea, most structures show strong parallels both in the urban as in the architectural features. However, the sanctuary of Jupiter Heliopolitanus in Baalbek can be considered prototypical in its successive development and its outstanding monumentality.

Dipl.-Ing. **Daniel Lohmann**

Architect, Scientific Researcher

RWTH Aachen University, Department for Conservation

Ph.D. candidate at the University of Cottbus, Germany

Lothringer Strasse 103

52070 Aachen

Germany

E-mail: [mail@daniellohmann.net](mailto:mail@daniellohmann.net)

[www.daniellohmann.net](http://www.daniellohmann.net)

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