

Broadening Horizons 4

A Conference of young researchers working in
the Ancient Near East, Egypt and Central Asia,
University of Torino, October 2011

Edited by

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Cover image: Excavations on the acropolis at Tell Beydar (Syria)

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TABLE OF CONTENTS

<i>Presentation</i>	
de Martino Stefano	viii
<i>Introduction to the Broadening Horizons 4 Conference Proceedings</i>	
Affanni Giorgio, Baccarin Cristina, Cordera Laura, Di Michele Angelo, Gavagnin Katia	ix
<i>Settlement patterns and exchange networks</i>	
<i>Copper Mining Community in Transcaucasia during Chalcolithic and Bronze Ages</i>	
Gailhard Nicolas	1
<i>Circulating through the city: an analysis of movement and urban space of a Northern Mesopotamian city</i>	
Tomé André	9
<i>A Comparative Analysis of the Cultural Interaction Between the Western and Central Areas of Anatolian in the Third Millennium BC</i>	
De Vincenzi Tommaso	21
<i>The socio-economic landscape of the Early Bronze IV period in the Southern Levant: a ceramic perspective</i>	
D’Andrea Marta	31
<i>The Transition from the Bronze Age to the Iron Age in Northern Palestine</i>	
Soennecken Katja	39
<i>Transferred Religion – Can Faith be exchanged?</i>	
Gropp Andrea	47
<i>Palmyra, City and Territory through the Epigraphic Sources</i>	
Gregoratti Leonardo	55
<i>Looking at and beyond Late Chalcolithic Pottery of the Burdur Plain, southwest Turkey</i>	
Vandam Ralf - Poblome Jeroen	61
<i>Architecture and Use of Space in Middle Bronze and Late Bronze Ages in Mesopotamian Temples</i>	
Di Michele Angelo	69
<i>Socio-economic reconstruction of ancient societies based on archaeological, historical or environmental records</i>	
<i>Demolition and Restoration at Giza: the Egyptian Sense of History and Heritage</i>	
Gilli Barbara	79
<i>The Modelling Skulls from the Ancient Near East</i>	
Marchand Florine	85
<i>The ‘Hammerhead Bowls’ in Syrian-Jezirah: a Case-Study from Tell Barri</i>	
Raccidi Mattia	89

<i>Wagons and Wine in Early Bronze Age central Anatolia</i>	
Whalen Jess	97
<i>The Early-Middle Bronze Age transition in Transcaucasia: the Bedeni pottery case</i>	
Carminati Eleonora	105
<i>Human Iconography on Metal Vessels From Bronze Age Middle Asia</i>	
Morello Martina	117
<i>The Oracle at Didyma, Hittite duddumar and the mercy of the gods</i>	
Walker Robert	127
<i>Italian Excavations at Nimrud: Preliminary Studies about Shell, Glass and Stone Small Finds</i>	
Somma Lorenzo	133
<i>Ceramics from Achaemenid and Post Achaemenid Qaleh Kali (Tappeh Servan, Jinjun), Iran: Political Reality versus Cultural Actuality</i>	
McRae Iona Kat	139
<i>Influence of the social class division on the Sassanian burial rituals (224-650 AD)</i>	
Farjamirad Mahdokht	149
<i>New Sealings from Old Nisa</i>	
Manassero Niccolo	155
<i>The Islamic relief-moulded jugs from Tell Barri (Syria)</i>	
Pappalardo Raffaella	161
<i>Investigating the origin of Early Bronze Age monumental chamber tombs in the Middle Euphrates Valley</i>	
Baccarin Cristina	169
<i>Application of new technologies in archaeological research</i>	
<i>Unlocking stories from objects: Some Ancient Near Eastern case-studies based on new research at the British Museum</i>	
Simpson St John	175
<i>Inferential analysis in archaeology: the Chi Square and its application to ceramic studies. A case study from Middle Bronze Age and Late Bronze Age pottery of Qatna</i>	
Iamoni Marco	187
<i>Organic Remains from Middle Bronze Age Ceramic Vessels at Tell Ahmar (North Syria)</i>	
Perini Silvia	195
<i>Close Encounters between Archaeology and Archaeometry in Cyprus</i>	
Chelazzi Francesca - Davit Patrizia	201
<i>Basalt Vessels Distribution in the Southern Levant during the Iron Age</i>	
Squitieri Andrea	209

<i>Broadening the Horizons of Space and Place. A new interdisciplinary, multiscalar approach on settlement patterns</i>	
Andreou Georgia Marina	217
<i>New technologies in archaeological research at Palmyra: the case of the Italian-Syrian Mission PAL.M.A.I.S.</i>	
Palmieri Lilia - Rossi Giorgio	223
<i>A Complete Operational Sequence of a Bone Industry Element from the Northern Near East: a Neolithic bevelled tool</i>	
Taha Buchra	229
<i>Probable cases of leprosy in two skulls from the Koc-Oba Kurgan (Kazakhstan)</i>	
Pedrosi Maria Elena - Mariotti Valentina - Belcastro Maria Giovanna	237
<i>Impact of human dynamics on landscape evolution</i>	
<i>Frontiers and Fortifications in Assyria: an introduction</i>	
Morello Nathan	241
<i>Exploitation of the natural environment and sustenance strategies</i>	
<i>Iron Age Water Supply Systems regarding agriculture at al Madam, Sharjah (U.A.E.)</i>	
Del Cerro L. Carmen	249
<i>The Jaghjagh river valley during the Roman period (II-IV century CE)</i>	
Palermo Rocco	257
<i>Posters</i>	
<i>Further Remarks about Lithic Production at Akarçay Tepe (Middle Euphrates Valley) during the Late PPNB</i>	
Borrell Ferran	265
<i>Parthian period storage jars from the south west building in Old Nisa</i>	
Ceccarini Giampaolo	279
<i>THE TESS DATABASE FOR THE CATALOGUING OF THE MOSAICS OF CRETE (GREECE)</i>	
Da Pieve Paola	287
<i>The Defences of Hatra: a Revaluation through the Archive of the Italian Expedition</i>	
Foietta Enrico	295
<i>A new Assessment of the End of the Oxus Civilization (Southern Central Asia, ca. 1750-1500 / 1400 BCE): Overview of the Transformations of the Society</i>	
Luneau Elise	303
<i>Fortification Systems in Central and Lower Mesopotamia Between the Third and the First Half of the Second Millennium BC: an Overview</i>	
Zingarello Melania	309

THE DEFENCES OF HATRA: A REVALUATION THROUGH THE ARCHIVE OF THE ITALIAN EXPEDITION

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Abstract

This study deals with the defences of Hatra, an important city of the Iraqi Jazirah in the IInd and IIIrd centuries AD. The data in this paper are both published and unpublished, and originate with the Italian expedition at Hatra. The main features of the fortifications are described with a special attention on the analysis of the unearthed gates (North, East and part of the West). At the end of the descriptive section a new chronological hypothesis is proposed.

KEYWORDS: HATRA, FORTIFICATIONS, MILITARY ARCHITECTURE, CHRONOLOGY, GIS.

The impressive fortifications of Hatra consist of a line of multiple defences: watchtowers; a ditch; an antemural; a main wall with towers; massive structures (towers and massive walls) added to the main curtain; an inner wall. The four main gates corresponded to the cardinal directions from which principal avenues lead to the core city *temenos* (Figure 1.1).

1. ARCHAEOLOGICAL INVESTIGATIONS AND STUDIES ON THE FORTIFICATIONS

W. Andrae was the first archaeologist to study the defence topic in detail, at the beginning of the twentieth century. The German Assur expedition conducted a site survey published in two fundamental volumes (1908, 1912) providing a general map of the site, which is still used by the academic community. A long chapter was dedicated to the fortifications with the definition of all the main parts.¹

During the 1950s Iraqi archaeologists conducted preliminary soundings in the northern gate area. W. Al-Salihi investigated it entirely in 1971. This excavation involved the gate, which includes the principal and secondary entrance, and a large part of the nearby main and inner wall (180 x 30m). The work was published but unfortunately only in Arabic, in a long article in 1980. In 1979 M. Subhi Abdallah directed the investigation of the eastern main gate, reported partially by J. Ibrahim in 1986 in English and in 1996 in Arabic. After the gate, excavations focused on the external eastern part of the main curtain for an extensive area extending from the north-eastern corner to the south-eastern one. There is still no accurate publication of these works, which predated heavy restoration in the area of the eastern gate.²

In 1990 a Polish expedition directed by M. Gawlikowski investigated and mapped the south-eastern corner of the defences, producing a detailed analysis of this sector, which was published over several articles (Gawlikowski

1990, 1994, 2009). Moreover, a smaller defensive quadrangular curtain was brought to light following soundings in the urban area (Figure 1.2).

2. A NEW METHODOLOGICAL APPROACH TO THE FORTIFICATIONS

These different archaeological investigations of the defences have produced a large but variable amount of information; this has been gathered within a database containing both published (textual and graphic) and unpublished information collected by the Italian expedition, directed since 1987 by R. Ricciardi Venco. The large Italian expedition corpus is important from a qualitative and quantitative point of view (2500 images, notebooks and commented plans) in order to check the published data. The relational database type chosen is linked to a GIS of the defences, which was produced from the topographic data (1987-1989) created by the Italian expedition (Figure 1). The integrated system allows a general revaluation of the defences, which will be briefly discussed in this paper.

The main pseudo-circular defensive wall has colossal dimensions, being approx 2km in diameter and 6km in circumference. Its irregular layout is probably due to the ground morphology.³ The main wall has been subdivided into 156 parts according to individual elements (e.g., towers, massive structures, etc.). The investigated areas are limited to the eastern and northern gates and to the eastern front of the curtain, representing only 29% of the total. In these zones the wall is in mud-brick with a stone socle of 2/3 courses with a constant width of 3/3.5m (Figure 2). The best preserved and excavated parts are preserved up to 2 or 3m high and display traces of plaster on the surface. It has been estimated that the original height of the curtain was approx 8/9m, judging by an analysis of eight stairways.⁴ The top walkway, which perhaps had a crenellated parapet, was probably 2.5m wide. The top of the towers, located at

I would like to thank R. Ricciardi Venco for the assistance in the preparation of this paper.

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¹ Andrae 1912, 24-59.

² The unpublished restorations probably made in 1989 are clearly detectable in the Italian photographic documentation.

³ For this topic see: Ibrahim 1986, 117.

⁴ The eight analysed stairways are located in these parts: T2-T3; TMI-TTII; TTIX-TMX; TMXVIII-T34; T34-T35; T36-T37; T36-T37; TMXIX-T38bis. The original height is valued making the rapport between ramp or arches length of the stairways and the tread and the result multiplied for the raiser. This method is achieved from M. Gawlikowski's study, which has produced a similar result for a single stairway located between T2-T3: Gawlikowski 1994, 153-155.

regular intervals of approx 30m, was presumably an enlargement of the walkway. W. Andrae supposed that further enlargements were provided in the north-western curtain part, where several bases for pilasters following the inner side curtain were found.⁵

An attempt to explain the use of the walkway can be made for the northern gate area, where four stairways are set against the main curtain. They are placed at a distance of approx 30m, allowing a rapid transit without the need for building stairways within the towers.

The preserved square *towers* (*T*) are approx 120 in number.⁶ The 28 surveyed ones, placed in the eastern and northern parts of the curtain, correspond to 23% of the total. The structures were probably all hollow, with an internal chamber investigated in 10 cases.⁷ The towers were built at the same time as the curtain and using the same techniques. The majority of the outer faces of the towers are 5-7m wide; the exceptions reach up to 7-10m across. Splayed arrow-slits are visible in a limited number of cases and these are placed at a height of 50-100cm from the outside level (Figure 2b), permitting only a low shot to the archer. It seems, according to the few data available, that there is no regular scheme behind their arrangement.⁸

The poor condition of the towers prevents an assessment of their original height. It could be assumed that it was approx 8/9m and the top would correspond to the battlements, as was supposed graphically and textually by W. Andrae and M. Gawlikowski.⁹ Therefore, it is likely that every tower had two, or perhaps three, floors. The entrances at the ground floor were constructed with door jambs and arches in stone.¹⁰ In some investigated cases, rooms (measuring 3 x 4m across) filled with the collapsed rubble of the upper floors and fragments of storage jars (T38) were found.¹¹

The *massive towers* (*TM*) are 26 rectangular structures measuring approx 6.5 x 8.5m across. They are built with a core of rubble and mortar faced with regular stone blocks (35/40 x 35/40 x 50cm).¹² On the ashlar are engraved marks, which could have the function of masons' marks, assembly signs or apotropaic value symbols.¹³ These mas-

sive towers are particularly well preserved and stand more than 7-8m high (ex. TMXIX, nearby the northern gate). W. Andrae reckons they had an original height of 15m judging by the amount of debris.¹⁴ M. Gawlikowski assumes a top higher than 8.6m, which he suggests to be the value for the walkway curtain, due to the discovery of a mortared floor in correspondence of TMXXXIX chamber.¹⁵ A total height of 10/11m, including the massive tower core and the top room, appears plausible. A hypothetical artillery chamber in mud-brick must have existed for defending soldiers and artillery machines against projectiles, humidity and rain.¹⁶ Massive towers were added after the main curtain construction, in some cases incorporating the remains of ancient towers.¹⁷

The *massive walls* (*MW*) are 16 and they show the same construction technique as the massive towers (i.e., dimension and setting of blocks). The length of the massive walls is around 18/19m, although 4 structures, defined by W. Andrae as 'conduits', are longer (approx 40m).¹⁸ The thickness of the constructions is approx 4m.¹⁹ A particular case concerns the southeast corner where a structure shows a triangular shape protruding 3.50m from the line of the main wall.²⁰

The *tower-tombs* (*TT*) incorporated in the main wall are 8 in number (Figure 2b). They are typologically similar to those located in the city's necropolis.²¹ The structures contain multiple rooms and floors and are constructed from ashlar with marks. The main curtain is set against these structures, which protrude from the wall. This proves that the main wall was constructed later than the tower-tombs. None of these constructions contain dated inscriptions on blocks found *in situ*; hence, it is impossible to determine their absolute chronology.²² According to their preserva-

256-259). The supposition of assembly marks must be probably rejected due to the fact that it is impossible to recognize any sign of regularity of occurrence in the unrestored buildings. See also: Bashir 2002.

¹⁴ This assumption was proposed for TMI: Andrae 1912, 36.

¹⁵ 'On top of the battery, an even, mortared surface bears two sets of hollow for tric-trac, being a proof that this was the floor of the artillery chamber, necessarily level with the *chemin de ronde*. A stump of a wall of this room still subsists at a corner' (Gawlikowski 1994, 180). This massive tower could also have been restored after the 1980s investigations.

¹⁶ The strings used for the artillery-machines (ballista type) are generally in animal sinews or horsehairs. These materials are very sensible to humidity. For the Hatra's ballista discovered near TMXIX see: Baatz 1977. Many stone projectiles with different weights and dimensions have been found nearby the main wall and in the city (Al-Salihi 1980, 166, fig. 15). Unfortunately a metrological research on the stone balls has not yet been completed.

¹⁷ TMIII, TMX, TMXV, TMXIX, TMXX, TMXXIV, TMXXIX, TMXXXII, TMXL, TMXLII.

¹⁸ Conduct east (MWIII); conduct south; conduct south-east; conduct north. Also MWXXXVIII must be included in this group.

¹⁹ Andrae 1912, 27; Gawlikowski 1994, 155.

²⁰ For a plan and a good picture of this corner see: Gawlikowski 1994, 148, fig. 1, and 150, fig. 10.

²¹ TTII, TTVII, TTIX, XXII (?), TTXVII, TTXVII, TTXLI, TT120 (?). The uncertainty is due to the unsure attribution of these constructions. For Hatra's funerary buildings see: Dorna Metzger 2000.

²² An inscribed block, which was probably related to the structure, was found near TTII [416]. The interpretation, particularly of the date, is extremely disputed (cf. Bertolino 1995, 56-57). In any case, as regards this paper the moment the tombs changed their function is more critical than

⁵ Andrae 1912, 45, figs 43-44.

⁶ The result is reached using the Italian expedition topography and Andrae's plan, which was also utilised for towers and massive structures enumerating (Arabic and Roman numbers). Six towers, which belong to three main east, north and south gates, are not included.

⁷ T3, T9, T38bis, perhaps T67 and T106, T111, T115, T122, T123, T124.

⁸ *Contra* Gawlikowski 1994, 152.

⁹ Andrae 1912, 31, fig. 26; Gawlikowski 1994, 148, fig. 2, 152.

¹⁰ Doors with arches were discovered in: T115 (Gawlikowski 1994, 151 fig. 6), T34, T37. Some cases show round arches (e.g. T38bis), others pointed arches (e.g. T34).

¹¹ Al-Salihi 1980, 163.

¹² The most of TM and MW are localised in the northern and eastern parts of the city, probably because they were built on the principal enemy attack itinerary. Some towers are bigger than the described ones (9 x 9 m): TMI, TMXVIII, TMXIX, TMXXIX, TMXXXIX, TMXLII, TMXLIII.

¹³ The mason's marks hypothesis seems the most plausible, agreeing in principle to M. Gawlikowski's affirmations (Gawlikowski 1994, 158). However, it is impossible to exclude that these signs could have also some apotropaic values following the proposal of W. Ainsworth (1892:

tion and the amount of debris, it was hypothesized that they could have interrupted the walkway by reaching a height of approx 15m.²³ This assumption is probably correct, although it seems difficult to reconstruct a constant height.²⁴ An interesting aspect deals with the adaptation of some windows of these buildings to the new defensive function, for example TTXXVII.²⁵ A similar change of function can also be ascribed to two tower-tombs (buildings N and O), which are located in front of the northern and eastern gates and were reused as watchtowers.

Some tower-tombs placed on the eastern side of the city were investigated during the 1980s by Iraqi expeditions and some sarcophagi and related funerary objects were found.²⁶ This proves that even if their primary function changed, the structures retained their original purpose until the city's destruction.

It was suggested by W. Al-Salihi that the custom of including *mausolea* in the curtain wall was a Greek tradition (Philo of Byzantium).²⁷ This hypothesis is uncertain because there is no reference to the precise location of this kind of mausoleum-tower in the relevant passage.²⁸ Furthermore, no Hellenistic city in either the east or the west, show the insertion of monumental tombs. The only possible comparison, which is of later date in any case, is Palmyra, where some tower-tombs were incorporated into the Diocletianic fortifications.²⁹ A plausible hypothesis, which is relevant in both cases, is that the tower-tombs were only incorporated for practical reasons, probably to prevent any enemies from using them to gain strategic elevation.

Evidence for a *ditch (D)*, detectable either by the ground morphology in the unexplored areas or *antemural (A)* is extremely restricted. The evidence for the ditch is mainly from the area of the northern gate and eastern front. The distance between the main wall and the ditch seems almost constant (approx 10m), allowing for good troop transit. The moat is lined with two walls, a retaining one on the side of the city, which is preserved up to 4m high in the northern gate zone, and an outer wall which is unfortunately badly preserved. The width of the ditch investigated in the northern gate area was approximately 8m.³⁰ This information is confirmed by the German general city survey (Andrae's plan). In the south-eastern corner, an enlargement was probably built because the moat here reaches 35m in width.³¹

their exact date of foundation.

²³ Andrae 1912, 50. This evaluation was proposed for this TT incorporated in the southern bastion, which is a main wall huge rectangular protrusion. The bastion construction was accomplished probably to incorporate the tower-tomb.

²⁴ In fact, Palmyra's towers-tombs, even if different in type, show a certain size heterogeneity. See Gawlikowski 1974.

²⁵ Andrae 1912, 47, fig. 46.

²⁶ For the objects found in TTH e TTXIX (eastern curtain part) see the little information supplied by Al-Salihi 1991a, 190-191.

²⁷ Al-Salihi 1991a, 191.

²⁸ Philo of Byzantium, V, 1, 86.

²⁹ See Gawlikowski 1974, 242.

³⁰ Al-Salihi 1980, 165. The outer limits of the ditch are not clearly visible in the Italian pictures.

³¹ Result achieved from the Polish expedition plan: Gawlikowski 1994,

The retaining inside wall was only detected by the northern gate and was composed of heterogeneous materials (*marmor*, an alabaster/gypsum stone, and limestone) and sources (ashlars and re-used column drums).³² The ditch follows the profile of the massive towers in certain parts, which is clear evidence that it was constructed afterwards, either totally or in part.

Antemural information mainly comes from the southeastern corner. The structure here follows the same line of the ditch counter city wall and is built with a core of rubble and mortar, faced with ashlar courses with marks. Almost the total length of the external facing fell into the moat, thus revealing the core of the structure. M. Gawlikowski supposed that the antemural was approx 2.5m high using the blocks found in the area.³³ It is unknown if a complete antemural originally surrounded the city. However, it can be affirmed that some parts were lacking in certain periods (external northern gate zone).³⁴ In the area of T115 the antemural shows a small exedra (width 3.80m) which protrudes 4.20m over the moat.³⁵

There are also a few other modest structures built of rubble and mortar which follow the outline of the older towers.³⁶ These walls might have been constructed in order to support forays by the defenders.

The *inner wall* appears in the unexcavated parts like a slight embankment which follows at a distance of 10m the main wall (Figure 2a). In the investigated areas (eastern and northern gates and soundings in the south-eastern corner), it shows a construction technique similar to that of the main curtain. Scholars think that this wall should have had a defensive function, shown partially by M. Gawlikowski with an evaluation of its original height based on a stairway ramp.³⁷ However, it must be noted that in the uninvestigated parts the inner wall embankment seems lower than the main wall. Moreover, in several excavated parts the inner wall is preserved only to the socle or to the first or second course of mud-bricks.³⁸

The *quadrangular defensive curtain* was partially explored with soundings by the Polish expedition in 1990 (Figure 1.2).³⁹ The towered wall, built in the same manner as the main curtain, was subsequently dismantled and incorporated into the urban layout. M. Gawlikowski states that this defensive wall should belong to the Trajanic pe-

148, fig. 1.

³² See: Al-Salihi 1980, 167, fig. 18.

³³ Gawlikowski 1994, 152, 179.

³⁴ For a plan of the northern gate area see: Al-Salihi 1980, 185.

³⁵ See the south-eastern corner plan of the Polish expedition: Gawlikowski 1994, 148, fig. 1. In addition to the exedra in correspondence of T67-T68, the antemural shows a little rectangular tower detected by W. Andrae and visible by the members of the Italian expedition during the 1990s.

³⁶ Seven walls of this kind are placed near the towers: T3; T5; T7; T10A; T13; T17A; T120.

³⁷ Gawlikowski 1994, 153. It is the same method described for the height reconstruction of the main curtain.

³⁸ See for example Gawlikowski 1994, 151, fig. 6.

³⁹ Gawlikowski 1990, 120-121; Gawlikowski 1994, 162-178; Gawlikowski 2009, 17.

riod as it corresponds better to a passage in Dio Cassius where the city is defined as ‘neither big or prosperous’ during the siege by Trajan.⁴⁰

The *four main gates* (Figure 3) are placed almost in correspondence to the cardinal points of the main wall system. Only the northern and the eastern ones were archaeologically investigated and are partially published. These main entrances are extremely important because they have inscriptions which allow the dating of the entire curtain wall. In the early 1990s, an Iraqi expedition started to investigate the inner part of the western gate but no report was published.⁴¹

The eastern, northern and southern gates are composed of two rectangular towers, which project more than those of the curtain, and flank an entry (main doorway). The towers, which are built in mud-brick on a stone socle, delineated an open space (main court). The western gate shows particular features which will be discussed in detail. In all the gates there is an added bent structure on the exterior, constructed in mud-brick on a stone socle, which gives a barbican appearance to the whole. This part ended with another entry (external doorway). In this way, there are two courts in each gate complex, the first one delineated by the bent wall, and the second major one enclosed by the towers.

To rejoin the external doorway the incomers had to cross a bridge, defended by some small rooms, and accomplish a turn of 90°, resulting in a significant defensive advantage (Figure 3).

The *eastern gate* has two niches added to the bent wall just inside the external doorway.⁴² In the northern niche a statue of Heracles, similar to one discovered in the northern gate, was found.⁴³ A statue, probably representing a priest, was recovered in front.⁴⁴ On the south wall of the main courtyard a shrine/niche built with quadrangular stone blocks bonded with mortar and covered by a semi-dome was discovered. In this niche was found a relief with the representation of a closed wings eagle with rich jewels and a long legal inscription [343] dated to AD 150/151.⁴⁵ This epigraph gives an *ante quem* limit to the towers and, by extension, to the gate, enabling us to establish that they were all built before this date. On the lintel of the main doorway, which was discovered in a broken condition by the Iraqi archaeologists, was engraved an important inscription [1027 = Ibr. IX] in which Nasru, probably the *marya* (Lord) according to his titles, is named as builder of the entire gate.⁴⁶ On the lateral

walls there are rectangular holes after the main doorway, presumably used to secure a door bolt. In the south area of the gate complex there is a house constructed against the main wall (Figure 3). It is supposed that the function of this was military, given its position.⁴⁷

The *northern gate* (Figure 4) has the same architectonic parts as the eastern one.⁴⁸ In correspondence with the first part of the inner bent-wall, a large niche built of stone and mud-brick on a stone socle was discovered. It was covered at the back by a partially preserved stone semi-dome. In this delimited space a Heracles statue was found,⁴⁹ and an incised inscription with the name of Nergal.⁵⁰

A stairway and a double niche composed of three pilasters were located on the eastern wall of the main courtyard. All of these structures were later. In the first niche was found an eagle relief and a dated inscription [336] (AD 150/151) similar to that in the eastern gate.⁵¹ The Iraqi archaeologists supposed that two altars⁵² and a little statue of Heracles-Gnd⁵³, which were found in the main court, were placed in the same niche.⁵⁴ In the southern niche could have been located a statue discovered nearby, possibly representing Sanatruq II.⁵⁵ Behind the middle pilaster, which divides the two niches, was found a little alcove built at the same time of the towers. Many religious epigraphs are engraved over the blocks and plaster of the gate walls, but unfortunately none are precisely dated.⁵⁶ The Iraqi archaeologists found in the rubble of the main doorway an inscription [335] on a stone block in which Nasru is mentioned, but without titles.⁵⁷ Inside the main doorway, which is 2m wide, large passing holes for the bolt were present on the lateral walls (Figure 3).

The northern gate is more complex than the others and has a *secondary major gate* on the same axis as the main one. A doorway is placed between two ‘square’ towers edified on the base of the conservation entirely in stone with engraved mason’s marks. The secondary main gate shows traces of two damaged stone walls on the eastern and western sides which belong to the same phase as the gate (Figures 3-4). The inner wall is set here against the two towers, proving

⁴⁷ Ibrahim 1996, 38-39.

⁴⁸ The only difference between the two gates is the bent wall orientation. See Figure 3.

⁴⁹ For the discovery, dimensions, and style analysis of the sculpture: Al-Salihi 1973a.

⁵⁰ In [295] Heracles-Nergal hold the Iranian title of ‘chief of the guards’. See: Aggoula 1991, 144.

⁵¹ For the inscription see: Aggoula 1991, 155; Kaizer 2006, 142-143.

⁵² Al-Salihi 1980, 160. For the altars dimensions and descriptions see Aggoula 1991, 156-157.

⁵³ For the small statue in gypsum-alabaster stone (32,5 x 12,5 x 10cm) see: Al-Salihi 1973b; Al-Salihi 1982.

⁵⁴ This supposition has been proposed in pictures taken by the Iraqi archaeologists: Al-Salihi 1980, 160, fig. 3-4.

⁵⁵ It was supposed by W. Al-Salihi that this statue was located at the top of the secondary northern gate. From the information gained by the statue’s catalogue at the end of the same article (1980) and by an excavation photograph, it seems that the sculpture was found in proximity of the southern niche (Al-Salihi 1980, 179, fig. 9a).

⁵⁶ For the northern gate plan with the location of the inscriptions see: Bertolino 1995, tav. XV.

⁵⁷ Aggoula 1991, 154-155.

⁴⁰ Gawlikowski 1994, 160-161. The author quotation is: Dio Cassius XLVIII, 31, 1.

⁴¹ Venco Ricciardi 2000, 93, n. 31.

⁴² The niches are large 2.90m and they protrude 0.90m from the bent wall. See the Iraqi plan: Ibrahim 1986, pl. 92.

⁴³ There is very few information about this statue, see: Ibrahim 1996, 27, fig. 4.

⁴⁴ Ibrahim 1996, 34; Al-Salihi 1991b, 35.

⁴⁵ For an excavation picture see: Ibrahim 1986, pl. 92. For the inscription, see Kaizer 2006, 144-145.

⁴⁶ See: Ibrahim 1986, 200; Ibrahim 1996, 28-29; Beyer 1998, 110-111. Gawlikowski 1994, 182, regarding the correspondence of Nasru as *marya* in this inscription.

that it is later.

Each tower has 4 arrow-slits of different forms (trapezium isosceles and trapezium rectangle in plan) which allow different archers' shots. In the secondary gate area two blocks and a lintel with inscriptions were found. They named probably Sanatruq II, last King of the city, as the builder or restorer of the gate.⁵⁸

The *western gate* was already considered different from the others by W. Andrae because its rooms/towers were placed inside the main wall in his general and detailed plans⁵⁹ (Figure 3), whereas the other main gates have protruding towers beside the doorway.⁶⁰ For this reason W. Andrae supposed that the western bastion, which is a huge main wall protrusion placed north of the gate, would be a defensive substitute for the protruding towers (Figure 1). The German expedition did not archaeologically investigate the main wall, and our understanding of the structure and its relationships remain very hypothetical.

An Iraqi expedition started to investigate part of the western gate at the beginning of the 1990s. The excavation, as it can be understood by the Italian documentation, was limited to the main court and to the interior of the northern tower. The walls of the gate were all in ashlar stone blocks in the preserved parts, unlike the others main entrances but similar to the northern secondary gate. The two towers/rooms show the occurrence of arrow-slits, revealing a defensive function. There are four arrow-slits in the northern investigated tower, two of which pointed directly to the main court. The inner face to the city of a stone wall with buttresses is visible to the north of the gate from the Italian photographic records and it seems damaged at the north end.

If Andrae's hypothesis of the relationship between the western gate towers and main wall is correct, it would be possible for this gate to have belonged to an earlier phase than the main curtain, which would be set against the southern tower of the gate.⁶¹ In other words, the main curtain dating would furnish an *ante quem* limit to the construction of the gate. The western entrance maintained its function in all periods.

⁵⁸ The inscriptions engraved on the blocks are: [333], [334]. The one engraved on the door lintel is: [341]. None were discovered in the masonry by the archaeologists. M. Gawlikowski and W. Al-Salihi affirm that the secondary gate was constructed during Sanatruq II's reign at the same time as the engraving of the inscriptions. J. Ibrahim disagrees as the text mentions a Sanatruq with the title of "pious", which might not correspond to the last King of Hatra. Moreover, he states that the lintel inscription was not found *in situ*, so it would be impossible to reach an easy conclusion (Ibrahim 1986, 121). The author supposes, furthermore, that the inner wall and the secondary gate could be in chronology anterior to the main gate and the main curtain, due to their lower conservation (Ibrahim 1986, 122).

⁵⁹ The main wall is mentioned as 'hauptwall' in Andrae's texts and plans.

⁶⁰ See Andrae's general plan and the description of the western gate: Andrae 1912, 32-33.

⁶¹ If the arrow-slits discovered in the northern tower existed in the same position in the southern one, the western slits would have been blocked by the main curtain and the southern slits would not have any function.

3. A NEW CHRONOLOGICAL HYPOTHESIS FOR THE DEFENCES (FIGURE 5)

The quadrangular curtain wall, even if it is not precisely dated, is surely earlier than the main curtain owing to the fact that it does not maintain its function and was used as a source of building material for successive houses. This defensive wall was probably constructed, in agreement with M. Gawlikowski,⁶² before the siege by Trajan (*ante* AD 117), as the city's description written by Dio Cassius might suggest.

The western stone gate is different in technique to the eastern and northern main gates which are built in mud-brick on a stone socle. This is unusual because they are all generally considered as belonging to a "unitary" main curtain project, which include the principal gates and dated with a fair degree of certainty to the reign of Nasru (AD 128/129-138/9).⁶³ If the relative chronology proposed for the western gate was correct, this entrance would have been built before the main curtain and reused in the main rampart.

The technical comparisons between the western gate and the secondary northern gate (stone masonry and arrow-slits), and their setting with respect to the main wall, might suggest the contemporaneity of these two structures. However, it is impossible, according to the few data available, to ascertain the period of time elapsed between the northern main gate and the secondary northern gate. It would be suggestive to read the little evidence of the destroyed walls of the secondary northern gate and the two stone gates (western gate and northern secondary gate) as a unitary project interrupted for some unknown reasons. However, only new field surveys and soundings, especially in the western gate area, could clarify this question.⁶⁴

The construction of the vast main curtain in mud-brick on a stone socle using a local technique was followed by a long period of peace. During that time, the house placed to

⁶² Gawlikowski 1994, 162-178. The tower-tombs location could be another indication of this. In fact these structures are placed outside the hypothetical limits of the ancient curtain (Gawlikowski 1994, 163).

⁶³ The inscriptions on the eagle niches provide a *terminus ante quem* for the construction of the gates and, perhaps, the main curtain wall. For this reason they are dated before AD 151, although it is impossible to provide an absolute date for the niche which was added to the tower. The main curtain wall is usually dated to Nasru's reign as the inscription [1027 = Ibr. IX] was found on the eastern gate lintel; for another similar one [335] discovered in the northern gate and for a statue found under the voussoirs of the fallen arch of the northern gate main entrance similar to the Nasru's one discovered in temple V. The chronology used for the city Lords and Kings in this paper follows that proposed recently by M. Sommer (2004). The chronology of Nasru's reign is heavily disputed. M. Gawlikowski states that the main wall was built between AD 138 and AD 152 because in [1027 = Ibr. IX] an 'inner stone wall' is mentioned which is interpreted by him that the temenos enclosure was completed in or before AD 138 (Gawlikowski 1994, 158, 182). It is also possible that the 'inner stone wall' was not the temenos wall but was instead the hypothetical stone project preserved only at the two stone gates.

⁶⁴ The building technique of the curtains in mud-brick on a stone socle (quadrangular wall, main wall, inner wall) cannot be used as a chronological clue, because this is the most usual method of construction in Hatra. The decreasing size of the curtains bricks, however, could furnish some support to the chronology: quadrangular wall (40 x 40 x 11cm), main wall (38 x 38 x 11cm), inner wall (33/34 x 33/34 x 10cm).

the south of the eastern gate was probably constructed as it blocked any rapid transit along the wall street.

In AD 197-199 the city was besieged twice by Septimius Severus. Prior to this event the defences were reinforced and the bent structures of the gates were perhaps added at this period. During the reign of Sanatruq II, the last King of Hatra, massive towers and walls were constructed with the purpose of repairing and reinforcing the defences. After this project the inner wall, which is stratigraphically later than the main wall and the house close to the eastern gate,⁶⁵ was built as a final barrier against the Sasanians. The inner wall preservation is worse than the main wall, perhaps indicating that it was never completed. Some parts were totally constructed (e.g. northern gate zone), others only started (e.g. only socle occurrence) and others left completely free.

If the assumption proposed for the western and the secondary northern gates is correct, Sanatruq II would have engraved the inscriptions with his name in the secondary northern gate in order to reclaim credit for a point of access probably built by an older city Lord.

Despite the strengthening of the defences and a new alliance with the Romans, the city of Hatra fell into Sasanian hands in AD 241 after a long siege.⁶⁶

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⁶⁵ Gawlikowski 1994, 153.

⁶⁶ Outside the main wall of the city there is a circumvallation wall which was reasonably interpreted by W. Andrae, M. Gawlikowski, S. Hauser and D. Tucker as a siege work built by the Sasanians. For the siege structures and a 'possible' siege camp detected using satellite images see: Hauser and Tucker 2009.

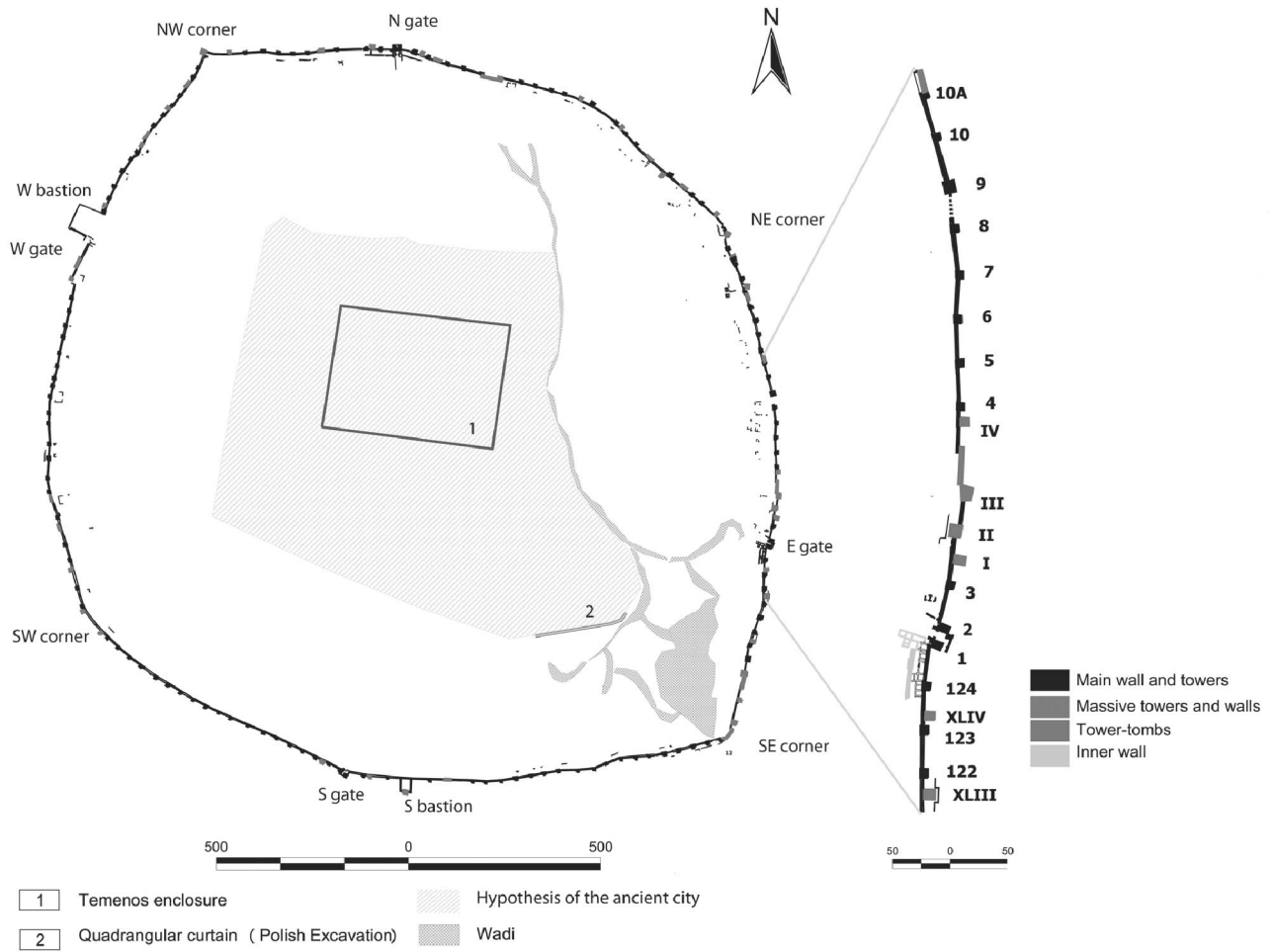


Fig. 1 Hatra's general plan and detail of the eastern part (GIS)



Fig. 2 a) Eastern main curtain sector. In foreground T121. In background TT120, T119 and TMXLIII. It is visible also the inner wall (right picture part); b) north-eastern corner of the main curtain. In foreground T18 and in background TTIX

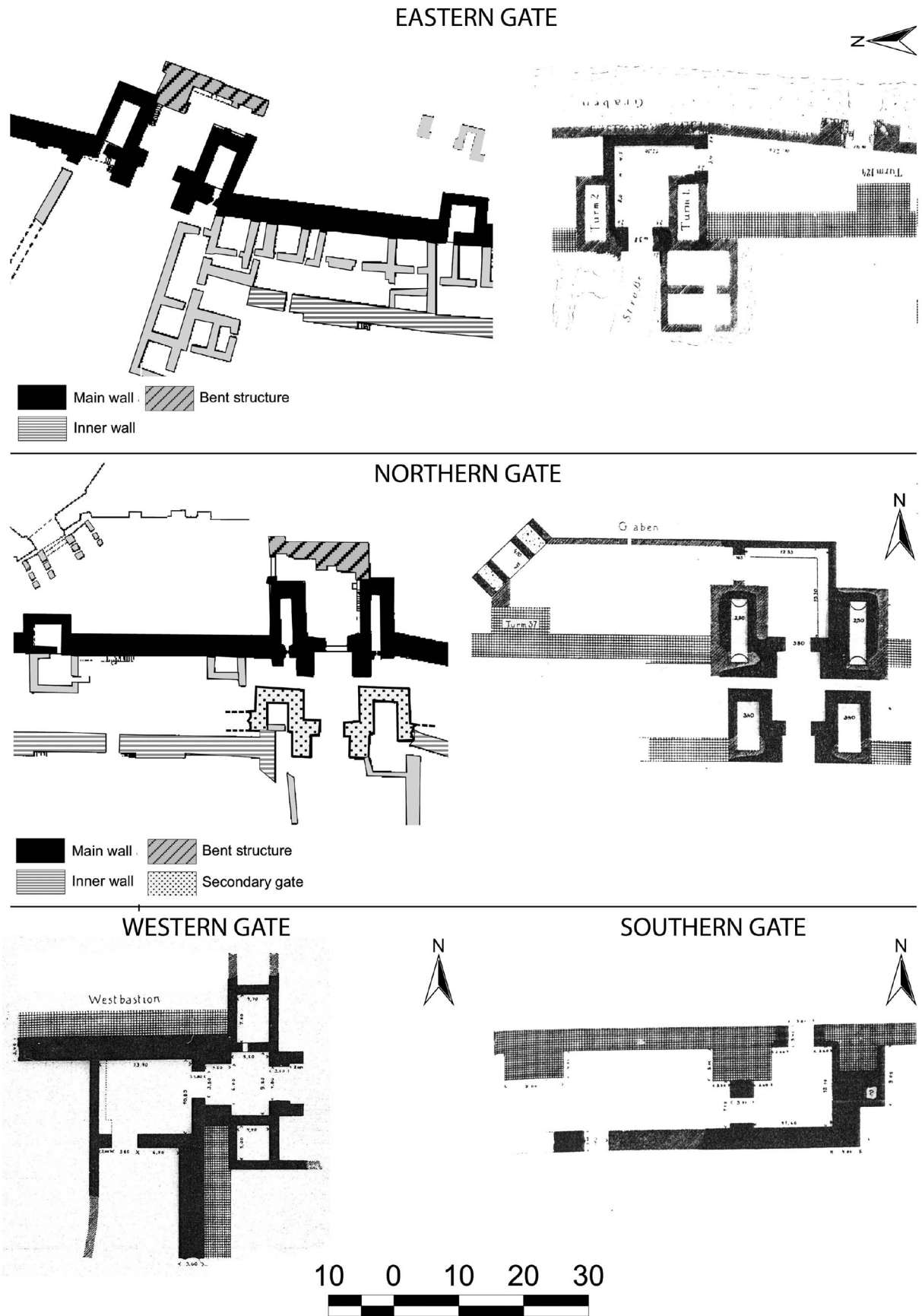
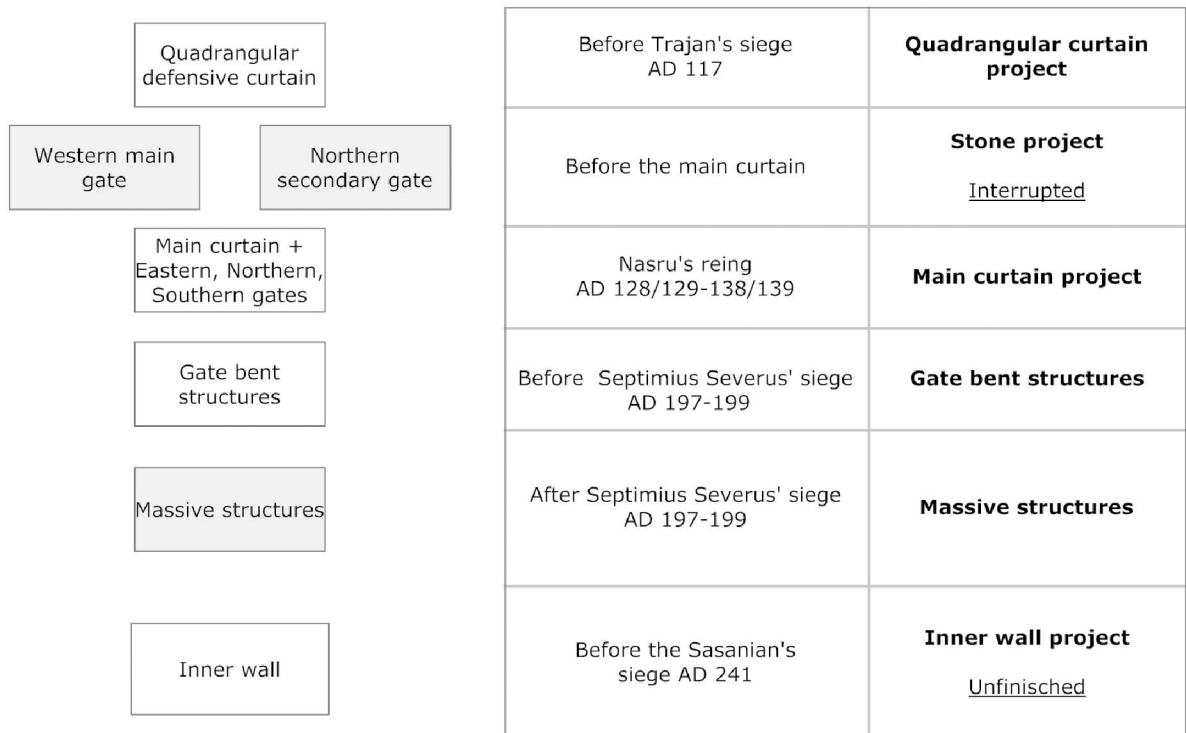


Fig. 3 Main gates plans: for the eastern and northern gates -GIS and Andrae's detail plans- (Andrae 1912, 30 fig. 25; Andrae 1912, 34 fig. 32); for the western and southern gates -Andrae's detail plans- (Andrae 1912, 32 fig. 27; Andrae 1912, 34 fig. 31)



Fig. 4 Northern gate from west. It is possible to identify the destroyed stone wall of the secondary gate (right picture part)

Chronological hypothesis



Stone structures

Fig. 5 Scheme of the chronological hypothesis