

Chapter 15

Urban changes in Late Roman North African cities: Thamugadi (Timgad, Algeria) as a case study

*Boubakar Laghmouche, Dalila HOUGLAOUENE, Meriem Naimi Ait Aoudia

Introduction

The character of urban changes in North African cities during the Late Roman Empire is a controversial topic that many recent scholars have sought to resolve. While the late city “decline” hypothesis has begun to dissipate in recent years, giving way to a new view that sees this period as a time of urban prosperity and development for the cities of Roman North Africa, the variations in the trends of the late transformations of each city's urban landscape, make it necessary to examine each case individually. This article explores the urban changes of Thamugadi (Timgad, Algeria) during the Late Roman period. We relied on an attempt to inventory and re-read of the available archaeological and epigraphic evidence of late-period construction and restoration. After organizing, tabulating, and mapping the data on a city map, using ArcGIS software, we set out to interpret the results concerning urban changes in Thamugadi during the Late Roman period, focusing on the following elements: Private and Public Investments, Urban Functions, and Christian Buildings. The results demonstrate the city's distinctive urban dynamism during the period in question. They also provide a framework for understanding Thamugadi's urban development and continuity during that era of the city's history.

The late Roman period, known as the “Lower Roman Empire”, has long been associated with “decline” in various areas, not least the urban landscape of the classical cities. These assumptions were linked to scholars' views relating to that era as a step back, which the scientific community considered to be one of the historical axioms for a long time (Jones, 2009). In fact, the Roman Empire faced a multitude of crises from the 3rd century AD, including political unrest, security threats, economic challenges, and health epidemics. The proliferation of crises and combined events weakened the empire, paving the way for its eventual downfall (White, 2023).

Thus, the urban changes in Roman cities during this period were placed in the same theoretical context associated with the “decay thesis” in the literature of historical and archaeological scholars, as mentioned above, particularly those changes that affected the cities of the western Roman provinces (Bjornlie, 2023), that reflected the wider crises and complexities facing the Roman Empire at this stage of its history. To form this vision of the late period, researchers and archaeologists have drawn on a range of aspects of urban transformations, such as : the shrinking of populated urban areas, the destruction of ancient buildings, or their readaptation under Christian influence. Nor were the Roman cities of the North African provinces spared these perceptions of the late decadence in the Roman West's cities (Baratte, 2018; Lepellet, 1981; Sears, 2007).

Urban fabric in late Roman North African cities

From a historiographical angle, there is often no consensus, among historians, about the precise starting point of the Late Roman period, and this continues to be a challenge due to the divergence of different positions and scholarly interpretations (Frighetto, 2016). Indeed, modern historians generally consider the period known as the

Corresponding Author: * Boubakar Laghmouche

ETAP Laboratory, Institute of Architecture and Urban Planning, Blida 1 University, Algeria
e-mail: laghmouche_boubakar@univ-blida.dz

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“Lower Empire” to have begun in the second third of the 3rd century CE and lasted until the fall of the Roman Empire (Whittaker, 1995; Zecchini, 2015).

Regarding the urban landscape of the region, it is important to note that North Africa was urbanized long before it was conquered by the Romans in 146 B.C., giving the region a rich and ancient urban and architectural tradition that allowed later Roman cities in Africa to display “African” characteristics (Dufton & Fentress, 2022). Indeed, the vastness and diversity of the North African provinces during this period, on the one hand, and the variation in the nature, size, and urban topography of each city, on the other, make it difficult to identify one unique pattern of urban transformations in all of the region’s Late Roman cities. (Jacobs, 2013; Sears, 2007; Syrbe, 2023). Hypotheses of the urban “Decay” in the North African cities under the domination of the late Roman Empire, and then in late Antiquity, no longer hold sway in the face of a new, more thorough, and detailed perception that began to take shape several years ago, and which carries with it a different picture. For determining the status of the city and its urban dynamism, based on a re-examination of ancient archaeological evidence and information, and greater attention paid to the dating of late buildings (Jacobs, 2013; Lepelley, 1981).

Many researchers now consider the 4th and 5th centuries AD to have been a period of remarkable prosperity and urban development in the majority of North African cities, even though several factors and determinants, such as the impetus, timing, and nature of the urban operations carried out, and the impact of the spread of Christianity on urban structure ..., remain highly variable from one city to another (Fenwick et al., 2022; Leone, 2007, 2013). This is what makes the study and analysis of each case an effective means of understanding the urban changes and patterns of each city in terms of its political characteristics and historical events, as well as its social and economic fabric. It’s worth noting that much of the previous work on the late Roman city of North Africa has focused on single aspects such as Christian buildings and their impact on the urban landscape, independently of the rest of the urban and socio-economic contexts of these dynamic urban communities in their various dimensions (Berthier et al., 1942; Leone, 2013).

Aims of the research

In this research, we discuss urban changes in one of North Africa's most extensively excavated Roman cities, and among the best-preserved archaeological sites in the region, which is Thamugadi (Timgad, Algeria). This paper presents an exploration and attempted inventory of construction and restoration operations dating from the Late Roman Empire in the city. By re-reading and examining the information provided by Latin inscriptions, and the archaeological evidence available, we attempt to build up a complete picture of what the city witnessed from an urban point of view from the 3rd century AD. Given that the urban fabric of any city is the result of social and economic changes and the political and ideological factors of its inhabitants combined, any attempt to understand this complex composition of Thamugadi's late urban landscape must include all these aspects. Therefore, through this work, we try to address construction and improvement works related to public and private investments, urban functions, and religious buildings.

Evidence

It is important to highlight the role of various evidence and sources related to the development of urbanization in North African cities during this period, to understand the paths of urban transformation and imagine what life would be like there. Material sources, such as archaeological evidence and Latin inscriptions, are essential for any attempt to read and interpret these changes. Archaeological excavations have touched many Roman sites in North Africa since the 19th century, revealing a wealth of archaeological evidence and inscriptions dating back to the earliest days of the Roman presence in these cities. (Leone, 2007) However, the destructive methods and techniques used during archaeological excavations in the 19th and early 20th centuries destroyed much of the evidence relating to the late Roman and later periods (Leone, 2003). Moreover, during this period, Archaeologists focused much of their attention on the display of buildings and the enhancement of archaeological monuments, to the neglect of evidence for the dating of buildings, particularly those of the Late Roman Period (Sears, 2007). It should also be noted that the results of archaeological excavations were often published sporadically and in the form of intermittent reports depending on the excavation operations. This makes data collection about urban operations more difficult.

Method

Case study

Timgad, the ancient “Thamugadi”, is a Roman city created for veterans of the Third Augustan Legion (Rome's main military force in North Africa). The town lies on the northern slopes of the Aurès Mountains, on the road between Lambaesis (Lambèse) and Mascula (Khenchela), in the northeast of present-day Algeria. “The Colonia Marciana Traiana Thamugadi” was founded in 100 AD by Emperor Trajan as a veterans' colony (Dupuis, 1994). Its square enclosure and orthogonal plan, controlled by the *cardo* and *decumanus*, the two perpendicular roads that crossed

the town, lined with porticoes, bear witness to the fact that it was strongly inspired by the Roman military model(see Fig.2). The city underwent two types of urbanization after its foundation: The first affected the interior of the original city, essentially by completing the fabric projected at the time of the initial design, within the city walls. The second was an extra-mural peripheral extension to the western and south-western sides of the “Trajanic” city, from the 2nd century A.D.(A. BOUCHAREB, 2009). Indeed, Thamugadi's urban development, from the initial geometrically strict orthogonal plan, of the ideal military model, to more organic forms of urban extensions, clearly shows how the city's urban planning has adapted to the reality of life over time. In fact, the winding, irregular streets that characterized Timgad's urban growth outside the abolished city walls from the 2nd century to at least the 4th century AD, were a remarkable contrast to the regularity of the city's original layout(Yegül & Favro, 2019).

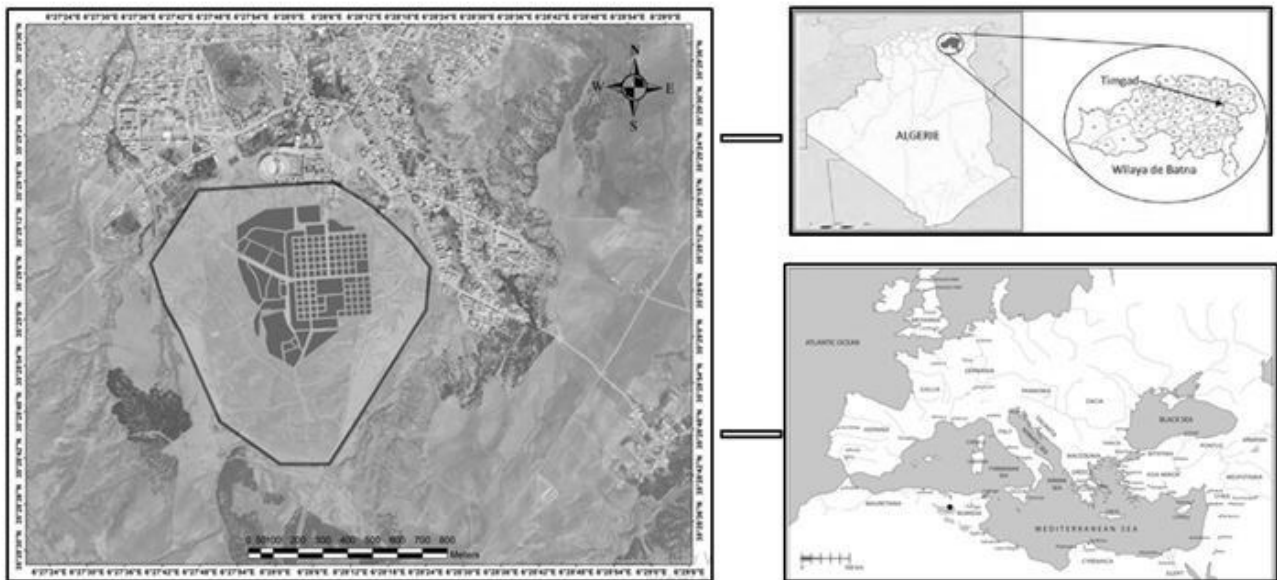


Fig.1. Geographical situation of Timgad (Authors, 2024; After F.YEGÜL, 2019).

With a population estimated, at its apogee, at between 12 and 15,000 inhabitants, covering the entire extramural area, suburban territories, and villages, the city was home to sophisticated urban structures: Forum, theater, temples, thermal baths, municipal library, capitol, industrial quarters... etc(Yegül & Favro, 2019), making it one of the most important Roman urban settlements in North Africa.

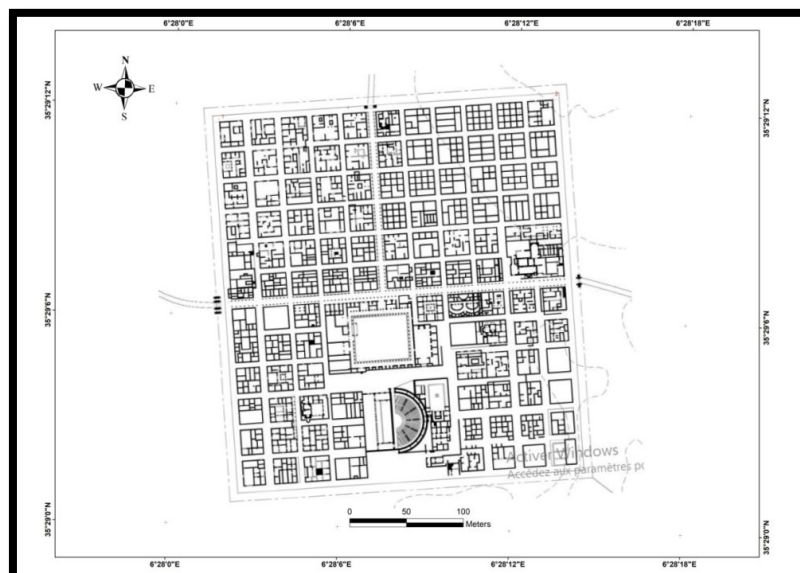


Fig.2. Plan of The original square of the town (Authors 2024; after Ballu 1911).



Fig.3. General view of the forum, looking west at Timgad. **Fig.4.** View looking east toward the theater at Timgad. (Photos by Fikret Yegül, 2019).

Since the first excavations work of the Timgad archaeological site, which began during the French occupation of Algeria, the ruins of the town and the monuments preserved for centuries under the sand have attracted the attention of architects of historic monuments and archaeologists alike. In fact, excavations on the site continued for over a century (from 1881 to 1958), and the results were often published in the form of excavation reports, discovery notes or thematic articles (Rezkallah, 2020).



Fig. 5. Panoramic view of Timgad, (Albert Ballu, 1903. MAN).

Data collection

The list of data that we aimed to collect was primarily related to the evidence of the dating of the construction and restoration operations that the city witnessed during the late Roman period, from various archaeological evidence and clues, which were then found during archaeological excavations that took place mainly during the nineteenth century and twentieth centuries. In addition to data from Latin epigraphy (mainly based on the CIL: "Corpus Inscriptionum Latinarum"), which generally, often carry dedications to emperors, civil and military leaders, and indicate the date of the construction or restoration process, as well as the party responsible for that. The works of a group of early and late scholars, such as Ballu (Ballu, 1911), LEPELLEY (Lepelley, 1981), Germain (Germain-Warot, 1969), Duval (Caillet et al., 1992).. and others (Jouffroy, 1986; Nielsen, 1990), are indispensable references for studying urban changes and the history of buildings in the city of Thamugadi. We aimed here, to collect and classify these information according to the type of each operation (construction or restoration), its date, and the source of that information.

It is also worth pointing out that collecting data and information on the results of excavation work carried out at Timgad is not such an easy task. Given that most of the results were published separately as various papers

(excavation reports, discovery notes, aerial photographs for the archives...) in a range of local journals and magazines, among others: CRAI (Compte-rendu de l'Académie des Inscriptions et des Belles Lettres), BCTHS or BCTH (Bulletin du Comité des Travaux Historique et Scientifiques) or JRA (Journal of Roman Archaeology), etc(Rezkallah, 2020).

Research framework

In this research, we rely on a methodology based on two complementary parts: The first part concerns the collection and inventory of data on archaeological and written evidence related to construction and restoration operations dated during the period of the Lower Roman Empire, in the city of Tamugadi. While the second part consists of an attempt to interpret those late urban changes recorded in the city and their relationship to social, economic, and ideological factors (See Fig.6).

The method of studying an ancient city and determining its characteristics varies depending on the approach adopted. Some rely on analyzing the characteristics of the city through its physical structure, which is more common in archaeological work, preferring to deal with the archaeological monuments and physical remains of the city.(Carver, 1993) While others consider that focusing on the structure of the society that inhabited the city, and its internal and external interactions, is the way to understand this complex structure.(Roskams, 1996).

In this research, we tried to combine the evocation of archaeological and literary sources and Latin inscriptions, as well as drawing maps and plans to show the location and impact of the late construction and restoration operations, using one of the geographical information systems software (ArcGis). Then, we re-examined these urban changes, focusing on the social, economic and ideological factors that stimulated and produced these processes. We chose this approach to achieve a more comprehensive analysis of the state of the city of Thamugadi during the late Roman period. Finally,we examine the concerns of decision-makers through the urban functions most present in the construction and restoration projects of the city of Thamogade during the Late Roman Empire, and the implications of these projects at different levels.

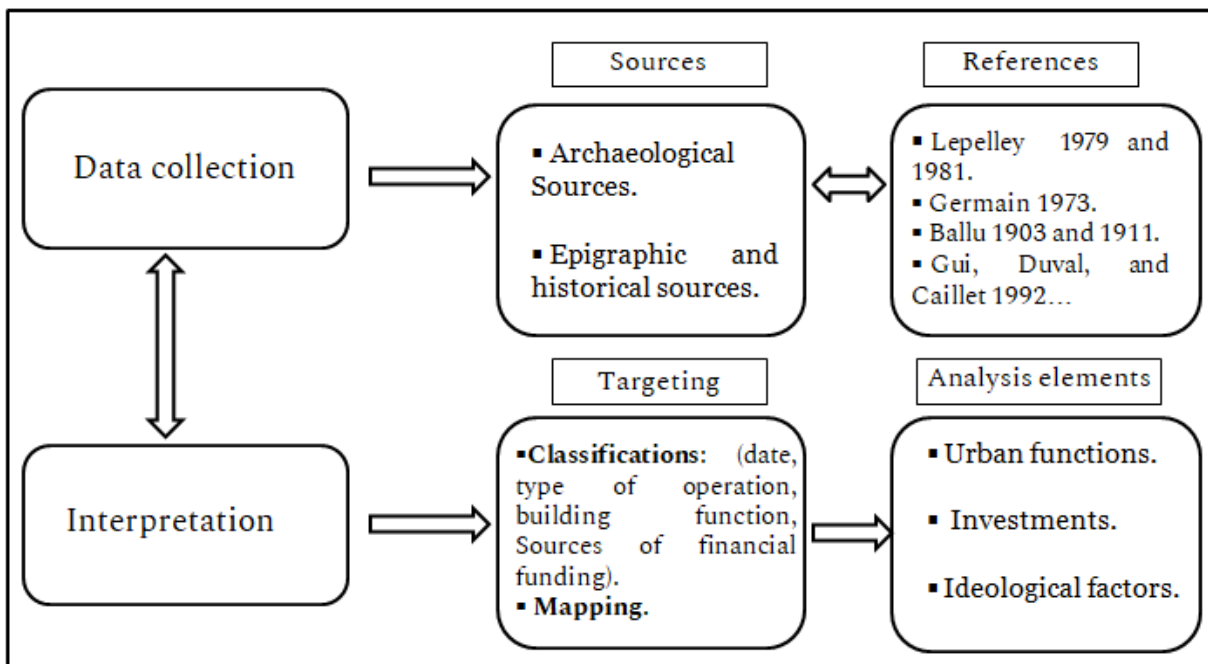


Fig.6. Schematic diagram explaining the method used (Authors, 2024).

Results and Discussion

The results consist of two complementary parts. The first is an attempt to inventory the construction and restoration work that took place in the city of Thamugdi during the late Roman Empire, based on archaeological and epigraphic evidence, which have been addressed in several previous specialized studies, while the second part is related to the spatial projection of these urban projects onto the city plan. The re-reading and analysis of these materials enabled us to extract some of the characteristics of the late urban changes in the city with our focus on the following elements: Public projects and evergetism, prominent urban functions during this period, and Christian buildings and their impact on the city's urban landscape.

Table 1. Urban operations (construction and restoration) dating from the Late Roman Empire in Thamugadi.

| Building | type of urban operation | Date | Source |
|---|-------------------------|---------------------------|--|
| A platea | Construction | AD 290-93 | Lepelley 1981, 444 |
| A bridge | Restoration | AD 290-93 | Lepelley 1981, 444 |
| The municipal library | Construction | Late 3rd- early 4th c. AD | Lepelley 1981, 445 |
| Temple of Mercury | Restoration | AD 303-5 | Jouffroy 1986,297 and Lepelley 1981, 446 |
| The Capitol | Restoration | AD 346-47 | Lepelley 1981, 447; CIL VIII 2388 = I.L.S., 5554 |
| The House of SERTIUS | Restoration | Late Empire | Germain 1973, 25-6 |
| The Large House to the north of the Capitol | Restoration | Late Empire | Germain 1973, 81 |
| The Large House near the Baths of the Philadelphi | Restoration | Late Empire | Germain 1973, 25-6, 81 |
| The House with the Baths in insula 61 | Restoration | Late Empire | Germain 1973, 25-6, 81 |
| The House of Corfidius Crementius | Restoration | 4th c. AD | Lepelley 1981, 455-456 |
| The Large Southern Baths | Restoration | Late Empire | Lepelley 1981, 447; CIL VIII 2342= I.L.S., 6843 |
| The Small Northern Baths | Construction | 4th c. AD | Germain 1973, 11-12 |
| The Northwest Baths | Construction | 4th c. AD or Later | Nielsen 1990, II 31 |
| The Small Eastern Baths | Construction | Late Empire | Ballu 1903, 49-53 |
| The Small Central Baths | Restoration | Late Empire | Germain 1973, 54, 120 and 137 |
| The Baths of the Capitol | Restoration | Late Empire | Germain 1973, 54, 120 and 137 |
| The Small Southern Baths | Restoration | Late Empire | Germain 1973, 54, 120 and 137 |

Public investment and Evergetism

The Interest in public facilities in Thamugadi testified to its vitality and continuity during the Late Roman period. Archaeological evidence and Latin inscriptions record several restoration operations and the construction of new public buildings of various urban vocations. One of the bridges crossing a valley on the outskirts of the city was restored thanks to an evergetic act by a Roman eques and augur, C. Statulenus Vitalis Aquilinus between AD 290 and 293, who also built a platea during the same period(Sears, 2007) Continuing the same approach to public facilities, during the Tetrarchy (exactly between AD 303 and 305), the Temple of Mercury and its porticoes were restored in the southwest of the city. The Capitoline's four porticoes were restored by four municipal dignitaries, according to an inscription dated AD 346-7.(Lepelley, 1981) therefore and as "Table. 1" shows, many public facilities were restored and others were built during the nearly two centuries of domination of the city by the late Roman Empire. We conclude that the city witnessed a continuity of municipal life throughout this stage of its Roman history, as evidenced by the interest shown in these public facilities and their various uses. The city plan (see Figure 4) shows a significant expansion of the built-up area and the vitality of the expansion spaces, particularly on the western and south-western sides of Trajan's original city.

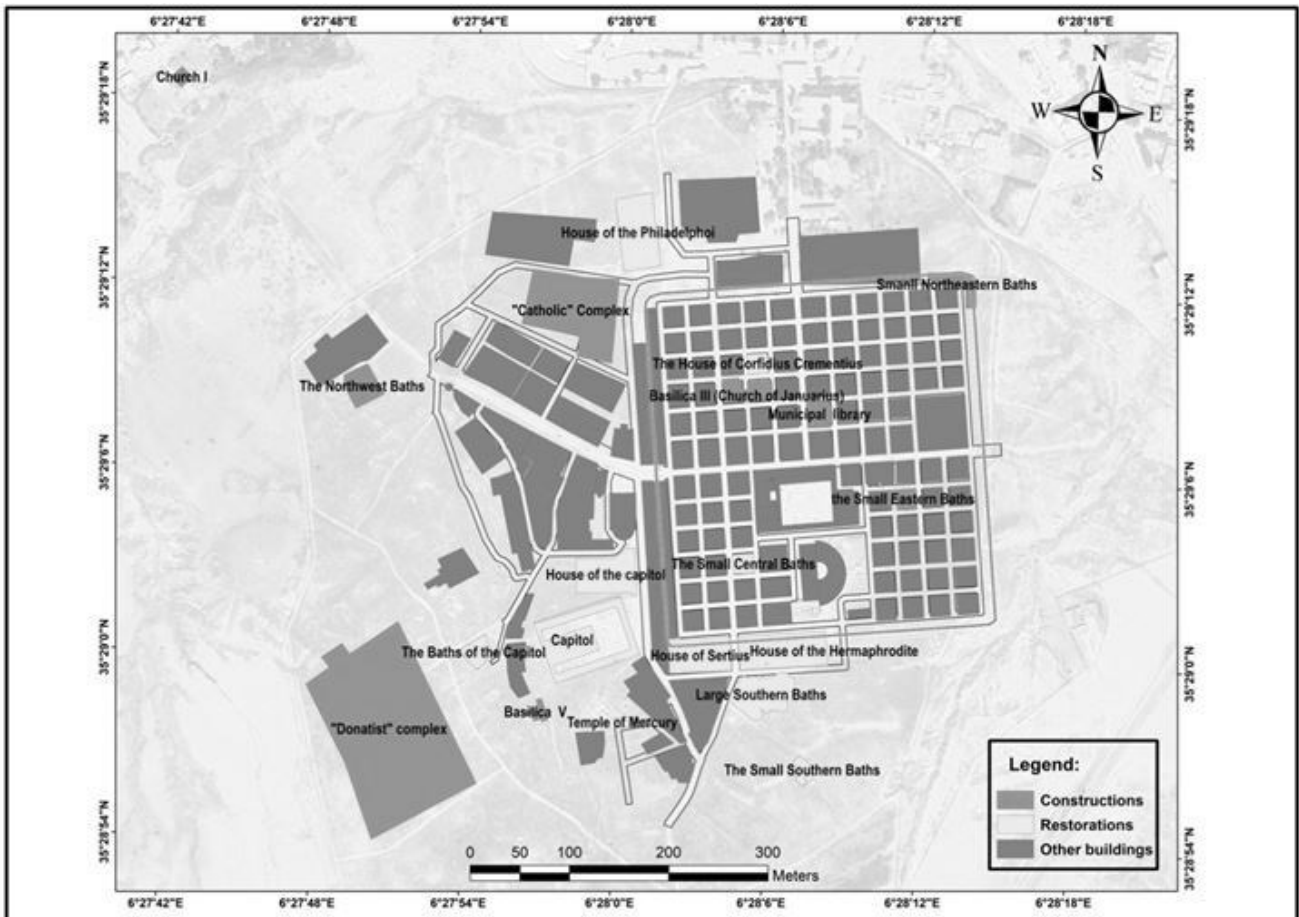


Fig.4. Plan of some construction /restoration operations at Thamugadi (Timgad) during the Late Roman Empire (Authors 2024; after Ballu, 1911).

The vitality of urban functions

Looking to the findings, we can see that there was a surge of interest in public entrainment buildings, such as baths, an impetus that indicates the advanced level of luxury enjoyed by the city's inhabitants at that time. As well as the extension and improvement of the houses of the aristocracy class, indicating that the city was witnessing a period of prosperity and wealth, and that many of these public facilities were offering their services to visitors to the city at the end of the Roman period, especially those coming from Lambesis through the city's western side. In fact, Thamugadi took advantage of its strategic location on the Lambesis-Mascula axis, and separating the coastal plains in the north from the southern countryside, to become a commercial and tourist center for people coming from both directions since the second century. Although the urban expansion of the city during the late Roman period was carried out differently from the initial pattern, breaking the solid geometric rules of the orthogonal plan, the construction of industrial, commercial and recreational facilities and buildings indicates a commercial movement and a comfortable economic situation witnessed by the city during that era (Yegül & Favro, 2019).

The impact of Christian structures on the town's urban space

The city has witnessed the construction of several Christian structures (churches, complexes) by the two religious groups "Donatists" and "Catholics", notably at the end of the 4th century. These structures had dominated the city, eclipsing profane and pagan monuments. The location of Thamugadi's basilicas varies, some being cemetery churches, others integrated into the urban fabric or on the outskirts of the city. Some of these buildings created new urban centers, as illustrated by the Donatist complex to the southwest, and the Catholic complex to the northwest, reflecting the Donatist-Catholic conflict in the city.

The city expanded at the end of the 4th century, reaching its maximum extension with the construction of the Donatist complex by "Optat", Donatist bishop, between 388 and 398 (see Table 2). This indicates the influence and domination of the Donatist sect during this period.

Table.2. Christian Construction operations, dated to the Late Roman period in Thamugadi.

| Christian Building | Type of operation | Date | Source |
|--------------------|-------------------|------|--------|
|--------------------|-------------------|------|--------|

| | | | |
|--|--------------|--------------------------|---------------------------------------|
| Basilica XI in the southern necropolis | Construction | Late Empire | Ballu 1911, 135 |
| Basilica I | Construction | Late Empire | Ballu 1911, 135 |
| Basilica V | Construction | Late Empire or Byzantine | Ballu 1911, 143 |
| Basilica III (Church of Januarius) | Construction | Late Empire | Gui, Duval, and Caillet 1992, 267-270 |
| The "Donatist" complex | Construction | AD 388-98 | Lepelley 1981, 445 |
| The 'Catholic' complex | Construction | Late 4th c. AD | Gui, Duval, and Caillet 1992, 267-270 |

Research limitations

Although the archaeological site of Timgad is one of the best-preserved Roman sites in North Africa and the most extensively excavated after Carthage, several factors have prevented the availability of sufficient archaeological and written evidence relating to the city's late urbanism. Destructive excavation techniques and the emphasis placed by archaeologists on exposing buildings early on, on the one hand, and the fragmentary publication of excavation results, on the other, have made it difficult to establish a complete picture of the urban changes of the period in question (Leone, 2003; Rezkallah, 2020; Sears, 2007). This makes any methodology used to study this subject vulnerable to gaps and carelessness in gathering the required evidence. In addition, the imprecise dating of many of the city's buildings (the library and Basilica V. etc), as well as a lack of knowledge about the location of certain late construction and restoration operations (namely the bridge and the Platea, see table.1) mentioned in some Latin inscriptions, hamper our attempt to gain a deeper understanding of Thamugadi's late urban landscape.

Conclusion

Studying urban changes in North African cities in the Late Roman period, at the level of each city (Fenwick et al., 2022), can reveal the situation of the region, taking into account the different characteristics of each part, different aspects of life (Roskams, 1996). Although our study was mainly concerned with the construction, and restoration processes dating back to the late period of Roman control over the region, linking this physical urban activity to various social, economic and ideological aspects enabled us to reach important conclusions that revealed a distinctive urban and economic vitality, reflecting a period of prosperity and progress known to the city, especially during the third and fourth centuries AD. Because the study of the classical city in general, and late Roman Thamugadi in particular, requires a deep interpretation that goes beyond the mere inventory of available material evidence (Parkins, 2005), painting a clear picture of what life was like in Timgad during the period from the first half of the third century to the late empire required the involvement of many other factors that affected both people and stone alike. In this regard, it is interesting to note the magnitude and importance of the religious factor in changing the urban landscape of the city, which witnessed the construction of a large number of churches, and religious complexes during the late empire (see Table 2), as well as the manifestation of the sectarian conflict between Catholics and Donatists by creating new urban poles and centers, which attracted many believers on both sides. However, despite this, we can observe a continued, albeit decreasing, interest in pagan structures in the city (Leone, 2013).

Overall, these findings demonstrate the vitality of building, and restoration activities in the urban center of Thamugadi during the Late Roman Empire. Despite the variation in intensity and degree of this activity at each stage of the Late Period, the city's urban life, in general, saw a continuity of interest in public facilities such as baths, markets and places of cult, reflecting the economic prosperity and luxury enjoyed by the city's inhabitants. The early spread of Christianity to Thamugadi was also an important factor in determining the nature of the urban development it witnessed. In general, there can be no doubt that the city was, by the end of the Roman era, one of the largest cities in the province of "Numidia" and one of its most important commercial and urban centers. To summarize, this study has highlighted the notable urban dynamic in the city, during the Late Roman Empire, and opened the door to further in-depth analyses of the evolution and transformations of the urban fabric in Thamugadi and other cities of Late Roman North Africa.

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Conflict of Interests

The author declares no conflict of interest.

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