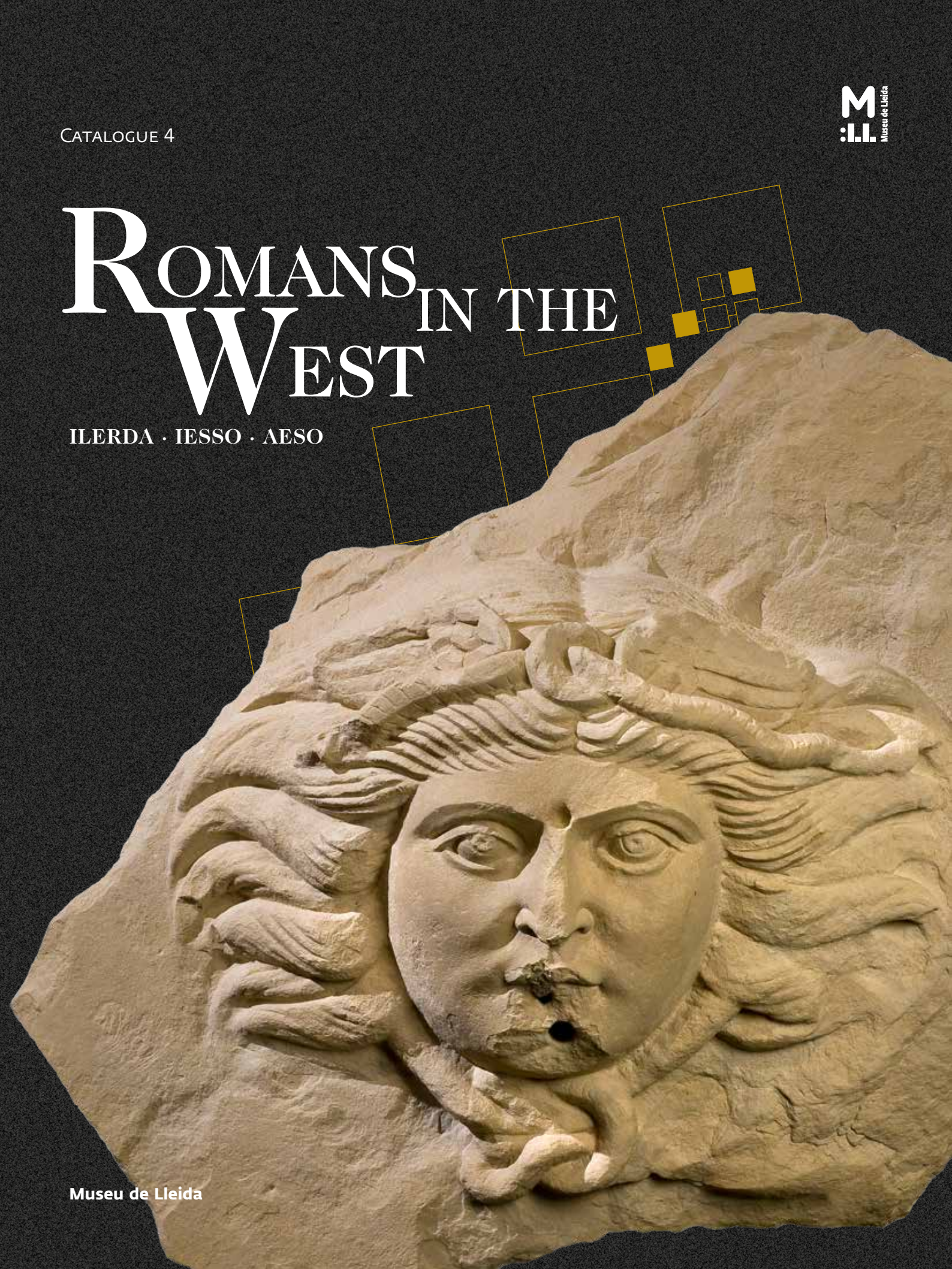
Catalogue 4

Romans in the West

ILERDA · IESSO · AESO



Museu de Lleida

Museu de Lleida

Consortium formed by:

Generalitat de Catalunya
Departament de Cultura

Diputació de Lleida
municipis, territori i tu

LA PAERIA
Ajuntament de Lleida

Consell Comarcal del Segrià

Bisbat de Lleida

Catalogue 4

Romans in the West

ILERDA · IESSO · AESO

Museu de Lleida
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La Paeria
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PRESENTATION

Josep Giralt i Balagueró, director of the Museu de Lleida

After selecting the curators of the future exhibition and securing the participation of the Archaeological Archive of Lleida, I reached out to the Museu de Guissona Eduard Camps and the Museu de Conca Dellà (Isona) in June 2017 to encourage them to collaborate with the Museu de Lleida in an exhibition on the Roman cities of western Catalonia. The project entitled *Romans in the West: Ilerda, Iesso, Aeso* represents a clear commitment to this territory through its focus on the archaeological research of three cities and serves as an update to the state of the research of a relevant aspect of the history of the area of Lleida and western Catalonia.

The original intention was to initiate the exhibition in September 2018. Yet many events have taken place in this area that forced us to delay its opening. The first was the application in Catalonia in October 2017 of Article 155 of the Spanish Constitution which resulted in complicated and tense situations for the Museu de Lleida. The subsequent COVID pandemic also forced changes in our personal and social behaviour and obviously had a great impact on the museum's programming.

Despite these drawbacks, Josep Guitart and Xavier Payà, curators of the exhibition, had already begun work by delving into what would be the first, complex and detailed ideas as to its focus as well as proposing the catalogue that you have in your hands. At this point I would like to publicly acknowledge them as despite complicated personal situations they have done an impeccable job that I believe is reflected in the exhibition and its catalogue.

Romans in the West: Ilerda, Iesso, Aeso also stems both from the teamwork of all the staff of the Museu de Lleida and many outside individuals, all reflected in the credits. If we have left anyone out, we hope they will forgive us. This type of exhibition displaying more than 150 pieces on loan from 18 Catalan, Spanish and French institutions is an exercise never undertaken before. This catalogue, likewise a study book, comprises contributions of 27 different authors. It highlights the archaeological research taken place in these cities over the last 30 years and serves to fill gaps in the history of Roman western Catalonia.

It is clear that the project represents a great investment both from the standpoints of museography and research resulting in a printed edition in Catalan and a free digital edition in English. The intention is to offer a scientific contribution updating what is known about the Roman cities of inner Catalonia. Allow me to briefly review the state of both general studies and exhibition projects of this period in order to further defend the position adopted by the Museu de Lleida, without ignoring the permanent exhibitions organised by Museu de Guissona a few years ago (currently once again under revision) and the recently inaugurated centre of the Museu de la Conca Dellà with a floor dedicated to the Roman Era.

A key moment for the state of the question of this research was the speech by Dr. Miquel Tarradell in 1978 on the occasion of his entry as a member of the Royal Academy of Fine Letters of Barcelona. Entitled '*Les ciutats romanes dels Països Catalans*', it offered an overview on the urban world in Catalonia. However, his only allusion to the cities of western Catalonia was a passing reference to Ilerda – no mention of Iesso and Aeso.

The outset of the 1980s Catalonia saw the organisation of its political, social, economic and cultural structures. In 1982 the Department of Culture presented in Barcelona (as well as in Lleida, Girona and Tarragona) the first major exhibition entitled '*L'arqueologia a Catalunya, avui*'. Yet progress on the question was slow. The map at the time of the Roman cities prior to the foundation of Caesar did not include any western Roman city. The display of a tombstone from Aeso dedicated to Lucius Aemilius Paternus preserved in the MAC was in fact the only relevant artefact of the Roman Era from western Catalonia.

The situation changed with the great leap in research on the history of Ilerda within the process of Romanisation of Catalonia carried out by the University of Lleida. Dr. Arturo Pérez Almoguera advanced a first overview filling a gap on *Municipium* Ilerda in 1984 by putting in order the findings

and previous work deposited in the Institut d'Estudis Ilerdencs published by Dr. Federico Lara Peinado. He likewise began to put into context the first extensive excavations undertaken in the city in the 1980s which he reviewed reviewed in his study entitled *Lleida Romana* published by Pagès Editors in 1991.

The large exhibition '*Roma a Catalunya*' was subsequently presented in 1992 at the Institut Català de la Mediterrània in the Palau Robert in Barcelona. Yet here it also only cited the Roman cities of western Catalonia in a few lines. Concerning Ilerda the curator Marc Mayer stated ' ... we do not have enough archaeological data to accurately illustrate its origins'. Moreover, the large exhibition only incorporated three pieces from western Catalonia: the Roman horseman and the tombstone of Servilla Prepusa from Guissona, and the Ilergete helmet from the cemetery of La Pedrera from Vallfogona of Balaguer then housed the collection of the Institut d'Estudis Ilerdencs, today at the Museu de Lleida.

The professors of the University of Lleida, Emili Junyent and Arturo Pérez, subsequently in 2003, began to build a solid discourse in the first volume of the history of Lleida in the monograph entitled *L'antiguitat, d'Iltirta a Ilerda* published by Pagès Editors. These authors in fact raised a series of notions that are reinforced both by the exhibition presented today and the study book. These require nuancing due to the fact that archaeological fieldwork carried out in the last 20 years has changed the landscape. Their fundamental idea was that the creation of cities served as an instrument of political, economic, social and ideological domination of the territory and its inhabitants and represented the triumph of the Latin civilisation. The cities likewise facilitated the penetration of the armies into the interior of the territory. Certain such as Ilerda that directly experienced the civil wars between Caesar and Pompey's generals would gradually become modest provincial *municipiums* within 'the colossal imperial structure'.

The latest overview of Roman Catalonia is a volume published in 2015 by Víctor Revilla and Joan Santacana. These authors emphasise the importance of archaeological sources as the basis of the new view of the Roman cities differing greatly from that 20 years back. One must take into account that 40% of the archaeological interventions in the area since the 1980s concern Roman sites, which represents a significant contribution to the knowledge of this period throughout the country, especially in what concerns the question of urbanism.

The exhibition *Romans in the West: Ilerda, Iesso, Aeso* has also served the teams leading the archaeological research in each of the three cities to both focus on attaining an overview of their city and disseminate their scientific data. This has led to the development of a 3D historical recreation offering a new image of Ilerda, Iesso and Aeso in Imperial Rome. These images presented in the exhibition are also available to all researchers of this period and to all docents and cultural managers who desire to incorporate them into their activities.

Ilerda, Iesso and Aeso were in a certain sense small Romes created by the Empire in the interior of Catalonia. All three assimilated Rome's legacy: a common language, an enduring urban planning, the first idea of an economic, commercial and political globalisation spanning the East to the West (the world at that time), and the legal norms differentiating between public and private law, the basis of the current legal system. This museographic project, signed by Maria Rosa Birulés and Anna Jordà (bp disseny), has in a dynamic, modern and accessible way assembled these ideas.

I am convinced that all the effort has been worth it.

INTRODUCTION

Josep Guitart and Xavier Payà

The exhibition *'Les ciutats romanes de Ponent: Ilerda, Iesso i Aeso' (Romans in the West: Ilerda, Iesso, Aeso)* is an initiative of the Museum of Lleida that arrives at a very favourable moment. Archaeological excavations and research on these three cities, especially that of recent decades, have yielded valuable data drawing us nearer to their archaeological and historical roots. The tasks of dissemination undertaken by different institutions and museums such as the Municipal Archaeological Archive, the Museum of Lleida (Ilerda), the Board of Archaeology and the Eduard Camps Museum of Guissona (Iesso) and the Museum of the Conca Dellà (Aeso) have led to the collection, interpretation and valorisation of data rendering it possible to organise this exhibition.

At **Lleida**, apart from the early Roman finds under the Church of Sant Joan (1880) and the cemetery explored during work at the train station (1926), archaeological research of Roman Ilerda began in 1961 with excavations beneath the Paeria, the current city hall, directed by Díez-Coronel and the Institut d'Estudis Ilerdencs. This research was then continued in 1981 by the Estudi General de Lleida and professors Emili Junyent and Arturo Pérez who brought to light the first remains of a building of the Roman city.

This was followed by the archaeological intervention at the Portal de la Magdalena (1984-1987) and the recovery of a vast Roman *domus* from the 2nd century AD. However, the general shape and extension of the Roman city remained unknown raising the possibility that the *domus* was outside the walls of the city. A subsequent period saw a series of rescue interventions (Francesc Macià Avenue in 1988 and the Aiguardent Street in 1991) carried out by the Archaeological Service of the Generalitat. This period extended until the creation in 1992 of the Municipal Archaeological Section. This service, dependent on the Department of Urbanism, promoting the protection of zones of the general urban plan and the obligation of carrying out archaeological surveys prior to receiving construction permits. This therefore initiated a period of public archaeology funded by the Municipality itself and led by a stable team of archaeologists who continued to excavate, manage their documents and materials and disseminate their results.

The recovery of the city's Roman legacy went through very different phases. Worth highlighting is the period between 1992-2006 when the buildings of Lleida's historic centre and the Seu Vella hill underwent vast renovations. Of the 27 interventions shedding light on Roman Ilerda, 21 took place in this timeframe. By contrast, the interval from 2007 to the present, due to the crisis of real estate, has only seen a single Roman excavation.

It must be understood, therefore, that research on Roman Ilerda is closely conditioned and motivated by circumstances beyond archaeology itself. With the exception of the vast interventions at the Old Portal de la Magdalena and the public baths of Remolins Street, most of the explorations have consisted of random test pits throughout the 23 hectares of Roman city.

Thirty-five years of urban archaeology have thus led to identifying the limits of the city, certain of its public buildings, the layout of its main roads, and a number of aspects regarding its historical evolution.

The situation of the town of **Guissona** is similar to that of Lleida. Although 16th-century scholars already identified it as Iesso based on citings by classical authors and epigraphic texts, the first archaeological work did not take place until 1933. This limited intervention was carried out by the Service of Excavations of the Institut d'Estudis Catalans in the framework of the installation of a sewer. Yet it was not until 1974 that Guissona saw its first veritable systematic excavations revealing a vast potential, in particular in the fields just north of the town.

The excavation of those fields in 1983 supported by the Archaeological Service of the Generalitat intended to delimit the extension of the Roman city in the framework of a project to declare it as a Cultural Asset of National Interest. This research which brought to light the ancient wall and North Gate led to an urban development plan establishing an archaeological reserve for a surface of several hectares that served as the basis of the future archaeological park.

The annual excavation campaigns carried out since 1990 in the archaeological reserve have led to recording Iesso's initial founding in Late Antiquity, as well as the discovery of certain of its components. The elements of the city that stand out are a section of its wall marked by a defensive tower and a gate (North), public thermal baths, a domestic quarter from the 1st century BC and its transformation into a vast *domus* during the High Imperial period, significant elements of its road network, and the urban layout of this northern district.

At the same time, the entire site has benefitted from a systematic monitoring of works affecting the town's archaeological subsoil and a series of successive rescue excavations which have enriched our grasp of the general archaeological topography of ancient Iesso.

All this activity, promoted and supervised by the Patronat d'Arqueologia de Guissona, with the participation of Guissona's City Council, the Diputació de Lleida, the Consell Comarcal de la Segarra, the Institut d'Estudis Catalans and the Universitat Autònoma de Barcelona, has led to attempt a first overview of the urban structure of Roman Iesso and its basic characteristics through a combination of archaeological evidence and reasoned hypotheses.

Moreover, the Archaeological Park of Guissona is open to the public since its inauguration in September, 2011 and, together with the Museum of Guissona, is recognised as a first-class cultural facility.

Our knowledge of **Isona**, the third Roman city of this exhibition, also dates to the 16th century based on the compilation of the many Roman inscriptions of Aeso. Fourteen already appear as far back as the 17th-century manuscript '*Inscripciones de memorias romanas y españolas antiguas y modernas*' by Gaspar Galceran de Pinós, followed by the studies by Marca (1688), Finestres (1762), Pascual (1782) and Moner (1868). All continued to base their findings on epigraphic evidence, increasing the catalogue of inscriptions to the 41 known today. The first scholar to link ancient Aeso to Isona was the canon Jaume Pasqual, who possibly, according to a letter from Finestres to Ramon Llàtzer de Dou, also undertook the city's first excavations.

These informations are repeated in the 20th century in various epigraphic studies such as that by Lara (1973). Yet the great advances in this research came with studies from social and economic perspectives, notably the works of Jordi Pons, Marc Mayer, Isabel Roda and Arturo Pérez Almoguera. Furthermore, since the 1980s, archaeological research of Aeso and its surroundings (known as *ager aesonensis*) began by the PRAMA Team and its Aeso Archaeological Research Programme. This led to the first chronological and morphological evidence of features of the city and initiated a dynamic that has continued until recent years through programmed and rescue archaeological interventions yielding finds allowing to begin to interpret the site's chronology and most characteristic features.

We take advantage here to acknowledge the efforts of the different authors specialising in the archaeology of these three Roman cities and their territories who have collaborated in compiling this catalogue by updating, revising and drawing up an overview allowing the reader to gain an understanding of these lands before the arrival of the Romans, during the forming of Roman urban life, and the individuals who populated these lands and their roles in the future development of our history.

We are aware that western Catalonia in Antiquity formed part of a wide territory stretching from the coastline to the Ebro River Valley and included other cities such as Sigarra (Els Prats de Rei) or

Labitolosa (La Pobla de Castre). This territory in fact corresponds to the expanse occupied by the Iberian Ilergete and Lacetani tribes. But as this exhibition has had to limit its territorial scope, it also has had to focus on a specific period in the historical evolution of these lands extending from the founding of the cities and their precursors (2nd-1st century BC) to the end of the High Imperial period (3rd century AD).

Much of the Iberian Peninsula a century after the arrival of the Romans was under the control of the Roman Republic. The routes of military penetration were soon transformed into arteries of communication transforming these cities into powerful tools of Romanisation progressively integrating the native cultures. In spite of the existence of veritable Iberian urbanised *oppida* with communal services (cisterns), sanitation networks, defensive systems (walls, gates, moats…), etc., the Roman city was a new reality when compared to the proto-urban features of indigenous communities.

It is precisely at the founding of these cities around the 100 BC when this western territory began to secure a robust structure. This urbanisation impulse also sprung up through most of the north-east of the Iberian Peninsula. When observing the map of the Roman cities of Catalonia one instantly notes that Rome established at this time the basic structure that remains in existence today.

Ilerda, Iesso and Aeso were three very different urban realities that shed light on a varied and particular Romanisation of the territories. Thus, certain cities were built on reliefs that although leading to very particular shapes and types of urbanisation retained common aspects, solutions, spaces and buildings which reflect the first great cultural and economic globalisation that the Roman Empire extended over its dominions.

The role of these cities in the Romanisation of our territory also varied. Aeso served as the gateway to the Pyrenees and linked the Segre Valley with Iulia Livica (Llívia). Ilerda, in turn, probably heir of an Ilergete past, was created by the Romans due to its strategic position between the thoroughfares leading from the coast through the Ebro Valley. Finally, Iesso was the city that not only colonised the fertile Plains of Guissona and Segarra, but served as an access to the mountain passes of the Pyrenees.

With the Romans appear here for the first time cities understood as legal facts and matters of law that define the relations between their citizens and Rome, the central power of the whole Mediterranean Basin. These cities therefore became symbols of power and progress of Roman culture represented by buildings and public spaces and the setting of the life of a new urban society.

ILERDA

IESSO

AESO

I

What preceded the arrival of the Romans?

The site of Els Vilars.

The times of Indibilis and Mandonius

Emili Junyent

The Second Punic War shook and annihilated the Ibero-Ilergete Civilisation. General Hamilcar Barca and the Carthaginian army landed in 227 BC in the Iberian Peninsula and 205 BC saw the crushing of the last uprising and death of the Ilergete leaders after Rome defeated Carthage forcing the abandonment of its last stronghold Gadir (Cádiz) a year earlier. The different events took place over a period spanning about 20 years, less than a quarter of a century (barely a generation), a timeframe that is very short to archaeologists but long enough to deeply shake Ilergete society before it was conquered.

It is obvious that the transformations experienced by the Ilergete world at the end of the 3rd century BC were due to the conflict and pressure imposed by the two Mediterranean powers. Yet these exceptional conditions did not impede the essential features and potential of the indigenous society from being developed to their extreme. Ilergete resistance and the desire to increase the merits of Rome caught the attention of Greco-Latin writers, who left detailed descriptions of the military events and painting a splendid portrait of the Iberians of the north-east of the peninsula. The following lines therefore serve to reflect on the current state of knowledge of the Ilergetes, define the direction adopted by historical-archaeological research, and map the springs and arid deserts of knowledge as to events of the end of the 3rd century BC and guide us on a journey through their remote past.

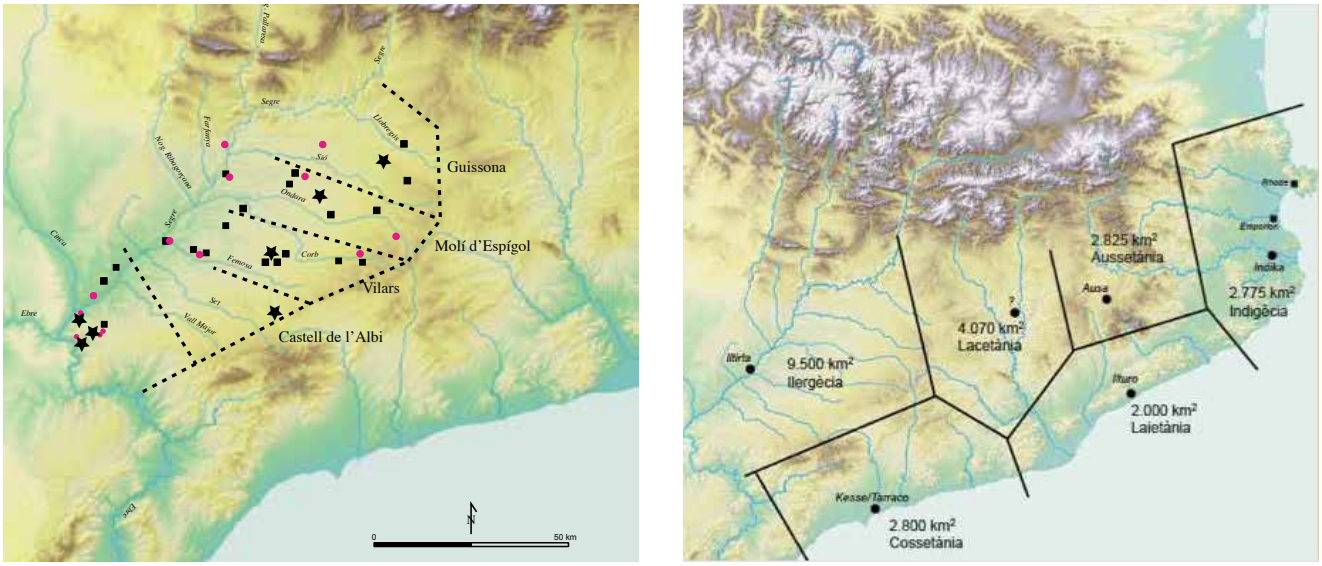


Fig. 1a-b. Maps depicting the passage from chieftainships (8th-6th centuries BC) to the archaic aristocratic Ilergete State (late 3rd century BC). The respective territories illustrate the scope of the changes (source: J. Sanmartí and Grup d'Investigació Prehistòrica de la UdL – GIP).

A description of Ilergete society during the early Roman presence

There is a traditional view long supported by written sources and to a lesser extent by archaeology as to the times of Indibilis and Mandonius. The Ilergetes at the end of the 3rd century BC were a hierarchical society headed by *reguli* linked to a princely family environment and a clientelistic and chivalric aristocracy. Politically organised, this society possessed institutions such as royalty and a *concilium* (assembly) that could designate ambassadors (*legati*), declare war and agree to peace, mint currency, enlist soldiers and lead an army of interethnic alliances. It was a power that dominated a more extensive territory and had a much greater demographic and military potential than the other Iberian populations to the north of the Ebro River. This reality has often been characterised as an archaic aristocratic state based on the concepts of ethnicity (people), *regulus*, the figure of a monarch (also alluded to by Latin terms such as *rex*, *princeps* or *dux*, or in Greek as *basileus*, *strategos*, *tyranos* or *dinastés*) and *ciuitas* (Iltirta) exerting a dominion over the *territorium* (Junyent 1986, 1989, 1994, 1996; 2002a; Junyent, Pérez 2003). Research of the Fortress of Els Vilars (Arbeca, Garrigues) has shed light on the path of the chiefs to become princes and the transformation over more than four centuries of the chiefdoms, fortresses, residential centres of the stronger lineages, and their subdued small territories and communities into a powerful territorial Ilergete State under Indibilis and Mandonius (Alonso et al. 2020; Junyent 2014, 2015, 2018; Junyent, López 2015, 2016, 2020; López, Junyent, Alonso 2020).

This proposal today is subject to a stimulating debate on the Ilergete economic and social formation and its differences compared to the coastal Iberian populations based on new archaeological finds and new models of social anthropology (Junyent 2015). Counted and debated, the coastal Cessetani, Laietani and Indigete developed archaic states characterised by territories ranging from about 2,000 to 3,000 km2 with their respective capitals (Tarakon/Kesse, Laie/Ilturo and Indika/Ullastret). These urban centres surpassing surfaces of 5 ha, and in the case of Ullastret even exceeding 11 ha, stood out among the hierarchical system of settlements according to their size, as well as by their particular features such as institutionalised inequality, consolidation of the ruling aristocratic elite who reserved the exclusive right to funerary rites, the possible existence of a tax system, writing, coinage, and the emergence of a

Fig. 2. Aerial view of the fortified settlement of Estinclells (Verdú, Urgell), 3rd century BC. A ditch, wall and slope served to defend the site (photo: Centre d'Estudis Lacetans – CEL).

Fig. 3. Aerial view of the urban layout of the three districts, two roads and central cistern of the site of La Pleta (Belianes, Urgell), 3rd century BC (photo: Centre d'Estudis Lacetans – CEL).

state religion. The Ilergetes, in turn, were closer to complex chieftainships and did not develop in the form of the archaic states, but took a path towards a heterarchical, decentralised state (Sanmartí 2002, 2004, 2010, 2015; Sanmartí, Plana, Martín 2015; Bermúdez 2005a, 2005b, 2010; Garcés 2005; Asensio et al. 2017).

The crux of their different characterisation with regard to that of the Ilergetes can be broken down into four points: 1) doubts as to the existence of Iltirta as an urban nucleus; 2) a population lacking a comparable hierarchy marked by different levels, dispersed into settlements with a smaller or non-existent urban entity rarely surpassing one hectare; 3) an extensive Ilergete territory with ill-defined western and especially eastern borders covering a surface of between 10,000 (Barbastre-Caspe line) and 15,000 km^2 (Alcanadre River) and a population of around 130,000, which would not appear to fall in line with a centralised power, and 4), the heterogeneity of Ilergete material culture with marked differences between the eastern Ilergetes and those of the Segre-Cinca area.

The two proposals may in fact not be so far apart. Concepts such as 'complex hierarchical chieftainships' or 'archaic aristocratic states' intend to reflect transitional societies differentiated by a degree or, perhaps better, by levels of social complexity. But the coastal and inland Iberian populations stem from different historical processes (Junyent 2002b) and coming to empirical comparisons of their 'state indicators' and debating their diagnostic value helps to pinpoint their specificity. It is for this reason we prefer not to dilute and confront the respective messages (Junyent 2015). Our viewpoint is that the issues and certain key ideas that have emerged from recent research, that will be pointed out later, should serve to determine the agenda for research.

Ilergete archaeological research: problems and priorities

Archaeological research on the subject of the Ilergetes is in fact in relatively good health. The term 'relative' is applicable here as it remains erratic and lines up more with a quantitative increase than with real knowledge. It is above all deeply unbalanced. The last few decades saw an intensification of excavations in the eastern Ilergete sector which appears to correspond to its periphery when assuming Iltirta and the Lower Segre to be the nucleus of their area. Excavations include that of the Fortress of Vilars (Arbeca) and the sites of Molí d'Espígol (Tornabous), Estinclells (Verdú), la Pleta (Belianes), el Tossal de les Tenalles (Sidamon) and, for a more advanced period, Missatges (Tàrrega). The different teams, projects and institutions appear to have concentrated their efforts on the eastern flank of

Fig. 4. Aerial view of Gebut (Soses, Baix Segre) (photo: Grup d'Investigació Prehistòrica de la UdL – GIP).

the area to the detriment of the central and western zones (the last including part of Aragon). The result is a deep imbalance and a distorted view which impedes addressing the issues cited above.

Given the current landscape, archaeological research on the Ilergetes can advance significantly if the following priorities are recognised and addressed:

- The first is to balance research by giving preference to the Lower Segre area.

The *Archaeological Map of Segrià* (1988) identified more than 20 Iberian sites (not counting the Ibero-Roman sites) downstream from Iltirta. The *oppida*, fortified settlements, rise regularly on the banks of the river until the junction of the Segre-Cinca Rivers. This is the setting of the strategic sites of Serra del Calvari and Punta del Calvari (La Granja d'Escarp Municipality) that succeeded each other in time. The archaeological richness of this sort of 'Ilergete Mesopotamia' contrasts with the little quantity of research. The interventions of the early 1970s were succeeded by research at Roques de Sant Formatge (Seròs), Els

Fig. 5. View of the excavations (2018) of Gebut (Soses, Baix Segre). In the foreground is the Iberian wall; in the background, the Montmaneu (photo: Grup d'Investigació Prehistòrica de la UdL – GIP).

Vilans (Aitona) and Pilaret de Santa Quitèria (Fraga) (Junyent 1973, 1986, 1987), a frustrated campaign at Gebut (Soses) between 1987-1988 (López 2018; López et al. 2018), a vindication of the collection of surface materials (Junyent 1986; Gallart, Junyent1989) and the excavation of part of the ditch of the *oppidum* of Carrassumada (Torres de Segre) in 1999-2001 (Medina, González 2005, González, Medina 2011). Since the 1980s there is the work by the Institut d'Estudis Ilerdencs at the settlement of Serra del Calvari. This last site, unfortunately partially destroyed, has been key to the understanding of the Early Iron Age (Rodríguez 1991; González et al. 2002; Vázquez *et al.* 2005; Vázquez et al. 2006-2007; Vázquez et al. 2014; Vázquez, Medina, González 2015).

The Prehistoric Research Group (GIP) of the University of Lleida (UdL) since last year has reoriented its strategic objectives with a four-year project (2018-2021) 'La Fortalesa dels Vilars i l'*Oppidum* de Gebut: Gènesi, Identitat i Heterogeneïtat en l'*Ethnos* Ilerget' directed by Joan B. López. This endeavour has benefitted from the support of an agreement signed between the City of Soses and the UdL (2016) and the approval and funding by the Ministry of Economy, Industry and Competitiveness (HAR2016-78277-R). The main novelty of the campaigns carried out so far (from 2017 to 2020) is the discovery of a fortified settlement from the Early Iron Age preceding the

Iberian *oppidum*. The objectives, however, are not limited to the site and will attempt to respond to specific priorities (López et al. 2018).

- The second is to study and interpret the heterogeneity of the Ilergete material culture.

The lack of cohesion over an extensive territory and the population pattern have been the basis of much of the criticism of the existence of a more or less centralised political system and have given rise to the idea of a composite Ilergete *ethnic* group comprising different groups marked by a heterarchical organisation (Bermúdez 2005a, 2005b, 2010; Garcés 2005; Asensio et al. 2014-2016). It is necessary to define the scope and significance of these differences which actually existed within the vast Ilergete territory. Noteworthy, for example, is the persistence of the saddle quern into the middle of the 4th century BC at Roques de Sant Formatge (Junyent 1973: 289-386) when rotary querns and larger pushing mills were already being manufactured with local stones at the Fortress of Vilars at an exceptionally early date (end of the 6th century BC) (Alonso 2014, 2015; Alonso et al. 2010; Alonso, Pérez 2014; Alonso, López, Pérez 2016; Alonso, Frankel 2017; Junyent 2015: 182; Junyent, López 2016). If this observation is confirmed, it therefore represents an exaggerated example of technical conservatism, a notion difficult to grasp without recognising strong ethnocultural and political boundaries. This and other hardly perceived differences have never been systematically examined from this perspective. Examples are the spheres of circulation of pottery productions such as the Ilergete red-slipped ware (Junyent, Alastuey 1991; Junyent 2008; Garcés 2018) or large jars of Ilduratin type (Lafuente 2002) and amphorae. It is necessary, however, to distinguish between those particularities following strongly ingrained community cultural traditions (e.g. querns and mills) and the presence of different techniques and decorative and symbolic motifs of hand made pottery, differences that can be considered circumstantial.

The comparative study by Joan Bernal (GIP, UdL) of the assemblages of materials of the cisterns of Roques de Sant Formatge (Seròs) and the Fortress of Els Vilars (Arbeca), despite their dating to the 4th century BC, represents a first attempt in this regard (Bernal 2019). The identification of features considered to be idiosyncratic or indicators of 'identity' from different areas of dissemination reflecting cultural coherence or heterogeneity may be relevant in recognising the territorialisation of the Ilergete *ethnic* group and its degree of cohesion, and shed light on its overlapping socio-political system (Junyent 2015).

- The third is to characterise the Ilergete settlements and their levels of hierarchy based on their extensions and functions.

Hierarchy based on orders of magnitude is recognised as characteristic of the coastal archaic states, a notion that would continue to exclude the Ilergetes and reflect a more heterarchical reality (Asensio et al. 2017). The cliché of settlements of very small dimensions stems from the persistence of ideas from an article by Almagro (1987). Yet this highly referenced article did nothing more than collect the basic approaches available at the moment (Pita 1975). It ascribed, for example, 0.18 ha to Pillar of Santa Quiteria (Fraga) and 0.44 ha to Gebut. Another persistent cliché is the 0.8 ha (or slightly more) attributed until a few years ago to Molí d'Espígol (Tornabous) (Sanmartí, Santacana 2005: 61; Ruiz 2008: 815-816, 836; Sanmartí 2010: 103). These surfaces, however, do not line up with reality. The area occupied by Gebut in fact surpasses one hectare, regardless of whether the upper plateau slightly exceeds 1,600 m2. Molí d'Espígol, in turn, according to the latest excavation work and multisystem prospecting with magnetometry and radar (GPR), extends over a surface of 2.5 hectares (Principal 2006-2007; Principal, Asensio, Sala 2012; Sala et al. 2013; Escala et al. 2018a, 2018b).

There is no doubt that a clear difference will continue to persist with respect to the Cessetani, Laietani and Indigete settlements, and that *ciuitates* such as Ullastret/Indika and second-class sites with surfaces ranging between 2 and 4 hectares such as Masies de Sant Miquel (Banyeres), Vilar (Valls), Darró (Vilanova i la Geltrú), Ca n'Oliver (Cerdanyola del Vallès) and Kerunta (Sant Julià de Ramis) will

Fig. 6. A drachma minted at Iltirta at the end of the 3rd century BC (photo: Museo Arqueológico Nacional – MAN; G. Obón Tolosa).

not appear. But, as noted, the reality in the Western Plain of Catalonia is more complex than previously thought and the existence along the coast of large *ciuitates* – marked by other indicators - could yield a different reading and respond to other phenomena such as population concentration and urbanisation linked to key production and commercial activities, without necessarily yielding complex and centralised political structures. Moreover, the existence of these political structures are not echoed by ancient written sources.

The Ilergete population was distributed in numerous settlements that did not for the most part exceed one hectare (Junyent 1986, 1987, 1989, 2002a, 2015). This is a model that has been described as 'ethnic micronuclear', as opposed to the 'hierarchical polynuclear ethnic' model of the sites along the coast (RUIZ 2008: 815-816, 836). But this model abuses a poor view that, leaving behind the problem of the first rank corresponding to Iltirta-*Atanagrum*, conceals the existence of four lower levels (Junyent 2015: 181-182). The second rank corresponds to sites larger than 2 hectares such as Molí d'Espígol, an urban complex serving as the head of the eastern Ilergetes. The third rank is that of *oppida*, that is, fortified settlements with complex urbanism extending between 1 and 2 hectares. These correspond to sites such as Gebut (Soses), Roques de Sant Formatge (Seròs) and La Pleta (Belianes). The fourth is that of sites between 0.5 and 1 hectare including Pilaret de Santa Quitèria (Fraga), Carrassumada (Torres de Segre) and Pla de les Tenalles de la Móra (Granyanella). The most numerous, in the fifth position, are sites of less of 0.5 hectares. These group includes the small fortified villages of Estinclells (Verdú) (Asensio et al. 2016; Cardona et al. 2020) and small villages and farms such as Roques del Sarró (Lleida) (Equip Sarró 2000).

Iltirta and *Atanagrum*

The impossible archaeology of Iltirta which remains stubbornly concealed completes the argument against an Ilergete political territory controlled by a central power. The existence of Iltirta, the *ciuitas* of the Ilergete ethnic group or *populus*, perched on the Seu Vella hill, dominator of the *territorium*, urban embodiment of the political power represented by the *regulus*, is clearly evidenced by historical, numismatic and geographical elements. Its central position rendered it visible and a point to visually control the communications between the hinterland and the coast. Its ford also facilitated crossing the Segre River ... Yet references to it in written sources contain unresolved contradictions that archaeology has yet to confirm. It is thus an issue that remains pending (Junyent 1994, 1996; Payà et al. 1996; Gil et al. 2001; Junyent, Pérez 2003; Junyent 2015). For centuries, and until a few decades back, no one questioned that Iltirta, the capital of the Ilergetes, preceded the Roman *municipium* Ilerda. The three upper terraces of the hill with their 4-5 hectares (Pita 1975: 53, 56) was a space large enough to accommodate a first-rate settlement. Topographical

factors and untamed anthropogenic actions throughout history (wars and an uninterrupted cycle of construction-destruction) and, above all, the lack of systematic research have justified the notion of 'a hidden city'. Furthermore, the archaeological record was limited to structures dating no earlier than the end of the 2nd century BC and a few decontextualised potsherds (6th-1st centuries BC) collected either on the hill itself or below it at La Paeria (Municipal hall), the Sant Joan Square and the Aiguardent Street (Junyent 1994; Junyent, Pérez 1994, 1995).

Repeated interventions by the Municipal Archaeological Service on the hill, at times extensive, begin nonetheless to offer new evidence. Materials at different points capping the bedrock of the hill reveal traces of a Pre-Sertorian times (100-80 BC) and a Late Republican wall, identified in 2004, is the first evidence openly raising the possibility that Roman Ilerda was founded *ex novo* (Payà, Pérez 2007). Although the value of negative data is always relative, it is nevertheless true that a large settlement can be destroyed. Josep Pleyan de Porta in 1873 asserted that a site can be 'devastated by the hand of time and men leaving not even dust'. Yet erasing every small trace from the map is not possible. Xavier Payà, the most authoritative voice on the archaeological data of the hill, noted it is difficult to imagine the existence here of a great pre-Roman settlement. He tended towards a founding of the city dating to Pre-Sertorian Late Republican times (Payà, Pérez 2007; Payà 2013), as noted in an article in this volume ('*The Roman city of Ilerda*'). The weight of the negative archaeological data appears to push archaeologists to search for an unlikely alternative location or to see Iltirta as a sort of etiological legend, a Roman invention intended to offer prestige, age and beauty to the origin of the Roman Republican city.

Other types of archaeological arguments are contrary to the a *silentio* argument ... Moreover, the indirect evidence in favour of a central location in the territory is compelling and could be confirmed by the concentration of Ilergete red-slipped ware around the capital. This supposed pottery production, potentially in the *ciuitas* itself or its surroundings, responds to type of tableware of extraordinary quality and technical characteristics requiring both the complexity and craftsmanship of peri-urban workshops and a market to distribute the ware (Junyent, Alastuey 1991; Junyent 2008, 2015: 177; Garcés 2018).

Numismatics does prove the existence of Iltirta since the end of the 3rd century BC as it minted imitations of Emporion drachmae from the end of the century and later, well into the 1st century BC. It is the most important minting in the interior of Catalonia and the number and spread of emissions, especially those of silver bearing Iberian legends, are proof of the role of Iltirta as a capital (Soler 1996; Villaronga 2002).

Even the old written sources yield problems ... In short, the Greek author Polybus does not mention the city despite being practically contemporary to the events and having visited the area. Latin sources likewise do not mention Iltirta, but Ilerda as early as the 1st century BC in the framework of the Sertorian Wars between 82 and 72 BC (Sallusti, *Historiae*) and

Fig. 7. Aerial view of urban layout of Molí d'Espígol (Tornabous, Urgell). In the foreground is the so-called Iltirta Gate. Certain authors equate the site with ancient Athanagrum (photo: Museu d'Arqueologia de Catalunya – MAC).

Fig. 8. Aerial view from the SW of the Fortress of Els Vilars (Arbeca, Garrigues) (8th-4th centuries BC). The site dominates the course of the Aixaragall stream (photo: Grup d'Investigació Prehistòrica de la UdL – GIP).

in *De bello civili* describing the confrontation between Caesar and Pompey. Furthermore, three horsemen from Ilerda are cited a few years earlier in the bronze inscription of Ascoli. Although the names cited are in Latin, these individuals were the progeny of parents with Iberian names who were granted citizenship for their participation in the siege of Asculum (89 BC). To complicate matters further, Titus Livius ignores the city and refers, instead, to Athanagrum as the capital of the Ilergetes: '*Athanagrum urbem, quae caput eius populi erat*' (Titus Livius, *Ab urbe condita*, XXI, 61, 5-7). Moreover, he notes that it was attacked in 218 BC by Gnaeus Cornelius Scipio. As can be imagined, there have been different unconvincing attempts to explain the situation. Athanagrum could have been the name of the city itself or its ancient name. The term could also have formed part of dual names such as Tarakon/Kesse, Barkeno/Laie or Edeta/Leiria or even be a distortion of the text (Pérez 1999, 2008; Junyent 1994, 1996, 2015; Junyent, Pérez 2003). The most attractive, placing Athanagrum as the circumstantial capital of the eastern Lacetani and Ausetani confederation, coincides with an old intuition of Rodrigo Pita Mercè (Pita 1975: 93, 141) taken up by other authors, who identified it with the site of Molí d'Espígol (Tornabous) (Jacob 1985: 38, n. 68), an assumption adopted by the site's excavator (Maluquer 1977, 1982, 1986, 1987). In addition, identifying it with this location is bolstered by the archaeological research on the scenes of the Second Punic War, notably the Battle of Cissa (Polybius, *Historia*, III, 76, 1-2; Titus Livius, *Ab urbe condita*, XXI, 60, 1-3) in the vicinity of Vilar (Valls) (Noguera, Ble, Valdés 2013). It is tempting to suppose that Gnaeus Cornelius Scipio, who landed at Emporion in late summer, and after defeating Hanno and his ally Indibilis and prior to wintering at Tarraco, instead of heading to the Segre River, followed the natural route to confront the eastern Ilergetes, destroy Athanagrum and then attack its Lacetani and Ausetani allies (Junyent 2015: 177).

Apart from numismatics, the ethnonym of Ilerda itself and its historical context offer the most compelling evidence favouring Iltirta as the *ciuitas* of the Ilergete *populus* (Junyent 1994, 2015; Junyent, Pérez 2003). Rome converted the hegemonic indigenous *ciuitates* of the different dominated *populi* as instruments of its domination (Kesse, Barkeno, Auso…) and they benefited from its prestige as did all of the populations it dominated. Iltirta was no exception. The situation of Ilerda does not resemble that of Iesso (Guissona), Aeso (Isona) and Labitolosa (La Pobla de Castre), the nearest *municipia* founded at the outset of the 1st century BC under the new Roman territorial arrangement of inland Catalonia (Pérez, 1996). Iltirta bore more resemblance - as we will see - with Iberian Sigarra (Els Prats de Rei), a city that also remains obstinately concealed under an archaeological record pointing to Republican times and the *municipium Sigarrensis* (Salazar 2012). It is for this reason that it until recently was thought to have been founded *ex novo* in parallel to the fouding of Iesso (Guitart, Pera, Grau 2000; Guitart, Pera, Ros 2004; Pera 1994, 1997).

From chieftainships to archaic state

But let us return and aim at a better understanding of the Ilergetes, now from their own past as the credibility of our proposal implies the intelligibility of the process from which it stems. How did the ancient settlers of the Early Iron Age transform themselves into Iberians and into the powerful Ilergetes capable of confronting Carthage and

Fig. 9. View of the excavation (2013) of the pre-Iberian towered wall of the settlement of Molí d'Espígol (Tornabous, Urgell) from the 8th-7th centuries BC (photo: Museu d'Arqueologia de Catalunya – MAC).

Fig. 10. Plan of Molí d'Espígol (Tornabous, Urgell) indicating the succession of phases of the pre-Iberian enclosure during the Early and Middle Iberian periods (drawing: Museu d'Arqueologia de Catalunya – MAC).

Rome? This question requires returning to their roots to contrast the different historical realities and the transformations they experienced. This means delving into their ethnogenesis and focusing on the processes of the different destinies of certain settlements, from the fortified villages and chieftainships of the Early Iron Age to the *ciuitas* of the archaic Ilergete State.

The territory during the Early Iron Age prior to the Iberian civilisation (8th-7th centuries and much of the 6th century BC) appears to be organised into fortified residential centres and chiefdoms, small political entities controlling a few hundred square kilometres and comprising scattered non-fortified communities such as Tossal del Ceba (Arbeca), Estany (Arbeca) and Tossal del Molinet (El Poal) populated by from 500 to 1,000 individuals. This is suggested by the regular range of 10 to 20 km between the fortresses of Castell (l'Albi), Els Vilars (Arbeca), Molí d'Espígol (Tornabous) and Vell Pla (Guissona). It is necessary to olk that the location of the Fortress of Albi differs and that only a few metres of its towered wall have been excavated (Casabona, Lafuente, Gallart 2010; Casabona, Gallart 2015, 2020), that only small sections of the fortification of Guissona have been located and that the situation of sites in the Lower Segre is more complex. But *se non è vero, è ben trovato* (Even if it is not true, it is a good story) meaning that the Fortress of Vilars (Arbeca) was no longer isolated. Moreover, the site of Molí d'Espígol reinforces this hypothesis and the fortification of Sigarra suggests that something similar was taking place among the eastern neighbours, the Lacetani.

This situation, however, differed radically a few centuries later. At the end of the 3rd century BC the archaic Ilergete State, with its capital at Atanagrum/Iltirta and headed by Indibilis and Mandonius, dominated more than 10,000 km2 and had a population surpassing 130,000. These approximate figures reveal the change in the scale of magnitude, transforming the territory into an area 40 or 50 times larger with a population similar to that which emerged from the embers of the 16th century in the regions of Segrià, Urgell and Segarra. This number renders credible the references to 20,000 infantrymen and 2,500 horsemen forming the interethnic armies led by their leaders against Rome in 206 BC (Titus Livius, XXVIII, 31, 5) and the 30,000 infantrymen and 4,000 horsemen only a year later despite their defeat and casualties (Titus Livius, XXIX, 1, 19-26).

This process has been referred to repeatedly (Alonso et al. 2020; Junyent 2014, 2015, 2018; Junyent, López 2015, 2016, 2020; López, Junyent, Alonso 2020). Between the times of aristocratic lineages, chieftains, fortresses and small territories

Fig. 11. Sigarra (Els Prats de Rei, Alta Segarra). View of the V-shaped walled ditch with its scarp and counterscarp, 6th century BC (photo: University of Lleida – UdL).

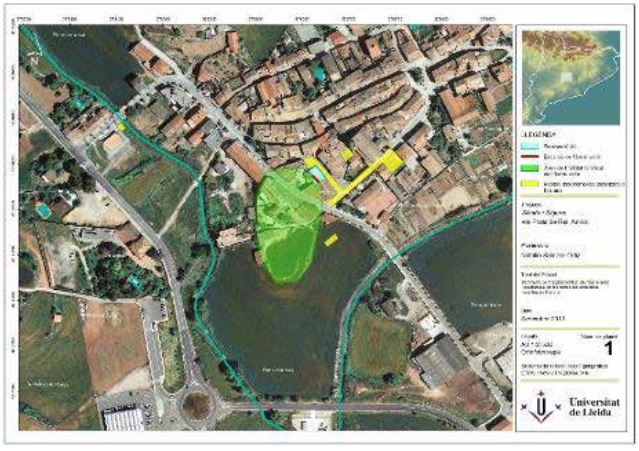


Fig. 12. Aerial view of the fortified site and ditch of Sigarra (Els Prats de Rei, Alta Segarra) (source: University of Lleida – UdL).

Fig. 13. Sigarra (Els Prats de Rei, Alta Segarra). Italic-styled monumental remains of a mid-2nd century BC building raised above Iberian constructions which in turn were built on the fill of a ditch dating from end of the 4th century BC (photo: University of Lleida – UdL).

Fig. 14. *Tetartemorion*, a subdivision of the drachma, minted at Sigarra. Both the Ilergete and Lacetani capitals issued currency in the late 3rd century BC (photo: Espitllera Fòrum d'Estudis Segarrencs; J. Porredón).

and those of the archaic Ilergete State, the tendency towards more extensive and stable politico-territorial structures presided over by more powerful centres became unstoppable. The system could hardly resolve tensions and contradictions. There was an unstable balance, broken by the hierarchy of the heads of lineages, who became military leaders controlling increasingly larger territorial entities and by the consolidation of the more powerful centres to the detriment of the weaker, either through violence or by absorption. These power structures, conflicts, and wars fostered relations of clientelism and the development of aristocratic groups. The time had come for the *oppida* to replace the old fortifications and announce the future. Relationships, however, were by far not always violent. Proximity and exogamy came to impose a necessary coexistence among the fortresses and ethnic territories, and led to consciousness of a united identity. Joint military actions were now often undertaken over more distant lands, a precedent for inter-ethnic armies that took up arms 200 years later. This process required centuries and did not halt as evidenced by growing aristocracies, concentrations of power, relations of clientelism, pyramidal clientele, princely rulers, capital status, archaic territorial states and intertribal confederations (Ruiz 2018).

The different fates of the settlements

Not all settlements or communities initiated these changes in the same manner. The Fortress of Vilars, paradigm of the old chieftainships, best illustrates the different paths and fortunes of these sites as

Fig. 15. Aerial view of La Pleta (Belianes, Urgell). To the right is a building dating from the Sertorian period. The position of the Iberian *oppidum* was not abandoned or reoccupied during the 2nd century. The 1st century BC, during the time of Sertorius, saw the construction of a large building. A villa was later built at the foot of the hill (photo: Centre d'Estudis Lacetans – CEL).

it only halfway adapted and was abandoned for a hundred years after the Second Punic War broke out. Of the old fortresses, certain such as Castell de l'Albi and Vell Pla of Guissona had already disappeared prior to the Early Iberian period.

Molí d'Espígol (Tornabous), on the other hand, expanded beyond its first defensive belt during the 6th century BC while the Fortress of Vilars (Arbeca) enclosed itself by reinforcing its advanced defences, something it experienced once again years later after its abandonmemt. Thus Molí d'Espígol became from the end of the 5th century BC the most powerful *oppidum* of eastern Ilergetes, marked by a new wall and a gridded layout of paved roads 4 m wide, a sewer network and complex buildings. This site thus served as an expression of the new and more powerful centres of power in the territory.

A similar narrative took place among the Lacetani, eastern neighbours and allies of the Ilergetes. Sigarra since the summer of 2013 has emerged as the capital of the Lacetani due to research directed by Natàlia Salazar (Salazar, Rafel 2015; Sabaté, Pujol, Salazar 2016; Salazar, Pàmies, Moreno 2017) which brought to light, opposite and under the church Mare de Déu del Portal (Els Prats de Rei), the remains of a V-shaped ditch more than 4 m deep cutting through the bedrock. The ditch also featured a carefully paved scarp and counterscarp, predictably, to either side of the gate, following the type of the Early Iberian ditches of Vilars II (Junyent, Moya 2011). This different evidence suggests that Sigarra was preceded by a fortified settlement during the Iron Age from the Early Iberian period or perhaps earlier. Subsequently, at the end of the 4th century BC, the ditch was intentionally filled to facilitate an extension of the site beyond the walls. New constructions were raised over its backfill, which, without the possibility of continuing, persisted until the Republican era. The remains of public buildings, Italic-styled columns and capitals capping the fill of the ditch dated to the middle of the 2nd century BC serve as proof of the site's conversion into a powerful

ciuitas, the capital of the Lacetani. Like Iltirta during the Second Punic War, it minted silver *tetartermorions*, a subdivision of the drachma, bearing the legend 'Sikara' (Villaronga 1998; Pérez 2001-2002; Ferrer et al. 2012). It also acted as the capital of its *populus* and, later, became a *municipium* under Rome. A very different destiny awaited Molí d'Espígol, a site that did not mint coins and disappeared as it never overcame the effects of the war.

Constructing an identity

This process, whose materiality can be traced, also manifests itself in the realm of collective consciousness and symbolism. It is also evidenced by archaeology, albeit with much greater difficulty and always indirectly. The construction of Ilergete identity took place throughout the 6th-4th centuries BC. No population is *ab origine* as essential ancestral realities developed from an original germinal seed containing all their potential. The transition of the chieftainships into an archaic state led to a dialectic process ranging between territorialisation (political power and borders) and the creation of identity. This identity among the Ilergete ethnic group in anthropological terms differentiated itself from other groups by its customs and symbols, its ways of living and waging war, it own language, and a shared consciousness of forming part of a collective sharing myths, legends, and beliefs about its origin and past.

Titus Livius referred to this when stating that the goal of Indibilis was to free the country of the foreign yoke and return it forever to the customs and usages of its ancestors (Titus Livius, XXIX, 1, 24). But how far away in time was the mythical past of the Ilergetes? Since when were they Ilergetes or identified themselves as Ilergetes? How was the old identity of the chieftains reformulated over the centuries into the new identity of the *populus* and into an archaic Ilergete State? Is it possible to suppose that ethnicity and social and political space were generated in unison from a slow cooking process that required centuries? It is also possible that small political territories coexisted during the Early Iron Age within the same ethnic territory and that the clan-parent political organisation facilitated an ethnogenesis allowing the assimilation into the main lineages whose genealogy recreated the political power and control of the symbolic world. It is from this process that emerged a consciousness of identity that made the Ilergetes feel as such, different from other Iberian groups.

Epilogue

A hundred years had to pass after the death of Indibilis and Mandonius and the subjugation of the Ilergetes before three cavalrymen from Ilerda gained citizenship by bearing arms at the service of Rome in the *turma Salluitana*. During this century, the worst ever known, a new order was gradually imposed as most *oppida* were abandoned, replaced by Roman *villae* raised along the base of their slopes. Certain survived and were transformed into Romanised settlements. The territory was then organised into new administrative and territorial units (*pagui*, *vici*, *villae rusticae* ...) before the arrival of a programme of municipalisation and centuriation, etc. of the territory. Indigenous elites experienced the double process of integration and self-affirmation within the framework of relations of power with the new Roman socio-political order. The consequences of the struggles between the Romans themselves (episodes personified by Sertorius, Caesar and Pompey) led to the advent of settlers such as those arriving among the great convoy headed by Caesar during his confrontation with Afranius (Julius Caesar, *De bello civili*, I, LI, 1-3). And the subjugated population had to find its place and relationship among the new production system.

Developing a uchronia and fantasising as to where the Ibero-Ilergete civilisation could have arrived if it had not been annihilated by the Roman sword is of purely literary interest. We are children of our history, of the Latin culture and of the legacies left by the peoples and cultures that took root in our land. And one of the earliest, now lost in the depths of the stratigraphy of our identity, was the Ibero-Ilergete Civilisation.

Location of the early protohistoric settlement in current Guissona at the Vell Pla and Capdevila Squares.

The background of Iesso. A Late Bronze Age and Early Iberian settlement

Josep Ros Mateu

Surface surveys of the surroundings of the city of Guissona led to the discovery of a series of sites ranging from small settlements to cemeteries. These finds highlight the extensive occupation of the Plain of Guissona throughout the Bronze (1800-700 BC) and Early Iron Age (700-500 BC). One such site was brought to light in urban Guissona itself at the Vell Pla Square.

Urbanisation and the installation of a sewer network in 1933 at the Vell Pla Square unearthed a great number of archaeological materials and structures leading to an archaeological intervention, the first of scientific character in this city, organised by the Institut d'Estudis Catalans under the direction of Josep Colominas. The work of Colominas, following the methods of the time, led him to identify two phases of occupation, the earliest being an Iberian settlement which after its abandonment became an Iberian incineration cemetery (Colominas 1941).

But after reviewing the materials from the 1933 Colominas excavation, and taking into account the findings of interventions in the area carried out since the end of the 1970s at Vell Pla (1978), Casa de Cultura (1987), Vell Pla, no. 16 (1988), Ravals (1994), Cal Ribó (1998), Cal Trepat (1999), Capdevila Square (2009), Les fonts (2016), and Vell Pla Square (2019-2020), the site has been reinterpreted as a settlement from the Late Bronze Age and Early Iron Age/ Early Iberian period (8th-4th centuries BC).

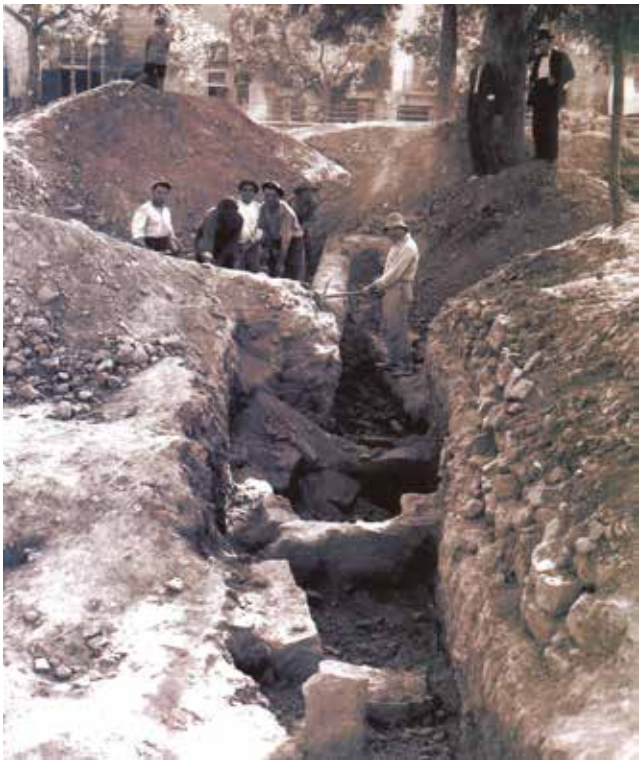


Fig. 1. Excavation of the Plaça del Vell Pla (1993) by Josep Colominas of the IEC.

Fig. 2. Eastern face of the wall of the Vell Pla settlement brought to light during the excavation of Cal Trepat in 1999.

It appears that a human community in the 8th-7th centuries BC settled around a natural spring located at what today is the Vell Pla Square marked by a well that was the source of water for the town in medieval and modern periods. Although the area is currently completely urbanised, its topographic features and the different archaeological interventions suggest that the old settlement probably occupied the surface corresponding to what today is the Capdevila Square. In former times this area must have been a small hill with a northern slope extending to what is today the Vell Pla Square. The ancient settlement was thus set in the middle of a flat and fertile land on the left bank of the Passerell, a tributary of the Sió River.

The archaeological interventions carried out in the area bear witness to a structured settlement with a great perimeter wall with a section measuring almost 4 m in width according to the different reconstructions gleaned from the archaeological interventions at Cal Trepat in 1999. The wall enclosed a sort of proto-urbanistic space comprising square or rectangular dwellings raised with stone blocks bound with mud, beaten earth floors and, at times, hearths.

The study of the archaeological materials reveals two major phases of occupation. The first clearly corresponds to the Late Bronze Age (775-650 BC) while the second, more evolved, dates to a timeframe prior to the Middle Iberian period. However, certain recent archaeological interventions in the area have recorded a thick and complex stratigraphy, more than 2 m deep, which will surely lead to defining additional chronological sub-phases.

The archaeological interventions carried out have also recorded a phase of abandonment of the settlement prior to the Middle Iberian period, as well as a subsequent occupation of the area either at the end of the 2nd century or the outset of the 1st century BC corresponding to the *ex novo* foundation of the Roman city of Iesso.

Aerial view of the archaeological site of Isona (photo: T. Reyes).

The background of Aeso *Cristina Belmonte, Xavier Bermúdez, Ignasi Garcés and Teresa Reyes*

The Roman city of Aeso is today partly under the modern village of Isona and partly under the market garden and fields to the south and west of the village (see header image).

This physiognomy comprising both urban and rural features is even more pronounced here than at the other cities such as Iesso (Guissona) and rare throughout the whole of western Catalonia. The setting reveals that it was deliberately founded on a terrace ending sharply to the west, between the streams of Mas de Mitjà to the north and La Colomera to the south in the middle of the Dellà Basin of the eastern sector of the Pallars Jussà country. Although its position at the foot of the Pyrenees and its altitude (663 m above sea level) are factors that could erroneously evoke severe weather conditions, the site enjoys a continental Mediterranean climate favourable to the cultivation of cereals, almonds, olives and, prior to the phylloxera plague, grapes. Where the crops end begin pastures and forests whose resources yield the basic elements required to sustain a city. In spite of the fact that the ancient system of roads is poorly known, it is obvious that Isona benefitted from a series of natural routes, notably one leading from the south through the Comiols Pass, a second from the east through the Bóixols Pass and a third starting at Isona leading to the north-west following the Noguera Pallaresa River to Bonaigua and Garona.

The moment when the human communities began to populate the spot remains an enigma. Adjacent to the centre of the village is the site of Serrat dels Espinyers yielding finds from the Late Neolithic. There is nonetheless no evidence of any continuity after the Neolithic occupation (Arcos, Belmonte 2011: 172-177).

Fig. 1. Aerial view of the silos of Serrat dels Espinyers (photo: C. Belmonte).

Fig. 2. The scarped wall preceding the foundation of the Roman wall (photo: T. Reyes).

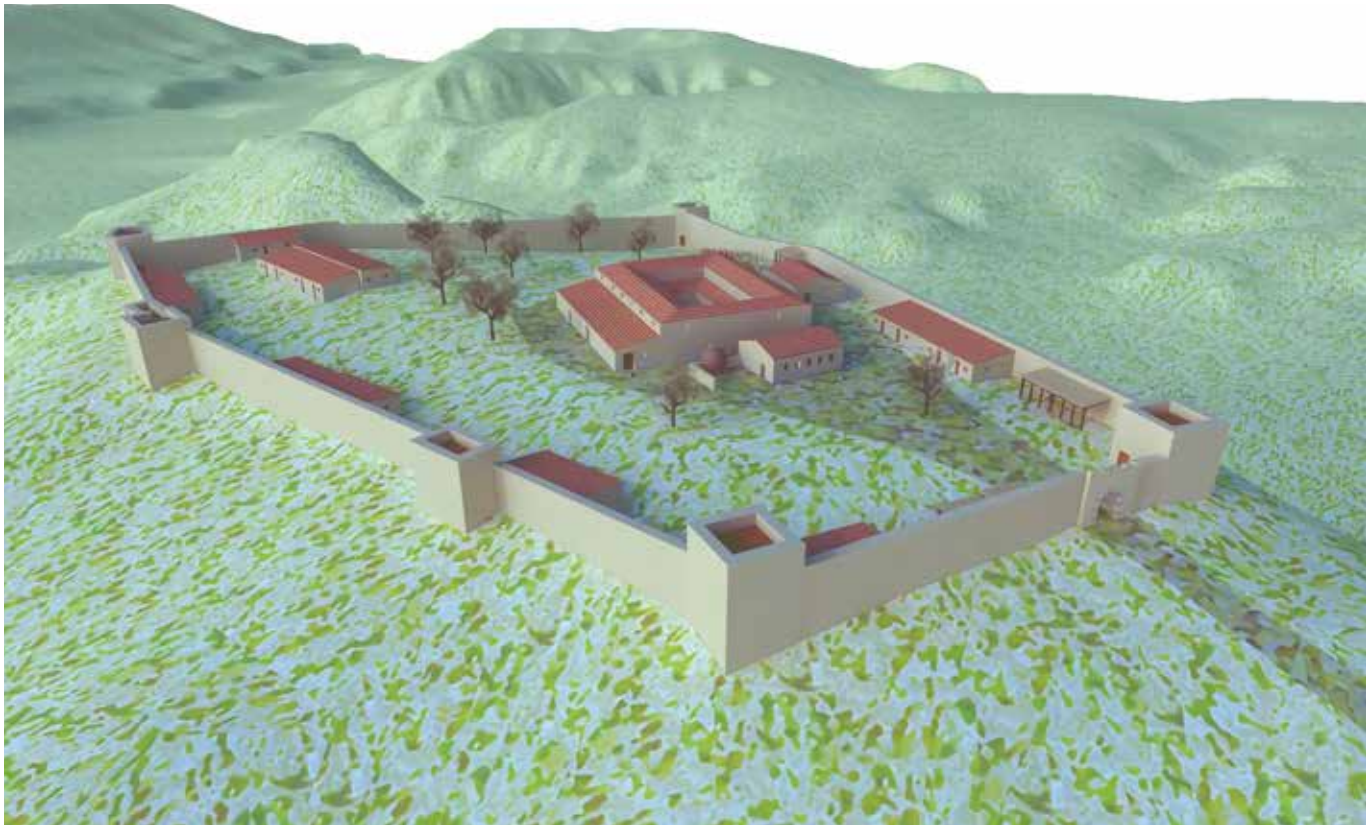
One must wait until the Middle Iberian period to identify a continuous human presence. Despite imports of Greek pottery from the end of the 5th century BC, most of the activity dates to between the late 3rd century and early 2nd century BC. This occupation is recorded by two archaeological sites, notably the large assemblage of silos of phase III at Serrat dels Espinyers (Fig. 1) (Belmonte 2014a; Belmonte 2015: 157-160; Garcés et al. 2020b) and the great scarped dry-stone wall raised prior to the Roman wall at the Camí de la Torreta (Fig. 2) (Reyes 2014a: 87-88).

Despite the lack of evidence, it is possible to envision an *oppidum* or settlement with capital status, perhaps corresponding to the 'eśo' on Iberian coins minted under Roman rule, a sort of nucleus preceding Roman Aeso (Belmonte et al. 2015). The technique and layout of the inclined wall are reminiscent of features at 'śikaŕa', later *municipium sigarrensis* (Els Prats de Rei, Anoia) (Salazar, Pàmies, Moreno 2016: 119-120).

In 218 BC the Romans disembarked on the Catalan coast and between 206 and 205 BC they erased the political and military power woven by the Ilergete confederation around which there was Isona. The population, now subjected to Rome, retained many of the features of its material culture throughout the 2nd century BC and became even more hybrid during the first half of the 1st century BC. This second period, labelled Late Iberian, manifests itself through painted pottery (Garcés et al. 2020a: 124). To these times belong the last phases of the storage field and workshop at Serrat dels Espinyers (Belmonte 2014a), a series of stratigraphic levels (Belmonte 2020) and a silo from a phase preceding the Roman wall (Reyes 2014a: 85-87).

II

The first signs of Romans in our territory



Reconstruction of the military camp of Puig Castellar (Biosca).

Puig Castellar de Biosca and the Roman military presence in the 2nd century BC

Joaquim Pera

There is no doubt that Rome began to gradually impose its control over *Hispania* during the 2nd century BC. Its dominance, initially military, evolved in the territorial sense into a consolidation in the form of urban centres. The best known examples along the coast, notably the ports and the *castra hiberna* of Tarraco and Emporion that evolved from the second half of the 2nd century BC into the first Roman cities in the north-east of the Iberian Peninsula. Thanks to the intensive work carried out by different archaeological teams, this process can now be recognised in other areas such as Castellvell (Solsona), Monteró (Camarasa), Sant Miquel de Sorba (Navès), Camp de les Llosses (Tona), Cabrera de Mar, etc. In the Segarra region there are two first-rate sites that have yielded the earliest traces of the Roman occupation: the fortification of Puig Castellar de Biosca and the Roman city of Iesso (Guissona) (Rodrigo et al. 2014). Recent work at Biosca uncovered the remains of what was a military fortress (*castellum* type) dating to the early days of the Roman conquest of Catalonia's western inlands. Due to tits location, the site took on a strategic character. The excavations have brought to light a large building at the top of the hill interpreted as a military command post (*principia*). The complex was surrounded by a solid defensive wall, towers and bastions delimiting a perimeter enclosing 1.5 hectares (Fig. 1).

The excavation also unearthed several spaces - houses and workshops - attached to the inner face

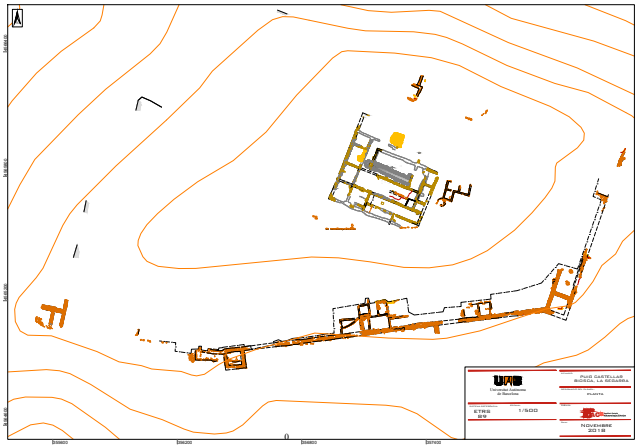


Fig. 1. Plan of the site of Puig Castellar and reconstruction of the military camp.

Fig. 2. View from the Puig Castellar hill indicating how it dominates the Llobregós Valley (2018).

of the wall suggesting that the area enclosed by the wall was partially urbanised and organised in different sectors: troops, services, command, workshops, representation, etc. The excavations also unearthed a vast amount of pottery, especially imported ware, signalling a well-defined chronological horizon between 180 and 120 BC. The evidence from the end of this period suggests that the fortification was abandoned after a deliberate dismantling of its military installation. The excavation also identified traces of the deliberate destruction of the fortified complex through the demolition of most of the structures, including the wall. Moreover, this abandonment coincides with the founding of the Roman city of Iesso (Guissona) six km away (Pera *et al*. 2016; Guitart, Pera, Carreras 1998).

The hill of Puig Castellar is located next to the Llobregós River where it receives the waters of the Biosca and Massoteres streams. Its slopes are very steep forming a natural defence. The exception is its eastern less inclined slope giving access to the site. The hill's geological composition is gypsum, a rather nutrient-poor soil, favouring shrubby and grassland but of little agricultural interest. This last fact had a positive impact on the site's preservation over the centuries.

Description of the site

The Romans occupied the top of the hill, a point which visually dominated much of the Llobregós Valley, the natural corridor traversed by a military road presumably linking the Alta Segarra region to the Segre Valley (Fig. 2).

This was a privileged position as it controlled the communication axis between the coast and the interior. Furthermore, the top of the hill dominated the access to the Plain of Guissona as well as the natural passes leading towards the Solsonès region. Its relatively flat upper sector contained the remains of the site's main building. Its regular construction design surpassing 900 m^2 clearly stems from the Roman modular pattern of 103 x 103 feet (*pes monetalis* = 0.29 m). This plan stretching over two terraces also allowed the construction to adapt to the slope. Although the excavation was able to unearth almost all of the building, it is noteworthy that many of its structures were poorly preserved. Most of the walls only retained their foundation level and at times even their foundations were removed yielding empty 'plunder' trenches. The central architectural element articulating the building is a large open-air courtyard framed at its two sides by an L-shaped corridor and perhaps a portico. The rooms of the residential complex were distributed around this courtyard. They were of unequal size, ranging between 20 m^2 and 100 m^2. The excavation at one end of the courtyard brought to light a large rainwater storage cistern, an important strategic feature of Roman

Fig. 3. Detail of the main building of the site (2018).

Fig. 4. *In situ* white terrazzo paving of the main building.

military complexes such as Olèrdola, Can Tacó (Montornès-Montmeló) (Rodrigo et al. 2013) and Sant Miquel de Sorba (Navès). The cistern was directly cut into the natural gypsum and revealed no internal system of waterproofing as the geological characteristics of the substrate rendered coating it necessary. Its storage capacity is estimated at 35 m^3 (35,000 litres). Given the building's general poor state and the lack of stratigraphy, the excavation of this cistern was fundamental to interpret the site. It contained two strata: the earliest relative to its period of use was capped by a thick layer corresponding to its abandonment. Its levels of abandonment merit certain comments as they consisted of layers of clay practically devoid of pottery stemming from the demolition of the rammed earth and adobe brick walls of nearby structures. Certain layers suggest an intentional deposition. Between the layers of clay and adobe were sacks containing heaps of construction fragments, notably pieces of ceilings and walls - at times painted or moulded - and pavements.

The different elements suggest that the walls of the buildings were raised combining rammed earth and adobe bricks that were arranged, depending on the natural slope or on their load, on a narrow base of one or two rows of ashlars (Fig. 3) which in turn rested on a more or less thick foundation. The stones serving for the construction of the bases and the foundations of the houses were the same as those used for the wall. It is a type of sandstone brought from elsewhere as the hill's gypsum substrate was not suitable for construction. The use of adobe in residential architecture is common to all eras as it is abundant and easy to work. Moreover, it allows quality finishes (stucco, paints) and serves as insulation. A second aspect worth highlighting in the construction of the buildings is the quality and diversity of the floor pavements. Most are terrazzos of different colours and finishes obtained by combining stone and ceramic materials. One even is paved with a *signinum* of *tesserae*. Almost all disappeared due in particular to erosion and plant roots. One of the few preserved *in situ* reveals severe deformations, a defect that stems from its structural weakness as it was laid directly on the ground without a solid level foundation (Fig. 4). Despite this defect, it is clear that the pavements are technically of high quality as all their components are well-cemented and cohesive, and still bear a smooth and polished surface. The many fragments of painted stucco of different colours, at times moulded, indicate lining of the room interiors. Certain of their decors suggest they suggest they followed the First Pompeian Style typical of the 2nd century BC marked by imitations of marble ashlars in white stucco on red plinths. Despite the recovery of only a few tile fragments, the roofs of the noble rooms appear to have been covered with *tegulae*. A noteworthy aspect based on analyses is that certain construction materials originated in the Italian Peninsula.

A minimum of five defensive towers and what is possibly a bastion have so far been identified along the wall surrounding the military complex. The

towers are square and integrated structurally into the wall's facing. The wall, devoid of traces of an earlier foundation, is 1.00 to 1.20 m wide and rests directly on the bedrock which it cuts forming a sort of bench. Its preservation is unequal depending on the sector. Its better preserved areas reveal between three and four rows of blocks. The wall offers no evidence of having many more rows of stone. Based on other military enclosures of this period, walls of this type were of mixed nature made of rammed earth raised on stone bases between 0.80 and 1 m in height. The use of rammed earth could help explain the few rocks conserved in the wall of Puig Castellar (Morillo, Adroher 2014). The kneaded earth and plaster mortar serving to bond the stone blocks was of poor quality. It must therefore be assumed that the wall, for reasons of security and military strategy, was dismantled the moment the site was abandoned.

Recent excavations of the southern and western walls uncovered a group of rooms arranged in battery attached to the wall's inner face. They are now interpreted as residences, probably for the troops. Also noteworthy is the existence within the site of the site of a metallurgical area serving to smelt iron through ferruginous ore reduction. This industrial activity is evidenced by a few crucible fragments as well as by hundreds of other by-products.

Another noteworthy aspect of this site is the great quantity of potsherds. The most common are amphorae, mostly wine and to a lesser extent mead and oil. They betray a wide variety of origins, in particular Italic (Campania, Puglia, Sicily, Etruria, Lazio, Calabria, Lucania, etc...). The imported tableware is almost exclusively old and classic Campanian type A black varnished ware. Thin-walled vessels, kitchen ware and mortars complete the panoply of imported pottery. The presence of a great number of painted plates and Iberian-type containers is also significant. All these materials, especially those that were imported, suggest that the military detachment of Puig Castellar was regularly stocked by a well-established commercial network that provided them with the supplies necessary for their subsistence. Finds of *militaria* remain nonetheless scarce. A simple spear ferrule is one of the few military elements. The site, in general, has yielded few metal artefacts apart from the by-products of iron smelting cited above. This could in part be due to the fact that the site has been subjected to continuous and systematic looting.

Different factors render Puig Castellar unique among Hispanic archaeology. First of all is its type and military function as it currently has no parallels in this timeframe. It had a relatively short life that can be estimated based on finds to about 60 years, which helps to understand certain particularities that will be discussed later. The quantity and diversity of imported materials and the presence of certain luxurious architectural elements - exceptional in this timeframe in *Hispania* – serve as evidence that certain of its occupants enjoyed a privileged social status. Moreover, they sought to imprint the residential complex with a clear sense of official representation through a deliberately sumptuous architecture. These two aspects discredit its interpretation as an ordinary military installation characterised most often by much more functional constructions. The second key aspect that cannot be overlooked is the close link between the abandonment of Puig Castellar and the founding of the Roman city of Iesso (Guissona) at the end of the 2nd century BC. There is clearly a link between Puig Castellar and Iesso bolstered by the chronology and the serialised succession of materials collected at each site. It is otherwise not possible to fathom the founding of a city like Iesso at this time and at such a privileged location in the centre of the productive and well-watered Plain of Guissona (Pera 1993; Rodrigo 2006). To further reinforce this conclusion, it should be noted that the fortification of Puig Castellar offers enough evidence to ensure that in its final days, prior to its ultimate abandonment, it was dismantled in a systematic and orderly manner. It is thus possible to speak of a programmed abandonment. In other words, once the site had been emptied of everything of value (crockery, weapons, tiles, *instrumentum domesticum*, etc.), the remaining

spaces were demolished and even at times put to fire. There is reliable evidence of this in the fill of the cistern through the deposition of large portions of adobe bricks of walls and tiles, which, as noted, are of Italic origin. Nor is it possible to rule out that blocks during the dismantlement were removed from the plinths and bases of certain walls. This aspect is, for the moment, difficult to confirm as these elements could also have been plundered a few years later for the construction in the 1st century BC of the imposing Roman *villa* of Sant Pelegrí 300 m away at the foot of the hill.

There is a hypothesis that Puig Castellar, beyond a strictly military character at some advanced moment of its short existence - just over a half century - could have served as the official Roman headquarters for territorial planning. Thus it would not be surprising that high officials of the Roman administration, delegates of Roman power, lived and worked here. It is our belief that carrying out these organisational functions required a direct presence in the territory. Moreover, these representatives of Roman power possibly left their mark at Puig Castellar in the form of the sumptuous architectural details described above.

To conclude, a last thought as to the last hypothesis is that Puig Castellar was a Roman administrative centre charged with planning and organising the new territories. It is strange to recognise an interest in this type of planning for *Hispania* in a timeframe as early as the site's founding (c. 180 BC). It is our view in fact that this policy took root from the middle of the 2nd century BC. Hence it cannot be ruled out that Puig Castellar was initially intended as a military *castellum* and, without ever ceasing to fill this function, and only a few decades later, became the headquarters of representation and territorial organisation.

This double function would justify the presence of a lavish residence that otherwise would be out of place at such an early time. Thus the sumptuous architecture would correspond to a later phase when the residents could take advantage of the protection offered by *castellum* and its military presence and could receive a regular supply of products of subsistence. Unfortunately, the poor state of preservation of the excavated areas so far does not allow recognising these two supposed phases meaning they must therefore remain plausible hypotheses.

View of the Monteró Plateau from the south. Zone 9 (tower) in the foreground.

Monteró and its historical framework until the Sertorian War

Jordi Principal, Carles Padrós and M. Pilar Camañes

Introduction: the post-Numantia scenario

The Roman Senate presumably expressed a certain interest in putting order into Hispanic affairs after the fall of Numantia in 133 BC. Although the Celtiberian wars saw no direct conflicts involving the Iberian population or its territories, their lands, especially those to the north-east of *Hispania Citerior*, nonetheless served as a sort of zone of 'transit' or 'passage' to Celtiberia leading them to gain a certain prosperity and economic recovery. Their ports saw the arrival and departure of supplies and goods, logistical convoys and military units on their way either towards the interior of the Peninsula or to the coastal areas from where they transited to other theatres of operations. These activities had to be guaranteed by an administrative structure and an infrastructure network. This was the framework that led three senatorial commissions (133, 101 and 95-94 BC) to the Iberian Peninsula with the mission of organising affairs in *Hispania* (Pina Polo 1997).

The installation of a road network to facilitate communications and the transit of goods and people (mostly military) (Ariño, Gurt, Palet 2004: 123-124) with an agile system of control, protection and administrative management (Ñaco, Principal 2012) could be considered as early evidence of this type of organisation. In fact, it is at this time that the first Roman roads appear. Among these is the ancient Via Heraclea with its inland branches from

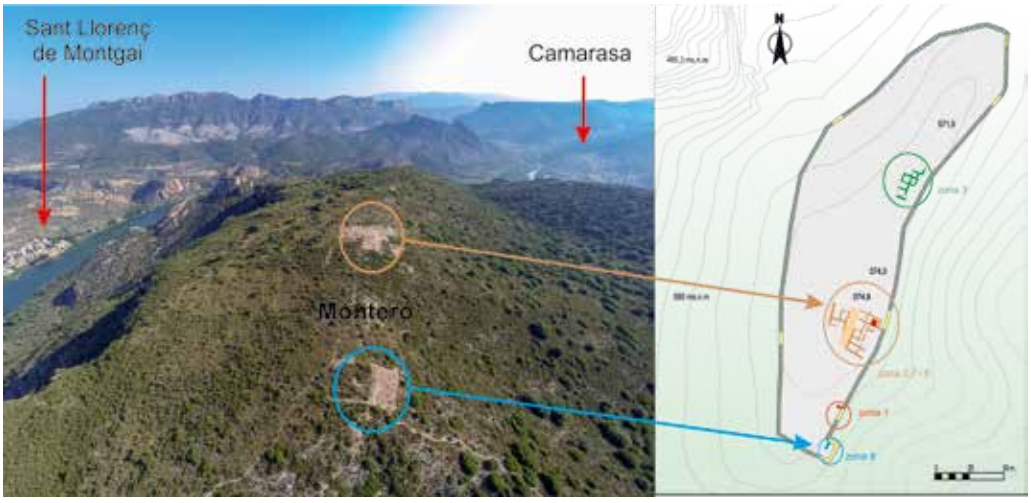


Fig. 1. View from the south of the Monteró plateau. Zone 9 (tower) in the foreground and Zones 1 and 8 in the centre. General plan and excavated areas (photo and drawing: Museu d'Arqueologia de Catalunya – MAC).

Tarraco along the Ebro River and also through the interior of Catalonia to the pre-Pyrenees. In fact, the Citerior does not appear to have a clear and proper government during this period between 132 and 98 BC as no praetors are known from the fragmentary *Fasti* assigned to the province. There is nonetheless indirect evidence of promagistrates, notably the proconsuls Q. Fabius Labeo and Manius Sergius, who during the last quarter of the 2nd century BC were charged with road construction as recorded on milestones (Fabre, Mayer, Roda 1984: 211; Salinas De Frías 1995: 82-83; Díaz Ariño 2008: 90-92).

Traditional historiography has for decades maintained that military garrisons played an essential role in the so-called 'Republican strategy of conquest' of the Iberian Peninsula as they lent a hand in ensuring political control of pacified regions and of the main routes allowing regular armies access to inland borders (Knapp 1977: 100-103, 209-210). This conception is currently questioned as it denies the existence of any type or form of occupation army involved in the initial hypothetical provincial organisation, as if it had been designed by the Senate and subsequently implemented by the Roman magistrates and by the commanders of the garrisons themselves. On the contrary, focus today is on the logistical needs of the army and the centres that could have been part of a structure designed to support it (Cadiou 2008: 279-361).

Archaeological evidence, by contrast, presumably points to a more complex system where 'defensive' garrisons, logistical bases, and specific surveillance checkpoints (*turres* types) coexisted throughout this period (c. 125-75 BC) (Padrós 2020). These different aspects appear to indicate that the north-east of the Citerior continued to play a key role in both Roman defensive strategy and in military logistics. When needed, supplies and troops (including local forces) and other resources could be dispatched at any time from the coast through a series of posts to the fronts. The archaeological evidence in north-eastern *Hispania Citerior* appears to fall in line with the findings of recent Roman-Republican military studies suggesting that only a sophisticated army accustomed to large-scale war operations such as that of the Middle/Late Republic had the ability to organise a network of logistical centres defended by territorial garrisons where military resources could be gathered and stored for use by armies on the move (Roth 1999: 187-188).

Monteró: a military fort on the way to Ilerda

The appearance of sites such as Monteró forms part of this dynamic. Monteró is located in the Municipality of Camarasa (la Noguera) on the top

Fig. 2. View from the west of Zone 1 (praesidium) (photo: Museu d'Arqueologia de Catalunya – MAC).

Fig. 3. Black-gloss Italic terracotta askos in the shape of a pig's head unearthed in Zone 8 (photo: Museu de la Noguera).

of an isolated hill (574 m above sea level) along the pre-Pyrenees mountains on the right bank of the Segre River (Fig. 1).

The site (18,000 m^2) occupies almost all of the hill's entire upper platform. It was certainly enclosed by either a perimeter wall or rampart adjusted to the local topography that has been partially observed at various locations. The hill, difficult to access, possessed a privileged visual control over the river and the plain to the south, an area extending until the city of Lleida (formerly Ilerda). Therefore Monteró, due to its geographical location, occupies a key strategic point, easily maintaining control over the territory and road network.

Excavations to date (Camañes, Padrós, Principal 2017) have focused on nine areas dated to 125-75 BC. Moreover, there is no trace of human occupation before or after this timeframe. Thus, the urbanisation of the hill and the construction of the settlement must have taken place towards the end of the third quarter of the 2nd century BC, a moment when the area was under total Roman domination.

The greatest concentration of remains is towards the middle of the hill, at its highest point where two groups of different structures are separated by a street about 7 m wide oriented north-south (Zone 7). The first of these groups (Zone 2 to the east) appears to correspond to a battery of complex rooms

Fig. 4. Lead band with an Iberian inscription unearthed in Zone 8 (photo: Centre de Restauració de Béns Mobles de Catalunya – CRBMC).

leaning against the perimeter wall or rampart. They are arranged in a C-shaped pattern around an open space or courtyard (Fig. 2).

Some of these rooms were equipped with *opus signinum* pavings and plastered walls (Sectors 1 and 14), at times painted or decorated with mouldings (Sector 13). Certain were also equipped with combustion structures of *tabun* type (Sector 19, a kitchen?) or carefully crafted rectangular hearths (Sector 13). The fauna assemblages reveal a wide variety: bovids, suids, equines and game animals. A fire affecting the eastern group of structures led to their collapse. Buried among the rubble was the lower part of the body of a 14 or 15-year-old human male who died shortly before or during the fire. The second group (Zone 8) must have consisted of a compact and complex trapezoidal building containing a variety of *in situ* finds, notably tableware, common ware, metal tools, and a lead band inscribed in Iberian signary (Figs 3-4).

Another excavated area to the north of the plateau (Zone 3) consists of a battery of fairly uniform rectangular terraced structures. They are compartmented with a front chamber facing east and a rear chamber facing west. In spite of the severe erosion and modern destruction this whole area has suffered, it is possible to recognise very uniform and austere architectural techniques and material culture. The faunal remains likewise point to an almost exclusive consumption of ovicaprids.

The last area excavated to date is to the south of the hill (Zone 9). This work brought to light the remains of a tower or bastion that must have covered the south-east angle of the theoretical perimeter of the wall. This was actually one of the vulnerable points of the fort. The bastion is a non-massive, poorly preserved trapezoidal structure, approximately 11 m long. It is worth highlighting that its outer corners were destroyed from within.

Broadly speaking, the most significant finds are local or regional Iberian oxidised ware. This assemblage is completed by imports from Italy (black varnished tableware, kitchen ware, amphorae) and amphorae from southern *Hispania* and northern Africa. Bronze and iron finds take on the form of small tools, crockery, weights, game items and *militaria* (bronze arrowheads, lead slingshot projectiles, iron spearheads, studs of *caligae* hobnails). The rare numismatic finds consist exclusively of Iltirta bronze coins dating to around 100 BC. The most notable finds among the metal artefacts are three lead bands inscribed with Iberian texts. These objects have been interpreted as inventories as they appear to be a type of list likewise containing anthroponyms (Ferrer et al. 2009: 115-129; Camañes et al. 2010). Although the lead objects date palaeographically to the 3rd century BC and certain coins collected (irregularly) also date to the end of the 3rd century (Crusafont 1989; Villaronga 1993: 30), the archaeological excavations conducted throughout the last 15 years clearly reveal that Monteró was a single-phased site, devoid of levels of occupation prior to the last third of the 2nd century BC.

The urban planning and the characteristics of the buildings of Monteró reveal compelling parallels with Roman-Republican military architecture. Zone 3 with its *contubernia* alignement of *hemistrigium* type with an *arma/papilio* design bears clear similarities with the military barracks housing troops at, for example, the camp of Peña Redonda during the siege of Numantia (Pamment Salvatore 1996: 102-105; Dobson 2008: 341-347). Zone 1, in turn, could represent the official's residence with a *praetorium* (Principal, Camañes, Padrós 2015). From the architectural point of view, Monteró follows, in principle, a Roman military design. Yet it does not correspond entirely with the canon of 'legionary' camps either by its extension or by the 'anomalous' design of its hypothetical barracks. The priority, given the strategic interest of the site, appears to adapt to the topography rather than to the 'regularity' of a standardised castrametation model.

To conclude, all these indications suggest that Monteró, due to its geostrategic situation, was an advanced post, fort or *castellum* with a garrison presumably manned by Iberian auxiliaries that mainly carried out a defensive and control function. As for its demise, all the finds point to a violent episode (e.g., fires at different points, *in situ* artefacts, a dead individual). Monteró, subsequent to this violent episode, remained unoccupied, as if its geostrategic function was no longer decisive or justifiable. In fact, it is even reasonable, based on the destruction of some of its defences such as the angles of the south-east tower, to hypothesise that it was deliberately deserted. Based on the material remains, this abandonment must have taken place sometime during the first third of the 1st century BC, linking it to the turbulent times of the Sertorian War.

Epilogue. Towards the consolidation of a provincial society

As it is currently not possible to calibrate the effect, albeit apparently limited, of the Cimbrian invasion of *Hispania* (102-104 BC), the conflict that was a key turning point for the Roman settlement strategies was the Sertorian War (81-72 BC). This was the last action of the civil wars between two factions, the *optimates* (supporters of L. Cornelius Sulla) and the *popularis* (supporters of C. Marius). Q. Sertorius, *praetor* of Hispania Citerior (82 BC) and supporter of Marius, resisted the senatorial armies sent against him. His assassination in 71 BC ultimately put an end to the conflict. The Sertorian strategy was largely based on supporting the indigenous communities and the sector of provincial society that lined up with their cause (Ñaco, Principal 2018: 390-393). Archaeological evidence of this conflict is widespread, especially that linked to the violent destruction of cities and settlements, and the construction of camps and military forts (Sala, Moratalla 2014).

The end of the Sertorian War marked the definitive transformation of *Hispania's* provincial society which had previously been initiated into, on the one hand, a civil arrangement of the territory where urban agglomerations became administrative, social and cultural centres (Pina Polo 1993; Keay 1995; Guitart 2006; Ñaco, Principal 2018: 393). The process of transformation was simultaneously based on an exploitation of the territory under Roman control fomented by a process of 'colonisation' involving a population of both indigenous and Italic origin (Revilla 2004; Revilla, Santacana 2015: 87-91). Centres such as Monteró in this new political and socio-economic context therefore ceased to make sense.

Detail of the V-shaped trench (SU 2083) under a feature dating to the Late Empire (photo: C. Belmonte).

Aeso. Traces of a Late Roman Republican camp

Cristina Belmonte, Ignasi Garcés and Carles Padrós

The possibility of a military camp in the vicinity of Aeso was initially formulated in the late 20th century based on the discovery of a layer of fill immediately below the level linked to the founding of the Roman city (Payà et al. 1994: 169-170; Pons 1994: 115). This earlier stratum contained a remarkable number of amphorae sherds of Italic origin dating from the last quarter of the 2nd century BC, a timeframe reinforced by the level's stratigraphic position prior to the construction of the Roman-Republican wall at the outset of the 1st century BC.

Modern road works (2009-2010) to improve access to Isona led to the partial archaeological excavation of the eastern end of the site of Serrat dels Espinyers located just over 100 m outside the city wall (Belmonte 2015: 156-163). The lower levels of this intervention revealed a series of V-sectioned ditches cut into the bedrock (Fig. 1) initially interpreted, based on the morphological and hydrological characteristics of the terrain, as part of a system to drain and control the infiltrations of water (*aqua paludensis*) (Wilson 2000: 315; Belmonte 2015: 160). Today these features are interpreted as the lower part of the *uallum* or system of ditches of a Roman camp (Padrós 2014: 102-105; Padrós et al. 2016: 39-52).

The archaeological intervention focused on two sectors divided by the modern path connecting Isona to the natural mound of Serrat dels Espinyers. Work at the southern end of the northern sector brought to light 20.3 m of a V-sectioned ditch oriented NW-

Fig. 1. Extremity of the V-sectioned ditch (SU 2083) beneath a structure from the High Imperial period (photo: C. Belmonte).

SE, up to 2.35 m wide and 0.9 m deep. Several post-holes measuring about 0.3 m a diameter, most likely contemporary to the ditch, were observed a short distance to the north-east. The excavation of the southern sector unearthed the remains of a large building abandoned either during the second half of the 2nd century or the outset of the 3rd century AD. Its construction dates to the beginnings of the High Empire, which explains the alterations suffered by the earlier levels. Moreover, the archaeological work uncovered negative structures 20 m in length, 1 to 2.34 m in width and between 0.5 to 1.2 m in depth. These structures were also V-sectioned, except for two with rectangular flat-bottomed channels about 0.3 m wide at their base (Fig. 2). Their orientation differed: three were NW/SE and two NE-SW.

The findings to date at Serrat dels Espinyers suggest that it was enclosed by a system of double ditches (*fossa duplex*) with V-shaped sections (*fossa fastigata*), structures that correspond with the outermost features of the *agger* of a Roman camp (Morillo 2008: 82). The excavation brought to light two ditch segments: one oriented NW/SE observed discontinuously for more than 40 m and a second one NE/SW uncovered over a length of 14.50 m. Their preserved widths ranged from 2.35 to 1 m depending on their position while their preserved depth ranged from 1.2 to 0.5 m. These types of ditches theoretically range between 6 and 2.5 m in width and between 2.7 and 1.2 m deep (Jones 1975: 112-113). Hence it is reasonable to assume the sections at Serrat dels Espinyers correspond only to the lower parts of the structures. Both V-sectioned ditches with and without rectangular canals at their bases, the two most common types associated with Roman camps, served to drain accumulations of water. These features are known to be accompanied by reinforcements such as stakes, spikes or spears (chevaux-de-frise) potentially linked to the post holes cited above.

Although, as noted, the excavation only unearthed segments of the ditches and none that directly intersect, their theoretical prolongation beyond the excavated area towards the angle closest to the modern town, on the one hand, and the natural reliefs as limits at the opposite corner on the other, lead to the hypothesis of a trapezoidal camp (Fig. 3) extending over a surface of between 4.9 and 3.3 hectares (Padrós 2014: 102-105; Padrós et al. 2016: 48).

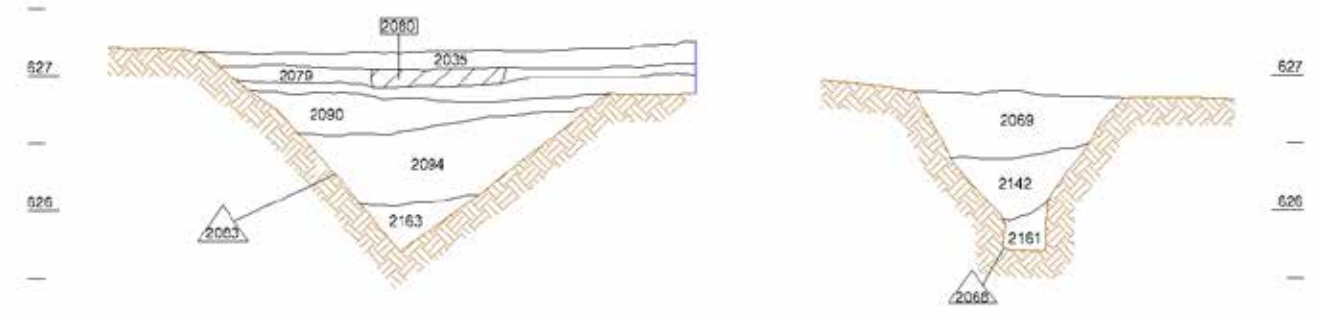


Fig. 2. Ditch cross-sections: left, V-shaped (SU 2080); right, V-shaped with a rectangular channel at its base (SU 2068) (drawings: M. Pujals and C. Belmonte).

Fig. 3. Hypothetical plan of the Roman camp of Serrat dels Espinyers enclosed by a double ditch. The excavated surface coincides with the modern road that traverses its eastern corner (planimetry: C. Belmonte; orthophotographic base: Institut Cartogràfic de Catalunya – ICC).

In this sense, it is well known that Republican-era camps are more often characterised by their adaption to the terrain (*castra necessaria*) than following a regular standardised shape that is either square (Polib, 6, 10) or rectangular (Higy, 20-21) typical of the times of Augustus and the High Empire. The trapezoidal shape associated with Julius Caesar (BG, 7, 83; BC, 1, 81) appears to be restricted to the final moment of the Republic.

The abandonment of the Serrat dels Espinyers ditches must have taken place at the end of the 2nd century or beginning of the 1st century BC as indicated by the potsherds collected in their fill comprising common ware of Iberian tradition, Italic amphorae (notably an notably an examples of a Dressel 1A; 135-50 BC), and black varnished ware. This last group is made up of Campanian type A and middle Calene ware. The first comprises two Lamboglia 36 and 27ab rims and the second a Lamboglia 8 formed rim (130-80 BC). The absence of Italic *terra sigillata* is noteworthy noteworth and places the features before the middle of the 1st century BC (Padrós et al. 2016: 45-46) and a modest group of pottery links the site to phases of the third quarter and the end of the 2nd century BC of Tarraco (Díaz 2000: 203-214). In short, the site appears to stretch between the second half of the 2nd century and the first quarter of the 1st century BC based on the finds and the relation of the phases that cover the ditches. In this sense, the work area (perhaps a workshop) from the 2nd to the 1st century BC covering (thus later than) certain structures offers a more specific timeframe during the second half of the 2nd century BC.

Close in time are certain camps in the north-east of Iberia which reveal a great diversity of solutions. The camp of La Cabañeta (El Burgo de Ebro, Zaragoza), for example, extending over a surface of 21.4 hectares, preceded a Roman Republican city. It was characterised by a W-sectioned ditch up to 30 m in width from the second half of the 2nd century

BC (Ferreruela, Mínguez 2006: 671-682). Part of a small camp at Ses Salines (Mallorca) extends over 0.75 hectares with V-sectioned ditches 3.2 m wide and 3.5 m deep. Although this site cannot be dated directly, indications consistent with the conquest of Mallorca place it in the last quarter of the 2nd century BC (Bauzà, Ponç 1998: 101-114). Excavations of the camp of Vila Joiosa (Alicante) identified a 50 m long segment of a V-sectioned ditch with a maximum width of 4.28 m and a depth of 2.17 containing material from the Sertorian Wars, that is, the end of the first quarter of the 1st century BC (Espinosa et al. 2008: 201-214).

There are several motives that can explain the construction at this time of a military camp near the city of Aeso (Padrós et al. 2016: 49-50). One relates it to a phase prior to the city's founding marked by the presence of a military contingent in charge of controlling the indigenous population (Payà et al. 1994: 169-170; Pons 1994: 115). Therefore, there must have been civil space in the area later occupied by Aeso, most likely an Early Iberian *oppidum* (Belmonte et al. 2013: 203-208; Belmonte et al. 2015: 207) later converted into a Roman city with a new layout. This suggestive possibility does not exclude, due to the scant current data, other options close in time such as the movements of troops linked to the trans-Pyrenean invasions of the end of the 2nd century BC. It is not possible to rule out, even in the 1st century BC, certain effects stemming from the urgent needs of the civil wars. Examples are the commands of generals such as Sertorius ordering troops to remain outside the cities (Plut, Sert., 6, 7). In short, the ditches form part of a turbulent period of profound changes that affected the entire north-east of the peninsula and, in general, the entire Roman world from the end of the 2nd century BC until the change of era.

Geophysical surveys carried out at Serrat dels Espinyers at the end of the summer of 2015 did not shed light on the extension of the structures to the north in spite of faint signals that could correspond to their destruction (it is very difficult to detect these types of sunken features). Surveys of this type were not carried out elsewhere (to the south and south-east) due to the refusal of the landowner. The extension of the camp therefore cannot be fully determined without a future archaeological intervention.

III

Ilerda, Iesso and Aeso. From their founding to their consolidation as Roman urban centres

Bust of Augustus (photo: Musée Saint-Raymond, Musée d'archéologie de Toulouse, J.-F. Peiré).

The Roman city of Ilerda

Xavier Payà, Marta Morán, Isabel Gil and Ana Loriente

It is essential, prior to describing the Roman city of Ilerda, to delve into the question of what was on the hill prior to Roman times. Unfortunately, this question remains unresolved from an archaeological point of view. The few finds are out of context and there is no layer or structure evidencing the existence of either Iltirta (Fig. 1) or a later occupation in the 2nd century BC. Nor is there any trace that can be linked to a military presence predating the founding of Roman Ilerda.

Ilerda was founded more than a 100 years after the initial arrival of the Romans in the Iberian Peninsula. The conquest was consolidated throughout the 2nd century BC and the territory of the interior to the north-east of *Hispania Citerior*, administered by Tarraco, witnessed the installation of several military camps in strategic positions. These camps with their walls, urbanism and buildings betray a clear will of permanence. Eventually, cities would replace these camps and become instruments in integrating the indigenous population into Roman culture, as well as means of incorporating the new territories into the Republic's administrative, political and economic structure.

Ilerda, like other cities of the north-east of Iberia, was founded between the end of the 2nd and the outset of the 1st century BC. It was at that moment, and for the first time, that the hill, its slopes and its lower sector adjacent to the Segre and Noguerola Rivers was incorporated inside a fortified city. Unfortunately, the ancient written sources do not shed light on the legal status given by the Republic to these new cities characterised by a great proportion of indigenous residents, which

Fig. 1. Coins from the mint of Iltirta dating to the end of the 3rd to the first half of the 2nd century BC.
1) Silver drachma.
2) Silver denarius.
3) Bronze as with rider.
4) Bronze as with wolf.
(photo: Museu de Lleida, J.V. Pou).

in the case of Ilerda continued minting bronze coins bearing the legend 'Iltirta'.

The 'Ascoli bronze', a unique epigraphic find, coincides approximately with the moment of the creation of Late Republican Ilerda in 89 BC. This plaque cites several indigenous horsemen who, owing to their participation in the siege of Asculum, received Roman citizenship by Pompeius Strabo. The plaque is of special interest as it is the first of its type to cite the city by its Latin name ('*Ilerdenses*' in reference to the origin of the three horsemen). Moreover, the horsemen are the only cases whose names, contrary to that of their parents in Iberian, are inscribed in Latin (Fig. 2).

Ilerda throughout the 1st century BC was one of the most important cities of the interior. Prior to the founding of the colony Caesaraugusta, it was strategic to the interests of the Roman Republic due to its proximity to the Ebro Valley. The form of its acropolis deriving from the hill's topography, the walls raised around 100 BC, and the more than probable existence of a bridge crossing the Segre River were decisive to the city being the setting of certain episodes of the civil war towards the end of the Re-

Ilerdenses
Quinto Otacilio fill de Suisetarten
Gneo Cornelio fill de Nesille
Publio Fabio fill d'Enasagin

Fig. 2. The Ascoli bronze (copy) 98 BC (Museu de Lleida, J.V. Pou).

1 *Room of a house attached to the interior of the wall*

2 *Foundation of the Ilerda wall (1st century BC)*

3 *Wall of the Al-Andalus quarter raised with recycled Roman ashlars.*

Fig. 3. The Roman wall of Ilerda, 1st century BC (Turó de la Seu Vella, INT-81).

public. These last circumstances, fortunately or unfortunately, have repeated themselves throughout its history. The sole archaeological evidence linked so far to the founding of the new Roman Ilerda is a 5 m section of a wall on the Seu Vella Hill (Fig. 7, INT-81) raised on an irregular stone block base 2.50 m wide with an internal masonry filling. Its elevation consisted of well-worked rectangular ashlars such as those on the inner face of the medieval wall of the Sant Andreu quarter recycled from the earlier fortification during the Al-Andalus period (Fig. 3).

The fact that the wall of the acropolis adapted to the natural relief of the hill and the two nearby rivers (Segre and Noguerola) led to an irregularly shaped city extending over a surface of 23 hectares and divided in two clearly defined sectors: the high and the low.

Despite the fact that observations have been limited to a short segment of the Roman wall, its total layout can be ascertained relatively precisely. To the north it follows the rocky cliff designating the gap between the current Palau Reial de la Suda and the Camp de Mart. To the south, before the Segre River, it must have varied very little with respect to the medieval (Al-Andalus and feudal) rampart following the northern façade of the current Ferran Rambla and Francesc Macià Avenue.

The wall's eastern limit, opposite the Noguerola River, must have coincided with the axis of the later defences of the Medina of Larida (9th-12th centuries AD). This assumption is based on the results of several excavations which systematically reveal Roman finds of the city of Ilerda to the inside of the Caliphate wall, but never beyond it. Finally, the western section of the wall, recorded at the top of the hill behind the Al-Andalus quarter of Sant Andreu, must have passed through the lower sector near the Sant Francesc Square as archaeological interventions to the west of this point have never unearthed any remains from Roman times.

The layout of the wall also affected the choice of the position of the city gates. The main gate, linked to a potential bridge and road arriving from Tarraco and the coast, coincides with the current arch of the bridge. There were two other gates, one to the west corresponding to the beginning of a road leading to the Ebro Valley, and another to the east, the start of a road to the Pyrenees. Ilerda's cemetery was by this second road. A fourth gate to the north, near the current Municipal Auditorium, accessed the road leading to *Osca* (today Huesca). Finally a fifth gate located to the nordwest of the hill allowed direct access to the high sector of the Roman city. Although we assume that the key courses connecting the gates were already defined at the moment the city was founded, the excavation of a section of the *cardo* (INT-101, Fig. 5) suggests that the city's final urbanisation did not take place until the turn of the era, most likely under the reign of Augustus.

The city's physical space also affected its interior urban planning. Ilerda probably did not benefit from a network of perpendicular thoroughfares delimiting regular blocks based on measurements such as the *actus*. It is currently impossible to accurately recognise the model put to use as we are only capable of identifying the layout of its two main roads.

Features from the Late Republican period inside the new city are abundant indicating a rapid urbanisation. They comprise remains from the last quarter of the 2nd century BC on the Seu Vella Hill at the Suda Castle (Fig. 5, INT-30) and from the 1st century BC at the Sardana Square (Fig. 5, INT-67), La Canonja (Fig. 5, INT-94), the cloister of the Seu Vella (Fig. 5, INT-70) and along the southeastern slope (Fig. 5, INT-48). These features were built on the hill's geological substrate of clays and sandstone. The excavation of the south-eastern slope unearthed a succession of construction phases between 80 and 30 BC, the first of which superposes a wall materialised by large demolished blocks resting on the bedrock. These features are indicative of a great number of changes in a short period of time reflecting the key role of Ilerda throughout the 1st century BC.

Fig. 4. Bronze as of the Ilerda mint: "MUNICIP. ILERDA" Augustus, 27 BC (private collection).

The archaeological finds of the lower sector resemble those on the hill. Among these stand out finds from Sant Joan (INT-08, Fig. 5), and La Paeria (city hall) (INT-12, Fig. 5), the pebble foundations of a building at Aiguardent Street (INT-04, Fig. 5), the room of a house with an offering of three coins at Magdalena Street (INT-261, Fig. 5), and a building covered by a road at the Bafart Street (Fig. 5), the metallurgical furnaces of Carme Street (Fig. 5), and a level of clays potentially linked to the construction of the *decumanus* (INT-230, Fig. 5).

In turn, the excavations to the east of the Democràcia Street near the eastern edge of the Roman city, notably the Portal de la Magdalena (INT-02), the thermal baths (INT-83), Anselm Clavé Street (INT-86) and the Costa de Magdalena Street (INT-47), have not yielded any clear evidence of a Republican phase except for a few pits containing combustion debris possibly linked to metallurgical work. It appears that the intense urbanisation and occupation of the city identified elsewhere in the 1st century BC did not take place here until the turn of the era (Fig. 5). The finds evidencing the way of life of Ilerda during its first century of existence are too scattered and poorly preserved to define an urban model.

The Imperial Period (1st-2nd century AD)

Ilerda shortly before the change of the era became within the program of municipalisation by Augustus a *municipium civium Romanorum* with its inhabitants assigned to the Galerian tribe. It is precisely at this moment that Ilerda began to mint bronze coins, which in turn will be the last of this old mint to be stamped with the Latin legends 'ILERDA' or 'MVN. ILERDA'. Moreover, the Ilergete wolf was then replaced by the Roman wolf and the portrait on the

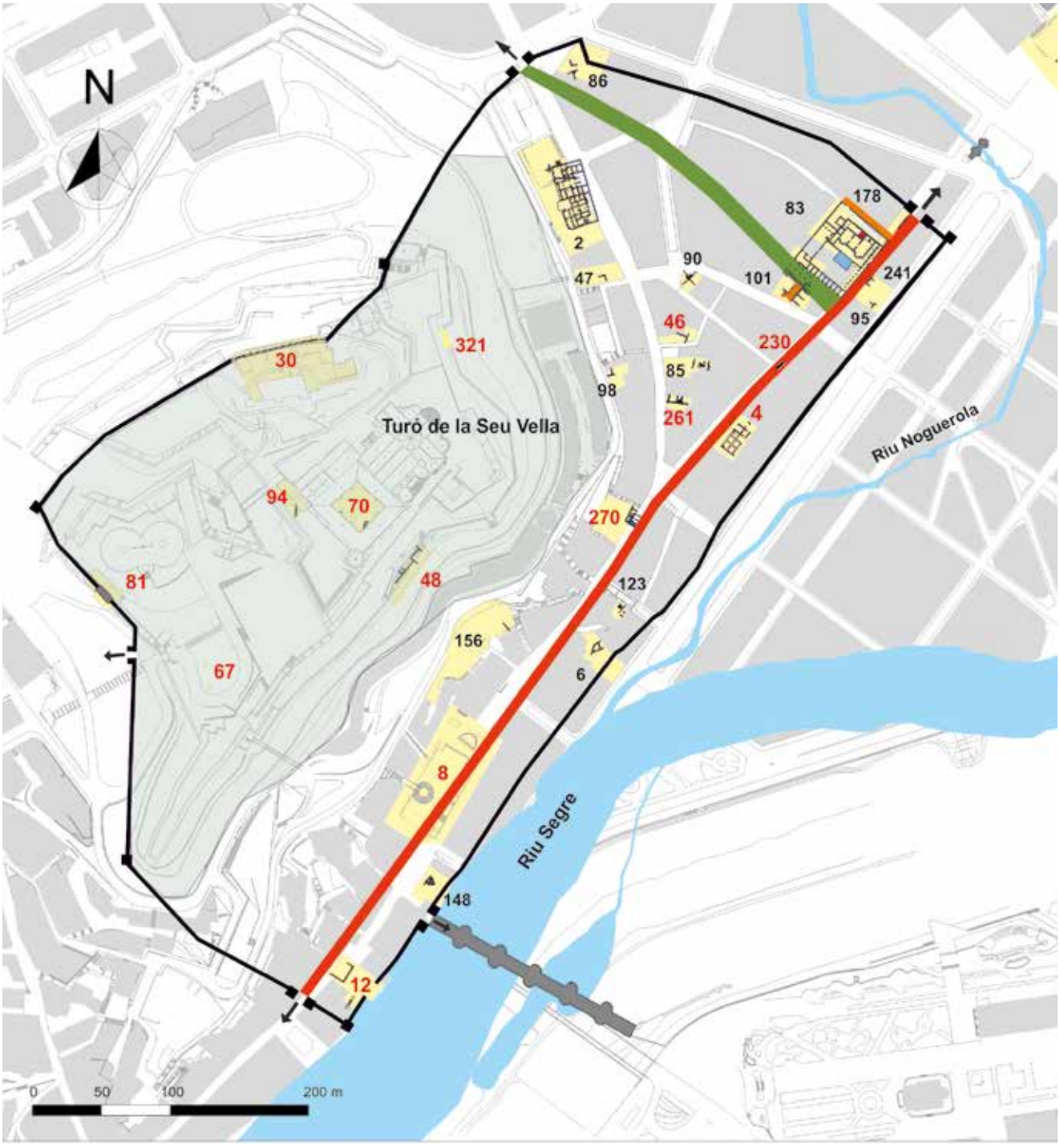


Fig. 5. Map of the city indicating all the archaeological interventions yielding Roman finds and the systematic network of the main roads (1st century BC- 5th century AD).

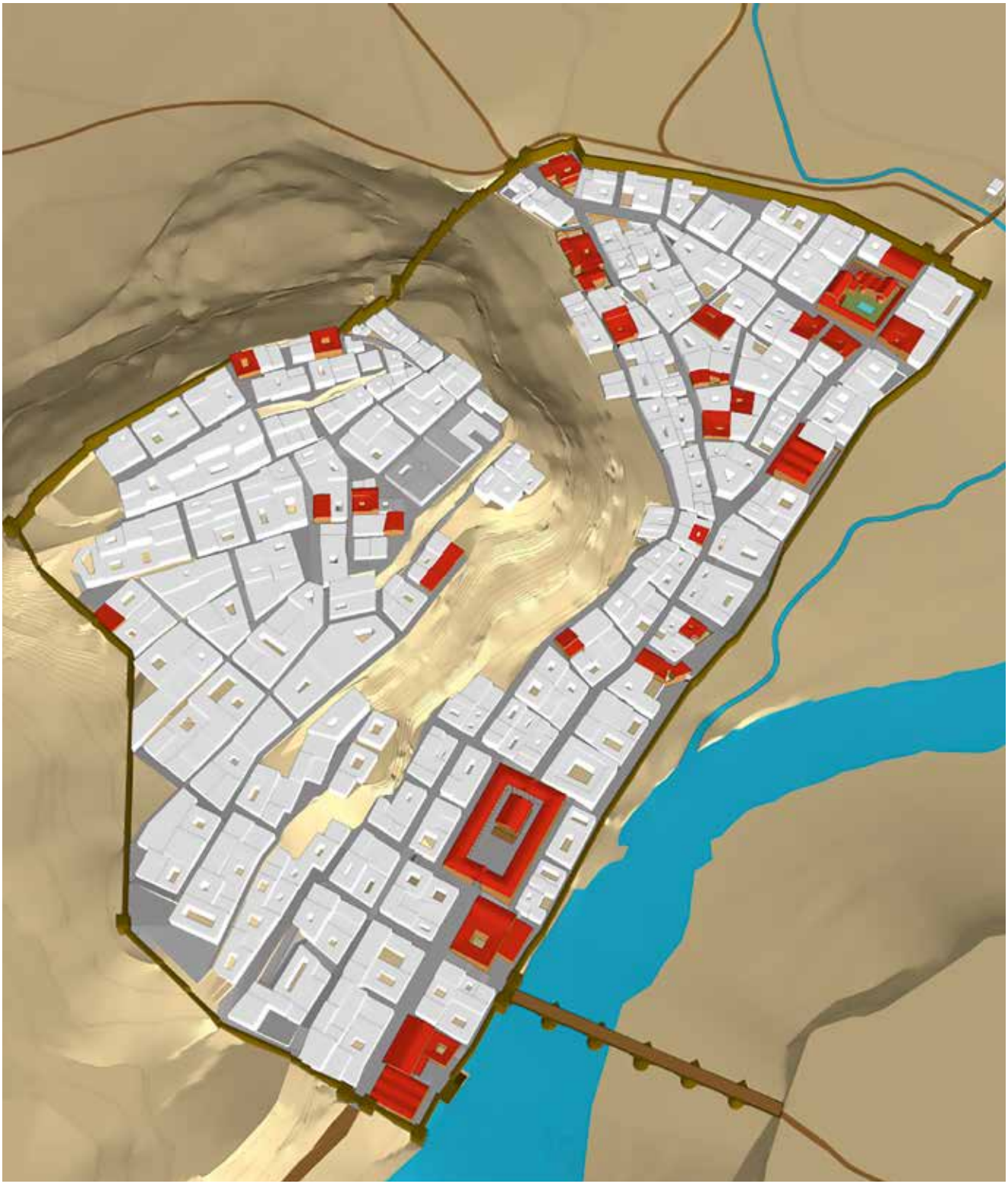


Fig. 6. Reconstruction of Ilerda in the 2nd century AD.

obverse became that of Caesar Augustus (Fig. 4).

The disclosure by Pliny the Elder (III, 3, 24) that Ilerda's inhabitants were one of many populations who had to settle their lawsuits further inland at the colony of Caesaraugusta suggests that this city acquired the primacy that Ilerda once enjoyed under the Republic. Moreover, Ilerda is the only Roman city in present-day Catalonia attached to the *conventus iuridicus Caesaraugustanus* and not, like the others, to the *Tarraconensis*.

The reconstruction we propose of Ilerda of the 2nd century AD is that of a city divided into two well-differentiated higher and lower sectors sharing few urban links (Fig. 6). It is known that part of the south-eastern slope of the Seu Vella elevation, opposite the river, was inhabited since the outset of the 1st century BC and that in the 2nd century AD it apparently housed a pottery workshop, indication of a non-residential character in Imperial times. However, there is little data as to the easternmost steepest part of the hillside above the current Municipal Auditorium, which we believe remained undeveloped in Roman times.

It is necessary to bear the question of topography in mind when comparing the surface of Ilerda (23 hectares) with that of other cities of *Hispania Citerior*. About four hectares of the southern slope, as well as other steep areas potentially between the top of the hill and the esplanade where the cathedral now stands, may have been sparsely urbanised in the 2nd century AD. Urbanising these slopes would have required constructing vast terraces and retaining walls, interventions justified in certain cases but not necessary at Ilerda as its eastern extremity does not appear to have been definitively urbanised until the change of the era.

Evidence at Ilerda of the Imperial period (1st-2nd centuries AD) is much more resounding. Its lower area had roads, buildings and features connected to the city's historical evolution (Fig. 7). The opposite applies to the hill as while its Late Republican phases are preserved, those from Imperial times have disappeared, erased by later levellings and constructions.

The roads of the Roman city

The terms *cardo* and the *decumanus* refer to perpendicular roads of a Roman city oriented according to the cardinal points. This is not the case of the two main thoroughfares crossing Ilerda. It was decided nonetheless to maintain these terms to facilitate their description as the projection of their axes beyond the city walls coincides approximately with the thoroughfares heading to the east, west and north (Fig. 7).

The *cardo* at Ilerda did not serve as an axis of circulation between two of its gates as its course to the south led towards the wall built in the flood area of the Segre River. It is for this reason that its axis began at the same point as that of the *decumanus*. The *cardo's* axis, far removed from the city centre, was clearly conditioned by the Seu Vella Hill. Its more or less regular course traversed the entire eastern sector of the city from south to north, circling the hill slightly to the east before ending at the North Gate.

The INT-101 excavation of a segment of this road reveals a thick layer of clay (80 cm) dating towards the turn of the era serving to waterproof the area. The excavation revealed no evidence of the Late Republican period in this excavation, a fact that is in line with the scant amount of construction in the eastern end of the city during the 1st century BC. The excavation did nonetheless record several sunken features filled with ashes. These cut through the clays preceding the layers of gravel of the road's paving and serve as evidence of a brief activity prior to the definitive urbanisation of the *cardo*.

The road was initially 9 m wide and ran with its eastern edge along a portico. In the middle of the 1st century AD it underwent a profound transformation. A new façade was raised to the east that broke the previous alignment, invading the portico of the previous phase. Moreover, the western edge was moved to the west stretching the road's width to 14

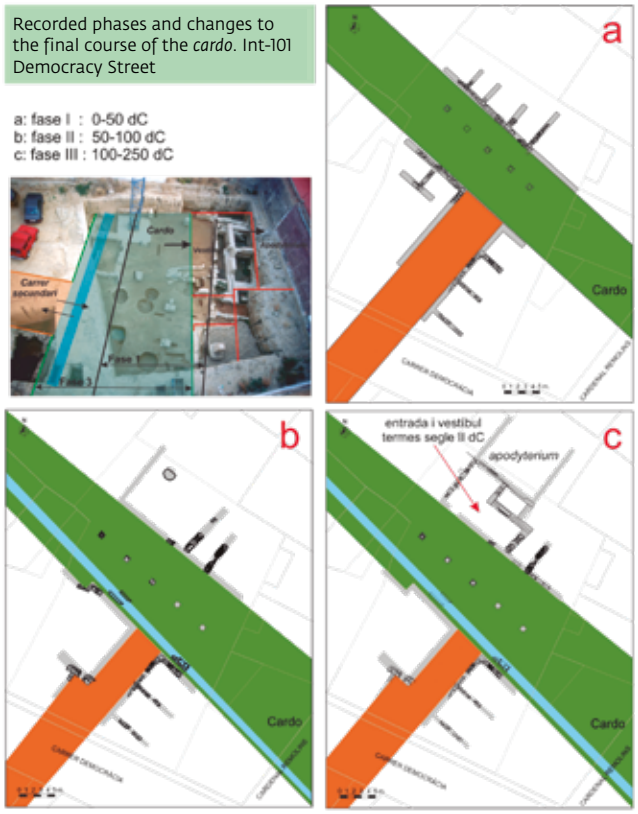


Fig. 7. Photo of the section of the *cardo* and drawings of the changes it underwent between the beginning of the 1st and the 2nd century AD.

m. At the same time, a new portico was raised and a large drainage sewer added along the western edge (Fig. 7). The reasons behind such profound transformations over such a short period remain unknown. They could possibly be related to the construction of the first thermal baths (AD 20-50) whose building followed, although at a considerable distance, the axis of the new eastern edge of the *cardo*.

The outset of the 2nd century AD saw how the new public baths extended their walls of the eastern edge of the *cardo*. Old walls and new walls now delimited the bath's vestibule and *tabernae*, spaces following the symmetry and alignments of the reforms of the previous phase which now served to define the design and orientation of the new thermal complex. In fact, at this time the structure of the road (its width, portico and pipelines) retained that of the previous phase from the middle of the 1st century AD.

The other main road of the city, the *decumanus*, roughly coincides with the current commercial axis. When prolonged to the east, beyond the limits of the Roman city and the Noguerola River, it coincides with an old road leading towards the town of Corbins. It was here, beyond the city walls, that Ilerda had its cemetery. This road was therefore a key connection between the city's western and eastern gates.

Furthermore, buildings such as the market with its shops open with a portico (INT-04), the northern wall of the baths and a section of city wall near the eastern gate (INT-178) formed different sections of its southern and northern borders. Unfortunately, the distance between the buildings linked to the *decumanus*, and the irregular and changing orientation of its course, impede defining its width, which was possibly narrower than that of the urbanised *cardo* of the Augustan period.

The moment of its urbanisation during the first half of the 1st century BC is pinpointed by several levels of compact gravel observed in an intervention along the Carmen Street (INT-230). The importance of this axis crossing all the lower sector of the city evidences that its urban development preceded that of the *cardo*, and that did not take place until the change of era during the final urbanisation of the city's eastern end.

Other secondary roads include one that passed along the eastern wall of the baths ending at the *decumanus* (INT-178) and another, 6 m wide, initiated at the western edge of the cardo (INT-101, Fig. 7). This last case is practically parallel to the nearby *decumanus*, only a few metres to the south. Two other roads, one paved with gravel and containing a sewer serving throughout the 1st century AD (INT-46, Fig. 5) and another identified by a large sewer (INT-95, Fig. 5) near the southern enclosure of the city, could have formed part of a hypothetical ring passing behind the wall.

Fig. 8. Corithian capital and pedestal belonging to a public building of the forum brought to light at the Plaça de Sant Joan.

The forum

A forum in a Roman city was the square where its main roads converged and the location of public buildings such as the *curia* (local government seat) and temples. Throughout the Empire the forum was normally the central space serving for meeting and representation.

Although the forum of Ilerda has yet to be identified, we believe that it occupied what is today the Sant Joan Square (INT-08, Fig. 5) as this is the only locality in the city with architectural remains of large public buildings and because this space (near the bridge) served over the centuries as the town's main square.

Elements such as a Corinthian capital, a column base and the remains of an *opus signinum* decorated with *tesserae* (see Fig. 8) recovered during the construction of the new temple of Sant Joan in 1880 and the underground car park of 1975 offer evidence of at least two or three public buildings (temple, curia ...). It is also possible that some of the reused pedestals (IRC II, 1) from the cemetery excavated during construction of the train station were originally embedded in the floor of the forum to remind the citizens of those who once participated in the city administration.

A building potentially linked to a harbour?

This area corresponding to the current Paeria of Lleida (city hall) (INT-12, Fig. 5) towards the turn of era saw the construction of a large building oriented in the sense of the river. Its foundations, reinforced with up to five rows of large blocks founded in the gravel bed, are indicative of its great dimensions and a concern for its stability (Fig. 9).

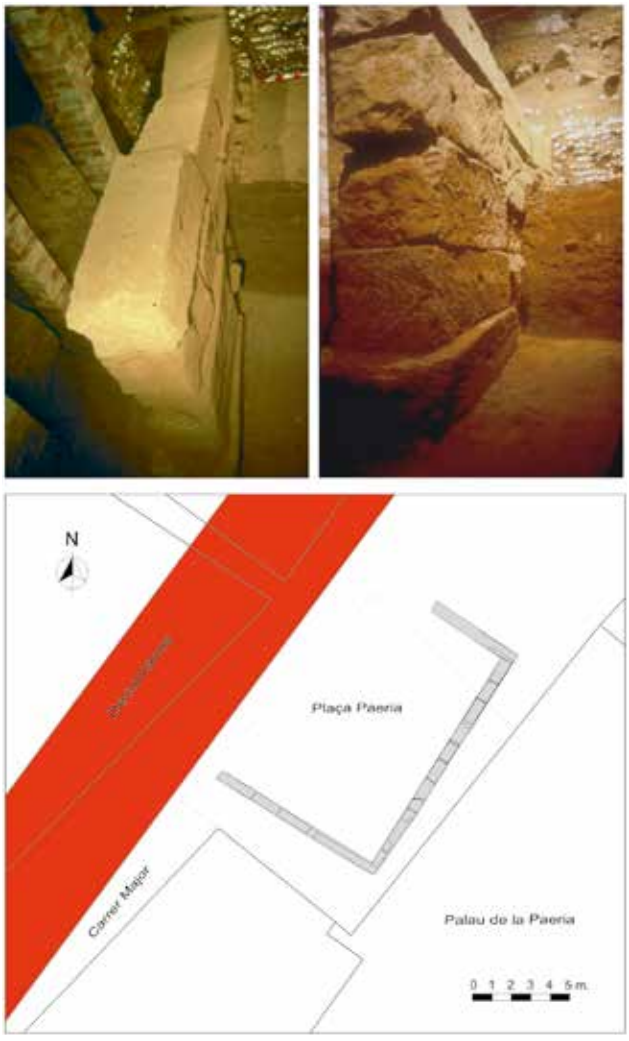


Fig. 9. Detail of the foundations and plan of the possible port warehouse.

Its proximity to the river and the characteristics and depth of its features (6 m below that in the Paeria Square) suggest it served as a harbour warehouse. It does not appear to be marginal beyond the city walls as this area has other remains of Roman buildings. Moreover, it coincides with a later Al-Andalus harbour, whose Medina appears to not have varied substantially from that of the Roman city. We believe that the role of the river in the creation of the Late Republican levels serving later for the foundations of the High Imperial building and the

problems of stability detected in the walls could relate to a great opening in the Roman wall which, in addition to allowing access to the dike or harbour facility, also exposed this sector of the city and buildings to periodic flooding.

The market of Ilerda

Two square rooms stand out among the excavated area of the market complex (INT-04, Fig. 5). The first opens to the portico along the *decumanus* and is marked by large square blocks supporting the bases of the columns. The second, to the rear, is accessed by two lateral doors. An identical third area appears farther to the south (Fig. 10).

An extension of the module of the rooms to the west indicates that their edges coincide with the walls of another that could correspond to a building that extended at least 40 m along the northern edge of the *decumanus* with rooms, possibly *tabernae*, opening to a porticoed space and others connected from behind to each other, serving for storage. These remains could hypothetically correspond to a market (*macellum*) dating to the turn of the era.

Fig. 10. Photos and plan of the tabernae of the Ilerda market.

The public baths of Ilerda

Public baths soon became symbols of the level of hygiene, well-being, and construction technology achieved by the Romans. Ilerda placed its baths at the intersection of the *cardo* and the *decumanus*. The earliest date to between the AD 20 and 50 and must have served as a great stimulus for the definitive urbanisation of the eastern sector of the city, hardly occupied during the previous century.

The earliest small complex was finally replaced at the outset of the 2nd century by another extending over a surface of 2,400 m2 (INT-83, 1001 and 178, Fig. 5). This feature set Ilerda at the level of other Roman cities of the Empire. While identifying its architecture is simple, and surprising when compared to the state of preservation of the city's other features, the information as to its evolution is still far from clear. Moreover, there are indications that its *caldarium* and *tepidarium* were already in ruins between the 5th century and the 6th century AD.

But the final destruction and looting of the bath's walls did not take place until the 13th century, when the paving of the *frigidarium* became the base of medieval walls and the *natatio* was compartmentalised into spaces serving to store manufactured goods.

The houses of Ilerda

The remains of private domestic residences are both the most abundant and scattered among Ilerda's entire archaeological record. It is common when exploring Roman levels to identify small parts of a larger reality extending beyond the limits of the intervention. It is therefore often impossible to determine the form of the houses or identify any model

Fig. 11. Details of the different types of features linked to Roman houses from the 1st and 2nd centuries AD.

or pattern. On the other hand, due to the superposition of phases and reforms, these explorations are very useful in identifying the changes that took place during the High Imperial period.

The overall impression is that of a city with modest houses with small rooms and rammed earth floors. None of these private spaces contain decorated mosaics. Moreover, although cases of floors of white plaster are scarce, they are at times associated with painted murals (INT-86, Fig. 5). Also noteworthy among the domestic features are wells to collect water (INT-85 and 123; Fig. 5 and Fig. 11).
The only well-known residence is the large *domus* unearthed at the Portal de la Magdalena (INT-12, Fig. 5). This feature, occupying a surface of more than 1,200 m2, comprised 27 rooms, open courtyards, a corridor and a porticoed atrium (Fig. 12).

Although the rooms present a variety of sizes and different types of walls, it is possible to divide them into two sectors. The first, the north wing, is char-

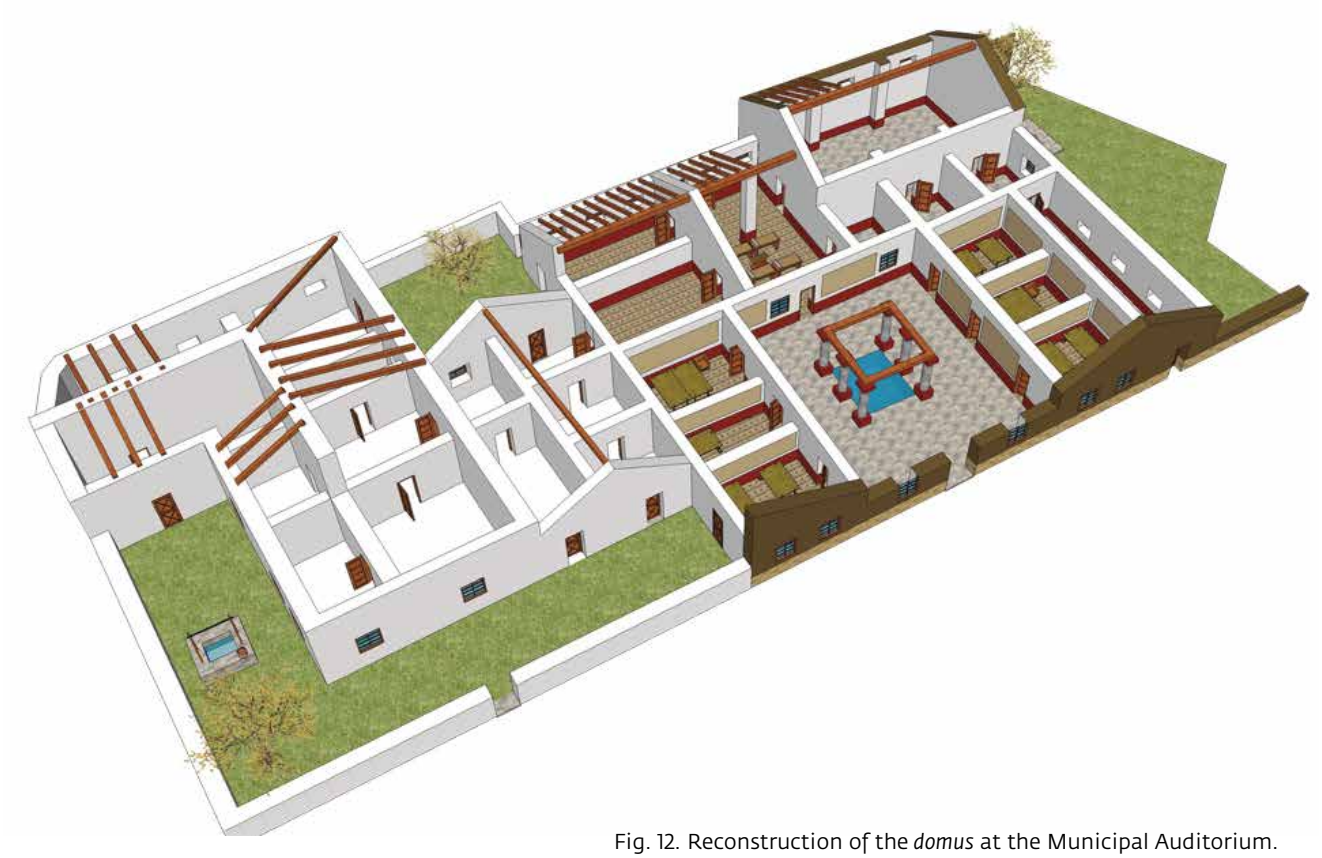


Fig. 12. Reconstruction of the *domus* at the Municipal Auditorium.

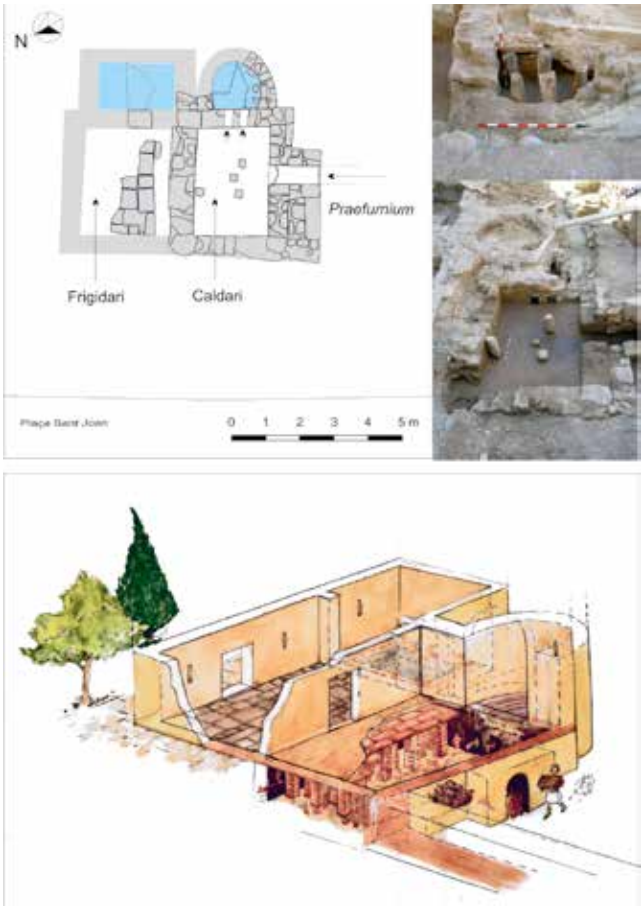


Fig. 13. Plan, photos and reconstruction of the private thermal baths of INT-149.

acterised by more extensive spaces and walls with large blocks. The second, to the south, has masonry walls. The private rooms of the masters of the house were probably in the northern sector, around the atrium and the *aula*. The smaller rooms to the south served for service and storage. An L-shaped area free of construction enclosed a well and a garden. Although all the rooms had earth floors, it is not possible to rule out that certain traces observed in the aula indicate floors of wooden planks.

This large residence raised around AD 100 and abandoned before the middle of the 3rd century AD has also yielded compelling evidence of infant burials and offerings such as chicken eggs in vessels.

Ilerda's houses with private thermal baths

One of the residences in Ilerda with its own thermal baths was adjacent to the city's main gate (INT-148, Fig. 5). Unfortunately all of its rooms or residential areas were destroyed during the construction of medieval cellars. This house presumably extended until the *decumanus*, while its thermal baths were in a space protected by the wall that, a few meters away, bordered the city along the river bank.

The baths were divided into two small attached rooms. The *frigidarium* is evidenced by fragments of the paving and the remains of the base of the pool. The *caldarium*, being a sunken structure, preserves all the walls of its furnace (measuring of 7 m2) and features an apse housing a hot water pool.

A 60 cm opening of the west wall is where the hot air entered into the hypocaust of the chamber, and to the north, two square flues ensured its circulation below the pool. The semicircular pool in the apse, roughly 1.30 m in diameter, conserved its entire system of support (pillars and tiles), its base and one of its steps (Fig. 13).

There is little evidence as to when these baths were constructed due to the fact that its features rest directly on the bedrock. Moreover, its end also remains unclear due to the total absence of materials in the fill of the heating chamber (hypocaust).

A second Roman *domus* with a private bath was identified to the north of the *decumanus* (INT-270, Fig. 5). Once again, medieval constructions destroyed all its ground level residential spaces. It was nonetheless possible to establish that both the cold and hot rooms of the private baths extended below the current Carmen Street, which forced displacing the course of the city's *decumanus* a few metres to the south.

The excavation of this site also brought to light a service room containing the furnace of the boiler and the hypocaust of the *caldarium*. The space (12 m2) is subterranean with masonry walls adjoining

the north wall of the *caldarium* that was pierced by a conduit guiding water to the pool. At the base of this wall was the entrance to the furnace that heated the *caldarium* were it was possible to perfectly observe the pillars that supported the mortar floor below the *caldarium*. Two walls perpendicular to the entrance served as a convection channel and support for the furnace. A small extension of the excavation below the surface of the Carmen Street allowed observing part of a pool (Fig. 15).

Next to it, and taking advantage of a pre-existing excavation, was a quadrangular feature made of small mortar-bound blocks lined with hydraulic mortar. It corresponds to a small (1 m2) cold water pool with two steps built at the outset of 2nd century AD and abandoned around the 5th century AD when the space serving to feed the fire became clogged with ashes.

The cemetery of the city of Ilerda

Ilerda's cemetery evolved to each side of the road leading out of the city (towards the central Pyrenees via Balaguer and Àger) after it passed through the East Gate and crossed the Noguerola River (INT-01, Fig. 5). It was discovered in 1926 during the construction of the railway station a few meters from the *antic camí de Corbins*, an ancient thoroughfare coinciding with the Antique Roman road which currently gives its name to a street in the Pardinyes Quarter.

The most noteworthy finds linked to the cemetery are pedestals and gravestones from the High Imperial period (IRC II, 1, 3, 4, 6). The pedestal dedicated to *Atilius Comodus* (IRC II, 1) suggests it was moved from elsewhere, possibly the forum, to serve as construction material in buildings and tombs. Here were also seven stone sarcophagi, two lead coffins and several burials enclosed in flat tiles (Fig. 15). All these burials from the Late or Low Imperial periods appeared about 40 m from the ancient Corbins road next to several mosaics with *tesserae* that are associated with a memorial or religious building of *cella memoriae*, *basilica* or *martyrium* type.

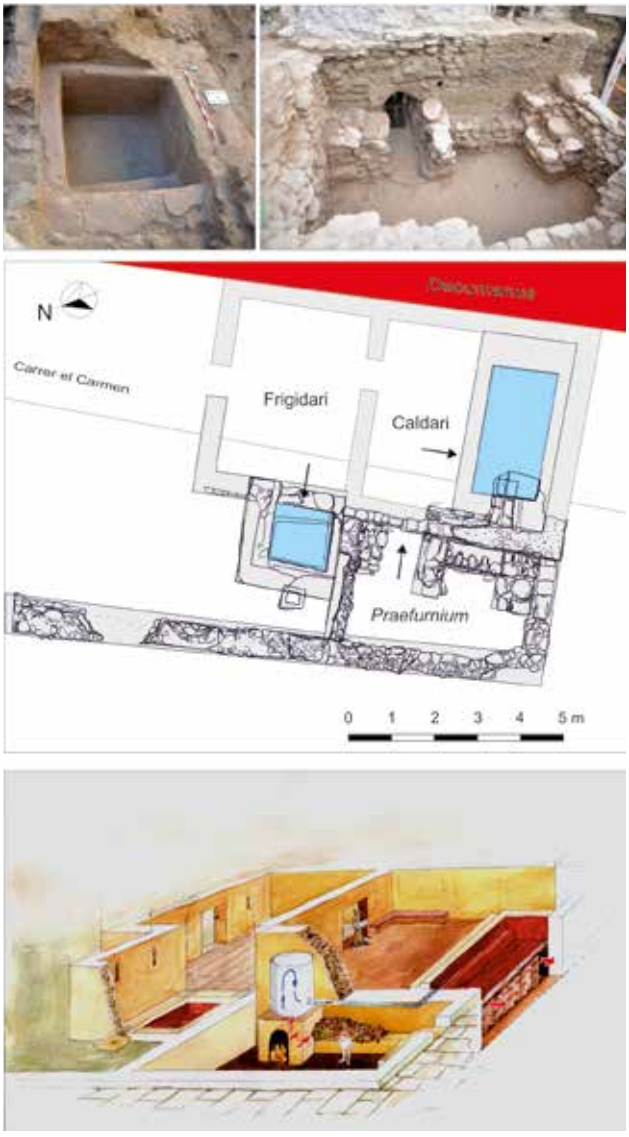


Fig. 14. Photos, plan and reconstruction of the private thermal baths unearthed during INT-270.

Although the finds are limited to those collected during the excavations in the course of construction of the train station in 1926, we believe that the real destruction of the cemetery must have taken place much earlier. A map from 1910 shows how the layout of the tracks of the first train station of 1861 probably razed a large part of the cemetery. It cannot be ruled out that the High Imperial finds recovered in 1926, such as the pedestals with inscriptions or the lamps not linked to any of the burials from the Low Empire, were probably displaced from their

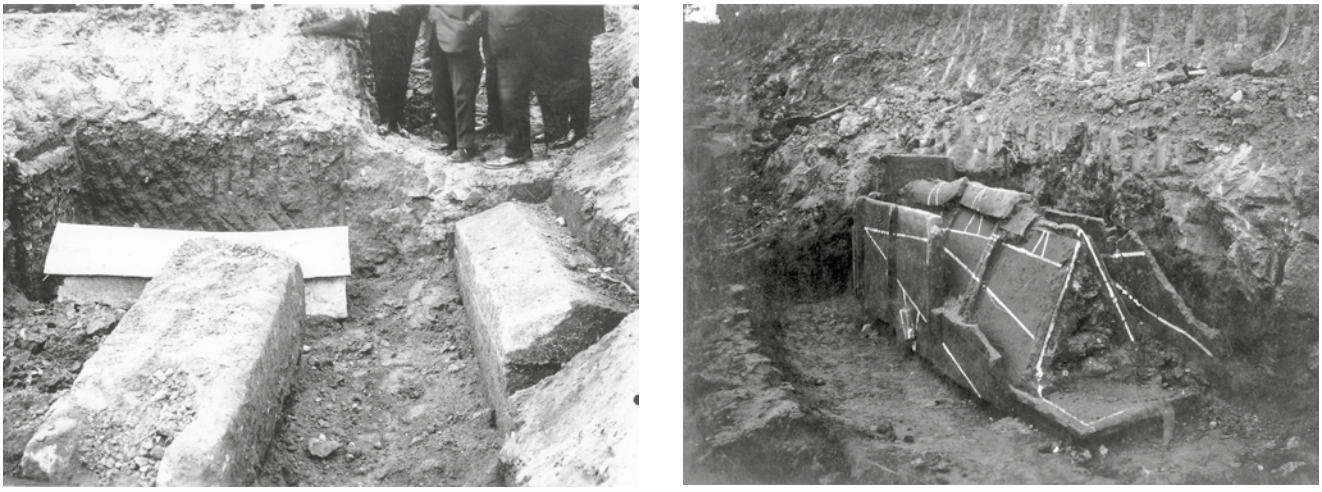


Fig. 15. Fotographs of burials at the moment of their discovery.

original position during construction of the older first train station.

The burials unearthed in 1926 were preserved because they were to the north and beyond the tracks of the initial railway. This area of the cemetery was active between the 4th and 5th centuries AD near what was potentially a building of Christian worship, relatively distant to the ancient Corbins road, near the first cemetery of Ilerda.

Pottery workshops and other commercial activities

The urban archaeology of Ilerda also offers evidence of activities related to manufacture, notably pottery production. The city, since its founding, produced Iberian slipped and painted ware whose manufacture persisted in parallel with the production of Ilerdan *terra sigillata* during the High Imperial period. This tableware found in the houses of Ilerda has been characterised as local by analyses of its clays.

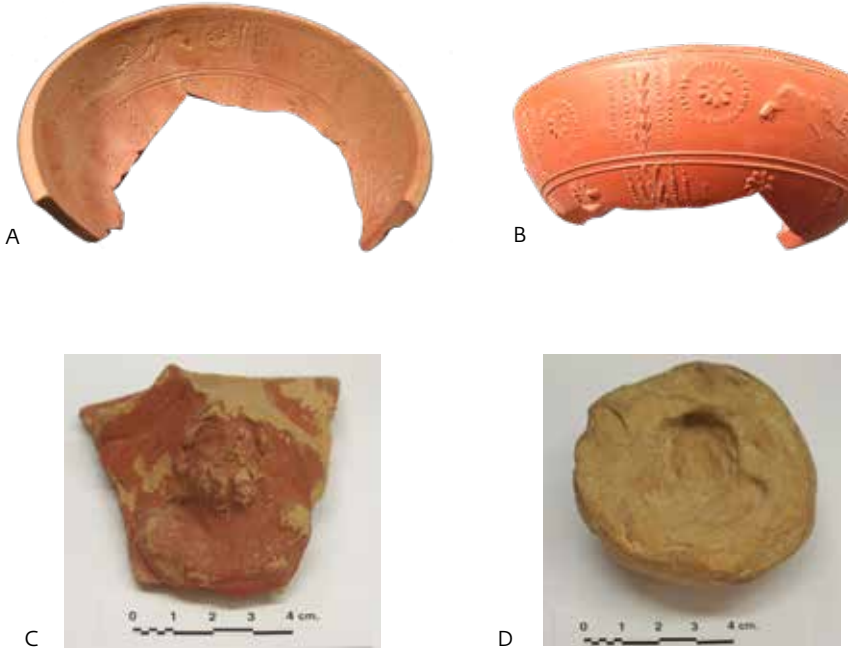


Fig.16.
A) Decorated mould to produce *terra sigillata* found near a kiln on the southeastern slope of the hill (INT-48, Fig. 6); B) positive produced from the mould; C) positive and D) mould of the attachment of a handle bearing a decor depicting Hercules.

Two of these pottery workshops were identified. The first, in levels preceding the construction of the large residential *domus* of the Municipal Auditorium, is evidenced by defective, poorly-fired wasters and a mould bearing the figure of Hercules. The second, on the south-eastern slope (INT-48, Fig. 5) and dated to the 2nd century AD, produced decorated *terra sigillata* vessels in moulds, some of which were unearthed in one of its rooms of the *domus* (Fig. 16).

Circular kilns, such as that recorded in at the INT-270, and pits containing combustion and slag remains in the oldest levels of various excavations of the city (INT-101, Fig. 5) reveal metallurgical activities of hitherto unknown scope and significance throughout the 1st century BC and part of the 1st century AD, especially in the sparsely urbanised areas such as the city's eastern end.

Other economic activities such as grinding wheat into flour and baking bread took place in two rooms of a building near the southern wall of the city (INT-06, Fig. 5). In the centre of one of the trapezoidal rooms was a biconical volcanic millstone identical to those from the city of Pompeii (Fig. 17). This building was abandoned during the second quarter of the 3rd century AD.

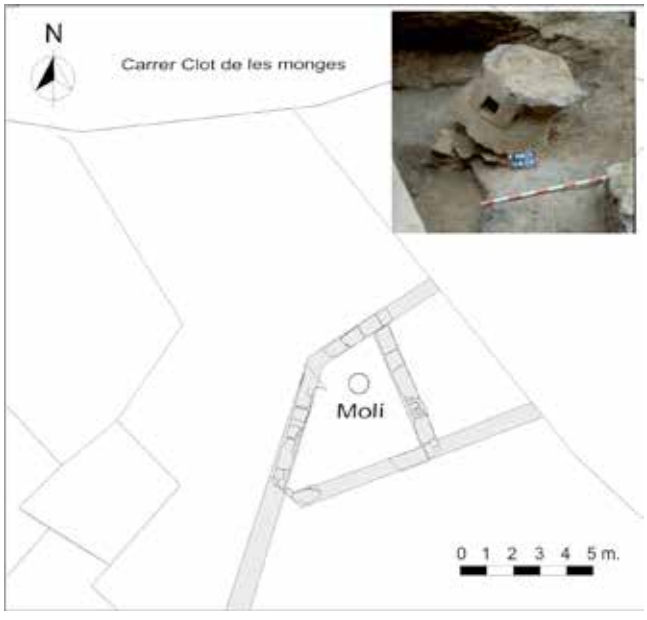


Fig. 17. Drawing and photograph of the millstone INT-06.

The archaeological evidence presented in this article, despite not exhaustive, serves to shed light on how the city of Ilerda was organised in the 2nd century AD. We now turn to summarise the evolution of the city's process of urbanisation.

The historical evolution of the city

Around 100 BC and immediately subsequent to Ilerda's founding, urbanisation and occupation of its spaces spread very rapidly throughout both its upper and lower sectors. Only a part of its eastern extremity did not follow this dynamic during the 1st century BC. The end of that century, when Ilerda was already a *municipium*, saw the construction of what appears to be a harbour warehouse (INT-12) and the *decumanus* market (INT-04). This phase also saw the urbanisation of the *cardo* (INT-101), construction of a new secondary road (INT-46), the first thermal baths (INT-83) and most likely the forum buildings. The 1st century AD then saw completion of the urbanisation of the Late Republican city.

The city at the outset of the 2nd century AD was subjected to an urban reform of unknown scale exemplified by the construction of the new public baths (INT-83), substantial modifications of the *cardo*, the extension of a *domus* over a secondary street (INT-46), the construction of the large *domus* at the Municipal Auditorium (INT-02) and construction of private baths along the northern edge of the *decumanus* (INT-270). Other reforms recorded in smaller residential buildings confirm that Ilerda, like other cities of the Peninsula, experienced its finest economic and social moment in the 2nd century AD. Moreover, it is no coincidence that most of the inscriptions referring to individuals date from this period.

This situation changed in the middle of the 3rd century AD when several buildings such as the large *domus* of the Portal de la Magdalena (INT-02), the flour mill at Francesc Macià (INT-06) and other

private buildings (INT-86, INT-46, INT-90) fell into disuse, were abandoned and then covered with earth. It is symptomatic that the villa of Torre Andreu in the immediate surroundings of the city and closely linked to city life also saw its end. However, extrapolating general notions requires careful interpretation even if the events do fit perfectly into the first great urban crisis suffered by the Roman cities throughout the Iberian Peninsula.

It is certain that three of the sites abandoned in the middle of the 3rd century AD (the *domus* of the Municipal Auditorium and the sites of Democràcia and Baixadad Trinitat Streets) not only were never rebuilt, but their surfaces began to serve for burials. Moreover the absence of levels and evidence of occupations subsequent to the 3rd century AD is certainly due in the numerous later constructions from both Al-Andalus and medieval times. This renders it impossible to determine how the city was set up during the 4th-5th centuries AD and how it overcame the crisis. There is evidence that the public baths, the *domus* with baths along the *decumanus* persisted throughout this period, and that new buildings such as that unearthed below the Paeria (city hall) and along the Bafart Street during the Low Empire were raised in parts in the city. Moreover, written sources at this time indicate that Ilerda followed the contemporary currents and conflicts, and proof of its continuity is the celebration it hosted in AD 546 of a new provincial council.

The Vell Pla Square of Guissona in 1933 during the archaeological intervention directed by Josep Colominas.

The Roman city of Iesso

Josep Guitart, Joaquim Pera and Núria Romaní *

Ancient written sources offer two very concise but significant references to the Roman city of Iesso and its inhabitants. The most explicit is by Pliny the Elder who in his *Naturalis Historia*, after describing the coasts of the Valencian region and Catalonia and their respective cities, then refers the whole of the *conventus Tarraconensis* in the following terms: 'Forty-two different peoples are subject to the jurisdiction of the courts of Tarraco: of these the most famous are - holding the rights of Roman citizens [*Civium Romanorum*], the *Dertosani* and the *Bisgargitani*; enjoying Latin rights, the *Ausetani*, and the *Cerretani*, the *Edetani*, the *Gerundenses*, the *Iessonienses*, and the *Teari*. Among the tributaries [*estipendarium*] are the *Aquicaldenses*, the Aessonenses, and the *Bæculonenses*' (Plini, *Nat. hist*. 3.4.23). The second, in Ptolemy's *Geography*, cites *Iesso* among the list of populations attributed to the Lacetani (Ptolemy, *Geog*., 2.6.71).

These very brief sketches by early authors, complemented by a series of epigraphic inscriptions, render it possible since the 16th century to connect antique Iesso with modern Guissona of the Segarra region, 70 km from Ilerda and just over 100 km from the coast. The ancient texts also offer significant data as to legal aspects as they describe the residents of Iesso as a privileged *populus* who already enjoyed in the early days of the Empire, under the reign of Augustus, the advantages of ancient Latin law. Moreover, one inscription from Guissona dating from the 3rd century (AD 282-283) refers to the *ordo iessonensium*, that is, the council of decurions of Iesso. This thus confirms, if there was ever any doubt, the link between Iesso and Guissona, as well as its role as a *municipium*.

** Photographs: Patronat d'Arqueologia de Guissona. Plans and 3D interpretation: Institut Català d'Arqueologia Clàssica (Josep Guitart, Josep M. Puche and Ivan Fernández).*

It was necessary nonetheless that archaeology begin to record the material remains of the ancient city. This only began well into the 20th century, notably in 1933, when the IEC Archaeological Excavations Service led by Josep Colominas explored the Vell Pla Square during the installation of a sewer. The astonishing features were difficult to interpret at the time as they included silos from the 1st century BC and remains of a Late Bronze and Early Iron Age settlement - the first occupation of an area which was long abandoned before the founding of the Roman city (Colominas 1941) (see view above).

Subsequently, and particularly since the 1960s, several individuals from Guissona, aware of the town's archaeological heritage, initiated the task of saving and recording archaeological materials that appeared during its urban construction. But systematic excavations would have to wait out the whole post-war and dictatorship intervals. Thus, between 1974 and 1978 several short campaigns promoted by the university yielded the first stratigraphic sequences and confirmed the city's archaeological potential, in part in a zone of arable land. This was the seed that led, years later, to extensive excavations at certain points of the town and finally the creation of the Archaeological Park of Guissona englobing a vast area of the northern sector of Roman Iesso (Fig. 1).

This made it possible to extend the detailed archaeological analysis of this part of the city that combined with the results of various preventive interventions elsewhere has progressively yielded concrete indications that deepen our grasp of the city's genesis, urban characteristics as well as key aspects of its evolution throughout the centuries of Roman Antiquity (Pera 1993; Garcés, Molist and Solias 1998; Guitart, Pera, Ros 2004; Guitart *et al.* 2018).

Fig. 1. Aerial view of the Archaeological Park of Guissona and in the background the town and Plain of Guissona.

Fig. 2. View of the wall during the excavation of 2003. Noteworthy is its width and the blocks forming its two facings.

Fig. 3. Remains of the North Gate of the wall of the city and its flanking defensive tower.

The founding of the city of Iesso

Iesso's founding as a new urban entity took place under the Roman Republic. The choice of the Plain of Guissona, besides strategic factors of regional scope, was most probably based on the natural and abundant source of water inside its walls. The choice of a setting also explains the earlier presence of a modest yet relatively extensive Late Bronze Age and Early Iberian site (probably from as early as the 7th century BC) that probably resembled the extensively excavated settlement of Els Vilars (Les Garrigues, Arbeca), today a magnificent example of an occupation in the plain during this remote timeframe of Lleidan protohistory. Since this book already devotes pages to this earlier site and to the archaeological remains unearthed under parts of Roman Iesso (see in this volume the article by Josep Ros Mateu), we will not delve further into this question except to note that the protohistoric town was abandoned during the 4th century BC.

The area of the source of water of the current town of Guissona between the 4th and 2nd centuries BC may have seen a modest occupation in the form of an isolated dwelling or hamlet, but never a proper Iberian settlement. The city of Iesso, although founded at the same spot as the earlier Late Bronze Age and Early Iberian site, retained however no links with the earlier frequentations either through material vestiges or memory. The founding of the Roman city two centuries later can therefore be considered as *ex novo*.

As was common at the time, one of the first tasks when founding a new city was to raise a defensive wall to enclose and protect the new urban core. The powerful fortification of Iesso was thus no exception. During the last two decades remains of these features in the northern section were unearthed at the Archaeological Park. They correspond to a segment of the city wall 40 m long as well as its northern gate and a solid defensive tower flanking the gate.

The wall was from 3.50 to 3.80 m wide raised on a base of solid, roughly-hewn blocks (no traces of bonding by lime mortar). From here rose two facings that when preserved reveal the construction technique (fourth modality polygonal masonry) widely adopted by Roman fortifications of the time. It consisted of elongated rectangular blocks, exceeding at times 2.50 m in length, bearing a slight bossage. The gap between the facings contained a compact filling of small irregular stones and earth (Fig. 2).

Only the base of the gate was preserved (Fig. 3). It nonetheless must have had a semicircular arch 3.80 m wide. The road passing through it was paved with large slabs marked by deep ruts, unequivocal evi-

dence of wear stemming from a continuous traffic over the years of carriages entering and leaving the city (Fig. 4). To its west was a large tower measuring 8.50 x 5.75 m raised following the same construction technique as the wall (Fig. 5).

Worth highlighting is that the different archaeological finds point to the massive nature of the fortification with an elevation that probably surpassed a height of 8 m. The discovery of a large, perfectly hewn ashlar suggests that the *opus quadratum* technique also was applied to the wall's upper facings (Fig. 6).

It appears that the wall as well as all of its features was almost totally dismantled, most likely in medieval and modern times, to reuse its blocks for construction. This dismantlement also allowed extending the fields around the town of Guissona which was refounded in the 11th century subsequent to the southward reconquest after centuries of having formed part of frontier lands. In fact, research at the Archaeological Park revealed that to the east, beyond the North Gate, the disassemblage of the fortification left only a few traces. This is also explained by the fact that the natural terrain of the westward slope left its eastern base at a shallower level making it easier to take apart. To the west, by contrast, it is deeper and better preserved. Consequently, traces of the fortification, although never excavated, are most likely well-preserved to the north-west as evidenced by the contemporary topography of Guissona.

Fig. 4. Blocks forming part of the road entering the city marked by deep ruts cut by carriages.

Fig. 5. Current view of the North Gate, the tower and a segment of the wall. The metal structure above the tower designates its approximate volume and height.

Our grasp of the perimeter of the wall remains fragmentary and very uneven from one area of the city to another. The current data suffices nonetheless to advance a first hypothesis of its entire outline. Its northern limit, noted above, is certified by archaeology. Its western and southern limits, in turn, are based on a combination of data gleaned from aerial photography, cadastral plans and archaeology. It appears in fact that the ancient wall's course was partially fossilised by the walls of certain current properties. In this sense the aerial photogrammetric coverage of Guissona carried out in 1945-1946 by the United States Air Force, prior to its urban expansion during the second half of the 20th century, reveals clear traces of the ancient enclosure (Fig. 7).

Thus, the form of the city's enclosure wall except for its eastern section, based on different evidence, begins to take shape. The hypothesis, which requires validation by future archaeological work, is therefore an enclosure wall with an irregular polygonal perimeter extending over a surface of about 18 hectares (Fig. 8).

Archaeology offers new data gleaned in particular from work at the Archaeological Park that helps pinpoint the chronology of the founding of Iesso and sheds light on its original function and historical context. The finds include the remains of several modest dwellings dating to the first half of the 1st century BC that formed part of a domestic quarter

Fig. 6. Rectangular block (ashlar) with surface bossage found at the foot of the wall.

Fig 7. Aerial orthophotograph of Guissona from 1945-1946 revealing traces of the layout of the walled enclosure of Roman Iesso.

adjacent to the wall. The wall itself, based both on its construction technique and its stratigraphy, dates to the end of the 2nd or early part of the 1st century BC.

The founding pits

Standing out among the archaeological finds are three circular pits about 2.50 m in diameter and more than 1 m deep cut through the natural terrain. They are about 25 m away from the wall and from the stratigraphic standpoint below a layer corresponding to vestiges from the quarter of domestic dwellings. The three undoubtedly are contemporary to the first moment of occupation of the area, possibly part of a ritual linked to the construction of the wall and the founding of the new city (Fig. 10). They contain at least 44 amphorae imported from the Italian Peninsula that can be classified into four well-differentiated groups (Guitart, Pera, Carreras 1999).

The first group, the largest, corresponds to wine amphorae of Dressel 1A type. Their provenance based on their fabric is most likely the Italian region of Campania. The minimum number of specimens is at least 22, statistically half of those of Italic origin (Fig. 11). The second group is smaller and comprises six amphorae characterised by a fine reddish fabric and an outer white to yellowish slip. Its precise origin in Italy has yet to be determined (Fig. 12). The third consists of sherds of only four amphorae, probably also intended for wine, with a fabric that differentiates it from the previous groups. Although

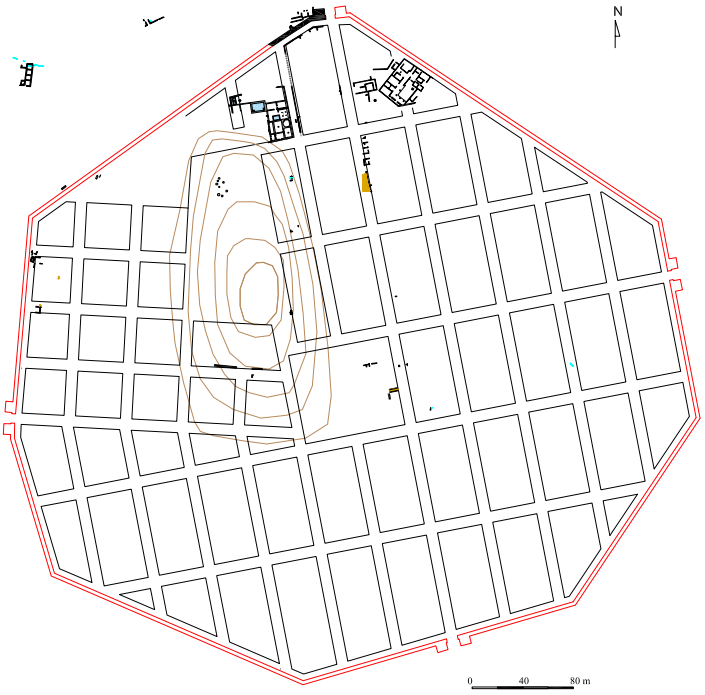


Fig. 8. Hypothetical layout of the Roman city of Iesso depicting the possible course of the founding wall and the potential grid serving as the base of its urban planning. The contour lines circumscribe the Capdevila-Vell Pla hill.

not represented by any rim fragments, the lot appears to be of Dressel 1A type.

The fourth group consists of at least 11 amphorae, presumably intended for oil, from *Brundisium* (Brindisi) on the Adriatic coast of Puglia. Two could be completely rebuilt. One is of particular interest for epigraphic reasons as one of its handles bears a rectangular stamp with the inscription 'APOL(LON)' arranged in retrograde. This mark is well-known among the products of the workshops of Brindisi from at least the first half of the 1st century BC. Its neck bears a second square stamp that is illegible. Finally its shoulder reveals a short painted *titulus pictus* reading 'C·HE', which most likely refers to the abbreviated name of the *negotiator* responsible for its marketing and transport (Fig. 13).

Both Dressel 1 amphorae and the Brindisi type (and its variants) were broadly circulated throughout the western Mediterranean from the last third of the 2nd century BC and for much of the 1st century BC. The examples from Iesso correspond to its oldest variants. Noteworthy is the absence among the assemblage of the Dressel IB and IC variants, which did not begin to arrive in Iesso until later the 90s of the 1st century BC.

The dating of the pits and their contents benefits from another unique vessel recovered at the base of Pit 2, notably several sherds of the rim, neck and handles of a Dressel 1A amphora of our second group. This particular case bears on its neck a red painted *titulus pictus* with a consular date. Although not well preserved, it reads 'Q·FAB L·OPI COS', that is, 'being consuls Quintus Fabius Maximus Allobrogicus and Lucius Opimius', two individuals who became consuls of the Roman Republic in 121 BC (Cormack et al. 2007) (Fig. 14).

Consular dates, relatively common to Dressel 1A amphorae, record the year of the harvest of the wine they contained. In these cases, it was probably a quality wine aged for a number of years before being packaged in the amphora. This practice by Italic

Fig. 9. View of the excavation of Pits 1 and 2 during their excavation.

Fig. 10. Details of each of the three pits during their excavation.

Fig. 11. Dressel 1A wine amphora imported from the Italian region of Campania.

Fig. 12. Dressel 1A wine amphora imported from the Italian Peninsula.

Fig. 13. Amphora from antique *Brundisium* (Brindisi) bearing epigraphic data: a *titulus pictus* on its shoulder with the inscription 'C.HE' and an 'APOL (LON)' retrograde stamp on its handle.

producers of the time is known due to the narratives of classical authors who for example (Ateneu, I, 26c-27b) precisely note the optimal ageing between 5 and 25 years for each type of wine (Tchernia 1986). Hence, in spite of the concrete consular date of 121 BC, it is not possible to determine the specific year this amphora arrived at Iesso. Yet there is little doubt that the different elements coincide in that the date of assemblage and the initial founding of Iesso took place about 100 BC.

Consular dates, relatively common to Dressel 1A amphorae, record the year of the harvest of the wine they contained. In these cases, it was probably a quality wine aged for a number of years before being packaged in the amphora. This practice by Italic producers of the time is known due to the narratives of classical authors who for example (Ateneu, I, 26c-27b) precisely note the optimal ageing between 5 and 25 years for each type of wine (Tchernia 1986). Hence, in spite of the concrete consular date of 121 BC, it is not possible to determine the specific year this amphora arrived at Iesso. Yet there is little doubt that the different elements coincide in that the date of assemblage and the initial founding of Iesso took place about 100 BC.

The remaining potsherds from among the different levels of fill of the pits are small but numerous. Their stratification suggests they were residual and their detailed study points to a chronological range spanning the last years of the 2nd century BC.

The impression is that the three pits were dug and then filled with great care. Their filling was simultaneous as fragments of the same amphora were found in each of the three. The hypothesis, not overlooked, that they were dug to then be filled with domestic waste does not line up with the characteristics of the remains they contained. The pits must therefore have been connected to a rite dedicated to the gods where wine played a key role. Their chronology and their proximity to the wall suggest that they formed part of the city's founding rites. There are in fact numerous examples of pits filled with goods interpreted as having formed part of Roman ritual and magical practices. Moreover, these types of structures are very common in Antiquity and known to be part of the founding rites of cities. It should be noted, however, that the discovery of the remains of a girl just over 20 years old among the amphorae sherds of Pit 1 obviously complicates the interpretation and poses an enigma that remains today unsolved (Fig. 18).

Fig. 15. One of the seven flat-rimmed Iberian amphorae discovered in the fill of the pits.

These hypotheses and enigmas remain difficult to confirm and resolve. In any case, the great number of Italic imports in a specific timeframe clearly points to the presence in Iesso of the Roman army benefitting from a direct and continuous supply of provisions from Italy. The army therefore chose the setting for the city and carried out its initial works of infrastructure: fortifications, urban layout, houses ... and perhaps also the centuriation of the territory.

Fig. 14. Dressel 1A amphora with a *titulus pictus* on its neck revealing the consular date of 121 BC.

Fig. 16. Double-rimmed painted Iberian vase from the base of the fill of Pit 1.

Fig. 17. Two bowls of Campanian A black-glazed ware found towards to top of the fill of Pit 1.

The historical context of the birth of the city

The well-defined chronology of the founding of Iesso links it to the historical framework of the time and, in particular, to an event that took place in the surroundings in the last years of the 2nd century BC as a result of the invasion of tribes from the north (Cimbri, Teutons, Helvetii ...). In 105 BC, after defeating two Roman armies at *Arausio* (Orange) in the Rhône Valley, the Cimbri sacked Languedoc and penetrated into *Hispania Citerior* most likely through the eastern passes of the Pyrenees. Although Antique texts do not shed light on this question, there is evidence that they provoked a great upheaval and that only the Celtiberians confronted them before the invaders returned to the south of France and were defeated by the Roman general and consul Gaius Marius. The Cimbrian post-war period could thus be the framework of the founding of Iesso by the Roman army both as a city and a strategic stronghold controlling the thoroughfares descending from the passes of the Pyrenees. Moreover, army veterans could have installed themselves in the city as stable colonists of the surrounding lands (Guitart 1994).

That the new city stemmed from a political initiative by Roman military authorities, present already in the area for several decades, is evidenced by recent archaeological explorations at Puig Castellar de Biosca (a site that also forms part of this exhibition and book), a military settlement from the 2nd century BC only 6 km from Guissona. Its proximity suggests that it played a key role in the founding of the new fortified Iesso due to the fact that it was dismantled and abandoned at the same time that Iesso was founded (see also Pera 2016: 22-44).

It is noteworthy that the indigenous population probably also took part in Iesso's founding. This is suggested by both its size, 18 hectares, and by certain clear archaeological finds, notably two Iberian inscriptions. The first is a splendid funerary stela bearing a dedication in Iberian characters to the deceased 'Neintinke', son of 'Subake', probably a member of the city's indigenous elite (Fig. 19). The second is a large jar with two potter marks in Iberian script/alphabet (Fig. 20) (Pera 2006).

Fig. 18. Skeleton among the amphorae fragments of Pit 1.

Fig. 19. Funerary stela with an inscription ('NEINTINKE. SUBAKE.E.I.TAKE') in Iberian signs translated to 'Neintinke, son of Subake, buried here'.

The Romans may have followed the same colonising strategy they often adopted during their expansion through Italy from the 4th to the first decades of the 2nd century BC. Their founding of numerous colonies was carried out by settlers comprising Roman citizens, residents of other Latin cities and members of the pro-Roman indigenous elite. Each of the Latin colonies created by the Senate of Rome became a key political and economic reference point of a territory in the Roman Republic's orbit. Iesso was not an initiative of the Senate, but of the military authority of the time. It therefore did not fall under the legal category of *colonia Latina*, nor would the other cities of *Hispania* founded at that stage of the Romanisation process. Hence the privileges of Latin law enjoyed by the residents of Iesso, the *Iessonenses* of Pliny, derived from the circumstances of this founding period (Guitart 2008, 2010).

Iesso's urban layout

The previous thoughts on the how and why of Iesso's founding also serve to interpret the scarce archaeological data as to its urban layout. The Romans when founding the numerous cities during their expansion throughout Italy developed a series of diverse but concrete urban models. Iesso likewise appears to adhere to guidelines similar to those applied in the founding of the ancient Latin colonies, notably a regular and functional layout following procedures of urban science popularised in the Greek world by Hippodamus of Miletus in the 5th century BC and widely applied and developed later by the Greeks and Romans. These types of cities were designed from the outset with roads (most often arranged according to an orthogonal grid), public squares, *insulae* for dwellings, and spaces devoid of constructions reserved for future facilities.

However it is evident that the walls and fortifications of Latin colonies adapted to the local topography regardless of the urban plan. This usually led to irregularly shaped enclosures often extending over vast surfaces surpassing the initial needs of a new city as the founders speculated on a future growth that did not always take place. The urban concept applied to Roman Iesso clearly stuck to this model. The traces of its walls, as noted, have led to the hypothesis of an irregular polygonal fortified enclosure extending over about 18 hectares, probably much more extensive than its initial settlement.

The terrain delimited by the enclosure was relatively flat, with a slight east-west slope, and an even gentler south-north inclination. The enclosed space also included a small elevation just over a hectare in its north-west quadrant stretching from what is today the Capdevila and Vell Pla Squares. To the west of the hill was a key feature within the fortified space: a source of water. This element undoubtedly played a major role in the choice of where to found the city. This hill, hardly 10 m above its surroundings, was the setting of the earlier Late Bronze Age and Early Iberian Culture settlement. With the exception

Fig. 20. Large jug with two potter marks 'TI.TI.S' in Iberian signs.

of the natural elevation around Capdevila Square, the remaining surface corresponds to a superposition of anthropic layers of the Late Bronze Age site's different phases (see the interpretation of Iesso's urban layout, Fig. 8).

There is ample evidence that the roads of the city were basically designed following what was originally a rigorous orthogonal grid. Over the course of its long evolution, the city saw a number of variations, especially concerning the width of its roads in function of reforms to the buildings of the insulae. The Archaeological Park contains several well-recorded roads, including the *cardo maximus*, *cardo 2*, *cardo 3* and the *intervallum*.

The north-south *cardo maximus* passing through the wall's North Gate was clearly one of the main thoroughfares of the city dictating the axes of the entire road network. Certain partially excavated sections in the Archaeological Park indicate that its width attained 11 m during Imperial times. Other observations of it beyond the park during a rescue excavation suggest, in turn, that its original width did not exceed 7 m (Fig. 21).

The excavation of a 70 m long segment of *cardo* 2 indicates it was 5.40 m wide and parallel to the *cardo maximus* located 35 and 38 m away. This distance suggests that the module serving for the initial planning of the extension of the *insulae* between the city's different cardines was one *actus*, equivalent to 120 feet (35.48 m), a length often adopted in Roman urban planning (Fig. 22).

A short segment of *cardo* 3 was likewise excavated recently to the west and about one *actus* (36.8 m) away from *cardo* 2. This road, 6 m wide and parallel to the other two *cardines*, was certainly interrupted to the south by the aforementioned Vell Pla Hill. Evidence that it was always secondary, apart from this interruption, is that an addition to the public baths extended over it in the middle of the 1st century AD.

The *intervallum*, another urban road, corresponds to the space between the end of the *insulae* and the city wall. Its different segments recorded so far reveal a width of 5 m. Its course along the interior of the wall allowed swift circulation throughout the perimeter. In the city's initial phases it had a strategic defensive function. In the city's later phases, during Imperial times when the wall lost much of its defensive role, certain of its segments, as evidenced by excavations, were occupied by other constructions (Fig. 23).

The Archaeological Park reveals what also appears to be traces of an east-west road. Although not excavated, it is evidenced by the southern limit of the public baths. If this were to be the case, it therefore corresponds to the *decumanus* at its intersection

Fig. 21. View of the cardo maximus in 2007 during the excavation at 11 Onze de Setembre Avenue. Its overlapping pavements evidence different periods of the city.

with *cardo* 2, just over 70 m from the intersection of *cardo* 2 with the *intervallum*. This implies that the *insulae* to either side of the *cardo* were two actus long by one wide equivalent to a module of 2:1 actus, often applied at this time when founding Roman cities. This interval in fact served for the urban plan of Empúries, a city contemporary to Iesso.

This strictly orthogonal structure meant that the insulae facing the *intervallum*, with their polygonal layout, adapted various solutions. Thus, the *insula* to the east of *cardo* 2 was extended by adding a small triangular surface, approximately the same as that to the west. The northern *insula*, in turn, to the east of *cardo maximus*, benefitting from the most archaeological observations, was extended to the east to incorporate the road and the next *insula*, greatly reduced in size due to the *intervallum's* diagonal *axis.*

Fig. 22. Aerial view of the *cardo minor* 2 during the 2006 excavation.

Intervallum

Figure 8 represents a basic image of Iesso's urban plan stemming from a combination of empirical archaeology evidence and interpretive hypotheses. It is based on the assumption that the Capdevila-Vell Pla elevation interrupted the orthogonal road network. Evidence gleaned from the preventive excavation of 11 Om Street in the heart of the medieval Guissona, near the church and at the foot of the south side of hill, also served to develop the scheme. The excavation brought to light a thick wall dating to the city's early Roman-Republican phases that probably served as the facade of a prominent building overlooking the *decumanus*. This feature's skewed north-western orientation is out of line with the grid of the roads. This deviation was also observed among the archaeological structures unearthed during rescue work to the south of Montsec Street. The different finds clearly indicate that the space of this part of the city to the south and west of the Capdevila-Vell Pla Hill followed an orthogonal layout deviating 18 degrees from that of the main grid. This different orientation centuries later marked the configuration of the zone's medieval constructions, including that of the church of Santa Maria.

The analysis of the topography of the terrain suggests that the irregularity in the urban plan resulted from an adaptation to the slope and the contour lines descending parallel to the Passerell Stream. The western course of the wall also must have adapted to this relief. It is clear that this irregularity, with a change in the direction of the urban fabric, is not at all common to the cities of this period that most often fall in line with a hypodamic grid

Fig. 23. Intersection of the *cardo minor* 2 and the *intervallum* with pavings of several periods. In the background are the remains of the facing of the city wall, and to the left, a wall that in a more advanced period blocked the course of the *intervallum* to the west.

such as that of Iesso. In any case, in spite of the scant data, the evidence is explicit enough to render the hypothesis plausible.

This altered orientation, on the other hand, also coincides with that of the Morana and Carral Streets, the last serving as one of the entrances to the medieval town. To the south of this point, however, the orientations of the medieval and modern streets align with that of the Roman *cardo maximus* suggesting that Carral Street could embody the fossilisation of the *decumanus maximus* of this part of the Roman city whose axis served to orient the different grid of the north-west quadrant of the urban layout which incorporated the important source of water inside the wall.

Otherwise, there are clues that shed light on the dimensions of the *insulae* of this part of the north-west quadrant of the city. They point to an urban layout consisting of square *insulae* with sides equivalent to an actus. This module yields three *insulae* between the Carral and Montsec Streets, which, due to their orientation, could likewise be the fossilisation of another *decumanus*. Moreover, both the wall observed at 11 Om Street (see above), as well as another identified to the south of Montsec Street potentially associated with a paved road, may coincide with the facades of several buildings facing various *decumani*.

We have added a wooded area to the reconstruction of the urban plan between the wall and around the source of water, which was undoubtedly also a key feature of the Roman city.

Also noteworthy is that the medieval axis formed by the Carral and Morana Streets that once again deviates approximately 18º, this time towards the south, when attaining the intersection with the axis of the Roman wall at a point probably marked by one of the gates. Hence the Morana Street continues from this point with an orientation perpendicular to that of the *cardo maximus*. It is therefore likely that this medieval road potentially represents the fossilisation of the east-west centuriation of Iesso's surrounding territory where it connected to the *decumanus maximus* at the West Gate, but avoided following the oblique orientation by adapting itself the city's main layout (Figures 24 and 25 are schematic 3D reconstructions of the city deriving from these hypotheses).

The development of Iesso and its evolution in Imperial times

An urban layout following a grid had to also foresee the position of public spaces and the basic features that would subsequently take shape with the arrival and consolidation of the population.

The forum was a quintessential public space when founding a Roman city. At Iesso this feature has yet to be identified by archaeology. There are nonetheless indications suggesting it was framed between the current Seminari, Coma, Sant Pere Streets and Generalitat Avenue. A public square at this point probably also served to define the intersection of the two networks of roads with different orientations. The surroundings of the forum usually contained the city's most vital and symbolic public buildings. These constructions in the case of Iesso have also yet to be identified. Only a salvage excavation carried out years ago at 34 Generalitat Avenue unearthed the remains of a structure featuring an *in situ* cylindrical bronze ground hinge of a portal.

Fig. 24. Hypothetical schematic 3D reconstruction of Iesso as seen from the south-east.

This element could in fact have been part of a public building that carried out special functions in the city centre (Fig. 26).

Another potential public space was on the hill (today the Capdevila-Vell Pla) that has nonetheless yielded no trace of Roman constructions. Here the archaeologist's pick fell directly on the remains of a protohistoric settlement as all this sector was levelled during the construction of the medieval wall. But the numerous bases of underground silos discovered by Colominas in 1933 in the Vell Pla Square suggest the existence in an early phase (1st-century BC) of the city with many features linked to public grain storage. A similar situation was observed at the Roman city of Empúries where storage silos occupied, in the first years after the city's founding, a part of the public space destined to the forum. This space subsequently, at the time of Augustus, was monumentalised by replacing the old warehouse with a judicial basilica. At Iesso, in turn, there is no evidence of how this space could have evolved in Imperial times. It could in fact have formed part of the north-western sector of the forum.

This study in its attempt to interpret the hypothetical urban public spaces of Iesso resorted to models gleaned from the nearest Roman cities, notably Empúries, *Iulia Libica* (Llívia) and *Auso* (Vic) where their forums and certain of their building could be observed either entirely or partially. These examples suggest the forum of Iesso was a porticoed square occupying a large part of two *insulae* presided over by a temple. The dimensions of the temple probably

Fig. 25. Hypothetical 3d reconstruction of Iesso. Detail of the North Gate and the northern sector of the city, the current location of the Archaeological Park of Guissona.

Fig. 26. Remnants of the building discovered at the 34-38 Generalitat Avenue with a remarkable *in situ* bronze hinge of a portal.

also resembled those of the nearby Roman cites (see Figures 8, 24 and 27 for hypothetical location and layout of the forum).

The Capdevila-Vell Pla Hill, in turn, is represented by a tree-lined space following the layout marked by the orthogonal roads which must have been in line with the main layout. The space was also possibly directly connected by stairs with the *decumani* and to the south with *cardo* 3. This public space hypothetically possessed certain pavilions, one of which could have served as a cereal storehouse, as suggested by the silo bases brought to light in 1933 at Vell Pla Square (Fig. 27). The interpretation of Iesso's potential forum and public spaces on the hill are currently reasoned hypotheses backed by little concrete evidence. Future archaeological work must focus on these areas to refine the approximate view of the whole city.

One of Iesso's public buildings, the thermal baths, is by contrast well-recorded. Moreover, research on this public construction carried out in the Archaeological Park also offers data as to its evolution. Its original features, of rather modest dimensions but great constructive quality, date from the late part of the first half of the 1st century BC. A century later, in Imperial times, it was remodelled by an extension to the north which demolished a series of earlier domestic dwellings from the initial phases of the city occupying a space near the *intervallum* and *cardo* 3. Finally, in the first half of the 2nd century BC it was once again remodelled, but this time partly destroying earlier features to erect a new building, probably even more monumental.

This evolution of these baths potentially reflects the trajectory of the city, which must have experienced a phase of prosperity and growth throughout the reign of Augustus and the Julio-Claudian Dynasty. Under Tiberius (AD 14-37) it boasted a network of running water with robust lead pipelines suggesting the presence of aqueduct and its corresponding water tower. This prosperity must have lasted at least until the 2nd century AD as evidenced by signs of remodelling and monumentalisation.

There is evidence of a similar trajectory in another area of the Archaeological Park where an extensive excavation of the *insula* to the west of the *cardo maximus* brought to light a quarter of modest dwellings dating from shortly after the founding phases of the city but transformed towards the 2nd century AD when most of these *insulae* were unified into a large seigniorial estate, presumably the residence of

Fig. 27. Hypothetical schematic 3D reconstruction of Iesso. In the foreground is the spring, the thermal baths and the Capdevila-Vell Pla Hill with features interpreted as having served for public storage.

a prosperous family of citizens forming part of the city's elite.

A more detailed description of the thermal baths and dwellings of Iesso, as well as its use of water, are in the other chapters of this volume focusing on the three Roman cities of Western Catalonia. It is worth highlighting nonetheless that there are traces of another structure that sheds light on the vitality of the city in Imperial times, a building raised outside the wall next to the defensive tower of the North Gate. This structure, only partially excavated and whose function is currently difficult to specify, was likewise remodelled on several occasions. One interpretation is that it served as a warehouse to store goods outside the city. Another is that served as stables for horses and carriages. In any case, archaeological work indicates that it was in operation until the first half of the 3rd century AD (Fig. 29).

Also noteworthy is that the archaeological interventions throughout the city and beyond its walls have detected a series of features from the Imperial period that display a certain level of suburban development. This is also quite common to Roman cities of the High Imperial *pax Romana*. A series of fortuitous finds of great interest also come from this peri-urban area. These include the two most emblematic items of Guissonian archaeology: a small bronze representing a military rider riding at a gallop (Fig. 30), a funerary inscription in verse by Servilla Prepusa dedicated to her daughter Lesbia (see this inscription in Fig. 6 of the article by Arturo Pérez in this volume) and a small figurine of a bull also of bronze (Fig. 29). These

Fig. 30. Small bronze sculpture of a galloping horseman in military attire. The find possible comes from a funerary monument in the periphery of ancient Iesso.

finds can probably be associated with burials near the walls and roads leaving the city which to date are only indirectly recorded by archaeology.

Roman Iesso persisted throughout the Low Empire and Late Antiquity, and presumably until the early part of the 8th century. Then, after the Islamic domination and until in the 11th century, it was incorporated into the County of Urgell. Thus it is possible to refer to the founding of medieval Guissona despite the lack of records or archaeological data, and not rule out a certain continuity of the settling of the Plain of Guissona. Ruins of the Roman city in the 11th century were undoubtedly still visible. Residents of the medieval town consciously dismantled the blocks of Roman buildings to raise new constructions. This is evidenced in the area of the Archaeological Park which over time became farmland provoking the disappearance of the Roman city's final phases. This implies, for now, that much remains unclear as to the evolution during the period ranging from the 4th to the 8th century. There is evidence, based on a cemetery next to the church, that Iesso did have a Palaeo-Christian community. Moreover, the remains of a 5th-century winery and other features of its industry, well excavated in the Archaeological Park near the *cardo maximus* (Uscatescu 2004), suggest that the city was not only still active during this late phase, but that this activity extended to the most peripheral areas of the old enclosure.

Fig. 28. A moment of the excavation in 2018 of a building outside the wall next to the defensive tower of the city's North Gate.

Fig. 29. Small bronze bull discovered during a salvage excavation in a northern periphery of the city.

Section of the wall of the Torreta Street (photo: S. Martínez).

The Roman city of Aeso

Cristina Belmonte, Xavier Bermúdez, Ignasi Garcés and Teresa Reyes

The founding of Aeso along with that of other cities such as Ilerda, Baetulo, Iluro and Iesso took place in the framework of the urban organisation of the north-east of the Iberian Peninsula from the end of the 2nd and outset of the 1st century BC.

Fig. 1A. View of the wall in the sector of the Carrerada Street (photo: T. Reyes).

The Republican wall and the *forma urbis*

Aeso was founded at the outset of the 1st century BC after levelling the remnants of a first Roman occupation. This consisted of raising an imposing defensive wall characterised by parallel large ashlar facings apparently not imbricated containing a sparse filling (Fig. 1). At an average width of 1.50 m, the wall rests directly on a geological substrate of soft conglomerate gravel of lacustrine origin and, at times, on older anthropogenic substrates. Although today preserved at an elevation of 3 m, the wall's original height is unknown.

The urban nucleus was perched on a rocky outcrop inclined slightly to the south-west dominating the surrounding flatlands above the confluence of two streams. Following the axis of this natural relief is

Fig. 1B. Remains of a room and houses of Aeso raised over blocks of the demolished wall, 2nd century AD (Fideuer market garden).

the current Soledat Street that is parallel to a section of wall unearthed along the Torreta Street and thought to represent the fossilisation of Aeso's *decumanus maximus*. The Raval Square is at the end of this ancient road where two blocks of houses (arranged obliquely to each other) are aligned symmetrically with regard to the section of wall observed in the southern area of the orchards (Garcés et al. 2019). All these features appear to respectively represent the northern and southern limits of the city.

The segment of the wall on the Torreta Street forms one of the long sides of the urban perimeter. As its opposite counterpart is not preserved, its position is inferred by applying the axis of symmetry of the *decumanus maximus*.

This approach yields a hypothetical elongated hexagonal *forma urbis* with chamfered corners at the shorter ends (Fig. 2) corresponding to the gates of the main axes of the roads oriented SW/NE. These gates, according to the surveys, must have been defended by quadrangular flanking towers. Aeso was thus rather small, only 350 m in length and 130 m wide, extending over a surface of about four hectares (Reyes 1991: 49-51).

Two bench-shaped terraces perpendicular to the wall were built immediately after raising the urban enclosure. These features correspond to levels associated with the first organisation of the city's urban space in what is today the area of the Torreta Street. The levels associated with this initial phase range from 100 to 50 BC. The wall was the exceptional protagonist of this moment, and its presence determined the interior urban plan.

Urban transformations during the High Empire

The Roman world during the first centuries of the Era - the High Empire - experienced a phase of general prosperity. At Isona this translated into the emergence of urban elites who left written records in the form of dedications and gravestones of their rank, honours, family relationships and religious orientation. Aeso is represented by a rich assemblage of 42 inscriptions based on recent finds (Sabaté et al. 2020) dating for the most part from end of the 1st century AD and the outset of the 2nd century AD, notably from the reigns of Trajan (98-117) and Hadrian (117-138).

A critical change took place in the city at the end of the 1st century AD when it acquired the rank of *municipium* and its constructed area began to surpass the limits of the earlier Republican wall to the point of at least doubling its surface. Few parts of the city bear evidence of these changes as clearly as those uncovered during archaeological work at the Fideuer market garden. The excavations here revealed that a section of the city's founding wall, identical to that observed at the Torreta Street, was demolished at the end of the 1st century AD in order to raise a great building which persisted until the second third of the 3rd century AD (Payà et al. 1994b: 121-123; Reyes 2014b).

The corner of one of its rooms (above the remains of the older wall) was paved with an *opus signinum* and its walls were made of small rough irregular coarse limestones bound with lime mortar (Figs 3 and 4). Its façade opened up through a large stepped sandstone threshold to a parallel street paved with pebbles and clay.

A second trial trench identified the corner of a similar room which stands out for the exceptional state of preservation of its walls ranging in height

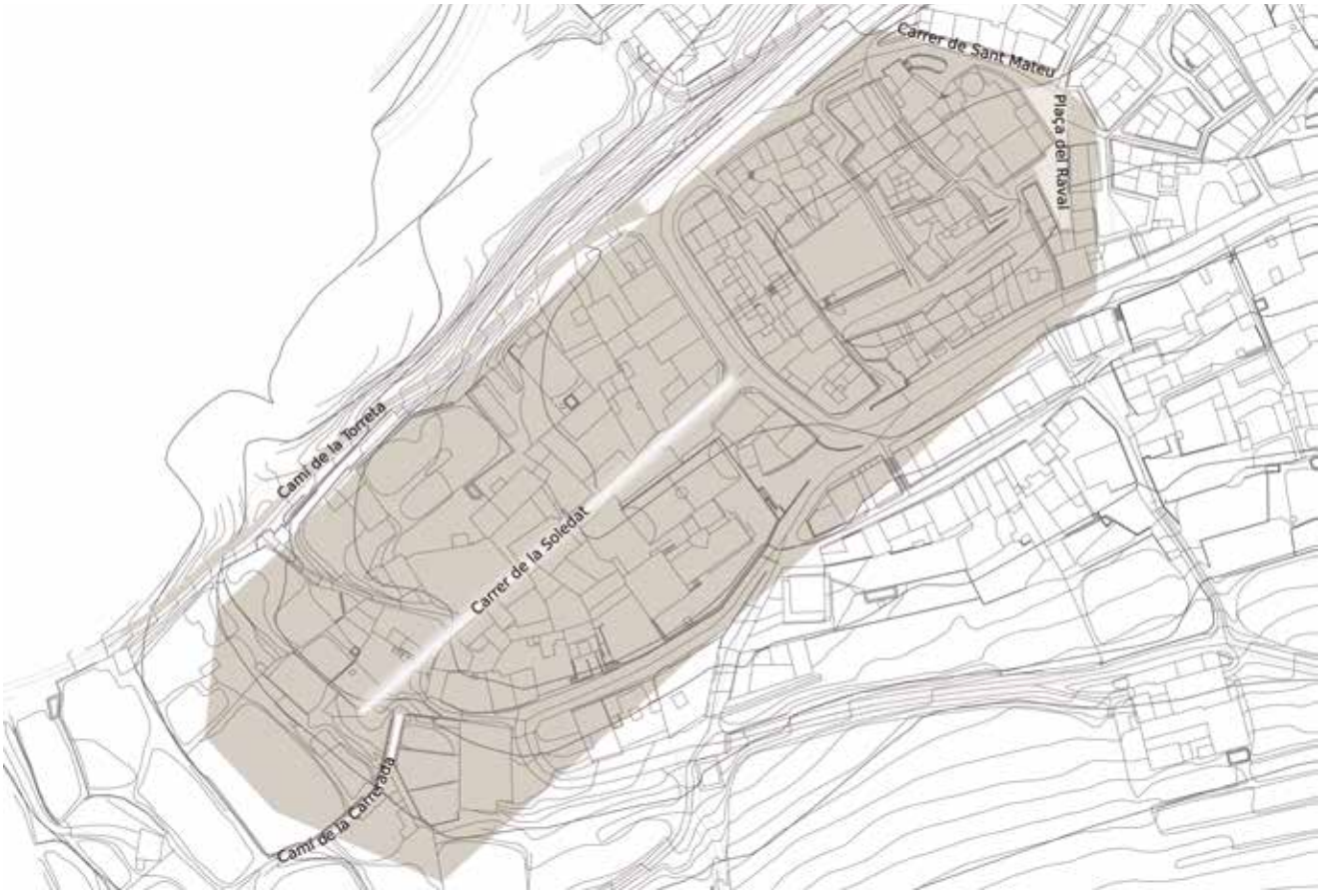


Fig. 2. Hypothetical map of the city: the darker area represents the known sections of the wall; the lighter and discontinues areas indicate the potential course of the wall (drawing: Projecte Aeso - UB).

between 0.58 and 2.48 m. Judging by the finds (*pilae* and *bipedalis* tiles, T-shaped nails, terra cotta pipes, etc.), it is likely a *hypocaustum* perhaps linked to public thermal baths. Another option is that it formed part of the baths of a private *domus* (Equip Prama 1989: 107-141).

Another part of the city where these transformations are evident is at the excavation of the 'Casa dels Antonii' along a section of the city wall on the Torreta Street. Here were built two walls attached to the main wall that subdivided the spaces delimited by the old bench terracing walls dating from the city's initial internal urbanisation. The four spaces thus defined were closed to the south by a new wall parallel to the urban enclosure. Simultaneous to the regularisation of its elevation, another parallel wall delimited the aforementioned areas to the south. Yet another parallel wall was raised 2.5 m from the southern boundary preceded by three quadrangular equidistant blocks interpreted as bases of columns. The preservation of the different structures is extremely poor as they were looted for their building materials. Their foundation ditches, in fact, are at times their only remaining elements. These features must have formed part of the same construction, that is, a large building raised with a porticoed courtyard, an atrium or a peristyle. The corridor and the bases of certain columns, as well as certain potsherds, were associated with *cubicula* (rooms) attached to the wall.

This building was dubbed the 'House of the Antonii' based on the find of a small inscription bearing this name carved in marble from Proconessus (Marmara, Turkey). It is not possible to determine whether the inscription formed part of a votive offering or a gravestone. The materials of the earlier levels and

Fig. 3. Detail of the Republican wall under the features of a newer building excavated at the Fideuer market garden (photo: T. Reyes).

Fig. 4. Singular burial of a woman and infant (photo: C. Belmonte).

those associated with the house suggest it saw use from AD 100 until the first half of the 3rd century when its structures began to be looted (Payà *et al.* 1994b: 119-120; Reyes 2014c).

Transformations during the Flavian period are also evident at the neighbouring house at the Era del Serret. Located at the start of the Torreta Street, the ancient excavations through the geological substrate created two terraces oriented NW/SE. Archaeological explorations of these surfaces brought to light poorly preserved vestiges of domestic structures, some of which must have contained remarkable pictorial decors judging by the quantity and quality of the fragments of stucco. Although highly fragmented, they reveal geometric motifs on trims consisting of lines and circles delineated by red, black, green and white pigments. The pottery suggests these levels date to the 2nd-3rd centuries (Solanes 2014: 139-141).

Near the expanded urban areas, perhaps a bit beyond, is the building of the southern sector of the Serrat dels Espinyers dated between the 1st and 2nd centuries. It contained up to six different rooms apart from others beyond the excavated area. These rooms formed part of a larger building, only partially excavated (700 m2) whose typology and construction techniques reveal an indigenous tradition (Belmonte 2014; Belmonte 2015; Garcés et al. 2020a; Garcés et al. 2020b).

'Room 5', to the north of the main building, is a small, very poorly preserved room separate from the other structures. In its centre was a circular fireplace set at the level of circulation. Under this level was the inhumation burial an adult woman oriented east-west (head facing east) in supine position with her hands on her thorax. A foetus, most likely the son of the woman, was placed between her left arm and thigh (Fig. 4). The size of its femur suggests it was between seven and nine months. The two were apparently placed in a simple, shallow pit inside the room on a thin layer of clay covering the subsoil.

'Room 4' is the most unique and the largest (14.5 x 8 m) of the rooms, extending over a surface of about 112 m2. To the north it accessed two spaces through a large door 6 m wide. Its main feature was a series of evenly distributed stone blocks, bases that supported both the roof and a possibly an elevated floor. This system of construction, besides serving to insulate the room from moisture, levelled the floor as the structure was raised on an inclined surface.

Thus, the total absence of underground silos in this phase and the general characteristics of the site suggest the structure was a large elevated storeroom or *horreum* combining construction techniques of both Iberian and Roman tradition. It was compartmentalised, ventilated from the north, and had elevated floors. Moreover, it was set in a well-guarded, easily accessible spot close to the city

Fig. 5. Late Imperial tower.

wall. It should be borne in mind that this construction formed part of the public system of storage of the city's surpluses, as did the structures observed in this area from earlier phases (Belmonte 2014b; Garcés *et al*. 2020a).

Transformation of the city during the Late Empire

Little can be said about Aeso's final period as few interventions have come upon levels or structures of this phase. It is therefore difficult to determine the chronology or dynamics of its last phases of urban life. From a point of view of structures, the most significant feature from the Late Imperial period is a tower on the Torreta Street, a street whose name derives from the structure (Fig. 5). It was in fact the only Antique construction of the city visible before the initiation of the excavations.

The tower is square with three visible dry stone facings (no binding materials). The construction technique is in fact similar to that of the city wall except for its use of smaller ashlars and the presence of several loopholes for its defence. At the time of its construction, the Republican wall was sectioned in order to attain, as in the earlier case, the conglomerate bedrock so as to secure its foundations. Its construction dates between the middle of the 4th and the middle of the 5th century AD. This tower, according to potsherds found in its levels of abandonment, must have served, albeit discontinuously, until the late medieval period (Equip Prama 1989: 48-92; Reyes 1991: 33-49).

Excavations throughout different areas of the city brought to light other stratigraphic sequences from the Late Antiquity. Exploration of the sector of the 'House of the Antonii' unearthed traces of a late phase of unconnected walls difficult to interpret. Judging from the pottery, notably African *terra sigillata* D and grey ware from the south of Gaul, they were raised between the second half of the 3rd century and the 4th century, and abandoned towards the middle of the 5th century (Payà et al. 1994b: 120-122; Payà, Reyes 1995: 57-60).

Another element corroborating the abandonment of the city during the Late Empire is an infant burial dating the 4th century next to the wall in an area which had contained buildings. The burial devoid of grave goods was in a cist made of reused construction materials.

Moreover, the intervention at the Fideuer market garden (in the southern sector of the orchards) brought to light abandoned buildings originally from the Flavian period. Their access road nonetheless remained in use until the middle of the 5th century, a dating based on finds of Low Imperial pottery such as *terra sigillata* D (Hayes form 67) and African tableware.

These data, although spatially unconnected, allow speculating on a scenario as to the end of Aeso's urban life, a phenomenon that began in the 4th century and persisted until the middle of the 5th century.

This last phase corresponds to the poorly known Roman-Christian Isona. It must be noted that a reference to a Bishop in Isona in the Acts of the Sixth Visigothic Council of Toledo of 638 (FHA IX: 294; Tovar 1989: 451) is erroneous. This issue was definitively resolved by critical research indicating that the reference is to the Bishop of Auso (Vic) and not Aeso.

From a strict archaeological point of view, we currently ignore whether there was a continuous occupation between Late Roman Aeso and Late medieval Aesona if the nucleus was inhabited during the second period. There are records from the second half of the 11th century onwards indicating the presence of settlers where the Roman city had once stood, the time of the founding of an enclosed one hectare town partially occupying the northern sector of the Roman-Republican city. The towers and segments of its wall remain partially preserved today, concealed between the buildings around the Portal Square (Reyes 2014d).

As of Augustus from Ilerda (MNAC/GNC).

Coinage in the cities of Ilerda, Iesso and Aeso (end of the 3rd century BC – beginning of the 1st century AD)

Marta Campo

The Second Punic War and the beginning of the minting of coins in western Catalonia

The northeast of Iberia prior to the outbreak of the Second Punic War was a very poorly monetised area only served by the mints of Emporion (Empúries) and Rhode (Roses). Coins at the same time occasionally attained this coastal area due to commercial links between the indigenous Iberian populations and the Greek colonies and Greek and Punic merchants. However, currency practically did not penetrate into western Catalonia until after the onset of the Second Punic War.

The Second Punic War and the subsequent indigenous revolts against the Roman presence as well as the large number of troops generated intense financial demands. It is in this context that a great number of Iberian populations located along the northeastern coastline of the Peninsula and in the territories occupied by the Ilergetes and Ilercavones began to mint silver coins. Although the iconography of most of these productions imitated Emporion's drachmas and their fractions, only a few bore identifiable place names or legible text. Practically the only recognisable toponym linked to these issues with any degree of certainty is the reference to Iltirta, the great capital of the Ilergetes.

Fig. 1. Silver Ilergete issues dating to the end of the 3rd century BC. 1) Drachma from the hoard of Xest (Valencia) (MIB 67/05) (MNAC/GNC). 2-4) Drachma and *tritartemoria* (MIB 67/08, 18 and 30b) (Private collections) (scale 1:1).

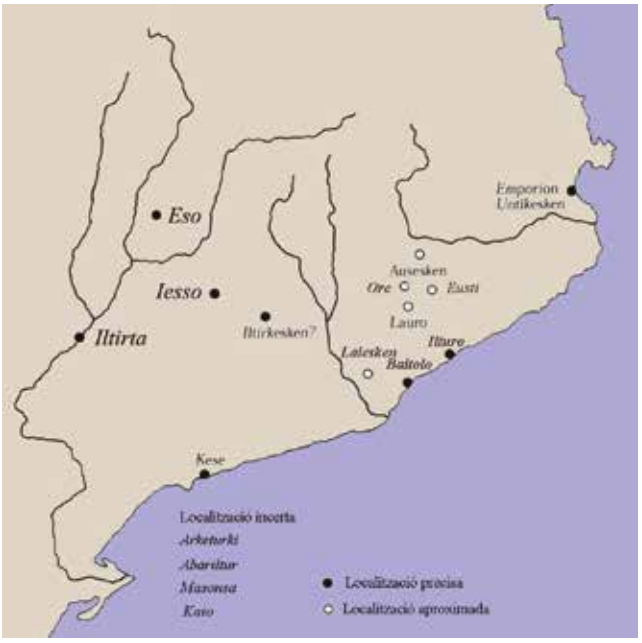


Fig. 2. Map depicting the Iberian mints in the northeast of *Hispania Citerior*.

The mint of Iltirta issued a great amount of currency commensurate with the outstanding role played by the Ilergetes during this period of intense conflict. The obverses of the drachmas bear a male head or, most often, the traditional female head surrounded by three dolphins like those of Emporion. The reverses were engraved with the typical Emporion Pegasus with the head modified to take on the form of a small human. These are accompanied by different variants of the Iberian legend 'iltirta' such as 'iltirtar', iltirtasalir' or 'iltirtasalir-ustin' (MIB 67/01-16). A highly significant feature is the constant presence of a small wolf below Pegasus, an animal that would later also appear in many of Iltirta's issues. The wolf was thought to be the totemic animal of the Ilergetes symbolising the mythological episode linked to the foundation or protection of the community (Giral 2006) (fig. 1.1-2).

Also minted in Iltirta, or at least in the Ilergete territory, were fractions of drachmas, equivalent to *tritartemoria* that more or less imitated the obols of Massalia (MIB 67/18-39). These depicted a male head on the obverse and a wheel with three or four spokes on the reverse accompanied by engraved inscriptions such as variants of the legend 'iltirta' and/or the letters M A, as well as a diversity of symbols such as the crescent, the triangle or the typical Ilergete wolf (Fig. 1.3-4).

The climate of extreme insecurity during this period and the entry into the circulation of a great volume of currency led to the stockpiling and loss of many coins. Noteworthy from this period is the hoard of Camarasa in western Catalonia containing many Iltirta *tritartemoria* and four pieces of Roman quadrigati (Villaronga 1993: 30, no. 28; Giral 2018). The constant displacement of fighting troops also favoured the diffusion of Iltirta drachmas to distant territories as evidenced by hoards including that of Xest (Valencia) (Chaves and Pliego 2015: 117-119) (Fig. 1.1). Isolated finds also suggest the arrival of foreign issues into western Catalonia, notably Carthaginian coins from the Iberian Peninsula (Gurt, Tuset 1982; Giral 2015).

Fig. 3. Issues from Iltirta dating to the 2nd century BC. 1) Bronze unit (MIB 67/63a); 2) Bronze half-unit (MIB 67/64b); 3) Silver denarius (MIB 67/58e); 4) Bronze unit (MIB 67/69) (MNAC/GNC) (scale 1:1).

The 2nd century BC: the mint of Iltirta and the first minting of coins under the gaze of Rome

Only the mint of Emporion remained in operation in the northeast of *Hispania Citerior* after the Second Punic War and the subsequent Iberian rebellions. The Iberian populations throughout the 2nd century BC gradually returned to manufacture coins bearing substantially different characteristics from those of the previous period. It is a complex process that can only be specified based on finds from well-dated archaeological contexts. These new Iberian issues were allowed, even encouraged, by the Romans in order to bolster relations with the indigenous elite. They also served for daily use, which made it less necessary to import currency (especially of bronze) from the Urbs (Campo 2022: 130-132).

Regarding the appearance of the new issues, finds in well-dated contexts only indicate that the workshop of Untikesken may have initiated minting bronze coins in the second quarter of the 2nd century BC and that Kese was only at full capacity in the middle of the 2nd century BC (Campo 2000: 63-65). Although archaeology has not yielded data confirming the opening of a mint in Iltirta in this period, the city must also have possessed the appropriate characteristics in the middle of the 2nd century BC.

Rome undertook a profound reorganisation of the northeastern area of *Hispania Citerior* in the middle of the 2nd century BC. This framework, particularly evident from the end of this century and the onset of the next, initiated a process of territorial urbanisation with the founding of new cities and the promotion of already existing indigenous nuclei that must have intensified the need for currency. This probably explains the almost 20 Iberian mints in the territory producing almost exclusively bronze coins. In addition, the Iltirta, Kese and Ausesken mints struck silver denarii and quinarii (Campo 2000: 65-67) (Fig. 2).

As the design of the silver denarii and quinarii and bronzes units adhered to Roman metrology, the city of Iltirta adopted the same iconographies as Kese. These, with their slight variations, were also copied by most of the Iberian and Celtiberian mints in *Hispania Citerior*. The obverses bore a male head surrounded by three dolphins, depictions generally associated with a warrior or an indigenous war deity. A horseman holding a palm was engraved on the reverses in conjunction with the legend in Iberian letters: 'iltirtasalirban' for the silver issues and 'iltirta' for those of bronze. The various fractional bronze denominations bear the same obverse depictions as the units, while the reverses depict a galloping horse at times accompanied by symbols such as a crescent, a star or Iberian signs (Fig. 3.1-3). These im-

Fig. 4. Bronze issues from the first half of the 1st century BC. 1) Unit from *Iesso* (MIB 65/1); 2) Unit from *Eso* (MIB 66/2); 3-4) Units from *Iltirta* (MIB 67/82a and 87a) (MNAC/GNC) (scale 1:1).

ages are in keeping with the strongly rooted equestrian tradition of Iberian societies when riders and horses symbolised power (MIB 67/56-68 and 70-81).

The Iltirta workshop also minted bronze units weighing less than those depicting the horseman, with a male head on the obverse and a wolf on the reverse accompanied by the Iberian inscription 'iltirta' (MIB 67/53) (Fig. 3.4) apart from fractional denominations with a lion or a boar on the reverse (MIB 67/54-55 and 69). Where these units began to be manufactured in parallel to the series of the rider remains unclear.

The 1st century BC: an increase in the monetisation of the territory

The advent of 1st century BC marked the beginning of the closure of most of the mints that had initiated their activity in the 2nd century BC. This timeframe also saw the opening of mints in the new Roman cities of Iesso and Aeso in western Catalonia and Baitolo along the Mediterranean coastline. These new workshops minted bronze coins in very limited quantities, insufficient to supply the needs of their cities. Therefore, their founding appears to a large extent to respond to causes of political nature rather than strict monetary economics (Campo 2022: 133-134).

The opening of the Iesso workshop was linked to its founding at the turn of the 2nd to 1st century BC. This timeframe thus represents a *post quem* for the start of its coin production, while there is insufficient data to determine when it ceased to produce (Campo 2005: 79). The workshop minted bronze units with the traditional images of the male head and rider carrying a palm and the Iberian inscription 'ieso'. A first issue depicted a club and the Iberian sign 'i' (Fig. 4.1) or a palm and the sign 'ti' engraved behind the head of the obverse. Subsequently, new units of lesser weight either bore the palm symbol and the Iberian sign 'bel' or just a palm (MIB 65/1-3).

The mint of Eso must be located in the Roman city of Aeso, founded between 100 and 80 BC at the location of an earlier Iberian settlement. This workshop produced units bearing the traditional male head and horseman holding a palm and Iberian inscription 'eso'. Its first two issues depicted two dolphins engraved in front of the head and behind the Iberian sign 'ke' (Fig. 4.2) or a palm, whereas a third issue depicted three dolphins (MIB 66/1-2). The finds and the few examples identified indicate this mint saw a short lifespan ranging between ca. 90 and 80-70 BC (Campo 2005: 79).

While these new workshops were being opened and others were being closed, Iltirta must have already stopped minting silver coins. A series of finds indicate it continued to produce only bronze units and fractions of the rider series, each time weighing less, probably until the 80-70 BC (MIB 67/82-83) (Fig. 4.3). Later, Iltirta resorted exclusively to the

Fig. 5. Asses in the name of Augustus from *Municipium Ilerda* (1. MNAC/GNC; 2. Private collection) (scale 1:1).

image of the wolf on the reverses and produced a few last units and halves of lesser weight bearing this depiction (MIB 67/84-88) (Fig. 4.4). There are no coin finds serving to record the chronology of these last issues from Iltirta. The metrology appears nonetheless to point to a time well after c. 70 BC, perhaps as late as the middle of the 1st century BC (Campo 2005: 81-82 and 87-89). Certain authors have proposed that some of these last issues of very rough workmanship were imitations (Villaronga 1994: 175), which suggests the lack of small coinage.

The use of currency in the 1st century BC must have been thoroughly integrated into the daily life of the inhabitants of northeastern *Hispania Citerior*, and more specifically Ilerda, Iesso and Aeso (Campo 2022: 134-135). The city yielding the most evidence is Iesso, where excavations have brought to light 125 pre-Augustan coins (Pera 2001, 2004). Iltirta, in turn, has yielded 37 coins ranging from chance finds to finds in excavations (Giral 2007, 2009, 2011-2012). Moreover, the incidence of issues from their respective local mints in these two cities is low. They account for only 30 % of the finds of Iltirta and 5.5 % of Iesso, while 32.78 % came from the dominant mint of Kese.

Coinage, in addition to representing a means to pay, served as votive offerings as evidenced by three small groups recovered in Iesso and Iltirta. The excavations of Guissona yielded four Iberian bronze coins inside a broken jar covered by a stone under the pavement of a house dating to the first half of the 1st century BC (Pera 2001: 58; Pera 2004: 193). Guissona also yielded 20 Iberian bronze coins at the bottom of a well, which, according to Pera, must have arrived there voluntarily sometime between the middle of the 1st century BC, prior to the reign of Augustus (Pera 2001: 58; Pera 2004: 193). A third case is that of two Iltirta units and a *Bolskan* denarius found in the city of Lleida inside a thin-walled ceramic goblet linked to the founding of a building probably dating to the outset of the 1st century BC (Giral 2011-2012: 49-51).

There is very little information on the circulation of silver coins in the cities of Iltirta, Iesso and Aeso and throughout western Catalonia in general. A hoard unearthed somewhere in Lleida dating from the second half of the 2nd century BC most likely exclusively comprising Iberian denarii included more than 170 specimens bearing the name of *Iltirtasalirban* (Villaronga 1993: no. 42). The later circulation of denarii during the first half of the 1st century BC is evidenced by a hoard discovered during construction linked to the Urgell Canal, probably in proximity of the city of Tàrrega. This assemblage recovered in a ceramic jar included a Bolskan denarius and three Roman denarii, the most recent dating to 86 BC (Campo 1996). These finds suggest a late arrival of the Roman denarius, which in the 1st century BC was the dominant silver monetary unit in spite of the presence of some Iberian denarii, especially from the *Bolskan* mint.

Towards a new monetary model: from the end of the Republic to the beginning of the 1st century AD.

A new impetus given to the administration of *Hispania* by Rome from the middle of the 1st century BC led to the beginning of a new monetary stage. Only a few privileged cities could mint coins during this

new period which until the reign of Caligula had produced bronze and orichalc issues known as Roman provincials marked by a strong Roman character. In the northeast of *Hispania Citerior* only the city of *Tarraco* with its legal status of a colony and the *Municipia* of Emporiae, Ilerda and Ilercavonia-Dertosa could produce coins at a volume according to their importance.

During the reign of Augustus, the *municipium* of Ilerda minted units or asses of lesser weight than the last Iberian units engraved in the name of Iltirta. In addition, Ilerda adapted its iconography to its new status as a Roman provincial mint. Obverses thus bore the Emperor's head and the legends 'IMP CAESAR DIVI F' or 'IMP AVGVSTVS DIVI F' clearly depicting the identity of the effigy. The reverses bore a wolf and different variants of the legend 'MVNICIP ILERDA' or at times simply 'ILERDA'. Therefore, the city once again turned to the traditional image of the wolf for their provincial emissions but transformed it into a she-wolf (Ripollès 2010: 180-181, nos 259-260) (Fig. 5).

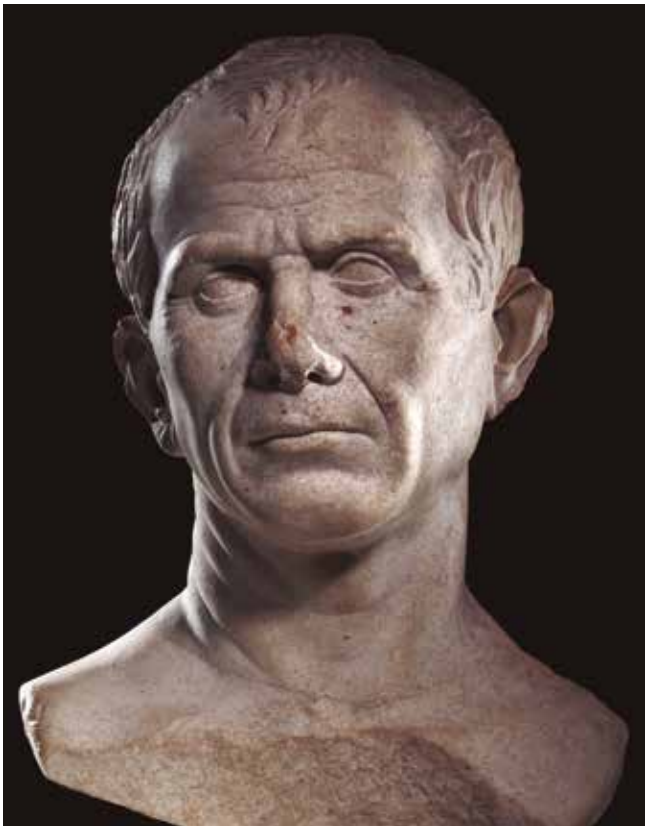
The volume produced by Ilerda mint was very modest, limited exclusively to the reign of Augustus. This contrasts with the vast numbers produced under Augustus and Tiberius at Tarraco due to its status as capital of the new *Hispania Tarraconensis* province (Ripollès 2010: 22). Finds from antique Iesso indicate that the provincial issues circulating most intensively were those of Tarraco (13 specimens), followed by Ilerda (5 specimens), and occasional cases from other workshops such as Celsa and Carthago Nova (one each) (Pera 2004: 204-206). According to Pera (2004: 194), the abundance of coins from Tarraco, and previously from Kese, reveals Tarraco's influence over Iesso.

Coin finds from sites in northeastern *Hispania Tarraconensis* suggest that Rome throughout the reigns of Augustus, Tiberius, and Caligula sent very little imperial bronze and orichalc coins, and that provincial issues did not suffice in satisfying the needs of the inhabitants (Campo 2021). This forced the population to resort to very old currency and to cut coins in order to obtain fractional currency for everyday use. In Lleida, the excavations of the Portal de Magdalena yielded a great number of sectioned coins proving the monetary scarcity suffered by the population during this period (Giral 2005).

Official Roman currency was no longer minted in *Hispania* after the closure of the provincial mints. This exacerbated the lack of everyday coins, a problem some attempted to remedy by minting local imitations of Claudius I emissions. Thereafter, Rome continued to supply consignments of state gold, silver, orichalc and bronze coins to *Hispania*, presumably resorting to the port of Tarraco as a point of entry. It was from here and from other areas that Roman coinage attained western Catalonia.

IV

Ilerda: scene of civil wars at the end of the Roman Republic



Bust of Julius Caesar (© Musée Départemental Arles Antique; photo: R. Bénali).

Ilerda and the Roman Civil Wars of the 1st century BC

Arturo Pérez

Written sources from the 1st century BC and later cite Ilerda and its surroundings as the scene of two bellicose events that were key to the history of Rome. This is no coincidence given the strategic position of Ilerda along the axis to Gaul through the Segre River Valley and between the provincial capital of Tarraco and the interior of the Iberian Peninsula. The city's strategic role is likewise reinforced by a 2nd-century document known as the '*Antonine Itinerary*' that describes Ilerda as a stopping point between two thoroughfares (no. 1 and no. 32) '*de Italia in hispania*' and '*Ab Asturica Astorga*'. Moreover, its topography marked by two hills (occupied respectively by the fortified city and the Gardeny Castle) controlling the Segre Pass, rendered the city as a favourable setting for events to repeat themselves throughout its long history.

It is noteworthy that although it took several decades for the city to acquire the status of a Roman municipality, the clashes with foreign troops reveal a lack of motivation among its indigenous population to settle the power struggles within the Roman Republic. Although the people of the city would opt for one side or the other, they always remained Romans. Their Romanisation was in fact a reality since at least 89 BC based on an object known as the Ascoli bronze or the *turma Salluitana*.

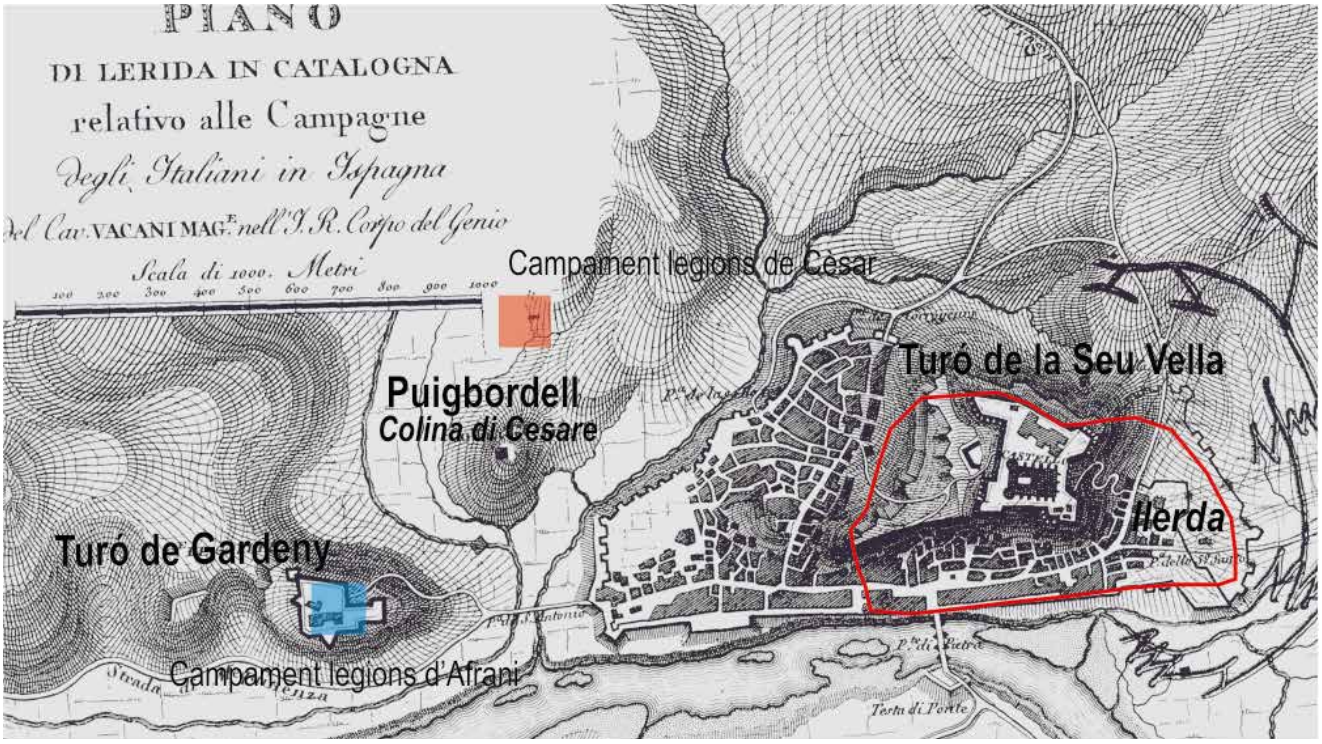


Fig. 1. Military map from the 19th century (Maggiore Vacani 1823. Bibliothèque Nationale-Paris – GE CC 1087).

The Sertorian campaigns

Rome was the scene of clashes between the *populares* and *optimates* during the first half of the 1st century BC. This confrontation between the two political options of the Republic, often fierce, resulted in the victory of Sulla, the death of Marius, and the establishment of a dictatorship. Certain of Marius' supporters managed to flee and mount an opposition led by the children of Marius. One was Quintus Sertorius, who fled to *Hispania* in 83 BC where he had earlier served as praetor. Three years later he received support - especially from the Italian Peninsula - in the Ebro Valley among the Celtiberians and Lusitanians. The abdication of Sulla led to the political rise of Pompey the Great. Sertorius at this time attempted to create a parallel power in Ilergete *Osca* with a sort of anti-Senate contrary to that of Rome and offered a Roman education to the children of the local elite. In fact, the Greek author Strabo (3, 10), who personally experienced the change of era, stated that Sertorius' main fiefdom was the region between *Osca*, *Calagurris* and Ilerda. Sallust (*Hist*. I, 22) who lived between 86 BC and AD 34 recorded that a lieutenant of Sertorius (Hirtuleius) defeated the *optimate* Lucius Manlius in 78 BC with three legions and 1,500 horsemen at what is today the Gardeny Hill of Lleida. Sallust alludes to this hill adjacent to the *oppidum* which later became the town centre. Paulus Orosius (*Hist. Adv.*, P.5 23,3), a later author, repeated this, adding that Manlius, after the defeat, took refuge in the *oppidum*, that is, in the city. Once the Sertorians were definitively defeated by Pompey the Great, and the rebel leader assassinated, the presence of the victors in these lands can explain why, a few decades later, the Pompeians were able to enlist a great amount of regional support in their struggles with Caesar.

The Battle of Ilerda

Ilerda since 49 BC acquired a significant level of importance throughout the Roman world. This was not due to the key role of the city itself, but because it was the scene of clashes serving as milestones marking the end of the Republic. This event, often referred to as the 'Battle of Ilerda', did not take place directly in the city and its surroundings, but some-

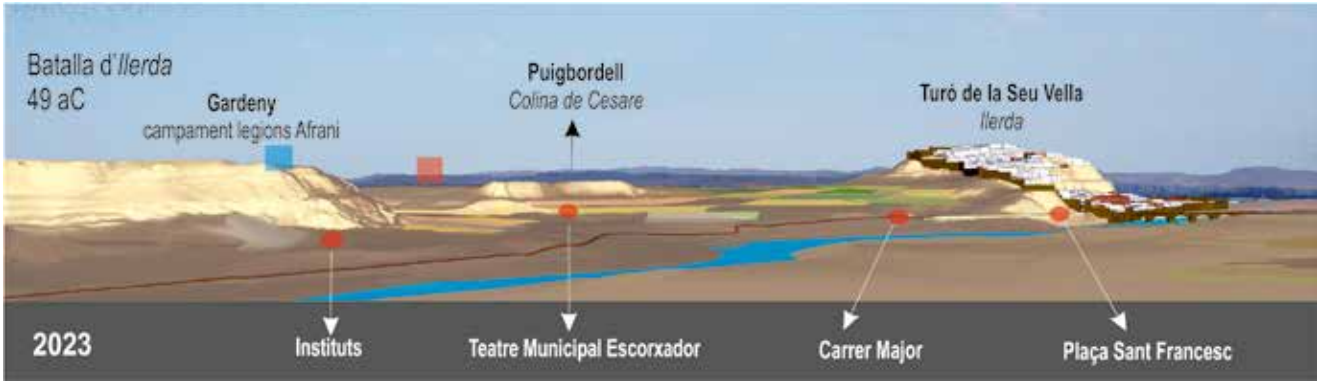


Fig. 2. Profile of the city and its surrounding topography during the Roman period compared to current Lleida.

where several kilometres to the south near the Ebro River. The battle pitted the troops of the *popular* Julius Caesar against Afranius and Petreius, lieutenants of the *optimate* Gnaeus Pompeius Magnus. The scene was described in great detail by Caesar himself in his *Bellum civile*.

Caesar violated the orders of the Senate by crossing the Rubicon River, which marked the border between Italy and Cisalpine Gaul, to initiate his pursuit of Pompey, the Senate candidate. Pompey then fled with much of his army by sea from southern Italy to the north of Greece. As all the ships had been confiscated, and seeing the impossibility of carrying out a quick pursuit of the enemy, Caesar attempted to weaken Pompey in Hispania Citerior, where he had many supporters and clients since the time of the Sertorian Wars described above.

Ilerda's geographical location and its defences subsequently once again played a major role. The different Latin writers who later described the conflict did not offer topographical data beyond that recognised in Caesar's own *Bellum civile*, who was an actor, witness and narrator (no doubt interested) of the battle of 49 BC. The Pompeian lieutenants Lucius Afranius and Marcus Petreius had five legions in the city, and two more in the south of the peninsula under the command of Varro. The cavalry auxiliaries and troops in the Pyrenees raised the total to about 25,000 men, a number that obviously exceeded by far that of the city's inhabitants. Likewise under their control was the nearby Gardeny Hill, the bridge over the Segre River and its surrounding territory where they were even stronger.

Caesar, with six legions, auxiliaries, cavalry and indigenous contingents, theoretically had more troops. He referred to Ilerda as an *oppidum*, a term in itself suggesting that it would not be easy to conquer. Its weak point was its western sector (today the Pla market?) facing the Gardeny elevation, as well as a smaller mound between the two (the medieval Puig Bordell), which Caesar attempted to conquer along with the bridge. This modest hill, located in the middle of an esplanade measuring 300 steps depicted by the military map dating from the 17th-19th centuries, is at times referred to as the '*Colina di Cesare*' (Caesar's hill) (Fig. 1). Moreover, it survives in the current urban framework, forming a pronounced incline known as the 'Balcony of Lleida' between the Doctor Combelles Street and the Municipal Theatre (Fig. 2).

Caesar at that time had already crossed the river with temporary bridges and established his camp near the city, presumably between the Gardeny Hill and the current town of Alcarràs. From there, he surrounded the Gardeny from the north with three legions, and from the small hill in the middle of the esplanade, he attempted to sever the communications between the troops of Afranius and Petreius with the city and impede a possible withdrawal by the bridge. The plan, described by Caesar himself, failed due to the advance of three cohorts of Afranius which captured Puig Bordell forcing Caesar's

troops to retreat towards the city walls where they were repulsed by numerous projectiles, obliging them to return to their nearby camp. Casualties were significant. According to Caesar, his troops suffered 70 fatalities and 600 wounded while there were more than 200 among his enemies. In any case, this episode of 49 BC appears to be Ilerda's most important military episode as the remaining conflicts were skirmishes.

Days after Caesar's failure things returned to their original state. However heavy rains and a flood destroyed the temporary bridges, which threatened the arrival of supplies for his troops and even put his own personal safety at risk. Finally, the Pompeians decided to take the war to Celtiberia, abandoning the city and leading their troops towards the Ebro while leaving a small garrison around Ilerda. Caesar pursued and defeated them at a location far from the city. Although other ancient sources describe these events, they do not add anything new as they basically refer to Caesar's accounts when describing the topography of Ilerda. The most noteworthy of these accounts is that of the poet Lucan, author of the epic poem *De Bello civili*, also known as *Pharsalia* (IV, 11), which offers a scenographic description lacking in veracity as the work was intended to be poetic and not an accurate account.

It is not surprising that such a crucial military conflict was recounted by various Latin authors, and that the name of Ilerda became known later in Rome itself, even though at this time it no longer played a major role due to its position between the Augustan colonies of *Barcino* and *Caesaraugusta*. Evidence of this appears in an epistle by the writer and poet Horace (*Epistle* I, 20, 13), who, when addressing a book he published in 20 BC in Rome, notes that once read it will flee to Utica in a damaged state to then, in the end, be sent to Ilerda.

Silver quinarius (photo: R. Graells i Fabregat).

Gallic auxiliary units of the Battle of Ilerda

Raimon Graells i Fabregat

Numerous recent finds of Gallic coins (chance finds) throughout the Ilergete territory form a typologically homogeneous assemblage (Fig. 1).

The intention of this study is to offer an overview of a wider program of research on this subject while avoiding delving too deeply into certain aspects or presenting a detailed catalogue. Despite its brevity, this note is meant to arouse interest and activate collaboration so to complete the record of this numismatic assemblage which, as will be demonstrated, can be linked to the Battle of Ilerda, specifically to the Gallic auxiliary units and their arrival. But let us begin at the beginning.

The narrative

Julius Caesar offered a first-hand written narrative of the progression of the Ilerda campaign from military, strategic as well as logistical perspectives. He likewise assessed the enemies, listing the numbers of casualties and the duration of certain engagements (Sabin 2000). Lucan subsequently also cited the Battle of Ilerda in Book 4 of his work based on the writings of Caesar (Lintott 1971: 490). Titus Livius, Varro and Cassius Dio likewise made references to the hostilities (Lintott 1971: 491).

Although Caesar's narrative is intricate and often criticised (the translation and comments by Gual-

Fig. 1. Examples of Gallic coins (from top to bottom): silver quinarii from Arbeca (right, photo: M. Torres) and Albelda (left, photo: R. Graells i Fabregat); stater from Palau d'Anglesola (photo: M. Torres); stater from Bellvís (photo from Baiges, Bouzas, Puigredon 2019: 187, cat. no. 8); stater from Olriols (photo from Domínguez Arranz and Maestro 2020: 76, fig. 6).

lar 1952 are still of use), it is nonetheless possible to perceive a complete account where details of the complications receive more attention than the achievements themselves, possibly to justify his defeats. What is certain is that the narrative follows no script. Like a daily logbook, its episodes are both continuous and interrupted. Caesar placed special attention on the circumstances of the encampments, the topography and the changing needs throughout the two intense summer months spent in the Lleida countryside. However, unlocking the meaning behind all these data requires certain keys.

One of the most critical moments of the Roman stasis took place in 49 BC at the gates of Ilerda during the month of June. Afranius and Petreius recognised how the fortunes of their rival, G. Julius Caesar, had radically evolved from being critical (due to devastating floods) to one of strength after the arrival of reinforcements and materials (*BC*, I, 53) (see Stadter 1993: 217; Deroux 2011). It was only a matter of time before Caesar would conquer Ilerda and pushed the troops loyal to Pompey southwards, across the Ebro River, to seek refuge among the Celtiberians.

Practically all the details of the Segre campaign are known thanks both to Caesar himself (*B.C.*, I, 37 ff.) and to numerous later historians. The surprising aspect of this episode is that it not only featured Roman protagonists, with names and surnames, but other secondary events fundamental to the resolution of the conflict. These consisted, one the one hand, of meteorological agents, characteristics of the territory and its communication routes, and, on the other hand, those of interest to this article, the arrival of auxiliary units from Gaul to fight among Caesar's ranks.

Now we must turn to the questions: Which zone was flooded? Which roads were interrupted? Who were the Gauls? What routes did they follow? What was the relationship between the floods and the Gauls? What evidence is there of the auxiliary units? These are just a few of many other questions that remain unsolved.

The rise of the rivers and the flooding

Caesar described a sudden swelling of the rivers and a terrible flooding of the low valleys cutting off certain roads and destroying the bridges spanning the Segre River (*B.C.*, I, 48). This halted the arrival of a number of supplies and reinforcements leaving Caesar's troops incommunicado. Although there are no data as to the duration of the rains and the surge of the river and the flooding, similar episodes in this area at this time of year normally could last between two or three weeks (a period corresponding to an eighth of the campaign). Caesar likewise of-

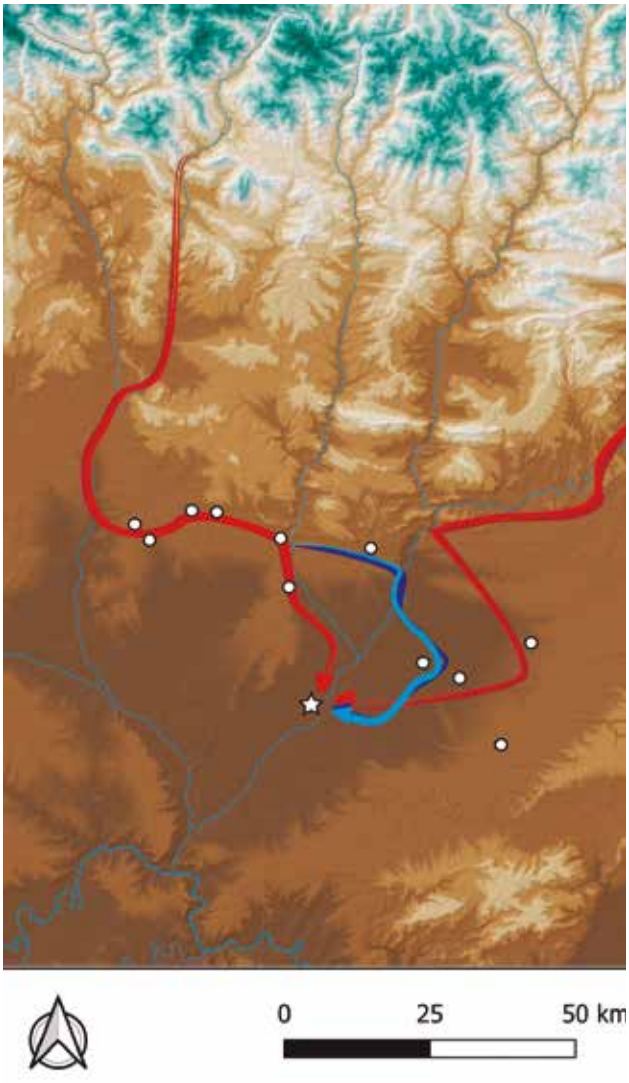


Fig. 2. Potential routes of entry into the Lleida Plain followed followed by the different Gallic units (drawing: R. Graells and Fabregat).

fered not indication of when the flooding took place (*B.C.*, I, 48) (Lintott 1971: 490 ff.; Avery 1993: 453, n. 14). For this we must turn to Lucan and interpret his astronomical allusions (4.48 ff.) which suggest it occurred shortly after the spring equinox (4.56-61).

The rivers and the affected area were also not described in detail. It is nonetheless known that two bridges were destroyed along the course of the Segre, possibly at Corbins (Segrià) and Térmens (la Noguera) as these two sites had both fords and road intersections. Moreover, there are no references to the Cinca or Noguera Ribagorçana Rivers, which served as communication routes between the area of Llitera and the Segre Valley.

Numerous flash floods affecting these different fluvial plains have taken place over time destroying features along the river banks such as bridges and routes. The damage caused by modern episodes in the 20th century, in part contained by dams, possibly resembles that of 49 BC since, according to flood prevention services, the zones of risk remain the same in the Lower Segre and Noguera Ribagorçana River Basins. It is noteworthy that although the flooding of 1982 did not affect the towns along the Segre River Valley (except for the lower quarters of Lleida), the fluvial plain itself was for the most part submerged and its crops destroyed before quickly recovering normality.

The report on the effects of the floods of 1982 reveal that the right bank of the Segre River suffered the most. It is this bank that intersects with the Noguera Ribagorçana River whose valley is particularly sensitive to increases in water levels which alter its form.

Which Gallic auxiliary units does Caesar cite?

Auxilia (sing. *auxilium*) were non-citizen soldiers recruited to fight alongside the Roman legions (Reddé 2008: 437; Pernet 2010: 28). They benefitted from a unique legal status clearly distinguishing them from mercenaries. Their capacity, however, was only spelled out later under Augustus. Thus, since their status at the end of the Republic was not yet regulated, Caesar in his narrative cited them by their military functions (*B.C.*, I, 51), that is, *Ruteni* archers and Gallic horsemen, which likewise offered indications of their origin. Caesar had nonetheless already had made reference to them in another narrative (*B.C.*, 7, 7) describing Gallic reinforcements as consisting of *Ruteni*, *Volcae Arecomici*, *Tolosates* and *Helvetii* warriors, all populations linked to what was known as Celtic Gaul. The *Ruteni* were from the area of present-day Rodés while the *Volcae Arecomici* were from the around Nîmes (Asséнat 2010; Pernet 2010:

139-142) to the south-east of Gaul. The *Tolosates*, also known as the *Volcae Tectosages*, came from between those two territories (Pernet 2010: 142), whereas the *Helvetii* were from farther north, the present-day Swiss Plateau.

Apart from differentiating the Gallic horsemen from the *Ruteni* archers, there is no other reference to Gallic populations. However the numismatic analyses suggest that the Gallic cavalry could have been aligned with the *Coriosolites*, a tribe from the Armorica of Brittany, and other groups.

Caesar states that these auxiliaries arrived in a chaotic manner, without clear leadership, surely each unit headed by their own chiefs or representatives (*B.C.*., I, 51). This suggests multiple arrivals along the different fluvial routes linking south-central Gaul to Ilerda.

How and when did the auxiliary units arrive in Ilerda?

The simplest way of attaining the Plain of Lleida from Aquitaine is by following the Garonne River to its source in the Catalan Pyrenees before descending along the courses of the Cinca and the Noguera Ribagorçana Rivers until their intersection with the Segre, a trek by foot estimated at about 50 hours when following the right bank above the Western Catalan Plain through the town of Tamarit de Llitera (La Llitera). From Toulouse, there is likewise access to this area along the Cinca River, and further east, following the route through Cerdanya and the Segre River (Fig. 2). In any case, there is no hard evidence allowing to ascertain with certainty the paths they took.

Although the timespan of theses journeys into the Plain of Lleida could be calculated, it was impossible to foresee that their arrival would coincide with a spell of rains provoking the rivers to rise (*B.C.*, I, 51) obliging them to draw to a halt. The spread of the numismatic finds throughout a series of stopping places close to each other suggest two potentially coherent itineraries converging on Ilerda: the first, from Tamarit (la Llitera), towards the Noguera Ribagorçana Valley above Alfarràs (Segrià) and the second from Artesa de Segre (la Noguera) towards Pla d'Urgell.

The direct journey following the Noguera Ribagorçana Valley from the Alfarràs area thus could not be completed causing the different auxiliary units to disperse along the way to different easily accessible points. From this it is possible to deduct three scenarios. The first is a deliberate choice of locations of no strategic value inasmuch as fortifications or longterm encampments. The second is their interest in maintaining communications with the other units encamped at short distances thus excluding that these sites yielding Gallic coins were settlements only accessed after days of march. The third point is the brevity of these frequentations evidenced by the fact they left very little material evidence.
It is therefore possible to assume, based on the numismatic finds, that the search for a passage to Ilerda saw the units move beyond the Noguera Ribagorçana Valley following a route under the rocky ridges. Thus, from Alfarràs they could have set forth towards the Balaguer-Térmens ford (la Noguera), the location of one of Caesar's bridges destroyed by the rise of the Segre River.

It is also quite possible that other groups from south-central Gaul followed an alternative route along the left bank of the Noguera Pallaresa River which from Artesa de Segre flows into the Segre. This group headed towards Ilerda on dry roads crossing the areas of Urgell and Pla d'Urgell. The need of heading towards the Lake of Ivars meant they followed the left bank of the Segre up to Ilerda - from where Caesar indicates that he crossed the Sícoris (the Segre River) with his troops (Stadter 1993: 217) - passing through the sites that ultimately yielded the Gallic coins.

This account, interpreted by connecting the pieces together with numismatic finds, still requires historical and archaeological data. The site where Pompey's loyalists attacked the Gauls coming to Caesar's aid forced them to seek refuge in the mountains. Although Caesar is imprecise in his information about these refuges, a plausible hypothesis requiring future confirmation is that they were in the Serra del Montsec.

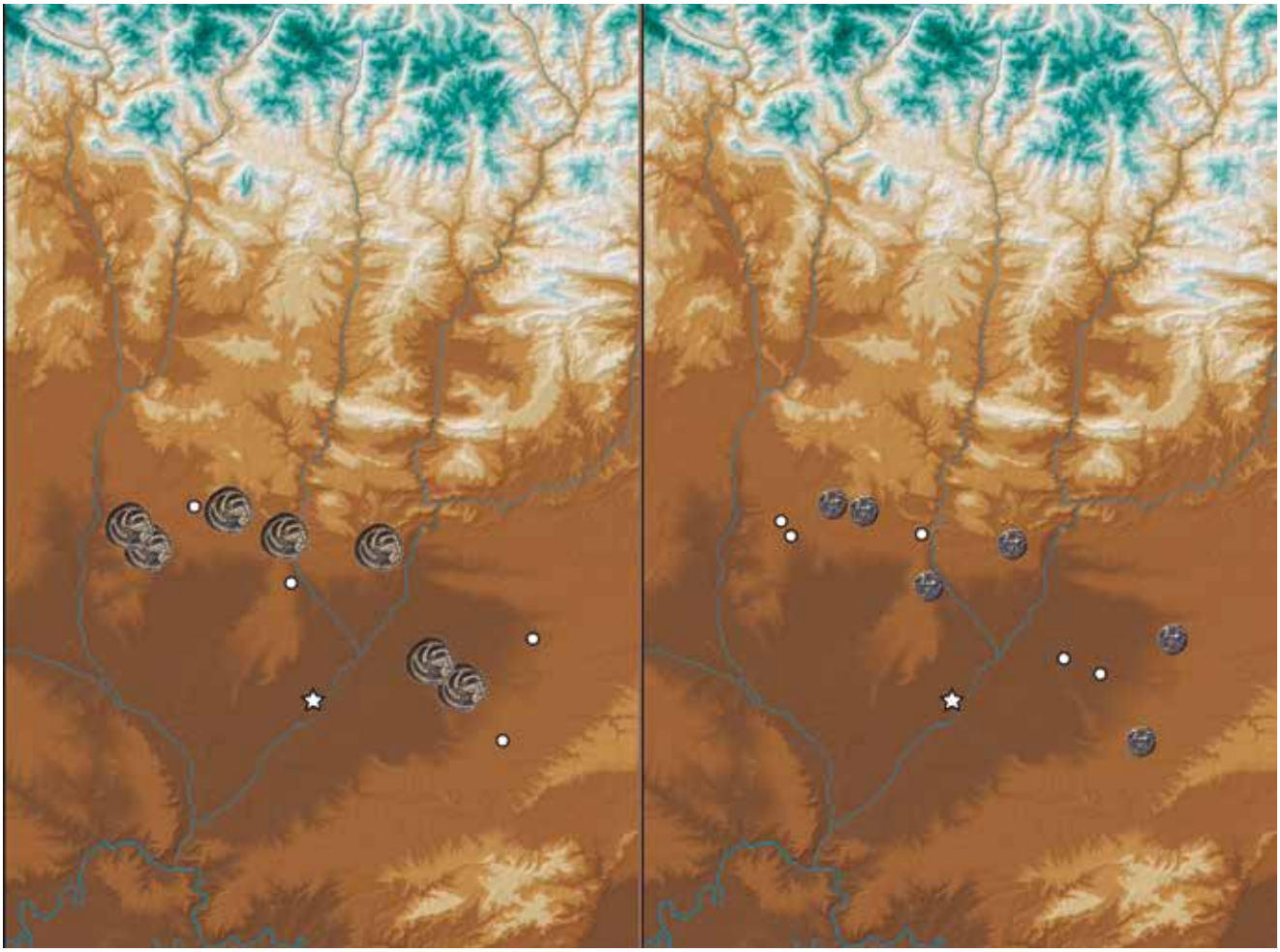


Fig. 3. Map indicating the spread of currency types: billon staters (left); silver quinarii (right) (drawing: R. Graells and Fabregat).

The archaeological finds and interpreting their distribution

Finds of Gallic coins in Catalonia are particularly rare and few are cited in publications. The type, dating and provenance of the few cases fall into the second quarter of the 1st century BC minted in southwestern Gaul, notably staters and quinarii, coins known to often have served to pay the wages of troops. Until today, all the finds were concentrated in either the Plain of Lleida or at La Llitera. The exception is a stater associated with Aquitanian Coriosolites discovered at Empúries (Alt Empordà) (Richard 1972) that nonetheless clearly relates to the events of this study.

Thus there is, on the one hand, the following series that appear unrelated to each other (Fig. 3):

- A group of Tectosages quinarii and Coriosolites and Unelli staters from Castelló de Farfanya (La Noguera) (García Garrido, Montañés 2009);

- Stray staters from Bellvís (Pla d'Urgell) (Baiges, Bouzas and Puigredon 2019: 187, cat. no. 8) from the Palau d'Anglesola (Pla d'Urgell) (Torres 2019), from Olriols (Sant Esteve de la Llitera, la Llitera) and from La Vispesa (Binèfar, la Llitera) (Domínguez Arranz, Maestro 2020: 76, fig. 6);

- Quinarii from Arbeca (Les Garrigues) and from Ivars d'Urgell (Pla d'Urgell) (Torres 2019).

Other similar finds (staters and quinarii) are from Tamarit (La Llitera), Albelda (La Llitera), El Campell (La Llitera), Alfarràs (Segrià) and Almenar (Segrià). These chance finds gathered by different enthusiasts complete a particularly revealing and concentrated scatter chart lending itself to a historical interpretation.

Conclusions

The assemblage of coins from Castelló de Farfanya was already interpreted as a 'treasure' linked to a Gallic auxiliary unit engaged by G. Julius Caesar to fight in the Battle of Ilerda (49 BC) (García Garrido and Montañés 2009: 35; García Serrano, Amela 2017: 18). However, this hypothesis was based on decontextualised data. The discovery of new coins at Binèfar, Albelda, El Campell, Alfarràs and Castelló de Farfanya, as well as on the other bank of the Segre River, bolster this interpretation.

Unfortunately, there is no other information concerning whether these other points, such as if they were linked to organised encampments or simply to frequentations taking advantage of earlier settlements or hamlets serving as supply or reference points. Undoubtedly, records on the discovery of these coins and the possibility of investigating their find spots could potentially shed new light on the Battle of Ilerda and would help answer the specific question as to the organisation of these auxiliary encampments and explore the notion of whether they were subjected to Roman discipline and organisation.

Ilerda was thus a key episode of the *bellum civile* and its surroundings now fact could play this role once again in future research.

Acknowledgments

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V

Public baths, symbols of urban well-being, Romanisation and social life

Introduction

Josep Guitart and Xavier Payà

Public baths are one of the most emblematic buildings of Roman cities. These urban facilities, besides offering hot and cold baths, hosted a wide range of features such as gymnasiums for sports and other spaces designed for socialisation, culture and leisure. The inhabitants of the city visited these sites to bathe and to receive massages, for physical exercise and to practice different sports (running, wrestling, hurling…), as well as to meet and interact with friends, and take part in cultural activities. Public baths in Imperial times also incorporated gardens and in certain cases libraries.

Grouping all these functions into a single feature is a concept that is very Roman. Yet it was the Greeks who had already invented hot public baths and the hypocaust heating system. The etymology of the term 'hypocaust' meaning 'fire below' is in fact Greek. However, Greek models differed from their Roman counterparts, especially during Hellenistic times, as they did not incorporate gymnasiums and *palaestrae*. The Roman model represented, in fact, the union of these features into a single facility bearing its own architectural characteristics.

The earliest known Roman thermal baths are in Campania along the Gulf of Naples (Italy). The example of the Stabian baths of Pompeii of the 2nd century BC already possessed the design that spread throughout Italy and to the different provinces of the Roman world. Archaeology in *Hispania*, specifically in the *conventus Tarraconensis*, has brought to light some of the oldest examples of thermal baths (also from the 2nd century BC) following the Campanian model at Valentia (Valencia) and at the settlement of Cabrera de Mar.

This model distinguishes between rooms intended for bathing and sports from other rooms with other functions. The rooms serving for bathing were the main features of the building, each with its own function and temperature. These can be broken down into a vestibule at the entrance, an *apodyterium* or dressing room, a *frigidarium*, the space for cold baths, a *tepidarium*, an intermediate warm room where bathers waited before entering the hottest room, the caldarium which was equipped with basins of hot water for bathing and a *labrum*, or basin, for cold water ablutions. The *praefurnium* held the furnaces serving to heat the water and the rooms.

Thermal baths then evolved very rapidly towards the hypocaust technique. The reform of the Stabian thermal baths at Pompeii between 90 and 80 BC already replaced the system of heating both the *caldarium* and *tepidarium* with braziers by a system of double floors resting on *suspensurae* (small columns), heated from below.

This substantial improvement yielded high temperatures in the hotter rooms by means of heat circulating underground from the *praefurnium*, usually next to the *caldarium*, between columns supporting thick lime mortar and tiled floors. Although these features required a long time to heat, they could maintain hot temperatures to a point that bathers, to not burn their feet, had to wear sandals with wooden soles.

During the reign of Augustus, at the outset of Imperial times, this heating system was applied to all public baths. They incorporated, besides other features, further complementary rooms including the *laconicum*, a small very hot room serving as a sauna, the *unctorium*, a place where the bathers anointed themselves with oils before exercising in the *palaestra* or the massage room. Thus, the baths grew in size and monumentality until reaching the great imperial baths such as those of Rome which even held large gardens and a series of rooms to accommodate many other activities. An example is the Baths of Nero which in the 1st century AD extended over a surface of more than 15,000 m^2. Moreover, those of Rome itself in the subsequent centuries covered even greater surfaces.

Public baths, exponents of a certain level of culture and urban way of life, thus spread to all parts of the Roman Empire. Many cities in fact had several operating simultaneously. Pompeii had three, Vienna in Narbonese Gaul had four, and *Thamugadi*, a colony founded by Trajan in North Africa, had fourteen.

The Roman cities of western Catalonia were no exception. Ilerda and Iesso reveal remains of splendid public baths such as those that can be visited in the Archaeological Park of Guissona or those of Lleida that are pending actions to exploit their potential. Aeso, the third Roman city of this area, has yet to offer traces of these types of emblematic facilities. There is nonetheless no doubt that the Roman city yielded these types of urban structures.

Scientific archaeological work carried out at Ilerda and Iesso in recent decades renders it possible to not only ascertain the presence of these complexes, but follow their evolution from their modest features, typical of the earliest phases of these cities, to monumental buildings from the later stages of Imperial times. Coincidentally, public baths are among the better studied and recorded archaeological features of both Ilerda and Iesso and their evolution in a certain manner reflects the evolution of these centres marked by moments of dynamism, transformation and mere continuity. Let us delve therefore into at the essential features of these complexes that archaeology currently offers us.

General reconstruction of the thermal complex of Ilerda built starting in the 2nd century AD.

The public thermal baths of Ilerda

Xavier Payà

The earliest public baths in Ilerda were built during the first half of the 1st century AD (between AD 20 and 50) near the intersection of the city's two main roads, the *cardo* and the *decumanus*. This spot corresponds approximately to the junction of the current Democràcia and Remolins Streets, a space that was detached from the antique forum, but near the eastern exit of the Roman city.

Little is known of the initial building as it was destroyed practically entirely by the construction of new baths at the outset of the 2nd century AD. Worth highlighting among its few preserved remains is the heating chamber of its *caldarium*, a space about 25 m2 leaning against a podium of large stone blocks lined with mortar. The feature still retained several stone pillars supporting the floor of the room and blocks that buttressed the vault through which passed the hot air. Adjacent to the *caldarium* along a linear axis were probably other rooms such as the *tepidarium* and the *frigidarium* (Fig. 1).

The baths were accessed through a large open space measuring 600 m^2, closed to the west by a masonry wall and to the east by a sunken rectangular space equipped with a furnace serving to heat the *caldarium*. This modest thermal building must have seen use throughout all the 1st century AD as evidenced by several layers of ash and slabs found inside the rectangular space.

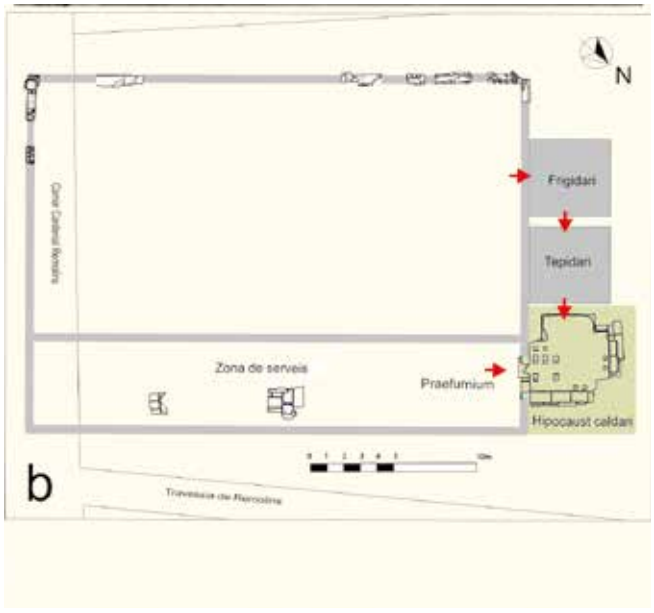


Fig. 1. Heating chamber and hypothetical reconstruction of the earliest thermal baths of Ilerda.

a) heating chamber (hypocaust) of the *caldarium*.
b) hypothetical reconstruction of the first baths of Ilerda.

Finally, the parts of the *caldarium* that were not dismantled were ultimately filled with layers of ash and debris so as to level the area before building new baths. These fills date to the outset of the 2nd century AD and serve to pinpoint both the end of the earliest phase of the baths and the outset of construction of the second.

Although these finds raise more questions than they answer, they in any case reveal the existence of baths of one sort or another during the 1st century AD.

The new baths of Ilerda (2nd century AD)

Although over the centuries this new complex also suffered a complete dismantlement, this phase of the baths is the best known of Roman Ilerda as all of its spaces have been identified (INT-83). These include the façades of buildings facing the *cardo* (INT-101) and the *decumanus*, and a secondary road parallel to the bath's eastern limit (INT-178). These different elements correspond to a complex of buildings following a symmetrical orthogonal design that allows linking what appear to be the isolated and scattered remains of three different archaeological excavations (Figs 2-3).

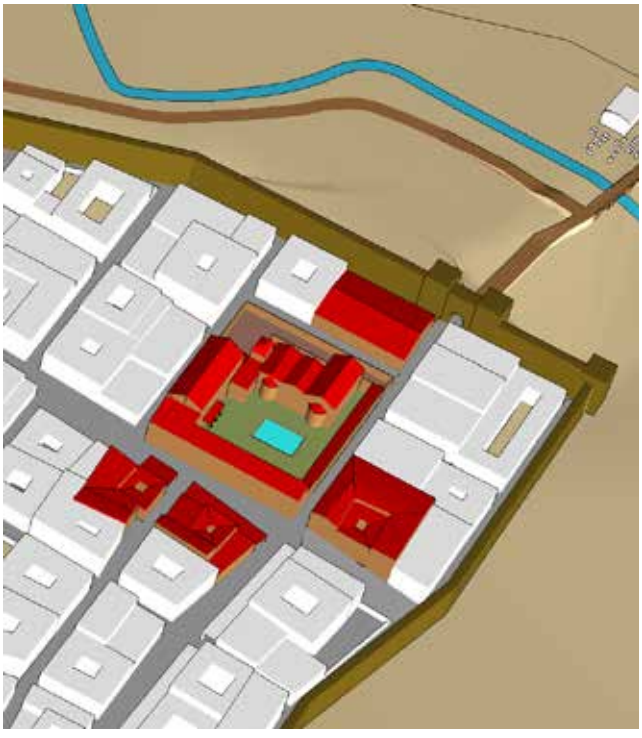


Fig. 2. Location of the public baths of Ilerda, 2nd century AD.

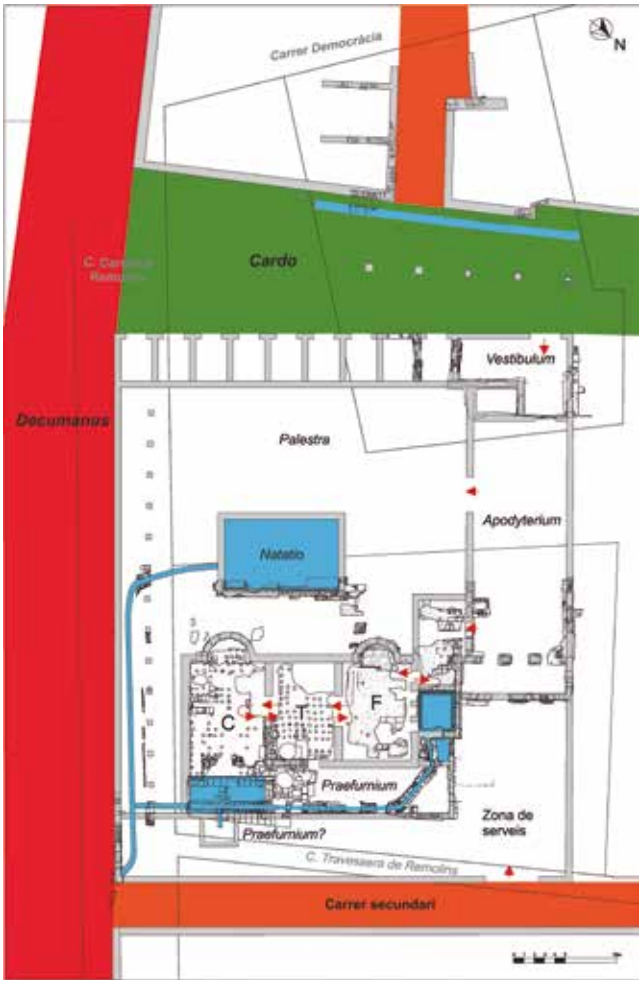


Fig. 3. Plan of the thermal baths from the early 2nd century AD depicting all the features identified during the three excavations (INT-83-101 and 178).

The new public baths occupied an area of 2,400 m^2, divided into five well-differentiated spaces: the western façade (*tabernae* and vestibule), the dressing rooms (*apodyterium-basilicae*), the central baths (*frigidarium*, *tepidarium* and *caldarium*), a vast open space of 725 m^2 with a central pool (*natatio*) and portico, and a zone reserved to carry out the services related to heat the rooms and the water (*praefurnium*).

The thermal areas (baths) and changing rooms were covered, based on several fragments recovered from the rubble, with barrel vaults made of porous volcanic stones bonded with lime mortar. This combination reduced the vault's weight yielding a lighter, more flexible roof structures. Rectangular architectural spaces covered with barrel vaults and featuring apses persisted over time and ultimately served a places of worship, notably Christian churches with single naves.

Circulating through the baths was quite simple. After crossing the entrance hall along the eastern façade of the *cardo*, one came to a large dressing room. From this point the bathers decided whether to access the *palaestra* or the baths. To gain the baths they passed through the *frigidarium*. From this cold room, they began a linear course through the different spaces, which normally began in the *caldarium* and ended in the *frigidarium*.

The western façade

The construction of the new baths extended to the *cardo*, adapting to the layout of an earlier façade that in the middle of the 1st century AD considerably altered the original layout of the road. Part of the eastern edge of the road was now turned into the vestibule of the new baths while the remaining part, independent of the baths, was divided into nine small square rooms (*tabernae*) measuring 15 m2 facing the road and extending to the *decumanus*. Access to the main entrance of the bath complex was from the *cardo*, through one of the two L-shaped rooms of the vestibule which, in turn, led to the entrance of the changing rooms. A second smaller room must have housed some type of service related to the entry of the bath users (Fig. 3).

The dressing rooms

The *apodyterium-basilica*, the largest covered space of the baths, played a key architectural function as it connected the entrance hall with the baths and served to delimit the north-western edge of the complex. Its foundations of large ashlars bracing mortar formwork walls indicate that these walls served to support the weight of a large vault (Fig. 5). The rectangular nave, 23 m long by 9.2 wide (260 m2), thus

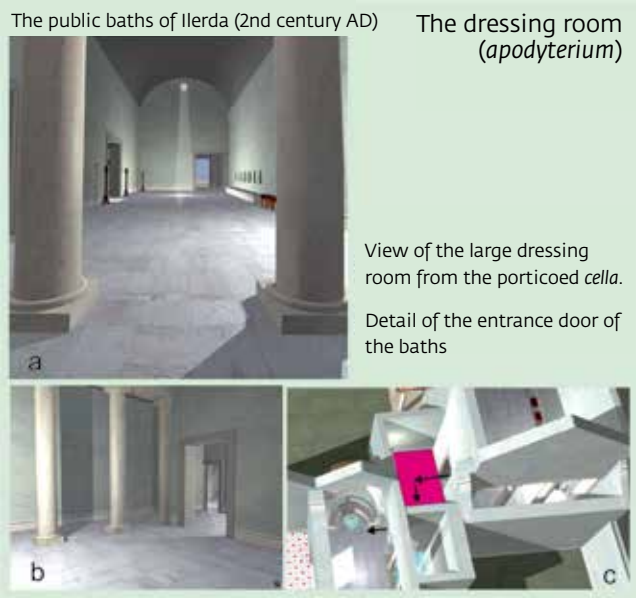


Fig. 4. Reconstruction of the public baths of Ilerda.
a) view of the large dressing room and the porticoed cella
b) detail of the entrance to the baths.

Fig. 5. Detail of the closing foundations of the dressing room (*apodyterium*) and the bases of the interior columns.

served as a dressing room and access to the *palaestra* and the baths (Fig. 4a).

At the back of the hall was a space differing from the others due to an alignment of two pilasters (attached to the perimeter walls) and two columns on large bases (Figs 5a-b) enclosing a space (10 x 3 m) without any apparent thermal function. It is likewise asymmetrical when compared to the rest of the large nave. It probably served as a cella containing representative elements such as sculptures separated by a portico consisting of columns simulating the façade of a temple. The users of the baths therefore passed before these sculptures prior to accessing the *frigidarium* (Fig. 4b). It is noteworthy that the axis of the columns follows that of the layout and alignment of the bath's western limit corresponding to the outset of the apsed extensions of the *frigidarium* and *caldarium*.

The baths were accessed from the dressing rooms (*apodyterium*) through a small rectangular room located between the apse and the pool of the *frigidarium* (Fig. 4c). This area, compared to the rest, is asymmetrical and must be interpreted as the link that corrected the displacement to the south imposed by the pool of the *frigidarium* on the baths. It also facilitated the opening of the door before the portico and the cella at the back of the large dressing room. It was a veritable entrance hall paved with marble slabs.

The *frigidarium*

The *frigidarium*, the first of the rooms of the baths, was rectangular (50 m^2) and limited to the west by an apse measuring 3 m in diameter that, like the entrance hall, was paved with marble slabs (Fig. 6c). Its floor, waterproofed by mixing ash with mortar, was separated from the rest of the room by vertical marble slabs forming a low step. Along this axis was a water fountain in a basin (*labrum*).

The pool (9 m^2; 1 m deep) was in a square chapel adjacent to the northern edge of the *frigidarium* (Figs 6a-b). Its walls and floor were initially lined with

Fig. 6. Reconstruction of the interior of the *frigidarium*.
a) ideal reconstruction of the *frigidarium*
b) pool of the *frigidarium*
c) general view of the remaining features of the *frigidarium* and in the foreground the paving of the vestibule serving as the entrance to the baths.

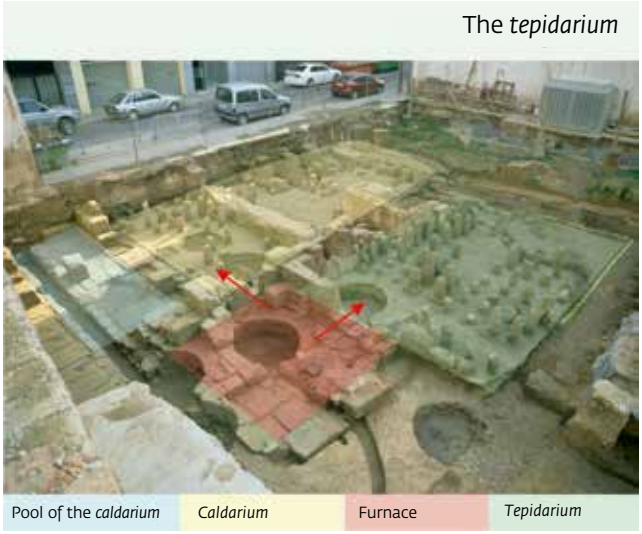


Fig. 7. Overview of the features linked to the heating system.
Pool of the caldarium
caldarium
furnace
tepidarium

a layer of mortar and ash, which served to attach the marble slabs. The marble in a later phase was replaced by a new mortar finish containing a high concentration of crushed reddish terracotta fragments (*opus signinum*) which covered the walls and served to fashion the quadrangular moulding and the new floor of the pool.

The *tepidarium*

Next to the *frigidarium* was the *tepidarium*, a room of transition between the hot and cold rooms. In spite of not having an apse or a pool, it did benefit from an underground heating system (Fig. 7). Although all of the walls delimiting this room disappeared, the traces of the extraction of the blocks of their foundation reveal a rectangular area measuring 9.5 by 6 m. The circulation chamber under it consisted of a floor of river pebbles mixed with mortar (*ara*) and 170 stone pillars (*pilae*) supporting large bricks (60 x 60 cm). The bricks were in turn covered by a decorative mosaic. The refractory capacity of the bricks maintained the heat in the room and in its mosaic floor where the bathers walked.

The hot air circulating between the pillars entered the hypocaust through a canal that ran from the furnace (*praefurnium*) through the eastern wall. Fume extraction was another technical issue that required solving in these buildings. The existence of an entrance without a horizontal exit along one of the walls of the *caldarium's* hypocaust suggests the presence of vertical chimneys along the interior of the wall to guide the gases away. Another potential option based on finds of terracotta cylinders is a system of hollow chambers between the walls and cladding slabs containing vertical flues.

The *caldarium*

The *caldarium*, the largest room of the complex (15 x 7 m) had an apse 4 m in diameter flanking its outer western wall (Figs 7 and 8b). This space extended 5 m farther to the east than both the *tepidarium* and the *frigidarium*.

The heating chamber (*hypocaustum*) extended below the apse with a system of supports identical to that of the *tepidarium*. The base of the pool, on the other hand, was independent of the hypocaust. Here, hot air circulated through slits between the square blocks that held up the large heavy pool of the *caldarium* (Fig. 8a).

Although the original pool was replaced by a smaller model during one of the many renovations of the *caldarium*, there is evidence that it originally occupied a surface of 11 x 2.5 m. It was set to the back of the room, against the outer eastern wall of the *caldarium* that was raised on large rectangular blocks that supported the weight of the structure. To the north it was connected to the wall that separated the two service areas.

Opposite the façade along the Cardenal Remolins Street, and above the large foundation blocks, was a segment of wall bound with mortar measuring 2 m in length and 1 m in height. Besides being the limit of the hot room, it could also have served as an edge of the pool.

A canal collecting the water from the *frigidarium* passed below the pool and the base of the large blocks towards the portico of the *palaestra* where it joined another that guided the water from the *natatio* to the general sewer of the *decumanus* (Fig. 8a). From that point a hole in the floor facilitated the drainage and cleaning of the pool of the *caldarium*.

Several fragments of the mosaic that covered the floor of the *caldarium* were recovered among the rubble that filled the hypocaust (Fig. 8a). Although certain were displaced, others were still in their original position supported by pillars. The decor was

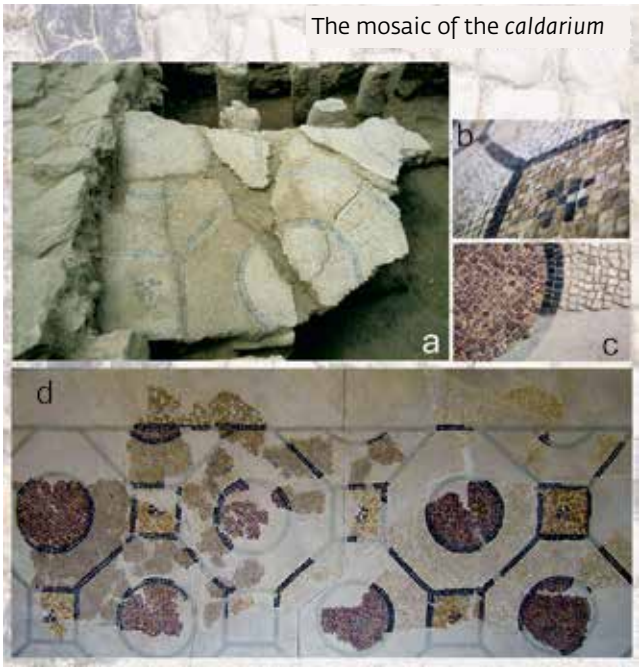


Fig. 8. Section of the mosaic of the *caldarium* restored with fragments recovered from the rubble of the heating chamber.

geometric consisting of octagonal shapes linked by squares. Each regular polygon contained a circle while the squares framed a schematic flower. Black *tesserae* served as the contours of the forms while the circles were filled with red *tesserae*. The remaining surface comprised white *tesserae* (Figs 9b-c-d). The edges of the mosaic were crowned by sectioned octagons with three faces and a perimetrical strip framing the entire mosaic.

The *palaestra*

The *palaestra* occupied the space between the outer walls of the apses of the body of the baths, the large dressing room and the rear of the bath's western façade. It was an open space measuring 725 m^2 with a large central pool (*natatio*) where the bathers could swim. Its edge to the south along *decumanus* was marked by an interior portico with columns that provided shelter and shade during the days of intense heat (Fig. 9b).

It remains unclear if the pool in the centre of the *palaestra* was rectangular or square as it was only partially excavated. The only side brought to light (out-

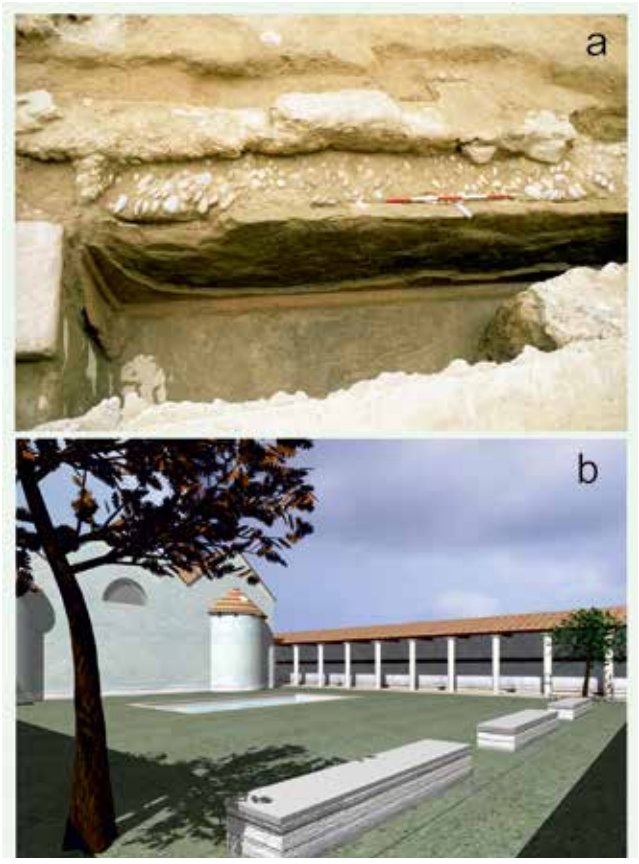


Fig. 9. Detail of an angle of the *natatio* of the *palaestra* and the interior portico of the southern façade.

The portico of the *palaestra* and the drainage system

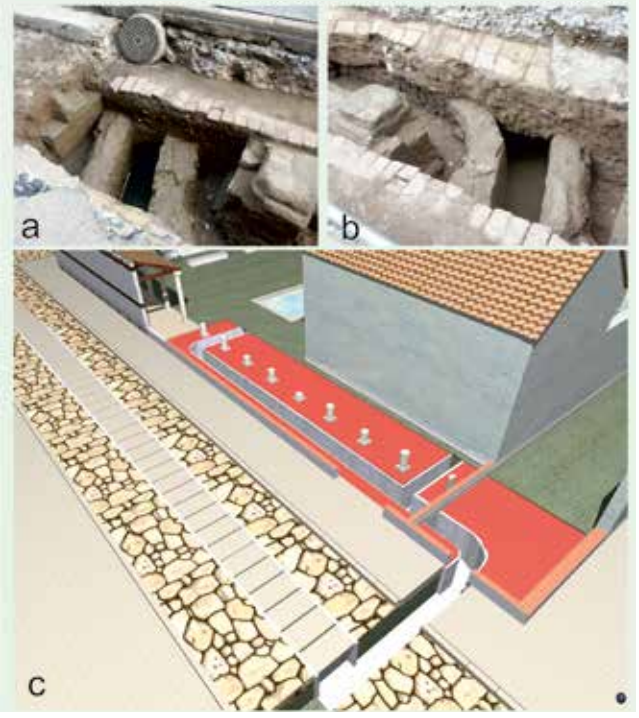


Fig. 10. Views of the drainage sewer of the natatio and reconstruction of the southern façade of the thermal baths of the *decumanus*.

lined by a perimeter rim) measured 11.30 m in length (Fig. 10a). The walls of the formwork mortar were clad with sandstone slabs lined with a thin layer of mortar mixed with ash acting as a hydraulic insulator. Its exterior coat consisted of a mortar containing crushed terracotta, a material also used for the cylindrical mouldings at the corners and along the bottom. The floor of the pool, in turn, consisted of a mortar of very different nature containing a high proportion of lime and a finish to avoid slipping.

Bases of the portico, the drain of the *natatio* and the foundations of the façade were unearthed under the surface of Cardenal Remolins Street (INT-178) (Figs 11a-b). Moreover, the excavations identified another road, in this case secondary, along the eastern limit of Ilerda's public baths.

The service area

Apart from the features intended for the bathers described above, a thermal complex of this nature requires other spaces to house the services required to operate the heating system. This is the case of an open rectangular courtyard 17 m long and 5 m wide to the east of the baths. Behind the angle outside the walls of the *caldarium* and *tepidarium* was a sort of square podium or platform raised with large stone blocks. These served as the base of the furnace that fed hot air through the channels under the different heated rooms (Fig. 11a).

Generally, tanks containing water were heated above the furnace and the canals to conduct hot water through lead or copper pipes into the pool to the other side of the wall. This however does not appear to be the case of the baths of Ilerda as the furnace was possibly set in another area, behind the

Fig. 11. Views of the zones of service. Remains of the *praefunium* serving the *tepidarium* and the *caldarium*, the drain of the pool of the *frigidarium* and a water tank.

eastern wall of the *caldarium* in a space extending to the eastern façade of the baths (where the Remolins Street passes today) (Fig. 11).

Heating the approximately 25 m3 of water to fill the pool of the *caldarium* required large tanks that could not fit on the podium of the furnaces of the *hypocausta*. The existence of a specific space serving exclusively to heat the boilers is evidenced by an open channel in the foundation of the eastern wall of the *caldarium* that joined the drain leading from the *frigidarium* right in the centre of the surface occupied by the pool (Fig. 8a). This was the conduit serving to release the excess water from the boilers whose vertical opening through the outer wall must also have facilitated placing the pipes conducting water to a potentially ornamental spout of a fountain at the base of the wall of the pool.

This first service area next to the baths was outlined by segments of a masonry wall bound with mortar and well-worked blocks (*opus africanum*) (Figs 12b-c). The wall began from the eastern outer wall of the *caldarium* and curved to the north until where it joined the pool of the *frigidarium*. A drain collecting water from the pool and the frigidarium passed through the base of this wall before crossing the whole space towards the south until joining the general drain under the portico of the *palaestra*. Here was a small square tank or catch basin along the conduit serving to fill the cold water pool (Fig. 12e). The sediments collected on the floor consisted of numerous very thin trampled layers of ash stemming from the cleaning of the furnaces and heating system (*hypocausta*).

The last service area of the baths, in the shape of an inverted L, extended beyond the limits of the excavation and delimited the eastern extension of the complex and joined the south-eastern corner of the façade under the current Cardenal Remolins Street. Inside were the furnaces and boilers of the pool. The remaining surface could have served to store the great amounts of wood required to keep the baths operational (Fig. 12e). The outer wall of this space ran parallel to a secondary road leading to the *decumanus*. Along this façade was a door allowing the workers to enter and unload the wood.

Apart from fire, water was essential to the thermal baths of Ilerda. There is unfortunately no evidence as to how the water was procured or how it attained the baths. One cannot rule out the use of wells collecting water from the water table in the area of the boilers where the wood was stored.

The interior decoration of the baths

Thermal complexes were meeting spaces and exemplified a city's high level of well-being and Romanisation. The Romans resorted to stone or marble slabs to cover mortar, a material they invented. As the thermal baths were very humid, marble and all its variants were ideal for decorating and cladding its walls and floors. Different types of marbles procured from a wide range of zones of

the Empire served to decorate and clad the baths of Ilerda. The most noteworthy material, due to its quantity, is the marble from Santa Tecla de Tarragona serving for the mouldings decorating the plinths, cornices and door frames (Fig. 12a) as well as for the sculpted plaques bearing acanthus flowers and vertical striations simulating pilasters decorating the walls from top to bottom (Fig. 12b). Also noteworthy were plaques with floral motifs, representations of mythological scenes and a fragment with a very fragmented epigraphic inscription whose meaning remains unknown. A compelling find was a 6.5 cm thick marble fragment bearing engraved footprints (*vestigia*) recovered in the *vestibulum* of the baths. Similar finds in other thermal complexes of the Empire are known to have been accompanied by brief propitiatory texts related to the utility of baths and their dangers (slipping, stomach cramps and minor accidents). Another interpretation is that it is a specific invocation of the goddess Isis within the framework of essential ablutions and propitiatory acts inviting bathers to stop in the footsteps of the divinity itself: '*ante ipsa Deae vestigia*'. Regardless of its meaning and function, the engraving was surely embedded in the floor of one of the rooms of the baths (Fig. 12c).

Ilerda's thermal baths. A model identified in other cities of the Empire

Both the dimensions and the finishes of the public baths suggest that Ilerda experienced one of its best moments at the outset of the 2nd century AD (Fig. 15). Public baths were expensive to erect and maintain with a funding, reflected by the city's epigraphic record, by a municipal curia consisting of members of the urban elite.

The baths of Ilerda reproduced the well-established model of other cities of the Empire characterised by a vast *palaestrae* and baths. They were constructed in areas of heavy commercial traffic with rooms set along a linear axis (*frigidarium*, *tepidarium*, *caldarium*) marked by a single path of circulation, and most likely surrounded by shops (*tabernae*).

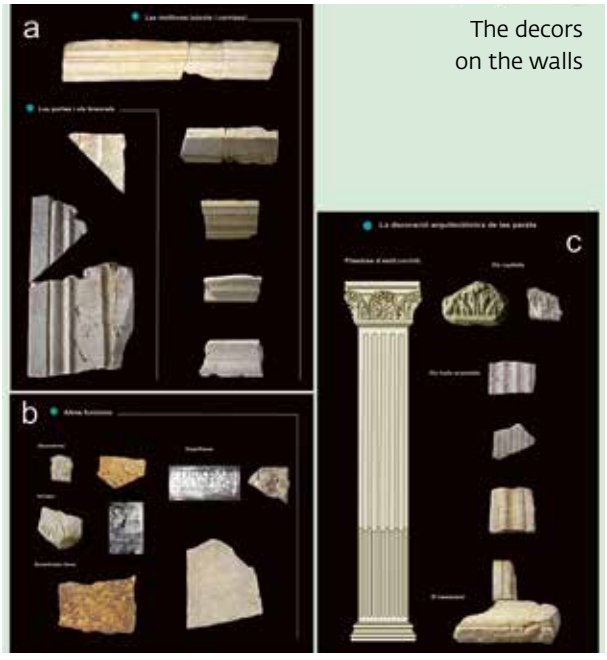


Fig. 12. Marble fragments decorating the walls of the baths.

Although there are no completely identical cases, the model applied at Ilerda is reminiscent of the Stabian and Forum baths of Pompeii and those of the Forum of Herculaneum of the 1st century BC. A century later saw similar buildings in Pompeii (Central baths), *Ostia* (Neptune baths) and San Bertran de Comenge (Northern baths) and later, in the 2nd century AD, in *Germania* in Kempten and Xanten. Undoubtedly the construction that best evokes that of Ilerda by it shape, distribution and dimensions, is the complex to the north of the city of *Volubilis* of Roman Mauritania built between 60 and 80 AD.

A long history?

Identifying the subsequent evolution and continuity of a thermal complex of this nature that has suffered from systematic looting is very complex as it has only been possible to recognise a series of late renovations related to the pool of the *caldarium*. Its final physical disappearance provoked by the removal of its stone foundations did not take place until the 13th century. It is then that the paving of the *frigidarium* was converted into the base of the walls

of Christian houses and the *natatio* was divided into compartments transforming its interior into storerooms for manufactured goods. Such a late looting of its foundations coupled with the fact that the level of the city remained unchanged for many centuries and the absence of constructions during the Al-Andalus period suggest that the complex could have in some manner served to house the Arab baths of the Magdalena. This notion is bolstered by several notarial records of the 12th and 13th centuries that place the Arab baths near the Romanesque church of St. Mary Magdalene a few metres from the Roman baths (INT-90).

Aerial view of the 2008 excavation of the thermal baths of Iesso.

The public thermal baths of Iesso

Josep Guitart, Núria Padrós and David Castellana[1]

Archaeology offers a substantial amount of information as to the public thermal baths of Roman Iesso, a complex that occupied an *insulae* to the north of the city west of the *cardo minor* 2. Its remains, which can be observed in the Archaeological Park of Guissona, reveal thermal features that are archaeologically intricate but very representative of the historical and urban evolution of the city.

It must be noted that this thermal complex, identified during a limited archaeological intervention between 1975 and 1976, has yet to be fully excavated. A series of successive extensive excavation campaigns of the complex resumed in 2003 during the creation of the Archaeological Park leading to the discovery of much of its thermal building and a series of its annexes. What was missing, however, is data as to the key south-eastern end of the baths where a good part of the hot rooms were under a modern construction which only recently could be removed. The ongoing exploration of this area, initiated in 2018, has yet to be completed as we write these lines. They will surely offer further information as to this key area (Fig. 1). In any case, the remains unearthed to date are significant enough to justify an initial interpretation of the design of the baths, a public complex that served for more than two centuries, and how it evolved over the years.

Indeed, a first clear observation gleaned from the work carried out so far is that they had several evolutionary phases that improved their performance and changed their appearance and dimensions. It was common in Roman cities for this type of public

Fig. 1. Aerial view of the hot area of the baths during the 2018-2019 excavation campaigns.

building to undergo maintenance and successive remodellings due to the great wear they suffered from their daily use of fire and water.

The earliest baths at Iesso constructed towards the end of the first half of the 1st century BC (Phase 1) were relatively modest. After a few years, somewhere in the middle of the 1st century AD, they underwent considerable remodelling and expansion (Phase 2) before once again being transformed and partly demolished in the 2nd century AD to raise a new more monumental complex that, in spite of everything, reused certain earlier elements (Phase 3) (Guitart et al. 2009; Guitart et al. 2011: 149-186).

Phase 1: the Republican-era baths (1st century BC)

The original building was an extremely solid feature applying a very meticulous technique combining *opus caementicium* with *opus incertum*, highly regular and well-squared main facings with large ashlars placed at key points such as corners, wall intersections and frames of arched doors.

These first baths occupied the south-eastern corner of the *insula* by means of a rectangular thermal building (18.20 x 15.90 m) covering a surface of about 290 m2. It has been suggested that the courtyard-*palaestra* was to the west of this building. This hypothesis, however, cannot be confirmed as this area was built over at the outset of the 20th century. Yet the notion is highly plausible when taking into account that *palaestrae* (serving also as *gymnasiums*) were already in this timeframe almost indispensable elements of public thermal baths.

The earliest thermal building (Fig. 2) had a large circular room 6 m in diameter (Fig. 2.4) that was linked to the west through a small door (0.70 m) with a rectangular room 6.10 m long and 4.30 m wide (Fig. 2.3). This room, in turn, led through a wide opening (3.60 m) to another small rectangular room of the same width and only 2.80 m long (Fig. 2.2). To the south of the circular room was the first of the hot rooms which was accessed through an arched door, which preserves the first voussoir of the arches. It is 0.70 m wide and, like the door leading to a room to the west, was most likely also capped by an arch whose highest point attained 1.62 m from the floor. This low door thus helped preserve the temperature of the hot

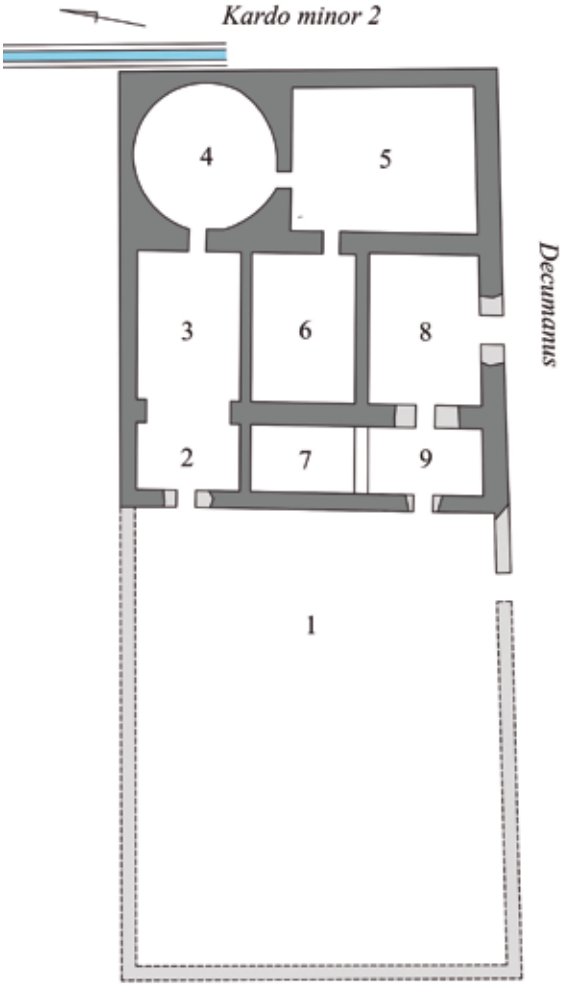


Fig. 2. Schematic floor plan of the earliest thermal building (Phase 1).

Fig. 3. Detail of a paving fragment from Phase 1 of Room 4, possibly the *frigidarium* of the earliest thermal baths.

Fig. 4. View the sewer of the Phase 1 of the thermal complex.

rooms which in this first phase were still heated with braziers.

The internal organisation of this room to the south of the circular room remains unclear as it is under the paving of Phase 2 and capped by the *suspensurae* of Phase 3. Trial trenches suggest it nonetheless to be a rectangular measuring 7.70 x 6 m (Fig. 2.5). It communicated to the west with another rectangular room (6.10 x 4.30 m) (Fig. 2.6), and towards the south with what appears to be another room (Fig. 2.8) with a paving 0.70 m higher than those prior to it that surely had a direct access the *decumanus*, the road bordering the baths to the south.

All the rooms (except 8) reveal a sophisticated paving consisting of first layer of *opus signinum* under a tile pavement (several were observed during the excavation). The tiles in Rooms 2, 3 and 4 were rhomboidal with a maximum length of 16 cm. Some in the circular room were pale yellow and others reddish, a combination giving the floor a certain polychromy and creating geometric motifs whose shapes cannot be specified given the poor state of preservation (Fig. 3). By contrast, a typical *opus spicatum* design with rectangular ceramic tiles measuring 8.3 x 4.8 cm and 2.3 cm thick served for the floor of Room 6.

Also worth highlighting is a major sewer constructed at the same time as the baths, which ran along the western façade of *cardo 2* connecting with the drains of the thermal building (Fig. 4).

The floor plan of this phase of the thermal complex incorporates the hypothesis of a courtyard-*palaestra* to the west measuring a total length of 36.80 m (Fig. 2.1). This is based on the assumption that it stretched across the whole width of the *insula*, although there is, for the time being, no concrete evidence supporting the hypothesis.

The baths were probably accessed from the *decumanus* through the courtyard-*palaestra* and from there, through a vestibule (Room 2) leading to the thermal building which connected directly with Room 3, interpreted as the *apodyterium* (dressing room). Room 3, in turn, communicated with the circular room (Room 4) possibly serving as a *frigidarium* of Phase 1. A ninety-degree turn to the south from the circular room probably led to the hot rooms: *tepidarium* (Room 5) and *caldarium* (Room 6). The *tepidarium*, occupying a surface of 47 m^2, was the largest of the rooms, almost doubling the surface of the *caldarium* (26 m^2). It was logical that the dimensions of the hottest room were still relatively small in baths of this type as they had not yet incorporated the underground hypocaust heating system meaning their heat was generated only by mobile braziers and their proximity to furnaces.

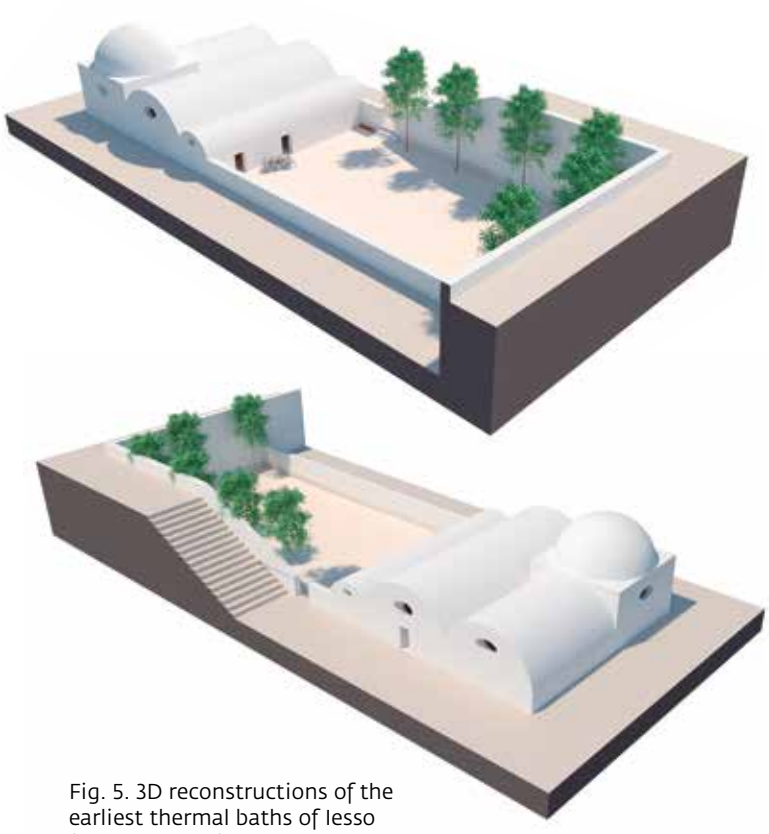


Fig. 5. 3D reconstructions of the earliest thermal baths of Iesso (1st century BC).

The furnaces were in Space 7 evidenced by the discovery of the base of one to the north of the room, adjacent to the *caldarium*. It is plausible that Room 8 and Space 9 had doors connecting directly to the outside to service areas needed to operate the furnaces and store fuel.

Thus, despite the fact that much remains unknown of Phase 1 of these baths, it probably followed a classical design established by thermal bath research marked by features with 'a layout of parallel rooms with a retrograde itinerary' (Krenker et al. 1929; Nielsen 1990: vol. II, 51-52; Gros 1996: 389, fig. 439).

The stratigraphic analysis places the chronology of the construction of these first baths in the first half of the 1st century BC and reveals that the construction led to the demolition of older domestic dwellings. This thermal complex was therefore not built during the earliest phase of the city but a few years later between 70 and 50 BC. It served the second or third generation of residents who endowed the city with facilities such as thermal baths that became increasingly indispensable to any urban centre. The complex thus follows a model developed in Italy in the 2nd century BC which did not yet incorporate the hypocaust heating system already known in Campania from the first years of the 1st century BC. The earlier baths of Pompeii are a good example of a model that would not become widespread until the last decades of the 1st century BC. The new public baths during the reign of Augustus incorporated the new hypocaust system not only in Italy, but in the provinces far from the capital. Relevant examples are Glanum in the south of Gaul (today Provence) from the second third of the 1st century BC equipped with a hypocaust under its *tepidarium* and *caldarium* (Rolland 1952) and Conimbriga (Portugal) at the western end of the Empire whose rooms were heated by means of a *suspensurae* and two furnaces (Alarçao, Etienne 1977: 48ff).

The initial phase of the thermal baths of Iesso, due both to its antiquity and characteristics, forms part of a small but interesting group of well-recorded Roman-Republican baths in the *conventus Tarraconensis*. These include the cases of Valentia (Marín, Ribera 2010) and Ca l'Arnau in Cabrera de Mar (Martín 2002), both from the 2nd century BC, and those of Baetulo (Guitart 1976: 61-78; Guitart, Padrós 1990: 169-172), which, like Iesso, date to the outset of the 1st century BC and follow the model of Roman baths that have not yet incorporated the hypocaust heating system. They serve nonetheless as palpable evidence of a very early and profound Romanisation of these regions (Fig. 5).

Phase 2: extension, reform and modernisation of the baths (1st century AD)

Phase 2 of these baths, dated by archaeology to the middle of the 1st century BC, saw key reforms that profoundly altered the thermal complex. These entailed an extension towards the north and west to make space for the *palaestra* and the garden courtyard. The baths now possibly extended over almost all of both the *insula* and *cardo* 3, which served as its western border.
A century after its construction, Iesso's first baths were too small and outdated. One of the most

Fig. 6. Trial trench below the level of circulation of the *apodyterium* of Phase 2 revealing the remains of the buildings demolished by second major extension of the thermal baths.

obvious aspects of this ageing was its heating system. It now adopted the hypocaust technique of heated floors that, as pointed out above, became widespread since the reign of Augustus. The citizens of Iesso were certainly well aware that their baths had become obsolete so the reforms of Phase 2 perfected it and rendered it more efficient. The city itself was in full development and other innovations were being adopted. There is evidence, for example, that during the reign of Tiberius the city's water was supplied by an aqueduct, a much more efficient system of managing running water. The remarkable extensions of the bath complex also suggest that the city experienced an increase of population, wealth and standard of living.

This expansion led to the demolition of a large part of the quarter of houses occupying the *insula* since the city's first decades. Archaeological trial trenches sunk below the circulation level of the baths recorded an earlier domestic Republican quarter dating from the first half of the 1st century BC, as well as vast reforms carried out in the early years of the Imperial era under the reign of Augustus (Guitart et al. 2015: 167-172) (Figs 6-7).

Construction of the new baths, although reusing the original thermal building and its solid architectural structure, led to profound changes of its interior through the installation of new properly updated hot rooms. Moreover, the *apodyterium* and the *frigidarium* were extended and rebuilt to the north with a more spacious design.

Fig. 7. Remains of a house and part of a road and its sewer covered by the courtyard-*palaestra* during the extension of Phase 2 the thermal baths.

The schematic plan of Phase 2 is numbered in Figure 8 according to the itinerary followed by the bathers. Archaeological work has clearly recorded that the refurbishment of the original hot areas of Phase 1 required raising the entire floor level by about 0.80 m in the new rooms so as to install the underground hypocaust.

The new *caldarium* (Fig. 8.7) stretched over both the earlier *caldarium* and *apodyterium* resulting in a usable space measuring 9.10 m in length and 6.10 m in width (56 m2). This room was now much more efficient as the new heating system ensured it maintained a high temperature. Its internal distribution remains unclear as several elements of later Phase 3 remain in place partially blocking the view. Enough surface was nonetheless cleared to confirm the presence of numerous *pilae* supporting the floor. Moreover, an *alveus* or hot water pool was certainly in this room's north-western corner, as suggested by the position of the sewer that served to drain it.

The new *tepidarium* (Fig. 8.6), occupying the same space as that of the earlier phase, also saw the raising of its floor by 80 cm and the installation of *suspensurae* for the hypocaust. These elements were observed during the last excavation carried out in 2019 of this sector.

The remodelling also included a new *praefurnium* (Fig. 8.9) which was extended to the north into the space of what was earlier the vestibule. This new source of heat for the new hot rooms also benefitted from more modern furnaces.

Although the level of circulation of the circular *frigidarium* was also raised, it was not equipped with an underground hypocaust but simply backfilled with a compact layer of stones and earth. This served as the base of a new opus *signinum* pavement of very high quality whose junction with the wall took on the form of a typical half-pipe section.

Prior to raising the floor level, the door connecting this room with the *apodyterium* of Phase 1 was walled up. This closure was carried out with care, with small blocks bonded with mortar, starting from the level of the original paving. The other door of this room connecting with the *tepidarium* was also sealed. Access to the *tepidarium* in this new phase was through a new door opened at the eastern end of the wall shared by the two rooms (Fig. 9).

A stone bench about 40 cm wide was attached to the northern and eastern sides of this circular room

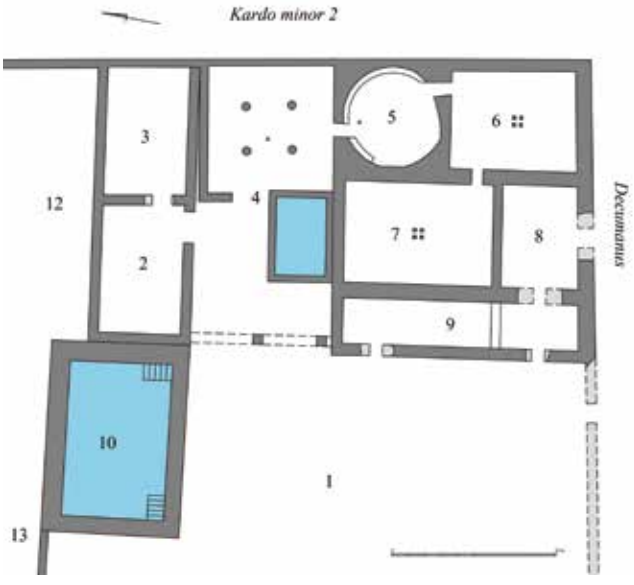


Fig. 8. Plan of the remodelled and expanded thermal baths of Phase 2 (middle 1st century AD).

Fig. 9.View of the circular room after its discovery in 2004. The ashlars in its interior were displaced when it was filled during Phase 3. In the back to the right is the walled-in door of Phase 1, and to the left, the new door of Phase 2 leading to the *tepidarium*.

Fig. 10. The circular room with its paving and its stone bench along the wall. The feature benefits from a protective cover since 2011.

(Fig. 10) and a new door was opened to the north to access the new spaces linked to the bath's new extensions. This door led directly to the new *frigidarium* (Fig. 8.4) in the form of a large elongated rectangular surface of 134 m2. This area, paved with *opus signinum*, is noteworthy due to a cold water rectangular pool (4.80 x 3 m, circa 1 m deep) attached to the wall of the older thermal building, and an opus *signinum* along its floor and walls covered with a high-quality hydraulic coating.

An original and creative aspect of the *frigidarium* is its division into two different environments. Its eastern half was covered by a tetrastyle atrium and its corresponding central *compluvium* (2.50 x 2.50 m) ventilated and allowed light to enter the zone (Fig. 11). The structure of the atrium was clearly delimited by elongated stones embedded in the paving of the *signinum*, as well as by traces of the columns that supported the *compluvium*. A sewer hole indicative of the position of the *impluvium* that collected water and channeled it westwards through a subterranean drain. The same drain was connected to the circular room whose paving, next to the door, featured another sewer hole. These features suggest that both the hot rooms and the circular room were designed to allow a thin layer of water to trickle over their hot floors to maintain the necessary humid environment.

The large room of the *frigidarium* faced an open courtyard that extended up to 26 m to the west, crossed by the sewers of the baths, which now drained to the west (Fig. 12). At his stage, only the pool of the *frigidarium* maintained a direct connection to the sewer of *cardo* 2 from Phase 1. Moreover, the northern end of this courtyard is the sole area that could be observed as a building was erected to the south in the early 20th century which today serves as a museum. Although the schematic representation of this phase of the baths includes a hypothetical projection of the thermal building bearing the same width, it is probable that it did not extend so far to the south-west.

Very well-preserved remains of the outdoor *natatio* (Figs 8 and 12.1) were unearthed next to the thermal building to the north of the courtyard, an area which presumably served as a *palaestra* (Figs 8 and 12). The *natatio 's* interior dimensions were of 9.35 x 6.30 m and its maximum depth was 1.20 m. Its two five-step ashlar staircases facilitated access. Its construction reveals a high degree of care and a search for great solidity. Its foundations measuring up to 1.30 m in length consisted of blocks. They were raised with *opus caementicium* and capped by elongated blocks with rounded surfaces (Fig. 13).

Fig. 11. View from 2004 of the *frigidarium* of Phase 2. Left: remains of the tetrastyle atrium. Right: the cold water pool topped by a sewer from Phase 3 which destroyed part of its walls. Top right: remains of the *alveus* (pool) of the *caldarium* of Phase 3.

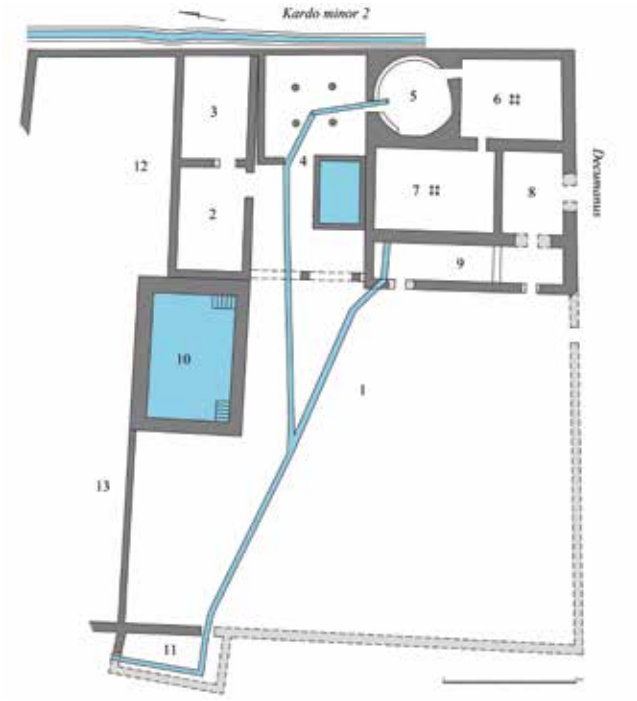


Fig. 12. Plan of Phase 2 of the thermal baths with the addition of the *palaestra* (no. 1) and the sewers that drained the baths.

Also notable is the drainage of the *natatio* in its north-west corner consisting of a large piece of lead with two overlapping holes allowing the pool to be emptied either completely by opening the two, or leave a few inches of water at the bottom of the pool by opening only the upper.

A door at the western end of the courtyard-*palaestra* led to a space interpreted, based on the arrangement of sewers, as the bath's latrines (Fig. 12.11). The convergence of the drains from the thermal building passing here facilitated, no doubt, taking hygienic measures.

The excavation of the thermal building to the north of the *frigidarium* brought to light two more identical rectangular rooms (7.80 x 5 m) (Fig. 8.2-3). They were likewise solid constructions with walls founded on ashlars capped by smaller stones bound with lime mortar. However, they were not paved with *opus signinum* like the others of the thermal building but may have had wood floors. Excavations farther north came upon what appears to be other spaces of the baths (Fig. 8.12) whose function can only be known upon completion of the excavation.

The schema of the bath's layout (Fig. 9) of Phase 2 illustrates the basic distribution of the thermal circuit. The entrance at the *decumanus* leading to the courtyard-*palaestra* was maintained to the south. This last space now became much larger and was marked by a splendid *natatio* in its north-eastern corner where it profited from sunshine most of the day and especially in the afternoon. Furthermore, this phase also possibly had other features or spaces linked to the entries, leisure and to services in the southern area of the courtyard-*palaestra*.

Therefore the entrance to the thermal building in Phase 2 was at the east, adjacent to the outdoor pool, facing a first room that functioned as a *frigidarium* (1). This room, besides its relatively remarkable large cold water pool, was partly covered by a tetrastyle atrium, a space which perhaps also served as an interior palaestra. A narrow opening to the south then gave way to the circular room (5), the old *frigidarium* of the baths of Phase 1, now simply serving as a transition to the hot rooms, the *tepidarium* (6) and the *caldarium* (7), which were enlarged and remodelled with a double-floored hypocaust system receiving heat from furnaces in the adjoining service area (9). The *apodyterium* of this phase probably

Fig. 13. The *natatio* during the excavation of 2007. Certain of the blocks forming its rim remain where they fell.

corresponds to two rooms (2-3) to the north of the *frigidarium*.

A large open space with gardens presumably occupied the space to the north of the *natatio* and the courtyard-*palaestra*, possibly stretching across the whole *insula* (Fig. 12.13). Although explorations are limited to only a small area, there is evidence that earlier dwellings were demolished prior to the extension of the baths in this direction and that the surfaces were systematically lowered to a level below that of the courtyard-*palaestra*. Archaeological work to the west of this space uncovered the remains of ponds, structures that reinforce the interpretation that this area served as a garden and recreation area for the bathers. They must have also been connected to other unexplored spaces to the north of the thermal building (Fig. 12.12) (Guitart et al. 2015: 171, fig. 17).

It is clear that the extension of the structure and its distribution in Phase 2 was conditioned by the very fact that it took advantage of the earlier meticulous, solid architecture. The expansion, with its new spaces and different service areas fell in line with a desire to reuse earlier structures. The layout of the new phase must not be interpreted as an imported thermal model, but rather an '*in situ*' creation incorporating new technical innovations that were becoming standard throughout the western provinces of the Empire, especially from the time of Augustus. Figures 14 to 16 represent different 3D reconstructions of the thermal baths of this second phase.

Fig. 14. 3D reconstruction of the thermal baths of Phase 2. View from the north-west.

Fig. 15. 3D reconstruction of the thermal baths of Phase 2. View from the south-east.

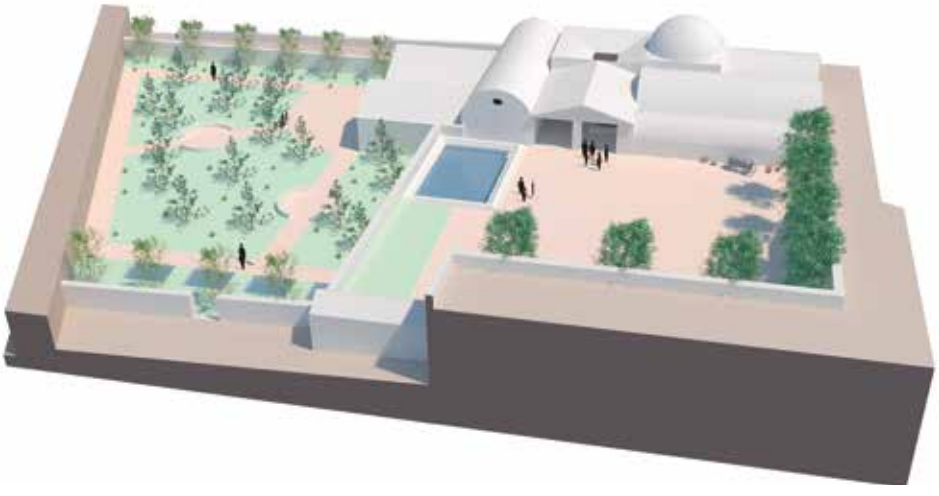


Fig. 16. 3D reconstruction of the thermal baths of Phase 2. View from the west.

Phase 3: monumentalisation of the baths (2nd century AD)

The excavation has also yielded several finds suggesting that the baths saw a third phase making use (without modifications) of the *palaestra* and the *natatio* of Phase 2, but substantially transforming the thermal building.

Unfortunately, little remains of this phase of the thermal building due to the destruction of its more superficial features during the recovery of blocks to raise medieval and modern Guissona and to adapt the area for agriculture (currently the location of the Archaeological Park).

There is evidence, however, that the new baths of Phase 3 once again raised the level of their floors and that the traces that remain today correspond only to elements below the Phase 3 circulation level which was higher than that of the agricultural fields at the moment the excavations began. This indicates that these last floor levels were completely destroyed by man in medieval and modern times.

The main remains of Phase 3 are the *tepidarium*, *caldarium* and *praefurnium* situated in the same spots as those of Phase 2, and still taking advantage of part of the structure of the earliest thermal building (Phase 1). In spite of the absence of these floors, the *pilae* of their hypocaust under the *caldarium* and *tepidarium* are relatively well preserved (Fig. 17).

The *tepidarium* maintained the same dimensions of its earlier counterpart. The *caldarium*, in turn, was widened considerably towards the south with a surface surpassing 87 m^2. The lower part of a square *alveus* or hot water pool (3 x 3 m) of the *caldarium* is also preserved in its northern corner. Its drain led to the same sewer in operation since Phase 2 (Fig. 18).

These two hot rooms benefitted from the new more efficient technical innovation introduced at the time of Augustus as it not only heated the floors, but also the walls. This was achieved

Fig. 17. Remains of the hypocaust and the *pilae* of the hot rooms of Phase 3 of thermal baths.

through a *concameratio* system consisting of a double wall with an internal air chamber connected directly to the hypocaust. Heating the walls allowed the rooms, especially the *caldarium*, to attain higher temperatures. This room, in fact, could exceed 50 degrees due to its proximity to the furnace. The excavation has yielded numerous building materials, including wall tiles and hollow terracotta spacers of the *concameratio*, elements clearly revealing an application of these techniques during this remodelling of the Iesso baths (Fig. 19).

There are practically no traces of the thermal building that extended through the circular room, the *frigidarium* and the *apodyterium* of Phase 2. The sole remains are that of a sewer that ran above the pool of the earlier *frigidarium* partially destroying certain of its walls, and traces of the sturdy foundations of a new structure that replaced the previous rooms, which were apparently completely demolished (Fig. 20). This moment also corresponds to the installation of a lead pipe for running water (materialised by a segment 35 m long) laid in a ditch that cut through the *opus signinum* paving of Phase 2 of the *frigidarium* see (Fig. 11).

Even if it is arduous, if not impossible, to obtain an overview of the thermal baths of this phase, it is clear from the scarce evidence, in particular the remains of the rebuilding of the massive foundations, that the last phase of the

Fig. 18. View of the *alveus* of the *caldarium* of Phase 3 of the thermal baths. Right: the foundation trench rendering visible the *supensurae* of Phase 2 of the *caldarium*, and above, those of the *caldarium* of Phase 3.

baths surpassed the former in architectural monumentality (Fig. 21).

This last phase from the chronological standpoint corresponds to the initial years of the 2nd century and thus contemporary to the construction of the baths of Ilerda. This is not a coincidence but another sign that sheds light on the favourable political and economic circumstances of Catalonia's western cities at the moment of the enthroning of the Imperial dynasty of the Antonines in Rome with its first emperors, Trajan and Hadrian, of Hispanic origin. Subsequent to the submission of the current article, this volume accompanied by many illustrations has been published (Guitart, Padrós, Castellana, 2023).

Fig. 19.View of the remains of the *tepiadarium* of Phase 3. Background: a modern well capping part its south wall.

Fig. 20. Aerial view of the excavation of 2008 highlighting the thermal baths of Phase 3, notably the sewer passing over the pool of the *frigidarium*. Top right: the *alveus* of the *caldarium* and the cracks made by the newer massive foundations.

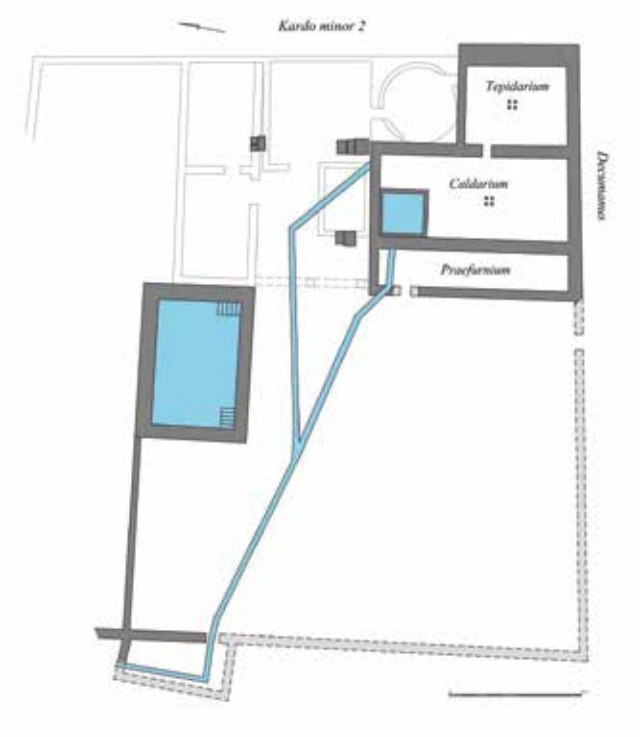


Fig. 21. Floor plan highlighting the features of Phase 3 of the thermal baths. The thinner lines correspond to demolished features of Phase 2.

Note 1: Planimetrics and 3D reconstructions: Institut Català d'Arqueologia Clàsica. Autors: Josep Guitart, Josep Ma Puche and Ivan Fernández.

VI

Water, roads and public sanitation

The roads of Roman Iesso. The excavated sections are shaded in red. Red rectangle: intersection of the Republican *cardo* and *decumanus*. Left: views of the *cardo*. top: upper layer of its stone paving (SU 1107) and its oldest sewer (SU 1175); bottom: the eastern half of the road, with the eastern edge (SU 478), gravel paving dated to the Augustan period (SU 953) and its most recent sewage drain (SU 955) with a darker fill of earth marking its ditch (SU 954) (photos: Iesso Team).

The Roman city: roads and water

Núria Romaní

Roads and water played essential roles in Roman cities. They were in fact two key features without which, in a certain manner, a city is not a city.

Roads transform a group of buildings into an urban core. Furthermore they interconnect and provide a global sense to each of the city's individual constructions. They thus transcend being empty features between constructions. Like other constructions, they are characterised by properties and components that evolved and changed over time. They also serve to explore the subject of urban water as they often covered underground water conduits that not only supplied the different quarters, but also served to drain away residual waters.

This study begins by presenting a brief approach to the broad subject of roads and water (both consumed and as waste) of the Roman cities of western Catalonia (Ilerda, Aeso and Iesso). Despite the fact that many aspects remain unclear, this study will attempt to define, based on these features, how they were organised and the services of these networks.

Archaeological evidence of roads in the Roman cities of western Catalonia

The three cities under study here were founded *ex novo* between the end of the 2nd century BC and the first quarter of the 1st century BC (Guitart 1994; Garcés, Reyes 2014: 116). In spite of irregular shaped enclosures, their urbanism tended to follow an orthogonal grid. This type of layout is especially visible

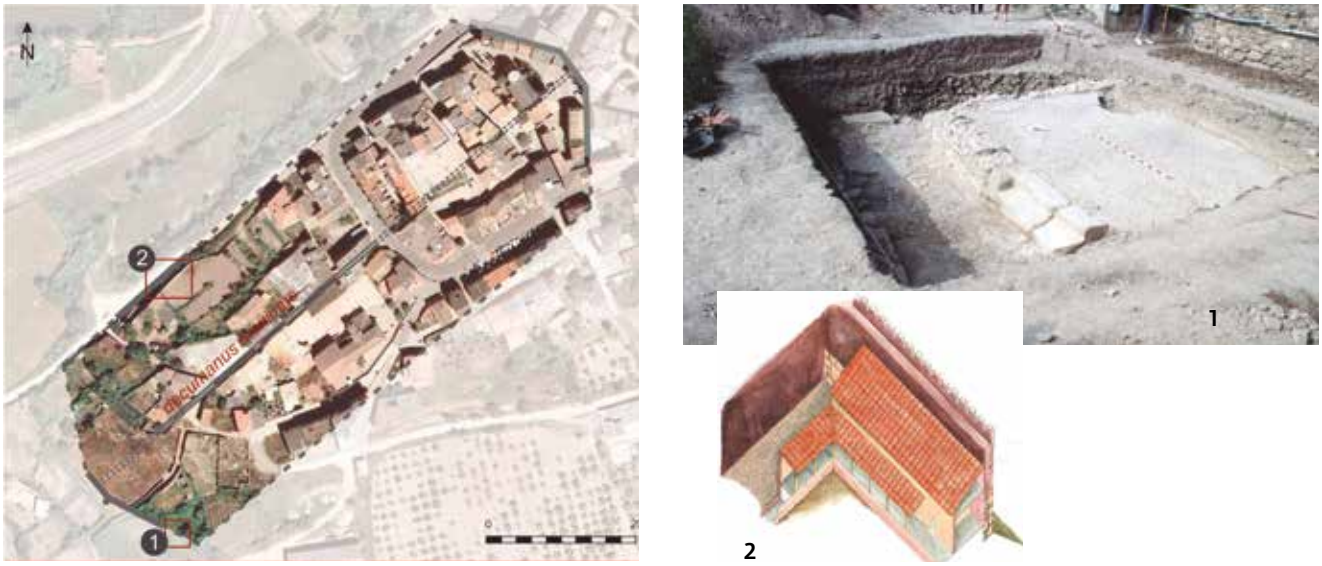


Fig. 1. Aerial view of the roads identified and excavated at Aeso: the *decumanus maximus* corresponds to the course of today's Soledat Street. Two other segments of the *decumanus* were unearthed during the excavations of the Fideuer orchard (1) and the *domus* of Antonii (2) (planimetrics and photo 1: T. Reyes; reconstruction 2: E. Revilla and G. Llompart).

at Iesso and Aeso where the topography was conducive to a fairly uniform grid of *cardines* and *decumani*. Although Iesso's road network is well known, that of Aeso unfortunately remains little explored. Despite this, one of its best defined roads is the *decumanus maximus*, marked by the course of today's Soletat Street (Garcés, Reyes 2014: 108) which, paradoxically, has never been the object of an archaeological intervention. It runs NE/SW along the long axis of the city connecting the two farthest ends of the wall. Two other short segments of secondary roads have nonetheless been explored archaeologically. The first is a small alley parallel to the *decumanus maximus* which possibly served as an access to a Flavian *domus* raised above the older demolished Republican wall when the city was extended to the south-west (Equip Prama 1993; Garcés, Reyes 2014: 134) (Fig. 1.1). The second road, flanking a *domus* called the House of Antonii to the south-west, was built at the same time as the Roman residence, between the end of the 1st century AD and early 2nd century AD (Garcés, Reyes 2014: 136) (Fig. 1).

Archaeology at Iesso, contrary to Aeso, clearly reveals the layout of three roads delimiting the city's better known northern quarter, today valorised by the Archaeological Park of Guissona. The first corresponds to two segments of the *intervallum* (ring road) unearthed along the inner face of the city wall (Fig. 3.2) respectively near the North Gate and at its intersection with *cardo* 2. The second corresponds to three wide sections of the *cardo maximus*, a main thoroughfare passing through the North Gate into the heart of the city (Uscatescu 2004: 15-16). The third is the aforementioned *cardo* 2 (Romaní 2006), a secondary road, about 35 m west of the *cardo maximus*, following the public baths' western façade (Fig. 3.1).

Apart from these three examples, two older roads were also identified, notably the crossroads of a *cardo* and a *decumanus* (Fig. 2) contemporary to the founding of the city but abandoned during the later urban transformations of the *insula* associated with the public thermal baths (Guitart et al. 2018: 168-170). Over time, these two roads evolved by means of a superposition of different levels of pavings and sewers until they permanently disappeared. This took place during the great expansion of the thermal baths (Phase 2) during the third quarter of the 1st century AD when they were covered by the courtyard-*palaestra* (Guitart et al. 2018: 165-169) and

Fig. 3. Views of the *cardo minor* 2 (1) and the *intervallum* (2) of Iesso revealing the overlapping gravel and earth pavings of the roads and sidewalks (the arrow marks where the sidewalk is elevated along the *cardo minor's* eastern edge) (photos: Equip Iesso).

the northern garden with two ornamental ponds.

The diversity of the widths of Iesso's roads is indicative of a certain hierarchy (main or secondary), a phenomenon that recurs in many Roman cities of the *conventus Tarraconensis* (Romaní 2019: 313-314). The *intervallum* ranged between 4.5 and 5 m, slightly narrower than the *cardo minor* (5.50-5.60 m since Tiberian times) and the Republican *cardo* of the *insula* of the baths (at almost 6 m). The width of the *cardo maximus*, in turn, exceeded all by far, attaining 11 m in the heart of the city before diminishing to 5.20 m towards the North Gate.

Unlike Aeso and Iesso, the founding of Ilerda on a hill corresponding to the current Seu Vella and the zone at the foot of the hill crossed by the Segre and Noguerola Rivers most likely explain why it never possessed an orthogonal plan. It must be noted that the little currently known of its urban road network does not allow to offer a clear vision of its organisational model (see the article by Payà et al. in this volume). To date it has only been possible to identify the layout of the two main Roman roads, displaced with respect to the city centre and clearly conditioned by the topography of the Seu Vella Hill. The first is the *decumanus maximus* that is parallel to the south-eastern course of the city wall connecting the eastern and western gates (Fig. 4.2). The second is the *cardo maximus*, not urbanised until the change of era, which intersected with the *decumanus* at the public baths before attaining the North Gate (Fig. 4.1). The panorama of the urban road network identified through archaeology is completed by three segments of secondary roads. These include a *decumanus minor* and a *cardo minor* which respectively delimited the south-western and north-eastern limits of the thermal baths. A third road, identified only by a large sewage drain near the southern sector of the wall, could correspond to part of the *intervallum*. The better-known roads are concentrated in the quarters at the foot of the hill. The archaeological data of the city's acropolis, in turn, remains silent.

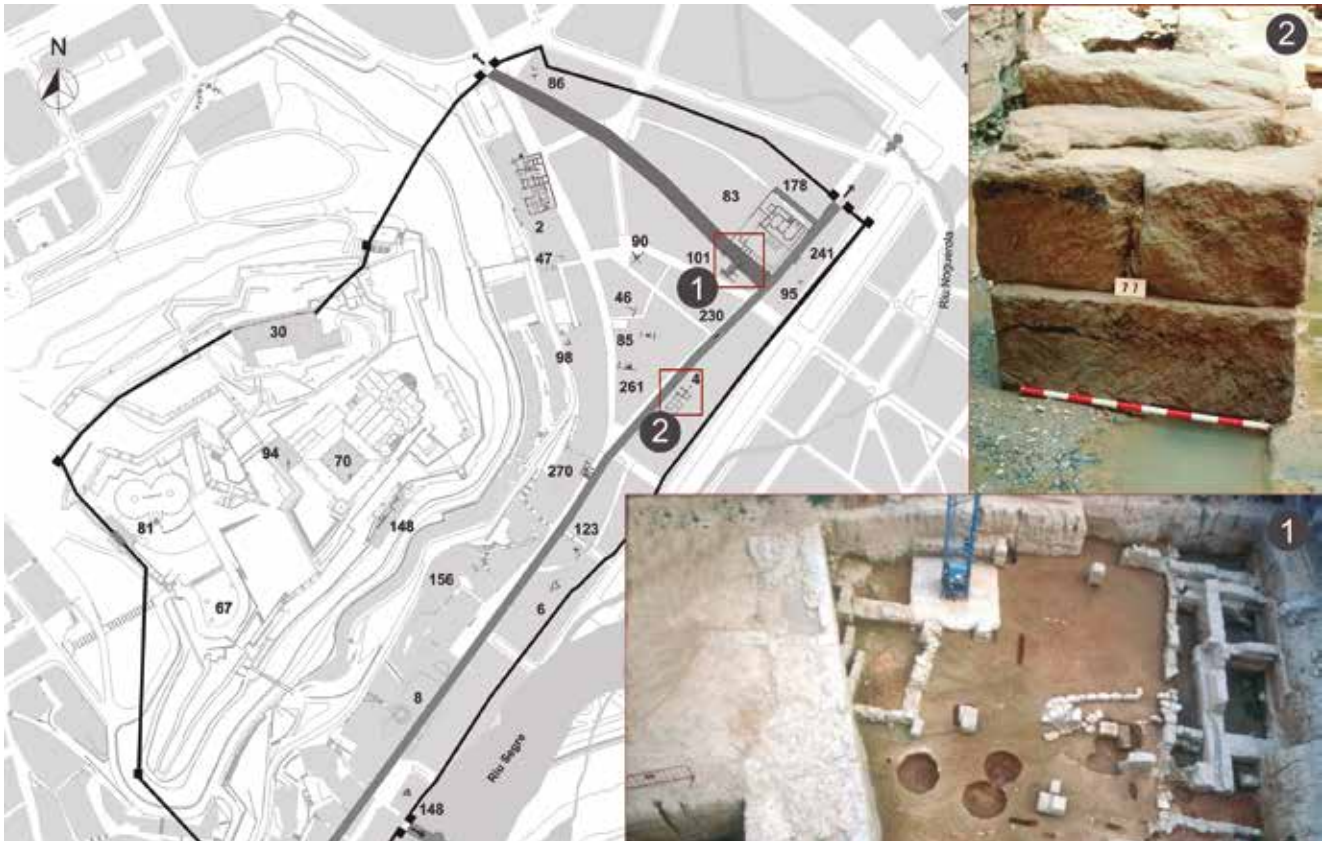


Fig. 4. Layout and detailed views of the better known roads of Ilerda: 1) aerial view of the porticoes and pavings (loose materials) of the *cardo maximus*; 2) detail of a stone base of the southern portico of the *decumanus maximus* opposite the *macellum* (photo 1: I. Gil; planimetry and photo 2: X. Payà).

The roads of the Roman cities of western Catalonia: spaces of circulation, construction techniques and transformations

As is the case today, the different features of Roman urban roads had different objectives depending on the type of traffic. Their centre was designed for wheeled vehicles while their sidewalks were for pedestrians. Certain, such as the two road segments at Aeso (Fig. 1), did not have sidewalks. Others at Iesso and Ilerda had them to either one side or the other (or both) at specific moments throughout their history. This trend, however, changed with the numerous repavings closely associated to the buildings they flanked. In the case of Iesso the earliest roads from Republican times were single spaces of circulation without sidewalks. Later, especially from the 1st century AD, sidewalks were introduced spontaneously to certain sections, and then later removed and rebuilt multiple times. This explains their variety of widths (between 60 cm and 1.80 m), types of pavings and other features serving to demarcate them from their roads (Figs 3 and 5). Iesso offers different features that distinguish the sidewalks from the road's central lane, notably different levels of paving, types of paving and constructive elements. The materials serving for Iesso's sidewalks were usually loose, like those of its centre, but of smaller calibre and compacted, adapted to the types of load they had to bear (Romaní 2019: 327). Stone slabs covering a sewage drain between the *cardo minor* and the façade of the building of the thermal baths, about 20 cm higher than the road, doubled during a certain period as a 'paved' sidewalk (Fig. 5.2c). Sidewalks were at times, like those of today, at a level higher than the roads which clearly separated them from the roads. There were likewise cases at the same level of the road. It is especially in these cases where features separating them from the road played an important role. It must be noted, nonetheless, that these cases are rather rare at Iesso. The rare cases at Iesso consist of aligned stone curbs which protrude slightly from the pavement between the sidewalk and the road (Fig. 5.3b). Porticos, another

Fig. 5. The *intervallum* (1) and the *cardo minor* 2 (2 and 3) of Iesso. The pavings of loose materials serving for both the roads and sidewalks overlapped over time (1 and 3). Different elements are visible in each of the two spaces: an elevated sidewalk (a), a stone curb (b), and a lateral sewer whose horizontal slabs served as a sidewalk (c). The *intervallum* (1) reveals a guard stone (d) protecting the curve of the cardo 2 (photos: Equip Iesso).

separating element, often marked the access to important houses or buildings. Although no case is known for Iesso, at Ilerda there are examples along the *cardo maximus* where it crosses the public baths and along the *decumanus maximus* at its limit with the *macellum* (GIL et al. 2001: 166, 168) (Fig. 4).

Contrary to what is usually imagined for Roman cities, urban roads were not usually paved with stone slabs, but with compact layers of earth, pebbles or gravel of varying granulometry depending on the location of the road segment and the moment it was paved (Romaní 2019: 324-327). This is the case of the three cities of this study (Figs 1, 3, 4 and 5), as well as many other Roman nuclei such as Lugo/*Lucus Augusti* (Carreño, González 1999) and most of the cities of the *conventus Tarraconensis* (i.e., Empúries, *Baetulo* or *Barcino*) (Romaní 2019: 327). This also applies to the older urban phases of emblematic cities such as Pompeii (Jones, Shoonhoven 2003: 135).

The pavings of both the roads and sidewalks succeeded and overlapped each other over time. Repair frequency depended on many factors such as practical requirements stemming from surface wear. Others were more circumstantial linked to the constructive dynamism of a city or to the state of its municipal government, the organism responsible for the maintenance of the urban public infrastructures including paving and other features linked to roads (De La Peña 2006: 346-348; Romaní 2008).

Iesso is in fact a good example of how roads were built and how they evolved over more than six centuries. There is clear evidence stemming from both its *cardo* 2 and *intervallum* that the first roads were built a few years after the founding of the city by equalising the more or less rugged relief. This was undertaken by either filling in the depressions with earth or cutting through the geological strata. This at times involved adding layers of stones intended to drain the periodic rise of Guissona's water table. This occurred with the Republican *cardo* that was subsequently absorbed by the construction of the later thermal baths (Fig. 2) (Guitart et al. 2018: 168). After these

operations, the first pavements consisted of simple materials: earth and clay mixed with gravels of variable granulometry, practically devoid of waste (potsherds, construction material, fauna) which became very common in more advanced periods. This type of road paving was applied at Iesso for most of its roads throughout the city's lifespan (Figs 3 and 5). Exceptionally, two sectors of stone paving were observed at two different sections of the *cardo maximus*. The first is near the North Gate of the wall (Fig. 10) while the second, dating from a later timeframe toward the end of the 1st century AD, is farther inside the city. It thus appears that Iesso's road network never benefitted from a global project of stone paving in spite of the fact that certain segments, the most important, did receive this type of paving. These cases were limited to significant or highly visible areas of the city marked by a scenographic character such as the area surrounding one of the urban gates. A similar case has been observed at Empúries (Romaní 2019: 33 and 327).

The increase of traffic over time along the roads of Iesso led to a dispersal of these loose materials (Figs 3 and 5). Their thickness ranged greatly from a meagre 6 cm to 80 cm. Archaeological evidence, notably repavings, indicate that the city's roads from the turn of the era benefitted from periodic maintenance. This dynamic slowed throughout the 3rd to 4th centuries AD coinciding with Iesso's urban regression (Pera 1996-1997), especially in its northern sector.

At Iesso it was also possible to identify, apart from the repavings, specific occasional repairs. These included the filling of potholes and other faults provoked by rain and wheeled traffic, as well as erosion generated by the introduction of sewers and water pipelines into their subsoil that were usually resolved by careful refillings (Figs 2 and 6). In any case these repairs did not alter to the level of the road's surface (Romaní 2008: 150).

Road traffic management was a concern within Roman cities, and Iesso offers evidence of it. Guard stones, for example, served to protect the corners and the sidewalk at two turning points, notably between the intervallum and the *cardo maximus* and between the *intervallum* and *cardo* 2 (Fig. 5.1d). These guards consisted of large local blocks placed at the limit between the road and the sidewalk and protruding no more than 40 cm from the paving.

Modifications to the roads were not limited to new pavings. They also consisted of great adjustments in width and layout conditioned by extensions of adjacent buildings. Since roads were urbanised, narrowed, widened and used over the years, they therefore can be considered spaces whose changes reflected the trajectory of the transformations of a city. This is the case of Ilerda's *cardo maximus* which was initially widened from 9 to 14 metres due to the displacement of its eastern edge in the middle of the 1st century AD. It then lost its eastern portico less than a century later in the early 2nd century AD in favour of a building of the public thermal baths (Payà 2003: 149). The cases of two of Iesso's better-known roads, *cardo* 2 and *cardo maximus*, were similar. The width of the first increased from 3.70 to 5.50-5.60 metres as the building's eastern limit was displaced during the first half of the 1st century AD (Romaní 2006). However, between the end of this century and the outset of the 2nd century AD, it lost one metre of width to the thermal complex. Despite the precarious state of conservation of this phase of construction, there is evidence that the refurbishing of the baths led to raising the level of the road and the construction of solid foundations to support its large monumental and vaulted building. It was necessary for this reason to reinforce the older features along the road with a large mass of *opus caementicium* extending one metre into the road (Fig. 6). However, the most radical appropriation known to date of the Iesso road network was in the area of the *cardo maximus* closest to the urban *domus* where in the middle of the 5th century AD two rooms of a wine cellar- to press and tread grapes - were installed thus invading the road's 11 m width (Fig. 6).

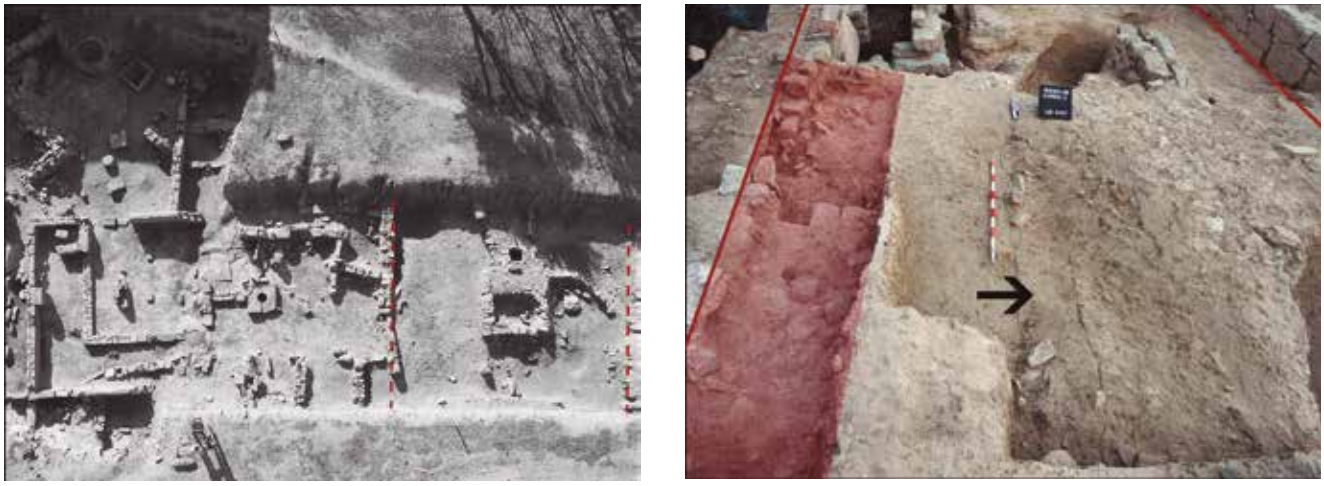


Fig. 6. Trasnformation of the roads of Iesso. Top, dashed red line, the original course of the *cardo maximus* converted in Late Antiquity into features to make wine. Bottom: view from the south of the massif *opus caementicium* (red shading) extending over part of the *cardo* 2 that served to reinforce the eastern walls of the thermal baths. The arrow indicates the filling of the ditch of the earliest lead pipeline that cuts into the gravel paving (photos: Equip Iesso).

Water in the Roman cities of western Catalonia

Water also played an essential role in the viability over time of Roman cities. Access to a good water supply was key when founding a city, especially in areas of low rainfall such as the region of this study.

The proximity of the Segre and Noguerola Rivers to Ilerda, as well as an easy access to the water table, allowed the city to collect water through wells without having to rely on rainfall. The well unearthed at the *domus* of the Portal de la Magdalena (Loriente, Oliver 1992) is an example from a domestic context.

Easy access to water under the subsoil of Guissona/Iesso was also a determining factor in choosing where to found the Roman city. A large and very shallow underground aquifer extends throughout 200 km2 around Guissona and feeds many of the sources of water of the town and its surroundings. This is the case of a spring at Estany 1.5 km away from Guissona (Guitart 2007: 15). It was precisely the wells tapping the aquifer that provided water to the inhabitants of the early urban Iesso. The oldest known to date is a Late Republican square well (Fig. 8.1) unearthed in 2000 that supplied the nearby quarter of houses and potentially the large *domus* from later High Imperial times. This well was linked to certain technical features that were probably not shared by other wells of Iesso. The archaeological evidence available consisting of a series of narrow drains protected by stone slabs, as well as the foundations of an elevated structure, suggests the existence of an elevated tank feeding the different lead pipelines inside drains that transported water to the different points of the quarter (Buxó et al. 2004: 263). A piston pump (*ctesibica machina*) probably served to extract the water from the well (Vitruvius, 10.7.1). Although not preserved, it is the only system that could have mechanically raised water from a modest well of this type (Guitart 2007: 37-40).

There was also another widely adopted, yet much more technically complex, means of supplying water to cities throughout the Roman world: the aqueduct. There is no archaeological evidence that these great canals provided water to the three Roman cities of western Catalonia. Moreover, neither Aeso nor Ilerda offer an indication that this was the system serving to provide the amount of water necessary, for example, to supply their public thermal baths.

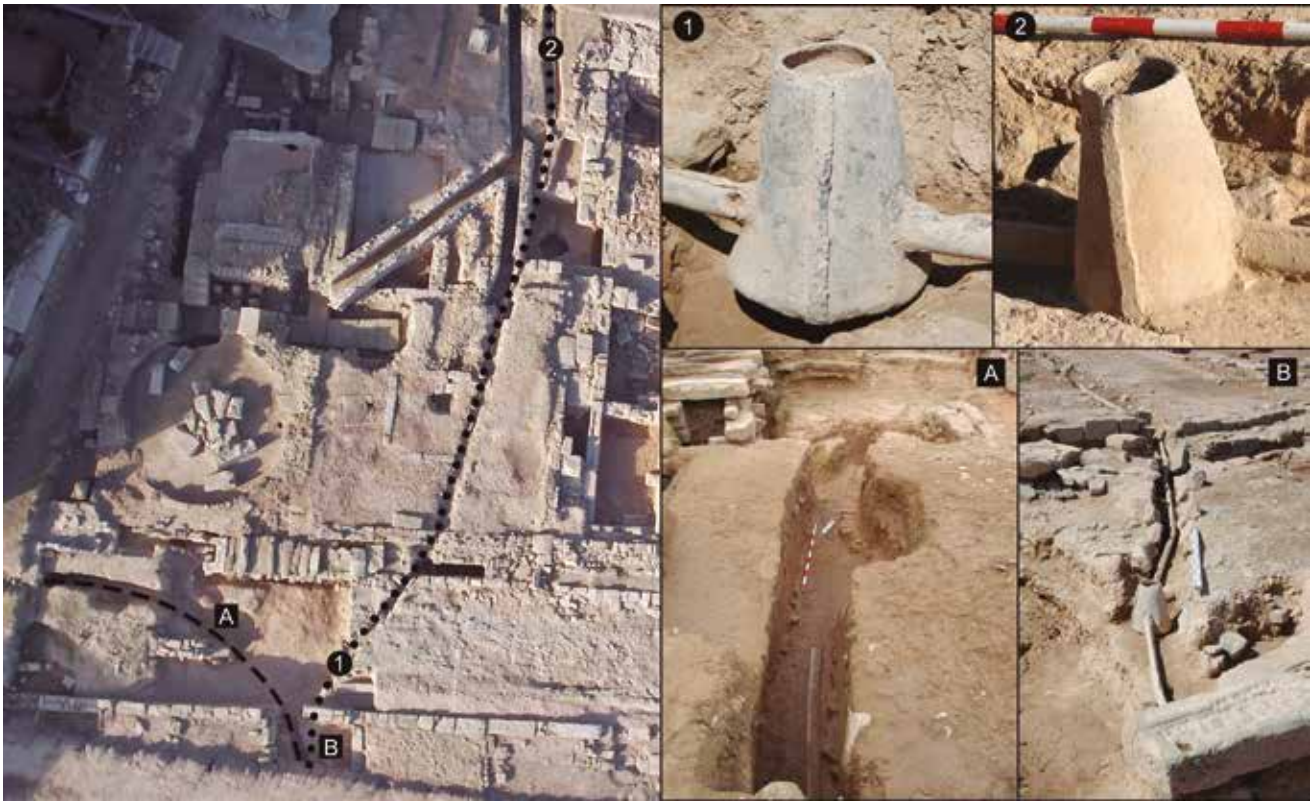


Fig. 7. Course and details of the two pipelines associated with *cardo* 2: A (dashed line) is the earliest while B (dotted line) is the most recent. To purge any accumulation of air, the pipeline was equipped with two lead valves (1 and 2) 21 m apart (photos: Equip Iesso).

Iesso however differs greatly as it possesses a complex network of lead pipelines of different sizes passing under its roads that was not compatible with an inconstant water supply. This suggests the existence of an aqueduct with a hypothetical origin at what is today the Estany spring (Guitart 2007; Romaní 2012: 528). Up to four sections of small-caliber lead pipes from different timeframes have been unearthed, the oldest from the Tiberian period, probably the moment when entire water supply system began to rely on an aqueduct. Two of these pipelines of different modules leading in different directions were brought to light under the *cardo minor* 2 (Fig. 7). Their stratigraphy indicates they succeeded each other suggesting that the urban water distribution network was modified and reformed over the 1st and 2nd centuries AD. The oldest pipeline (Fig. 7A), 6.8 cm in diameter, and called *fistula denum quinum* of Frontinus (*Aq.* 45), was in a ditch between 60 to 90 cm deep between the road and the western sidewalk. The later pipeline (Fig. 7B) corresponding to the *fistula duodenaria* of Frontinus (*Aq.* 44) and measuring between 4 and 5.5 cm in diameter was introduced in the second half of the 1st century AD. It crossed the *cardo* diagonally and ran through the baths towards the open-air courtyard with the *natatio* where it ended with a welding neck, a feature indicative that the pipeline ended at this point. The pipeline also had two exceptional fittings: lead valves (Figs 7.1-2). The first was in the centre of the *cardo* 2 while the second was 21 m away in the corner of the access to the bath courtyard. These conical lead devices 35 and 30 cm high were attached to the pipeline at 10 cm from their base. These devices must have been equipped with an airtight buoy-type shutters. As these fittings were not located during the archaeologic excavation, they were probably made of perishable material. Their absence would mean a leak and the water would never reach its destination. The conclusion, based on their location and characteristics, is that they served as valves to purge the

trapped pockets of air (Guitart 2007; Romaní 2012: 529-537) that often circulated in the interior of gravity-flow U-shaped water systems (Jordan JNR 1984: 54-55) as appears to be the case of Iesso. These air-valves are quite exceptional and are known in cities such as Pompeii (Eschenbach 1979: 13; Ciarallo, De Carolis 1999: 318), *Italica* (Luzón, Mañas 2007: 246 and 255, fig. 8) and *Baelo Claudia* (Didierjean et al. 1979: 534-535) to have served to release accumulations of dangerous air pockets that could partially or completely block the section of the pipeline or even worse provoke a rupture (Mendiluce 1984: 178; García 1999: 42).

Despite the existence at Iesso from that timeframe of a system of running water associated with a supposed aqueduct, exploitation of the water table was never abandoned. This is evidenced by up to four new wells in the northern quarter of the city dating to Imperial times. Two formed part of the great *domus* dated to the 2nd century AD (Cortés 2004). One is in its surroundings and while the second is in the residence's central courtyard. Two others were identified in other localities of the same quarter, one in the centre of the garden north of the thermal baths and the other in an open-air area of a peri-urban building, possibly a hostel, beyond Iesso's North Gate (Guitart et al. 2018: 167).

The first well noted above (Fig. 8.1), as well as that from Republican times (Buxó et al. 2004), were excavated in 2000. The third (Fig. 8.2), connected to the building outside the wall, was brought to light in 2017. The excavation of these structures yielded exceptional data at the level of constructive techniques and finds. The scant oscillation of Guissona's groundwater over 2,000 years since Roman times yielded a stable level of humidity to the well's fill preserving much of its organic material. This led to unique archaeological finds, especially concerning research in the framework of Roman cities. Each of the wells bears similar construction techniques: respectively 7.7 m and 6.30 m deep and relatively small circular mouths (1.2 m and between 80 cm and 1 m in diameter). The facings of their upper sections (2.4 and 4 m deep) were lined with irregular but very well interlocking blocks. Their lower sections, bereft of rock facings, cut through the natural rock and clay layers through which was filtered the water.

The excavation of 2000 produced many well preserved organic objects of daily life. These included fragments of a willow basket, a cap and a bowl, punches, cladding and wooden gutters, as well as seeds and fruits (cereals, figs, olives, peaches, grapes, plums, cherries, melons and nuts, such as hazelnuts, almonds and walnuts) and branches of a wide variety of trees and shrubs. Their study has led to a first analysis of the management and consumption of plant resources at Roman Iesso. The later excavation of the well in 2017 yielded similar finds, notably a large number of seeds, pits and shells (Fig. 8C), and numerous wooden objects such as a bucket (Fig. 8B), a walnut wood bowl and an ash spatula. Other finds were tools such as an iron hammer with an ash wood handle and two fragments of leather shoe soles (Fig. 8A). Noteworthy among the other materials is an extensive and unique assemblage of fauna (currently under study) including the remains of four oxen, a horse, eight dogs and many ovicaprines and turtles.

A task that was equally or even more important was managing waste water. It was conducted through a more or less complex interconnected network of sewers that also ran under the urban roads. Their inclined gradients thus led the gray and blackwater away from the city. Our grasp of the sewage networks and wastewater drainage systems in the Roman cities of western Catalonia remains nonetheless very limited.

The evidence from Iesso and Ilerda indicate that although each had a network of sewers, they were not widespread throughout the city. They were installed in specific localities to drain features of high water consumption such as the public thermal baths. The discovery at Ilerda of two sewers under the *cardo maximus*, one of which in the vicinity of the public baths (Fig. 9), and two more under two secondary roads - although, for the time being, not under the *decumanus maximus* - suggests that the city

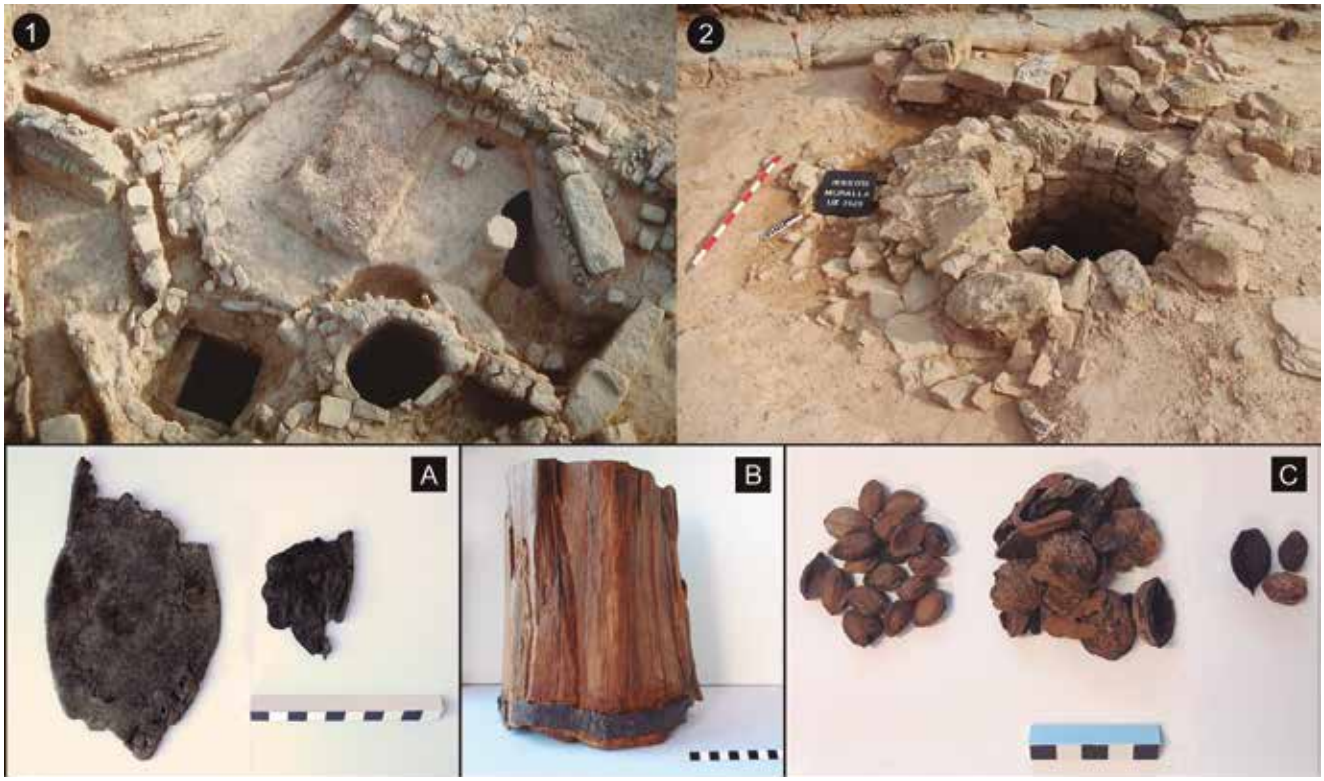


Fig. 8. Iesso. Two wells at the *insula* of the *domus* (1): a square Late Republican model featuring structures possibly linked to lead pipelines, and, to its right, a circular well dating from Imperial times (2): well of the open-air courtyard of the peri-urban building. Lower photos: organic materials from the wells: two leather shoe sole fragments (A), wooden bucket (B) a sampling of fruits and seeds (plum and peach pits and walnut shells (C) (photos 1 and 2: Equip Iesso; photos A, B and C: Museou de Guissona).

adopted this model to dispose of its wastewater. Iesso as early as the Republican period displayed an interest in managing its excess waters. Thus, it combined zones, for example, the Republican district later occupied by the great *domus*, where domestic sewers with different orientations and inclines probably spilt their content directly into the *cardo maximus*, *intervallum* with other zones, notably the *insula* of the baths that had their own modest sewage network such as the central collector of the *cardo* that was subsequently removed when the *insula* was occupied by the thermal baths (Guitart et al. 2018: 169) (Fig. 2).

Even if the method of supplying water to Iesso was modified considerably at the turn of the era, it appears nonetheless that it maintained its earlier sanitation mechanisms combining underground sewers to evacuate certain residual waters while others ran over the surface. The city therefore never established a global sewer network (Romaní 2019: 69-70).

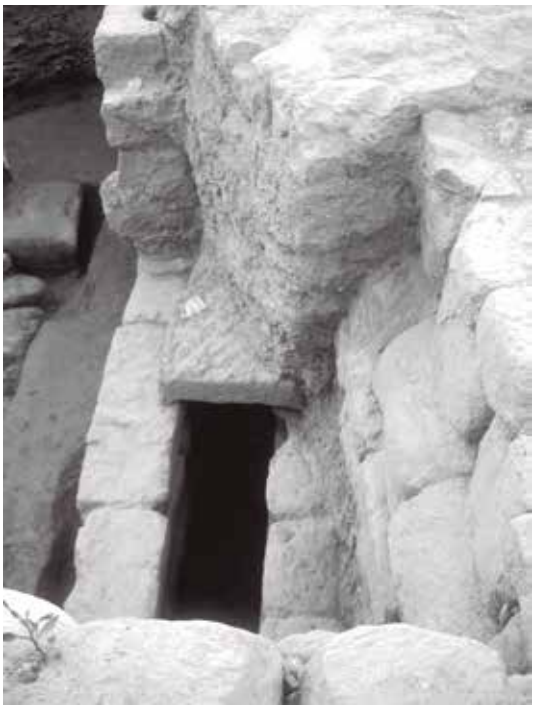


Fig. 9. The sewer drain along the western edge of the *cardo maximus* of Ilerda, near the city's public baths (photo: I. Gil).

Fig. 10. The sewer drains of Iesso. Left: *cardo 2* and its sewer formed by two channels along its eastern edge. Right: the *cardo maximus* at the North Gate, stone-paved at this point, with a sewer drain (indicated by the arrow) protruding slightly from the paving (photos: Equip Iesso).

Conduits were laid down, for example, around the baths as exemplified by the Republican *cardo* cited above that rebuilt its central sewer in Augustan times before removing it definitively half a century later. *Cardo* 2 also had a large dry stone drain formed by two different connected sections (one narrower to the south and one wider to the north) along its western edge (Figs 3 and 10). Its atypical position to one side of the road, coupled with absence of secondary connections and the origin of the wider sewer at the mouth of the drain of the baths, suggest that it served more as a drain of the baths than to collect surface water. Moreover, no road sewer has been identified in the *intervallum* or *cardo maximus*. In fact, the section of the *cardo maximus* explored during the excavation at 11 Onze de Setembre Avenue indicates that the domestic sewers of the 1st century AD fed their waters directly onto the surface of the road. In fact, a superficial drain was unearthed along the northern edge of the *cardo maximus* near the gate (Fig. 10) which served to drain water, especially rainwater, which accumulated at the end of this road.

Acknowledgements

We thank Teresa Reyes and Xavier Payà for kindly providing information concerning the roads and hydraulic systems of the cities of Aeso and Ilerda. This article would not have been possible without their help.

VII

Housing and *domus* in the Roman cities of the interior of Catalonia

View of the *Domus* of the Mosaisc of the of Empúries

The *domus* in our cities

Ada Cortés

Again his dictum about houses, that the same house is both beautiful and useful, was a lesson in the art of building houses as they ought to be. He approached the problem thus: 'When one means to have the right sort of house, must he contrive to make it as pleasant to live in and as useful as can be?'And this being admitted, 'Is it pleasant', he asked,'to have it cool in summer and warm in winter?' […] To put it shortly, the house in which the owner can find a pleasant retreat at all seasons and can store his belongings safely is presumably at once the pleasantest and the most beautiful.

Xenophon, *Memoirs of Socrates, Book III, 8, 8-10*

What the Socratic dialogue clearly indicates is that the search for and desire to live in a comfortable house is intrinsic to humans since at least Antiquity. However, it appears that only providing for the domestic needs has never sufficed. Socrates and Aristotle of Cyrene as early as the end of the 5th century BC delved into a dialogue reflecting on the concomitance of utility and beauty (or the lack of) of houses suggesting that the factors of beauty and comfort of domestic spaces were human concerns rooted in the way of grasping and living life. The nature of domestic residences and how they were put to use are characteristics serving to identify any society. The citizens of the Roman cities of Ilerda, Iesso and Aeso, even those living in the most modest dwellings, also left traces of their identity in their most intimate and private spaces. The archaeological finds unearthed to date reveal aspects that are both typical of those observed in many cities of the Roman Empire while simultaneously bearing their own characteristics that reflect, once again, that the physiognomy of domestic spaces equates with an ever-long search at every moment and by every society for well-being and beauty.

The houses of the Late Republic

The urban landscape of western Catalonia towards the 1st century BC was entirely altered by the founding of new Roman cities of Ilerda, Iesso and Aeso. These changes did not only affect the interior of this territory, but also the coast with the founding of *Iluro* and *Baetulo*, and the Roman city adjacent to the earlier Greek settlement of Empúries.

Fig. 1. Zone of the *atrium* of the *Domus* of the Mosaics (photo: A. Cortés).

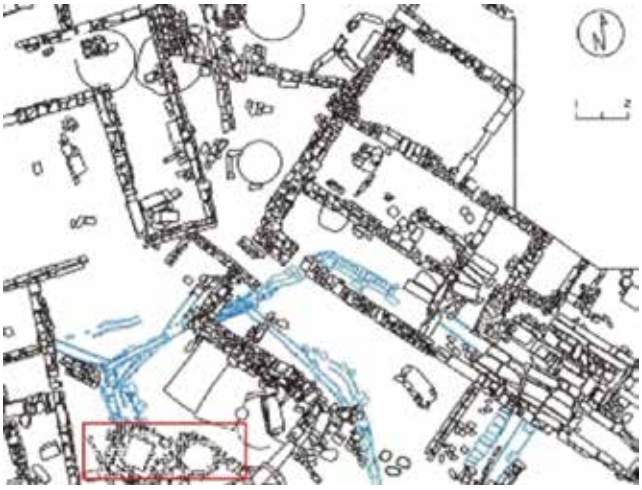


Fig. 2. Plan of the houses in the northern quarter of the Roman city of Iesso. The rectangular well is highlighted by the red square and the lead pipelines are marked in blue (from: Guitart, Pera, Ros 2004: 159)

Although these cities offer a variety of compelling domestic structures, it must be borne in mind that the remains of these archaeological structures are not abundant and certain do not date back to the reign of Augustus and the 1st century AD. A city offering good examples of entire house floor plans from the Late Republican period is Roman Empúries. The best-preserved of these dwellings are to the north-east of the southern segment of the transversal wall as well as those along the eastern wall. Their final phase and architectural evolution differed substantially from those of the initial phase. The study of the different phases of construction allow to visualise the aspect of this city's extremity in Late Republican times. Despite the difficulty of establishing the exact morphology of the dwellings of these initial *insulae*, there is evidence that they were of *atrium* type (Fig. 1).

An example of this type corresponds to the first phase of the residence known as the *Domus* of the Mosaics (House 2B) (Santos 2012: 71-78; Cortés 2014: 221-222). The *atrium*, a type of inner courtyard characteristic of the Mediterranean that developed in certain areas of Italy, is recognised during this century at certain residences of Empúries. In fact, certain remains directly recall the noble houses from the area around the Vesuvius. Their typological classification as domestic *atria*, apart from the feature itself, comprises in most cases an own system of water collection (*compluvium* and *impluvium*) and a symmetry and axiality that converge towards the *tablinium*, the receiving room of the *dominus*.

A domestic model differing significantly from that of Empúries is recorded among the Late Republican residences (1st century BC) at the city of Iesso. These houses, in the northern quarter of the city, and unlike certain along the Catalan coast, possess no *atrium* or other type of inner courtyard. In other words, the remains of domestic structures from the Republican phase of Iesso, to this day, do not offer evidence that they adopted the Mediterranean layout of an inner courtyard giving priority to light, air and water. They, in turn, follow a simple schema of two or three rooms with multifunctional spaces (Fig. 2).

The domestic functions of these residences thus had to take place in the open air either in front of the house or in a public or communal space. These domestic practices are in fact characteristic of the Iberian Culture at this time and even earlier than the 2nd century BC (Belarte 1997: 203). At the nearby Iberian Fortress of Vilars (Arbeca), for example, apart from its dwellings with porches, there were communal spaces designed for domestic activities (Junyent, López, Lafuente 1994: 82-83). Moreover,

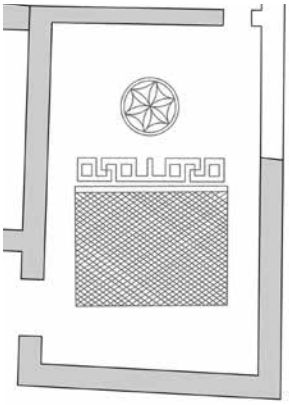


Fig. 3. Schema of the mosaic of the *triclinium* of the seigneurial residence of Iesso (drawing: Patronat d'Arqueologia de Guissona).

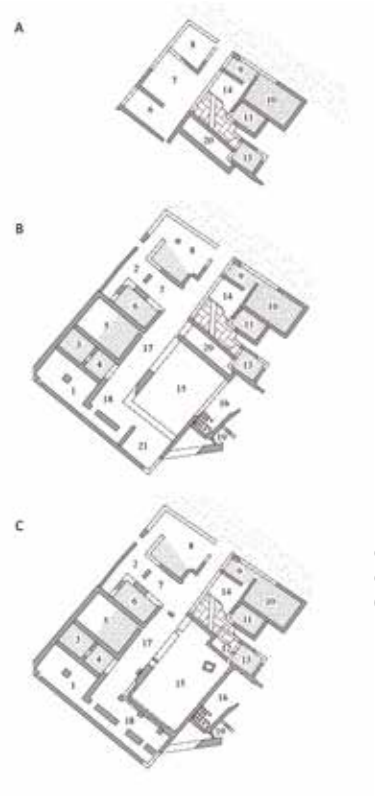


Fig. 4. The different phases of the seigneurial residence of the Roman city of Iesso (from: Cortés 2014).

in the northern Republican district of Iesso there are spaces between the houses paved with slabs that could very well respond to this model (Cortés 2014: 294). This suggests that the population of this quarter of Iesso in the early days of the city, despite its *ex novo* founding, must have held on to their traditional forms of domestic life. However, an exceptional engineering feature was discovered among these dwellings, notably a circuit of running water, a system never observed among any domestic quarter prior to the arrival of the Romans. The water that ran to these residences was conducted through lead pipes from a well in one of the public spaces (Fig. 2). This pipeline network must have been fed by an elevated reservoir that supplied water by means of communicating vessels (Buxó 2004: 263). The axes of the façades of the houses excavated in the *intervallum* of the city, adjacent to the North Gate, and the different axes of the buildings edges unearthed along the *cardo minor*, parallel to the city's *cardo maximus*, evidence the existence of a similar pipeline network (Romaní 2006: 63, 153). In short, Iesso at this moment was characterised by domestic structures that represent a certain continuum of earlier Iberian practices while simultaneously embracing a new scheme that radically changed the essence and way to live of its residents.

The early stages of the Augustan Age saw the introduction at Iesso of a new more complex model of dwelling. The first phase of what would subsequently be the seigneurial residence (Fig. 4a) is characterised by an open space articulating much of the house comprising a domestic inner courtyard. This new type of residence also featured a *triclinium* (Fig. 3), a space of Roman conception serving for representation and pleasure, where the residents and guests could dine in a reclined position. The *triclinium* served likewise as a public space to secure part of the city's social, economic and cultural interchanges. Broadly speaking, certain Roman cities of Catalonia during the 1st century BC and throughout the change of the era fully adopted what was an Italic domestic architecture. Cities such as *Baetulo* and Empúries comprised wealthy *domus* with canonical patterns following those of Pompeian residences. However, the evidence for this period from the interior of Catalonia points to residences of simpler type yet possessing Romanising elements regarding their layout and interiors.

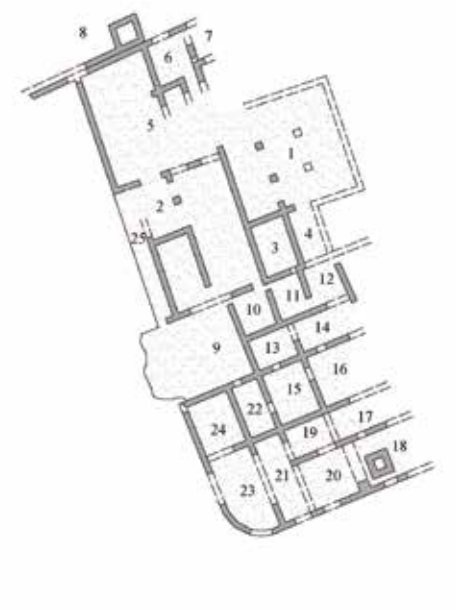


Fig. 5. *Domus* of the excavation at the Portal de la Magdalena of Ilerda (Adapted from Gil et al. 2001: 164)

The residences of the High Roman Empire

In the case of Ilerda, the capital of the Ilergetes, the first domestic feature unearthed by archaeology with a floor plan sufficiently complete to identify its structure dates to the end of the 1st century AD (despite the fact that the city was founded long before). Although a Roman presence was detected here prior this period, the type of houses built in the Late Republican period in the lower sector remain unknown. The same can be said of the Iberian dwellings towards the top of the hill whose remains suggest simple layouts similar to those of the Republican district of Iesso (see 'The Roman city of Ilerda in this volume'). But due to the lack of archaeological data, there is a dearth of comparative elements allowing to assess the influence of the arrival of Roman domestic schemes on the private architecture in the ancient Iltirta. It appears to mainly have been a type of domestic architecture typical of Imperial times. Undoubtedly, the city's most emblematic private architectural features correspond to the *domus* excavated at the Portal de la Magdalena raised towards the end of the 1st century AD (Pérez 1990: 11) that was progressively abandoned towards the end of the 2nd century BC (Loriente, Oliver 1992: 77-80; Payà et al. 2000: 283-284). Unfortunately, as is the case of almost all the Roman residences excavated in what are today urban areas, its floor plan is only partial (Fig. 5).

The remains of the *domus* excavated at the Portal de la Magdalena shed light on the more productive functions of domestic life, as well as glimpses on a zone that could have served for acts of representation and nobility. In fact, the analysis of the dimensions and characteristics of the area of services very likely reflects noble spaces indicative of a high level of well-being. It was a zone also marked by a porticoed courtyard decorated with a pattern of dots (Iñiguez 2015: 186-187). Areas of this type are only linked to large Roman *domus* bearing spaces of comfort in the framework of a very privileged social network responding to the demands of public relations and representation. It is very possible that much of the noblest area of this residence stretched towards Lleida's present-day Mossèn Jacint Verdaguer Square (Loriente, Oliver 1992: 29-40, 78-79). Thus, it is possible that the open porticoed courtyard of this *domus* did not form part of the central space of circulation and distribution, but of a secondary space of circulation. Therefore, although wealthy residences elsewhere in the Iberian Peninsula in this chronological framework tend to develop around a porticoed courtyard or a peristyle leaving behind the Republican *atrium*, this is not certain for residence unearthed at the Portal de la Magdalena.

A domestic unit raised between the end of the 1st and the beginning of the 2nd century AD that appears to respond to this new type of porticoed or peristyle courtyard was excavated at 22 Magdalena Street. Despite that the exploration was limited to its area of circulation (Payà, Morán 1998: 8; Payà et al. 2000: 290), the finds suggest it could have possessed a porticoed courtyard with a pond or water tank in its centre. Although it could potentially be identified as an *atrium*, its portico is quite a distance from the pond (Cortés 2014: 279). In any case, the key to identifying the typology of this space lies in its organisation with respect to the rest of the residence, as well as observing

Fig. 6. Remains of the porticoed courtyard house of Sant Miquel at *Barcino* (photo: M. Raya and B. Miró, Museu d'Historia de Barcelona – MUHBA).

whether it is in fact the central area of circulation and distribution or a secondary open area. Its interpretation must thus be put on hold pending future archaeological work.

This new model of residence gleaned from the domestic remains of the Roman city of Lleida - houses with peristyles or porticoed courtyards dating from the 1st and 2nd centuries AD - typifies the great political and cultural changes in Roman society that took place within the walls of private residences. As in the case of many cities throughout the Roman Empire, they began to share, since the reign of Augustus, a taste to introduce Hellenistic luxury of public spaces into the private sphere. This phenomenon was materialised by large porticoed courtyards, peristyles, beautiful gardens and numerous spacious banquet and reception halls. These new elements of wealthy abodes were designed to foster *otium* between peers during leisure and serve to exemplify the refined culture as well as illustrious and cultivated capacity of Roman citizens in all their facets and actions.

These new elements first affected the early Roman sectors with *atria*. The Pompeian residence characterised by an *atrium* and a peristyle is the clearest example of this model. Later in Imperial times, these residences abandoned the *atria* and, more importantly, the space known as the *salutatio* serving the proprietor to greet his clients. The *tablinium*, the space of representation of the *dominus*, also no longer played an essential role in the floor plan. The *salutatio*, a ritual of social cohesion, was thus no longer clearly materialised by architecture which suggests key changes to Roman social structures and relations.

The central space of residences at this time tended in fact towards halls for banquets and receptions. As noted, this type of house repeats itself in many different parts of the Empire, especially in the western provinces (Gros 2006: 149) such as North Africa, Gaul, Italy and *Hispania*. Cities in the Iberian Peninsula with a large number of cases of this type are Italica in the Baetic Province and *Barcino* in the northeast of *Hispania Tarraconensis* (Fig. 6).

The Roman seigneurial peristyle residence of Guissona/Iesso is one of the best-preserved examples in western Catalonia. It has its origins in a *domus* from the Augustan Age whose floor plan underwent considerable modifications over the next two and a half centuries. Towards the end of its days it was thus a High Imperial peristyle *domus* in the northernmost quarter of the city with an access to the *intervallum* and relatively near the public baths of the North Gate. The plan of its last phase extended over a surface of about 900 m2 (its northern limit is beyond the excavated area). Estimations indicate that it possessed a great number of rooms in its northern wing and was flanked by an agricultural and productive space to the south. Despite its incomplete floor plan and the position of its remains near the surface (vulnerable to modern vine cultivation), the stratigraphic analyses suggest it underwent three phases of construction (Cortés 2014: 163-166).

The first, as noted, was around an inner courtyard. It was then expanded during the second half of the 1st century AD by creating a second area of open circulation. This new space, possibly serving in the previous phase as a *hortus*, was a courtyard surrounded by new rooms. A third renovation of the house then was transformed into a large courtyard peristyle with two porticoes (Figs 4b-c). This extension, apart from the construction of the central courtyard, yielded two new rooms and a third corresponding to a small *balneum* (Rooms 1, 3-5, 16 and 19). The rooms in this extension to the south-west were accessed by the corridors that in this phase (Structures 17 and 18) did not open to the courtyard and did not serve as porticoes. Although difficult to interpret, this closed arrangement could correspond to cryptoporticoes. Moreover, this viewpoint takes into account that the columns of the next phase formed part of a peristyle. Another interpretation is that despite the limited access of these corridor walls, there must have been openings into the courtyard as is the case of the windows of the porticos of the Vesuvian Casa dell'Atrio at Mosaico where the closed corridor allowed, from a sheltered position, to enjoy the views of the house by passing from the *oecus aegyptius* through the southern portico to the *diaeta* (Clarke 1991: 21, 243-253). It appears that a *triclinia* (Room 5) and a cubicle with its antechamber (Rooms 3 and 4) also formed part of the new rooms of this seigneurial residence. The kitchen and the service and production sectors of this extension remain unknown. A small *balneum* in the eastern sector, with traces of a *praefurnium*, suggest that the services in this sector took advantage of these technical features. The extension of the excavation does not allow to identify the area's total floor plan. Although parts of a hypocaust and the mouth of the *praefurnium* were brought to light, it is not possible to identify the access or the circuit of the thermal baths.

The last reforms date from the 2nd century AD and correspond to the remodelling of a few spaces, the construction of a new room in the original sector of the *domus* (Room 12) and the connection of two open spaces by designing a stair to compensate the difference of levels. The most notable renovation is the transformation of the central courtyard into a peristyle with two porticoes (Rooms 15, 17 and 18). This phase also saw the demolishing of part of the closure walls of the corridors and the fashioning of 2 or 3 square pilasters whose circular columns are materialised by their negatives. The resulting structure was an assemblage of two porticoes with columns delimited by a *pluteus*, as well as a wide opening towards the *viridarium* of the western portico (Room 17). The westernmost area of the residence also possibly served as a field for livestock or to grow crops in the 2nd century AD (Fig. 4).

However, despite having knowledge of the floor plan, it has not been possible to excavate the entrance of this residence rendering it impossible to define its perspective from the outside. It is nonetheless possible to state that the owner's transformation in the 2nd century AD of the courtyard into a garden with a columned portico reflects a willingness to adopt the model of contemporary wealthy Roman domestic abodes. The peristyle sector of the seigneurial residence became its central area of representation with new reception rooms and thermal baths bearing structures similar to the two cases unearthed at Ilerda. This phase also saw a pictorial remodelling of the whole area during the creation of a peristyle.

However, this was not the only case in the north-east of *Hispania Tarraconensis* in the 2nd century AD that transformed its courtyard into a peristyle embellished with a *viridarium* and new porticoes. The residence excavated at 9 Alguer Street in Tarraco follows the same process. This phenomenon denotes the key role of gardens with porticoes in the wealthy residences of Roman *Tarraconensis* and, therefore, reflects patterns of behaviour and social representation in the domestic sphere.

The Roman city of Aeso also has an example of a house with what appears to be a peristyle. It is the *Domus* of Antonii discovered during the 1990s (Payà, Reyes 1997: 50; Payà et al. 1994: 120) (Fig. 7).

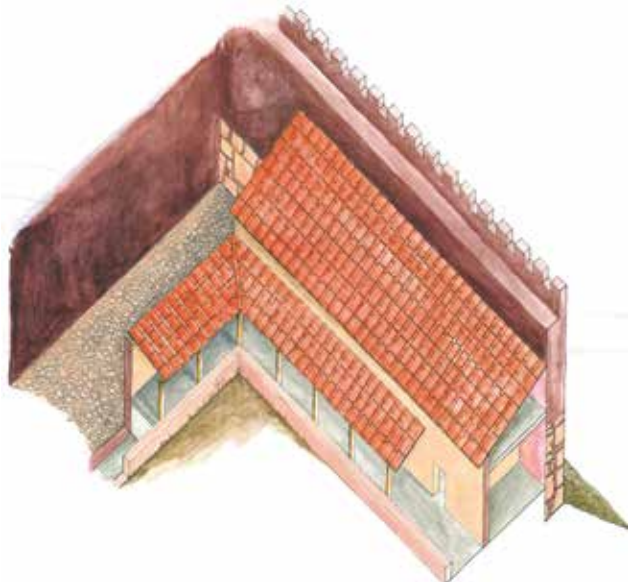


Fig. 7. Reconstruction of the sector of the peristyle of the *Domus* of Antonii (drawing: E. Revilla and G. Llompart).

Fig. 8. Hermes in the form of Mercury discovered at the residence excavated at 37-41 Francesc Macià Avenue at Ilerda (photo: X. Goñi, Servei d'Àudiovisuals).

This excavation was limited to only part of the open area and four rooms leading to one of the porticoes adjacent to the wall, insufficient surface to determine whether the *domus* falls into the category of a peristyle house or the type with two areas of circulation. Hence, in spite of the fact that the evidence is limited to this sector of the domestic unit, it is possible to state it was built in the 2nd century AD. Moreover, the most plausible option is that it was a peristyle house owned by a member of Aeso's aristocracy or elite. This notion is likewise evidenced by the find of a fragment of Italian marble bearing an inscription referring to the Antonii family, a key lineage at Aeso. What is certain in any case is that the space must have had a portico, most likely a peristyle. Moreover, the wall enclosing what could have been a *viridarium* and the southern limit of the corridor bear evidence of three bases of columns that confirm the presence of a portico (Payà, Reyes 1997: 49).

Domestic religious rituals in the cities of western Catalonia

Not only do domestic features serve as indicators of the level of Romanisation of the residences of Ilerda, Aeso and Iesso. Material finds from their interiors also yield clues as to customs, behaviours and consumption. Certain practices rooted in religion have been observed in the city of Ilerda. For example, a Hermes statuette in the form of Mercury was uncovered in a space dedicated to grinding cereal during the excavation of 37-41 Francesc Macià Avenue (Pérez 1991) (fig. 8).

This Hermes sculpture representing Mercury presumably proves the existence of a domestic or artisanal lares as this god is characteristic of these features (Bakker 1994: 10-11). In the Roman world, areas of artisanal and domestic production were linked to religiosity, especially those associated with fire in a workplace and hearths in a house. The room excavated at 37-41 Francesc Macià Avenue is potentially an example. Mercury here corroborates the domestic worship of gods, especially in dwellings of merchants (Fernández 2003: 396-397). This find from Ilerda serves as a clear index of the level of

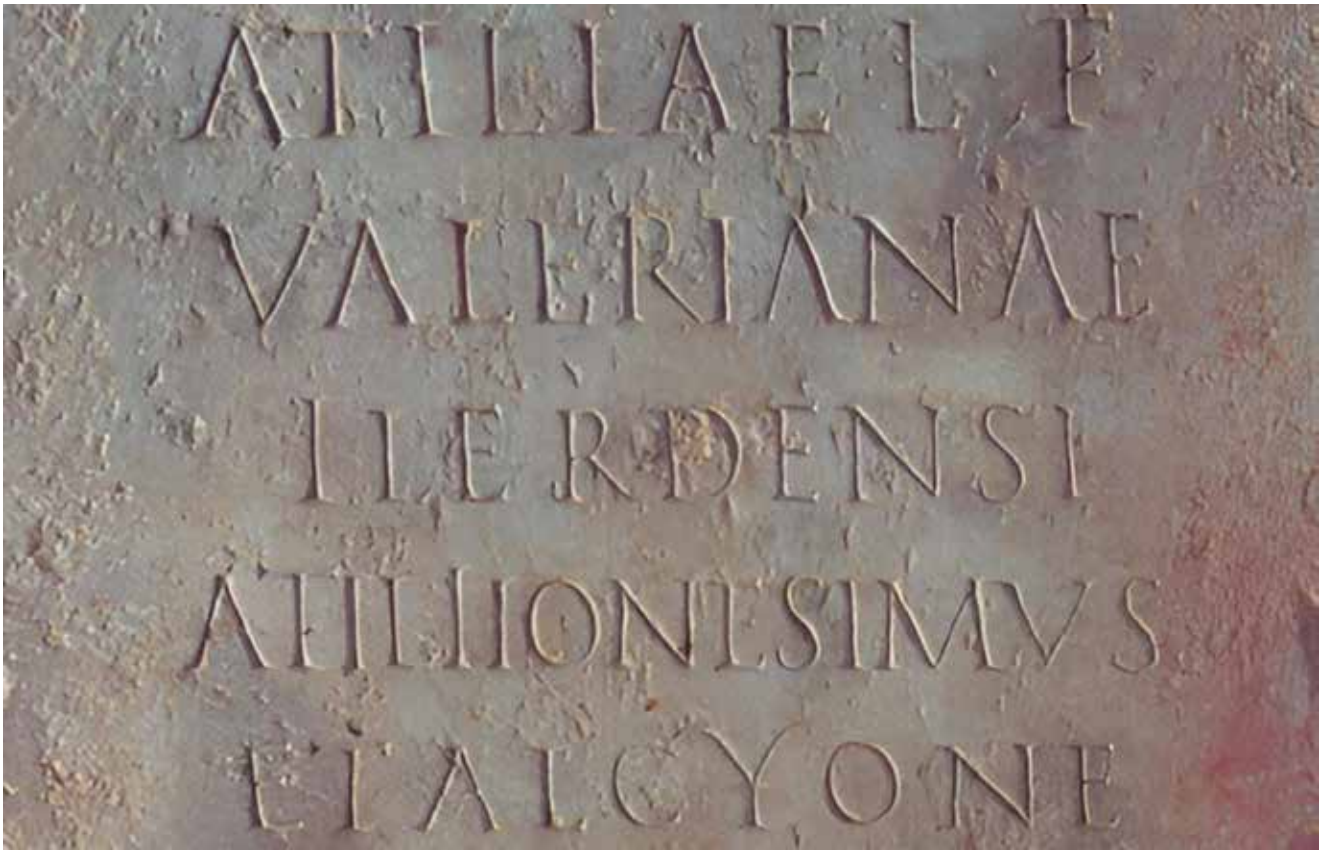
Romanisation of the city's population. Other finds from Ilerda also bear witness to domestic religiosity stemming from an indigenous tradition. A number of terracotta figurines bearing Iberian traits were unearthed in the *domus* of the Portal de la Magdalena. Although most are feminine, certain also bear masculine or animal features. Near them were also terracotta figurines with Roman attributes notably the toga fashioned in a mould (Payà 1996: 217-231; Loriente, Oliver 1992: 73-77). All these figurines are of religious and ornamental nature. This residence also contained infant burials under the pavements which can at times be linked to rituals. Moreover, a ritual offering of eggshells was found near one of these burials. Infant graves, despite being known in the Roman world (e.g., at the seigneurial residence of Iesso), are more characteristic of the Iberian Culture (PÉREZ 1998). Furthermore, eggs as funerary depositions formed part of a rite often recorded in the Roman world in other areas of Catalonia such as at the villae of Tolegassos (dated to the 3rd century AD) and Vilauba or in the Roman house excavated at the Plaça Gran at Iluro (Mataró). Eggs in the Roman and Greek worlds were associated with lustral practices and *genius loci*. This second type is evidenced by lares in Pompeii and Delos (Casas, Ruiz De Arbulo 1997: 219-222). Consequently, the burial of infants, closer to the Iberian tradition - albeit known in the Roman world – can be associated with another rite tending to be Roman, notably that of egg offerings (Pérez 1998: 201-206). All these votive elements are, in general, aspects of rituals common to dwellings in Hispania stemming from earlier religious traditions of each territory as in the case of those recorded in the Baetic and Tarraconensis Provinces (Pérez 2014: 348-358). The Iberian and Roman votive figures associated with the religious domestic customs of Aeso, Ilerda and Iesso thus indicate a widespread eclecticism as late as in Imperial times, two centuries after their Romanisation.

Conclusions

In short, the dwellings of these three cities were varied and intricate, and evolved over the centuries of Romanisation. The domestic structures unearthed in the study area nonetheless share a common aspect: despite being framed within a fully Roman conception, they always maintained traits linked to their territorial ancestors. The differences between the *domus* and dwellings of other cities of Tarraconensis compared to those of inland Catalonia can be explained by the autochthonous traits of their original populations. A different climate and geography generating varied patterns of behaviour perhaps was also decisive in distinguishing them from the cities of the coast. In any case, there is no doubt that the inhabitants of these inland dwellings also aspired not only for comfort but beauty in their interior design and domestic rituals.

VIII

Roman society based on epigraphy. Who lived in our cities?



Detail of the epigraphy of the honorary pedestal dedicated to Atilia Valeriana from Ilerda.

A structured and hierarchical Roman society

Arturo Pérez

The documental value of inscriptions

Epigraphy, abundant throughout the Empire, is the only type of written record that sheds light on the inhabitants of Roman cities by citing, among other data, names, functions, occupations and age. However, this information is often incomplete due to the fractured state of these finds or because not all layers of the population could afford or were entitled to inscriptions. Moreover, most of these types of finds date to the 2nd century AD (the great period of epigraphy). This study therefore focuses on inscriptions carried out on what were more or less noble stones (ranging either from local fine local materials to imported marbles).

Inscriptions are classified either as funerary, honorary or votive. The first is the most common as it was customary for individuals to aspire to a gravestone. It must be noted nonetheless that most inhabitants of the region could not afford gravestones due to the scarcity of an adequate local stone. Honorary inscriptions, the second type, were carved on pedestals of statues placed in a public setting to recognise individuals, most often of local aristocratic descent, for financing public works (euergetism). The more scarce votive inscriptions, the third type, served to show gratitude to or petition deities.

Although inscriptions are only a partial reflection of society of the three cities of the study area, Aeso stands out due to the 31 cases discovered in its urban core and 8 from its surroundings. This second group can be explained by the city's subsequent expansion and the fact that it was closer to sources of stone. This great number of finds contrasts with

Fig. 1. Honorary pedestal dedicated to Marcus Fabius Paulinus (photo: Museu Nacional Arqueologic de Tarragona - MNAT).

Fig. 2. Honorary pedestal dedicated to Atilia Valeriana (photo: Museu Nacional Arqueologic de Tarragona - MNAT).

that of Ilerda, a more important municipality, and even more with Iesso. Noteworthy also is the quantity of graffiti finds, especially on pottery, that nonetheless do not substantially change the panorama of this theme. Despite their limitations, the epigraphic inscriptions reflect an urban way of life where citizens held public office and where public works and services were carried out and enjoyed. Despite the high degree of political organisation and urban development of the Iberian city-states, and their ability to recruit real armies against the Romans during the early years of the conquest, nothing is comparable to the model of cities imposed by the Roman Republic and Late Empire, centres whose model has laid the groundwork for our way of understanding urban life.

Roman society was class oriented and its social divisions did not exactly coincide with those of other later historical phases. In the first place were the *ingenui*, that is, the free (*cives Romano*, *cives Latini*) and foreign (*peregrini*) citizens who possessed all rights. This group throughout the colonies and municipalities dominated the *ordo municipalis* or *decurionalis* which were formed by the families of the local aristocracy. They comprised males who could be chosen annually by the city government or local Senate. Many, in turn, could hold military positions. The women of these families were the *flaminica* or priestess of the Imperial cult, and even played the role of provincial *flaminica* (e.g., Aemilia Paterna, Aeso, IRC II, 21). Above the *ordo decurionalis* were the senatorial and equestrian *ordines*. The first was rare throughout the provinces, almost exclusive to Rome and Italy. The second was relatively abundant in western Catalonia. A singular example is that of Marcus Fabius Paulinus of Lleida (Fig. 1) recorded in the provincial capital of Tarraco by two inscriptions on pedestals (RIT 3743, 376). One of the two discovered in the forum informs that he made great donations to his city, another example of euergetism commonly practiced by local aristocracies. His wife may have been Atilia Valeriana (RIT 372) of Ilerda honoured at Tarraco by her slaves Atilius and Alcyonus (RIT 371) (Fig. 2).

Most of the inscriptions on pedestals pertain to members of the families of the *ordo decurionum*. This suggests that they were represented by a statue in a public place, preferably in the local forum, as a sign of gratitude for an act of euergetism favouring their fellow citizens. The highest city office to which they could aspire was *duumvir*, an annual and biennial position comparable to the current office of mayor. This position was the culmination of a career begun by exercising the offices of *aedilis* and *quaestor*, attained by vote, charged respectively with public works and the water supply. They also held religious

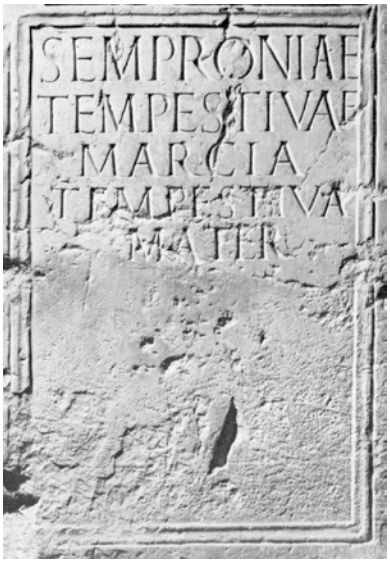


Fig. 3. Pedestal of Sempronia Tempestiva.

Fig.4. Funerary altar dedicated to Baebia Ursina from Ilerda (photo: Museu Nacional Arqueològic de Tarragona – MNAT).

Fig. 5. Funerary stele dedicated to Neitinke (photo: Museu de Guissona).

positions, as the official Roman religion did not require specialisation and could be held by civilians. The most common was that of *flamen*, also recorded elsewhere in western Catalonia, charged with lighting and maintaining the flame of the altar.

Slaves or *servi* did not, in principle, have legal status and could not officially aspire to inscriptions. Yet there were exceptions. Although they did tend to improve their status by means of several factors (either public or private), their condition as slaves was always hereditary. They could nonetheless aspire to manumission and become *libertii* either by being officially released by their owner or through purchase. Their freedom had limitations such as not being able to run for political office or to maintain a bond with their former master, even though their children, or *libertini*, were free. Certain freedmen achieved notoriety and even great fortune by exercising well regarded trades such as doctors or pedagogues. At most, they could aspire to form part of the imperial priesthood or *sevir*, of which there is no specific record in the three municipalities under study.

The case of Ilerda

Although the inventory of inscriptions of the most important *municipium* of western Catalonia is very scarce, it suffices to identify that its citizens formed part of the Galeria tribe, contemporary to Augustus, at the moment that the city received municipal status. The pedestals recovered in 1926 during excavations at Lleida's train station identify several members of the *ordo municipalis*. Lucius Atilius Commodus (IRC II, 1), who held all the magistracies in the city, was a member of a renowned local family. His family included Atilia Valeriana, who in the provincial capital of Tarraco stated that she was from Ilerda, and may have been the wife of the cavalryman M. Fabius Paulinus.

A second pedestal was dedicated to Caius Licinius Saturninus by his wife, Porcia Nigrina (IRC II, 2), and a third to Gaius Marcius Masclus (IRC II, 3) by his wife, Marcia Tempestiva. This last woman is cited in two other inscriptions (IRC II 6, 7) as the mother of Sempronia Tempestiva (Fig. 3) and sister of Gaius Marcius Masclus. Finally, an inscription found at Aitona refers to another *duumvir*, presumably from Ilerda, Marcus Cornelius Arrianus (IRC II, 11) dedicated by his wife Licinia Nigrina.

Also noteworthy is the funerary inscription in Tarragona dedicated to Baebia Ursina, which, as in the case of Attilia Valeriana, records that she came from Ilerda (Fig. 4), and the late inscription dedicated to Theodora (IRC II, 10), the first case of a Christian woman in the city.

Inscriptions of freedmen include two potential cases among the finds from the excavations at the Lleida train station. These are the hardly legible inscriptions that include Cerinthius and Corinthia, Greek names of servile origin (IRC II, 4). A more clear case is the gravestone of Afrania Chrocale, today in the house of Onofre Cerveró on Palma Street (IRC II, 5). The category of released slave includes Licinius Rufo and Licinius Felix (IRC II, 13) based on inscriptions from the neighbouring town of Seròs, and possibly M. Antonio Inachus (IRC II, 18) from Penelles.

Iesso

The epigraphic record of Iesso, although poor, is no less interesting. A singular case from the 1st century AD is one that is characteristic of Roman funerary epigraphy but using Iberian characters. This remarkable example of continuity between Iberian and Roman reads 'Neitinke subake.e.i.tako' ('Neitinke, son of Subako, is buried here') (Fig. 5).

Three other inscriptions, a pedestal and two gravestones (IRC II 75, 83 and 84), offer evidence of up to seven free citizens of this city: Marcus Caecilius Probus (Fig. 7), Marcus Caecilius Argutus, Publius Iunius Silo, Lucius Iunius Laurbeles, Lucius Caecilius Agilio, Lucius Caecilius Agidillus, and Lucius Caecilius Severianus. The inscriptions nevertheless do not specify whether they held public office.

A compelling inscription, possibly on another pedestal, was dedicated to Marcus Fabius Nepotus, born in Iesso. He had resided in *Baetulo* (Badalona) where he occupied all the municipal magistracies and was responsible for the maintenance of the new public baths (*curatori balinei novi*).

Another important individual born in Iesso was Caius Iulius Lepidus (IRC II, 25). Although he did not live in his town of birth, his origin is recorded on a pedestal (today lost) indicating that he was an expert soldier, a centurion who served in several legions, victorious and *primus pilus*. It was his freedmen, in fulfilment of his will, who erected a monument to him at a place granted by decree of the *curiales*.

Fig. 6. Gravestone dedicated to Lesbia (photo: Museu de Guissona).

The most well-known gravestone is that of Servilla Prepusa dedicated to her daughter Lesbia (IRC II, 76) who died at the age of eleven. The inscription consists of a poem (13 lines) in the form of a dialogue whose verses reveal influences of Juvenal and Virgil. The grief of this mother resulting from the death of her daughter is evident in what is one of the most beautiful funerary texts recorded by Roman epigraphy (Fig. 6).

The onomastic record of the citizens of Iesso is completed by inscriptions of the freedman Tyche (IRC II, 75) (Fig. 7) and an anonymous slave (IRC II, 78). Also worth mentioning, although from later times (4th-5th century AD), are the Christian motifs dedicated to a woman named Carthago (IRC II, 82).

Aeso

The great number of inscriptions from Aeso have yielded a broader perspective of the society of this pre-Pyrenees municipality in the 2nd century AD. Its 40 inscriptions comprising funerary, honorary and a few votive pedestals appear to reflect a conservative, closed society where local life was dominated over several generations by a few inter-related families. There was little room for the social mobility and change evidenced by the epigraphy of the cities along the coast. Moreover, the names of certain of Aeso's citizens such as Marcus Licinius Celtiber (IRC II, 27) (Fig. 8) point to a Celtiberian origin making this city a special case.

The initial evidence suggests that the citizens of Aeso can be broken down equally between members of the Galeria and Quirina tribes. Municipalities the size of Aeso, throughout the 2nd century, ended up being controlled by a local oligarchy consisting of eight families, often related to each other. Of particular note in this small town of the Pre-Pyrenees is the high proportion of inscriptions denoting free citizens (with military backgrounds) and women, some stating their *aesonense* status.

The Aemilii stand out among the prominent families (IRC II 19, 21, 23, 39, 49 and 54) due to notable military and municipal careers (three cavalrymen and seven municipal magistrates). One of their women was a *flaminica* in Tarraco (RIT, 319). Among these families was also Lucius Aemilius Paternus, probably the most brilliant Aesonian (IRC II, 54; Fig. 9). He began his career as prefect among workers and then was a centurion in several legions deployed throughout the Empire. The most notable was Legion VII Gemina (close to Legion II Augusta) where he served as a *primus pilus* and *trecenari* (with the rank of horseman). Throughout his journeys, he took part in the Dacian Wars (today Romania) of 101-102 and 105-106 and in the Parthian campaign (today Iraq) of 114-117 (IRC II, 23 and 54). He was decorated on several occasions by the Emperor Trajan with necklaces, bracelets, *phalerae* and a crown.

Fig. 7. Honorary pedestal dedicated to Marcus Caecilius Probus (photo: Museu de Guissona).

Inscriptions also identify other inhabitants of Aeso, certain of the same family, who likewise held positions of responsibility in the Roman army. This is the case of Publius Aemilius Paternus, a *primus pilus*, and Marcus Aemilius Fraternus (IRC II, 49), a prefect of the engineers and member of the Angusticlavia tribe. Finally, there is also evidence of a citizen named Gaius Antonius Verecundus (IRC II, 24) who in addition to exercising the post of *duovir* in the municipal magistracy, participated in the army, twice with of the Legio III Augusta.

Other important families were the Antonii, Atilii, Caecilii and Fabii. The Fulvii, Iulii, and *Licinii* are also recorded (by seven inscriptions). One includes Licinia Numantina, the mother of two members of the local *ordo municipalis* (IRC II 26, 29). The Porcii, common to other cities in the north-east of the Iberian Peninsula, are also represented. M. Porcius Catullus, for example was twice *IIvir* (IRC II, 30).

Although the Terentii family is only represented by one inscription at Aeso (IRC II, 28), a certain A M. M. Terentis Paternus from Aeso appears in an inscription at Rome (CIL VI, 27198). Three inscriptions cite the Valerii, notably Lucius Valerius Faventinus (IRC II, 32), *IIvir* who in a display of euergetism purchased grain for the common people. This inscription was dedicated to two *collegia* (professionals?, funerary?) from Aeso.

A compelling inscription (IRC II, 35), like others preserved on the walls of the Church of Isona, is that of Publius Calpurnianus, a young man who died at the age of 18. The *ordo decurionum* agreed to an equestrian statue - presumably placed in the forum - dedicated to him by his parents.

The number of free women and men of Aeso who did not hold a public office is quite extensive (about 13 women and 17 men). However, this number of members of the lower classes cited compared to the great quantity of inscriptions, is proportionally small. This group consists of two freedmen, a woman named Antonia Saturnina (IRC II, 40; Fig. 10) and an undocumented slave.

In short, despite its shortcomings, the epigraphy of the three Antique cities of this study reveals a fully Latinised society, equivalent to that of most of the cities of the Romanised provinces in the 2nd century AD, a timeframe that was decisive to the world of the Roman provinces.

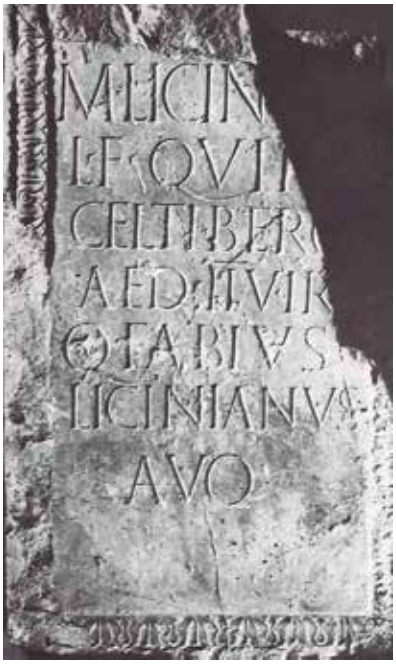


Fig. 8. Honorary pedestal dedicated to the Celtiberian Marcus Licinius (Museu d'Arqueologia de Catalunya - MAC).

Fig. 9. Pedestal dedicated to Lucius Aemilius Paternus.

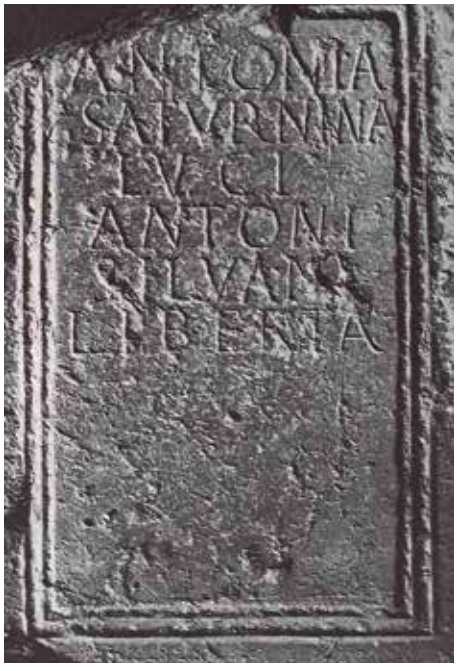


Fig. 10. Pedestal dedicated to Antonia Saturnina (Museu d'Arqueologia de Catalunya - MAC).

IX

Economic activity: production, transport and commerce

Milestone from the High Imperial period (AD 44 or 45). Vallbona (Tamarit de Llitera, Osca) (photo: J. V. Pou).

Roads and trade

Pau de Soto

mille viae ducunt homines per saecula Romam
(*Liber Parabolarum*, 591, 1175)

The most enduring features of the Roman civilisation are its infrastructures. Harbours and dams, and especially aqueducts, bridges and roads, have been etched in the retinae of thousands of travellers and have filled the landscapes of books, paintings and engravings by many artists from Roman Antiquity to today.

Rome calculated and drew up detailed plans of each of its actions as evidenced by its expenses on projects of infrastructure. Moreover, each construction had to serve more that a single purpose. There were obviously practical and economic motives. Road construction offered more mobility to armies and facilitated and lowered the costs of distributing goods. Infrastructure construction likewise served other purposes such as political propaganda. Thus, behind each new road identified and adorned with milestones, trophies or triumphal arches, Rome instilled in the minds of its citizens and other members of the population the benefits of its dominance, as well as its great technical capacity and architectural expertise. This explains the persistence a thousand years later (and even today) of the expression 'a thousand paths lead men to eternal Rome' (medieval version of the current 'all paths lead to Rome').

Thoroughfares in Roman times were key not only to the mobility of the army and transport of goods, but the circulation of news and political orders. This explains the different records of the principal thor-

Fig. 1. The Roman roads of Catalonia (from De Soto 2010).

oughfares connecting the different territories of the Empire. The main examples known today are the Antonine Itinerary (Bosio 1983: 147-167; Kubitschek 1916: 2336) and the Peutinger Table (Cuntz 1894: 506ff; Miller 1916).

The Roman roads of western Catalonia

The interior of Catalonia benefitted in Roman times from a vast network of roads and paths (Fig. 1). The main road crossing these territories is known by historiography by two names: *de Italia in Hispanias* and *ab Asturica Terracone* (De Soto 2010). Originating in Tarraco, the capital of the Roman province, it crossed the north-western territories of the Iberian Peninsula. Only one of the Roman cities of Catalonia's interior, Ilerda, was directly on this road. The others, Iesso and Aeso, were linked through secondary thoroughfares. The latest research indicates that Aeso, in a more mountainous area, communicated mainly with Ilerda and Iesso by means of a southward road. Iesso's location in the Plain of Segarra, in turn, favoured the construction of roads with different orientations. A road leading to the northwest connected it to Aeso and then to Ilerda. A road to the south secured its connection with Tarraco, while another to the east linked it to the nearby site of Sigarra (Els Prats de Rei) before continuing to *Barcino* through the Llobregat River Valley.

Ilerda undoubtedly assumed a key role within the network of Roman roads as a nerve centre communicating with the territories of the interior. Apart from the main road connecting it to Tarraco, *Osca* (Huesca) and *Caesaraugusta* (Zaragoza), it likewise facilitated access from the inland territories to the Mediterranean and the Pyrenees. One road initiated in *Dertosa* (Tortosa) attained Ilerda by following sections of Ebro River Valley. Another followed the Segre Valley from *Celsa*, a Roman city on the banks of the Ebro. Roads leaving Ilerda also led to the Pyrenees. The most important followed the Segre River Valley towards *Iulia Libica* (Llívia) before continuing through the Tet River Valley to the coast of Gaul. Ilerda also had acccess to roads leading to the Aran Valley following the courses of the Noguera Ribagorçana and Noguera Pallaresa Rivers.

Finally, it is possible that Ilerda also benefitted from fluvial transport and communication by means of the Segre River. Although there is no direct evidence of a Roman port, the presence of a medieval jetty (Loriente 2016) in the city suggests that the Segre was also navigable in Roman times. The potential of a port in Ilerda bolsters the notion of its key role as a link for the land routes of inland Catalonia.

Accessibility to the Roman cities of Ilerda, Iesso and Aeso

A network of communication infrastructures, whether by land, river or sea, facilitated and improved connections between territories and cities. A city benefitting from many roads was more likely to move goods and individuals. It therefore was more prone to receive products of distant origins.

A number of tools and procedures stemming mainly from urban geographical research have been developed to calculate the rates of accessibility of urban centres. The Antique world also retained different perceptions of these concepts. One of the most intuitive methods to visualise the potential of receiving and exporting goods is based on the notions of centrality (Freeman 1979). Centrality can be cal-

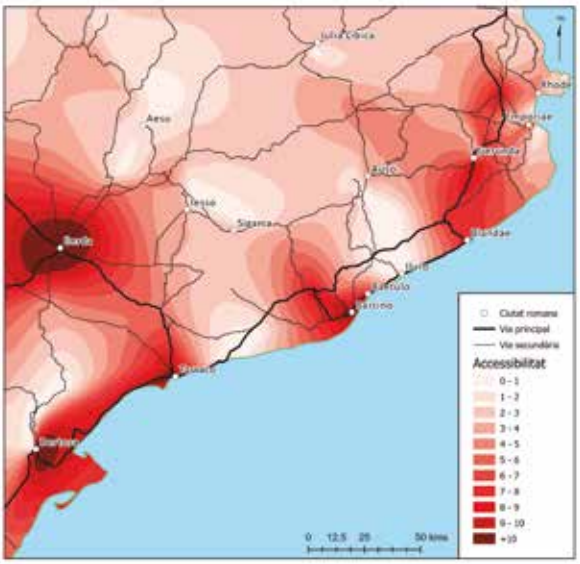


Fig. 2. Map illustrating the accessibility of the Roman cities of Catalonia (from De Soto, Carreras 2008)

culated with a high degree of precision due to the development of Network Science, a field that has its origin in the Graph Theory, a mathematical procedure initially applied by Leonhard Euler in 1736 that serves to define relationships between edges and vertices. The basis of network analyses resides in the conception that almost any element or concept, including social relationships, can be extrapolated to correlations between vertices and edges (lines and points). This method therefore allows calculating accessibility indices of the Roman cities in Catalonia (Fig. 2) by quantifying the number of roads linked to each city, taking into account that not all types of infrastructure are of equal weight (De Soto 2010).

Thus the inland cities offer three very different scenarios. The first is that Aeso was very isolated and only accessed by a secondary road. Its position in the mountains and its low economic significance relegated it to a lesser role in the Roman road network. The situation of Iesso, in turn, was favourable as it was linked to different cities by several secondary roads. Although not along the major routes recorded in ancient texts, Iesso did benefit from a direct link to Ilerda, Tarraco, Sigarra and Barcino. Ilerda, on the other hand, differed greatly from its counterparts as it benefitted from an ideal position in the road network. Recent research indicates that Ilerda was a hub within the transport network of the north-east of the Iberian Peninsula with a role that can be equated with that of the other great Roman cities of the territory such as Tarraco, *Barcino* and *Dertosa* as it was along a main thoroughfare, connected to many secondary roads and very likely had a fluvial port. The study of the accessibility of the Roman cities of Catalonia therefore demonstrates that Ilerda was in fact key to the communication network of the Iberian Peninsula.

The transport of goods

One of the key functions of the infrastructures put in place by the Romans was the transport of goods and the development of trade. Both classical texts and archaeological research clearly reveal that maritime transport was the most economical method of moving goods in Roman times. The great capacity and facility of ships to cross great distances rendered them unique to the exchange of merchandise. The celebrated epistle by Gregory, the Thaumaturgist of Neocaesarea, states that 'Coastal cities can withstand restrictions [of grain] without difficulty as they have their own products and can receive supplies from the sea; for us in the inland it is not possible to profit from our surpluses, and our shortages are irremediable as we have no means to take advantage of what we have nor to import what we lack' (*Orationes*, XLIII, 34-5).

This old text, like many others, reveals precisely the benefits of coastal cities as their position assisted and reduced the price of imports and exports. The inland cities of Catalonia did not benefit from these facilities. Thus, despite being accessible by numerous land routes, the geographical location of both Iesso and Aeso did not favour long-distance transport. The mountainous position of Aeso also complicated access to foreign goods. The position of Iesso in the Plain of Urgell, at a relatively short distance to the coast (compared to other cities of the interior), did favour up to a certain point the arrival of these products. Despite these drawbacks, each

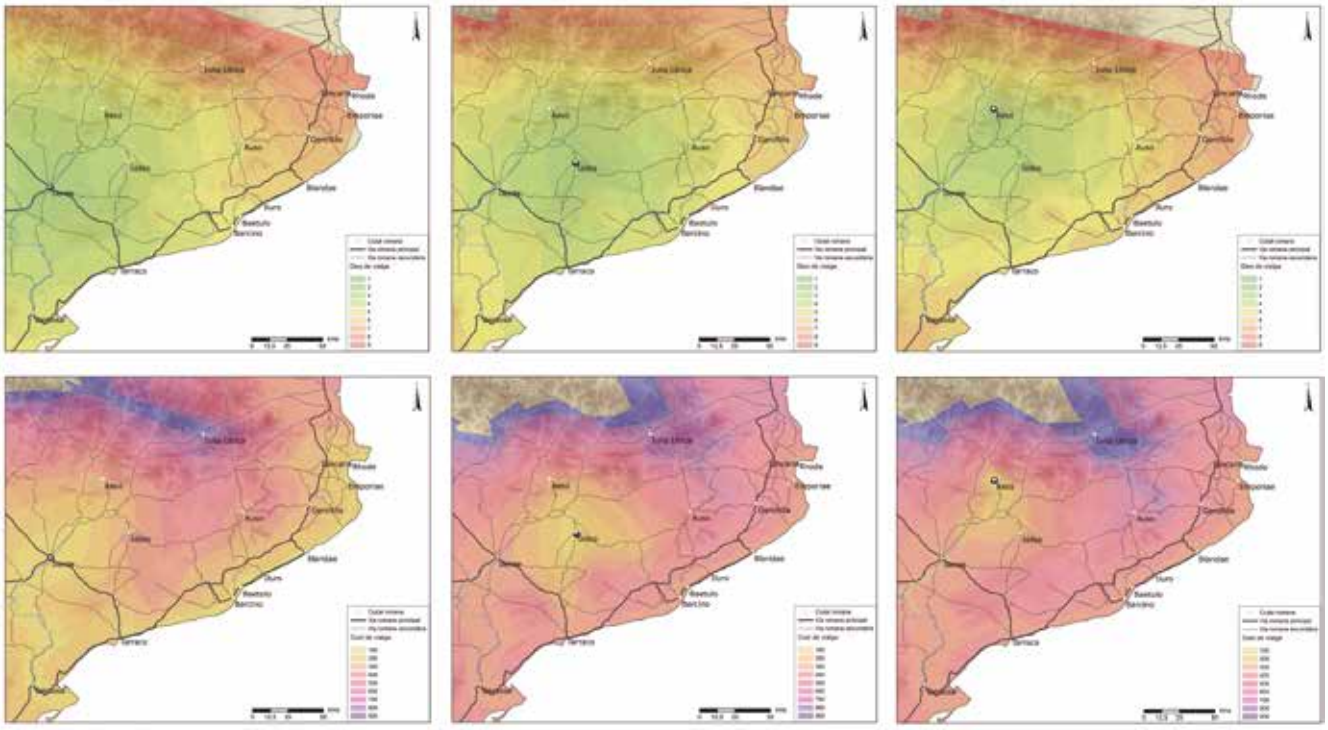


Fig. 3. Maps indicating transport time (top) and expenses (bottom) from Ilerda (left), Iesso (centre) and Aeso (right) (from De Soto 2023).

of these cities reveals a volume of locally produced pottery exceeding by far that of imports, especially when compared, for example, with the archaeological assemblages of coastal cities. The case of Ilerda differs significantly.

Although the main means of transport throughout the north of the interior of the Iberian Peninsula must have been the Ebro River, Ilerda was accessed by travellers and goods over land from the Mediterranean mainly through Tarraco. Exchanges proceeded in both directions, that is, towards the inland and vice versa towards the coast. Products originating in the interior transported over land inevitably passed through Ilerda before reaching the coast. Ilerda was also connected via the Segre to Gaul. This route passing through *Iulia Libica*, although shorter and more rectilinear than that to the coast, without a doubt resulted in greater costs as it had to contend with the slopes of the Pyrenees.

Transportation costs

Recent research has developed tools to calculate transport expenses (in time and capital) throughout various historical periods (De Soto 2010; Scheidel 2014). It is thus possible, by analysing transport and economic data, to reconstruct the approximate expenses of the different means of Roman transport. An example of a source yielding this type of data is the Edict of Diocletian of 301 BC. The document, whose different copies are partially preserved, records the prices and rules of the Roman economy at the time. Written sources thus render it possible to identify the differences of costs of the transport of identical goods by sea, river or land, and determine the implications of the geographical position of each of the Roman cities and settlements.

A summary of the data gleaned from this method reveals the following ratio of transport costs: by sea - 1 / downstream - 3.4 / upstream - 6.8 and by land - 50.8. It was thus 50 times more expensive to transport goods by land than by sea. This clearly illus-

trates the differences in volume of foreign products arriving in the cities of the interior and the high economic and symbolic value attached to owning these goods.

Moreover, the analysis of the geographical position of the Roman cities of the interior (Fig. 3) reveals a clear difference between Ilerda and Iesso and Aeso. Ilerda, on the banks of the *Sicoris* (Segre), probably also benefited from fluvial transport which rendered economically viable both imports and exports. Ilerda could receive goods from nearby territories and, at the same time, apply an export policy for surplus products. The situation of Iesso, and especially Aeso, was more complicated as the first was between three or four days from the coast while the second was four or five away. A transport to the coast for them thus meant attaining the limit of what was economically viable.

Conclusion

The situation of the Roman cities of Ilerda, Iesso and Aeso clearly differed in spite of sharing positions far from the coastline. Ilerda stood out as an axis of communication, no doubt favoured by its location on the banks of the Segre River. It clearly played a key role within the network of communications and its infrastructures facilitated the reception of goods. Iesso, despite not having the best conditions of transport, was in a plain where it could connect with nearby inland territories and had access, albeit limited, to the coast and to foreign goods. Aeso was the city most conditioned by its geographical position. Its few road connections led to higher transportation costs restricting foreign contacts. In spite of certain drawbacks, all three cities were nonetheless situated within a more than satisfactory radius of distance and territorial pattern designed by Rome for other territories of the Iberian Peninsula (De Soto 2010).

X

Two examples of urban craftwork

Painted frontal representation of a female on an Iberian vessel from Turó de la Seu Vella, Lleida, 1st century BC (Arxiu Arqueològic de Lleida) (drawing: G. Costa).

Pottery production in the Republican period

Ignasi Garcés

Pottery, often of modest nature, is a good indicator of cultural changes as its manufacture combines tradition and innovation. In this sense Republican pottery production (200-30 BC) is a paradigm requiring going back in time to understand. The potter's wheel is first recorded in the Plain of Lleida during the first half of the 6th century BC (Junyent 2003: 37). Although the moment it was introduced into the mountainous regions remains unknown, its presence in the area of Pallars Jussà dates to at least the outset of the 4th century BC (Piera et al. 2013: 195). The consolidation of autochthonous productions in the 4th-3rd century BC was simultaneous to the arrival of the imported tableware first from workshops in Athens and then from Greek workshops elsewhere in western Europe. This process continued and intensified in Roman-Republican times and Italy, mainly Campania, became the main supplier of a considerable amount of tableware.

Hence local workshops with fewer resources than their international counterparts adapted their production to meet local needs even prior to the Roman conquest. To this end they manufactured economical tableware and storage vessels. Their tableware in Republican times was quite original as it adopted forms, techniques and decors from other areas, and combined elements to produce vessels which can be better defined as *recreations* than *imitations*. What remains unclear is whether this was due to initiatives of the potters themselves, stimuli stemming from demand, or orders from distribution agents in a society increasingly influenced by the Roman sphere.

The three Roman cities of western Catalonia, since their founding (or even before), possessed their own workshops to supply the demands of the urban settlements and their surrounding agricultural areas. In spite of the imbalanced state of current knowledge, there is evidence that they shared common points and contacts among each other and beyond, while simultaneously revealing differences.

Ilergete red-slipped ware was produced not far from future Roman Ilerda between 250 and 150-125 BC (Junyent, Alastuey 1991). The success of this ware is evidenced by finds within a radius of 100 km (Junyent 2003: 45). In spite of the fact that its last productions date to the early days of Roman rule, they continued to reflect indigenous tastes influenced by Hellenistic and Punic models. These products included an established service of tableware (jugs, bowls and *patheras*) and enticing pieces intended for the market (Garcés 2018). These products represented nonetheless only a modest fraction of the vast range of oxidised ware characteristic of the 2nd century BC which was smooth and at times decorated with vinous paintings. A desire for grey ware was irrelevant in the Plain. In the third quarter of the 2nd century BC white-slipped ware began to be introduced, a type that was destined to have a long history. Moreover, new pictorial plant motifs were adopted at the end of the century in line with the styles of the south-east of the peninsula.

A great change took place at the outset of the 1st century BC with the urbanisation of Ilerda that led to the introduction of new Roman customs and eating habits (Morán, Payà 2007: 188). Pottery workshops soon sprung up in the city, one in its north-east quarter next to the Noguerola Stream (Morán, Payà 2007: 190-191) that produced three types of slipped pottery between 100 and 30 BC: oxidised white-slipped ware, oxidised red or brown-slipped ware and reduced grey-black-slipped ware (Morán, Payà 2007: 208-210). To this must be added painted ware of Iberian tradition (Garcés 2000: 57-59). The combination of the three finishes generated original polychromes indicating the workshops themselves produced all the series as well as certain bearing embossed decors and coroplast figurines (Garcés 1993).

White-slipped ware was specific to jugs and became the main unpainted product from 100 to 50 BC before declining between 50-30 BC and becoming residual in Augustan times. Red-slipped ware, like the white-slipped ware, also appeared at the end of the 2nd century BC. It in turn went from less to more, especially at the end of the Republic, before achieving a long and nurtured presence in the High Empire. It comprised a complete table service of jugs, bottles and bowls with inward lips, without renouncing imitating the black-slipped forms from 80 BC. The substitution of Campanian ware around 50 BC by black-slipped ware was not exclusive to any series. Although the models that were imitated stopped arriving around 30 BC, local productions persisted throughout the Augustan period before subsequently imitating Arretine *terra sigillata*. The workshops had previously reproduced forms from Cales (Lamboglia cups 1 and 8 and Lamboglia plates 5/7) deliberately seeking the utmost accuracy, to the point of reproducing the fluting and roulette decor.

Painted Iberian pottery in Ilerda throughout the Republican period was both abundant and original. The forms from the scarce levels of the late 2nd century BC (a *calathus* at La Suda, a small pot at the Magdalena Square) gave way, at the outset of the 1st century BC, to plates with thickened rims based on finds from the excavations under La Paeria (Municipality of Lleida) in levels in contact with the layers of gravel of the old course of the Segre River. A new assemblage of forms and decors appeared in 80 BC that characterised pottery production until the end of the Republic: trunco-conical *calathi*, open vessels with hanging rims, new cups painted both inside and out, cups deriving from the Lamboglia 1 and 8 types cited above, biconical jugs with vegetal decors and carinated storage jars and lids with vertical grips (Garcés 2000). A large part of these vessels combined white slip with reddish paint, but became residual with the decline of the former. The vinous coloured paint was also mixed with red slip, a more popular finish, yielding an association that

endured until the Flavian era. All three elements came together between 80-30 BC to yield an original and limited polychrome series bearing human and animal figures. Painters skilfully exploited their resources as they depicted, for example, the eye of a horse with a white iris, the white robe of a warrior or hunter on an orange background, etc. A frontal representation of a woman discovered on the slope of the Seu Vella Hill is particularly illustrative (see header photo) and recalls an example from the site of El Palomar (Oliete, Teruel) as the technique and appearance are Iberian, but the hairstyle is Roman (Costa, Garcés 2019). This fusion is not surprising as it depicts a new urban elite in the Ebro Valley who demanded more and more elaborate products while switching between a local identity and Roman fashions.

When observing the pottery traditions prior to the Roman conquest it is possible to establish a well-defined area stretching from Urgell to Llitera while Segarra is connected with the traditions of Central Catalonia. A limited but original type of painted pottery is known at the moment of the founding of the city of Iesso towards 100 BC (Guitart, Pera, Carreras 1998: 46-47). A few years later saw the consolidation of an active local production of common ware. White-slipped ware predominated during the first half of the 1st century BC as in the case of Ilerda. Yet its end took place more swiftly and suddenly in the second half of this century and was replaced by the red slip technique (Pera 1993: 303). This was a remarkable change as the city embraced a tradition that meant forming part of the eastern end of an extensive area stretching to the west through Aragon, to the south through Navarra and La Rioja, and that at Guissona would have an extensive lifespan throughout the High Empire.

Iesso, like Ilerda, produced black-slipped ware from the second half of the 1st century BC that also endured into the Augustan period. Its most successful forms, as expected, derived from the repertoire of Cales: Lamboglia 1 and 5/7. There were also cases of Lamboglia 2 and 3, as well as a crater (F4753). Production was not limited to the slipped-ware series

Fig. 1. Painted *calathus* waster from Serrat dels Espinyers, Isona, 2nd century BC (Museu de la Conca Dellà) (photo: R. Álvarez).

as Iesso also yielded oxidised imitations of forms deriving from the Late Campanian A and Calene styles (Pera, Guitart 2007). Coarse ware was also produced throughout the 1st century BC at times bearing Iberian inscriptions (Pera 2003: 242-249). Future research here must focus on the series painted with bands and plant motifs (Pera 2006: 41) in order to determine whether they are local or imported products.

Aeso (Isona) has yet to offer research on common locally produced ceramic ware. There is nonetheless evidence that is promising in this respect due to the discovery of pottery wasters (Fig. 1) that confirm the presence of a Late Iberian workshop (175-125 BC) producing *calathi*, painted plates and smoothed vases (Garcés, Padrós 2014). Moreover, this local production is in formal and decorative harmony with products from the Fontscaldes workshop (Alt Camp). Despite a dependence on Rome, this production can nevertheless be linked to the end of the indigenous settlements prior to the refounding of Aeso.

A preliminary study of the painted pottery at Aeso is available for the period 100-30 BC (Garcés, Padrós 2010; Garcés, Cama 2014: 74-77). The production here, as expected, is dominated by *calathi*. In second place are large dishes with high feet and thick flared rims. The rarity of this form in the Plain highlights the remarkable nature of this concentration. The remaining vessels are token examples of bowls, jugs and goblets. Analyses carried out on samples of the painted and white-slipped ware suggest a local production with occasional imports from workshops in Ilerda (Buxeda, Madrid 2014).

Drag 37b bowl from Abella (photo: Museu de Guissona, L. Puig i Bernaus).

Local *terra sigillata* production in imperial times

Gemma de Solà

Archaeological materials recovered during excavations carried out over the years at Iesso have yielded evidence that this Roman city produced Hispanic *terra sigillata* (TSH). This type of pottery is in fact very abundant at Iesso from the end of the 1st throughout all of the 4th century.

Among the different varieties of *terra sigillata* pottery imported into Iesso from elsewhere in the Roman Empire were vessels from workshops in Italy, southern Gaul and North Africa. A great number of TSH vessels manufactured in the different workshops throughout *Hispania* also arrived at Iesso. These include ware from the Catalan workshops of Ilerda/Lleida and Abella (Solsonès) (the second is the oldest identified in the Iberian Peninsula) and *Tritium Magallum*, today Tricio in La Rioja, is the main TSH production centre in all of Antique Hispania. It is also likely that this type of pottery was also imported from the workshops of Can Sotaterra (Solsona) and Can Quec II (Anoia) (Pera et al. 2016: 269-270).

The materials from these different workshops, notably those from *Tritium Magallum* as early as the end of the 1st century, certainly served as inspiration for the potters of Iesso, who are known to have produced their own red-slip ware adhering to a specific and characteristic typology (Fig. 1) (Pera 1993).

It was not difficult for the potters of Iesso, who already mastered red-slip ware manufacture, to produce their own TSH inspired by (and even in cer-

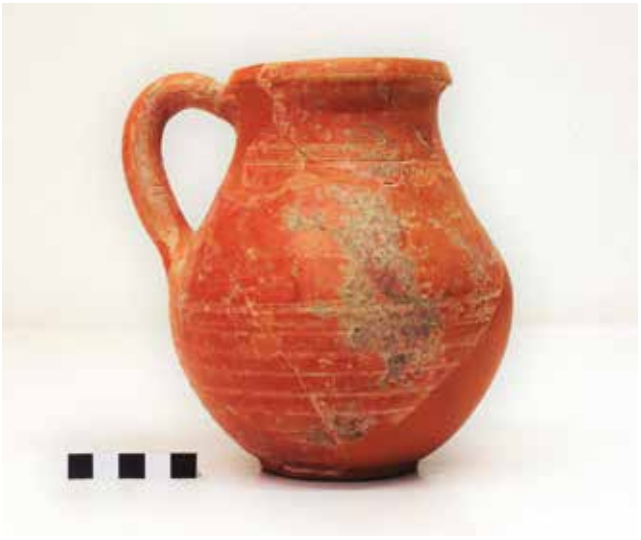


Fig. 1. Small red-slip jar from Guissona (Guissona 2 form, variant A) (photo: Museu de Guissona, L. Puig i Bernau).

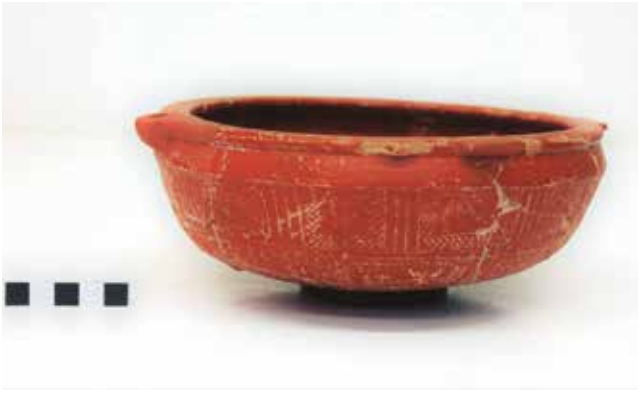


Fig. 2. Bowl (Drag. 40) of unknown origin (photo: Museu de Guissona, L. Puig i Bernaus).

tain cases imitating) the imports that reached their markets.

In the case of Ilerda, it is worth highlighting that it offers evidence of its own production of red slip ware, TSH and advanced Hispanic *terra sigillata* (TSHA), the last two being identified by archaeometric analyses in 2000 (Buxeda et al. 2014: 242-243). Ilerda's TSH is very similar to that of the Tricio workshop. Finds of this ware in Iesso suggest that the Ilerdan TSH was also marketed in the Roman city of Iesso.

The Hispanic *terra sigillata* production of Iesso

There is evidence that the potters of Iesso began to produce local TSH from the outset of the 2nd century. It is at this moment that it is possible to identify different TSH productions that, to date, cannot be linked to any other known Roman workshops.

Broadly speaking, Iesso's different TSH clay serving to produce the pottery is characterised by fabrics of a variety of colours ranging from red to yellow, with poor quality slip of varying thickness that is usually red or orange. The forms for the most part are in line with those from most other Hispanic workshops. There are nonetheless variations of known types and even others that remain unknown. Although most of Iesso's TSH is smooth, certain bear typical Hispanic motifs. Other decors, in turn, reveal unique styles and motifs difficult to classify (Fig. 2). However, it should be borne in mind that the characteristics of these products vary over time, especially among those from the late 3rd and 4th centuries (De Solà 2016: 179-186).

Certain fabrics of the pottery unearthed in Iesso's archaeological excavations were subjected to archaeometric analyses to determine their chemical composition so as to pinpoint their geographical origin. These analyses reveal that certain are from workshops in Abella (see header photo), *Tritium Magallum* and Ilerda. They also clearly reveal the existence of five TSH productions whose origin remain unknown for the moment (Pera et al. 2016: 272). Given the dimensions of Iesso (c. 16 hectares) and the different evidence of pottery workshops in the city, we believe that at least one of the samples could have been produced at Iesso itself.

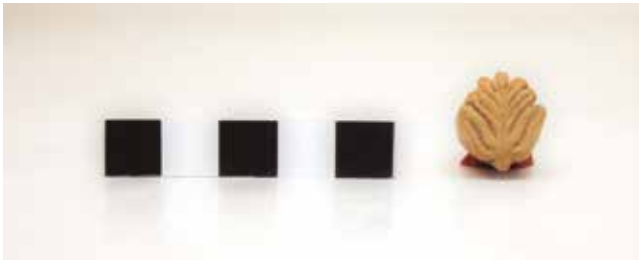


Fig. 3. Stamp with a plant motif (photo: Museu de Guissona, L. Puig i Bernaus)

Following the traces of the potters of Iesso

The potters of ancient Iesso left numerous traces of their craft. Apart from the many potsherds unearthed throughout the site, there are other elements that confirm their existence.

One of the most notable is a ceramic stamp (Fig. 3) used to impress decors into the moulds of TSH ware. This stamp with its plant motif, specifically a leaf, is the only tool of this type brought to light so far in Iesso. Four fragments of decorated moulds also serve as evidence of locally made TSH.

While no TSH workshop has to date been recorded at Iesso, an excavation in 2008 did unearth a Roman pottery kiln. As the feature was empty it is not possible to pinpoint the type of pottery it fired (De Solà, 2016: 185). The discovery of a waste heap of red slip ware nonetheless suggests that the potters of Iesso manufactured this type of pottery, a precursor of Iessonian TSH.

XI

The territory surrounding the cities

Centuriation (Roman cadastres)

Teresa Reyes and Esther Rodrigo

The emergence of the systems of Roman agrarian centuriation was closely tied to expansionism, which first resulted in the conquest and control of the entire Italian Peninsula before culminating in the conquest of the entire Mediterranean Basin. Rome possessed at the end of the Republic, on the one hand, vast territories that required effective control, and on the other, an increasingly large and unsatisfied social mass that had to be appeased. Centuriation was thus the tool that best solved this binomial.

Geometric Roman cadastres took advantage of the experience of the Etruscans and other populations of the Italian Peninsula. This Italic tradition was also influenced by Greek cadastres with their orthogonal parcelling. The basic metrics of Roman surveying was the *actus*, defined as the distance a pair of oxen can plough at a single spell.

Centuriation consisted of crossing straight, parallel and equidistant lines, aligned according to two main axes at the centre of a surveyed area yielding regular squares (centuries).

The parcelling map of Iesso thus yielded a vast area stretching over about 1,085 km2, presumably delimiting the territory that depended on it. Its orientation was basically north-south practically lining up with Iesso's road network albeit with a slight deviation of two degrees to the east.

Its centuriation extended mainly to the south and west, while occupying a lesser surface to the north and east. Iesso was not in its centre, a fact that can probably be explained by topographical factors due to the rugged relief to the north and east and the more gentle slopes to the west and south that were more suitable for agriculture (Rodrigo 2004, 2013). Its borders to the north coincided with the area of Sanaüja and beyond the town of Torà. This centuriation must have encompassed, but not surpassed, the Llobregós River Valley. Its southern limit most likely coincided with the Corb River, whose course was presumably followed by a Roman road. This theoretical road was evidenced by a milestone (today lost) discovered near Guimerà. Finally, its limit to the east corresponds to a line formed by the towns of Almenara Alta, La Guàrdia, Tornabous, Preixana and Maldà. This boundary must have roughly coincided with the border of another Roman centuriation in the Plain of Urgell aligned with an orientation of 27° 30' towards the east. All the evidence suggests that this second centuriation, with its different orientation, was not dependent on Iesso, but Ilerda. There are signs that many of the sites from Roman-Republican and Imperial times were oriented according to a centuriation that was probably established in the 1st century BC, a few decades after the founding of Iesso. This falls in line with the module of 20 actus to each side, the most widespread throughout the 1st century BC, a timeframe also coinciding with founding of the city (Fig. 1).

Little is known as to how the cadastre and road network evolved throughout the Roman period. Certain findings suggests that the main axes of communication in the Late Empire were still in operation, evidenced by many settlements and *villae* of this period set along to their axes. Iesso at this time was therefore a key centre or at least a long-distance itinerary reference point that, especially at the outset of the Visigothic kingdom, must have been one of Iberia's major axes of communication. This refers to the inland thoroughfare starting in Cádiz that crossed the peninsula via Toledo, the capital of the Visigoths. It must be assumed that its course to Barcino, as well as the road connecting Tarraco to Ilerda through the Corb Valley, were still operative at this time (Rodrigo 2013: 205ff).

The city of Ilerda, according to archaeomorphological research of the early 1990s, yielded different centuriation grids that extended preferentially,

as in the case of Iesso, throughout the Plain of Urgell. To the east they followed two predominant orientations. The first was initially eastward at 24° (Burés et al. 1989: 120) extending from Bellcaire to short before Tornabous. To the south it extended to the area of Golmés and Vilanova de Bellpuig, with a void between Linyola and Palau d'Anglesola. This centuriation was subsequently studied in depth by Anna de Lanuza who corrected the orientation of 30° 50' to the east (Lanuza 1991, 1994) and later by Gurt and Palet fixing the eastward 27° 30' orientation (Ariño, Gurt, Palet 2004: 50). The second centuriation must have been north-south following the features of the Magdalena Square of Lleida. These authors (Burés et al. 1989: 119) see it stretching over a vast region, from Ilerda to the east-west and to the north almost attaining Tàrrega. Traces of it to the south were detected in the area from Linyola to Mollerussa and Bellpuig, a line which must have marked the border between the lands of the cities of Ilerda and Iesso and also between the *conventi iuridici* (Rodrigo 2006: 572-573). Unfortunately, research identifying the traces of these grids with the known Roman occupation of the land and their evolution has not been pursued. In any case, both centuriations adhere to the 20 *actus* module.

The *ager* of Aeso is difficult to identify as the research so far has only identified a few features. It is probable that the Dellà Basin must have been its most immediate area of influence, although certain traces have been detected farther away.

The area of the Conca Dellà, to the south-east of the Pallars Jussà, is bordered by mountains ranging in altitude between 1,000 and 2,000 m (the Sant Corneli, Carreu, Boumort and Bóixols ranges to the north; the Sierra de Comiols to the east, and the Montsec Massif to the south). To the west, in turn, the area opens up to the course of the Noguera Pallaresa River. The Basin was thus a sloping plain surrounded by elevations ranging from just over 1,000 m in altitude at the foot of the mountains to an altitude of 400 m near the Noguera Pallaresa River.

Archaeological explorations of the city of Aeso have led to research of its surrounding territory, the *ager aesonensis* (Reyes 1991: 61-111). The spread of the different settlements following the regular network of parcels and roads of its surroundings reveals a dynamic and a temporal sequence consistent with urban Aeso (Reyes 2014: 145-151; see Garcés, Reyes).

These structures align themselves according to two dominant orientations (Reyes, González, García 1998: 42-49; González Villaescusa 2002). The first corresponds to a coherent system of parcels covering much of the Basin following the orientation of the Quaternary deposits and the dominant Plio-Quaternary slopping banks. This orientation appears to have dictated the implantation of most of the settlements and has survived until today as it shaped the agricultural landscape (Fig. 3).

The system must have been applied before the founding of Aeso due to the formal, metrological and functional similarities it maintains with the patterns of Edeta (González Villaescusa 2000) or the Gallo-Roman sites of the Costières Plateau of Nîmes (González Villaescusa 1997), and the tight relation of Aeso itself with other settlements of Late Iberian and Republican times.

The second orientation, labelled the 'centuriation grid system', extended throughout the territory of Aeso with the exception of the spaces previously articulated by the coherent plot system. Despite its metrical regularity, the term 'centuriation' here could not applied as it lacks the robust homogeneity and continuity characterised by other more transparent means of structuring space (Fig. 2).

Moreover, the existence of a vast series of limits oriented to the geographic north, 28° 30' to the west yielding vast surfaces of the *ager*, besides its coherent theoretical lattice of 15 x 15 *actus* (532.3 m side), raises the hypothesis of a much older grid. Its implantation apparently took place during the Augustan period, when these types of structures served for the initial delimitations of *Barcino* or *Cae-*

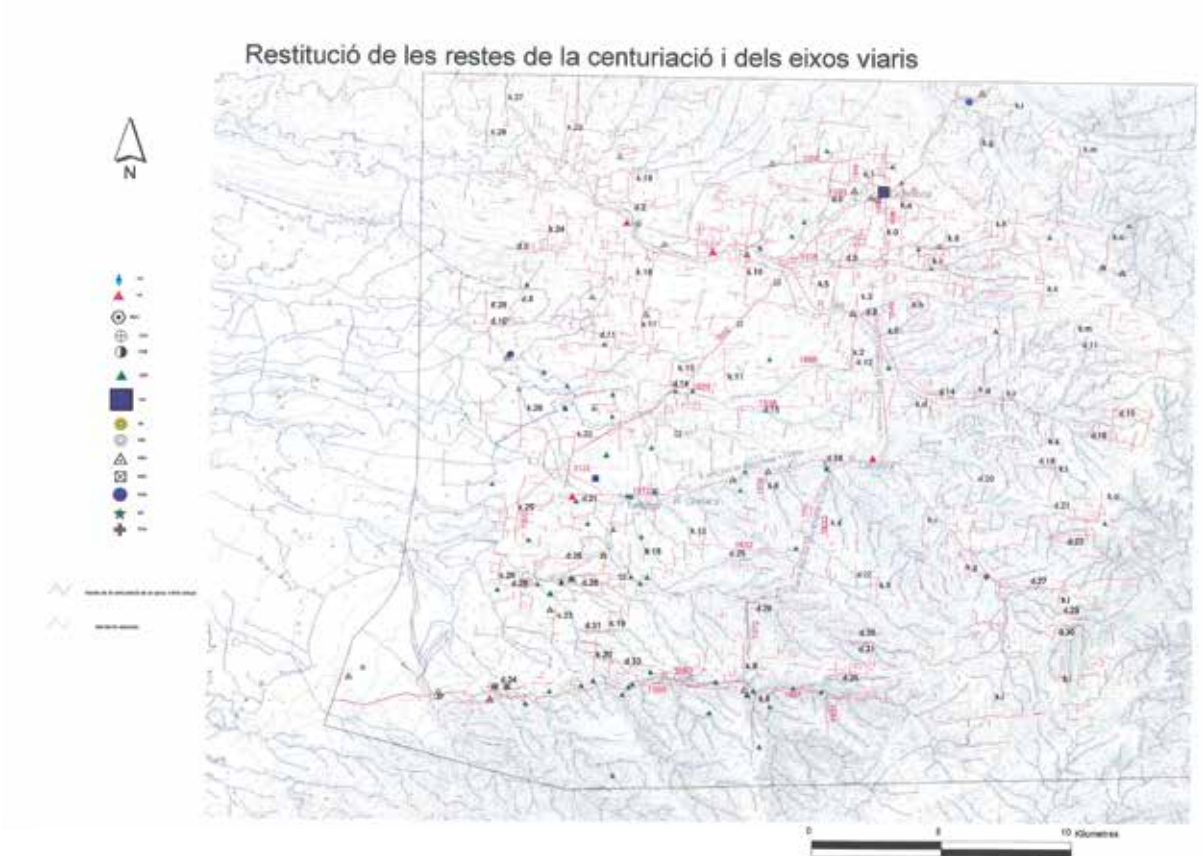


Fig. 1. *Ager aesonensis*. Coherent grid system of the area of Aeso (source: González, Reyes 1998)

saraugusta (Ariño, Gurt, Palet 1996), as well other contemporary cadastres including the limits of certain reduced spaces of Italian parcels (Chouquer et al. 1987: 243ff).

It is significant that this orientation extends beyond the limits of the Basin, extending farther than the Sierra de Sant Corneli to the north, from Aramunt to Sant Martí de Canals. This could indicate that the influence of Aeso, at least during this period, extended over an area approximately equivalent to what is currently the Pallars region except for the Fosca Valley (Reyes 2013: 151-156 a Garcés, Reyes).

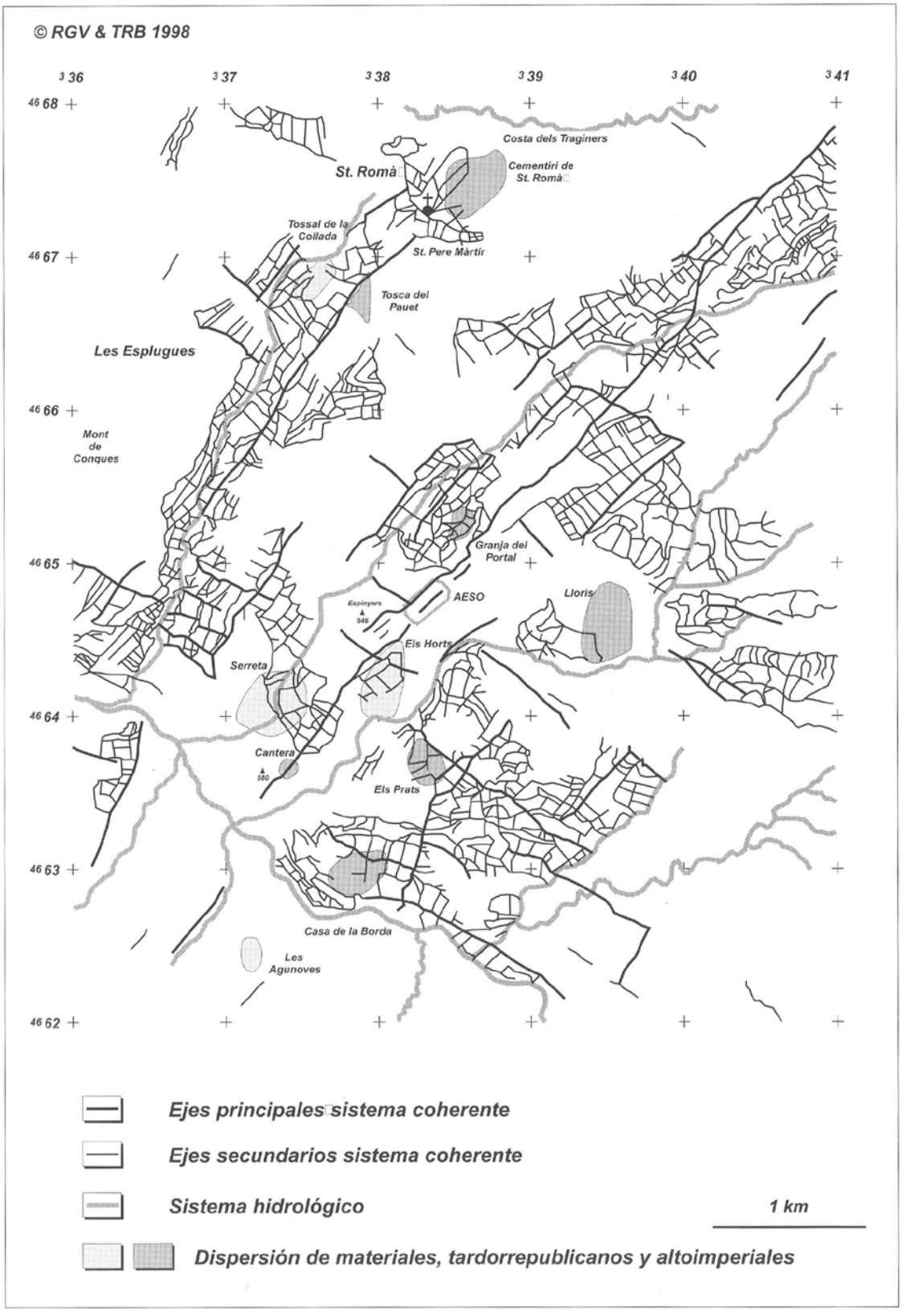


Fig. 2. *Ager aesonensis*. Map of the Roman centuriation system of Aeso (source: González, Reyes 1998)

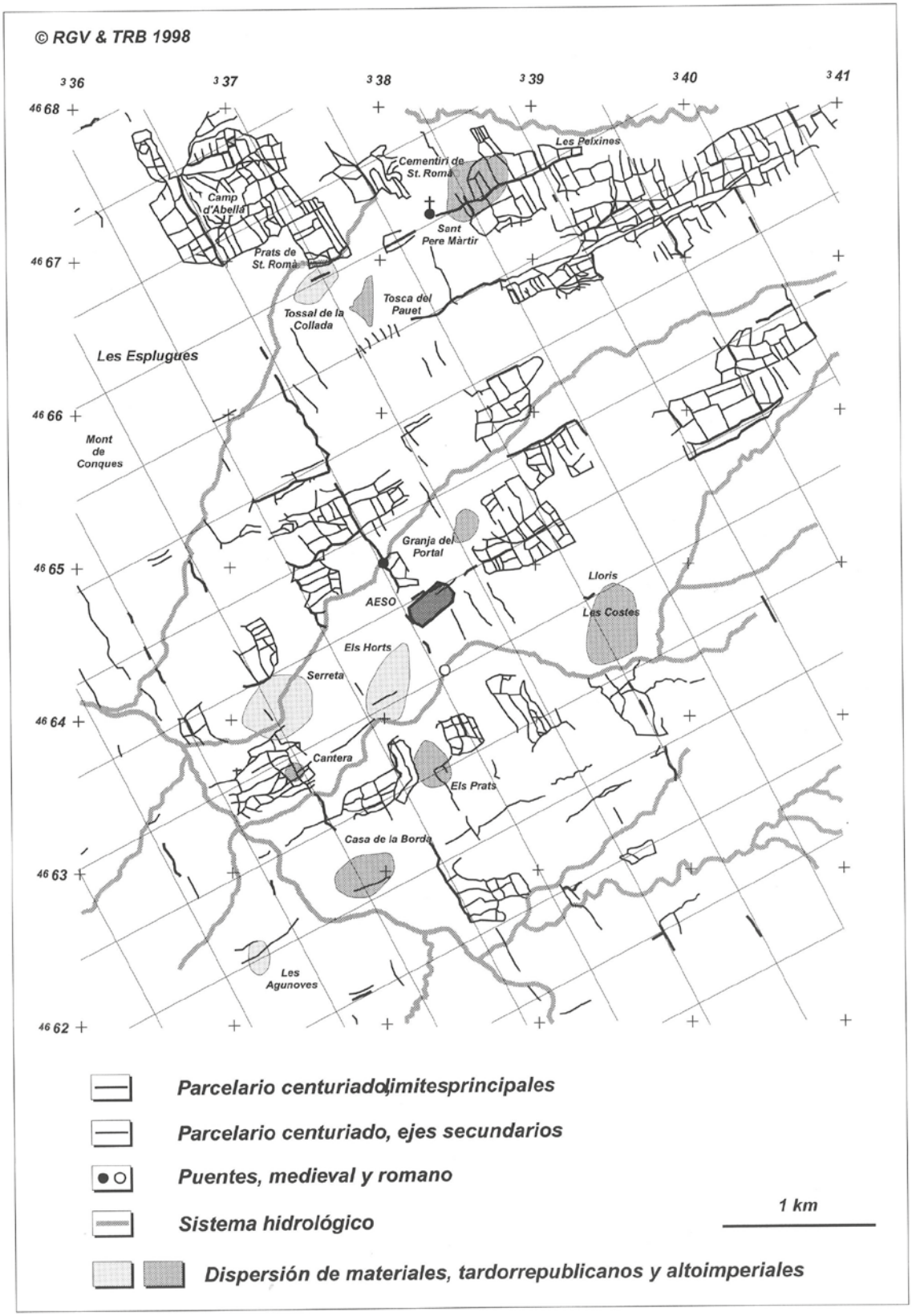


Fig. 3. *Ager Iessonensis*. Map of the system of Roman centuriation of the rural settlements surrounding Iesso (source: Rodrigo 2006)

Villa of the Romeral (Albesa). *Gorgoneion* carved in sandstone (photo: Museu de Lleida, J.V. Pou).

A new rural landscape: *villae* and exploitation of the territory

Lluís Marí and Víctor Revilla

Territories around Roman cities were occupied and exploited by sites of very different nature. These included suburban residences of the local elite, small farms, orchards, workshops and their waste areas, and cemeteries. Their coexistence yielded a particular *suburbium* of variable size extending between the city walls and the rural world occupied for the most part by nuclei of agricultural nature. These consisted for the most part of villae, settlements serving both as residences (temporary or permanent) and centres of production and processing. This double function explains the emergence of a specific rural architecture, symbolic of the Roman way of life, combining constructions and luxurious decorative elements with infrastructures linked to agriculture, livestock and craftwork. *Villae* in economic terms were the embodiment of a dynamic and rational system of carrying out complementary pursuits focusing on the double strategy of attaining self-sufficiency as well as producing foodstuffs for the market.

The advances in archaeological research over the last decades reveal that the territory of Ilerda, and to a lesser extent that of Iesso and Aeso, was structured between the 1st and 3rd centuries AD according to patterns of settlement and exploitation centred on *villae* (Gorges 1979; Pérez Almoguera 2008), settlements situated for the most part either near main rivers (Segre, Noguera Ribagorçana and Cinca) or smaller water courses (Llobregós i Ondara-Corb).

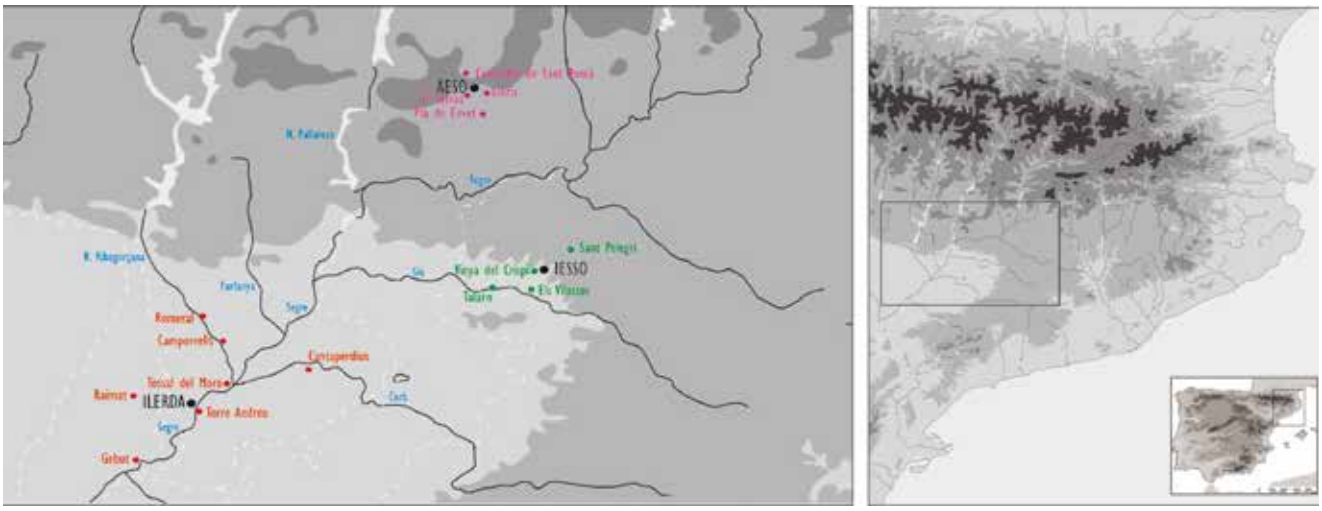


Fig. 1. Spread of the rural establishments within a radius of 18 km of Ilerda and within a radius of 10 km of Iesso and Aeso (from Ll. Marí and V. Revilla).

The *ager ilerdensis*

A series of *villae* marked by a monumental architecture have been identified inside a radius of up to 18 km around Ilerda (Fig. 1). None has been fully excavated. The only case defined as a suburban villa benefitting from a partial study is that of Torre Andreu (Bordeta district), just over 2 km from the centre of Ilerda. It had a vast paved courtyard delimited by a columned portico decorated with a mosaic and walls lined with painted stucco and marble. It was raised during the second half of the 2nd or the outset of the 3rd century AD on the remains of an earlier site and was abandoned towards the end of 3rd century. There is likewise evidence of a later occupation whose dating remains unclear (Pérez Almoguera, Rafel 1993).

Farther away, albeit linked to Ilerda, are other sites combining residential and economic functions. The site of Gebut (Soses) is a vast thermal complex with a seigneurial residence, a productive sector measuring more than 11,000 m2 (characterised by four containers for wine or oil) and a cemetery (Benseny 1997; González, Rodríguez 2011). The thermal building preserved its circuit of rooms: the *frigidarium* (with a cold water pool), the *tepidarium*, the *caldarium* (with traces of a pool) and the furnace to heat the spaces. The site was occupied between the 1st and 3rd centuries AD.

Perhaps the best known of the *villae* is El Romeral at Albesa, 18 km as the crow flies from Ilerda, that was occupied continuously between the 1st and 5th centuries AD. Its first phase from the first half of the 1st century AD, although poorly known, is characterised by a series of features raised on foundations consisting of large sandstone ashlars (140 x 60 x 50 cm). The *villa* in the 2nd-3rd and outset of the 4th century underwent reforms and extensions transforming its initial nucleus into a residential and productive site organised around a central space. This phase, extending over a surface of about 2,000 m2, did not lack in items of luxury (see header photo).

Excavations of its southern sector brought to light private baths, specifically, a large room with an *opus signinum* floor (possibly the *cella frigidaria*) with a pool measuring 17 m2 (Fig. 2). Noteworthy are the numerous fragments of *lapis specularis* along the base of the pool coming from one or more apertures in the ceiling that allowed light into the room. This complex was presumably in use during the 2nd and 3rd centuries AD. Recent work identified a large area with a hypocaust heating system which could potentially correspond to the *caldarium* (Marí, Revilla, 2006-2007; 2018). The complexity and size of these baths reveal the predominant role of this *villa* and the economic power of its residents.

Fig. 2. Villa of Romeral (Albesa). View of the cold water pool of the thermal baths (photo: Ll. Marí).

Fig. 3. Villa of Romeral (Albesa). View of the western gallery and the courtyard of the peristyle. In the background is its northern gallery and new floor plan built at the end of the 4th century (photo: Ll. Marí).

El Romeral was subsequently completely rebuilt in the second half of the 4th century (Fig. 3) by raising a large *villa* whose sole function was to serve as a residence. It had an elaborate decor consisting of an *opus tessellatum* floor in the galleries of the peristyle and in the main rooms, walls and ceilings decorated with paintings and stucco in relief, and a vast surfaces cladded with marble. Building the new features meant razing those of the previous phases and selectively taking advantage of certain older foundations. This new residential villa covered an area of about 3,000 m2. At a later stage (towards the end of the 4th or beginning of the 5th century) and for no apparent reason, the works were interrupted and the *villa* was abandoned in an orderly manner.

Another key *villa* just over eight kilometres from Ilerda is Tossal del Moro (Corbins) comprising constructions of agricultural, livestock and artisan function spread over an area of more than 15,000 m2. Its centre had up to three large rectangular buildings, two of which were excavated.

The first of the Tossal buildings served as a storehouse and stable (Fig. 4.1) while the second, a *torcularium*, had two beam presses for oil or wine (Fig. 4.2). A *cellarium*, about 50 m downhill to the southeast (below the current C-12 road), stored the product of the presses (Fig. 4.3). To the left was a small industrial sector (Fig. 4.4). Although these buildings were raised towards the middle of the 2nd century

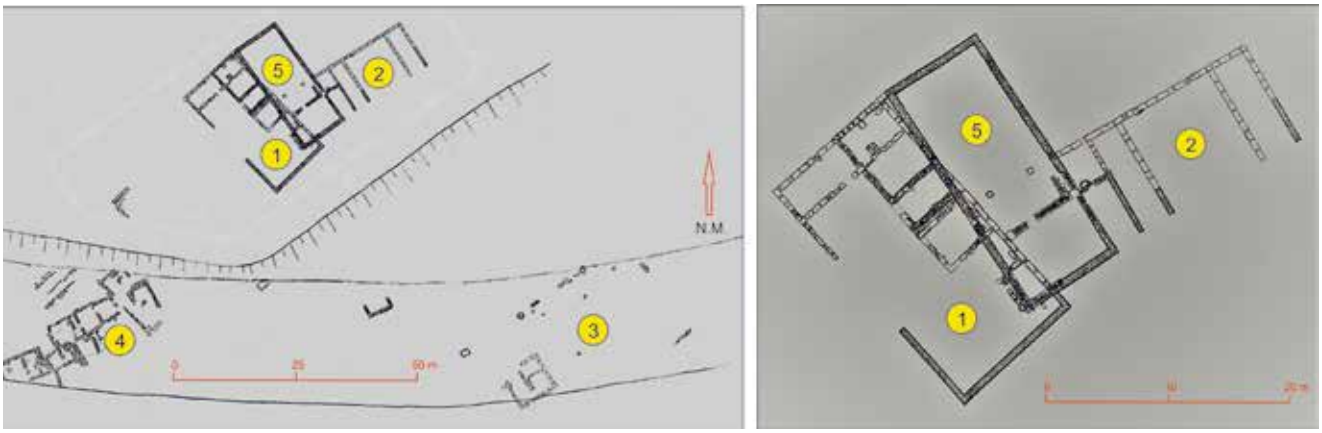


Fig. 4. Villa of Tossal del Moro (Corbins). Plan of the *pars rustica*: 1. storehouse and stable; 2. *torcularium*; 3. *cellarium*; 4. industrial sector; 5. late building (drawings: Ll. Marí and V. Revilla).

Fig. 5. Villa of Tossal del Moro (Corbins). Detail of the façade of the building from the 2nd century AD serving as a storehouse-stable. In the foreground, to the left, is its interior compartmentalisation dating the 3rd century AD (photo: Ll. Marí).

Fig. 6. View of the hypocaust of the Villa of Sant Pelegrí (photo: C. Belmonte).

AD, there is evidence that the *villa* was founded long before, at least in Augustan times.

The storehouse-stable suffered a fire in the middle of the 3rd century AD and was rebuilt for living quarters and craft work (Fig. 5). It was replaced in the 4th century AD by a new construction of unknown function (Fig. 4.5), perhaps associated with a *torcularium*. The *villa* of Tossal appears to have remained active, albeit modestly, until a late 5th century.

The hill that has lent its name to the *villa* had a small cemetery consisting of a group of very modest *tegulae* tombs surrounding a mausoleum, a rectangular edifice in the shape of a temple. This structure's dominant position, solidity and rich decor suggest it housed the burials of the owner of the *villa* and his family (Marí, Revilla 2003).

A last site forming part of the sphere surrounding Ilerda is Raimat. Although a number of questions remain unclear, the evidence points to an occupation spanning the Imperial period (Pérez Almoguera et al. 1988). The recent analysis of the graphic records from old excavations (middle of the 20th century) suggest the existence of substantial, albeit poorly defined, architectural structures that undoubtedly formed part of a *villa* comprising both residential and productive sectors (Garcés 2014).

The *ager iessonensis*

The space surrounding the urban core of Iesso also reveals a cluster, although less dense, of settlements (Fig. 1) (Rodrigo 2004). It is noteworthy, however, that the distinction between urbanised and rural areas is much less evident in the case of smaller cities such as Iesso. One of its more important *villae* is that of Vinya del Crispí founded around AD 100. Although its building is only partially excavated, it is possible to identify a deliberate design separating its residential and economic activities (perhaps oil production). Moreover, part of the complex was structured around a porticoed courtyard (Llinàs, Sagrera 1993).

Another rural settlement in the sphere of Iesso is the *Villa* of Sant Pelegrí (Fig. 6) in the Biosca Municipality (Belmonte, Miquel, Moret 2006). It occupied a strategic position securing the land connection (through the Llobregós Valley) to fertile land and water. It was a vast *villa* (exceeding 4,800 m2) with many rooms (up to 20) arranged along a central corridor. It also was designed to separate its productive and residential sectors (with thermal baths). Founded on what appears to be an earlier farm from the 1st century BC, it was raised in the 2nd century AD and remained occupied until the 5th century.

Fig. 7. Aerial view of the *Villa* of Talarn in the Municipality of Les Pallargues (photo: M. Miret).

A newer *villa* discovered by the authors of this article in 2005 is the that of Talarn, about 10 km from Iesso and just over 500 m from the town of Les Pallargues. This urban residence, identified through field surveys and aerial photography, appears to comprise a large group of buildings occupying a surface of about 5,000 m2 (Fig. 7).

Finally, worth mentioning is the *Villa* of Els Vilassos, about 6 km south of Iesso in the town of Tarroja de Segarra on the right bank of the Sió River. It was excavated in 1972 and 1973 with very precarious means. A subsequent interpretation (Pera 1995) places part of its structures with an oil or wine press adjacent to traces of the *pars urbana*. Its dating ranges roughly from the High Imperial period to the 4th century.

The *ager aesonensis*

Data related to Aeso's urban core and surrounding territory are very scarce. Except for a segment of its wall, the dimensions, organisation and architecture of this city remain vague. Inscriptions nonetheless reveal the existence of a local government with the status of municipality active until the 3rd century, and a local elite with political and military careers in the service of emperors such as Trajan. The power of this elite has its origins in land ownership. Yet, at least for the moment, only one *villa* has been identified at Llorís 800 m from Aeso and just over 150 m from the Colomera Stream, an affluent of the Conques-Gavet River. This *villa* , active since the 1st century AD and occupying about 10,000 m2, has constructions distributed on several terraces. Excavations have identified a luxurious residential area and a sector possibly dedicated to agricultural and artisanal production. The *Villa* of Llorís also has links to two nearby cemeteries.

Final considerations

The economic system that developed in the surroundings of the *villae* generated a particular type of occupation characterised by a differentiated and unequal spread of sites and economic activities (Revilla 2010). This process was accompanied by a wide range of structures of very different architecture and functions, from large and small farms specialised in agricultural tasks to modest sheds and huts. In addition, these activities involved particular forms of occupation and life patterns. *Villae* functioned as centres of a property and concentrated a large group of individuals of very different social conditions (family of the owner, servants and workers, slaves and freedmen) mostly residing on

Fig. 8. The oil press of Secà del Colo (Corbins). In the foreground is a counterweight; in the background, to the right, a settling tank (photo: Ll. Marí).

a permanent basis. Many other sites, in turn, were occupied only by small units of permanent or temporary workers. The result was a highly uneven distribution of rural population.

A first type of rural establishment is characterised by its vast extension (over 2,000 m2) and a rational internal organisation dictated by its productive function. Numerous well-recorded examples in Catalonia suggest that these buildings formed part of a system of intensive agriculture oriented towards producing surpluses, in particular wine and oil. This strategy involved the construction of highly complex production (presses) and storage features. Behind the investments in infrastructure and work processes requiring a significant amount of human labour was an economy designed for marketing circuits and a great urban demand. This economy developed throughout several territories along both the Catalan coastline and interior between the end of the 1st century BC and the 2nd-3rd centuries AD (Revilla 1995). A good example in western Catalonia is the site of Hostal Nou at Balaguer (Díez-Coronel 1970) excavated in part in the 1960s, a complex spread over a surface of at least 1,000 m2 consisting of several buildings around a courtyard. Certain of its spaces must have housed one or more presses, while one, approximately 230 m2, served as a storehouse. An estimation of the number of containers in this space evidences its great capacity to store wine (Peña 2010).

Another category of settlements corresponds to small, solid, yet simple (two to three rooms) isolated buildings raised with modest materials. Certain appear to have served for a specific function, and feature exclusively productive infrastructures and no evidence of residential use. An example is Secà del Colo at Corbins (Fig. 8) consisting of a small building divided into two contiguous spaces. The first housed an oil press while the other, opening to the outside by a portico, featured a tank to collect pressed liquid (Marí, Mascort 1988). Its function and the absence of a living space suggests that it was an outbuilding of a nearby *villa* (perhaps Tossal del Moro 800 m away) attended by seasonal agricultural workers. The following archaeological sites marked by very scarce material finds could fall in line with this type of modest agricultural model: Cal Piqué, Torre-sulla and Camporrells (all in Albesa); Cantaperdius (Castelló de Farfanya), or Cantaperdius (Bellvís) dating to the High Empire and in certain cases still in use in Late Antiquity (Marí, Revilla 2018b).

Interpreting Tossal de Cal Montblanc (Albesa) is more complex (Fig. 10). This settlement controlled the junction of two roads leading through the mountain passes (Algerri and Castelló de Farfanya) of Sierra Llarga. Identification in 1986 of a square building occupying the upper sector of the hill, and the presence of a section of a rutted road about 60 m in length, led to the hypothesis of a *mansio* controlling the junction of two axes of the regional road network connecting the Pyrenees and Southern Gaul with Ilerda (Rovira, Marí 1998). The excavation of 1998 (surpassing 1,500 m2) shed light into the nature of these structures with finds indicating a phase of occupation from the late 1st and early 2nd centuries AD, as well as from Late Antiquity and the Middle Ages. Interpreting Cal Montblanc is complex for the moment as there is not enough evidence to classify it as an agricultural site. Neither do the finds link it to the nearby *villa* of El Romeral or serve to confirm the hypothesis of its function as a *mansio* (Marí, Revilla 2018a).

Fig. 9. Tossal de Cal Montblanc (Albesa). View of the structures towards the top of the hill (photo: Ll. Marí).

Finally, worth mention is a type of modest building made totally or partially with perishable materials that was occupied either sporadically or seasonally. A good example is the modest nucleus La Gravera at Artesa de Lleida dating from between the end of the 1st century BC and the middle of the following century. The only remains of the building, potentially associated with livestock activities, are an irregular, shallow pit or depression (about 15 x 3 m) sunk into the ground with a small hearth (Morín et al. 2010).

In any case, the diversity of rural settlements of western Catalonia in terms of architecture, distribution and density is indicative of the dynamism of an urban society - yet with agricultural roots - characterised by strong inequalities and the necessity of creating an appropriate setting for their residence and to exhibit and legitimise their social hierarchies. At the same time, the presence of productive activities and their rigorous level of organisation reveal the rapid expansion of an economy driven by urban elites capable of considerable investments intended to produce surpluses. The needs and strategies, social and patrimonial, of these elites thus determined, to a large extent, the design of the landscape and the distribution of the rural population between the end of the 1st century BC and the 3rd century AD.

EPILOGUE

Josep Guitart and Xavier Payà

The coordinators of this book in this epilogue desire to highlight that its content and the exhibition itself clearly reveal the rich archaeological heritage of the three Roman cities of Western Catalonia.

Moreover the heritage of these three cities stemming from the work of recent decades, although only beginning to be thoroughly studied and recognised, is already yielding its first fruits, notably those presented here. They reveal the great interest and potential of archaeology not only strictly from the perspective of research, but also from museological, pedagogical and tourist standpoints. And this potential, already clearly perceptible for each city, expands exponentially when treating the three cities as a group.

It is necessary, however, to adopt a deliberate management of heritage with clear objectives assembling policies and initiatives of various public and private institutions which in unison act and bring to the fore the resources required to garner the obvious social and cultural benefits.

To conclude, we would like to advance a few brief thoughts regarding the management of each of our cities, taking into account the diversity of their contexts and their expectations over a medium-term. These naturally derive from the state of the question highlighted by this exhibition that will serve future projects at least to initiate broader reflections that should involve all stakeholders.

The urban dynamism of Lleida of recent years and its preventive archaeology has rendered it possible to visualise the basic characteristics of Roman Ilerda and advance our grasp of its origins and historical evolution. Circumstances are currently changing with the emergence of factors that will condition the immediate future. The end of the thorough renovations of buildings raised on the remains of Antique Ilerda, the lack of public spaces to potentially excavate, the use of new methods of laying down foundations, the abandonment of constructing underground parkings, and the growing trend towards rehabilitating old constructions will drastically reduce future preventive archaeological work. This therefore will no longer be the means to collect new data and evidence of Roman Ilerda. Thus one must search for new strategies to advance archaeological excavations while simultaneously focusing and exploiting the known sites of great value and interest such as Ilerda's public thermal baths.

Guissona has already benefitted from a series of important steps such as the development of an Archaeological Park closely linked to the museum and Centre of interpretation of Antique Iesso. Moreover, the recent approval of an urban plan intends in the future to double the size of the park and incorporate certain of the site's most promising features. It is urgent, however, in the short term, to complete the park and museum infrastructure in order to put in place a means to disseminate to the public what we currently know about the site. It is likewise necessary to deepen archaeological research of the whole city, placing value on interweaving both the Roman and medieval remains of its old quarter.

Archaeology at Isona is still in its early stages. Yet unlike Guissona, Aeso has the privilege of being one of the very few Roman cities in Catalonia that was not built over. As an important number of Roman features are still under orchards and farmlands, its archaeological potential is exceptional. It is also evident that a small town such as Isona cannot alone assume all the responsibility of research.

And finally it must be stated that the Museum of Lleida, as a sort of spokesperson of the rich western Catalan heritage, must assume the archaeological discourse of these three Roman cities, maximum exponents of a number of transformations and continuities that marked a period spanning more than eight centuries, and take on the role as an indispensable link to grasp the transition from Lleida's rich Protohistory to its medieval and modern realities. Let's go then.

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