

# Late Antique and Medieval Landscape in the Guadiana Valley. The Roman Villa of ‘La Dehesa de la Cocosa’ (Badajoz, Spain)

Isabel Sánchez Ramos – Fernando Valdés Fernández – Felix Teichner

## Introduction

The geographical framework of this study corresponds to the middle valley of the river Guadiana together with the stream Hinojales, in the province of Badajoz (Extremadura, Spain), characterized for benefiting the development of farming activities.<sup>1</sup> The main aim is to make progress in the research on the outcome of the Roman villa of La Dehesa de la Cocosa – that is situated since the 1<sup>st</sup> century until the 7<sup>th</sup> century (fig. 1), and its role in the management of the territory following the consolidation of the bishop’s sees in the 6<sup>th</sup> century and, later on, throughout the structuring of al-Andalus.<sup>2</sup> Ultimately,

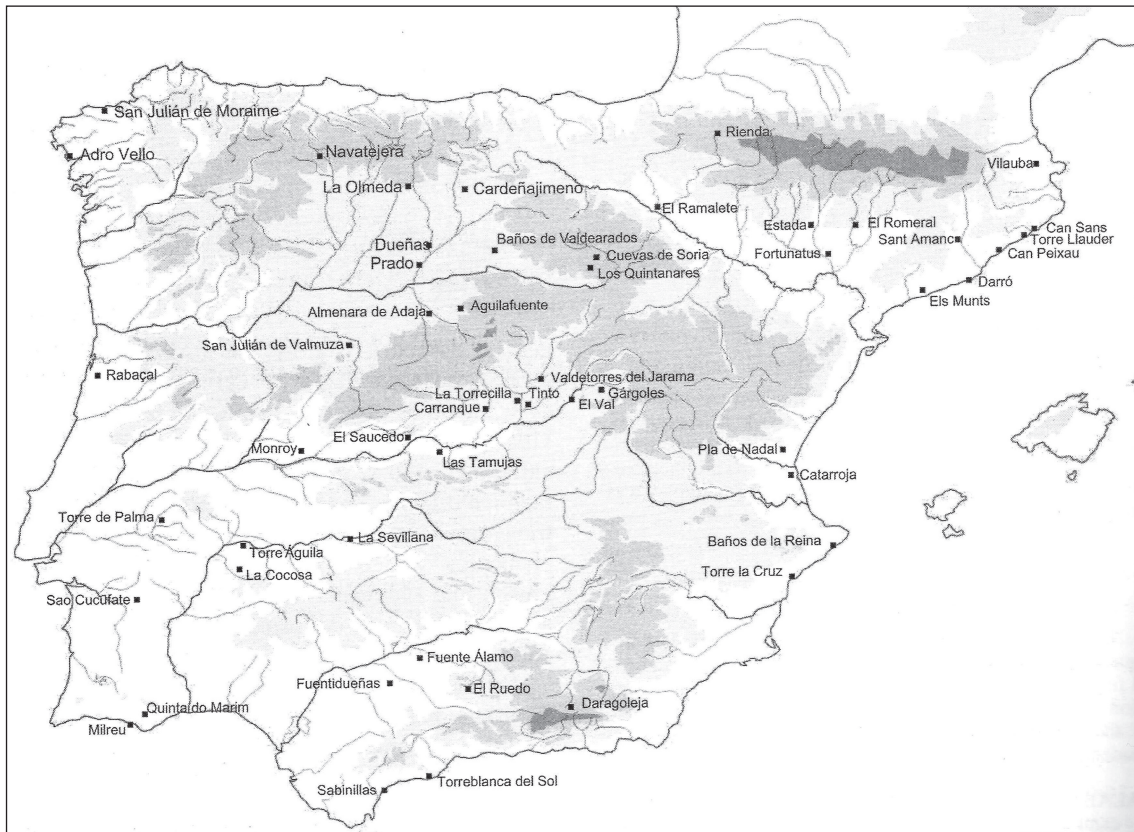


Fig. 1: Location of the main Roman and late Roman villae in the Iberian Peninsula cited in the text.

the purpose is to know the evolution of this bordering Lusitanian landscape and its patrimonial heritage, as well as to contribute to advance in the architectural knowledge of the land-use planning in such a hierarchically organized space, of both cultural exchange and connection. The Roman villa of La Dehesa de la Cocosa was discovered during the development of the agricultural works in the property of Mr. Luis Mendoza Botello. In the last decades of the 20<sup>th</sup> century, it has been a partial subject matter by other researchers<sup>3</sup> and institutions such as the Archaeology Institute of Merida<sup>4</sup> (IAM-CSIC). The first excavations were done in 1945 by the archaeologist José de Calasanz Serrá Ráfols (fig. 2). Subsequently, other excavations were conducted where the three documented Christian mausoleums appeared and about which we will discuss later, even if the extension of the settlement has not yet been fully delimited.

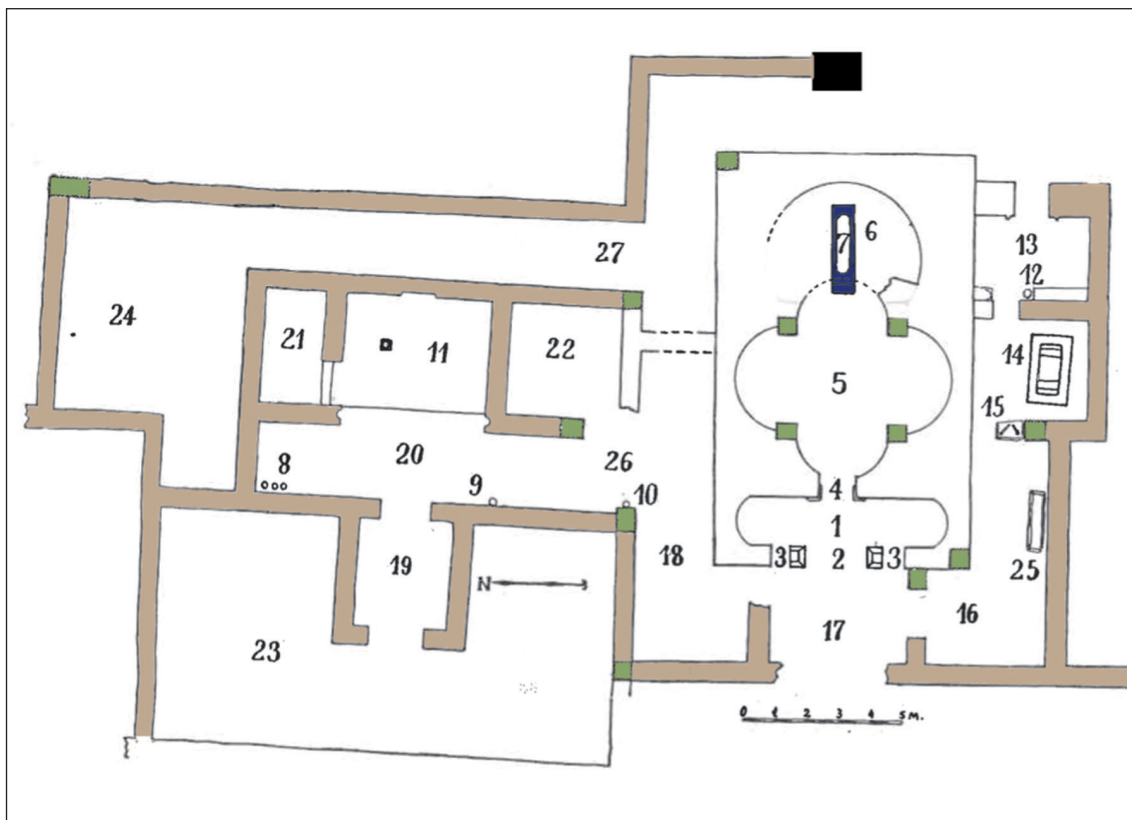


Fig. 2: Plant of the Roman villa of la dehesa de la Cocosa after the first excavations conducted in the 20<sup>th</sup> century.

### Goals and Methodological Approach

Firstly, a topographic analysis of La Cocosa will be done through different documentation methodology strategies (which are non-invasive) that guarantee a minimum impact on the archeological site. Secondly, we intend to reconstruct the succession of cultural landscapes, as a sum of natural and anthropic environments, created in the outlying rural areas of the middle valley of the river Guadiana by the new civil and religious powers, from the construction of the Visigoth Kingdom, with capital in Toledo, to the Umayyad Emirate of Cordova later on. This site is a preferential case for our goals, being it an exceptional complex to develop a non-invasive archaeological methodology. These goals are the following: 1) To carry out the three most useful geophysical prospection in a complimentary way (with magnetometry, ERT/resistivity and GPR/with ground-penetrating radar<sup>5</sup>) in order to evaluate the surface and the extension of the Roman latifundium on the basis of the existence of possible underlying structures; 2) to obtain an orthophotography and a DGM (digital terrain model) from a drone with traditional and thermal sensors<sup>6</sup>; 3) to propose a modern digital documentation and a 3D restitution from the topographic survey of the currently visible structures, which were excavated by Serrá Ráfols between 1945 and 1947; 4) to establish the chain of changes undergone by the villa since the 5<sup>th</sup> century onwards, from the chronological and functional point of view, and try to know the relationship among the three funerary and sacred structures of the site's Christianization; 5) to explore the transformations of the Christian complex throughout the Islamization period, in order to assess its impact and try to reconstruct the relationships between the ancient villa and the new civil power settled in the recently founded city of Badajoz. In this sense, we intend to study the 'journey of the materials': the sacking and spoliation process of constructive and sculptural material of the villa led and controlled by the local elites, and its reuse for the new constructions of the city; and 6) lastly, to insert the site of la Cocosa within the landscape of the middle valley of the river Guadiana throughout the Late Antiquity and the Middle Ages.

### The Roman Villa and the Late Antique Transformations

The villa was an agricultural and farming holding in the 1<sup>st</sup> century, which was intended for the production and storage of agricultural products, as evidenced by the found wheat mills and oil press. It has a *pars urbana*, a residential area constructed around a peristyle with a *balneum* and other representation rooms, which reached their splendor in the 4<sup>th</sup> century, just like other Hispanic and Lusitanian villas, such as La Atalaya, Bótoa, Torre Águila, El Pesquero, La Vega and Panes Perdidos.<sup>7</sup> The villa's production and storage activities were likewise maintained,<sup>8</sup> this is, the use of *torcularia* for oil production has been evidenced to exist during the Late Antiquity, as is the case in the villas



of Torre Águila, Milreu and Sao Cucufate located in Portugal.<sup>9</sup> Nonetheless, it is the transformations and occupations detected in the villa since the end of the 4<sup>th</sup> century what constitutes our main topic of interest. Probably having already lost its residential function, the presence of three new buildings has been object of speculation in recent historiography as to whether they might be churches or just mausoleums.<sup>10</sup> Two of them are located in the *pars urbana* of the ancient villa and may be identifiable in the maps of Serrá Ráfols.<sup>11</sup> However, the third one, which is undoubtedly Christian, appeared in a different area in the course of a minor excavation, located some 250 meters to the southeast of the main complex. Given that the topographic relationship of the three mentioned late antique structures is unknown, we intend to use the orthography to create a new topography for its visualization. Logically, this work involves explaining the nature of this reoccupation and its evolution, in funerary, sacred and/or residential site, as well as its likely private nature at first, and possibly public afterwards, if we manage to confirm that it was used as a rural *parochia*, and ultimately an 'exclusive' quarry of materials.

The first building (building one) is situated between the peristyle of the *uilla* and the *balneum*. It has a square ground plan (6.5 m × 6,6 m) and a double apse with a burial located in the southern apse (fig. 3). Since the approach by Pere de Palol of it being a



Fig. 3: The first building located between the peristyle of the *uilla* and the *balneum* that held a double apse.

church has been dismissed, it shall be identified as a mausoleum, either pagan or Christian, and assume that the northern apse, whose function is unknown, is a posterior adding. A second mausoleum (building 2) is situated next to the northeastern corner of the peristyle. It is a rectangular nave (4.7 m × 5.5 m) with the northern end also apse-shaded. The third private mausoleum (building 3) is situated at around 250 m from the *pars urbana*, and has been dated, as have the other two, between the late 4<sup>th</sup> century and the middle of the 5<sup>th</sup> century.<sup>12</sup> It is a rectangular-shaped ground plan construction, of greater dimensions than the others (13 × 8 m) with two apse-shaped premises in the interior, preceded by a transversal lobby to the west. This access leads to a quadrilobed chamber and further, in the eastern part, a crypt (which is partially destroyed) with a privileged burial in a plain white marble sarcophagus, with an east-west orientation. This chamber might have been covered by a central dome richly decorated with a mosaic, given the amount of glass tiles recovered from the levels of destruction. As we will later discuss, we believe that the pilasters spoiled for their use in the first residence of the Islamic governor of Badajoz in the 9<sup>th</sup> century belonged to this building, namely to the central space. Our hypothesis is that it was an intentional spoliation carried out to legitimate the new civil power. The construction quickly reminds of the central-ground plan building of Centelles (Tarragona) in Tarragona, which has also been object of review and controversial interpretations in recent research.<sup>13</sup>

As many other 4<sup>th</sup> century structures identified in the reoccupation phases of some Hispanic villas, including but not limited to Milreu, Estoi, Las Vegas de Pedraza (Segovia), San Miguel de Odrinhas (Sintra, Portugal) or La Alberca (Murcia),<sup>14</sup> these very constructions shall be identified with non-church mausoleums, and it is rarely possible to even define its religious affiliation, except for the case of Las Vegas de Pueblanueva (Talavera), a Christian burial confirmed by the recovered marble sarcophagus.<sup>15</sup> However, some of these mausoleums have been transformed into churches from the 6<sup>th</sup> century.<sup>16</sup> As a matter of fact, in La Cocosa, in an even later phase, the third mentioned building was included in a wider architectural complex, from which several premises attached to the central space are noteworthy, such as the baptism pool of rectangular ground plan with descent and ascent stairs in the ends. It can date from the 6<sup>th</sup> and 7<sup>th</sup> centuries due to its typology and the presence of an altar table and liturgical objects (fig. 4). We



Fig. 4: Bronze paten handle with Christian inscription and cross: Ex of(ficina) Aseeliter(e) felix in Deo (HAE 475).

do not know the whole structure of the ecclesiastic complex, or its relationship with the peasant housing units established between the peristyle and the third mausoleum used as a church. However, the available literature triggers the idea of the existence of a rural settlement that may be defined as a late antique *uicus* formed around a religious building (building 3, which used to be a mausoleum and was transformed into a church with a baptistery), which might have been used as a rural parish.<sup>17</sup> Therefore, this settlement model reflects a shift in the economic and social system of the territory at the end of the Late Antiquity.

### **The Foundation of Badajoz and the New Territorial Organization in the Ninth Century**

Another vital factor to take into account when studying the remains of La Cocosa is the final occupation date and its possible continuity until a quite posterior period to that of the Arab conquest in 711. None of the archaeological digits carefully noted by J. de C. Serrá Ráfols allows considering, *a priori*, that this was the case. Despite this, we now know that the Islamization process took place quite slowly and that the cultural change took time to appear in its material aspects. We also know, thanks to the documentary evidence, that the local oligarchies agreed to their redemption before the Arab conquerors and soon converted to Islam, specially forced by tax reasons, keeping a noticeable level of autonomy.<sup>18</sup> It was only when the Umayyad monarchs of Cordova initiated the application of a centralist policy based on the Abbasi model in Iraq, which breached the pacts following the invasion and reduced the self-governance of the local aristocracy, that problems started: a series of rebellions and riots that took place in the eastern region from the reign of the Emir al-Hakam I (796–822) until 875, moment in which the Muslim indigenous leader Abd al-Rahman ibn Marwan al-Yilliqi founded *Batalyaws*. We should ask ourselves where these oligarchies lived from the moment of the conquest until, at least, the foundation of the first fully Islamic enclave.<sup>19</sup>

The excavation works that took place in the old Military Hospital of Badajoz, which today hosts the Library of Extremadura, in the late 90's of the 20<sup>th</sup> century, revealed the remains of an architectural site consisting of a residential area, a reception hall and a small mosque, all of it structured around a low garden. It is a castle, which most likely served as the residence of the city founder. The official area of this complex, with three occupation phases (before the 11<sup>th</sup> century, 11<sup>th</sup> and 12<sup>th</sup> centuries) was partially destroyed by the apse of the cathedral of Badajoz, constructed shortly after 1230, when the city was conquered by the king Alfonso IX of Leon (1171–1230).

It was only possible to study the apse of the reception hall. It has an east-west orientation and the eastern side, limited by a low quadrangular garden, is 10.64 m long. The floors in the hall were made of pebbles, covered by a layer of stucco painted in red. It was possible to recover a considerable part of the plinth with white stucco and geo-

metrical lattices, also in red. The most interesting aspect from the construction point of view is the *in situ* emergence of three quadrangular granite bases, placed equidistantly. A fallen, almost complete masonry block covered with the same white plaster and decorated with the same red-painted lacework strips was excavated at the bottom of the most southern one. The bases were apparently used as a support to the three plinths (just one was preserved) on which each squared pillar was placed, whose location accounts for their use as elements to rest the supports of a big hole with two compartments separated by a mullion. Except for their difference in use, its organization seems similar to the one visible in the access to the cistern stairs of the Alcazaba of Merida.<sup>20</sup> What is most striking is the similarity in size of the bases in the hall and the two late antique marble pillars, which are preserved in the Archaeological Museum of Badajoz, and whose general origin was situated in this Alcazaba (fig. 5). Several crosses were craved in the side of these pillars. However, the ones situated in one of them, apparently the frontal one, were carefully chipped out at some point. Those in the opposite side and other smaller ones in the other two remained intact. We do not know the appearance of the mullion, but its base was also rectangular.

From our point of view, the similarities between the dimensions of the bases of these pillars and those of the granite bases discovered in the apse of the Badajoz Palace's hall indicate that this was their original placement, over brick plinths, in a highly visible and deliberate way. This is, like *spolia*. This was confirmed by the position of the chipped-out crosses, whose cavity, once they were erased, remained clear. The two pillars situated in the compartment of the hall's apse were, undoubtedly, those found in the Provincial Archaeological Museum of Badajoz (Inv. No.: 900 and 901). Given the position of the intact crosses and the spaces left by the chipping-out process, we must assume that they were attached, as doorposts, to those walls.<sup>21</sup> Finally, it is noteworthy that their bases have the same width that the support of the dome of the *martyrium* of La Cocosa. If, as we believe, the pillars with crosses, together with another extensive lot of sculptural pieces, went from La Cocosa to the castle of the Alcazaba of Badajoz, it is obvious that they were a part of an important and representative enough building to be used in the reception hall's apse of the residence of Abd al-Rahman Ibn Marwan, the founder of the city (fig. 6). Hence, not only was the legitimacy of the pre-Islamic territorial powers (the Goth Lusitanian oligarchy) evidenced, but also its continuity.

It is likely, from our point of view, even if the complex requires – as stated before – a more extensive and thorough research, that the villa of La Cocosa was not abandoned at the time or shortly after the Arab conquest, but that it was used until much later. It is the foundation of the *Batalyaws* castle (880–890) what establishes the approximate moment of its definite abandonment. In that moment, part of the complex might have been dismantled to move its sculptural elements to the new seat of the territorial authority.





Fig. 5: Late antique sculpted pilasters reused in the 9<sup>th</sup> century residence of the governor of *Batalyaws*.



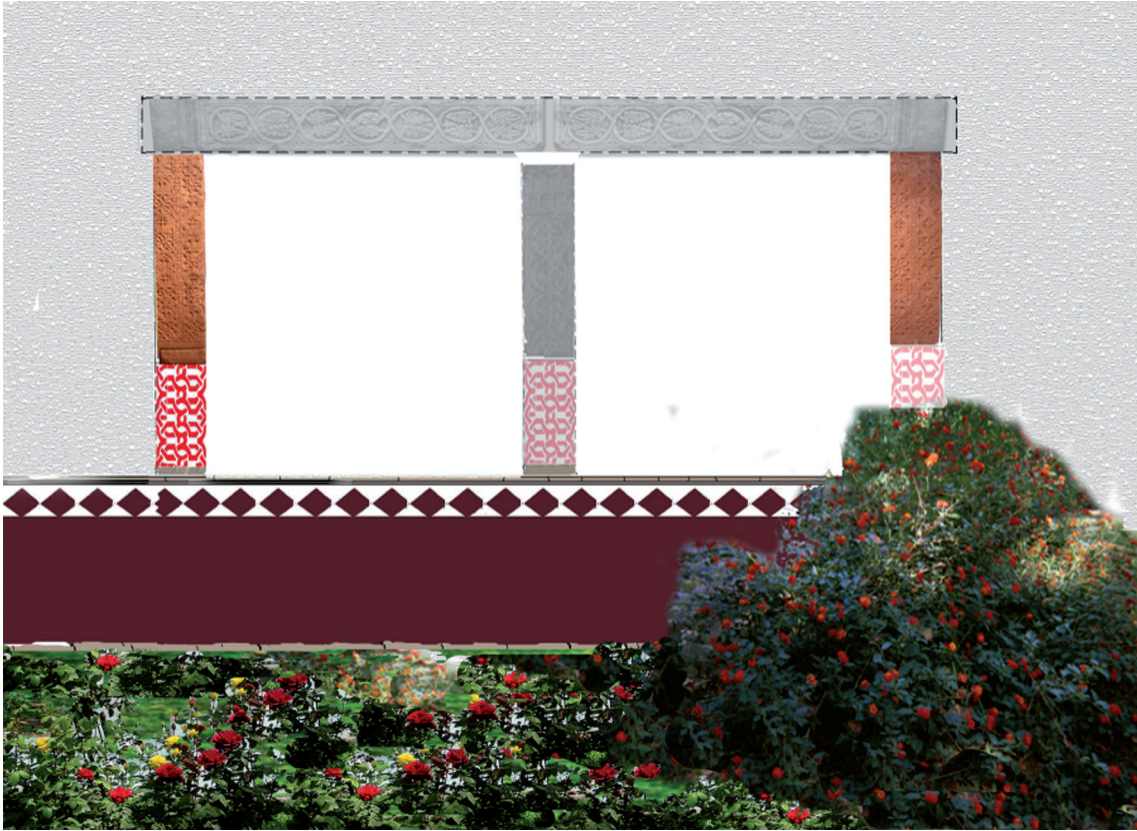


Fig. 6: The architectural restitution of the reception hall of the Alcazaba's foundational residence faced to the garden courtyard, proposed by F. Valdés.

### Conclusions

The future perspectives of this project will also involve addressing various aspects of the transformation of the landscape beyond the town and the emergence of new rural settlements in the territory, including in its rebuilding knowledge of the geomorphological environment, resources (mining, agriculture and livestock<sup>22</sup>) and infrastructures (communication routes, irrigated systems) as key elements for their interpretation. From the methodological point of view, the most immediate future expectations of the project should be a modern documentation of the site and its landscape/topography involving the use of SfM (Structure from Motion), and of mappable information processing systems, such as Laser Scan, Drone, GPS and Total Station. With them, it will be possible to create a plan that will show the spatial articulation of the complex and about which we will obtain a 3D survey that will render the space articulation of the complex more understandable in its different chronological phases. Secondly, the stratigraphic reading of the walls, which will facilitate the distinction of various constructive moments and definition of their technical characteristics, will also be essential to establish their

constructive–destructive–constructive sequence. Finally, the non-invasive geophysical prospection in cooperation with the team of the University of Marburg, applied before on other sites of the Iberian Peninsula, including, but not limited to Italica, Monte Bernorio, La Olmeda, Regina, Tiermes or Sasamon, will give a radiography of the architectural elements/ground-plan-parts that are still unknown/unsecure<sup>23</sup>. The application of these new technologies should help to understand and confirm the important perspective (in the sense of a case study) about the continuities and changes in *Lusitania* in the transition period between the Late Antiquity and *al-Andalus*, and the behavior/reaction of local aristocracy/elites.

### Acknowledgment

This work has been conducted under the Research Project ULP.PILAEMA that has received funding from the Marie Skłodowska-Curie Actions ‘Horizon 2020-MSCA-IF-EF-ST’ and it has been lead by Isabel Sánchez Ramos at the UCL Institute of Archaeology under the grant agreement No. 740123. The archaeologist Fernando Sánchez has conducted the fieldwork in La Cocosa in 2018. The authors would like to thank him for contributing to this work.

### Summary

This paper aims to present the study in progress about the evolution of the territory of the middle valley of the Guadiana between Late Antiquity and the Middle Ages periods (4<sup>th</sup>–10<sup>th</sup> centuries), to understand the articulation and management of this geographical border area in administrative, economic, social and ideological terms. One of the main goals is to know the impact of both Christianization and Islamization phenomena in the structuring of the new rural settlements in this bordering area between Lusitania and Baetica after the fall of the Roman Empire system, as well as the structural characterization of the cultural landscape in which the transformation of the Hispanic Roman *villae* is inserted.

### Notes

<sup>1</sup> Gorges – Rico 1999, 157–195.

<sup>2</sup> A recent study addressing to the same phenomenon but in the framework of the Roman *villae* of *Baetica*, in Sánchez and Morín 2018, 575–612.

<sup>3</sup> Cerrillo 1983, 87–101; Arce 2006, 13.

<sup>4</sup> Mateos 2003, 21–24; Cordero 2013; Teichner – Dürr, 2020.

<sup>5</sup> Teichner et al 2016b and Teichner et al. 2021, 5–25.

<sup>6</sup> Salzmann 2016.

<sup>7</sup> The architectural renovation of the Roman *villa* also involved an ornamentation of the spaces with mural painting, stucco, sculptures, marble, mosaic pavements, etc., among which stands out the polychrome mosaic of the *balneum's frigidarium* representing Triton. These constructions are rooms that were organized around a peristyle, among which stand out the *stibadia* linked to the banquet and representation rooms of the owners, which are documented in La Cocosa (Serra i Rafols 1952), and other Roman *villae* such as Torre Águila (Rodríguez 1997, 697–712), Monroy (Cerrillo 2006, 200) and Santiago. Regarding to the architectural conservation, most of the documented structures correspond to the foundations of the walls (masonry and mud walls), and to the aforementioned mosaic pavement, and other *opus signinum* floors. Recently summing up: Teichner 2018.

<sup>8</sup> Serra i Rafols 1952, 46.

<sup>9</sup> Teichner 2008; *Idem*. 2018.

<sup>10</sup> Other mausoleums were built during the mid-4<sup>th</sup> and the 5<sup>th</sup> centuries in the Roman *villae* of El Carrascal (García Bellido 1965, 83–86), El Pesquero (Rubio 1991, 436), São Cucufate (Alarcão et al. 1990), Milreu (Teichner 2008, 509) and Pisões.

<sup>11</sup> Teichner 2018.

<sup>12</sup> Serra Rafols 1949, 105–116.

<sup>13</sup> Arbeiter 2002, 1–9; Puche – Lopez 2017, 169–182.

<sup>14</sup> The archaeological evidence of La Cocosa indicates that the ancient Roman villa lost its function as a prestigious residential place throughout the 5<sup>th</sup> century, as well as the late transformation of the settlement into a *vicus* surrounding the church built on the third mausoleum. A similar case is documented in the large Roman villa of Torre de Palma in Portugal (Maloney – Hale 1996, 293).

<sup>15</sup> Chavarría 2018, 106.

<sup>16</sup> Chavarría 2007, 215.

<sup>17</sup> There are also late productive spaces and the conversion of the Roman *oecus* in stockyard has been documented (Aguilar 1991, 264–279).

<sup>18</sup> Hernández, 1967, 37–123.

<sup>19</sup> Valdés 1999, 281.

<sup>20</sup> Valdés 1995, 295.

<sup>21</sup> Valdés 2018, 241–251.

<sup>22</sup> Cordero 2013, 80.

<sup>23</sup> Teichner et al. 2016a, 161–170; Teichner et al. 2020a and 2020b; Teichner et al. 2021.

### Image Credits

Fig. 1: Chavarría 2006, 18, fig. 1. – Fig. 2: Serra Rafols 1952, fig. 11. – Fig. 3: © F. Sánchez. – Fig. 4: © F. Valdés. – Fig. 5: © F. Valdés. – Fig. 6: © F. Valdés.

## References

### **Aguilar 1991**

A. Aguilar Sáenz, Dependencias con funcionalidad agrícola en las villas romanas de la Península Ibérica, Gerión (Anejos III, Alimenta. Estudios en homenaje al Dr Michel Ponsich) 1991, 264–279.

### **Alarcão et al. 1990**

J. Alarcão – R. Étienne – F. Mayet, Les villas de São Cucufate (Portugal) (Paris 1900).

### **Arbeiter 2002**

A. Arbeiter, 2002, Centcelles. Puntualizaciones relativas al estado actual del debate, in: J. Arce (ed.), Centcelles. El monumento tardorromano. Iconografía y arquitectura, Bibliotheca Italica, Monografías de la Escuela Española de Historia y Arqueología en Roma, CSIC 25 (Rome 2002) 1–9.

### **Arce 2006**

J. Arce, Villae en el paisaje rural de Hispania romana durante la Antigüedad tardía, in: A. Chavarría – J. Arce – G. P. Brogiolo (eds.), Villas Tardoantiguas en el Mediterráneo Occidental. Anejos de AEspA 39 (Madrid 2006) 9–15.

### **Cerrillo 1983**

E. Cerrillo, La villa de La Cocosa y su área territorial. Análisis de un asentamiento rural romano. Actas del VI Congreso de Estudios Extremeños, Arqueología Mérida 1979 (Madrid 1983) 87–101.

### **Cerrillo 2006**

E. Cerrillo, La villa romana de Monroy. Reflexiones sobre la complejidad rural de época romana, in: A. Chavarría – J. Arce – G. P. Brogiolo (eds.), Villas tardoantiguas en el Mediterráneo Occidental. Anejos de AEspA 39 (Madrid 2006) 197–205.

### **Chavarría 2007**

A. Chavarría, Aristocracias tardoantiguas y cristianización del territorio (siglos IV–V): ¿otro mito historiográfico?, Rivista di Archeologia Cristiana 82, 201–230.

### **Chavarría 2018**

A. Chavarría Arnau, A la sombra de un imperio. Iglesias, obispos y reyes en la Hispania tardoantigua (siglos V–VII) (Bari 2018).

### **Cordero 2013**

T. Cordero Ruiz, El territorio emeritense durante la Antigüedad Tardía (siglos IV–VIII): génesis y evolución del mundo rural lusitano. Anejos de AEspA LXVI (Mérida 2013).

### **García Bellido 1965**

A. García y Bellido, La villa romana del El Carrascal, Talavera la Real, AEspA 38, 1965, 83–86.

### **Gorges – Rico 1999**

J.-G. Gorges – Ch. Rico, Barrages ruraux d'époque romaine en moyenne vallée du Guadiana, in: G. Rodríguez – J.-G. Gorges (eds.), Économie et territoire en Lusitanie romaine, Collection de la Casa de Velázquez 65 (Madrid 1999) 157–195.

### **Hernández 1967**

F. Hernández, Los caminos de Córdoba hacia Noroeste en época musulmana. Al-Andalus 32, 1967, 37–123.



**Maloney – Hale 1996**

S. J. Maloney – J. R. Hale, The villa of Torre de Palma (Alto Alentejo), *Journal of Roman Archaeology* 9, 1996, 292–294.

**Mateos 2003**

P. Mateos Cruz, Villa de La Cocosa, Badajoz, in: P. Mateos – L. Caballero (eds.), *Repertorio de arquitectura cristiana en Extremadura: época tardoantigua y altomedieval*, *Anejos de AEspA* 29 (Mérida 2003) 21–24.

**Puche and Lopez 2017**

J. M. Puche – J. Lopez, Centcelles. Aproximación al monumento, in: L. Roldán – J. M. Macías – A. Pizzo – O. Rodríguez (eds.), *Modelos constructivos y urbanísticos de la arquitectura de Hispania* (Tarragona 2017) 169–182.

**Rodríguez 1997**

F. G. Rodríguez Martín, La villa romana de Torre Águila (Barbaño, Badajoz) a partir del s. IV d.C. Consideraciones generales, in: R. Teja – C. Pérez (eds.), *La Hispania de Teodosio* (Segovia 1997) 697–712.

**Rubio 1991**

L. A. Rubio Muñoz, Precisiones cronológicas en cuanto al inicio y fin de la ocupación de la villa romana del Pesquero, *Extremadura Arqueológica* 2, 1991, 431–444.

**Salzmann 2016**

Chr. Salzmann, *Italica aus der Luft: Structur from Motion (SfM) mit unbemannten Fluggeräten (UAVs)*, in: F. Teichner (ed.), *Aktuelle Forschungen zur Provinzialrömischen Archäologie in Hispanien. Kleine Schriften aus dem Vorgeschichtlichen Seminar Marburg* 61 (Marburg 2016) 22–28.

**Sánchez – Morín 2018**

I. Sánchez – J. Morín, La antigüedad tardía y el final de las villae, in: R. Hidalgo Prieto (ed.), *Las villas romanas de la Bética* 1 (Sevilla 2018) 575–612.

**Serra Rafols 1949**

J. C. Serra Rafols, La capilla funeraria de la dehesa de la Cocosa, *Revista de Estudios Extremeños* 1–2, 1949, 105–116.

**Serra Rafols 1952**

J. C. Serra Rafols, La villa romana de la dehesa de la Cocosa, *Revista de Estudios Extremeños*, *Anejos* 2 (Badajoz 1952).

**Teichner 2005**

F. Teichner, Neue Forschungen zu den römischen Villen Lusitaniens. Akten des Kollquiums Vesprem 2004, *Balácai Közlemények* 9 (Vesprém 2005) 117–132.

**Teichner 2008**

F. Teichner, Entre tierra y mar, *Studia Lusitana* 3 (Mérida 2008).

**Teichner 2018**

F. Teichner, Roman Villas in the Iberian Peninsula (Second Century BCE–Third Century CE), in: A. Marzano – G. P. R. Métraux (eds.), *The Roman Villa in the Mediterranean Basin* (Cambridge 2018) 235–254.

**Teichner – Dürr 2020**

F. Teichner – R. Dürr, *Instrumentum domesticum: Objetos de hierro encontrados en la villa romana de “La Dehesa de la Cocosa” (Lusitania)*, in: *Ex Baetica Romam. Homenaje a José Remesal. Col·lecció Homenatges 58* (Barcelona 2020) 895–922.

**Teichner et al. 2016a**

F. Teichner – J. M. Álvarez – J. M. Iglesias – J. I. Jimenez, *Prospecciones geofísicas en Regina Turdulorum (Casas de Reina, Badajoz). Aplicación al conocimiento de su Territorio Urbano*, in: *La revalorización de zonas arqueológicas mediante el empleo de técnicas no destructivas. Anejos de AEspA 75* (Merida 2016) 161–170.

**Teichner et al. 2016b**

F. Teichner – P. Mertl – F. Hermann, *Geophysikalische Testmessungen an der westgotischen Stadtmauer von Italica (Santiponce)*, in: F. Teichner (ed.), *Aktuelle Forschungen zur Provinzialrömischen Archäologie in Hispanien. Kleine Schriften aus dem Vorgeschichtlichen Seminar Marburg 61* (Marburg 2016) 16–21.

**Teichner et al. 2020a**

F. Teichner – C. Salzmann – M. C. Moreno Escobar, *La villa romana de La Olmeda 50 años después: más allá de las excavaciones arqueológicas clásicas*, in: R. Martínez, T. Nogales, I. Rodà (eds.), *Actas del Congreso Internacional Las villas romanas bajo-imperiales de Hispania* (Palencia 2020) 89–115.

**Teichner et al. 2020b**

F. Teichner – F. Hermann – M. C. Moreno Excobar – E. Illaregui Gómez, *Ver lo imposible: prospecciones geofísicas en el yacimiento arqueológico de Tiermes (Montejo de Tiermes, Soria)*, in: *Anejos de Oppidum 7. Estudios y recuerdos in Memoriam Prof. Emilio Illaregui Gómez* (Madrid 2020), 105–123.

**Teichner et al. 2021**

F. Teichner – H. Brückner – F. Hermann – K. Paul – K. Reicherter, *Geoarchäologische Forschungen zur römischen Fishsaucenproduktion in Lusitanien*, in: *Akten des ICCA 2018 Cologne/Bonn May 2018, Panel 2.3* (Heidelberg 2021) 5–25.

**Valdés 1995**

F. Valdés Fernández, *El aljibe de la Alcazaba de Mérida y la política omeya en el Occidente de al-Andalus*, *Extremadura Arqueológica* 5, 1995, 279–299.

**Valdés 1999**

F. Valdés Fernández, *La mezquita privada de ‘Abd al-Rahman ibn Marwan al-Yilliqi, en la Alcazaba de Badajoz. Cuadernos de Prehistoria y Arqueología de la Universidad Autónoma de Madrid* 25, 1999, 267–290.

**Valdés 2018**

F. Valdés Fernández, *Los pilares del Museo (Arqueológico Provincial de Badajoz). 150 años del Museo Arqueológico Provincial de Badajoz, Junta de Extremadura, Consejería de Cultura e Igualdad* (Badajoz 2018) 241–251.