

Reuse of the Marmora from the Late Roman Palatial Building at Carranque (Toledo, Spain) in the Visigothic Necropolis

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REUSE OF THE *MARMORA* FROM THE LATE ROMAN PALATIAL BUILDING AT CARRANQUE (TOLEDO, SPAIN) IN THE VISIGOTHIC NECROPOLIS¹

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Abstract

The archaeological site of Carranque (Toledo, Spain) is one of the most important Hispano-Roman sites in terms of the use of *marmora* during the late Roman Empire. The research carried out since 2004 at this site has shed light on the extent of the use of more than forty types of *marmora* (from the most important Mediterranean and Hispanic quarries) to decorate a prominent palatial building built in the late 4th century AD and which has been the object of recent studies and publications. The work we present now focuses on the reuse of *marmora* from this Late Roman building in the construction of tombs of the necropolis established in Visigothic times (6th – 7th centuries AD).

Keywords

Carranque, *marmor* reuse, Visigothic necropolis

was opened to the public as part of the Red de Parques Arqueológicos de la Junta de Comunidades de Castilla-La Mancha (Castilla-La Mancha Archaeological Parks Department). The site was established on a wide fluvial terrace on the left bank of the Guadarrama River and covers an area of c. 18 hectares. Several buildings and structures have been found since 1986. Among them, three buildings stand out: the *villa* of *Maternus*, a funerary building (*mausoleum*) and the Late Roman palatial building (Fig. 1). Other, still only partially known, buildings existed over the wide terrace. Among them, it is possible to recognize the *pars fructuaria* of the *villa*. It was related to olive oil and wine production and it has been under investigation in recent years (GARCÍA-ENTERO *et al.* 2012).

The study of the *marmora* of Carranque is one of the key objectives of the current research group, which has been working on it since 2004. The vast volume of material recovered in the Late Roman palatial building,

1. Introduction

The archaeological site of Carranque is located on the northern part of the current province of Toledo, bordering on the province of Madrid, in La Sagra region. In ancient times, it belonged to the *conventus Carthaginensis* (*Tarraconensis* province) and to the *Carthaginensis* province after Diocletian's administrative reform. The site was discovered by chance in 1983 during agricultural work and has been the object of archaeological excavations since 1986¹. In 2003 the site

Guadalajara, 2001). Since 2004, C. Fernández Ochoa (UAM) and V. García-Entero (UNED) are in charge of the scientific direction of this site.

- 2 This paper is part of the Project “Marmora Hispaniae. The Quarrying, Use and Trade of Espejón Limestone in Roman and Late Antique Hispania” (HAR2013-44971) funded by the Ministerio de Economía y Competitividad of Spain directed by V. García-Entero. It is also part of the Project “Estudio de los materiales arqueológicos procedentes de las excavaciones desarrolladas en el edificio palacial del yacimiento de Carranque (Toledo) durante las campañas de 2009 a 2011” led in 2014 by C. Fernández Ochoa and V. García-Entero, and funded by Dirección General de Cultura de la Consejería de Educación, Cultura y Deportes de la JCCM; the cooperation of A. Gutiérrez Garcia-M. has been possible thanks to the “*Lapides et Marmora Hispaniae*” project of the LabEx Sciences Archéologiques de Bordeaux programme supported by the ANR (n° ANR-10-LABX-52).

1 The first stage of the investigation of the site was carried out between 1986 and 2003 under the direction of D. Fernández-Galiano and B. Patón Lorca. Its result was the production of an abundant bibliography, mainly focused on the iconography of mosaics of the so-called *villa* of Materno (for a summary of the works carried out, see Carranque. *Centro de Hispania romana*,

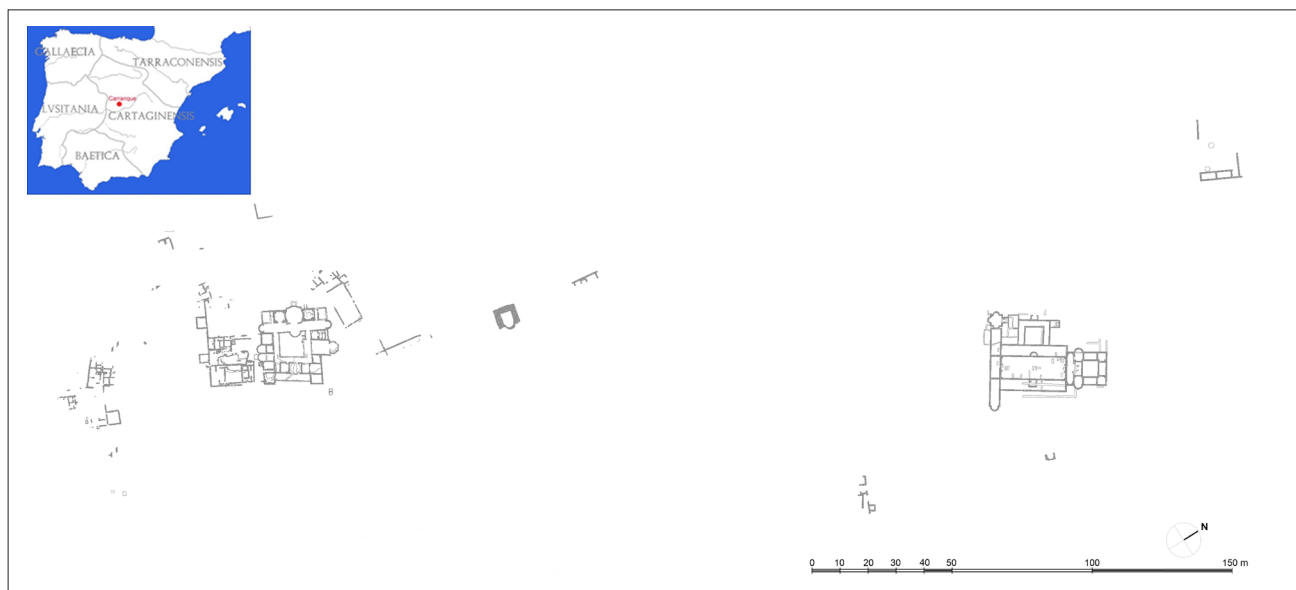


Fig. 1. Plan of the Roman site of Carranque (Toledo, Spain) with location of the site in the Iberian peninsula

several hundreds of thousands of fragments, determines the phases of the study. We have dedicated the first phase to the classification and identification³ of the more than forty types of *marmora* employed in the decoration program of this important building. This wide array of materials and the presence of some imported types extremely uncommon in Hispania confirms that the archaeological site of Carranque is one of the most important Hispano-Roman sites in terms of the use of *marmora* during the Late Roman Empire (GARCÍA-ENTERO, VIDAL 2007; 2012; GARCÍA-ENTERO *et al.* 2008).

2. The Late Roman palatial building and the Visigothic necropolis

The excavation works carried out between 2009 and 2011 focused on the large, Late Roman palatial building. They confirm that this area of the site was occupied over a long span of time, from the construction of the palatial building in the Late Roman period (late 4th century AD) to the final destruction of the last standing remains of its walls in the early 20th century. Especially noteworthy are the periods of occupation in Visigothic and medieval times (GARCÍA-ENTERO *et al.* 2014). The palace is located on the enclave's lower terrace, a few meters away

from the Guadarrama River. From an architectonic point of view, the building consists of a northern section of centralized plan, with eight smaller spaces arranged around a central space of bigger dimensions (Fig. 2). Two of these minor rooms are closed with exedras. A double-apsed vestibule precedes the entire section, leading to a big open patio. Two porticoed corridors flank the patio to east and west. These corridors are cut off in their central area by the presence of an apsed space –to the west– and a quadrangular space –to the east. On the southern flank, the building closes by means of a long section running perpendicular to the patio, closed on the eastern end by an exedra, and on the western end by a four-lobed building. Finally, there is a group of rooms arranged around a U-shaped corridor next to the western flank of the West portico.

This building is undoubtedly the most sumptuous among those documented in Carranque in terms of quantity and variety of the *marmora* used in its decoration program (pavement and revetment slabs and *opera sectilia*, architectural molding elements, pilaster and column shafts, capitals, furniture, etc.). Thus, the use of *porfido rosso*, *porfido nero*, *porfido verde egiziano*, *granito verde della sedia di San Lorenzo*, *granito bianco e nero*, *granito rosso* from Asuán, *granito verde a erbetta*, *serpentino*, *porfido vitelli*, *breccia verde di Sparta*, *rosso antico*, *cipollino rosso Taenarium*, *bigio morato/nero antico*, *verde antico*, *cipollino*, *fior di pesco*, *breccia di Sciro o di Settebassi*, *portasanta*, *marmor Thasium*, *marmor parium -lapis lychnites-*, *pavonazzetto*, *breccia corallina*, *africano*, *marmor carium o iassense*, *rosso brecciato*, *giallo antico*, *giallo brecciato*, Estremoz marble, Almadén de la Plata marble, Espejón limestone, and other Hispanic *marmora* has been attested (Fig. 3) (GARCÍA-ENTERO, VIDAL 2007, 2012;

3 Including detailed macroscopic examination of every single fragment and the archaeometric characterization of a large selection of them. To these, we have applied a multimethod analytical protocol consisting of petrography (optical transmitted light microscopy), cathodoluminescence and mass spectrometry isotopic relations. ÁLVAREZ *et al.* 2006; 2007; RODÀ *et al.* 2009; 2010.

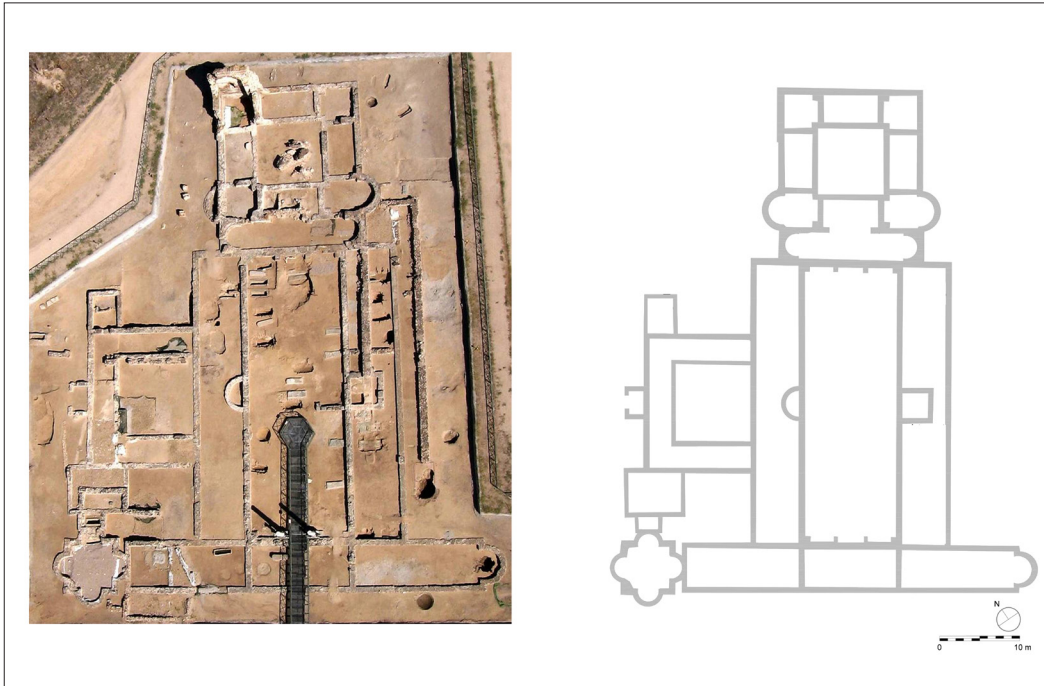


Fig. 2. Aerial view and plan of the Late Roman palatial building of Carranque



Fig. 3. Varieties of *marmora* employed in the Late Roman palatial building decoration program

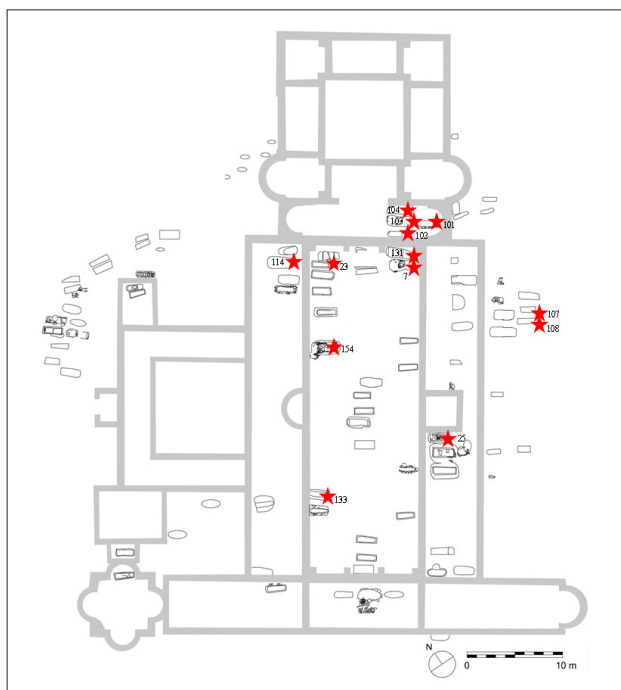


Fig. 4. The Visigothic necropolis sited over the Late Roman palatial building with indication of graves where reused *marmora* is attested

GARCÍA-ENTERO *et al.* 2008). The architectural plan and the decoration program of this important building demonstrates the prominent role that architecture and the massive use of *marmora* played in the self-representation strategies of the Late Roman elite.

In the 6th-7th centuries AD, a necropolis emerged in the area previously occupied by the palatial building (Fig. 4). This necropolis has at least 110 graves that were excavated between 1988 and 2011 in two different periods of research. The excavation works carried out between 2009 and 2011, and the study of the material unearthed then, which was carried out in 2014, have provided data on the structural features of the tombs, the funeral ritual issues, the use of the necropolis and the anthropological features of the people buried (GARCÍA-ENTERO *et al.* 2017).

3. The reuse of marble

In this paper we focus on the *marmora* from the Late Roman building found in a secondary position (re-used) in the funerary structures (cists and lids) as well as within the filling layers deposited when the tombs were closed, in Visigothic times. The excavation works carried out in 2009 and 2011 confirm the regular reuse of marbles to set up tombs. In this period, 41 Visigothic graves were excavated. Thus, the reuse of *marmora* from the palatial building to set up the cists or to function as lids (or part of the lids) has been attested in 6 of them (tombs 7, 25, 101, 102, 114 and 154), while the presence of *marmora*

fragments within the filling deposits sealing the grave has been corroborated in the case of tombs 7, 23, 101, 103, 104, 107, 108, 131, 133, and 154⁴.

In fact, not only marble *crustae*, *opera sectilia* fragments and pavement and revetment slabs, but also fragments of *opera sectilia* preparatory beds were used again in the tombs, as can be seen in the cist walls of tombs No 25 and 102 (Fig. 7). This demonstrates the significant degree of destruction of the late Roman building during the Visigothic period. The varieties of *marmora* reused in the Visigothic tombs are the more frequent types employed in the palatial decoration program. Thus, *porfido rosso*, *serpentino*, *giallo antico/giallo brecciato*, *pavonazzetto*, *verde antico*, Estremoz marble and Espejón limestone were frequently used. However, other less frequent types (*cipollino*, *marmor iassense*, *rosso antico*, *portasanta*, *breccia di Skyros*, *breccia corallina* and slate) were also used, but their presence is barely testimonial. So far, there has been no evidence of the reuse of the most rarely employed *marmora*, such as *porfido nero*, *porfido verde egiziano*, *granito verde della sedia di San Lorenzo*, *granito bianco e nero*, *granito rosso* from Aswan, *granito verde a erbetta*, *breccia verde di Sparta*, *bigio morato/nero antico*, *fior di pesco* and *afriicano*. In this sense, tomb No. 131 stands out for the large

4 In tomb No 23 only 1 fragment of *pavonazzetto* was attested. In tomb No 101 there were documented 3 pieces of *giallo antico*, 2 of *serpentino*, 2 of Estremoz marble, and 1 piece of *porfido rosso*, *pavonazzetto* and *verde antico*. In tomb No 102 pieces and fragments of *giallo antico* (13), slate (12), *serpentino* (7), *pavonazzetto* (4), *verde antico* (2) and local white limestone (2) were attested. In tomb No 103 fragments and complete pieces of *serpentino* (17), *giallo antico* and *giallo brecciato* (15), *porfido rosso* (8), *verde antico* (7), *pavonazzetto* (5), *breccia di Skyros* (1) and Estremoz marble (1) were documented. In tomb No 104, fragments and pieces of slate (24), *giallo antico* (21), *serpentino* (15), *porfido rosso* (8), *pavonazzetto* (7), *verde antico* (5), Espejón limestone (3), Estremoz marble (3) *cipollino* (2) and *iassense* (1) were attested. It is especially worth noting the reuse of a fragment of *opus sectile* composition (slate and white marble) in the cist of this tomb (Fig. 7). In tomb No 107 only 1 fragment of *porfido rosso*, 1 fragment of *serpentino* and 1 fragment of *pavonazzetto* are attested. In tomb No 108 only 2 fragments (*pavonazzetto* and *verde antico*) are documented. In tomb No 114 a large fragment of *giallo antico* revetment slab was reused for the grave's lid. In tomb No 133, 7 fragments and complete pieces of *serpentino* and 1 fragment of *pavonazzetto* were attested. In Tomb No 154 fragments and complete pieces of *pavonazzetto* (6), *verde antico* (4), *giallo antico* (4), Espejón limestone (2), Estremoz marble (2), *serpentino* (1) and white local limestone (1) were documented. For the marbles reused in tombs No 7, 25 and 131 see below.



Fig. 5. Tomb n° 131 where 281 *marmora* fragments were reused.

Right: (above) some of the *crustae* and revetment panels from tomb n° 131 and (down) detail of the *marmora* varieties reused

number of *marmora* fragments (281) reused in it, both as material to build the cist and as part of the refilling deposit to seal the tomb (Fig. 5). This tomb is located in the north-east corner of the courtyard of the palatial building and it contained three corpses: an adult individual (between 25 and 35 years old) in primary position and two other individuals (an adult and a child) in secondary position burial. Once again, *pavonazzetto*, Estremoz marble, *giallo antico*, *porfido rosso* and *serpentino* are the more frequently found marbles, both as fragments and complete pieces of *opera sectilia crustae*, pavement slabs and wall revetment panels. Most of them show tool marks (saw, pick and chisel), as well as traces of retouching and re-cutting with a chisel. Nevertheless, these tool marks belong to their first period of use, evidencing the cutting and assembling of these marble pieces in order for them to fit perfectly in their intended place in the Late Roman Palace.

Apart from the reuse of marble as mere building material for the graves, we have also detected the careful selection of certain pieces that were incorporated into the structure of some particular graves in an action that can be considered the symbolic use of *spolia*. This is the case, for example, with tombs n° 7 and 25. Tomb n° 7 is located in the Northeast corner of the central courtyard of the palatial building. It is the grave of a child (c. 12 years old), in which a

big⁵ Late Roman (late 4th c. AD) sarcophagus marble lid was reused as part of the cover of this tomb, which dates from the 7th c. AD (Fig. 6). The front of the sarcophagus lid is decorated with three scenes taken from the cycle of the prophet Jonah. Archaeometric analysis consisting of POM, CL and IRMS was conducted at the ICAC (Tarragona) and confirmed that the marble used is Estremoz marble (Portugal). We are therefore dealing with a piece made by a Hispanic sculpture workshop of excellent quality that was active in the final decades of the 4th c. AD (FERNÁNDEZ OCHOA *et al.* 2011; VIDAL, GARCÍA-ENTERO 2015; VIDAL *et al.* 2016). Although there is no information, it is possible that this magnificent artwork was originally located in the nearby funerary building situated 400 m south of the palace where other sarcophagus fragments were discovered (GARCÍA-ENTERO, VIDAL 2012). It must be pointed out that a *verde antico* slab was also employed as part of this closing cover. Moreover, fragments and complete pieces of *pavonazzetto*, *porfido*, *serpentino*, *verde antico*, Estremoz marble and slate were also found in the deposit sealing the tomb.

Tomb n° 25 is located in the central part of the east corridor of the palace. It is a children's cist tomb (c. 4 years

5 It is 218 cm long, 24 cm high and 68 cm wide.



Fig. 6. Sarcophagus lid in Estremoz marble with Jonahesque iconography (late 4th century AD) reused in Tomb n° 7 (7th century AD)

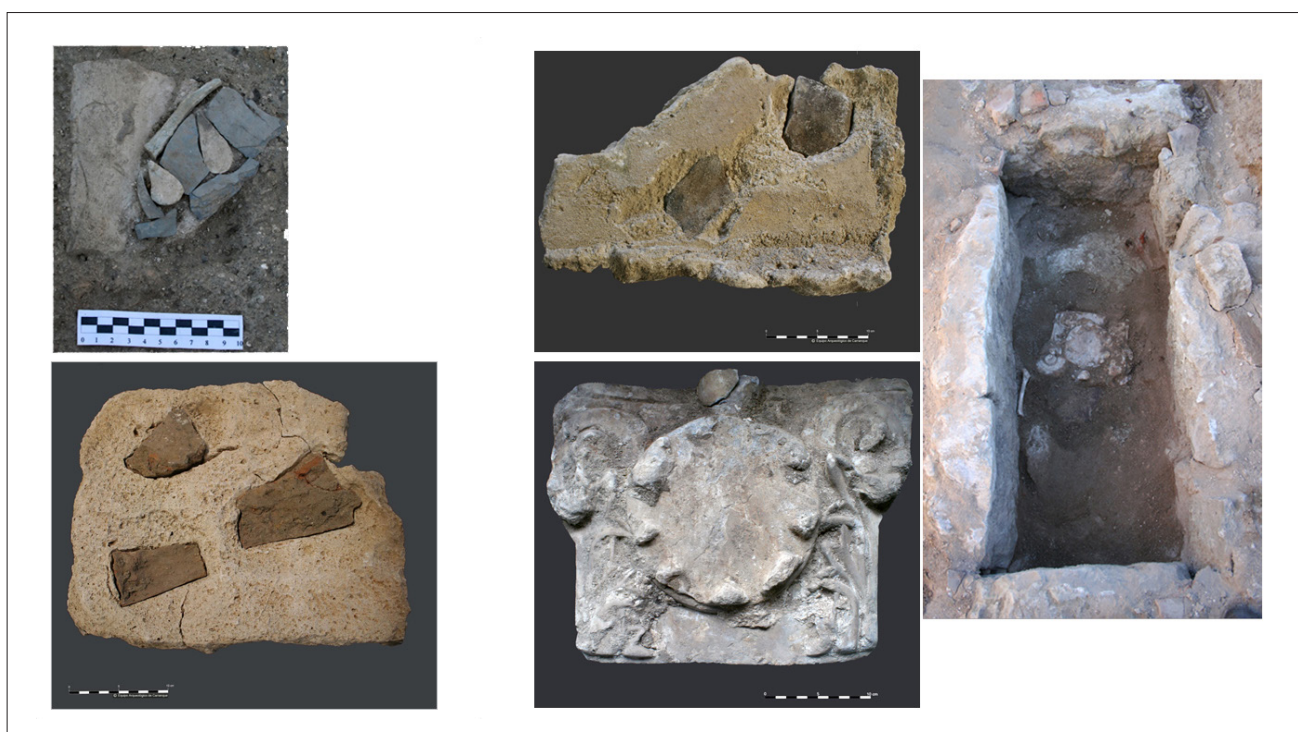


Fig. 7. The reuse of *marmora* in Visigothic tombs
 Left above: Tomb n° 104: *Opus sectile* fragment reused in the construction of the cist
 Left down: Tomb n° 102: *Opus sectile* preparatory bed used for the construction of the tomb Right: Tomb n° 25: *Opus sectile* preparatory bed and *pavonazzetto* pilaster capital reused in the structure of the tomb

old) where an unbroken, *pavonazzetto* pilaster capital was reused (Fig. 7). This marble piece was carefully placed in the bottom of the grave acting as a sort of bed for the corpse, which was then placed on it. The closing cover of this grave was made of several fragments and complete pieces of *crustae* and slabs (Estremoz marble, *breccia corallina* and *marmor isassense*) as well as a fragment of *opera sectilia* preparatory bed as mentioned above.

The study of these materials entailed not only the specific identification and recording of all the pieces of *marmora*, which are currently part of a comprehensive database

of the assemblage, but also the detailed examination of traces of use that could help to recognize the primary use of these fragments (GARCÍA-ENTERO *et al.* 2008). Therefore, the results do not only help to deepen our understanding of the construction processes of the Visigothic cemetery but also to get a more complete image of the volume of *marmora* originally used at the palatial building of Carranque.

BIBLIOGRAPHY

- ÁLVAREZ A., GUTIÉRREZ GARCÍA-M. A., PITARCH A. 2006: Informe del análisis por microscopía de polarización de 5 muestras procedentes del yacimiento arqueológico de Carranque (Toledo), Institut Català d'Arqueologia Clàssica, Unitat d'Estudis Arqueomètrics, Tarragona (Unpublished Report).
- ÁLVAREZ A., RODÀ I., GUTIÉRREZ GARCIA-M. A., PITARCH A. 2007: Informe del análisis de un conjunto de materiales lapídeos (marmora) procedentes del Parque Arqueológico de Carranque, Toledo, Institut Català d'Arqueologia Clàssica, Unitat d'Estudis Arqueomètrics, Tarragona (Unpublished Report).
- FERNÁNDEZ OCHOA C., BENDALA M., GARCÍA-ENTERO V., VIDAL S. 2011: "Cubierta de sarcófago con el ciclo de Jonás hallada en Carranque (Toledo)", *AEspA* 84, 231-242.
- GARCÍA-ENTERO V., VIDAL S. 2007: "Marmora from the Roman site of Carranque (Toledo, Spain)", *Marmora* 3, 53-69.
- GARCÍA-ENTERO V., VIDAL S. 2012: "El uso del *marmor* en el yacimiento de Carranque (Toledo)", in V. GARCÍA-ENTERO (ed.): *El marmor en Hispania: explotación, uso y difusión en época romana*, Madrid, 135-153.
- GARCÍA-ENTERO V., SALÁN, M., VIDAL, S. 2008: "El *marmor* en el yacimiento de Carranque (Toledo). Algunas consideraciones sobre las marcas de herramientas", in T. NOGALES, J. BELTRAN (eds.): *Marmora Hispana: explotación y uso de los materiales pétreos en la Hispania Romana*, Roma, 199-211.
- GARCÍA-ENTERO V., PEÑA Y., FERNÁNDEZ OCHOA C., ZARCO E. 2012: "La producción de aceite y vino en el interior peninsular. El ejemplo de la villa de Carranque (Toledo)", in J. M. NOGUERA, J. A. ANTOLINOS (eds.): *De vino et oleo Hispaniae. Áreas de producción y procesos tecnológicos del vino y el aceite en la Hispania romana*. Coloquio Internacional (Murcia-5-7 de mayo de 2010), Murcia, APA 27-28, 155-172.
- GARCÍA-ENTERO V., FERNÁNDEZ OCHOA C., PEÑA Y., ZARCO E. 2014: "La evolución arquitectónica del edificio palacial de Carranque (Toledo, España). Primeros avances", in P. PENSABENE, C. SFAMENI (a cura di): *La villa restaurata e i nuovi studi sull'edilizia residenziale tardoantica*, Atti del Convegno Internazionale del CISEM (Piazza Armerina, 7-10 Novembre 2012), Bari, 2014, 477-486.
- GARCÍA-ENTERO V., PEÑA Y., ZARCO E., ELVIRA A., VIDAL S. 2017: "La necrópolis de época visigoda de Santa María de Abajo (Carranque, Toledo)", in *La Meseta Sur entre la Tardía Antigüedad y la Alta Edad Media*, Toledo, 153-212.
- RODÀ I., ÁLVAREZ A., DOMÈNECH A. 2009: Informe de una muestra de mármol procedente de un sarcófago de Carranque (Toledo), Institut Català d'Arqueologia Clàssica. Unitat d'Estudis Arqueomètrics, Tarragona (Unpublished Report).
- RODÀ I., ÁLVAREZ A., DOMÈNECH A. 2010: Informe del análisis de un conjunto de muestras de marmora procedentes de Carranque (Toledo), Institut Català d'Arqueologia Clàssica. Unitat d'Estudis Arqueomètrics, Tarragona (Unpublished Report).
- VIDAL S., GARCÍA-ENTERO V. 2012: "The use of Estremoz marble in Late Antique Sculpture of Hispania: New Data from the Petrographic and Cathodoluminescence analyses", in *ASMOSIA X*, 413-420.
- VIDAL S., GARCÍA-ENTERO V., GUTIÉRREZ GARCIA-M. A. 2016: "La utilización del mármol de Estremoz en la escultura hispánica de la Antigüedad Tardía: los sarcófagos", *digitAR - Revista Digital de Arqueologia, Arquitectura e Artes (XI Congreso Peninsular de Arqueometría, Evora, octubre 2015)*, nº 3, 119-128.