

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

---

García-Entero, Virginia; Gutiérrez Garcia-M., Anna; Vidal Álvarez, Sergio

Source / Izvornik: **ASMOSIA XI, Interdisciplinary Studies on Ancient Stone, Proceedings of the XI International Conference of ASMOSIA, 2018, 427 - 433**

Conference paper / Rad u zborniku

Publication status / Verzija rada: **Published version / Objavljena verzija rada (izdavačev PDF)**

<https://doi.org/10.31534/XI.asmosia.2015/02.27>

Permanent link / Trajna poveznica: <https://urn.nsk.hr/urn:nbn:hr:123:188951>

Rights / Prava: [In copyright](#) / [Zaštićeno autorskim pravom.](#)

Download date / Datum preuzimanja: **2024-11-20**



Repository / Repozitorij:

[FCEAG Repository - Repository of the Faculty of Civil Engineering, Architecture and Geodesy, University of Split](#)





# ASMOSIA XI

Interdisciplinary Studies on Ancient Stone

## PROCEEDINGS

of the XI ASMOSIA Conference, Split 2015

Edited by Daniela Matetić Poljak and Katja Marasović



Interdisciplinary Studies on Ancient Stone  
Proceedings of the XI ASMOSIA Conference (Split 2015)

Publishers:

ARTS ACADEMY IN SPLIT  
UNIVERSITY OF SPLIT

and

UNIVERSITY OF SPLIT  
FACULTY OF CIVIL ENGINEERING,  
ARCHITECTURE AND GEODESY

Technical editor:  
Kate Bošković

English language editor:  
Graham McMaster

Computer pre-press:  
Nikola Križanac

Cover design:  
Mladen Čulić

Cover page:

*Sigma shaped mensa of pavonazzetto marble from Diocletian's palace in Split*

ISBN 978-953-6617-49-4 (Arts Academy in Split)

ISBN 978-953-6116-75-1 (Faculty of Civil Engineering, Architecture and Geodesy)

e-ISBN 978-953-6617-51-7 (Arts Academy in Split)

e-ISBN 978-953-6116-79-9 (Faculty of Civil Engineering, Architecture and Geodesy)

CIP available at the digital catalogue of the University Library in Split, no 170529005

Association for the Study of Marble & Other Stones in Antiquity

# ASMOSIA XI

Interdisciplinary Studies of Ancient Stone

Proceedings of the Eleventh International Conference of ASMOSIA,  
Split, 18–22 May 2015

Edited by  
Daniela Matetić Poljak  
Katja Marasović



Split, 2018

**Nota bene**

All papers are subjected to an international review.

The quality of the images relies on the quality of the originals provided by the authors.

# CONTENT

<b>PRESENTATION</b> .....	15
<b>NECROLOGY: NORMAN HERZ (1923-2013) by Susan Kane</b> .....	17
<b>1. APPLICATIONS TO SPECIFIC ARCHEOLOGICAL QUESTIONS – USE OF MARBLE</b>	
Hermaphrodites and Sleeping or Reclining Maenads: Production Centres and Quarry Marks <i>Patrizio Pensabene</i> .....	25
First Remarks about the Pavement of the Newly Discovered Mithraeum of the Colored Marbles at Ostia and New Investigations on Roman and Late Roman White and Colored Marbles from Insula IV, IX <i>Massimiliano David, Stefano Succi and Marcello Turci</i> .....	33
Alabaster. Quarrying and Trade in the Roman World: Evidence from Pompeii and Herculaneum <i>Simon J. Barker and Simona Perna</i> .....	45
Recent Work on the Stone at the Villa Arianna and the Villa San Marco (Castellammare di Stabia) and Their Context within the Vesuvian Area <i>Simon J. Barker and J. Clayton Fant</i> .....	65
Marble Wall Decorations from the Imperial Mausoleum (4 <sup>th</sup> C.) and the Basilica of San Lorenzo (5 <sup>th</sup> C.) in Milan: an Update on Colored Marbles in Late Antique Milan <i>Elisabetta Neri, Roberto Bugini and Silvia Gazzoli</i> .....	79
Sarcophagus Lids Sawn from their Chests <i>Dorothy H. Abramitis and John J. Herrmann</i> .....	89
The Re-Use of Monolithic Columns in the Invention and Persistence of Roman Architecture <i>Peter D. De Staebler</i> .....	95
The Trade in Small-Size Statues in the Roman Mediterranean: a Case Study from Alexandria <i>Patrizio Pensabene and Eleonora Gasparini</i> .....	101
The Marble Dedication of Komon, Son of Asklepiades, from Egypt: Material, Provenance, and Reinforcement of Meaning <i>Patricia A. Butz</i> .....	109
Multiple Reuse of Imported Marble Pedestals at Caesarea Maritima in Israel <i>Barbara Burrell</i> .....	117
Iasos and Iasian Marble between the Late Antique and Early Byzantine Eras <i>Diego Peirano</i> .....	123

Thassos, Known Inscriptions with New Data <i>Tony Kozelj and Manuela Wurch-Kozelj</i> .....	131
The Value of Marble in Roman <i>Hispalis</i> : Contextual, Typological and Lithological Analysis of an Assemblage of Large Architectural Elements Recovered at N° 17 Goyeneta Street (Seville, Spain) <i>Ruth Taylor, Oliva Rodríguez, Esther Ontiveros, María Luisa Loza, José Beltrán and Araceli Rodríguez</i> .....	143
<i>Giallo Antico</i> in Context. Distribution, Use and Commercial Actors According to New Stratigraphic Data from the Western Mediterranean (2 <sup>nd</sup> C. Bc – Late 1 <sup>st</sup> C. Ad) <i>Stefan Ardeleanu</i> .....	155
<i>Amethystus</i> : Ancient Properties and Iconographic Selection <i>Luigi Pedroni</i> .....	167
<b>2. PROVENANCE IDENTIFICATION I: (MARBLE)</b>	
Unraveling the Carrara – Göktepe Entanglement <i>Walter Prochaska, Donato Attanasio and Matthias Bruno</i> .....	175
The Marble of Roman Imperial Portraits <i>Donato Attanasio, Matthias Bruno, Walter Prochaska and Ali Bahadır Yavuz</i> .....	185
Tracing Alabaster (Gypsum or Anhydrite) Artwork Using Trace Element Analysis and a Multi-Isotope Approach (Sr, S, O) <i>Lise Leroux, Wolfram Kloppmann, Philippe Bromblet, Catherine Guerrot, Anthony H. Cooper, Pierre-Yves Le Pogam, Dominique Vingtain and Noel Worley</i> .....	195
Roman Monolithic Fountains and Thasian Marble <i>Annewies van den Hoek, Donato Attanasio and John J. Herrmann</i> .....	207
Archaeometric Analysis of the Alabaster Thresholds of Villa A, Oplontis (Torre Annunziata, Italy) and New Sr and Pb Isotopic Data for <i>Alabastro Ghiaccione del Circeo</i> <i>Simon J. Barker, Simona Perna, J. Clayton Fant, Lorenzo Lazzarini and Igor M. Villa</i> .....	215
Roman Villas of Lake Garda and the Occurrence of Coloured Marbles in the Western Part of “Regio X Venetia et Histria” (Northern Italy) <i>Roberto Bugini, Luisa Folli and Elisabetta Roffia</i> .....	231
Calcitic Marble from Thasos in the North Adriatic Basin: Ravenna, Aquileia, and Milan <i>John J. Herrmann, Robert H. Tykot and Annewies van den Hoek</i> .....	239
Characterisation of White Marble Objects from the Temple of Apollo and the House of Augustus (Palatine Hill, Rome) <i>Francesca Giustini, Mauro Brilli, Enrico Gallochio and Patrizio Pensabene</i> .....	247
Study and Archeometric Analysis of the Marble Elements Found in the Roman Theater at Aeclanum (Mirabella Eclano, Avellino - Italy) <i>Antonio Mesisca, Lorenzo Lazzarini, Stefano Cancelliere and Monica Salvadori</i> .....	255



Two Imperial Monuments in Puteoli: Use of Proconnesian Marble in the Domitianic and Trajanic Periods in Campania <i>Irene Bald Romano, Hans Rupprecht Goette, Donato Attanasio and Walter Prochaska</i> .....	267
Coloured Marbles in the Neapolitan Pavements (16 <sup>th</sup> And 17 <sup>th</sup> Centuries): the Church of <i>Santi Severino e Sossio</i> <i>Roberto Bugini, Luisa Folli and Martino Solito</i> .....	275
Roman and Early Byzantine Sarcophagi of Calcitic Marble from Thasos in Italy: Ostia and Siracusa <i>Donato Attanasio, John J. Herrmann, Robert H. Tykot and Annewies van den Hoek</i> .....	281
Revisiting the Origin and Destination of the Late Antique Marzamemi 'Church Wreck' Cargo <i>Justin Leidwanger, Scott H. Pike and Andrew Donnelly</i> .....	291
The Marbles of the Sculptures of Felix Romuliana in Serbia <i>Walter Prochaska and Maja Živić</i> .....	301
Calcitic Marble from Thasos and Proconnesos in Nea Anchialos (Thessaly) and Thessaloniki (Macedonia) <i>Vincent Barbin, John J. Herrmann, Aristotle Mentzos and Annewies van den Hoek</i> .....	311
Architectural Decoration of the Imperial Agora's Porticoes at Iasos <i>Fulvia Bianchi, Donato Attanasio and Walter Prochaska</i> .....	321
The Winged Victory of Samothrace - New Data on the Different Marbles Used for the Monument from the Sanctuary of the Great Gods <i>Annie Blanc, Philippe Blanc and Ludovic Laugier</i> .....	331
Polychrome Marbles from the Theatre of the Sanctuary of Apollo Pythios in Gortyna (Crete) <i>Jacopo Bonetto, Nicolò Mareso and Michele Bueno</i> .....	337
Paul the Silentary, Hagia Sophia, Onyx, Lydia, and Breccia Corallina <i>John J. Herrmann and Annewies van den Hoek</i> .....	345
Incrustations from Colonia Ulpia Traiana (Near Modern Xanten, Germany) <i>Vilma Ruppinić and Ulrich Schüssler</i> .....	351
Stone Objects from Vindobona (Austria) – Petrological Characterization and Provenance of Local Stone in a Historico-Economical Setting <i>Andreas Rohatsch, Michaela Kronberger, Sophie Insulander, Martin Mosser and Barbara Hodits</i> .....	363
Marbles Discovered on the Site of the Forum of Vaison-la-Romaine (Vaucluse, France): Preliminary Results <i>Elsa Roux, Jean-Marc Mignon, Philippe Blanc and Annie Blanc</i> .....	373
Updated Characterisation of White Saint-Béat Marble. Discrimination Parameters from Classical Marbles <i>Hernando Royo Plumed, Pilar Lapeunte, José Antonio Cuchí, Mauro Brillì and Marie-Claire Savin</i> .....	379

Grey and Greyish Banded Marbles from the Estremoz Anticline in Lusitania <i>Pilar Lapuente, Trinidad Nogales-Basarrate, Hernando Royo Plumed, Mauro Brilli and Marie-Claire Savin</i> .....	391
New Data on Spanish Marbles: the Case of <i>Gallaecia</i> (NW Spain) <i>Anna Gutiérrez García-M., Hernando Royo Plumed and Silvia González Soutelo</i> .....	401
A New Roman Imperial Relief Said to Be from Southern Spain: Problems of Style, Iconography, and Marble Type in Determining Provenance <i>John Pollini, Pilar Lapuente, Trinidad Nogales-Basarrate and Jerry Podany</i> .....	413
Reuse of the <i>Marmora</i> from the Late Roman Palatial Building at Carranque (Toledo, Spain) in the Visigothic Necropolis <i>Virginia García-Entero, Anna Gutiérrez García-M. and Sergio Vidal Álvarez</i> .....	427
Imperial Porphyry in Roman Britain <i>David F. Williams</i> .....	435
Recycling of Marble: Apollonia/Sozousa/Arsuf (Israel) as a Case Study <i>Moshe Fischer, Dimitris Tambakopoulos and Yannis Maniatis</i> .....	443
Thasian Connections Overseas: Sculpture in the Cyrene Museum (Libya) Made of Dolomitic Marble from Thasos <i>John J. Herrmann and Donato Attanasio</i> .....	457
Marble on Rome's Southwestern Frontier: Thamugadi and Lambaesis <i>Robert H. Tykot, Ouahiba Bouzidi, John J. Herrmann and Annewies van den Hoek</i> .....	467
Marble and Sculpture at Lepcis Magna (Tripolitania, Libya): a Preliminary Study Concerning Origin and Workshops <i>Luisa Musso, Laura Buccino, Matthias Bruno, Donato Attanasio and Walter Prochaska</i> .....	481
The Pentelic Marble in the Carnegie Museum of Art Hall of Sculpture, Pittsburgh, Pennsylvania <i>Albert D. Kollar</i> .....	491
Analysis of Classical Marble Sculptures in the Michael C. Carlos Museum, Emory University, Atlanta <i>Robert H. Tykot, John J. Herrmann, Renée Stein, Jasper Gaunt, Susan Blevins and Anne R. Skinner</i> .....	501
<b>3. PROVENANCE IDENTIFICATION II: (OTHER STONES)</b>	
Aphrodisias and the Regional Marble Trade. The <i>Scaenae Frons</i> of the Theatre at Nysa <i>Natalia Toma</i> .....	513
The Stones of Felix Romuliana (Gamzigrad, Serbia) <i>Bojan Djurić, Divna Jovanović, Stefan Pop Lazić and Walter Prochaska</i> .....	523
Aspects of Characterisation of Stone Monuments from Southern Pannonia <i>Branka Migotti</i> .....	537

The Budakalász Travertine Production <i>Bojan Djurić, Sándor Kele and Igor Rižnar</i> .....	545
Stone Monuments from Carnuntum and Surrounding Areas (Austria) – Petrological Characterization and Quarry Location in a Historical Context <i>Gabrielle Kremer, Isabella Kitz, Beatrix Moshhammer, Maria Heinrich and Erich Draganits</i> .....	557
Espejón Limestone and Conglomerate (Soria, Spain): Archaeometric Characterization, Quarrying and Use in Roman Times <i>Virginia García-Entero, Anna Gutiérrez García-M, Sergio Vidal Álvarez, María J. Peréx Agorreta and Eva Zarco Martínez</i> .....	567
The Use of Alcover Stone in Roman Times ( <i>Tarraco, Hispania Citerior</i> ). Contributions to the <i>Officina Lapidaria Tarraconensis</i> <i>Diana Gorostidi Pi, Jordi López Vilar and Anna Gutiérrez García-M.</i> .....	577
<b>4. ADVANCES IN PROVENANCE TECHNIQUES, METHODOLOGIES AND DATABASES</b>	
Grainautline – a Supervised Grain Boundary Extraction Tool Supported by Image Processing and Pattern Recognition <i>Kristóf Csorba, Lilla Barancsuk, Balázs Székely and Judit Zöldföldi</i> .....	587
A Database and GIS Project about Quarrying, Circulation and Use of Stone During the Roman Age in <i>Regio X - Venetia et Histria</i> . The Case Study of the Euganean Trachyte <i>Caterine Previato and Arturo Zara</i> .....	597
<b>5. QUARRIES AND GEOLOGY</b>	
The Distribution of Troad Granite Columns as Evidence for Reconstructing the Management of Their Production <i>Patrizio Pensabene, Javier Á. Domingo and Isabel Rodà</i> .....	613
Ancient Quarries and Stonemasonry in Northern Choria Considiana <i>Hale Güney</i> .....	621
Polychromy in Larisaeon Quarries and its Relation to Architectural Conception <i>Gizem Mater and Ertunç Denктаş</i> .....	633
Euromos of Caria: the Origin of an Hitherto Unknown Grey Veined Stepped Marble of Roman Antiquity <i>Matthias Bruno, Donato Attanasio, Walter Prochaska and Ali Bahadır Yavuz</i> .....	639
Unknown Painted Quarry Inscriptions from Bacakale at <i>Docimium</i> (Turkey) <i>Matthias Bruno</i> .....	651
The Green Schist Marble Stone of Jebel El Hairech (North West of Tunisia): a Multi-Analytical Approach and its Uses in Antiquity <i>Ameur Younès, Mohamed Gaied and Wissem Gallala</i> .....	659
Building Materials and the Ancient Quarries at <i>Thamugadi</i> (East of Algeria), Case Study: Sandstone and Limestone <i>Younès Rezkallah and Ramdane Marmi</i> .....	673

The Local Quarries of the Ancient Roman City of <i>Valeria</i> (Cuenca, Spain) <i>Javier Atienza Fuente</i> .....	683
The Stone and Ancient Quarries of Montjuïc Mountain (Barcelona, Spain) <i>Aureli Álvarez</i> .....	693
<i>Notae Lapidinarum</i> : Preliminary Considerations about the Quarry Marks from the Provincial Forum of <i>Tarraco</i> <i>Maria Serena Vinci</i> .....	699
The Different Steps of the Rough-Hewing on a Monumental Sculpture at the Greek Archaic Period: the Unfinished Kouros of Thasos <i>Danièle Braunstein</i> .....	711
A Review of Copying Techniques in Greco-Roman Sculpture <i>Séverine Moureaud</i> .....	717
Labour Forces at Imperial Quarries <i>Ben Russell</i> .....	733
Social Position of Craftsmen inside the Stone and Marble Processing Trades in the Light of Diocletian's Edict on Prices <i>Krešimir Bosnić and Branko Matulić</i> .....	741
<b>6. STONE PROPERTIES, WEATHERING EFFECTS AND RESTORATION, AS RELATED TO DIAGNOSIS PROBLEMS, MATCHING OF STONE FRAGMENTS AND AUTHENTICITY</b>	
Methods of Consolidation and Protection of Pentelic Marble <i>Maria Apostolopoulou, Elissavet Drakopoulou, Maria Karoglou and Asterios Bakolas</i> .....	749
<b>7. PIGMENTS AND PAINTINGS ON MARBLE</b>	
Painting and Sculpture Conservation in Two Gallo-Roman Temples in Picardy (France): Champlieu and Pont-Sainte-Maxence <i>Véronique Brunet-Gaston and Christophe Gaston</i> .....	763
The Use of Colour on Roman Marble Sarcophagi <i>Eliana Siotto</i> .....	773
New Evidence for Ancient Gilding and Historic Restorations on a Portrait of Antinous in the San Antonio Museum of Art <i>Jessica Powers, Mark Abbe, Michelle Bushey and Scott H. Pike</i> .....	783
Schists and Pigments from Ancient Swat (Khyber Pukhtunkhwa, Pakistan) <i>Francesco Mariottini, Gianluca Vignaroli, Maurizio Mariottini and Mauro Roma</i> .....	793
<b>8. SPECIAL THEME SESSION: „THE USE OF MARBLE AND LIMESTONE IN THE ADRIATIC BASIN IN ANTIQUITY”</b>	
Marble Sarcophagi of Roman Dalmatia Material – Provenance – Workmanship <i>Guntram Koch</i> .....	809

Funerary Monuments and Quarry Management in Middle Dalmatia <i>Nenad Cambi</i> .....	827
Marble Revetments of Diocletian's Palace <i>Katja Marasović and Vinka Marinković</i> .....	839
The Use of Limestones as Construction Materials for the Mosaics of Diocletian's Palace <i>Branko Matulić, Domagoj Mudronja and Krešimir Bosnić</i> .....	855
Restoration of the Peristyle of Diocletian's Palace in Split <i>Goran Nikšić</i> .....	863
Marble Slabs Used at the Archaeological Site of Sorna near Poreč Istria – Croatia <i>Đeni Gobić-Bravar</i> .....	871
Ancient Marbles from the Villa in Verige Bay, Brijuni Island, Croatia <i>Mira Pavletić and Đeni Gobić-Bravar</i> .....	879
Notes on Early Christian Ambos and Altars in the Light of some Fragments from the Islands of Pag and Rab <i>Mirja Jarak</i> .....	887
The Marbles in the Chapel of the Blessed John of Trogir in the Cathedral of St. Lawrence at Trogir <i>Đeni Gobić-Bravar and Daniela Matetić Poljak</i> .....	899
The Use of Limestone in the Roman Province of Dalmatia <i>Edisa Lozić and Igor Rižnar</i> .....	915
The Extraction and Use of Limestone in Istria in Antiquity <i>Klara Buršić-Matijašić and Robert Matijašić</i> .....	925
Aurisina Limestone in the Roman Age: from Karst Quarries to the Cities of the Adriatic Basin <i>Caterina Previato</i> .....	933
The Remains of Infrastructural Facilities of the Ancient Quarries on Zadar Islands (Croatia) <i>Mate Parica</i> .....	941
The Impact of Local Geomorphological and Geological Features of the Area for the Construction of the Burnum Amphitheatre <i>Miroslav Glavičić and Uroš Stepišnik</i> .....	951
Roman Quarry Klis Kosa near Salona <i>Ivan Alduk</i> .....	957
Marmore Lavdata Brattia <i>Miona Miliša and Vinka Marinković</i> .....	963
Quarries of the Lumbarda Archipelago <i>Ivka Lipanović and Vinka Marinković</i> .....	979

Island of Korčula – Importer and Exporter of Stone in Antiquity <i>Mate Parica and Igor Borzić</i> .....	985
Faux Marbling Motifs in Early Christian Frescoes in Central and South Dalmatia: Preliminary Report <i>Tonči Borovac, Antonija Gluhan and Nikola Radošević</i> .....	995
<b>INDEX OF AUTHORS</b> .....	1009

# REUSE OF THE *MARMORA* FROM THE LATE ROMAN PALATIAL BUILDING AT CARRANQUE (TOLEDO, SPAIN) IN THE VISIGOTHIC NECROPOLIS<sup>1</sup>

Virginia García-Entero<sup>1</sup>, Anna Gutiérrez Garcia-M.<sup>2</sup> and Sergio Vidal Álvarez<sup>3</sup>

<sup>1</sup> Universidad Nacional de Educación a Distancia (UNED), Madrid, Spain (vgarciaentero@geo.uned.es)

<sup>2</sup> Institut de Recherche sur les ArchéoMATériaux (IRAMAT) – Centre de Recherche en Physique Appliquée à l'Archéologie (CRP2A), Université de Bordeaux Montaigne, Bordeaux, France (anna.gutierrez@u-bordeaux-montaigne.fr)

<sup>3</sup> Museo Arqueológico Nacional (MAN), Madrid, Spain (sergio.vidal@cultura.gob.es)

## 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 4<sup>th</sup> 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 (6<sup>th</sup> – 7<sup>th</sup> 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 1986<sup>1</sup>. 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*,

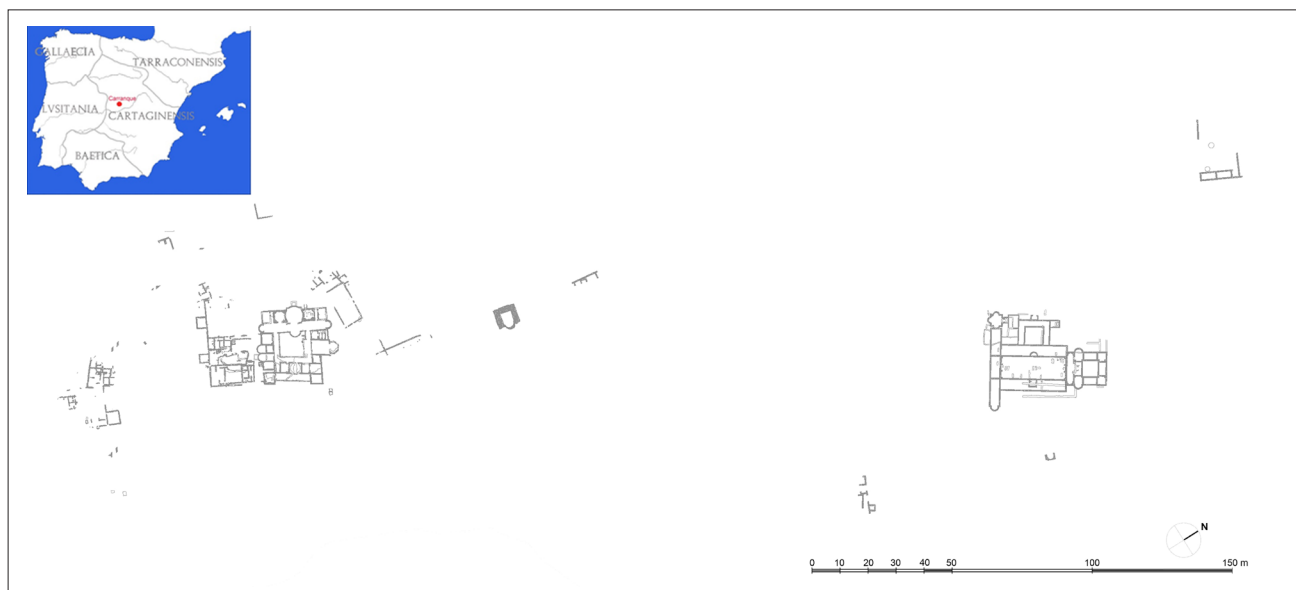


Fig. 1. Plan of the Roman site of Carranque (Toledo, Spain) with location of the site in the Iberian peninsula

several hundreds of thousands of fragments, determines the phases of the study. We have dedicated the first phase to the classification and identification<sup>3</sup> 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 4<sup>th</sup> century AD) to the final destruction of the last standing remains of its walls in the early 20<sup>th</sup> 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.



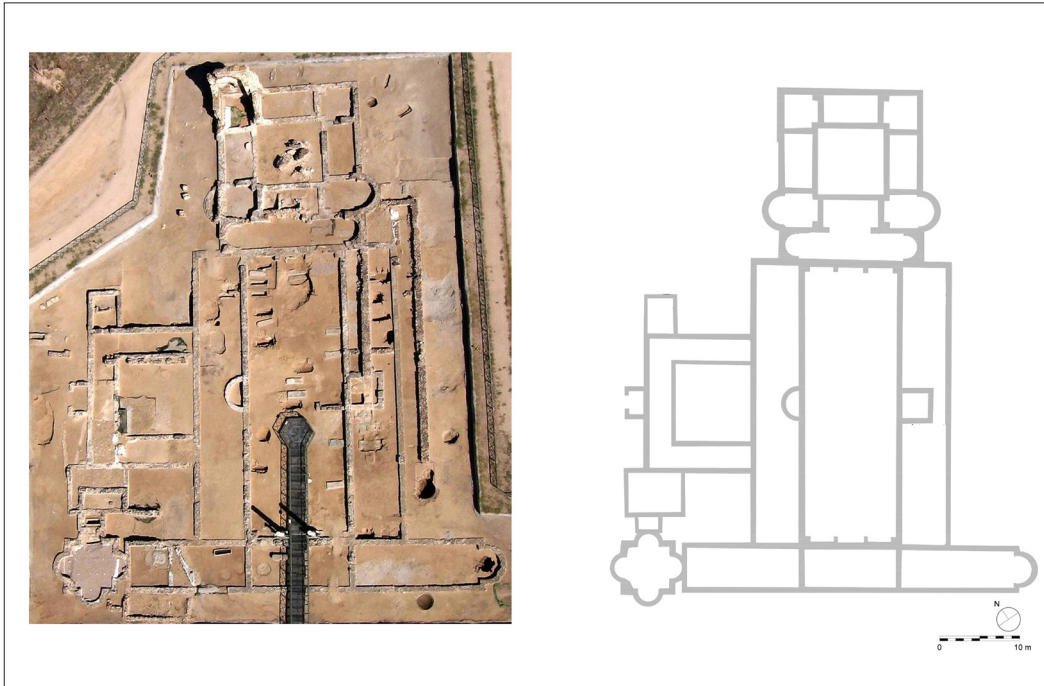


Fig. 2.  
Aerial view and plan  
of the Late Roman  
palatial building of  
Carranque



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

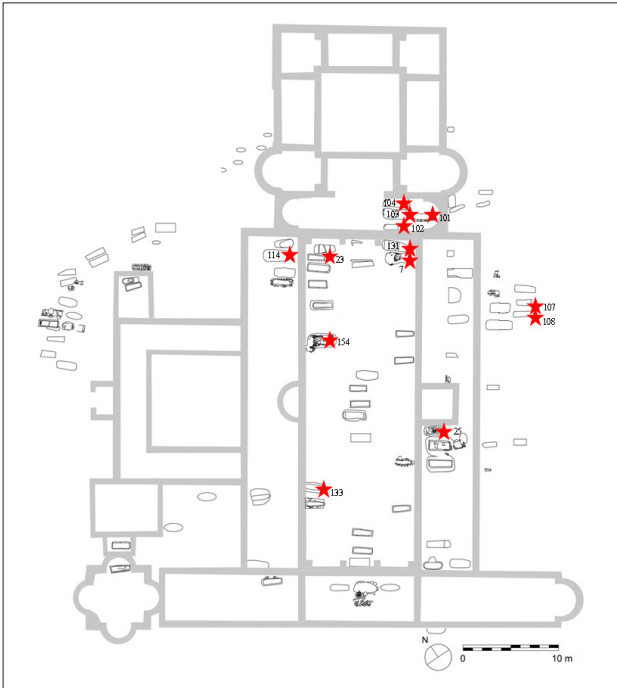


Fig. 4. The Visigothic necropolis sited over the Late Roman palatial building with indication of graves where reused *marmora* is attested

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 6<sup>th</sup>-7<sup>th</sup> 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 154<sup>4</sup>.

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.

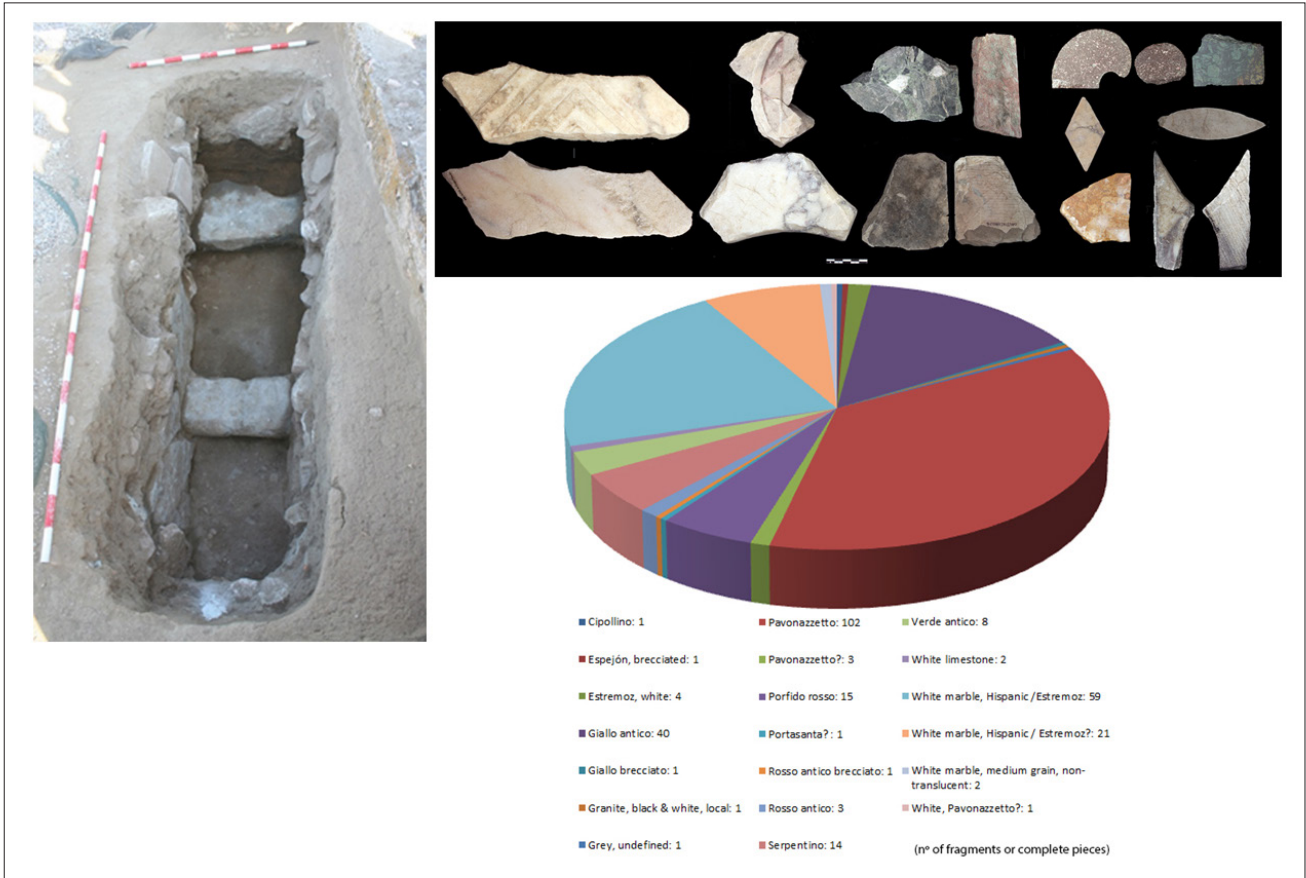


Fig. 5. Tomb n° 131 where 281 *marmora* fragments were reused.

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

big<sup>5</sup> Late Roman (late 4<sup>th</sup> c. AD) sarcophagus marble lid was reused as part of the cover of this tomb, which dates from the 7<sup>th</sup> 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 4<sup>th</sup> 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 4<sup>th</sup> century AD) reused in Tomb n° 7 (7<sup>th</sup> century AD)

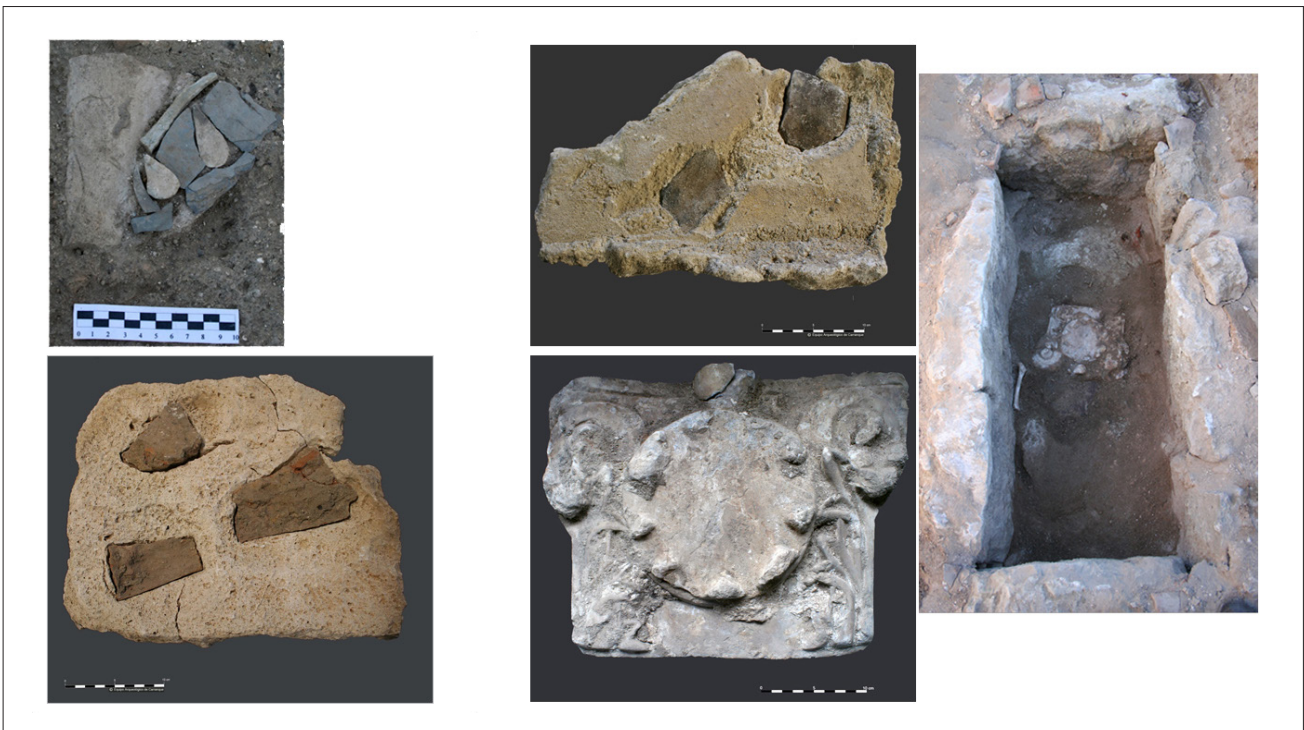


Fig. 7. The reuse of *marmora* in Visigothic tombs  
 Left above: Tomb n° 104: *Opus sectile* fragment reused in the construction of the cist  
 Left down: Tomb n° 102: *Opus sectile* preparatory bed used for the construction of the tomb Right: Tomb n° 25: *Opus sectile* preparatory bed and *pavonazetto*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

old) where an unbroken, *pavonazetto* 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.