Gabrielle Kremer – Eduard Pollhammer – Julia Kopf –
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Zeit(en) des Umbruchs

**Akten des 17. Internationalen Kolloquiums zum provinzialrömischen Kunstschaffen
Wien – Carnuntum, 16.–21. Mai 2022**

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VORWORT

Das 17. Internationale Kolloquium zum Provinzialrömischen Kunstschaffen in Wien und Carnuntum vom 16. bis 21. Mai 2022 war für viele Teilnehmerinnen und Teilnehmer die erste größere Fachtagung in physischer Präsenz seit rund zwei Jahren. Die Pause während der Pandemie hat nicht nur zur Verschiebung der Veranstaltung um ein Jahr, sondern auch zu Umbrüchen in vielen Bereichen unseres Arbeitsumfeldes geführt. Zu den Nutzen dieser Entwicklung zählen unter anderem die verbesserten Möglichkeiten digitaler Kommunikation. Während der Tagung ist jedoch der Mehrwert persönlichen Austauschs und direkter Erfahrung stark ins Bewusstsein gerückt – eine Bereicherung, die aus unserer Sicht wesentlich zum Gelingen beigetragen und unsere Entscheidung, die Veranstaltung nicht hybrid durchzuführen, im Nachhinein legitimiert hat. Die – unfreiwillige – Aktualität des Titels »Zeit(en) des Umbruchs« soll jedoch nicht die ursprüngliche Intention der Tagung verschleiern.

Zum einen wollten wir die Diskussionen über das provinzialrömische Kunstschaffen um den Aspekt der technisch-naturwissenschaftlichen Methoden erweitern, die gerade für die Forschungen zu antiken Steindenkmälern in den letzten Jahren zunehmend an Bedeutung gewonnen haben. Ziel war es nicht, die traditionellen Methoden der Stilkritik, Ikonografie und interdisziplinären geisteswissenschaftlichen Ansätze zu verdrängen oder zu ersetzen, sondern vielmehr das Forum für komplementäre Möglichkeiten der Analyse zu öffnen. Die Kombination der Methoden und die gegenseitige Befruchtung der Forschungsansätze sollten im Mittelpunkt der Diskussionen stehen. In vielen Beiträgen wird sichtbar, welche neuen Fragestellungen und umfangreichen Perspektiven sich für die Provinzialrömische Archäologie und Kunstgeschichte dadurch ergeben. Die Entwicklung der Methoden selbst und deren Diskussion bleibt selbstverständlich weiterhin den speziell darauf ausgerichteten Fachtagungen – etwa zu den Gesteinsmaterialien oder zur Polychromie römischer Steindenkmäler – vorbehalten.

Zum anderen verweist der Titel der Tagung auf den zweiten thematischen Schwerpunkt, der auf die spätrömische und spätantike Epoche gelegt wurde, und dem manche Beiträge gefolgt sind. In dieser Zeitspanne machen sich vielfältige Umbrüche auf unterschiedlichen Ebenen bemerkbar, die inhaltliche, symbolische und formale Aspekte, aber auch den Umgang mit Steindenkmälern und deren Verwendung ganz allgemein betreffen. Hier kam es wesentlich auf die Berücksichtigung der gesellschaftlichen und archäologischen Kontexte an, die notwendig sind, um die Aussagekraft der Steindenkmäler in ihrer gesamten Bandbreite zu erschließen.

Die überwiegende Anzahl der Beiträge gilt Neufunden und aktuellen Forschungsthemen. Die große Zahl der Anmeldungen erforderte auch für diese Tagung eine Auswahl und eine Beschränkung der Themen. Um trotzdem möglichst vielen Kolleginnen und Kollegen die Teilnahme zu ermöglichen, wurden einige Präsentationen als Kurzvorträge gehalten. Die darauf beruhenden Beiträge in diesem Band fallen etwas kürzer aus als die der Langvorträge. Die Konzentration auf Steindenkmäler der römischen Provinzen und der nördlichen Randzone Italiens in ihren unterschiedlichen Erscheinungsformen als Bestandteile von architektonischen und skulpturalen Ensembles oder als Inschriftenträger wurde dabei konsequent beibehalten. Die Erweiterung der zu Beginn der Tagungsreihe auf die Donau- und die Nordwestprovinzen beschränkten räumlichen Abgrenzung verstanden wir hingegen als bereichernd und folgen damit der in Köln (2001) und Mérida (2009) initiierten Entwicklung der CRPA-Kolloquien.

Unser Dank gilt in erster Linie den Teilnehmerinnen und Teilnehmern der Tagung, die durch ihre Präsentationen und Diskussionen deren Inhalt und Qualität bestimmt haben. Den Autoren und Autorinnen ist es zu verdanken, dass die Ergebnisse vorgelegt und langfristig genutzt werden können. Für das sehr gelungene, spontan gehaltene abschließende Resümee ist Jochen Griesbach im Speziellen zu danken.

Die Austragung der Veranstaltung wurde durch das reibungslose Zusammenspiel dreier Institutionen möglich, die das Forschungsgeschehen auf dem Gebiet der provinzialrömischen Archäologie in Wien und Carnuntum wesentlich bestimmen: das Österreichische Archäologische Institut der Österreichischen Akademie der Wissenschaften, die Historisch-Kulturwissenschaftliche Fakultät der Universität Wien und die Landessammlungen Niederösterreich – Archäologischer

Die Teilnehmerinnen und Teilnehmer des Kolloquiums zu Besuch in der »Römerstadt Carnuntum«

Park Carnuntum. Dem Organisationskomitee gehörten als maßgebliche Vertreter Andreas Pülz und Gabrielle Kremer (ÖAW/ÖAI), Eduard Pollhammer und Bernadette Malkiel (Landessammlungen NÖ – Archäologischer Park Carnuntum), Günther Schörner und Julia Kopf (Institut für Klassische Archäologie der Universität Wien) sowie Fritz Mitthof und Franziska Beutler (Institut für Alte Geschichte und Altertumskunde, Papyrologie und Epigraphik der Universität Wien) an. Als Kooperationspartner konnten wir die Gesellschaft der Freunde Carnuntums, die Römerstadt Carnuntum, das Wien Museum, das Kunsthistorische Museum Wien und das Bundesdenkmalamt gewinnen. Den Verantwortlichen sowie den Mitarbeitern und Mitarbeiterinnen, allen voran Christa Farka, Markus Wachter, Michaela Kronberger, Georg Plattner und Eva Steigberger gilt unser aufrichtiger Dank. Sie ermöglichten uns vielfache Einblicke in die reichhaltigen Bestände ihrer Sammlungen und Grabungsstätten und sorgten für fachkundige Führungen sowie für gastfreundliche Bewirtung. Den reibungslosen Ablauf der Tagung gewährleisteten zudem Ida Muharemovic (ÖAI) und Michaela Löffler-Leutgeb, Norbert Braunecker, Marina Brzakovic, Jasmine Cencic, Tanja Koch, Eva Pimpel, Fahira Sapaj und Anna-Maria Stieberitz (LSNÖ/APC) sowie Olivér Borcsányi, Felix Michler, Tomás Sobihard und Elisabeth Todt (Universität Wien). Fachkundige Führungen durch das römische Wien boten Kristina Adler-Wölfl und Sophie Insulander. Die abschließende Exkursion am 21. Mai 2022 führte uns nach Bruckneudorf, ins Burgenländische Landesmuseum Eisenstadt, ins Stadtmuseum Mannersdorf und nach Leithaprodersdorf. Für Führungen danken wir Heinz Zabehlicky, Eva Steigberger, Heribert Schutzbier und Robert Krickl, der Gemeinde Leithaprodersdorf für die burgenländische Gastfreundschaft.

Die Aufnahme des Tagungsbandes in die Reihe der Sonderschriften des ÖAI ermöglichten Sabine Ladstätter und Barbara Beck-Brandt. Armin Laussegger ist zu verdanken, dass der Tagungsband auch in die Reihe der Veröffentlichungen aus den Landessammlungen Niederösterreich aufgenommen wurde. Das Sprachlektorat Englisch lag in den bewährten Händen von Sarah Homan-Cormack, Satz und Layout verdanken wir Andrea Sulzgruber.

Nicht zuletzt sei dem wissenschaftlichen Komitee der CRPA-Tagungen für die wohlwollende Unterstützung gedankt, besonders denjenigen Mitgliedern, die sich wiederholt für den Austragungsort Carnuntum eingesetzt haben. Dass das langjährige Vorhaben im Jahr 2022 trotz aller Erschwernisse schließlich an den Tagungsorten Wien und Carnuntum erfolgreich realisiert werden konnte, verdanken wir der kooperativen Bereitschaft aller Beteiligten.

Gabrielle Kremer – Eduard Pollhammer – Julia Kopf – Franziska Beutler

Wien, im September 2023

Isabel Rodà de Llanza[1]

KEYNOTE LECTURE:

ROMAN SCULPTURE AS A MULTIDISCIPLINARY RESEARCH FOCUS

It is a great honour for me, and also for Spanish Roman sculpture research, that I am able to be here today to address you[2]. I am aware, and I would like to acknowledge publicly, that I owe this opportunity to the kindness of Gabrielle Kremer. She has persistently advocated in previous Colloquia on Roman Provincial Art, so that finally, in 2022, the seventeenth colloquium is being held in Vienna and *Carnuntum*, at a time of transition and change in which there is a great need to reflect on our current hectic world. All this has been made possible by the efficient work of the Austrian Academy of Sciences and the Austrian Archaeological Institute (OeAI) – Department of Classics, as well as the personal interest of Gabrielle Kremer, who has bravely overcome both personal difficulties and those caused by the coronavirus. Despite the sorrows, here we are, ready to start our working sessions and with a hospitable welcome that we all deeply appreciate.

The long road that has brought us here began in 1989, when Manfred Hainzmann and Erwin Pochmarski's initiative first took shape, with an initial meeting held in Graz[3]. The last three meetings have taken place in Dijon (2015)[4], Graz (2017)[5] and Tübingen[6]. From the outset, our colloquia have been involved in the »Corpus Signorum Imperii Romani« (CSIR).

The first of our colloquia was held in the areas of the Rhine-Danube Limes. The seventh, held in Cologne 2001 and edited by Peter Noelke, included a section dedicated to *Hispania* with three contributions by Walter Trillmich, Angelika Franz with Fiona A. Greenland and Markus Trunk[7]. However, the title was so broad that by 2007 the tenth colloquium was held in Arles and Aix-en-Provence, focusing on regional sculpture workshops[8]. In that meeting, it was proposed that the 2009 meeting be held in Spain. The National Museum of Roman Art and the Catalan Institute of Classical Archaeology set to work and arranged for Mérida to host the eleventh colloquium, with a focus on the relationship between the centre and the provinces, following the usual biennial intervals[9]. The Vienna meeting was initially scheduled for last year, but prudence warranted postponing it until now. We are all glad that it is now possible and, furthermore, face to face, since on so many other occasions we have been relegated to online meetings, which are much less lively.

---

1 UAB-ICAC, research group ArPA. Work was carried out within investigation project, »Sulcato marmore ferro (SULMARE). Canteras, talleres, artesanos y comitentes de las producciones artísticas en piedra en la Hispania Tarraconensis« (PID2019-106967GB-I00).

2 The lecture style of the keynote speech, held on 16 May 2022, has been largely retained here.

3 The list of the first twelve colloquia with the corresponding edition of the Proceedings can be seen in Alexandrescu 2015, 9 n. 3.

4 Lefebvre 2017.

5 Porod – Scherrer 2019.

6 Lipps 2021.

7 Noelke 2003.

8 Gaggadis-Robin et al. 2009.

9 Nogales – Rodà 2011.

I have been asked by the organisers to focus on the value of interdisciplinary research on Roman stone monuments, in accordance with the guiding theme of this conference. To this end, allow me to take stock of the relevant studies on Roman sculpture in Spain and neighbouring France, as examples of countries in which constant and intensive research work has been undertaken in recent years. In France, the CSIR series did not materialise, as it was decided to publish the »Nouvel Espérandieu« under the direction of Henri Lavagne. Since 2003, seven volumes have been published with the support of the Académie des Inscriptions et Belles-Lettres[10].

Likewise, the »Rencontres« were held, the first of which concerned Roman sculpture in the West and dealt with the controversial portrait from Arles attributed to Julius Caesar[11]. There followed a second with commendable regularity and the publication of the minutes[12]. The third meeting took place in November 2019 at the Musée Départemental Arles Antique, organized by Guillaume Biard, Vassiliki Gaggadis-Robin and Nicolas de Larquier. Vassiliki Gaggadis-Robin, chère amie, has constantly watched over all of this.

In Spain, the »Reuniones sobre Escultura Romana en Hispania« (Meetings on Roman Sculpture in Hispania) began in 1992. The first was held in Mérida and the ninth in Yecla[13]. As *Hispania* includes both present-day Spain and Portugal, the meetings have been convened in both Spanish and Portuguese venues, with the involvement of numerous institutions. The tenth colloquium was held in late October 2022 in Faro and Mértola, in the beautiful Algarve and Alentejo regions.

This joint effort has also been crystallised in the publication of numerous monographs and the publication of ten volumes of the CSIR Spain since 2001[14]. It includes all types of sculptures in stone, except for architectural decoration, and also large-format bronzes. Small bronzes have not been included in these volumes.

The current director is Professor José Miguel Noguera from the University of Murcia who works with an advisory committee of specialists in Archaeology and History of Art from the various autonomous regions of Spain, in an excellent collaborative environment. The next director will be Professor Montserrat Claveria from the Autonomous University of Barcelona.

We are in Vienna and it is necessary to acknowledge the great job done by Austrian researchers on the edition of the corresponding CSIR volumes at the Austrian Academy of Sciences. The first volumes of this series have been published here, and among the various volumes on *Carnumtum*, I would like to highlight the supplement 1, edited in 2012 by our kind hostess, Gabrielle Kremer, with interdisciplinary contributions by Christian Gugl, Christian Uhlir and Michael Unterwurzacher[15]. Recent volumes have been published by Erwin Pochmarski, one of the initiators of the CRPA Colloquia[16].

I have spoken at length, albeit in synthesis, in order to reach the current point at which we find ourselves in the study of Roman sculpture. Fortunately, we can state that it is in relatively good health. I would also like to point out that doctoral theses devoted by young researchers to this subject are frequent, which is always a source of satisfaction. In my opinion, a challenge for the future that I see facing future generations that are a little younger than mine is to create a major database of Roman sculpture on the same level as, for example, that being built in the field of epigraphy.

The study of each individual piece has now been superseded and, therefore, stylistic analysis has become an important element, although only one of several. We have to recognise that many

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10 Terrer et al. 2003; Darblade-Audoin 2006; Moitrieux 2010; Lemoine 2013; Moitrieux – Tronche 2017; Corré – Gaggadis-Robin 2018; Moitrieux et al. 2022.

11 Gaggadis-Robin – Picard 2016.

12 Gaggadis-Robin – de Larquier 2019.

13 Nogales 1993; Massó – Sada 1996; León – Nogales 2000; Nogales – Gonçalves 2004; Noguera – Conde 2008; Abascal – Cebrián 2010; Acuña et al. 2013; Márquez – Ojeda 2018; Noguera – Ruiz 2020.

14 Claveria 2001; Garriguet 2001; Baena – Beltrán 2002; Vidal 2005; Beltrán et al. 2006; Noguera 2012; Merchán 2015; Moreno 2016; López 2017; Beltrán – Loza 2020. For Portugal, Souza 1990.

15 Kremer 2012.

16 Pochmarski 2021.

1 Relationship of sculptures with other disciplines

disciplines of the sciences of antiquity need to collaborate for the study of sculpture. Taking all aspects into account allows a better interpretation of a particular production or sculptural ensemble (fig. 1). The most precise information possible is necessary regarding the place of discovery, the raw material and the circulation of models, techniques, manufacturing processes, style and iconography, as well as programmes, symbolism, and the like. Architecture helps us to understand the relationship with the framework into which the sculpture should be inserted. Religion and politics are also important, as sculpture was an important element in the propaganda of emperors and elites, as was the desire for self-representation among the members of the various strata of society. Furthermore, we must not fail to take into account economic factors, by not only gauging the cost of sculptural productions, but also the channels through which they were traded. Finally, we should look at the relationship that can be established with the historical moment and the events with which a certain sculptural production can be interwoven. In cases where the context of the find is known, it should be kept in mind and the pertinent data consulted. If possible, the archaeologists who excavated the site should be consulted to better place the sculptural remains in their environment and chronological framework, thus contributing an important element to the landscape for which the piece was conceived and created.

Once again, teamwork is important, especially when we enter the field of other disciplines in what we understand globally as »the sciences«, although archaeology and the humanities also belong to this category.

Today we cannot fully understand or study a sculpture if we do not ask ourselves the questions I have just outlined. It is essential to determine the material from which the piece was sculpted. In an ideal situation we would be able to carry out archaeometric analyses; however we must recognise that this is often not possible, given the difficulty in obtaining permission to extract samples. In spite of everything, wherever possible we should attempt to go beyond generically classifying the type of stone, i.e. limestone, sandstone, marble, granite, porphyry, etc., to ascertain its extraction point. This can be undertaken macroscopically and formulated as a possibility or hypothesis. Analytical verification is essential, above all, in the case of white marbles. Coloured marbles are easier to identify with the naked eye if one is familiar with the lithotypes.

It is important to define the terminology. The Romans used the term *lapis* to define the less exclusive types of stone, and the word *marmor* for types that were geologically very different but much more impressive, especially after they had been polished. For a Roman, the good quality cretaceous limestones, the different types of true marble, the granites and the porphyries were all considered to be *marmora*. As in our modern languages the words »marble«, »marbre«, »marmo«, »mármol« and »Marmor« derive from the Latin *marmor*; nevertheless, we must be aware of the difference in meaning for a Roman and for us. Geologists naturally use very precise terminology for the various stones, and this precision is something we need to be aware of.

It is very encouraging to see in our colloquia, and Vienna and *Carnuntum* are no exceptions, that the concern for investigating and identifying the raw material itself is becoming more important, and that greater attention is being paid to the processes prior to its configuration as a partially- or fully-finished sculpture. It is also possible to understand the symbolic value of the choice of some materials over others. Augustus himself selected them with great care for his forum in Rome, which also influenced other provinces. It is well known, for example, that the intrinsic value and intense red of porphyry was meant to represent the imperial purple.

Thus we enter the field of archaeometry. Geology is now essential for us, and it is necessary to work closely with geologists and, above all, to find dedicated professionals who share our interests. A mere geological dating of the piece is of little use to us. What we need to know is the origin of the material and for this we need a reference collection of the many quarries exploited in antiquity. This is what we have been doing since the late 1970s through numerous surveys in the countries that made up the Roman Empire. In this task, we have had the invaluable help of Professor Aureli Àlvarez, who poured all his efforts into determining the origins of the pieces we submitted for analysis at the Laboratory for the Study of Ancient Stone Materials of the Autonomous University of Barcelona (LEMLA). Continuous growth and development has also led to an expansion of this area in the Catalan Institute of Classical Archaeology with the establishment of the Archaeometric Studies Unit (UEA), directed by Anna Gutiérrez Garcia-Moreno and the incorporation of Pilar Lapuente, Professor of Geology at the University of Zaragoza. This line of research has developed alongside another one oriented towards artistic productions, with which sculpture and analytics have always gone hand in hand within our group ArPA (Archaeometry and Artistic Productions).

Throughout Spain, especially since the early 2000s, archaeometric studies and the determination of stone materials have proliferated. A very important part of this has been the surveying and excavation of ancient quarries to specify the origin of the different *marmora*. Here I would like to highlight the decisive studies of Jean-Claude Bessac in the 1980s[17]. As both an archaeologist and a sculptor, he contributed new perspectives by studying the working techniques of the stonemasons and sculptors and providing very useful information on the tools they used. A highly commendable work was the monograph on the Bois de Lens quarries that supplied a white limestone of extraordinary quality for the buildings of *Nemausus*[18].

Let's briefly review the bibliography published in Spain in the last twenty years: The proceedings of two congresses deal extensively with Hispanic *marmora*[19], followed by the catalogue of an exhibition, which presents the 16 main types exploited on the Iberian Peninsula[20], including marble from Estremoz (Portugal) and Almadén de la Plata (Sevilla), both from the Osa Morena anticline and widely used for sculptural productions. New studies are constantly widening its distribution radius outside of *Baetica*. For example, at the Dijon Colloquium we presented a very battered head from the Julio-Claudian period found in Zaragoza, perhaps attributable to the emperor Tiberius. We will return to this later.

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17 Bessac 1987.
18 Bessac 1996.
19 Nogales – Beltrán 2008; García-Entero 2012.
20 Àlvarez et al. 2009.

2 The Roman villa of *Sagrera* (Barcelona), Broccatello shaft and capital (MUHBA, photos J. Casanovas)

Another favourite topic of research in Spain, parallel to that being undertaken in other countries, has been the detection of quarries, as we see in one volume which deals with chronology, techniques and work organisation[21].

The following two volumes are very recent contributions. The first, the product of a three-year competitive research project, looks at the *marmora* of *Baetica*, effectively intertwining archaeological research and archaeometry[22]. The second focuses on the materials, workshops and production in the quarries themselves, a very important aspect for detecting partially finished pieces and their marketing, as well as the finishing process carried out at the place of reception[23].

The hard cretaceous limestones were not very suitable for sculptural work. They include the showy Broccatello or La Cinta jaspi from the quarries of *Dertosa*, today Tortosa, near the mouth of the river Ebro[24]. We can appreciate this on a plaque we will also see later, as well as on other architectural elements (fig. 2)[25].

We have no evidence of any sculptural use of marmor from *Tarraco*, the so-called Santa Tecla stone, which was widely used for epigraphy[26]. We do have a few examples of sculptures in the hard cretaceous limestone from *Emporiae*, as well as bas-reliefs carved from the *marmor Saetabitanum*, known today as Buixcarró, quarried in the territory of the ancient *Saetabis*, present-day Xàtiva[27].

In contrast, the cheaper soft limestones and sandstones had to be covered with stucco and a final layer of paint that constituted the true epidermis of the sculptures. This fragile layer has only very occasionally been preserved until today.

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21 Gutiérrez Garcia-M. – Rouillard 2018.
22 Beltrán et al. 2018.
23 Vinci et al. 2020.
24 Gutiérrez Garcia-M. 2009, 229–245.
25 Rodà – Alcubierre 2020.
26 Àlvarez et al. 2009b.
27 Cebrián 2012; Soler 2019, 250–252 n. 34–35.

3 Examples of reuse in the cathedral of Barcelona (photos J. M. Puche)

We recognise the importance of polychromy, an important international line of study, which will also be dealt with in major sessions in this Colloquium[28]. A champion of polychrome sculptures in Spain is Professor Trinidad Nogales, the current director of the National Museum of Roman Art in Mérida[29].

Likewise, careful attention should be paid to *spolia* (fig. 3) and the reuse of materials from antiquity in later constructions[30]. Beyond their strictly economic value, they contribute a profound symbolism by, for example, integrating pagan productions in Christian contexts. This makes up somewhat for the loss of a large number of works, either due to *damnationes* of various kinds or to the reduction of marble in ovens, in order to turn it into good quality lime.

ASMOSIA (Association for the Study of Marmora and Other Stones in Antiquity) was set up to deal specifically with the stone resources used in antiquity. On the subject of marble itself, an authentic ›bombshell‹ was dropped in the ninth edition of ASMOSIA held in Tarragona in 2009[31]. This was the identification of the Göktepe quarries of fine-grained white marble, which radically changed the evaluation and expansion of the *Aphrodisias* workshops, as we will see later. Likewise, the objective evidence presented on the so-called Greco scritto, which was believed to have been extracted entirely from present-day Algeria, made it very clear that it could also have come from quarries near *Ephesos*. These cases serve as examples of how much has been done, how much remains to be done and the surprises we may still have to come.

Consequently, it is necessary to continue tracking down and surveying hitherto unknown quarry areas, as is planned for the sessions of this Colloquium. In Spain, for example, this has been undertaken in present-day Galicia, with results that have exceeded expectations[32]. In the French

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28 See also Liverani 2004; Brinkmann 2008; Brinkmann – Bendala 2010. The 11th International Round Table on Polychromy in Ancient Sculpture and Architecture, organized by the Musei Capitolini and Museo Nazionale Romano, was held in Rome from 9 to 12 September 2022.

29 Nogales 2010; Merchán et al. 2020a.

30 Mateos – Morán 2020; Beltrán de Heredia – Rodà 2020.

31 Gutiérrez Garcia-M. et al. 2012.

32 Gutiérrez Garcia-M. et al. 2016 and 2018; González Soutelo et al. 2014.

Pyrenees, Pilar Lapuente Mercadal has detected the existence of an extraction area of fine-grained white marble in Louvie-Soubiron, which will have to be differentiated from the Lunense marbles[33].

With all this, Spanish research has become fully integrated in the line, which incisively marked the work of such scholars as John B. Ward Perkins, Marc Waelkens, Norman Herz and Luc Moens who, in 1992, published these volumes – the first a compilation – that have become absolute reference works for all of us[34]. Around the same time, the symposium held in 1988 and published in 1990 was also very significant for ancient sculpture[35].

Italian research has made a fundamental contribution to Roman *marmora* studies. The long bibliography produced by professors Patrizio Pensabene[36], also a great specialist in sculpture, and Lorenzo Lazzarini, founder of the review »Marmora«, from the field of geology, provide an essential background for our studies[37]. Finally, I wish to highlight how the countries that were once part of the Roman Empire are producing global monographs that deal with the use of *marmora*. As an example, we can cite the volume that covers Roman *Dacia*[38].

I have perhaps spoken enough about these issues, although we should never lose sight of the fact that, before it became a sculpture, a block of marble would have been extracted with a precise technique and skill from a quarry, the quality of which, as well as the faults in the stone itself, would have conditioned the final result. Michelangelo himself was well aware of this when he travelled to the Carrara quarries to see the block of marble he was to sculpt. In a well-known anecdote, he exclaimed »There's my David, I just have to remove what's left over … «.

A major boost to Spanish research and its dissemination on an international level was the ninth edition of ASMOSIA held in Tarragona in 2009[39]. The front cover of the minutes shows the plaque from the latrines of the Roman villa of Els Munts in the *Tarraco ager*. Made of Broccatello, it bears the engraved silhouette of a dolphin and illustrates the unsuitability for sculpture of hard limestones, no matter how attractive they were. The highly prized Broccatello – its name evokes the appearance of brocade made of gold threads on a purple background – was used above all for small cornices, slabs and cladding *crustae*, as well as for plain column shafts and certain capitals, as we have seen in *Barcino* (fig. 2)[40].

Let add me that the thirteenth edition of ASMOSIA, also delayed by the pandemic, took place here in Vienna in September 2022. It was organised by Sabine Ladstätter and Walter Prochaska under the auspices of the Austrian Archaeological Institute at the Austrian Academy of Sciences. The city of Vienna, in addition to its many merits and attractions, was for us the capital of Roman stone studies throughout 2022.

For the research into stone raw materials, it is necessary to deal with the subject by beginning with a macroscopic autopsy, to better interpret the sculptures we intend to study. Without knowing what they are made of, we will be unable to present solid conclusions regarding the technique, elaboration, finishes, models, whether the workshops were local or not, the price, and commercialisation, not forgetting the challenges of conservation in its current state (fig. 4).

I will now provide examples with cases in which archaeometry and interdisciplinarity have allowed a much more accurate joint analysis of the artefact.

At the Dijon Colloquium, organised and edited by Sabine Lefebvre, together with Trinidad Nogales and Pilar Lapuente[41], we presented a Julio-Claudian portrait from Zaragoza, ancient

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33 Lapuente et al. 2021a.
34 Ward-Perkins 1992; Waelkens et al. 1992.
35 Marble Papers 1990.
36 E.g. Pensabene 1998; Pensabene 2013.
37 E.g. Lazzarini 2007.
38 Müller et al. 2012.
39 Gutiérrez Garcia-M. et al. 2012.
40 Rodà – Alcubierre 2020.
41 Nogales et al. 2017.

4 Sculptures, sarcophagi, half-worked capitals at the foot of the Proconnesus marble quarries 2018 (photos I. Rodà)

Caesar Augusta on the river Ebro, the ancient *Hiberum*. The analysis, using petrography, cathodoluminescence and isotopes, gave us a pleasant surprise. The isotopic values projected in the corresponding diagram for fine-medium grained marbles (<2 mm) led to a double possibility for their origin: either the Estremoz Anticline in Portugal, or *Docimium*, near Afyon in Turkey. The petrographic and cathodomicrofacies comparison with quarry samples from our database is similar to some quarry samples from the Pardais area (southern end of the Estremoz Anticline), ruling out the Turkish origin. In conclusion, the overall result of the analytical study of the marble sample points to a Hispanic origin: the quarries of the Estremoz Anticline located in the present-day Alto Alentejo region of Portugal, a marble area that supplied a large amount of material for the capital of *Lusitania*, *Augusta Emerita*. At the moment, the portrait from Zaragoza constitutes the easternmost testimony of the sculptural use of this marble that, until a few years ago, was considered limited to all intents and purposes to the area of Mérida.

The determination of the raw materials is essential to clarify the distribution radius of the sculptural productions. Here are two more cases:

In Oviedo Cathedral the sarcophagus of the child Ithacius is preserved. It was believed to have been made in an Aquitanian workshop, but subsequent analysis has revealed that it is once again an example of the use of marble from Estremoz, with a new point of attention on the diffusion of the so-called local marbles, which, as we see, are not so local[42].

Another interesting case is that of the late-period sarcophagi (around AD 400) from the *Tarraco* necropolis. Their similarity, both visual and macroscopic, to those of Carthage is such that it led us to believe they may have been sculpted in *Tarraco* itself, following Carthaginian models. However, when viewed under a microscope, the thin sections attest their differences: the micritic limestone from Tarragona does not correspond to the bioesparite, the so-called kadel, from Carthage[43]. Therefore, the *Tarraco* sarcophagi were imported directly and fully finished from Carthage. They would have crossed the Mediterranean in ships that would also have brought the African pottery that reached our shores in large quantities.

[42] Vidal – García-Entero 2015; Vidal et al. 2016.
[43] Rodà 1990.

5 Statue traditionally believed to be of the god Asclepius, from the Greek town of *Emporion* on the northern Spanish Mediterranean coast, present-day Catalonia (MAC-Empúries, photo I. Rodà)

A current international line of research focuses on alabaster, to which Simon J. Barker and Simona Perna devote their studies[44]. Recently, several researchers in *Baetica* have been studying calcitic alabasters[45]. The exploitation zones in the south of the Iberian Peninsula are being traced and locally extracted materials identified. Also of considerable importance are the studies undertaken on the theatres of Cádiz (*Gades*) and Cartagena (*Carthago Nova*). In the *scaenae frons* of the latter, there was a mass use of red travertine from the Hispanic quarries of Mula (Murcia)[46]. On the other hand, for the Cádiz theatre, the Theatrum Balbi, the majestic marble decoration reveals a very early use of imported marble for a Hispanic building, in the early Augustan period according to the archaeological data[47]. This opulence was due to the main protagonists, namely Balbus the Younger and perhaps Agrippa, who provided precious imported marbles[48], such as Alabaster Fiorito for the ornamentation. These materials were used at the same time for the decorative programmes of Rome promoted by Augustus. Balbus inaugurated his theatre in Rome in 13 BC[49]. We know that four onyx columns were placed in it, as they were described by Pliny[50].

The *Gades* theatre would even surpass the Theatrum Balbi of Rome in its splendour and in a somewhat earlier chronology. Cádiz's theatre is the earliest Hispanic example of architectural magnificence in imported marble, parallel to the theatrical building undertaken by Agrippa and Balbus in Rome and Italy.

Although Hispania had marble sculptures prior to the arrival of the Romans, they were all fully finished and made from foreign and imported materials[51]. This can be seen in the Phoenician sarcophagi of Cádiz in Parian marble from the Sidon workshops, as well as in the base of an ideal statue in marble, also from Paros, of which the feet have been recently discovered. It was found at the spectacular site of Turuñuelo in Extremadura, which was destroyed at the end of the 5th or the beginning of the 4th century BC[52]. Likewise, the Emporitan sculpture (fig. 5), traditionally considered to be of the god Asclepius, from the end of the 2nd century BC, is an imported piece of unique typology, the torso of which was carved in Greek Paros marble and the rest of the body with its clothing in Pentelic marble. It is the only Greek sculpture found in the western part of the Greek world contemporary to the famous Venus de Milo, with the advantage that ours has arms.

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44 Barker – Perna 2018 and in press.
45 Loza – Beltrán 2018; Ontiveros 2018.
46 Soler 2005 and 2012.
47 Bernal – Arévalo 2011, 269–272; Bernal et al. 2014.
48 Rodà et al. 2011; Ventura – Borrego 2011; Ventura et al. 2021; Àlvarez et al., in press.
49 Manacorda 2011.
50 Plin. nat. 36, 60. Platner – Ashby 1929, 513.
51 Rodà 2020.
52 Rodà 2020; Lapuente et al. 2020.

6 Metropolitan models in the forum of *Augusta Emerita* (left); Aeneas, Ascanius and Anchises group (right) (MNAR Merida, photos I. Rodà)

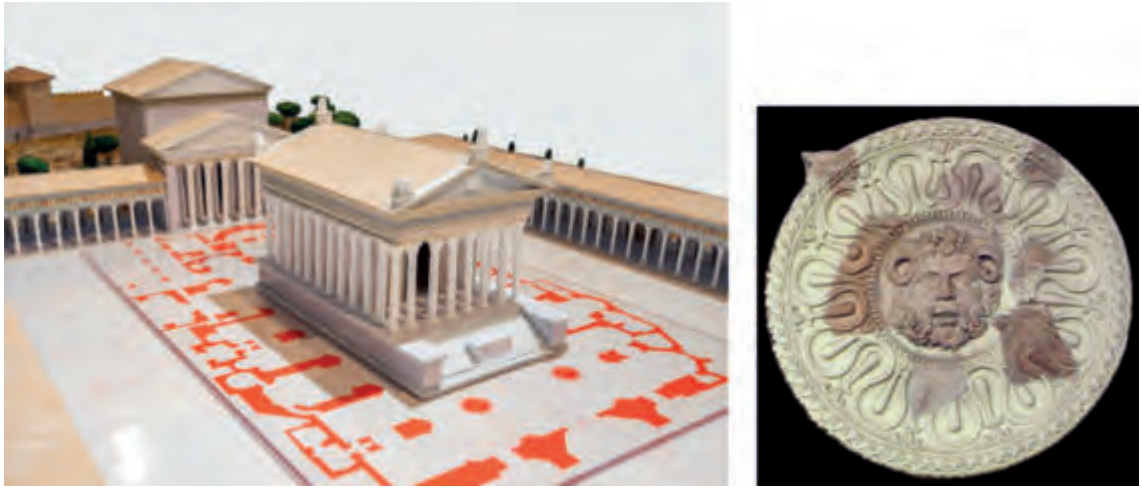
In a parallel chronology, between the 5th and the 1st century BC, the great Iberian sculpture, which in its last phase was already Roman, used only local limestones. In the initial centuries of its existence it manifested the strong influence of the Greek models.

Although marble sculptures were imported during the Roman Republic, it was under Augustus and Agrippa that imported marble spread on a large scale. At the same time, the exploitation of marble quarries began all over *Hispania*. We have evidence of this in the sculptures and also the inscriptions that sometimes provide us with important dates to situate the beginning of the use of local marble.

The portraits of Mérida residents show this very clearly. Professor Trinidad Nogales has studied them with great enthusiasm and care, having baptised them as the first generation of Mérida residents[53]. The extraordinary quarries of high quality marble at Estremoz allowed the large-scale ›marbleisation‹ of Mérida as the capital of *Lusitania*. This closely followed the models of the *urbs*, to such an extent that the sculptural finds of Mérida have shown Rome the statuary groups lost to the Forum of Augustus in Rome. These include, for example, the group of Aeneas, Ascanius and Anchises, which Walter Trillmich so masterfully restored (fig. 6) and which is now virtually on display at its original location[54].

The provinces have a lot to show the centre of power. For example, a copy of the Merida group is exhibited the Museo dei Fori Imperiali, as is another of the grand statues from the Córdoba Tienda Collection representing Aeneas or Romulus, for which the best quality Carrara marble was used[55]. The *Baetis* (today Guadalquivir) had better navigability conditions than the *Anas* (today Guadiana).

53 Nogales 1997, 134–138.
54 Merchán et al. 2020b.
55 Rodríguez Oliva 2009, 128–129.



7 The imperial worship area of *Tarraco*: model of the Museu Bíblic (Tarragona) and *clipeus* in MNAT (photos S. Grimau and R. Cornadó)

Huge amounts of imported marble arrived along the entire Mediterranean coast of *Hispania* and the *Baetis* Valley, especially Lunense marble. In *Tarraco* (fig. 7), capital of the largest province in the Roman Empire, *Hispania Citerior*, there are not only free-standing sculptures made of Carrara marble, among them some of early chronology, but also unworked blocks destined to build and decorate the porticoes of the Flavian-era imperial worship area, following the models of the Forum of Augustus in Rome. The workshop waste excavated in abundance in the upper part of the town proves that the artisans worked *in situ*. The programme was unitary and the differences in execution are due to the hands of the various craftspersons who worked on the ornamentation and not to the fact that they were made in successive phases. A very interesting proposal has been made regarding this grand architectural programme, as well as that of the *Carthago Nova* theatre: the overall cost for each of them has been calculated at more than 330,000 sesterces. According to Patrizio Pensabene and Ricardo Mar[56], the marble used in the porticoes of the *Tarraco* worship area reached a volume of 705.82 m^3 = 26,962.3 p^3 and was equivalent to 134,811 HS. Together with the costs of the cladding surface, the total market costs of the marble used in the porticoes has been calculated to HS 330,762.

Naturally, the waterways favoured the marble trade, although even in this aspect Rome practiced the »e pur si muove«. In a town in the interior of Spain, *Segobriga* in Cuenca, a magnificent iconographic programme was carried out that concentrated on the forum basilica. This has been well studied by José Miguel Noguera as part of the CSIR[57]. For life-size or slightly larger statues, all kinds of imported Pentelic, Thassos and Luni-Carrara white marbles were used. Overland transport (probably from the port of *Carthago Nova*) was expensive, but the people of *Segobriga* could afford it, since their wealth came from the exploitation and sale of *lapis specularis* in the Augustan era and for much of the 1st century AD.

The aforementioned, recently identified marble of Göktepe was particularly abundant in the decoration of large late-period villas. As examples, we may mention the portrait of emperor Hadrian from the villa of Los Torrejones (Yecla, Murcia)[58] (fig. 8), the Portuguese villa of Quinta das Longas (Elvas)[59], which has been well interpreted by Trinidad Nogales, and the villa of Valdetorres de Jarama (Madrid)[60], the excellent artisanship of which used both white and blackish varieties

56 Mar – Pensabene 2009, 377.
57 Noguera 2012.
58 Noguera – Ruiz 2018.
59 Nogales et al. 2004; Lapuente et al. 2021b.
60 Castellano 2004; Fernández Ochoa et al. 2022, 163–164. 367–368.

8 Emperor Hadrian (Göktepe marble) from the villa of Los Torrejones, Yecla, Murcia (left) and funerary sculptures from *Barcino* carved in local sandstone, MUHBA (photos I. Rodà)

for the sculptures. Ongoing studies on the Iberian Peninsula, as well as in various parts of the Empire, will no doubt identify new assemblages.

Also very important will be the studies questioning the distribution networks of the various marbles. The impact of imperially owned *marmora* can be noted to a greater or lesser degree in all the domains of the Empire, depending on the geographical conditions of the different towns and their territories. However, we can sometimes distinguish the limits of its expansion when similar marbles were available nearby. For example, when studying the sculptures of the Augusteum in the Dalmatian town of *Narona* (Vid, Croatia), to which Emilio Marin has dedicated so many years of his professional life, we were able to determine that Greek marble predominated in this Adriatic coastal town and that, in the case of fine-grained whites, only Pentelic was used and not Carrara[61].

We see how official sculpture, with well-defined models and types, led to the standardisation of the productions and programmes in the most diverse areas of the Empire, for example in the iconography of the *Segobriga* forum and the *Narona* Augusteum. However, on the level of local productions, which usually used local stone, the panorama is much wider and the varied traditions of the different areas are reflected.

Therefore, in conclusion, it only remains to discuss local stone, which sometimes had a notable distribution radius, as we can see, for example, with the Broccatello from *Dertosa*. When it comes to sandstones, their use and distribution was much more restricted, but they do offer an excellent window onto the study of local workshops and the expansion and success of their models.

A good example is that of *Barcino* (Barcelona), a colony founded in 19 BC, after the Cantabrian wars had ended[62]. As a small town, a *parvum oppidum* according to Pomponius Mela, it was

[61] Marin – Rodà 2004, 167–174. 371–373.
[62] Rodà – Beltrán de Heredia 2021.

very active thanks to its control of a fertile agricultural territory and the movement provided by its seaport at the mouth of the river *Rubricatum* (Llobregat). It also had an excellent sandstone extracted from the quarries of Montjuïc that served both for building and sculptural ornamentation. It was used, for example, on the Augustan-period forum temple, the capitals of which reveal the use of a technique from the Triumviral period with the typical triangular cavities.

This sandstone was also used in the private sphere, where it was worked following Italic models (fig. 8). This is not surprising as, judging by the onomastics of the many preserved inscriptions, the first generation of *Barcino*'s residents came from the Italian peninsula[63]. In the funerary monuments, we can clearly see how the local workshops adopted and profusely used the Italic models, which we also see in the neighbouring town of *Baetulo* (Badalona) with productions from the *Barcino* workshop[64].

However, we must bear in mind that these models did not always arrive by a direct route, but rather via the grand capital of the neighbouring province of *Narbonensis*. *Narbo*, in addition to having a local stone not very different macroscopically from that of *Barcino*, also extensively adapted the models generated in Italy. Did the models applied in *Barcino* come in part from *Narbo*[65]? Thanks to the spectacular remodelling undertaken as part of the inauguration of the new Narbonne Museum and the project initiated by a Spanish-French team, these questions are again under discussion.

But therein lies the servitude and grandeur of our discipline that offers new readings, proposals and lines of research, always in an atmosphere of collaboration and interdisciplinarity, as we have been able to verify in all the editions of the »Roman Provincial Art Colloquia« and will witness throughout this most recent Colloquium, the seventeenth, here in Vienna. *Ago vobis gratias maximas*.

BIBLIOGRAPHY

Abascal – Cebrián 2010 — J. M. Abascal – R. Cebrián (eds.), Escultura romana en Hispania VI. Homenaje a Eva Koppel (Segobriga 2008)

Acuña et al. 2013 — F. Acuña – R. Casal – S. González Soutelo (eds.), Escultura romana en Hispania VII. Homenaje al Prof. Alberto Balil (Santiago de Compostela 2011)

Alexandrescu 2015 — C.-G. Alexandrescu (ed.), Cult and Votive Monuments in the Roman Provinces. Proceedings of the 13th International Colloquium on Roman Provincial Art in Bucharest, Alba Iulia, Constanţa 27.05.–03.06.2013 (Cluj-Napoca 2015)

Àlvarez et al. 2009a — A. Àlvarez et al., Marbles and Stones of Hispania = Marbres i pedres d'Hispania = Mármoles y piedras de Hispania. Exhibition catalogue (Tarragona 2009)

Àlvarez et al. 2009b — A. Àlvarez et al., El *marmor* de Tarraco. Explotació, utilització i comercialització de la pedra de Santa Tecla en època romana = Tarraco Marmor. The Quarrying, Use and Trade of Santa Tecla Stone in Roman Times (Tarragona 2009)

Àlvarez et al., in press — A. Àlvarez – A. Gutiérrez Garcia-M. – I. Rodà, Mármoles importados para la ornamentación del teatro. Análisis petrológico de siete elementos arquitectónicos in El *Theatrum Balbi* de Gades II (Cádiz, in press)

Baena – Beltrán 2002 — L. Baena – J. Beltrán, Las esculturas romanas de la provincia de Jaén, CSIR España I 2 (Murcia 2002)

Barker – Perna 2018 — S. Barker – S. Perna, Alabaster. Quarrying and Trade in the Roman World: Evidence from Pompeii and Herculaneum, in: D. Matetić Poljak – K. Marasović (eds.), Interdisciplinary Studies on Ancient Stone. Proceedings of the XIth ASMOSIA Conference Split 18.–22.05.2015 (Split 2018) 45–64

63 Rodà 2011.
64 Claveria – Rodà 2015; Rodà 2009.
65 Rodà 2000.

Barker – Perna, in press	S. Barker – S. Perna, ›Alabaster‹: an interdisciplinary study of the sources and uses of calcite-alabaster across archaeological contexts. Proceedings of an international workshop held at the Norwegian Institute in Rome, 09.–10.05.2019 (in press)
Beltrán – Loza 2020	J. Beltrán – M. L. Loza, Provincia de Cádiz (Hispania Vlterior Baetica), CSIR España I 8 (Cádiz 2020)
Beltrán et al. 2006	J. Beltrán – M. A. García García – P. Rodríguez Oliva, Los sarcófagos romanos de Andalucía, CSIR España I 3 (Murcia 2006)
Beltrán et al. 2018	J. Beltrán – M. L. Loza – E. Ontiveros (coord.), *Marmora Baeticae.* Usos de materiales pétreos en la Bética romana. Estudios arqueológicos y análisis arqueométricos, SPAL. Monografías Arqueología 27 (Sevilla 2018)
Beltrán de Heredia – Rodà 2020	J. Beltrán de Heredia – I. Rodà, Spolia y reutilización. Elementos de la Antigüedad clásica y tardía en la Catedral de Barcelona, in: J. Beltrán de Heredia (ed.), La basílica de la Santa Creu i Santa Eulàlia: la Catedral abans de la Catedral. IV Jornades de les basíliques històriques de Barcelona 2019, Studia Historica Tarraconensia 10 (Barcelona 2020) 37–71
Bernal – Arévalo 2011	D. Bernal – A. Arévalo (eds.), El *Theatrum Balbi* de Gades, UCA (Cádiz 2011)
Bernal et al. 2014	D. Bernal et al., Del *Theatrum Balbi* de Gades. Recientes excavaciones arqueológicas (2010–2012), in: J. M. Álvarez Martínez – T. Nogales – I. Rodà (eds.), Actas del XVIII Congreso internacional de Arqueología Clásica: centro y periferia en el mundo clásico Mérida 13.–17.05.2013, I (Mérida 2014) 847–851
Bessac 1987	J.-Cl. Bessac, L'outillage traditionnel du tailleur de pierre de l'antiquité à nos jours, RANarb Suppl. 14 (Paris 1987)
Bessac 1996	J.-Cl. Bessac, La pierre en Gaule Narbonnaise et les carrières du Bois des Lens (Nîmes). Histoire, archéologie, ethnographie, et techniques, JRA Suppl. 16 (Ann Arbor 1996)
Brinkmann 2008	V. Brinkmann (ed.), Bunte Götter. Die Farbigkeit antiker Skulptur. Ausstellungskatalog Liebighaus Skulpturensammlung (Frankfurt am Main 2008)
Brinkmann – Bendala 2010	V. Brinkmann – M. Bendala (eds.), El color de los dioses. El colorido de la estatuaria antigua. Exhibition Museo Arqueológico Regional, Alcalá de Henares (Madrid 2010)
Castellano 2004	A. Castellano, Tritó o gegant/Tritón o gigante, Niòbide/Nióbide, Esculapi/Esculapio, in: I. Rodà (dir.), Aqua romana (Barcelona 2004) 271–273
Cebrián 2012	R. Cebrián, Las canteras de Buixcarró y el uso del marnor Saetabitanum = The Buixcarró quarries and the use of marmor Saetabitanum, in: García-Entero 2012, 155–168
Claveria 2001	M. Claveria, Los sarcófagos romanos de Cataluña, CSIR España I 1 (Murcia 2001)
Claveria – Rodà 2015	M. Claveria – I. Rodà, Esculturas e inscripciones del entorno funerario de *Barcino*, in: S. Augusta-Boularot – E. Rosso (eds.), Signa et tituli. Monuments et espaces de représentation en Gaule Méridionale sous le regard croisé de la sculpture et de l'épigraphie (Arles 2015) 175–189
Corré – Gaggadis-Robin 2018	X. Corré – V. Gaggadis-Robin, Marseille et ses environs, Nouvel Espérandieu 6 (Paris 2018)
Darblade-Audoin 2006	M.-P. Darblade-Audoin, Lyon, Nouvel Espérandieu 2 (Paris 2006)
Fernández Ochoa et al. 2022	C. Fernández Ochoa – M. Zarzalejos – J. Salido (eds.), Tempus Romae. Exhibition Museo Arqueológico Regional, Alcalá de Henares (Madrid 2022)
Gaggadis-Robin et al. 2009	V. Gaggadis-Robin – A. Hermary – M. Reddé – C. Sintes (eds.), Les ateliers de sculpture régionaux: techniques, styles et iconographie. Actes du Xe Colloque International sur l'Art Provincial Romain, Arles et Aix-en-Provence 21.–23.05.2007 (Arles 2009)
Gaggadis-Robin – de Larquier 2019	V. Gaggadis-Robin – N. de Larquier (eds.), La sculpture romaine et ses remplois. Actes des IIes Rencontres autour de la sculpture romaine (Bordeaux 2019)
Gaggadis-Robin – Picard 2016	V. Gaggadis-Robin – P. Picard (eds.), La sculpture romaine en Occident. Nouveaux regards. Actes des Rencontres autour de la sculpture romaine 2012 (Arles 2016)
García-Entero 2012	V. García-Entero (ed.), El *marmor* en Hispania. Explotación, uso y difusión en época romana (Madrid 2012)
Garriguet 2001	J. A. Garriguet, La imagen del poder imperial en Hispania. Tipos estatuarios, CSIR II 1 (Murcia 2001)
González Soutelo et al. 2014	S. González Soutelo et al., El mármol de O Incio: proyecto de caracterización y estudio de la explotación y uso de un *marmor* local en la Galicia romana, in: J. M. Álvarez

Martínez – T. Nogales – I. Rodà (eds.), Actas del XVIII Congreso internacional de Arqueología Clásica: centro y periferia en el mundo clásico Mérida 13.–17.05.2013, I (Mérida 2014) 323–326

Gutiérrez Garcia-M. 2009 — A. Gutiérrez Garcia-M., Roman Quarries in the northeast of Hispania (modern Catalonia), Documenta 10 (Tarragona 2009)

Gutiérrez Garcia-M. – Rouillard 2018 — A. Gutiérrez Garcia-M. – P. Rouillard (eds.), Lapidum natura restat. Canteras antiguas de la península Ibérica en su contexto (cronología, técnicas y organización de la explotación) = Carrières antiques de la péninsule Ibérique dans leur contexte (chronologie, techniques et organisation de l'exploitation), Documenta 31 (Tarragona 2018)

Gutiérrez Garcia-M. et al. 2012 — A. Gutiérrez Garcia-M. – P. Lapuente – I. Rodà (eds.), Interdisciplinary Studies on Ancient Stone. Proceedings of the IXth ASMOSIA Conference Tarragona 2009, Documenta 23 (Tarragona 2012)

Gutiérrez Garcia-M. et al. 2016 — A. Gutiérrez Garcia-M. et al., The marble of O Incio (Galicia, Spain): quarries and first archaeometric characterisation of a material used since Roman times, ArchéoSciences. Revue d'Archéometrie 40, 2016, 103–117

Gutiérrez Garcia-M. et al. 2018 — A. Gutiérrez Garcia-M. et al., New data on Spanish marbles: the case of Gallaecia (NW of Spain), in: D. Matetić Poljak – K. Marasović (eds.), Interdisciplinary Studies on Ancient Stone. Proceedings of the XIth ASMOSIA Conference Split 18.–22.05.2015 (Split 2018) 401–411

Kremer 2012 — G. Kremer, Götterdarstellungen, Kult- und Weihedenkmäler aus Carnuntum. Mit Beiträgen von C. Gugl, C. Uhlir, M. Unterwurzacher, CSIR Carnuntum Suppl. 1 (Wien 2012)

Lapuente et al. 2020 — P. Lapuente et al., Addressing the controversial origin of the marble source used in the Phoenician anthropoid sarcophagi of Gadir (Cadiz, Spain), Archaeometry 2020, DOI: 10.1111/arcm.12623

Lapuente et al. 2021a — P. Lapuente et al., Louvie-Soubiron Marble: Heritage Stone in the French Pyrenean Ossau Valley. First Evidence of the Roman Trans-Pyrenean Use, Geoheritage 13/1, 2021, DOI: 10.1007/s12371-021-00534-2

Lapuente et al. 2021b — M. P. Lapuente – T. Nogales – A. Carvalho, Mineralogical Insights to Identify Göktepe Marble in the Sculptural Program of Quinta Das Longas Villa (Lusitania), Minerals 11, 2021, DOI: 10.3390/min11111194

Lazzarini 2007 — L. Lazzarini, Poikiloi lithoi, versiculores maculae: i marmi colorati della Grecia antica (Pisa 2007)

Lefebvre 2017 — S. Lefebvre (dir.), Iconographie du quotidien dans l'art provincial romain: modèles régionaux. Actes du XIVème Congrès International d'Art Provincial Romain Dijon 01.–06.06.2015 (Dijon 2017)

Lemoine 2013 — Y. Lemoine, Fréjus, Nouvel Espérandieu 4 (Paris 2013)

León – Nogales 2000 — P. León – T. Nogales (coord.), Actas de la III Reunión sobre escultura romana en Hispania Córdoba 1997 (Madrid 2000)

Lipps 2021 — J. Lipps (ed.), People Abboard. Proceedings of the XVIth International Colloquium on Roman Provincial Art Tübingen 09.–13.04.2019, Tübinger Archäologische Forschungen 31 (Tübingen 2021)

Liverani 2004 — P. Liverani (ed.), I colori del bianco. Policromia nella scultura antica (Rome 2004)

López 2017 — I. López, Osuna (Provincia de Sevilla, Hispania Vlterior Baetica), CSIR España I 7 (Sevilla 2017)

Loza – Beltrán 2018 — M. L. Loza – J. Beltrán, El uso de los travertinos calcíticos en las *provinciae Tarraconensis et Baetica*. Una aproximación general, in: Beltrán et al. 2018, 137–149

Manacorda 2011 — D. Manacorda, El complejo de Balbo en Roma, in: Bernal – Arévalo 2011, 387–407

Mar – Pensabene 2009 — R. Mar – P. Pensabene, Financiación de la edilicia pública y cálculo de los costes del material lapídeo: El caso del foro superior de Tárraco, in: J. López – O. Martin (eds.), Tarraco: Construcció i arquitectura d'una capital provincial romana. Actes del Congrés Internacional en homenatge a Theodor Hauschild, Tarragona 2009, Butlletí Arqueològic 31, 2009, 345–409

Marble Papers 1990 — Marble. Art Historical and Scientific Perspectives on Ancient Sculpture 1990. Papers delivered at a symposium organized by the Departments of Antiquities and Antiquities Conservation held at the J. Paul Getty Museum 1988 (Malibu 1990)

Marin – Rodà 2004	E. Marin – I. Rodà (eds.), Divo Augusto, La descoberta d'un temple romà a Croàcia = El descubrimiento de un templo romano en Croacia (Split 2004)
Márquez – Ojeda 2018	C. Márquez – D. Ojeda (eds.), Escultura romana en Hispania VIII. Homenaje a Luis Baena del Alcázar, Córdoba 2016 (Cordoba 2018)
Massó – Sada 1996	J. Massó – P. Sada (eds.), Actes II Reunió sobre escultura romana a Hispània = Actas II Reunión sobre escultura romana en Hispania, Tarragona 1995 (Tarragona 1996)
Mateos – Morán 2020	P. Mateos – C. J. Morán (eds.), Exemplum et Spolia I. La reutilización arquitectónica en la transformaciñon del paisaje urbano de las ciudades históricas, Mérida 2019, MYTRA 7 (Mérida 2020)
Merchán 2015	M. J. Merchán, Écija (Provincia de Sevilla, Hispania Vlterior Baetica), CSIR España I 5 (Tarragona 2015)
Merchán et al. 2020a	M. J. Merchán et al., La digilitazión tridimensional y su aplicación en el estudio de la escultura romana, in: Noguera – Ruiz 2020, 445–457
Merchán et al. 2020b	M. J. Merchán – T. Nogales – P. Merchán, Técnicas de documentación de la policromía en la estatuaria antigua. Augusta Emerita como ejemplo, in: A. Fernández Díaz – G. Castillo (coord.), La pintura romana en Hispania: del estudio de campo a su puesta en valor (Murcia 2020) 331–337
Moitrieux 2010	G. Moitrieux (with the collaboration of J.-N. Castorio), Toul et la cité des Leuques, Nouvel Espérandieu 3 (Paris 2010)
Moitrieux – Tronche 2017	G. Moitrieux – P. Tronche, Saintes: la cite des Santons et Angoulême, Nouvel Espérandieu 5 (Paris 2017)
Moitrieux et al. 2022	G. Moitrieux et al., Metz et la cité des Médiomatriques I–II, Nouvel Espérandieu 7 (Paris 2022)
Moreno 2016	A. S. Moreno, Pollentia (Islas Baleares, Hispania Citerior), CSIR España I 6 (Granada 2016)
Müller at al. 2012	H. W. Müller – B. Schwaighofer – I. Piso – M. Benea, Der Marmor im römischen Dakien (Cluj-Napoca 2012)
Noelke 2003	P. Noelke (with F. Naumann-Steckner – B. Schneider), Romanisation und Resistenz in Plastik, Architektur und Inschriften der Provinzen des Imperium Romanum. Neue Funde und Forschungen. Akten des VII. Internationalen Colloquiums über Probleme des Provinzialrömischen Kunstschaffens Köln 02.–06.05.2001 (Mainz/Rhine 2003)
Nogales 1993	T. Nogales (coord.), Actas de la I Reunión sobre Escultura romana en Hispania, Mérida 1992 (Madrid 1993)
Nogales 1997	T. Nogales, El retrato privado en Augusta Emerita I–II (Badajoz 1997)
Nogales 2010	T. Nogales, El color de Roma: Escultura y policromía en *Augusta Emerita*, in: Brinkmann – Bendala 2010, 241–251
Nogales – Beltràn 2008	T. Nogales – J. Beltràn (eds.), *Marmora Hispana:* explotación y uso de los materiales pétreos en la Hispania romana (Rome 2008)
Nogales – Gonçalves 2004	T. Nogales – L. J. Gonçalves (coord.), Actas de la IV Reunión sobre escultura romana en Hispania = IV Reuniao sobre escultura romana na Hispania, Lisboa 2002 (Madrid 2004)
Nogales – Rodà 2011	T. Nogales – I. Rodà (eds.), Roma y las provincias: modelo y difusión. XI Coloquio Internacional de Arte Romano Provincial, Mérida 2009 (Rome 2011)
Nogales et al. 2004	T. Nogales – A. Carvalho – M. J. Almeida, El programa decorativo de la Quinta das Longas (Elvas, Portugal): un modelo excepcional de las *uillae* de la Lusitania, in: Nogales – Gonçalves 2004, 103–156
Nogales et al. 2017	T. Nogales – P. Lapuente – I. Rodà, Dos nuevos retratos de Caesar Augusta (Zaragoza), in: Lefebvre 2017, 271–280
Noguera 2012	J. M. Noguera, Segobriga (Provincia de Cuenca, Hispania Citerior), CSIR España I 4 (Tarragona 2012)
Noguera – Conde 2008	J. M. Noguera – E. Conde (eds.), Escultura romana en Hispania V. Actas de la reunión internacional Murcia 09.–11.11.2005 (Murcia 2008)
Noguera – Ruiz 2018	J. M. Noguera – L. Ruiz, El retrato de Adriano de la villa de Los Torrejones (Yecla, Murcia) y su contexto arquelógico, in: Márquez – Ojeda 2018, 299–317

Noguera – Ruiz 2020	J. M. Noguera – L. Ruiz (eds.), Escultura romana en Hispania IX. Reunión sobre escultura romana en Hispania Yecla 2019, Yakka 22 (Murcia 2020)
Ontiveros 2018	E. Ontiveros, Apéndice. Caracterización arqueométrica de los traverinos calcíticos de Mijas (Málaga), in: Beltrán et al. 2018, 150–155
Pensabene 1998	P. Pensabene (ed.), Marmi antichi II. Cave e tecnica di lavorazione, provenienze e distribuzione (Rome 1998)
Pensabene 2013	P. Pensabene, I marmi nella Roma antica (Rome 2013)
Platner – Ashby 1929	S. B. Platner – T. Ashby, A Topographical Dictionary of Ancient Rome (London 1929) (digitized edition, Cambridge 2015, DOI: 10.1017/CBO9781316219706)
Pochmarski 2021	E. Pochmarski, Die Grabbaureliefs des Stadtgebietes von Flavia Solva I, CSIR Österreich IV 4 (Vienna 2021)
Porod – Scherrer 2019	B. Porod – P. Scherrer (eds.), Der Stifter und sein Monument. Gesellschaft – Ikonographie – Chronologie. Akten des 15. Internationalen Kolloqiums zum Provinzialrömischen Kunstschaften Graz 14.–20.06.2017 (Graz 2019)
Rodà 1990	I. Rodà, Sarcofagi della bottega di Cartagine a Tarraco, in: A. Mastino (ed.), L'Africa Romana. Atti del VII Convegno di Studio Sassari 15.–17.12.1989 (Sassari 2019) 727–736
Rodà 2000	I. Rodà, La escultura del sur de la Narbonense y en norte de Hispania: paralelos y contactos, in: León – Nogales 2000, 173–196
Rodà 2009	I. Rodà, Los talleres de la ciudad de Barcino (Barcelona), in: Gaggadis-Robin et al. 2009, 513–529
Rodà 2011	I. Rodà, *Imago mortis*: el componente itálico en el mundo funerario de *Tarraco* y *Barcino,* in: J. Andreu – D. Espinosa – S. Pastor (coord.), Mors omnibus instat. Aspectos arqueológicos, epigráficos y rituales de la muerte en el Occidente romano (Madrid 2011) 233–254
Rodà 2020	I. Rodà, Los primeros usos del mármol en la escultura de Hispania, in: Noguera – Ruiz 2020, 101–120
Rodà – Alcubierre 2020	I. Rodà – D. Alcubierre, El ›broccatello‹ o jaspi de la Cinta a *Barcino*, in: X. Aquilué et al. (eds.), Estudis sobre ceràmica i arqueologia de l'arquitectura. Homenatge al Dr. Alberto López Mullor (Barcelona 2020) 445–453
Rodà – Beltrán de Heredia 2021	I. Rodà – J. Beltrán de Heredia, *Barcino*, in: T. Nogales (ed.), Ciudades romanas de Hispania = Cities of Roman Hispania (Rome 2021) 315–336
Rodà el al. 2011	I. Rodà et al., Anexo: Informe del análisis de un conjunto de muestras procedentes del Teatro Romano de Cádiz, in: Bernal – Arévalo 2011, 222–226. 254–256
Rodríguez Oliva 2009	P. Rodríguez Oliva, La escultura ideal, in: P. León (coord.), Arte romano de la Bética. Escultura (Sevilla 2009) 41–151
Soler 2005	B. Soler, El travertino rojo de Mula (Murcia). Definición de un mármol local, Verdolay 9, 2005, 141–164
Soler 2012	B. Soler, Planificación, producción y costo del programa marmóreo del teatro romano de Cartagena, in: García-Entero 2012, 193–228
Soler 2019	B. Soler, Lastra con decoración vegetal, Lastra con decoración geométrica, in: J. M. Noguera (ed.), Villae. Vida y producción rural en el sureste de Hispania (Murcia 2019) 250–252
Souza 1990	V. de Souza, CSIR Portugal (Coimbra 1990)
Terrer et al. 2003	D. Terrer et al., Vienne (Isère), Nouvel Espérandieu 1 (Paris 2003)
Ventura – Borrego 2011	A. Ventura – J. de D. Borrego, *Notae lapicidinarum Lunensium, damnatio memoriae* y *graffito* maldiciente en una inscripción del teatro romano de *Gades,* in: Bernal –Arévalo 2011, 227–253
Ventura et al. 2021	A. Ventura – J. de D. Borrego – F. J. Alarcón, M. Agrippa ¿propietario de canteras de mármol en Carrara? Nueva *nota lapicidinarum Lunensium* hallada en el teatro romano de *Gades*, AEspA 94, 2021, DOI: 10.3989/aespa.094.021.05
Vidal 2005	S. Vidal, La escultura hispana figurada de la antigüedad tardía (ss. IV–VII), CSIR España II 2 (Murcia 2005)
Vidal – García-Entero 2015	S. Vidal – V. García-Entero, The use of Estremoz marble in late antique sculpture of Hispania: new data from petrographic and cathodoluminiscence analyses, in: P. Pensa-

bene – E. Gasparini (eds.), ASMOSIA X. Proceedings of the 10th International Conference Rome 21.–26.05.2012, I (Rome 2015) 413–420

Vidal et al. 2016 — S. Vidal – V. García-Entero – A. Gutiérrez Garcia-M., La utilización del mármol de Estremoz en la escultura hispánica de la antigüedad tardía: los sarcófagos, digitAR 3, 2016, 119–128, DOI: 10.14195/2182-844X_3_14

Vinci et al. 2020 — S. Vinci – A. Ottati – D. Gorostidi (eds.), La cava e il monumento. Materiali, officine, sistema di costruzione e produzione nei cantieri edilizi di età imperiale (Rome 2020)

Waelkens et al. 1992 — M. Waelkens – N. Herz – L. Moens, Ancient Stones: quarrying, trade and provenance. Interdisciplinary Studies on Stones and Stone Technology in Europe and Near East from the Prehistoric to the Early Christian Period (Leuven 1992)

Ward-Perkins 1992 — H. Dodge – B. Ward-Perkins (eds.), Marble in Antiquity. Collected papers of J. B. Ward-Perkins, Archaeological Monographs of the British School at Rome 6 (London 1992)

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