

Iasos and Iasian Marble between the Late Antique and Early Byzantine Eras

Peirano, Diego

Source / Izvornik: **ASMOSIA XI, Interdisciplinary Studies on Ancient Stone, Proceedings of the XI International Conference of ASMOSIA, 2018, 123 - 130**

Conference paper / Rad u zborniku

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

<https://doi.org/10.31534/XI.asmosia.2015/01.11>

Permanent link / Trajna poveznica: <https://um.nsk.hr/um:nbn:hr:123:800819>

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

Download date / Datum preuzimanja: **2025-03-12**



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

PRESENTATION	15
NECROLOGY: NORMAN HERZ (1923-2013) by Susan Kane	17
1. APPLICATIONS TO SPECIFIC ARCHEOLOGICAL QUESTIONS – USE OF MARBLE	
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 th C.) and the Basilica of San Lorenzo (5 th 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 nd C. Bc – Late 1 st C. Ad) <i>Stefan Ardeleanu</i>	155
<i>Amethystus</i> : Ancient Properties and Iconographic Selection <i>Luigi Pedroni</i>	167
2. PROVENANCE IDENTIFICATION I: (MARBLE)	
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 Bahadir 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 th And 17 th 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 Silentiary, 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>Marmorata</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
3. PROVENANCE IDENTIFICATION II: (OTHER STONES)	
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
4. ADVANCES IN PROVENANCE TECHNIQUES, METHODOLOGIES AND DATABASES	
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
5. QUARRIES AND GEOLOGY	
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
6. STONE PROPERTIES, WEATHERING EFFECTS AND RESTORATION, AS RELATED TO DIAGNOSIS PROBLEMS, MATCHING OF STONE FRAGMENTS AND AUTHENTICITY	
Methods of Consolidation and Protection of Pentelic Marble <i>Maria Apostolopoulou, Elissavet Drakopoulou, Maria Karoglou and Asterios Bakolas</i>	749
7. PIGMENTS AND PAINTINGS ON MARBLE	
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
8. SPECIAL THEME SESSION: „THE USE OF MARBLE AND LIMESTONE IN THE ADRIATIC BASIN IN ANTIQUITY”	
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
INDEX OF AUTHORS	1009

IASOS AND IASIAN MARBLE BETWEEN THE LATE ANTIQUE AND EARLY BYZANTINE ERAS

Diego Peirano

Association Iasos of Caria, Ferrara, Italy (diego.peirano@polito.it)

Abstract

Iasian marble seemed to reach the highest point of its reputation in the 6th century when it appeared in three of the most important edifices built by Justinian: in the Constantinopolitan churches of Hagia Sofia and of the Holy Apostles and in the church of San Vitale in Ravenna. At the time, evidence of this material also became more frequent in Iasos. Firstly, the raw blocks found at Balık Pazarı¹, some ready to be sawn into slabs, then the columns and colonnettes discovered in the neighbouring quarries and in two of the Iasian churches. Here the marble also appears as mosaic tesserae in the acropolis basilica and as tiles in the agora basilica. Similarly, furniture such as tables made with *marmor iassense*, both rectangular and sigma-shaped, were found in secondary places everywhere throughout Iasos. A study of these elements, concerning their shapes, processing techniques and functions, is in progress. The preliminary results will be presented.

Keywords

use of marble, Iasos, furniture

Iasian marble was already known and was used for small objects from the Middle-Late Bronze Age² and for architectural elements between the Classical-Hellenistic³ and the Roman ages. At this time the systematic exploitation of the quarries as a planned intervention and investment by the polis seemed to have begun. In any case, examples of this marble only became more frequent in late

antiquity in Iasos⁴ and in the regions outside the Caria, while in the latter area there is little evidence of marble⁵.

In Iasos many tables found in secondary places pertain to this time; they assume different shapes, mainly circular, but sigmoid or rectangular ones have also been found. Between the last two types the *trait d'union* is the highly pointed edging that encloses the central surface. These kinds of tables were classified by Roux⁶ in the form of *clôturées*. They were extensively employed from late antiquity, in both domestic and ecclesiastical contexts⁷. In home furniture, circular and sigma shaped tables were used at the centre of half-moon dining couches named *stibadia*⁸ while rectangular was the usual shape of a central table for the *triclinia*⁹. In ecclesiastical settings, while circular and sigma shaped tables were used to collect offerings, more generally as secondary furniture, the rectangular form was preferred for altars¹⁰. However, the erratic discoveries of the Iasian series hinder any precise assumptions about their origin. The only indicative character of the potential uses is the smooth or rough under side. The former was designed to remain visible on metallic or wooden bases and was thus removable, the second requiring a masonry base. While the smooth underside is common to both types of tables,

1 About the monument: PARAPETTI 2013, 161–172.

2 At the time the inhabitants obtained from this stone small artefacts such as spindles and vessels. See: BERTI, PEIRANO 2014, 25 note 2 and related bibliography.

3 Different constructions such as watchtowers and terracing are located near the marble outcrops; here are also evident architectural elements including a small Doric capital: BERTI, PEIRANO 2014, 25 note 3.

4 Around the Common Era evidence of the material also became more frequent in Iasos: within the *bouleuterion* and south *stoa* of agora, always in portals or within *opus sectile* flooring. BERTI 1999, 336; PARAPETTI 1985, 105–136.

5 Few remains are conserved in Labraunda, Cnidos, Sinuri (sanctuary of high antiquity also next to outcrops where, as in the *chora* of Iasos, marble was used for construction and as a support for inscriptions), Xanthos, Ephesus. For Labraunda see BLID 2012, 58, fig. 45; for Cnidos YALCIN 1996, 122, fig. 20; for Sinuri ROBERT 1945, 14, tav. VIII; for Xanthos FROIDEVAUX, RAYNAUD 2005, 145; for Ephesus DEICHMANN 1976, 216, MANGARTZ *et al.* 2010, tav. 19.1; BRUNO 2012, 706.

6 ROUX 1973, 136.

7 TOCCI 2012, 115–116.

8 These appear at the end of the 3rd century. ELLIS 2000, 67.

9 DUNBABIN 1991, 123.

10 CHALKIA 1991, 54, note 117.

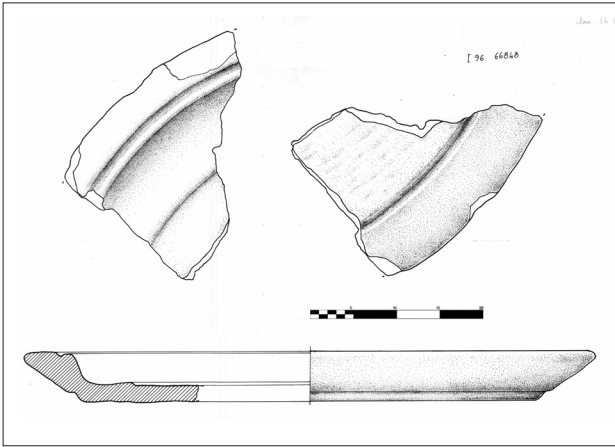


Fig. 1. Fragment of a circular table
(drawing: L. Ruffoni)

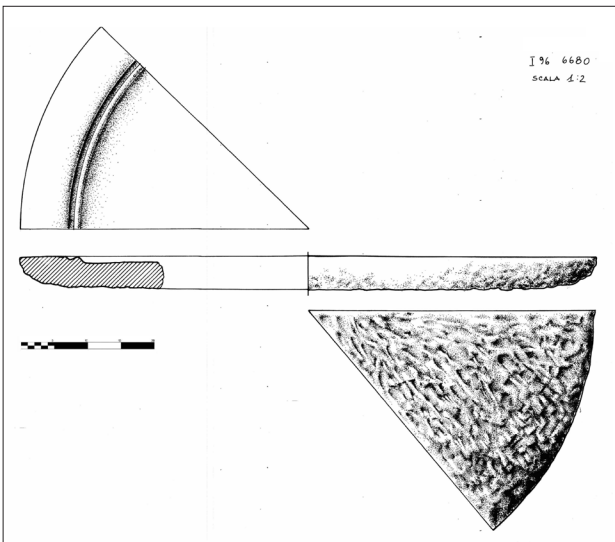


Fig. 2. Fragment of a circular table
(drawing: L. Ruffoni)

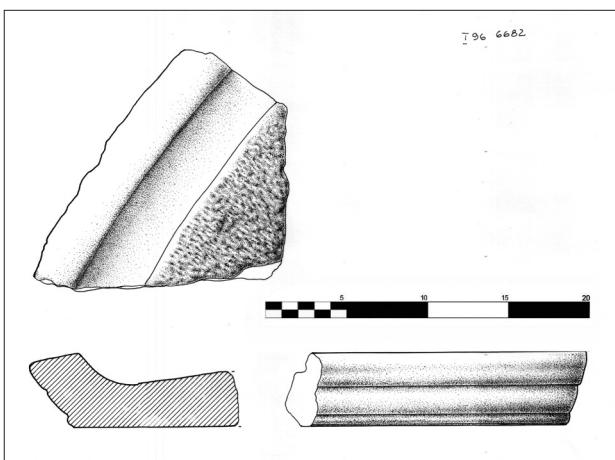


Fig. 3. Fragment of a circular table
(drawing: L. Ruffoni)

domestic or Christian, the masonry bases were habitual in *stibadia* but extremely rare in religious buildings¹¹.

It should also be noted how the high border is rare in sigma shaped tables¹² which, as stated, were mainly used for domestic purposes; due to this, the presence of the channel, originally sloped to rid the table centre of food residue, was rendered useless.

Let us now examine the most significant examples of these tables¹³, describing their processing and seeking to make a number of assumptions about their original settings.

Circular tables

As attested by the Pompeii findings, in addition to a number of fresco representations from the same city¹⁴, in secular buildings circular precede sigmoid tables. In late antiquity these continued to be used in *stibadia* as an alternative to sigma-shaped tables and were largely used in Christian buildings¹⁵.

A fragment made of red breccia (inv. no. 6684b) originated from a circular table with a deducible diameter of 66 cm. Its central area is smooth, both above and below, and is enclosed by means of a simple molded profile consisting of a fascia, a groove and a *cyma reversa*. Smoothing on both sides suggests that it may have rested on a base, perhaps wooden, allowing visibility while the reduced diameter hints that it may have been movable.

Instead, the fragment of table inv. no. 6680 has sides with only the base that is roughened, perhaps because they were intended for a masonry base; on top, a wide fascia was separated by a *scotia* from an astragal that leads to the central area, without the interposition of a frame (deducible diameter of 83 cm).

Fragment inv. no. 6682 (deducible diameter of 88 cm) has a similar profile with a smooth base and edges moulded by two fillets that frame a smoothed ovolo section. A feature of this piece is the channel following the borders and enclosing the central area, worked by a toothed chisel and with increasing thickness toward the centre. It seems unlikely that this is an unfinished conventional table; before sanding of the edges the artisan would have had to have lowered the central area; as such, the idea of a table intended for particular uses must be considered.

11 See the examples of Kos, Aliko and Kourion. On these, respectively: ORLANDOS 1966, 32–34, figs. 32–34; SODINI KOLOKOTSAS 1984; 462 and 466, fig. 15; LOVERANCE 2007, 322.

12 CHALKIA 1991, 45.

13 For the full records see: BERTI, PEIRANO 2014, 31–34.

14 VROOM 2007, 320.

15 CHALKIA 1991, 46 ff., 73 ff.

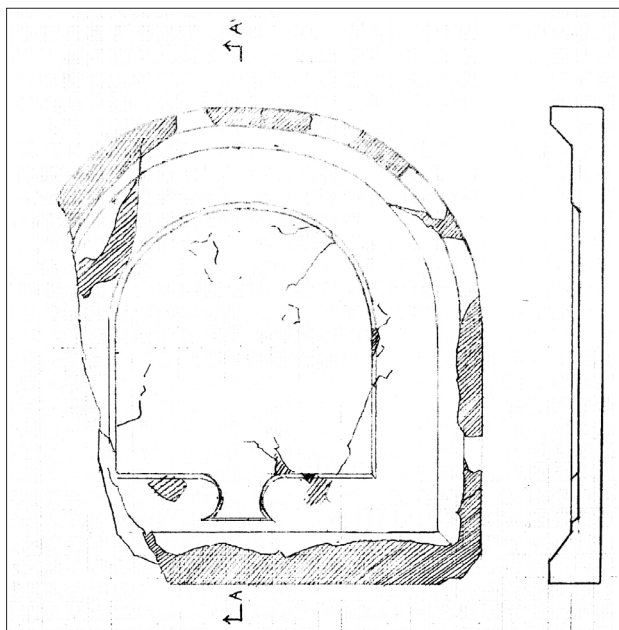


Fig. 4. A sigma shaped *clôturée* table (drawing: D. Peirano)



Fig. 5. Fragmentary rectangular *clôturée* table (photo: D. Baldoni)



Fig. 6. Fragment of a red breccia table (photo: M. Molinari)

Sigma shaped table

Sigma shaped tables appear in the banquet halls at the end of the fourth century¹⁶ and within Christian buildings from the following century¹⁷.

A sigma shaped *clôturée* table (inv. no. 2050) was found in front of an apsed room containing mosaics, within the so-called east basilica complex¹⁸. As usual the table has square proportions, 1.03 x 1.02 meters. It is 11 cm high at the border, 6 cm at the internal cornice and 5 cm at the centre. The table was made of veined marble and shows the typical central surface enclosed by a large cornice interrupted by a channel with rounded edges. The rough underside and edges, created using a point chisel, show how this table should rest on a masonry base; however, the absence of *stibadia* in the parts of this building that have been explored means that the true origin of the table remains unclear¹⁹.

Rectangular tables

The fragmentary *clôturée* table inv. no. 6663, made of brecciated marble, is 89 cm wide, 10.8 cm high at the edge, 4 cm at the inner frame and 2.8 cm in the central part; the length, however, cannot be determined. The rectangular shape associated with the *clôturée* border and the apparent absence of the channel on the short side, usual in this kind of table, are characteristic of this piece²⁰. The smooth base indicates that this was visible.

Another fragment of red breccia table, *clôturée* and belonging to a corner of a table, was found in the recent excavations of the castle of the Acropolis²¹: it is likely that the table was part of the furnishings of the nearby

16 DUNBABIN 2003, 191.

17 The first to suppose a derivation of the Christian sigma shaped tables from those of banquet halls was LASSUS 1940, 348–349; LASSUS 1947, 199–201, following the discovery of two of these pieces of furniture in private buildings of Antioch.

18 *Contra* SERIN 2004, 137 that relates this table to the acropolis basilica.

19 This unless one would interpret the masonry wall that closes the apse devoid of a floor mosaic as the front part of one *stibadium*. However, this hypothesis collides with the thickness of the apse's wall (74 cm) which seems to suggest a high wall, incompatible with the access to the rear structure, already limited by the reduced chord of the apse. On *stibadia* see MORVILLEZ 1996; DUNBABIN 1991; DUVAL 1997.

20 CHALKIA 1991, 42.

21 PEIRANO 2012, 28. On this excavation: BERTI, MENGOLI, MOLINARI 2011, 386–396.



Fig. 7. San Vitale in Ravenna, wall cladding made of Iasian cipollino (photo: D. Peirano)

Christian basilica where, in fact, a rectangular altar base (133 x 88 cm) was found²².

Among the production of Iasian tables, all forms and profiles known exist with the exception of polylobed ones. Common traits are linear forms, devoid of figurative representations, symbols or inscriptions. These choices were made by workshops that only attended to local needs. In fact, with the exception of a round table stored at the Museum of Milas²³, there are no current findings of this type evident outside the city. It seems, then, that the frequent occurrence of high borders can be attributed to local custom.

Iasian marble was also used for pavement *sectilia* as in the east church or cathedral of Xanthos (late 5th century – beginning 6th century), in church D of Knidos (late 5th century – beginning 6th century)²⁴ or in the basilica of Mitropolis in Gortyna, where it appears in the floor of the lane crossing the solea from north to south (second half of the 6th century)²⁵.

The stone seemed to reach the highest point of its reputation in the 6th century when it appeared alternating with other precious polychrome marble in some of

22 SERIN 2004, 136.

23 BERTI, PEIRANO 2014, 52.

24 YALCIN 1996, 110.

25 FARIOLI CAMPANATI, BORBOUDAKIS 2005, 167.



Fig. 8. Basilica of St. John in Ephesus, the column bases that enclosed the presbyterium (photo: M. Molinari)

the most important edifices of the time. Firstly in Bosra, in the wall revetments of the Church of SS. Sergius, Bacchus and Leontius, dated to the years 512–513²⁶. The octagonal church in Gadara, Jordan, from the early 6th century, also conserves traces of Iasian marble²⁷ but in an unknown position.

The first occurrence in Constantinople is related to the church of Saint Polyeuktos, built under the patronage of Anicia Giuliana in the years 524–527; here the marble appeared in slab lining and *sectilia*²⁸.

At the time the marble seemed to become one of the most appreciated revetments in the buildings built by Justinian and his entourage: the Constantinopolitan churches of Hagia Sofia (562²⁹) and of the Holy Apostles (after 565³⁰) and in the San Vitale church in Ravenna (548³¹). From the description of St. Sofia written by Paul the Silentiary, we know that the atrium *phiale* was made of red cipollino, similar to the wall claddings³², where the stone took the form of open book slabs. In Holy Apostles and in San Vitale also, the same marble appeared on wall claddings³³. Another church in Ravenna, the Sant'Andrea Maggiore (546–556), had columns made from Iasian marble³⁴. Two of these are now conserved in

26 MASTURZO 1995, 378.

27 AL-BASHAIREH 2011, 317 and 320.

28 HARRISON 1993, 42.

29 RUSSO 2011.

30 THEOPHANES, Chronographia, A.M. 6058/A.D. 565.

31 RUSSO 1996, 710.

32 SILENZIARIUS, Description S. Sophiae, 595, 630.

33 SODINI 2002, 131.

34 The insertion of these columns, whose original position is unknown, may be related to the works promoted by



Fig. 9. Above the monumental tomb where marble slabs were sawn; below the nearby aqueduct (photo: M. Molinari)

the local cathedral. Choricus of Gaza tells us that Iasian marble was also present in the church of St. Sergius in Gaza (before 536³⁵) although in an unknown location³⁶. In the basilica of St. John in Ephesus (c. 560) the column bases that enclosed the presbyterium and certain portal elements³⁷ are made of red cipollino.

The description of Hagia Sophia written by Paul the Silentiary cites Iasian marble together with others produced by well-known imperial quarries; it thus seems probable that at this time the extraction of our marble was also an imperial privilege.

At the same time the stone also became part of local churches, initially as mosaic *tesserae* in the acropolis

the bishop Maximianus. The prelate, according to Agnellus of Ravenna, replaced the original wooden supports of the aisles with others made from Proconnesian marble. *Liber pontificalis ecclesiae ravennatis*, ed. Holder Hegger 329; DEICHMANN 1972, 61–64.

35 MANGO 1986, 60 note 25.

36 CORICIUS, *Laudatio Marciani*, I, 17 ss.

37 SODINI, BARSANTI, GUIGLIA GUIDOBALDI 1998, 315; SODINI 2002, 133.



Fig. 10. A block conserving traces of cutting (photo: Levi's excavations, Archive SAIA)

basilica (late fifth-early sixth century³⁸); these reappear in the agora basilica (Justinianic age³⁹) where Iasian marble was also found in square, rectangular and triangular tiles of the *sectilia*. In the basilicas small columns of unknown origin were also found⁴⁰.

This limited use in local construction, together with the presence of imported marble, also fine, suggests that the value assigned to this marble made it more profitable to export, with a tendency to purchase other types of marble rather than using this particular one.

As is known⁴¹, slabs of cipollino marble⁴² were cut into the quadriporticus of a 2nd century tomb located near the east port and the aqueduct which supplied water power⁴³. That particular transformation of the tomb resembles one represented on a sarcophagus in Hierapolis⁴⁴ and those discovered in Ephesus and Gerasa⁴⁵. These examples date from the late 3rd to the 6th–7th century. These data, together with the systematic evidence of slabs in buildings of the 6th century, suggest the Late Antique – Early Byzantine eras for the insertion of the workshop. The excavations of two galleries of the quadriporticus unearthed, on an emery thick layer, 114 discarded blocks

38 SERIN 2004, 188.

39 PEIRANO 2011, 15 note 1.

40 SERIN 2004, 82.

41 BRUNO 2012, 706–714.

42 In fact, no traces of breccia were found in the workshop. BRUNO 2012, 708.

43 The quadriporticus pavements were located at least 4 m. below the water level. BRUNO 2012, 711 note 21. Compare these data with KESSENER 2010, 286–287.

44 RITTI, GREWE, KESSENER 2007, 138–163.

45 See respectively: MANGARTZ 2010; SEIGNE 2006, 371–378.

with traces of multiple saw blades. Excavations also extracted a flat chisel, one of which was used to regularise the corners⁴⁶. Instead, columns roughened with point chisels left at quarries testify to the processing of these pieces in these areas.

Extraction could take place in the quarry closest to the city but located in a gorge (which increased the cost and time due to transportation by animals) or in the wider quarry front on Karaođlan Deresi. In the latter case, the stone-boating road identified during the surveys in Chora⁴⁷ allowed the material to be taken down as far as the "small sea", until boarding and transportation; from the port of the peninsula it would then be shipped, worked or not.

If the extraction of marble was related to initial transportation by sea⁴⁸, the sea was the main route for shipping of *marmor iassense*, which, as mentioned, is rarely evident in Caria and in the surrounding areas. The map of the findings, drawing two roughly concentric circles (the first corresponding to the Aegean Sea, the second to the central and eastern Mediterranean) shows that they are almost exclusively found along the coasts⁴⁹.

A small port such as Iasos probably depended on the most important *emporion* of Ephesus; from here the marble, sorted and then combined with others from different areas, ultimately reached the final destination.

The many wrecks with worked and semi-worked marble shed light on the means of transportation (the "lapidary vessels"). Particularly strong evidence in this regard is provided by the wrecks of La Mirande, Torre Sgarlata, of Porto Nuovo and of Punta Scifo D⁵⁰.

To this primary production must be added mortars of different capacity and with a different degree of precision, some with grips decorated with geometrical patterns and/or representations such as diagonal patterns, segments, oblique crosses or other simple geometries, but also the figure of the dove. The extensive

documentation, collected along the entire Mediterranean⁵¹, helps to date these finds, made in Iasos mainly from brecciated marble, to the seventh century.

The excavations also evidence the production of basins and trays, generally small and difficult to distinguish due to the fragmentary condition, with the remains mainly from the edges. Some of these maintain, on the underside, traces of an umbo that testify as to how they should stand on a base. The pieces made of cipollino, regardless of their size, are shallow, depending on the need to use the veins during manufacturing.

Other examples originating from the Mediterranean basin suggest how this lower level of output might be related to the inactive periods of quarries⁵². Numerous constructions are evident close to the quarries where many fragments and artefacts, some related to Byzantine times, offer clues as to the local marble processing method.

Some provisional conclusions

In Iasos, before the 6th century, the production and export of architectural artefacts seems limited to columns while items such as tiles might be derived from sawing of the former. Tables were instead confined to the city and surrounding areas, as well as to certain by-products such as mosaic tiles.

At the beginning of the 6th century and even more during the Justinian era, marble quarrying became more intensive, almost reaching "industrial" levels. It should be remembered that 114 blocks with saw traces were found in the Balık Pazarı and were the waste products of a much wider manufacturing process. The sources, in addition to the excavation data, suggest the use of marble as a lavish material in construction promoted by the most eminent patrons of the time, juxtaposed with other exotic coloured marble extracted from imperial quarries. Even in the absence of any direct evidence of imperial ownership of the Iasian quarries, the contemporary appearance of a workshop capable of slab sawing, an operation that used a public resource such as the aqueduct, seems to suggest a fiscal property for the entire production chain.

The city of Iasos undoubtedly drew important economic benefit, as testified by the excavations. The circulation of coins increased for another century, evidence of which is confirmed by the ceramics and amphorae, some of Constantinopolitan origin. These data depict a wealthy city where marble would also get into everyday life in the form of basins, trays and mortars.

46 MENICHINI 2011, 335.

47 PIEROBON BENOIT 2011, 411 ff.

48 MARANO 2014, 415.

49 LAZZARINI, CANCELLIERE, PIEROBON BENOIT 2005, 322, fig. 2.

50 RUSSELL 2011, 139–155; in the sixth century onwards the marble intended to be sawn could travel in the form of blocks (requiring, once it arrived, equipment and labor to be worked), but wrecks with marble slabs are also known. Wrecks with marble slabs, from the sixth century onwards, are recorded in CASTAGNINO BERLINGHIERI, PARIBENI 2011, 64–75. On *naves lapidariae* MEDAGLIA, BELTRAME, LAZZARINI 2013, 137–165 and the related bibliography.

51 BERTI, PEIRANO 2014, 46 and related bibliography.

52 MARANO 2014, 421.

BIBLIOGRAPHY

- AL-BASHAIREH K. 2011: "Provenance of marbles from the octagonal building at Gadara "Umm-Qais", Northern Jordan", *Journal of Cultural Heritage* 12, 317–322.
- BERTI F. 1999: "Precisazioni su uno scutulatum iasio", *Gli scavi italiani a Iasos in Caria, La Parola del Passato* 54, 333–342.
- BERTI F., MENGOLI D., MOLINARI M. 2011: "Iasos (Turchia). Relazione preliminare sulle ricerche archeologiche compiute nel castello dell'acropoli", *Archeologia Medievale* 37, 386–396.
- BERTI F., PEIRANO D. 2014: "Il marmo iasio e alcuni dei manufatti a esso collegati", *Marmora* 10, 25–37.
- BERTI F., PEIRANO D. 2016: "Iasos di Caria e il rilancio del suo porto in età bizantina: il ruolo del marmo", *Hortus Artium Medievalium* 22, 178–190.
- BLID J. 2012: *Felcium Temporum Reparatio. Labraunda in Late Antiquity (c. ad 300–600)*, Stockholm.
- BRUNO M. 2012: "Quarry Blocks in Marmor Iassense from the Balık Pazarı at Iasos (Turkey)", in *ASMOSIA IX*, 706–714.
- CASTAGNINO BERLINGHIERE F., PARIBENI A. 2011: "Byzantine Merchant Ships and Marble Trade", *Skyllis* 11, 64–75.
- CHALKIA E. 1991: *Le mense paleocristiane. Tipologia e funzioni delle mense secondarie nel culto paleocristiano*, Città del Vaticano.
- DEICHMANN F. W. 1972: "Studi sulla Ravenna scomparsa", *Felix Ravenna*, 103–104, 61–112.
- DEICHMANN F. W. 1976: *Ravenna. Hauptstadt des spätantiken Abendlandes, II.2*, Wiesbaden.
- DUNBABIN K. M. D. 1991: "Triclinium and stibadium", in W. J. SLATER (ed.): *Dining in a Classical Context*, Ann Arbor, 121–148.
- DUNBABIN K. M. D. 2003: *The Roman Banquet. Images of Conviviality*, Cambridge.
- DUVAL N. 1997: "Le lit semi-circulaire de repas: une invention d'Hélagabale? (Hel.25, 1.2–3)", in G. BONAMENTE, K. ROSEN (eds.): *Historiae Augustae Colloquium Bonnense*, Bari, 129–152.
- ELLIS S. P. 2000: *Roman Housing*, London.
- FARIOLI CAMPANATI R., BORBOUDAKIS M. 2005: "La decorazione pavimentale e parietale della Cattedrale di Gortyna. Nuovi elementi di datazione del pavimento musivo della navata", in H. MORLIER (ed.): *La mosaïque Gréco-romaine IX. Actes du IX Colloque international pour l'étude de la mosaïque antique et médiévale*, 165–171.
- FROIDEVAUX M. G., RAYNAUD M. P. 2005: "Les sols en opus sectile et leur contexte architectural dans la Basilique épiscopale de Xanthos", in F. BARATTE (ed.): *Mélanges Jean-Pierre Sodini*, Paris, 277–298.
- HARRISON R. M. 1993: "Monumenti e urbanistica nella città", in A. GUILLOU (ed.): *La Civiltà bizantina, oggetti e messaggio: architettura e ambiente di vita*, Roma, 27–74.
- KESSENER P. 2010: "Stone Sawing Machines of Roman and Early Byzantine Times in the Anatolian Mediterranean", *Adalya* 13, 283–303.
- LASSUS J. 1940: "Remarques sur l'adoption en Syrie de la forme basilicale pour les églises chrétiennes", *Atti del IV Congresso Internazionale di Archeologia Cristiana*, Città del Vaticano, 335–353.
- LASSUS J. 1947: *Sanctuaires chrétiens de Syrie. Essai sur la genèse, la forme et l'usage liturgique des édifices du culte chrétien, en Syrie, du III^e siècle à la conquête musulmane*, Paris.
- LAZZARINI L., CANCELLIERE S., PIEROBON BENOIT R. 2005: "Il marmo di Iasos: cave, uso, caratterizzazione e indagini archeometriche", *La Parola del Passato*, 341–345, 320–330.
- MANGARTZ F. *et al.* 2010: *Die byzantinische Steinsäge von Ephesos*, Regensburg.
- MANGO C. 1986: *The Art of the Byzantine Empire 312–1453*, Toronto.
- MARANOY. A. 2014: "Le cave di marmo nella tarda Antichità: aspetti organizzativi e produttivi", in *Arqueología de la Producción – Le cave nel mondo antico: sistemi di sfruttamento e processi produttivi*, *Proceedings of International Conference*, 413–427.
- MASTURZO N. 1995: "Architettura siriana pre-justiniana: la chiesa dei SS. Sergio, Bacco e Leonzio. Problemi interpretativi e di conservazione", *Corsi di Cultura e Arte Bizantina* 41, Ravenna, 369–386.
- MEDAGLIA S., BELTRAME C., LAZZARINI L. 2013: "La navis marmorum di età romana 'Punta scifo D' (Crotone). Risultati preliminari della prima campagna di indagini subacquee", *Rivista di Archeologia* 37, 137–165.
- MENICHINI M. 2011: "Su un gruppo di attrezzi da lavoro risalenti probabilmente a età tardo antica da Iasos", *Atti dell'Accademia delle Scienze di Ferrara*, 88, 329–338.
- MORVILLEZ E. 1996: "Sur les installations de lits de repas en sigma dans l'architecture du Haut et du Bas-Empire", *Pallas* 44, 119–158.
- ORLANDOS A. K. 1966: "Δύο παλαιοχριστιανικά βασιλικά τηςΚω", *Archaïologiki Ephemeris*, 1–98.
- PARAPETTI R. 1985: "Il Bouleuterion: aspetti architettonici e decorativi" in *Studi su Iasos di Caria. Venticinque anni di scavi della Missione Archeologica Italiana*, *Bollettino d'Arte*, suppl. 31–32, 105–136.

- PARAPETTI R. 2013: “Anastilosi grafica del monumento funerario nel Balik Pazari di Iasos”, in D. BALDONI, F. BERTI, M. GIUMAN (eds.): *Iasos e il suo territorio*, Roma, 161–172.
- PEIRANO D. 2011: “Ricerche su *assetti, arredi, percezione* nella basilica dell'agorà di Iasos”, *Bollettino dell'associazione Iasos di Caria* 17, 10–16.
- PEIRANO D. 2012: “Il ciborio della basilica dell'acropoli”, *Bollettino dell'associazione Iasos di Caria* 18, 25–30.
- PIEROBON BENOIT R. 2011: “Il territorio di Iasos: nuove ricerche (2006–2008)”, in L. KARLSSON, S. CARLSSON (eds.): *Labraunda and Karia. Proceedings of the International Symposium Commemorating Sixty Years of Swedish Archaeological Work in Labraunda*, *Boreas* 32, 389–423.
- RITTI T., GREWE K., KESSENER P. 2007: “A relief of a water-powered stone saw mill on a sarcophagus at Hierapolis and its implications”, *Journal of Roman Archaeology* 20, 139–163.
- ROBERT L. 1945: *Le sanctuaire de Sinuri près de Mylasa*, I, Paris.
- ROUX G. 1973: “Tables chrétiennes en marbre découvertes à Salamine de Chypre”, in *Salamine de Chypre* 4. *Anthologie salaminienne*, Paris, 133–196.
- RUSSELL B. 2011: “*Lapis transmarinus*: stone-carrying ships and the maritime distribution of stone in the Roman empire”, in D. ROBINSON, A. WILSON (eds.): *Maritime Archaeology and Ancient Trade in the Mediterranean*, Oxford, 139–155.
- RUSSO E. 1996: s. v. Ravenna, in *Enciclopedia dell'arte antica classica e orientale*, II suppl., IV, Roma, 703–718.
- RUSSO E. 2011: *Le decorazioni di Isidoro il Giovane per S. Sofia di Costantinopoli*, Roma.
- SEIGNE J. 2006: “Water-powered Stone Saws in Late Antiquity. First Step on the Way to Industrialization?”, in G. WIPLINGER (ed.): *Cura Aquarum in Ephesus. Proceedings of the Twelfth International Congress on the History of Water Management and Hydraulic Engineering in the Mediterranean Region*, Dudley-Leuven, 371–378.
- SERIN U. 2004: *Early Christian and Byzantine Churches at Iasos in Caria. An Architectural Survey*, Città del Vaticano.
- SILVESTRINI M. 2006: “Una dedica al *Sole nella cattedrale* di Bari”, in *Studi in onore di Francesco Grelle*, Bari, 369–379.
- SODINI J. P., KOLOKOTSAS K. 1984: *Aliki II: la basilique double*, Paris.
- SODINI J. P., BARSANTI C., GUIGLIA GUIDOBALDI A. 1998: “La sculpture architecturale en marbre au VI^e siècle à Constantinople et dans les régions sous influence constantinopolitaine”, in *Acta XIII Congressus internationalis archaeologiae christianae*, Città del Vaticano, 301–376.
- SODINI J. P. 2002: “Marble and stoneworking in Byzantium, seventh-fifteenth centuries”, in A. LAIOU (ed.): *The economic history of Byzantium: from the seventh through the fifteenth century*, Washington, 129–146.
- TOCCI 2012: “Le tavole “sigma”: alcuni frammenti da Bakchias”, in P. BUZI, S. PERNIGOTTI (ed.): *Lo scriba e il suo re: dal documento al monumento*, Imola, 115–137.
- VROOM I. 2007: “The Archaeology of the Late Antique Dining Habits”, in L. LAVAN, E. SWIFT, T. PUTZEYS (ed.): *Objects in Context, Objects in Use: Material Spatiality in Late Antiquity*, Leiden-Boston, 313–361.
- YALCIN A. B. 1996: “Alcune osservazioni sul decoro scultoreo e musivo delle chiese protobizantine di *Cnido* in Caria” in *Bisanzio e l'Occidente: arte, archeologia, storia. Studi in onore di Fernanda de' Maffei*. Roma, 105–123.