

# Ancient Marbles from the Villa in Verige Bay, Brijuni Island, Croatia

---

**Pavletić, Mira; Gobić-Bravar, Đeni**

*Source / Izvornik:* **ASMOSIA XI, Interdisciplinary Studies on Ancient Stone, Proceedings of the XI International Conference of ASMOSIA, 2018, 879 - 886**

**Conference paper / Rad u zborniku**

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

<https://doi.org/10.31534/XI.asmosia.2015/08.07>

*Permanent link / Trajna poveznica:* <https://um.nsk.hr/um:nbn:hr:123:866438>

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

*Download date / Datum preuzimanja:* **2024-11-23**



*Repository / Repozitorij:*

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



UNIVERSITY OF SPLIT

DIGITALNI AKADEMSKI ARHIVI I REPOZITORIJI



# ASMOSIA XI

Interdisciplinary Studies on Ancient Stone

## PROCEEDINGS

of the XI ASMOSIA Conference, Split 2015

Edited by Daniela Matetić Poljak and Katja Marasović



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

Publishers:

ARTS ACADEMY IN SPLIT  
UNIVERSITY OF SPLIT

and

UNIVERSITY OF SPLIT  
FACULTY OF CIVIL ENGINEERING,  
ARCHITECTURE AND GEODESY

Technical editor:  
Kate Bošković

English language editor:  
Graham McMaster

Computer pre-press:  
Nikola Križanac

Cover design:  
Mladen Čulić

Cover page:

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

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

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

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

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

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

Association for the Study of Marble & Other Stones in Antiquity

# ASMOSIA XI

Interdisciplinary Studies of Ancient Stone

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

Edited by  
Daniela Matetić Poljak  
Katja Marasović



Split, 2018

**Nota bene**

All papers are subjected to an international review.

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

# CONTENT

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

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



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

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

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

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

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

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

## ANCIENT MARBLES FROM THE VILLA IN VERIGE BAY, BRIJUNI ISLAND, CROATIA

Mira Pavletić<sup>1</sup> and Đeni Gobić-Bravar<sup>2</sup>

<sup>1</sup> Department for the Protection of Cultural Heritage, Public institution Brijuni National Park, Fažana, Croatia (m.pavletic@np-brijuni.hr)

<sup>2</sup> Archaeological Museum of Istria, Pula, Croatia (gobic-bravar@ami-pula.hr; geni.gobic.bravar@gmail.com)

### Abstract

During many years of research of the luxurious Roman villa in Verige Bay on Veli Brijuni, Austrian conservator Anton Gnirs found the fragments of floor and wall coverings and decorations made of marble. While in the early report he indicated only the colours, in the last report he accurately determined the type of marbles. The objective of this study is to identify the remainings of marbles and complement them by materials found in the bay at the end of the last century. By determining the types of marble which decorated different buildings in the bay, we will get a complemented picture of the brilliance of this Roman villa as another confirmation of its luxurious equipment and find out with which quarry sites of the Mediterranean basin the small port in the Verige Bay was connected.

### Keywords

roman villa, use of coloured marble, Anton Gnirs, historical research on marble, Brijuni island - Croatia

### About the villa complex

The Roman villa in Verige Bay on the eastern coast of Veliki Brijun is the largest ancient residential complex in Istria. It consisted of several buildings for different purposes located at various positions along the bay (Fig. 1). This included: a residential-production building located on three terraces, a temple area, diaeta, palestra, thermae, a fish pond and another work area. All buildings were connected into one whole, with a system of open and closed walkways (porticos and cryptoporticus) that extended the length of one kilometre along the bay. The construction of the villa started in the 1<sup>st</sup> century BC, and some parts were still in use until the 6<sup>th</sup> century. Austrian historian, archaeologist and conservator Anton Gnirs (1873-1933) excavated the site between 1903 and 1914. During those years there were still plenty of marble decorations in the

villa<sup>1</sup>. At that time some of the objects were already being exhibited in a small museum on the island<sup>2</sup> where they are still today, while part of the findings have been stored at the Archaeological Museum of Istria in Pula.<sup>3</sup> The villa was also richly decorated with mosaics, fresco paintings and stucco decorations.<sup>4</sup>

The villa consisted of several buildings for various purposes situated at carefully selected locations along the bay. The luxurious residential-cum-production villa, with its structures descending towards the sea shore, dominated the bay.<sup>5</sup> It was architecturally designed around two peristyles at the highest point of the villa. The sea-facing front of both the production and residential architectural units was unified by a porch over 100 meters in length at the level of the lowest terrace. At the inner most point of the bay stood the temple area. This consisted of the temple of Neptune on the south, the temple of Venus on the north and probably the temple of the Capitoline Triad between them. Next to the temple area, following the sea shore, were the rooms for priests, dieta, palestra, a spa, a fish pond and another production area situated on the northern side of the bay. All the buildings were connected by an interesting system of open and closed paths that extended for a kilometre along the sea front, thus forming an architectural complex in perfect harmony with the landscape. The whole complex had a built coastline made of large stone blocks which presently stands about 1 meter below sea level.<sup>6</sup> The access to the port was regulated with

1 GNIRS 1904, 131-146; GNIRS 1907, 43-58; GNIRS 1908, 167-186; GNIRS 1915, 99-163; GNIRS 1930, 177-190.

2 GNIRS 1930, 178, n. 6.

3 GIRARDI-JURKIĆ, DŽIN 2001, 33.

4 See note 2; GNIRS 1902, 44-48; GNIRS 1906, 29-48; GNIRS 1908a, 124-143.

5 JURIŠIĆ, ORLIĆ 1987, 99; JURIŠIĆ 1991, 28.

6 GNIRS 1915, 99-163; BEGOVIĆ-DVORŽAK 1990, 97-110; BEGOVIĆ-DVORŽAK 1993, 25-45; BEGOVIĆ-DVORŽAK 1995, 47-54; BEGOVIĆ-DVORŽAK 1997, 85-96; DE FRANCESCHINI 1998, 618-676.

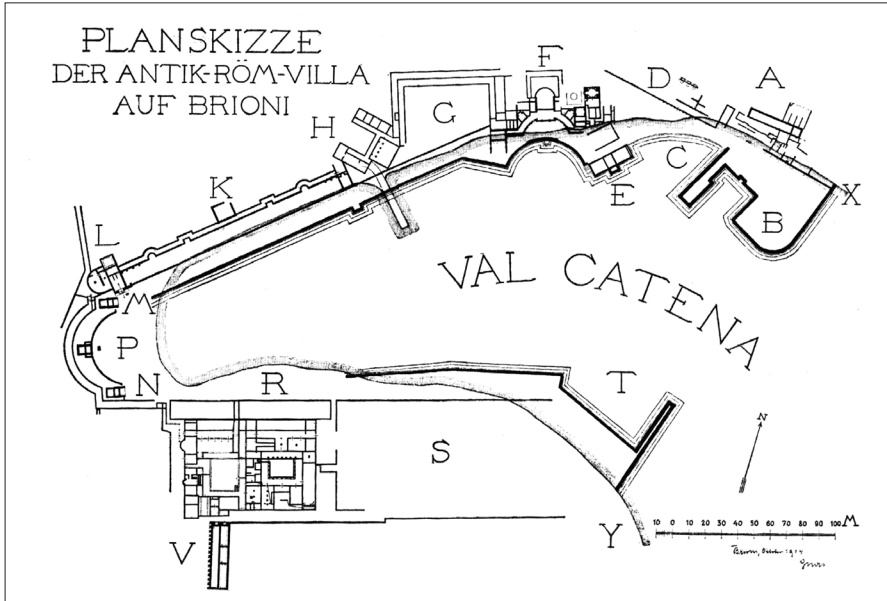


Fig. 1.  
Plan of the Verige bay complex



Fig. 2.  
Aerial view of the three-terrace villa and the temple area

a big chain that stretched between the two opposite shorelines, after which the bay itself was named (a chain is called *verige* in Croatian).

Marble decorations were found in almost every part of the complex: the residential part of the villa, the temple area, the portico, the *thermae* and in the rooms for the priests. Marble was used for floor pavement and wall decoration. However, the data collected during the excavation couldn't show how richly the villa was furnished because most of the marble disappeared into the lime kiln located in the bay. Through the examination of the remains of the lime kilns, Gnirs was able to prove the existence of the remains of destroyed sculptures that

were made of the finest types of marble<sup>7</sup>. He found these fragments within the waste of the Byzantine and the early Venetian lime kiln. According to the stratigraphy of the ash mound, which was swept away during the time of his research, Gnirs concluded "that during the Middle Ages, the material that was first thrown into the limekiln was the valuable and easily accessible marble sculptures and architectural fragments"<sup>8</sup>.

Therefore, the preserved parts of marble revetment and marble decoration from the villa are even more precious. We must also take into account that, until 1915,

7 GNIRS 1930, 179-180, n. 7.

8 *op. cit.*





Fig. 3.  
Pilaster made  
of white marble,  
from room XIII

when “giallo africano” and “pavonazzetto” were mentioned for the first time as types of marble found in the *thermae*, the descriptions of the marble material that Gnirs left us were limited to its colour and sometimes dimensions.

### The three-terraced villa

Inside the complex of the three-terraced villa (Fig. 2) there were residential rooms for the owner and his guests and all the auxiliary spaces such as: summer and winter dining rooms, a hall with two rows of columns, *balneum*, a kitchen, rooms for the servants, spaces for slaves, spaces for olive oil production and storage rooms. Some of the reception spaces of the villa were paved with mosaic floors, with tiles made of marble, imported coloured limestone and local white limestone. Gnirs described the mosaic floor in room XVII as made of “black and white marble tiles of 1 cm in size.” This mosaic was divided into rectangular fields with a side length from 23 to 25 cm. In the centre of the mosaic there were polychrome scenes of fruits and flowers.<sup>9</sup> Another mosaic, the one in room XIII, was made of marble tiles forming a meander and

geometric ribbon ornaments and in the middle of it there was an *emblema vermiculatum*.<sup>10</sup> In this room, a marble architectural fragment was also found; a pilaster of white marble, measuring 10.5x6.2x30.8 cm (Fig. 3), with two sides decorated with stylized floral elements.<sup>11</sup>

Other floors were made in the *opus sectile* technique. Gnirs described the floor of the *balneum*, E, as made of “black and white floor marble slabs (side length 30 cm)” (Fig. 4).<sup>12</sup> And the floor of room H, the so called ‘room with two rows of columns’ was “paved with large slabs of coloured marble”. The remains of some of the marble were found in the waste, such as: a square plate (side length 22 cm) made of white marble and red veined marble (Fig. 4). According to the description made by Gnirs it is possible to assume that the floors were paved in a simple, rectangular module as described by Guidobaldi (the Q module with two interchanging colours).<sup>13</sup> A very similar floor was found at the Roman villa of Cazzanello<sup>14</sup> and at the Villa dei Misteri in Pompei. There was also a find of a small white plate with a side length of 9 cm.<sup>15</sup> And in room XIV there were “floor slabs of black and white marble” as well as “large basalt pieces”.<sup>16</sup>

### The temple area

At the innermost point of the bay there was the temple area, which consisted of three temples of the tetrastylous prostyle type, of small dimensions (20x40 Roman feet according to Vitruvius).<sup>17</sup> The three temples were surrounded from their rear side with a semicircular porch. According to the discovered sculptural remains, the southern temple was dedicated to the god of the sea Neptune, and the northern to the goddess of love and beauty Venus, who was considered the mother of the emperors from the Julius family. The central temple, set back further from the other two temples, was probably dedicated to the Capitoline triad.

Within the temple area Gnirs found fragments of small marble columns, which today cannot be located. Near the temple of Venus he found two fragments of a column with an elliptical cross-section. The column was made of white marble, decorated with laurel leaves that

10 GNIRS 1915, 104, fig. 39.

11 GNIRS 1915, 105, fig. 40.

12 GNIRS 1915, 120.

13 GUIDOBALDI 1993, 171-251.

14 AOYAGI 2005, 339-352; AOYAGI 2003, 187-244.

15 GNIRS 1906, 37.

16 GNIRS 1915, 106-107.

17 GNIRS 1904, 136-137; GNIRS 1906, 25-28; GNIRS 1908, 167-172.

9 GNIRS 1915, 109-110, fig. 43.



Fig. 4.  
Black limestone  
slab, and breccia  
corallina slab



Fig. 5.  
Part of an arm,  
parts of curls and a  
small *aedicula* with  
holes for mounting.  
White marble

overlap like scales, with a triangular space between the leaves filled with three berries on one of the fragments. He also found a twisted marble pillar with an elliptical cross-section, which was decorated with leaves on its much damaged lower part.<sup>18</sup>

The most significant fragments of marble sculptures that Gnirs found (Fig. 5) were located in the area of the temples in Verige Bay. These were small fragments, such as the thumb of a female hand, folds of clothes and curls of hair (Fig. 5). However the most important object discovered was part of a *hydria* (Fig. 6), a vessel with three handles for the transportation of water. It was found in 1907.<sup>19</sup> It was richly decorated with palmettes and antithetically placed flying swans made of white fine-grained marble. These finds helped him to recognize a Roman copy of the famous Praxiteles statue of Aphrodite from the island of Cnidus.<sup>20</sup>



Fig. 6. Hydria, part of a sculpture, in white marble, from the temple area

18 GNIRS 1906, 39.

19 GNIRS 1907, 50; GNIRS 1930, 178-181, fig. 82, 84; BEGOVIĆ-DVORŽAK 1993, 28-29, fig 2.

20 GNIRS 1930, 180.



Fig. 7.  
Fragments of giallo antico, probably wall and/or floor decoration



Fig. 8.  
Thick and thin fragments of pavonazzetto marble

In the nearby so called “Priest’s apartments” Gnirs noted “numerous marble slabs of different types and colours indicate that the walls had incrustations.”<sup>21</sup>

Close by was a portico (150 m long by 10 m wide) with semi-circular and rectangular niches that were once decorated with sculptures. It is here that the marble fragments of a head probably belong.<sup>22</sup> Today only the positions of their pedestals, once coated with marble slabs, are visible.<sup>23</sup>

### The thermal area

A full range of porticos and cryptoporticus allowed for a pleasant walk, sheltered from the elements, from the villa located on the terraces on the south side of the bay to the buildings located on the northern coast, which included the baths, or *thermae*. The baths consisted of a series of functionally arranged rooms. Along with the *apoditerium*, or the dressing room, there was the *frigidarium*, *tepidarium*, *caldarium*, and the *laconicum*. The bath

complex was adorned with a monumental façade that rose above the semicircular beach area.<sup>24</sup> The *thermae* were also richly decorated with mosaics, fresco paintings, stucco decorations and marble slabs.

In hall G Gnirs states: “a large amount of fragments of thin plates of precious kinds of marble were found in this room. These include yellow *giallo africano* (Fig. 7) with bright veins and the colourful *pavonazzetto* (Fig. 8), as well as white marble profiles that originate from incrustrated parts of the hall.”<sup>25</sup>

The fragments of giallo antico (Fig. 7) are the thinnest of the marble fragments found. It is thus possible that they formed part of the wall revetment, even with elaborated designs.

The description of the *caldarium* MN is: “Finds of marble fragments that coated the bathtub, while the opening for the heating was coated with large basalt blocks. A mosaic was composed of small marble tiles (dim. 1 cm) with a motif of a black meander on a white background.”<sup>26</sup>

21 GNIRS 1904, 141.

22 GNIRS 1904, 139.

23 GNIRS 1908, 172-173.

24 GNIRS 1915, 131-145.

25 GNIRS 1915, 142.

26 GNIRS 1915, 139.



Fig. 9.  
Cube made of cipollino verde



Fig. 10.  
Molded block  
and plinth in fine  
grained white  
marble



Fig. 11.  
Small column of  
africano marble;  
a twin is stored at  
the Archaeological  
Museum of Istria  
in Pula



Fig. 12.  
Two parts of a thick hexagonal floor slab



Fig. 13. Floor slabs of rosso antico marble



Fig. 14. Rectangular marble slabs, probably floor slabs

In the villa complex there are two *balnea*, but the existence of a separate thermal complex is rare in the villas of the X Regio<sup>27</sup>, and this further confirms the luxurious fitting out of the villa.

#### Other marbles found in the complex

All the mentioned marbles from the villa were identified in the different parts of the complex with the help of Gnirs' notes. However, in the stores of the museum in Brijuni National Park there are many other marble fragments coming from Verige Bay. It has not been possible to determine where these marbles were used in the villa. The different types of marble that could be identified are: cipollino verde, giallo antico, bardiglio marble, Africano, breccia corallina, Proconnesian marble, rosso antico, breccia di settebasi, marmo portasanta, pavonazzetto marble, rosso di Verona marble and white, fine grained marbles<sup>28</sup>.

Today the decorative marbles that remain of the villa complex are smaller architectural decorations like a cube (maybe a base) of cipollino verde (Fig. 9), a moulded block of white marble and moulded cornices (Fig. 10). A small column of Africano marble (Fig. 11) is a very nice example of the richness of the decorations. Two fragments of Proconnesian marble (Fig. 12) which were originally of hexagonal shape, with the side length



Fig. 15. Thin slabs of elaborate design, marmo africano

of 10 cm. These are *opus sectile* tiles, probably part of a small module with hexagonal tiles.<sup>29</sup> There are other remains that point to the existence of *opus sectile* and wall revetment decorations. Some marble slabs due to their thickness (of up to 6.7 cm) (Fig. 8) were probably used as floor slabs (Figs. 13, 14). Others just 0.5 cm thick (Fig. 15) were more probably used as wall revetment. Just a small number of slabs remain, and their shapes indicate elaborate designs made of marble.

27 DE FRANCESCHINI 1998, 675.

28 LAZZARINI 2004, 74-100; PENSABENE 1998.

29 GUIDOBALDI 1993, 171-251.

Although the amount of coloured marble fragments found at the Verige Bay villa is not large, it must be noted that some of the most important types of coloured marble have been recognized. The spoliation of ancient marbles is a well known act, for the production of lime as well as for reutilisation in other buildings. It is thus concluded that the amount of marble at the villa was surely important at the time of the flourishing of the site. So the results of this re-elaboration of the Gnirs findings provide new information on the circulation of marbles and in particular of coloured marbles in the north Adriatic region.

#### LIST OF ABBREVIATIONS

APreg – Arheološki pregled, Beograd, Ljubljana  
Izdanja HAD-a – Izdanja Hrvatskog arheološkog društva, Zagreb  
JAK – Jahrbuch für Altertumskunde, Wien  
JÖAI – Jahreshefte des Österreichischen Archäologischen Instituts, Wien  
MZK – Mitteilungen der K.K. Zentralkommission für Denkmalpflege, Wien  
Obavijesti HAD-a - Obavijesti Hrvatskog arheološkog društva, Zagreb  
VAMZ – Vjesnik Arheološkog muzeja u Zagrebu, Zagreb

#### BIBLIOGRAPHY

- AOYAGI M., ANGELELLI C., IMAI FUJISAWA S. 2003: "Lo scavo della villa romana in loc. Cazanello, presso Tarquinia. Nota preliminare", *Rendiconti della Pontificia academia romana di archeologia*, vol LXXV, 187-244.
- AOYAGI M., ANGELELLI C. 2005: "Sectilia pavimenta e mosaici dalla villa romana di Cazzanello (Tarquinia, VT)", in *Actes de IX Colloque de l'Association Internationale pour l'Étude de la Mosaïque Antique (AIEMA)*, Roma, 339-352.
- BEGOVIĆ-DVORŽAK V. 1990: "Antička vila u uvali Verige na Brijunima (Roman Villa in Verige Bay, Brijuni Islands)", *VAMZ* 23, 97-110.
- BEGOVIĆ-DVORŽAK V. 1993: "Rezidencijalni kompleks u uvali Verige na Brijunima – Hramovi", *VAMZ* 26-27, 25-45.
- BEGOVIĆ-DVORŽAK V. 1995: "Rezidencijalni kompleks u uvali Verige na Brijunima: primjer ekstrovertirane maritimne vile harmonično uklopljene u krajolik", *Histria antiqua* 1, 47-54.
- BEGOVIĆ-DVORŽAK V. 1997: "Utvrđivanje cjelovitog areala ranocarskog rezidencijalnog kompleksa u Uvali Verige na Brijunima", *Izdanja HAD-a* 18, 85-96.
- DE FRANCESCHINI M. 1998: "Un esempio della villa marittima", in *Le ville romane della X.regio, (Venetie et Histria), Catalogo e carta archeologica dell'insediamento romano nel territorio, dell'età repubblicana al tardo impero*, Roma, 618-676.
- GIRARDI-JURKIĆ V., DŽIN K. 2001: *Voda kao izvor života antičke Pule (Water as a Source of Life in Ancient Pula)*, izložba/Exhibition, *Katalog* 61, Arheološki muzej Istre, Pula, 1-40.
- GNIRS A. 1902: "Bauliche Überreste aus den römischen Ansiedlung von Val Catena auf Brioni grande", *MZK* 28, 44-48.
- GNIRS A. 1904: "Antike Funde aus Pola und Umgebung, I. Vorläufiger Bericht über die Ausgrabungen in Val Catena auf Brioni grande", *JÖAI* 7, 131-146.
- GNIRS A. 1906: "Forschungen im südlichen Istrien, I. Ausgrabungen in Val Catena auf Brioni grande", *JÖAI* 9, 29-48.
- GNIRS A. 1907: "Forschungen in Istrien, I. Grabungen in Val Catena auf Brioni grande", *JÖAI* 10, 43-58.
- GNIRS A. 1908: "Forschungen im südlichen Istrien: I. Grabungen in Val Catena auf Brioni grande, II", *JÖAI* 11, 167-186.
- GNIRS A. 1908a: "Istrische Beispiele für Formen der antik-römischen villa rustica", *JAK* 2, 124-143.
- GNIRS A. 1915: "Forschungen über antiken villenbau in Südistrien, I. Die Grabung in der antiken Villenanlage von Val Catena", *JÖAI* 18, 99-163.
- GNIRS A. 1930: "Paralipomena aus Istrien und Aquileia", *JÖAI* 26, 177-190.
- GUIDOBALDI F. 1993: "Pavimenti in opus sectile di Roma e dell'area romana: proposte per una classificazione e criteri di datazione" in *Marmi antichi, problemi d'impiego, di restauro e d'identificazione*, Roma, 177-251.
- JURIŠIĆ M. 1991: "Istraživanja podmorskih arheoloških lokaliteta u Hrvatskoj tijekom 1990. godine", *Obavijesti HAD-a* 23/1, 26-28.
- JURIŠIĆ M., ORLIĆ M. 1987: "Brijuni, Uvala Verige; Antička luka (Roman Harbour)", *APreg* 28, 98-99.
- LAZZARINI L. 2004: *Pietre e marmi antichi*, Padova, 2004, 74-100.
- PENSABENE P. (ed.) 1998: *Marmi antichi II*, Roma, 1998.
- PENSABENE P., BRUNO M. 1998: *Il marmo e il colore*, Roma, 1998.