

Unknown Painted Quarry Inscriptions from Bacakale at Docimium (Turkey)

Bruno, Matthias

Source / Izvornik: **ASMOSIA XI, Interdisciplinary Studies on Ancient Stone, Proceedings of the XI International Conference of ASMOSIA, 2018, 651 - 657**

Conference paper / Rad u zborniku

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

<https://doi.org/10.31534/XI.asmosia.2015/05.05>

Permanent link / Trajna poveznica: <https://um.nsk.hr/um:nbn:hr:123:723176>

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

Download date / Datum preuzimanja: **2024-05-19**



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

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 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 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 Brilli 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
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. Peréz 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 Barancsik, 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 Prevato 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 Denktaş</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 Prevato</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

UNKNOWN PAINTED QUARRY INSCRIPTIONS FROM BACAKALE AT *DOCIMIUM* (TURKEY)

Matthias Bruno

Via dei Vascellari 34, Rome, Italy (matthiasbruno@libero.it)

Abstract

During a survey in the large quarry area of Bacakale several unknown inscriptions and marks were discovered painted in red colour on some quarry fronts. This epigraphic evidence, which probably can be dated to the middle Imperial period, shows that strict production control was not limited to the quarry items produced, blocks and column shafts, but in fact was extended to the quarry sites, where, on the extraction faces, the amount periodically extracted was recorded.

Keywords

Docimium, Bacakale, inscriptions

Introduction

The productive system in quarries is now well known thanks to the archaeological, epigraphic and historical evidence from many Roman imperial marble quarries. The inscriptions on the quarry items discovered in the extraction sites or in the depots in Rome and Ostia clarify how strict the control of the yearly production was. The *Docimium* quarry district, north from Afyonkarahisar, and close to the village of Iscehisar, was in Roman antiquity one of the most important extraction sites producing the renowned and prestigious Roman imperial *marmor phrygium*, known today also as Pavonazzetto, exploited since the late Augustan age.¹ Due to the intense modern exploitation of the marble outcrop, the ancient quarries of *Docimium* are not very well preserved, but nevertheless, during the last 40 years hundreds of marble blocks and column shafts have been discovered. They were first collected in some depots close to the modern extraction pits and then put on display along the main

central road of the small village of Iscehisar.² Thanks to the studies of several scholars, such as Joseph Röder,³ Marc Waelkens,⁴ Michel Christol and Thomas Drew-Bear,⁵ John Clayton Fant⁶ and Patrizio Pensabene,⁷ all these items, and especially their epigraphic evidence, made it possible to obtain important information about the extraction activity at *Docimium* in Roman times. The quarry marks and inscriptions affirm, in fact, a strict control, indicating not only the intraquarry provenance, the extraction place, distinguished into *loca* and *bracchia*, the *caesurae* and the *officinae* involved in the extraction, the production year and, sometimes, the consular date of a recounting of rough items left in the yards of the quarries or in the depots of the *Urbs*.

In the last twenty years the main quarry site of Bacakale has been cleared of the huge amount of debris that was dumped into the site during the ancient quarry activity, in order to facilitate modern extraction work. In fact, the left side of the Bacakale district was completely destroyed by modern sawing and cutting machines, while the southern quarry front is still well preserved and visible to its original height (Fig. 1).⁸

1 About the opening of the quarries, the use and distribution of Phrygian marble in Roman antiquity see BRUNO, ATTANASIO, PROCHASKA 2012, 406-408; *ead.* 2015, 381-383; FANT 1989, 6-11; PENSABENE 2011, 78; *id.* 2013, 360-361.

2 All the quarry blocks and column shafts were seen on display along the main street of Iscehisar in August 2011, while two years later they were lying all together in an area close to the old bridge of Iscehisar crossing the river Seyitler.

3 RÖDER 1971.

4 WAELEKENS 1982; *id.* 1985; *id.* 1986.

5 CHRISTOL, DREW-BEAR 1986; *ead.* 1987; *ead.* 1991; DREW-BEAR 1994.

6 FANT 1989.

7 PENSABENE 2011.

8 My last visit to *Docimium* was in summer 2013. At that time the director of the Archaeological Museum of Afyonkarahisar told me that the huge southern quarry front is under protection, but what happened up to now to it is not known. Figure 1 in the present paper is a photo taken in 2008 by Turgut Tarhan and published in 2009 in SUMMERER, VON KIENLIN, BRUNO 2009, 112-113.



Fig. 1. Iscehisar, Afyonkarahisar. Overview of the Bacakale district (2008). On the left side the northern limit with modern fronts cut with diamond wire, on the right side the southern roman quarry front (photo: Turgut Tarhan)

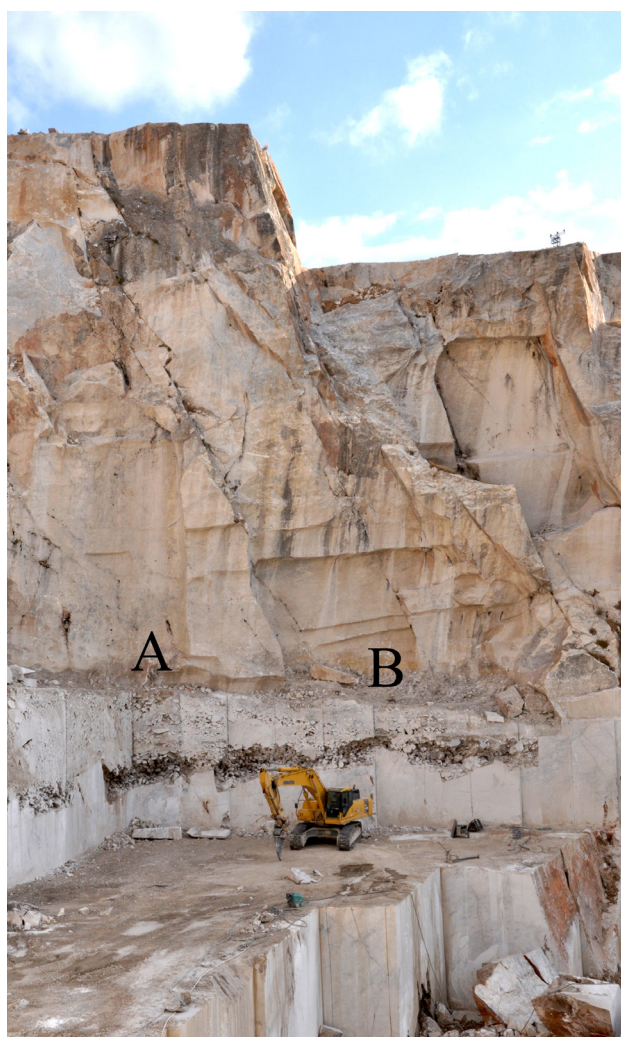


Fig. 2. Detail of the two quarry fronts with painted dates, “A”, and single letters, “B” (July 2013)

The quarry inscriptions

During several surveys in the quarries of Iscehisar since 1995, especially at the site of Bacakale, it was possible to discover many unknown quarry inscriptions painted in red directly on two different quarry fronts (Fig. 2).⁹ The first one (A) is approximately 30 meters tall and shows the typical extraction traces made with the heavy pick. The marble is of high quality and concerns the typical brecciated marble variety of the Roman *mar-mor phrygium*. In the middle and lower part of the quarry front, several inscriptions are still visible on the rough surfaces of the rock (Fig. 3). They were painted with red colour directly on the surfaces during the extraction activity of Roman times. All the inscriptions, written with capital letters, concern specific dates¹⁰ (Figs. 3 - 4). At the upper left side the 13th of February is mentioned, “(Ad) Id(us) febra(rias)”; less than one meters underneath the 4th of March is painted “(Die) IIII (ad) Non(a)s Mar(-tias)”; further to the right, 2.6 meters below, the 29th of April is written “(Die) III (ad) K(alendas) Mai(a)s”; approximately 2 meters lower, the 14th of July is indicated “Pr(idie) Idus Iul(ias)”; on the left side and more than 2 meters underneath, follows the painted indication “(Die) III (ad) K(alendas) Aug(ustas)”, the 30th of July, while the last date, “Pr(idie) Idus Aug(ustas)”, the 12th of August, is again painted more or less at the centre of the quarry faces and only 10 cm lower than the previous one.

9 BRUNO 2017.

10 For the Roman calendar, see INVERNIZZI 1994.

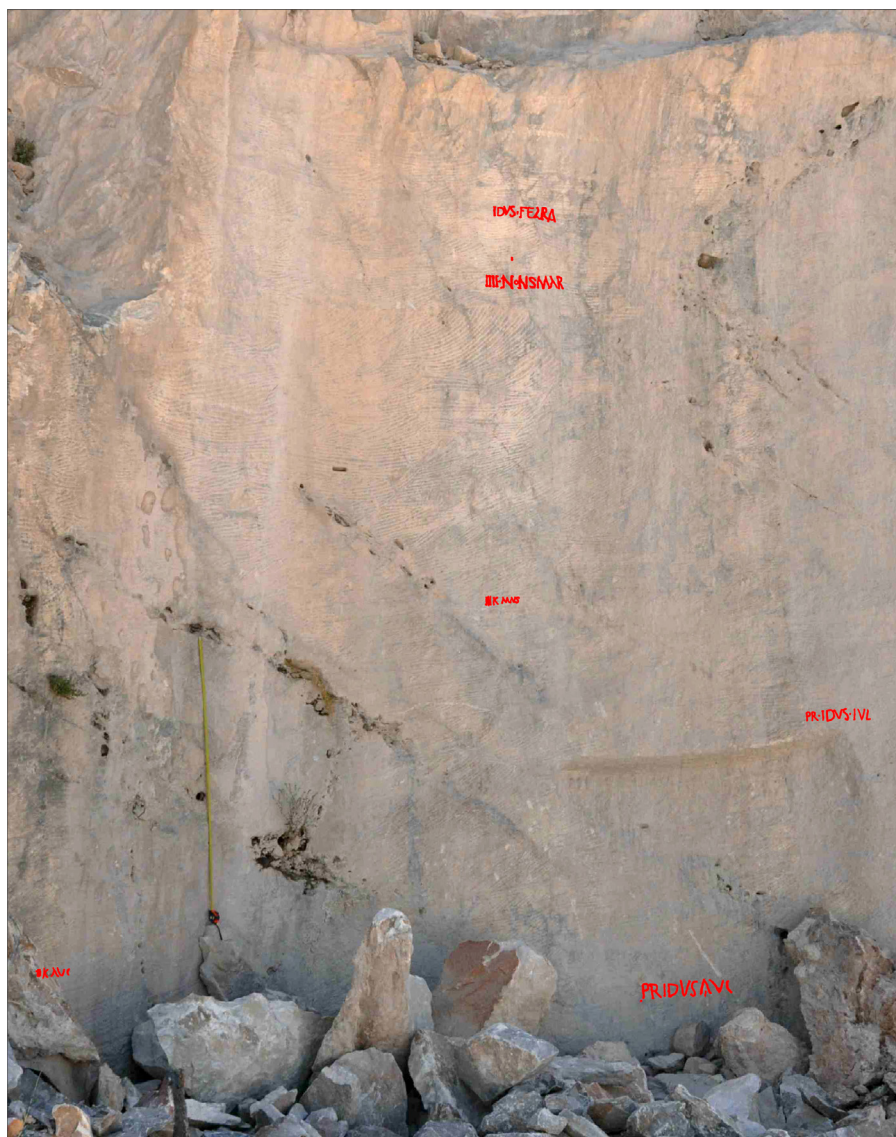


Fig. 3.
Detail of wall "A" with painted
dates highlighted in red



Fig. 4.
Details of the six painted dates
on the quarry front "A" (from
top to bottom, photographic
reproduction and drawing of the
evidence and graphical integration).
1. "IDVS·FE2RA", "Idus · Febra(rias)
= February 13th; 2. "III·N·NSMAR",
"(die) IIII (ad) · Non(a)s Mar(tias)"
= March 4th; 3. "III·K·MAIS", "(die)
III (ad) · K(alendas) Mai(a)s" =
April 29th; 4. "PR·IDVS·IVL",
"Pr(idie) · Idus · Iul(ias) = July
14th; 5. "III·K·AVL", "(die) III (ad)
K(alendas) Aug(ustas)", July 30th;
6. "PR·IDVS·AVL", "Pr(idie) Idus
Aug(ustas)" = August 12th

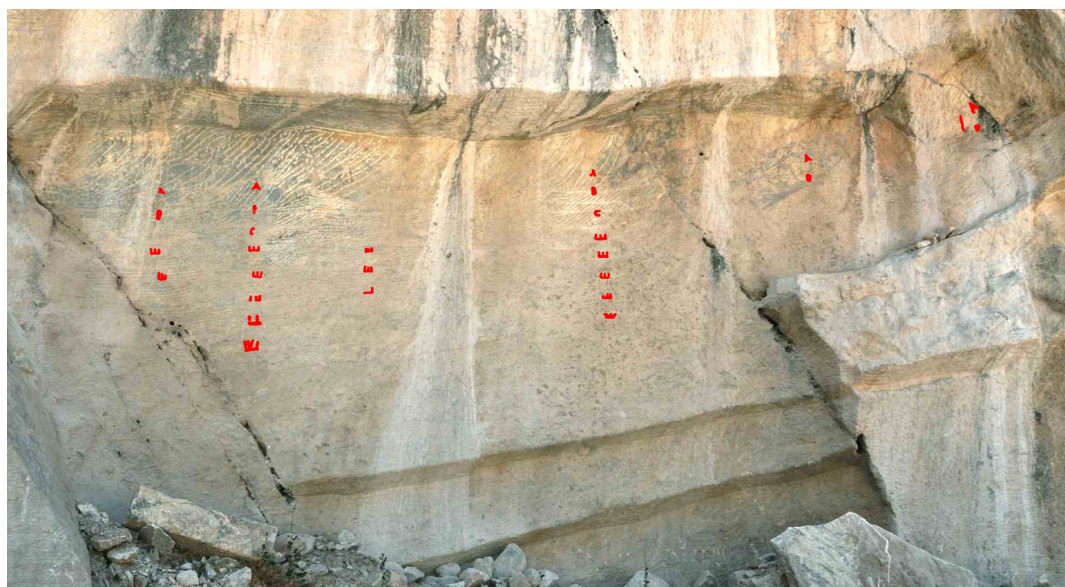


Fig. 5.
Detail of wall
“B” with painted
vertical sequences
highlighted in red

Therefore in summary, the painted inscriptions, from top to bottom, provide us with this chronological sequence: February 13th, March 4th, April 29th, July 14th, July 30th and August 12th. Presuming that the date was applied at the end of extracting activities, at the bottom of the quarry front,¹¹ it results that the time lapse between the successive dates is respectively equal to 19, 56, 76, 16 and 13 days, for an overall total of 180 days elapsing between February 13th and August 12th; this, then, determined the formation, subsequent to quarrying activities, of a quarry front that was approximately 6.3 metres in height.

On a nearby quarry front (Figs. 2 and 5), carved into the face like a large horizontal niche, several other painted quarry inscriptions are visible, repeated exactly in the same way vertically six times mentioning only the single Latin letters “A, B, C”, placed one under the other at a regular distance of 22 - 25 cm, and followed by five particular signs of a kind of letter E on its side or small fork (Fig. 6).

Dating of the two epigraphic contexts

Unfortunately, no surviving elements provide a date for the inscriptions painted on the two quarry fronts. Therefore, other aspects of the quarry topography must be taken into consideration to reach an approximate dating of these *tituli picti*. Important are the location and the height of the two walls examined, within the broader scheme of the southern front of the quarry

in the Bacakale district. The wall bearing vertical letter sequences is located at about 10 metres above the ancient quarry floor, whereas the adjacent one with painted dates is situated higher to the left. They presumably are the result of medium-advanced quarrying activities of the Bacakale basin in the *Docimium* district, which was opened during the mid-Augustan period, that is, the last decades of the first century B.C. A clear chronological limit for the final mining of Bacakale when the bottom of the quarry was reached is given by the discovery of three blocks inscribed with three different consular dates relative to 144, 148 and 157 A.D.¹² This suggests that the end of quarrying activities in the Bacakale basin took place toward the mid-second century, while the basin was filled with debris from the surrounding areas at a later date.¹³ The high position of the two walls compared to the bottom of the quarry is therefore a further chronological reference, which not only pushes their hypothetical dating to the first half of the second century A.D., but perhaps even before – namely the end of the first and the beginning of the second century.

11 The different dates should have been painted on the quarry face at the end of the mining operations at the lower limit of the trench. This would seem especially corroborated by the analysis of the working traces that change towards them and are different in the following sections.

12 Three blocks have been found on the bottom of the quarry and they belong to group 3 catalogued by Fant in the early eighties of the last century. The three blocks, cat. 83, 93 and 124, are dated respectively to 144, 148 and 157 A. D. FANT 1989, 42-48.

13 The blocks of group 4 were instead a bit higher up, on a consistent elevation of the ground level of the quarry, and probably in front of the two faces in question, see FANT 1989 p. 44, Fig. 9 and p. 46, Fig. 11. Their position would seem unordered and probably determined by the reversal of blocks and debris into the large quarry pit of Bacakale, even if their dating is relatively homogeneous, and refers to the early third century A.D., FANT 1989, 45, Tab. 9.



Fig. 6.
Detail of the fifth vertical
sequence of wall "B". To the
left the "staus quo", to the
right the letters and symbols
graphically highlighted in red

Epigraphic and typological comparisons

The painted inscriptions bearing dates bring to mind the examples discovered in recent years on the foundation walls and the overhead south-western exedra in the Baths of Trajan located on the Oppius Hill in Rome.¹⁴ These dates obviously refer to a few years prior to the inauguration of the building in 109 A.D. and are assumed to have had a functional meaning for the imperial work-yard from an executive, structural, organizational and economic standpoint. While the two groups of inscriptions were painted in the same manner, with the same red, and in similar sizes, their arrangement demonstrates an obvious and substantial difference. In fact, construction of the Baths of Trajan proceeded from the bottom upwards, whereas the quarry front in Bacakale developed in the opposite direction, being excavated from top to bottom.

The dates painted in the Baths of Trajan are not the only inscriptions of this kind on a Roman monument; similar inscriptions have been discovered engraved within the Porta Nigra in Trier (Germany) which was inaugurated and dedicated to Septimius Severus and

Caracalla in 197-198.¹⁵ Initials engraved with dates were found on different blocks in the rows standing on the internal curved side on the third floor of the western tower of the Gate.¹⁶ In this case again the sequence of dates was developed from bottom to top, beginning with the first, July 29th, to the last, August 7th,¹⁷ therefore indicating that approximately half of the storey was built in only 10 days. Again, there is no indication of the year, but one might suppose that the year of reference is only shortly prior to the date in which the Gate itself was inaugurated, since it stands in the topmost part of the building.

The only case of similar inscriptions with dates found in a quarry, however are those dating back to Augustan period found in the underground quarries at Massignano in the Conero Mountain close to the city of Ancona in Italy, a extraction site in which a white limestone was extracted.¹⁸ On the quarry faces several

14 VOLPE 2002; *id.* 2008; *id.* 2010; VOLPE, ROSSI 2012.

15 GOSE 1969; SCHWINDEN 2001, 143-153.

16 STEINHAUSEN 1969, 104-106; SCHWINDEN 2001, 150-152.

17 *CIL* XIII 3778 n. 115-126; STEINHAUSEN 1969, 104-105; SCHWINDEN 2001, 150-152.

18 PACI 2007.

numeric or text inscriptions were discovered written in charcoal or painted with red; three of them are dates positioned in different parts of the underground gallery. One indicating the 25th of January was written with coal, while the 26th of January is twice repeated in red, the latter in combination with mentions of two men of the colony of Ancona. These three inscriptions, which represent the closest parallels in terms of context to those of *Docimium*, however, do not seem to indicate a controlled chronological mining sequence but rather the end of the mining process in these underground quarries.

Whereas in the second case of the Docimian painted inscriptions, namely the smaller face of the *antrum* bearing alphabetic letters and a “forked” motif in parallel vertical sequences from top to bottom, it has been impossible to find any detailed forms of comparison. Furthermore, in this specific case one cannot understand the need for such a close repetition of the vertical sequence of initials, which must have been affixed in connection with mining activities. The “forked” motif, repeated at least five times in one of the sequences, does not have a plausible explanation and would simply seem to be an identification mark – but unfortunately of unknown meaning.

Conclusions

At present, painted inscriptions on Roman quarry fronts are rare. Those discovered in the *Docimium* quarries are, in fact, an *unicum* in ancient Roman quarries, due to the fact that they represent an extraction sequence, while those discovered in the underground quarries at the Cone-ro Mountain are only single inscriptions; two of them with the same dates need further investigation. The six *Docimium* inscriptions indicate six different dates starting from top with the earliest, the 13th of February, and ending several meters below with the last, the 12th of August. Unfortunately, there is no further indication of the year, so that we cannot know exactly when they were painted on the quarry front, but their position on the lower part of the southern quarry front of the Bacakale district allows us to assume that they must belong to the last period of the extraction activity at Bacakale. This was probably a year at the end of the first or the beginning of the second century AD, when the activity at the site reached its lowest level. After a period when extraction stopped, the large quarry pit was filled up with debris coming from newer quarry pits nearby.

These painted inscriptions must certainly be connected with a systematic and precise control of the extraction activity in a special sector of the site where one of the most appreciated qualities of Phrygian marble was extracted. They were painted on the quarry front after several days of activity in order to have an exact control of the volume of marble extracted and the quantity of marble blocks produced for export. The sequence of

these painted *tituli* is helpful for an understanding that quarrying activities could proceed in a rather erratic way and that longer periods of time did not necessarily correspond to greater quantities being extracted. In addition, as manifested by period IV, from April 30th to July 14th and with a duration of 76 days, mining activities must have been subjected to a long interruption; during this time special skilled workers, known as *caesura*, must have been dispatched to other areas or *loci* within the *Docimium* district, and this is probably the reason why some *caesurae* were registered in different *loci* and *brachia* during the same year.¹⁹

Even if no similar inscriptions have so far been discovered in Roman quarries, parallels exist with painted inscriptions recently discovered on the brick surfaces of Trajan's Baths in Rome and with inscriptions engraved on blocks of the Porta Nigra in Trier. In these cases, the sequence of days went from the lowest level up to the impost level of the half-dome of the apse. All three contexts attest a very special control of high priority activities, two connected with imperial building projects (the Baths of Trajan, finished in AD 109, and the Porta Nigra, of the end of the second century) and the third with extraction activity in one of the most important imperial quarries, where yearly production, probably only of some specific sectors, was strictly controlled by the imperial quarry administration.

19 See CHRISTOL, DREW-BEAR 1987, 106; FANT 1989, p. 20, tab. 2, pp. 52-69, tab. 11; PENSABENE 2011, 97-98.

BIBLIOGRAPHY

- BRUNO M. 2017: “*Tituli picti* su due fronti di cava nel distretto di Bacakale a *Docimium* (Iscehisar, Afyonkarahisar, Turchia)”, *Journal of Roman Archaeology* 30, 469-489.
- BRUNO M., ATTANASIO D., PROCHASKA W. 2012: “I marmi docimeni dei gruppi scultorei dell’antro di Tiberio a Sperlonga”, in G. GHINI, Z. MARI (eds.): *Atti del Convegno, Ottavo Incontro di Studi sul Lazio e la Sabina*, Roma 30 – 31 marzo, 1 aprile 2011, *Lazio e Sabina* 8, Roma, 403-417.
- BRUNO M., ATTANASIO D., PROCHASKA W. 2015: “The Docimium Marble Sculptures of the Grotto of Tiberius at Sperlonga”, *AJA* 119, n. 3, 375-394.
- CHRISTOL M., DREW-BEAR TH. 1986: “Documents latins de Phrygie”, *Thyche* I, 62-87.
- CHRISTOL M., DREW-BEAR TH. 1987: “Inscriptions de Dokimeion”, *Anatolia Antiqua* 1, 83-137.
- CHRISTOL M., DREW-BEAR TH. 1991: “Les Carrières de Dokimeion à l’époque sévérienne”, *Epigraphica* 53, 113-174.
- DREW-BEAR TH. 1994: “Nouvelles inscriptions de Dokimeion”, *MEFRA* 106, 747-844.
- FANT J. C. 1989: *Cavum Antrum Phrygiae*. The Organization and Operations of the Roman Imperial Marble Quarries in Phrygia. BAR. International Series no. 482, Oxford.
- GOSE E. 1969: “Die Porta Nigra in Trier”, *Trierer Grabungen und Forschungen* 4, Berlin.
- INVERNIZZI A. 1994: *Il Calendario. Vita e Costumi dei Romani antichi* 16, Roma.
- PACI G. 2007: “Le iscrizioni della cava romana del Cone-ro”, in G. PACI (ed.): *Contributi all’epigrafia d’età augustea. Actes de la XIII^e rencontre Franco-Italienne sur l’epigraphie du Monde Romain*, Macerata, 9 – 11 settembre 2005, Tivoli, 217-246.
- PENSABENE P. 2011: “Cave di marmo bianco e pavonaz-zetto in Frigia. Sulla produzione e sui dati epigrafici”, *Marmora* 6, 71-134.
- PENSABENE P. 2013: *I marmi nella Roma antica*, Roma.
- RÖDER J. 1971: “*Marmor Phrygium*. Die antiken Marmorbrüche von Iscehisar in Westanatolien”, *JdI* 86, 253-312.
- SCHWINDEN L. 2001: “Die Porta Nigra”, in H.-P. KUHNEN (ed.): *Das römische Trier*, Stuttgart, 143-157.
- STEINHAUSEN J. 1969: “Die Steinmetzzeichen und sonstige Mauerinschriften”, in E. GOSE 1969, 87-106.
- VOLPE R. 2002: “Un antico giornale di cantiere delle terme di Traiano”, in *Cantieri antichi. Giornata di Studio* tenuta il 25 ottobre 2001, *RM109*, 376-394.
- SUMMERER L., VON KIENLIN A., BRUNO M. 2009: “Afyon, Roma ve Mermer”, in *Atlas*, n. 119, 112 - 113.