

Sarcophagus Lids Sawn from their Chests

Abramitis, Dorothy H.; Herrmann, John J.

Source / Izvornik: **ASMOSIA XI, Interdisciplinary Studies on Ancient Stone, Proceedings of the XI International Conference of ASMOSIA, 2018, 89 - 94**

Conference paper / Rad u zborniku

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

<https://doi.org/10.31534/XI.asmosia.2015/01.06>

Permanent link / Trajna poveznica: <https://urn.nsk.hr/urn:nbn:hr:123:247945>

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

Download date / Datum preuzimanja: **2024-07-24**



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 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
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

SARCOPHAGUS LIDS SAWN FROM THEIR CHESTS

Dorothy H. Abramitis¹ and John J. Herrmann²

¹The Metropolitan Museum of Art, New York, New York, United States (de.abramitis@metmuseum.org)

²Museum of Fine Arts, Boston, Massachusetts, United States (jherrmannjr@gmail.com)

Abstract

The contrast between smooth and rough surfaces on the backs of some sarcophagi in central Italy has been the subject of attention in recent years, and several mistaken or partial explanations for the phenomenon have been advanced. Close visual observation of sarcophagi in Naples and Ostia, however, makes it possible to explain the mixture of techniques more completely and gives further insight into the production process for sarcophagi in central Italy.

Keywords

Badminton Sarcophagus, quarries, central Italy, trade, manufacture

The problem: rough and smooth zones on the backs of Central Italian sarcophagi

It is well known that during the second and third centuries marble quarries in the Aegean area exported rough chests for sarcophagi to Rome, where sculptors carved the figures, garlands, and other ornaments. The decoration carved in Central Italy always covered the front and usually the ends, while the back of the chest was usually left undecorated. Normally the unfinished backs remain roughly chiseled, just as they came from the quarries. Examination of finished sarcophagi of Roman type, however, also shows that in many cases smooth, almost polished-looking surfaces appear, not only on backs but also on sides and bottoms (HERRMANN *et al.* 2015, table I).

Shipwrecked cargoes of sarcophagi have provided insight into the issue, and several hypotheses based on them have provided explanations for these smooth areas on hidden or undecorated parts of Roman sarcophagi. Two cargoes of roughed-out sarcophagi have been found off the southeastern coast of Italy near Taranto: one of 15 sarcophagi off Torre Sgarrata (GABELLONE *et al.* 2009) and another of about 23 sarcophagi off S. Pietro in Bevagna (WARD PERKINS, THROCKMORTON 1965; GIANNOTTA *et al.* 2015). All the sarcophagi were quarried on the island of Thasos, and all their surfaces were

roughly chiseled except for one smooth saw-cut end. This makes it clear that most of the sawing seen in finished sarcophagi of Roman type must have taken place in Italy. In several cases two sarcophagi were shipped together as a single block. Other sarcophagi had an excessively thick side (Fig. 1). Sawing would have been needed at their intended destination to separate the two chests that were joined together, and it would have been necessary to cut the thick sides of others down to a normal width. The additional slabs produced in the process could be used as lids or for other purposes. (GABELLONE *et al.* 2009; GIANNOTTA *et al.* 2015; HERRMANN *et al.* 2015). The sawing was performed with a wire and wet sand.

The backs of some sarcophagi, however, show a puzzling mixture of smooth and rough surfaces that is not accounted for by these explanations. The division is usually tripartite, with a very smooth, saw-cut zone below, a roughly chiseled zone above, and a more finely chiseled band between them. The famous Badminton Sarcophagus

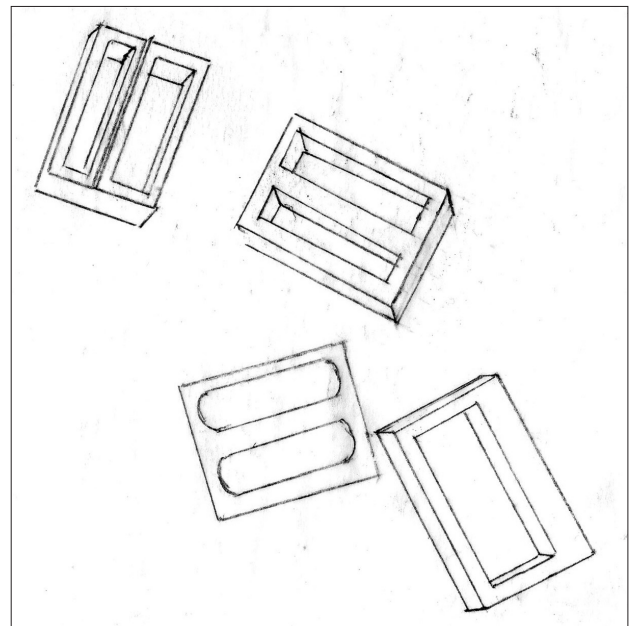


Fig. 1. Double sarcophagi and a thick-sided sarcophagus, S. Pietro wreck, early 3rd century, drawing by John Herrmann after M. Valtinos in WARD PERKINS, THROCKMORTON 1965, 208-9

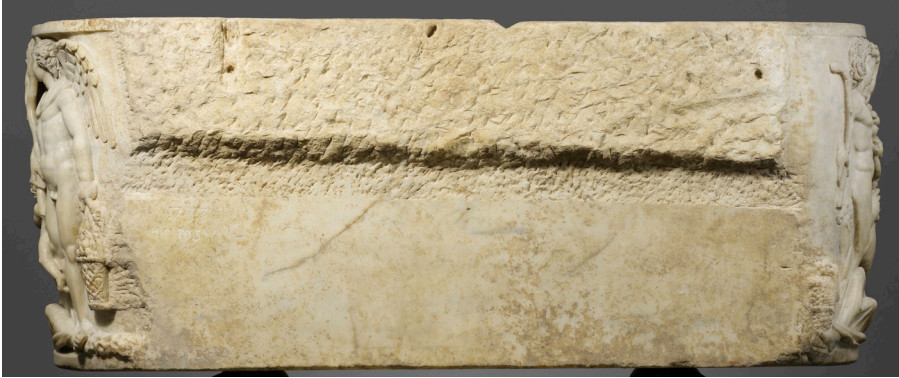


Fig. 2.
Badminton Sarcophagus, back view, ca. 220-270 CE: The Metropolitan Museum of Art, Purchase, Joseph Pulitzer Bequest, 1955 (55.11.5). Image © The Metropolitan Museum of Art



Fig. 3. Double sarcophagus combining a large sarcophagus, a child's sarcophagus, and possibly a lid from the Torre Sgarata Wreck, marble from Aliko, Thasos, Taranto Museum, ca. 200 CE

of the third century in the Metropolitan Museum of Art, New York is an often-discussed example of this mixed treatment (Fig. 2) (VAN KEUREN *et al.* 2015). The rough and smooth divisions have been interpreted as the battered remains of an architectural profile: the smooth lower part would have been the frieze and the rough upper part, the remains of a hammered-down cornice (BARTMAN 1993, 57-60, Figs. 2-5; HERRMANN 2012, 99-100). Neither the Badminton Sarcophagus nor any others, however, have projections on the backs that correspond closely to the profile of an entablature, nor do traces remain of any original architectural decoration that was hammered down. The polished zone, moreover, resembles a saw-cut surface more than one worked by an architectural sculptor.

One unfinished sarcophagus from the Torre Sgarata shipwreck shows a situation that might explain the partial sawing of the back. The chest has a projection from the lower part of one long side (Fig. 3) (GABELLONE *et al.* 2009, fig.10; HERRMANN *et al.* 2015). This could have been sawed off to produce either a child's sarcophagus or a slab, which could perhaps have been used as a lid (HERRMANN *et al.* 2015). In this case the result would be a mixture of rough and smooth surfaces.

Lids cut from their chest

Close observation of finished sarcophagi in museum collections suggests another reason for the partial sawing of backs of chests: flat lids with vertical risers, a typical form of Roman sarcophagi of the third century and fourth century, were extracted from the backs and bottoms of sarcophagus chests. The lids themselves would be sawed from the bottom of the chest and the low riser would be sawed from the lower part of a long side. Since the riser was not as high as the full height of the chest, the saw cut would be confined to the lower part of the chest. This reconstruction is based on the study of two sarcophagi that appear to preserve their original lids, one in Naples and one in Ostia. Both sarcophagi appear to date from the late third or early fourth century.

The strigillated sarcophagus in Naples

A round-ended sarcophagus (*lenos*) in the Museo Nazionale Archeologico, Naples has a smooth and a rough area on its back that have been noted before but not interpreted correctly (Fig. 4b) (HERRMANN 2012, 100, table III, fig. 10). The underside of the chest is also smooth. The polished-looking areas are the products of sawing, and indicate that a typical central Italian type of lid was removed from the lower back and underside of the chest. The top of the horizontal lid of this chest and the back of its riser are also smooth saw-cut surfaces, and optical inspection reveals that the patterns of veining on the saw-cut sections of the lid match those on the chest in mirror images. The lid was apparently cut from the lower parts of this chest, rotated 180 degrees, and placed on top of the chest with the riser facing the front (Fig. 4c).

Corner "A" bottom left (as labeled in Fig. 4b and the Fig. 5a) has two broad grey stripes that move from the outer edge diagonally upward. These stripes are also visible in corner "A" of the lid, again moving diagonally from the edge upward (Fig. 4b and 5a). The upper corner of the saw-cut register of the chest has a clearly evident curve, which once more matches the curve of this corner of the lid.



Fig. 4a.
Front of a strigillated *lenos* with Cupids holding birds at the corners and its lid with sea monsters, probably Proconnesian marble, 280-330 CE, Museo Nazionale Archeologico, Naples



Fig. 4b.
Back of the preceding

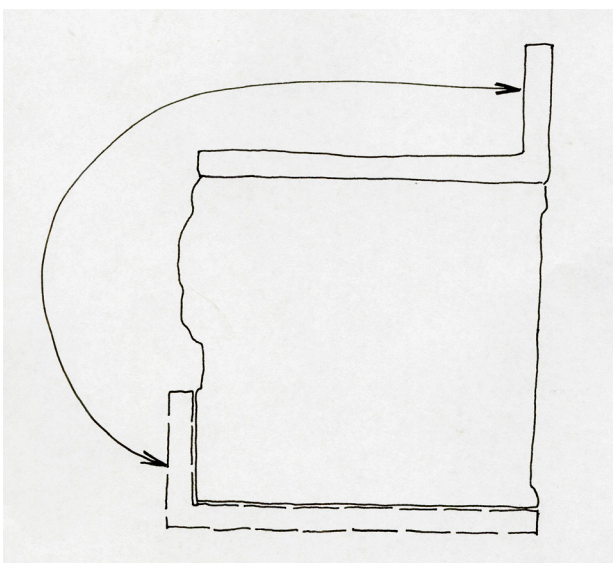


Fig. 4c. Diagram of the preceding showing the extraction and positioning of the lid. The original position of the lid is shown with dotted lines (drawing: S. McPeters)

Corner “B” (as labeled in Fig. 4b and Fig. 6a) has numerous feathered grey stripes that move diagonally upward as they reach the edge; also visible in corner “B” of the lid. In addition, the upper corner of the saw-cut register of the chest is more squared, again the match is visible in the lid.

On the back, a band of relatively fine chiseling passes between the smoothly cut surface below, where the riser was removed, and the rougher chiseling above (Fig. 4a, 5a). The rougher chiseling represents the surface of the chest as it was removed from the quarry, and the finer chiseling probably represents work done in Central Italy to insert the wire for sawing off the riser of the lid.

The Ostia Hunt Sarcophagus

It has previously been demonstrated that a sarcophagus with a hunting scene in the Ostia Museum, inv. 36231 has a lid with a riser cut from the lower part of its chest (Fig. 7) (HERRMANN *et al.* 2015, 561, fig. 6).



Fig. 5a, 5b. Details of the preceding: matching "A" corners of chest and lid



Fig. 6a, 6b. Details of the preceding: matching "B" corners of chest and lid



Fig. 7. Lion Hunt *lenos*, probably Proconnesian marble, 290-320 CE, Ostia Museum, inv. 36231 (photo: A. van den Hoek)



Fig. 7a. Details of the preceding: Blind cracks in chest and riser reveal that the lid was cut from the lower part of the chest. Arrows point to the locations of the matching blind cracks

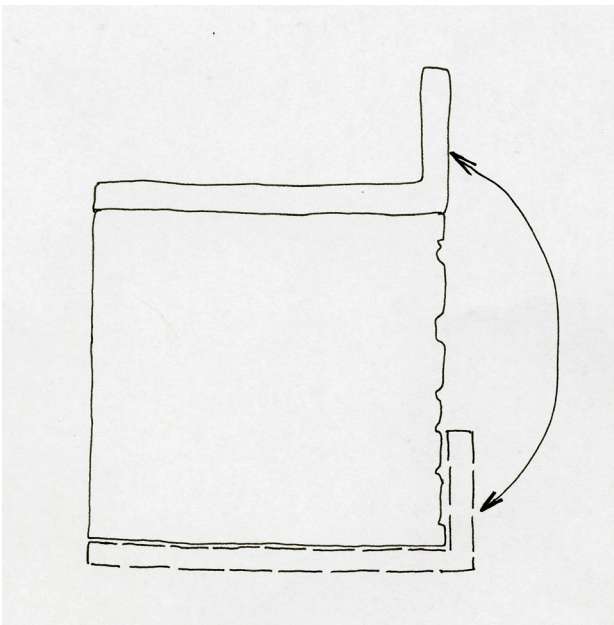


Fig. 8. Diagram of the preceding showing the extraction and positioning of the lid. The original position of the lid is shown with dotted lines (drawing: S. McPeters)

Conspicuous cracks in the right side of the chest match similar cracks in the lid. In this case, the horizontal part of the lid was again sawn from the bottom of the chest, but the riser was taken from a bulge on the front. The top of the lid, the back of the riser, and the bottom of the chest are smooth saw-cut surfaces. The lid and riser were moved to the top of the chest without rotation. Decorating the front of the chest with figures cancelled traces of the sawing that detached the riser. The back of the chest is entirely smooth, indicating that a large slab was removed for some unknown purpose.

Conclusions

These two instances of extracting a typical central Italian lid with riser from the lower part of a sarcophagus chest clearly are important indexes to a widespread practice. The many sarcophagus chests of Roman type whose backs reveal a saw-cut lower zone and a projecting, roughly chiseled upper zone are testimony to the practice. The smoothly sawn bottoms of these chests confirm the procedure (HERRMANN *et al.* 2015, table I). This procedure best explains the mixture of techniques seen on the back of the Badminton Sarcophagus (Fig. 2).

The situation shows coordination between quarries in the east and their markets in the west. Sarcophagus chests were hollowed out in eastern quarries to reduce their weight for shipment and reduce work for the sculptors in Italy, but extra material was left on the back and bottom for flat lids with risers, a type of lid used in central Italy but not in the East. The extra material would have increased the weight, but this inconvenience was considered worthwhile in the interest of having a good match between chest and lid.

Coordination between quarries in the Aegean area and markets in central Italy has long been noted; round-ended *lenoi*, were made in the East exclusively for use in the West (KOZELJ *et al.* 1985; HERRMANN 1990, 74). It has recently been pointed out, moreover, that the coordination goes well beyond this (GIANNOTTA *et al.* 2015, 145-146, 151). The roughly shaped sarcophagus chests from the Vathy/Saliara quarries found in the S. Pietro in Bevagna wreck include both *lenoi* with projections on the side for the heads of lions and *lenoi* without these projections. Some of the S. Pietro chests are rectangular rather than round-ended. The proportions of the chests vary greatly. This variety in roughed-out sarcophagi from the same quarry or group of quarries undoubtedly reflects detailed specifications from central Italy. The accommodations made for the extraction of lids from the back and sides of roughed-out chests can now be added to this list of adaptations.

ACKNOWLEDGEMENTS

We would like to thank Valeria Sampaolo, former Direttrice of the Museo Archeologico Nazionale di Napoli, Luigia Melillo and Umberto Minichiello of the Laboratorio di Conservazione e Restauro del Museo Archeologico Nazionale di Napoli for their assistance in securing access to examine the Naples sarcophagus. Also to Lisa Pilosi, Conservator in Charge of Objects Conservation at the Metropolitan Museum for her support.

BIBLIOGRAPHY

- BARTMAN E. 1993: "Carving the Badminton Sarcophagus", *Metropolitan Museum Journal* 28, 57-75.
- GABELLONE F., GIANNOTTA M. T., ALESSIO A. 2009: "The Torre Sgarrata Wreck (South-Italy): Marble Artefacts in the Cargo," in *ASMOSIA VII*, 319-331.
- GIANNOTTA M. T. *et al.* 2015: "Provenance of the Roman Marble sarcophagi of the San Pietro in Bevagna Wreck," in *ASMOSIA X*, 143-153.
- HERRMANN J. 2012: "Late Roman Sarcophagi in Central Italy Made from Scavenged Blocks", in *ASMOSIA IX*, 93-103.
- HERRMANN J., BRUNO M., VAN DEN HOEK, A. 2015: "Saw cuts on marble sarcophagi: New York and Ostia", in *ASMOSIA X*, 559-564.
- KOZELJ T. *et al.* 1985: "Sarcophages decouverts dans les carrières de Saliari (Thasos), in P. PENSABENE (ed.): *Marmi antichi: Problemi d'impiego, di restauro e d'identificazione* (Studi miscellanei, vol. 26), 75-81.
- VAN KEUREN F. *et al.* 2015: "Parian Lychnites and the Badminton Sarcophagus in New York", *ASMOSIA X*, 403-411.
- WARD PERKINS J., THROCKMORTON P. 1965: "The San Pietro Wreck," *Archaeology* 18, 3, 1965, 201-9.