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56

Sessions 11–12 – Single Contributions Poster Session

Martin Bentz
Michael Heinzelmann (Eds.)

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Edited by

Martin Bentz and Michael Heinzelmann

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CONTENTS

Session 11: Methodology: survey archaeology, natural sciences, quantification

Panel 11.6: Computational Approaches to Classical Archaeology

Evan I. Levine – Daniel Plekhov
Integrating Legacy and Modern Remote Sensing Data for the Study of Land-Use History on Samothrace 5

Katherine A. Crawford
Modelling Processional Movement at Ostia 21

Session 12: Other topics

Panel 12.2: Communicating Archaeology in the Digital Era

Carlo Baione
Virtual Poggio del Molino: Communicating the Archaeological Excavation to the Public 37

Panel 12.5: Ancient Sculpture

David Ojeda
Römische Kopien eines hellenistischen Kinderkopfes. Zum Fragment Inv. 45295 aus der Villa Hadriana (Magazzini) und zum Kopf Inv. Ma 2332 im Musée du Louvre 53

Pedro Rodríguez Oliva
Manifestaciones de la escultura iberorromana en las cercanías del Fretum Herculeum 63

Isabel López García – José Beltrán Fortes
Repertorio escultórico romano-provincial de la *colonia Iulia Genetiva* (Osuna, Sevilla) 77

Panel 12.6: Sanctuaries and Rituals

Bianca Ferrara
Louteria fittili dal santuario di Hera alla foce del Sele (Paestum) 95

Laura Maniscalco – Brian E. McConnell
The Sanctuary of the Divine Palikoi: Cult Activities and Economic Activities around the Sacred Lakes 115

Marcella Boglione
Una nuova area sacra sul Piano del Tamburino, Himera. Contesti e dinamiche rituali 127

Panel 12.7: Idalion

Angelika Corinna Walther
A Sanctuary of a Female Goddess Excavated by Max Ohnefalsch-Richter (1850–1917) at the Gialias River in Idalion (Cyprus) 143

Sophie Geraldine Horacek
A Sanctuary of a Female Goddess Excavated by Max Ohnefalsch-Richter (1850–1917) on the Eastern Acropolis in Idalion (Cyprus) 147

Panel 12.8: 3D Documentation and Interpretation of Ancient Buildings

Maria Papaioannou – Peter Dare – Mihalis Koutellas
Visualizing Culture: What Can Go Wrong Behind the Scenes? Terrestrial Laser Scanning of an Early Christian Basilica on the Island of Kalymnos 165

Poster Sessions

Josipa Baraka Perica – Ante Uglešić
Rivine – Crkvina: An Example of Production Quarters by a Church 183

Leonardo Bernardi
The Reconstruction of the Organization of Space and Work through Iron-Working Micro-Residues Distributional Analysis: the Case of the Roman Smithy of Montebelluna (Treviso, Italy) 191

Riccardo Berriola
The Purchase of the Collection Gargiulo in the National Archaeological Museum of Naples 201

Giacomo Biondi
La ceramica laconica figurata dal deposito votivo di piazza San Francesco a Catania 207

Giacomo Biondi
A New Attic Late Protogeometric Krater from the Siderospilia Necropolis of Prinias (Crete) 215

Ana Caessa – Nuno Mota
A Monumental Structure on the Riverfront. Archeology and Architecture of the *Felicitas Iulia Olisipo cryptoporticus* (Lisbon, Portugal) 219

Mila Chacheva
Glass Beads from Apollonia Pontica: Chronology and Types 231

Kalliopi G. Chatzinikolaou
Economy of Cult – Examples from Macedonia during the Roman Period 241

Gioulika Olga Christakopoulou
A Mortuary Testimony as a Guide for a Society's Economic Evaluation. Case Study: the Establishment of Protogeometric Stamna in Aetolia, Greece 251

Laura Cianfriglia – Stella Falzone – Ivana Montali – Federica Michela Rossi
Un edificio arcaico sulle sponde del Tevere: testimonianze produttive e commerciali nella bassa valle tiberina 259

Enric Colom Mendoza – Ramon Járrega Domínguez
Una fase del proceso de comercialización del vino de la costa este de *Hispania Citerior*: La producción de ánforas *parvae* 269

Daniel Mateo Corredor – Juan Francisco Álvarez Tortosa – Rubén Santana Onrubia – Jaime Molina Vidal
The ARCEA Project. Production Centres and Trade Relations in the Early Empire. Analysis of the Amphorae Production from the Tarraconensis Central Coast 277

Margarit Damyanov – Krastina Panayotova
On the Chronology of the Earliest Greek Metallurgy in Apollonia Pontica 285

Corinne Dubler
Der Handel und die Verteilung des spanischen Olivenöls Richtung Gallien und Germanien zwischen dem 1. und dem 3. Jahrhundert n. Chr. 295

Renata Esposito
Puteoli tra Est ed Ovest: nuovi dati sulla colonia di età tardo – repubblicana 309

Mª Isabel Fernández-García – Manuel Moreno-Alcaide
Notas acerca del comercio de la *terra sigillata* hispánica de origen bético. El caso de los alfares romanos de Los Villares de Andújar (Jaén, España) 317

Mª Isabel Fernández-García – Manuel Moreno-Alcaide
La *terra sigillata* hispánica de origen bético: una aproximación a su simbología 325

Mariagrazia Giuseppina Finistrella
A Work in Progress: Late Roman Amphorae from Garrison's Camp Area, Nea Paphos; the Most Attested Types and Some Considerations about 333

Agnese Livia Fischetti
The Villa of Quinto Voconio Pollione in the Suburbium of Rome: Indicators of Production from Recent Excavations 343

Martina Fusi
Economy of Pottery Production: New Clues from Populonia 351

Maria Teresa Giannotta – Mariateresa Lettieri
Classical Food and Diet under the Microscope. Feeding Children in pre-Roman Apulia (Southern Italy): the Contribution of the Analyses of Organic Residues from Pottery 361

Brita Jansen
Seleukeia Gadara (Umm Qays, Jordan) – Economic Aspects of the Building Process and the Strategic Concept of a Hellenistic Fortification 371

Nisa Iduna Kirchengast
'Garbage Archaeology Reloaded' – An Interdisciplinary Approach to Animal Bones as Raw Material Supplier at the Roman Site of Carnuntum (Austria) 379

Patrick Kremser
Work in Progress. Trade Depictions on the so-called Topographical Border of the 'Yakto Mosaic' 387

Paulina Kucharska-Budzik
Anaxyrides in Greek Art 393

Eftixia Lygouri-Tolia – Dr. Anna Maria Anagnostopoulou – Mary Giamalidi – Kornilía Ntaifa – Ioulia Lourentzatou
Organization of Space in the Countryside of Attica: a New Potters' Workshop in the Ancient Deme of Aixonides Alai 401

Anna Rita Marchi – Michele Matteazzi – Ilaria Serchia
Evoluzione della relazione città-campagna in epoca romana: il caso di Parma (Italia) come suggerito dagli scavi di via del Conservatorio 411

Julia Mikocka
Change of the Function of the City Insula during the Late Roman Period: The Case of the Late Roman Insula from Maloutena District in Nea Paphos (Cyprus) 419

Bartolomé Mora Serrano – Ana Arancibia Román – Víctor Martínez Hahnmüller – Carmen Ana Pardo Barrionuevo
Phoenician and Punic Malaka: Centrality or Periphery 425

Adel Njim
La toponymie maghrébine antique et les ressources 435

Ainhoa Pancorbo Picó – Albert Martín Menéndez
El asentamiento tardo-republicano del Campet de la Sal (Cardona, Barcelona) y su relación con la explotación de la sal 441

Kleanthi Pateraki
The Diet of Classical Athletes and the Opinions of Ancient Writers, Philosophers, and Doctors Concerning It 449

Yolanda Peña Cervantes – Clara Tello Martín
Production Spaces and Commercial Spaces in Hispanorroman City of *Italica* (Seville, Spain): Economic Topography of the City 453

Peter Pflaumer
Analyzing Age at Death from Roman Epitaph Inscriptions 463

Verónica del Río Canedo – Begoña Fernández Rojo
The López Mullor LXVII in *Augusta Emerita* (Spain) High-Imperial Digs: Production in Thin-Walled and in Common Pottery 469

Salvatore Rizza – Giacomo Biondi
Nuovi dati sul c. d. «Edificio degli *Augustales*» di Centuripe (Sicilia) 477

Julio C. Ruiz
Observaciones sobre los retratos imperiales de *Tarraco* en base a aspectos técnicos 485

Julian Gabriel Schneider
The Shops of Pergamon – Terraced *Ergastēria* as Economic Spaces 495

Daniela Stoyanova
Archaic Roof-Tiles from Apollonia Pontica 511

Mikhail Treister
Kantharoi of Vysochino Type – Chronology, Manufacture and Distribution of a Specific Type of 1st Century AD Northern Pontic Silverware 521

Füsun Tülek
The Burnaz Harbor, Tax Exempt, and the Economic Boom in the Eastern Mediterranean 531

Paraskevi Vlachou – Antonis Vratsalis-Pantelaios
Natural Resources and Cultural Interactions in the Neolithic and Early Bronze Age Mediterranean. A Tentative Response from the Island of Gavdos 539

PREFACE

On behalf of the 'Associazione Internazionale di Archeologia Classica (AIAC)' the 19th International Congress for Classical Archaeology took place in Cologne and Bonn from 22 to 26 May 2018. It was jointly organized by the two Archaeological Institutes of the Universities of Cologne and Bonn, and the primary theme of the congress was 'Archaeology and Economy in the Ancient World'. In fact, economic aspects permeate all areas of public and private life in ancient societies, whether in urban development, religion, art, housing, or in death.

Research on ancient economy has long played a significant role in ancient history. Increasingly in the last decades, awareness has grown in archaeology that the material culture of ancient societies offers excellent opportunities for studying the structure, performance and dynamics of ancient economic systems and economic processes. Therefore, the main objective of this congress was to understand economy as a central element of classical societies and to analyze its interaction with ecological, political, social, religious, and cultural factors. The theme of the congress was addressed to all disciplines that deal with the Greco-Roman civilization and their neighbouring cultures from the Aegean Bronze Age to the end of Late Antiquity.

The participation of more than 1,200 scholars from more than 40 countries demonstrates the great response to the topic of the congress. Altogether more than 900 papers in 128 panels were presented, as were more than 110 posters.

The publication of the congress takes place in two ways: larger panels are presented as independent volumes (vol. 1–52). All other contributions – papers and posters – are published in four larger joint volumes (vol. 53–56).

We would like to take this opportunity to thank all participants and helpers of the congress who made it such a great success. Its realization would not have been possible without the generous support of many institutions, whom we would like to thank once again: the Universities of Bonn and Cologne, the Archaeological Society of Cologne, the Archaeology Foundation of Cologne, the Gerda Henkel Foundation, the Fritz Thyssen Foundation, the Sal. Oppenheim Foundation, the German Research Foundation (DFG), the German Academic Exchange Service (DAAD), the Romano-Germanic Museum Cologne and the LVR-LandesMuseum Bonn. Finally, our thanks go to all colleagues and panel organizers who who were involved in the editing and printing process.

Bonn/Cologne, in August 2019

Martin Bentz & Michael Heinzelmann

SESSION 11

Methodology: survey archaeology, natural sciences, quantification

Computational Approaches to Classical Archaeology

Panel 11.6

Organized by

Eleftheria Paliou

Integrating Legacy and Modern Remote Sensing Data for the Study of Land-Use History on Samothrace

Evan I. Levine – Daniel Plekhov

Introduction

This paper emerged from an effort to restudy legacy intensive survey data collected on the Aegean island of Samothrace from 1985–1987 (fig. 1).[1] To contextualize the survey data, we sought to investigate the organization of the landscape during the period when the survey was conducted. In searching for this data, we realized that there was a robust dataset of historical imagery available to us. Therefore, we saw the opportunity to explore landscape and settlement change on other parts of the island using this legacy remote sensing data. This paper demonstrates the temporal resolution available from legacy and modern remote sensing data that can inform our understanding of the opportunities on the island for landscape exploitation, as well as what the history of that land use has been over the past 75 years. Through examination of these imagery datasets and comparisons to select archaeological and demographic data, we seek to characterize in what ways the island has been utilized over time, and to identify connections between these land-use practices and fluctuations in population.

Samothrace is a rugged island measuring 178 km² that is located in the northeast corner of the Aegean Sea.[2] The island lies roughly 40 km from the mainland, and at least 25 km from the nearest Aegean island.[3] Neither small nor lacking in natural resources, it appears that Samothrace never was settled intensely in antiquity, although little is known about the one polis-sized urban centre located on the island.[4] Instead, Samothrace features prominently in history because of the religious sanctuary, the Sanctuary of the Great Gods, located on the island's northwest coast, that attracted a number of monumental architectural dedications by Hellenistic kings.[5]

It has long been assumed that the topography of Samothrace was a major reason for the limited settlement on the island. Most of the island is mountainous, rising up to a height of 1,611 m to dominate the northeast Aegean. Such extreme topography provides limited opportunities for agriculture and settlement, except on the west coast where the terrain is less extreme. The prominence of the sanctuary and the easily arable terrain on the west and northwest part of the island has attracted the majority of archaeological investigation. In addition, Samothrace is without any natural harbours, and the creation of artificial moles and bays has been necessary to facilitate seafaring, fishing, and trade since antiquity.

Nevertheless, archaeological remains are prevalent throughout the island, and aerial photography and satellite imagery collected over the course of the past century reveals a high degree of activity, settlement, and change throughout the island. As the French geographer Elisée Reclus remarked after his visit to the island in the late 19th century,

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"there is only one village on the island now. Its inhabitants lead a secluded life, and the only strange faces they see are those of the sponge-fishers who frequent the island during summer. The entire absence of harbours, and the dangerous current which separates Samothrace from Imbro, keep off the mariner, and though the valleys are extremely fertile, they have not hitherto attracted a single immigrant from the neighbouring continent."[6]. Today, the island has a population of 2,859,[7] and many of its "extremely fertile" valleys are under cultivation. Such activity not only underscores the exploitability of these other parts of the island, but also demonstrates the markedly dynamic relationship between population, environment, and settlement. Moreover, these observations challenge assumptions about where traces of past human activity are likely to be preserved.

Historical Overview

The archaeological and historical record of Samothrace reveals long-term habitation by several cultural groups, highlighting the island as an important place of cultural contact in the Aegean. Fieldwork at Mikro Vouni on the western coast of the island has shown that the island was inhabited since the Late Neolithic.[8] This site also provides the most compelling evidence for Bronze Age activity, with some of the earliest Linear A and Cretan Hieroglyphic texts outside of Crete, and certainly the furthest examples of these scripts from the Minoan heartland.[9] The Iron Age archaeological record exhibits strong parallels to the ceramics and metalworking produced by contemporary populations on the nearby Thracian coast. Following the settlement pattern seen on the mainland, these sites cluster atop hills, occupying easily defensible positions in the landscape, and occasionally integrating additional fortifications.[10] This was the period when religious activity began at the Sanctuary of the Great Gods on the north coast of the island.[11] The earliest material evidence of worship at this site dates to the 7th century BC, with votive deposits exhibiting local Samothracian forms.[12] Hellenic influence is seen at the site by the 6th century, with the first Greek inscriptions and the rise to prominence of the mystery cult for which the site is known. A major urban centre developed adjacent to the sanctuary, known today as Paleopolis, which has yet to undergo systematic study. Hints of activity from the Archaic to Roman periods are found throughout the rest of the island, at sites like Phonias and Chora, but the lack of any published material precludes their integration in this narrative.[13] The Byzantine, Medieval, and Early Modern periods saw Samothrace changing hands between the Ottoman Empire, the Genoese Gattilusi family, the Venetians, and briefly the Russians. Recently, the island has been a point of contention between Greece and Turkey and still features a major Greek military presence.

This review paints the picture of an island that experienced periods of dense island-wide habitation and exploitation, as well as periods of settlement contraction and

abandonment. Though this paper focuses on the settlement history and land-use of the past century, we argue that understanding changes occurring during that period can better inform our understanding of similar changes in the past. While the northern and eastern parts of the island were extensively occupied during the Byzantine periods, settlement during the subsequent centuries contracted to Chora in the foothills near the west coast. The settlement dispersal and population increase of the past century provide a valuable opportunity to track how these northern and eastern parts of the island were re-inhabited and more intensively exploited.

Data

To obtain a comprehensive record of aerial and satellite imagery that covers much of the past century, we drew on a variety of legacy and contemporary datasets, each with their relative advantages and drawbacks. The earliest of these datasets comes from extensive photographic aerial reconnaissance missions flown by Allied Forces during World War 2. The photos that cover Greece were given to the British School at Athens after the war. More than 30,000 images of Greece exist, many of them stereo pairs, and which cover about 60% of the Greek mainland and select Aegean and Ionian islands, including Samothrace. The scale of most of these photos is around 1:15,000. Flight paths have been mapped by the BSA and linked to an interactive map of Greece,[14] which we have used to request and obtain relevant images from August of 1944.

The second set of imagery comes from the CORONA spy satellite program, operated by the CIA between 1959 and 1972. Since 1995, the majority of images collected by this program have become declassified, providing an invaluable tool for archaeologists interested in studying landscapes prior to the expansion of urban settlements and intensive agriculture.[15] As with the RAF photos, CORONA images were also collected in stereo pairs. The images used for this study were collected in 1965, with a spatial resolution of approximately 2,75 meters.

The third set of imagery comes from the Landsat satellite program, which is the designation given to a series of satellite systems launched and maintained by NASA in order to provide a tool for the continuous monitoring of Earth's resources. With the first of these systems launched in 1972, the Landsat program has provided consistent monitoring of the planet with increasing spatial and spectral resolution. For the purposes of this paper, we focus on images collected by Landsat 4 and 5, which were operational from 1975 to 2013, and Landsat 7, which was launched in 1999 and remains operational today. Landsat 4 and 5 provided imagery in seven spectral bands, with a maximum resolution of 30 meters and a revisit time of 16 days, while Landsat 7 added a panchromatic band that allows resolution to be sharpened to 15 meters. From imagery collected by these sensors, we select images for 1985 and 2005, continuing the roughly 20-year interval between RAF and CORONA imagery.

The fourth set of imagery is provided by DigitalGlobe and comes from their WorldView-2 sensor, launched in 2009. WorldView data, acquired through a grant from the DigitalGlobe Foundation, provides the greatest spectral and spatial resolution of our datasets, with eight multispectral bands imaged at a resolution of 1,84 meters and a panchromatic band imaged at a resolution of 46 centimetres. Two sets of images were obtained for Samothrace, collected in September 2015 and May 2016 respectively.

Collectively, these four datasets provide a coarse but long-term perspective on changes in settlement and land-use on the island. While limitations clearly exist, not least in terms of spatial resolution and obscuration by clouds, these data nevertheless represent an important archive of information that can be employed to answer broad scale questions.

Methods

To integrate these datasets and create a narrative of Samothracian landscape change over the past 75 years, we georeferenced all available image sets and identified five areas of interest on the island, which we investigated for signs of continuity or change in land-use (fig. 1). These areas were selected according to three criteria. The first criterion was areas on the coast. While we would have liked to focus on more inland and mountainous areas, no ground-truthed archaeological data for these areas exists presently; features associated with pastoralist activities are either too small to appear in all but our highest resolution imagery, or even then are obscured by vegetation which is more prevalent at higher elevations. The second criterion was areas that were under cultivation and settled in our earliest imagery datasets. We considered these areas as baselines, from which we evaluate processes of expansion and abandonment. Conversely, one of our areas was chosen specifically because it is currently exploited, but was not settled or under cultivation in 1944. For this area, we are interested in tracking when activity began and the rate at which it progressed. The third and final criterion aimed to sufficiently sample the northern, southern, and eastern parts of the island, in order to compare with the activity taking place on the western part. These parts of the island can be considered marginal, when compared with the flatter and more agriculturally favourable areas on the west, such that their exploitation may reflect certain social or economic pressures.

Together, these criteria provide us with a means to address our two questions: what evidence is there for recent activity on other parts of the island, and what has the trajectory of settlement and land-use been on the island over the course of the past 75 years? Based on these findings, we have established a foundation for further research that integrates data from other parts of the island with the robust dataset coming from the well-studied western area. These data both stand on their own, providing novel insights into something of an archaeological lacuna, but also provide a critical regional

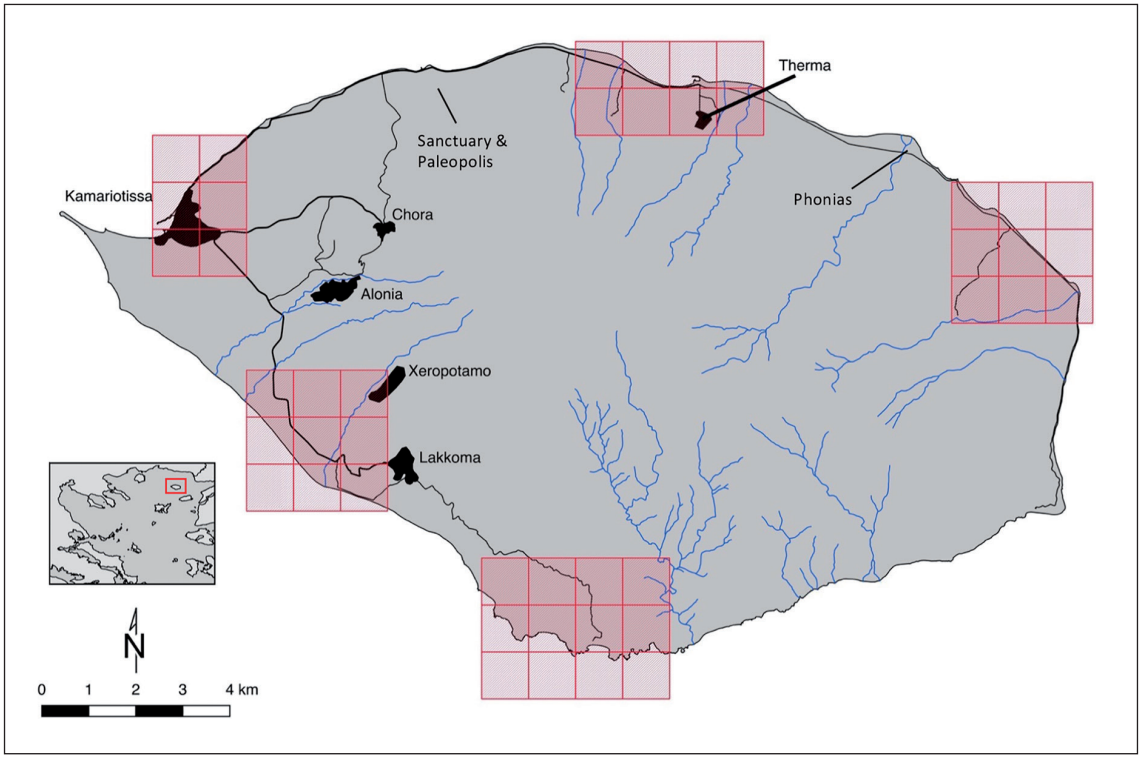


Fig. 1: Map of Samothrace with major urban centers and areas of interest.

context within which to better situate the questions asked of the western part of the island.

Trends in Samothracian Land-Use

The most notable change apparent from the satellite imagery was the expansion of settlement to other parts of the island and the construction of harbour facilities on the coasts at several of these new settlements. Across the island, there is a concerted pattern of settlement dispersal, with areas on the north and east coast becoming progressively settled over the course of the 20th century. These changes are best contextualized by reference to population and economic data for the past 75 years. From 1830 to the end of the 19th century, as recorded in Ottoman census records, the island's population was no larger than 500.[16] In any case, by the first Greek census of the island in 1940, immediately before the occupation of the island by the Bulgarian army, the island's population had risen to 4,000. The following decade experienced another period of growth, as the population rose to 4,564 inhabitants by 1951. Subsequent decades, however, have seen a general population decline on the island, with numbers steadily decreasing to 3,000 in 1971, and remaining near that figure until the present day.

This trend of population decline contrasts with the sharp rise of tourism on the island by domestic and international visitors. While the Samothracian economy of the 19th and first half of the 20th century was dominated by local agro-pastoral production, documented both in historical literature and the archaeological record of the recent past, tourism now serves as the major driving force of the island's economy. Like other Aegean islands, visitor numbers peak in the summer months, with between 8 and 11 thousand individuals transported to the island during summer months in 2016 and 2017.[17] A good deal of the island's tourist population camps on the north side of the island, taking advantage of the touristic amenities in Therma, plentiful camping areas, as well as visiting the island's waterfalls, forests, hiking trails, and beaches. Nevertheless, while agricultural and pastoral economics have been supplanted by tourism as the major economic drivers on the island and the large tourist population has necessitated the importation of food from the Greek mainland and EU, a population of some 90–100,000 goats are still herded on the island and common Mediterranean crops are still farmed across the island.[18]

These figures provide us with a perspective toward the island as a whole, but further nuances can be seen in our five case studies. The first area that we examine is Kamariotissa: the area that has become the island's major port and main centre of habitation and infrastructure (fig. 2). In 1944, the area was almost devoid of buildings, with clear evidence of the exploitation of this fertile landscape for farming, likely by inhabitants of the village of Chora a few kilometres inland. By 1965, a settlement had expanded and a harbour with an artificial mole was constructed to provide a safe place for ships to dock in rough seas. By 1985, the settlement had expanded further, continuing to encroach on coastal farmland. The harbour and mole were expanded in 2005 to allow for large Aegean ferries to dock on the island, but the settlement and farmland around it largely stagnated in terms of change. Some additional structures were built, but the urban footprint remains roughly the same. In 2015, the western and southern extents of the town remained as they were in 2005, but noted expansion was observed to the northeast, where additional touristic amenities (such as hotels and pools) are clearly visible.

We turn now to the town of Therma on the island's north central coast, another area that has seen a good deal of infrastructural development over the past 75 years (fig. 3). This area, known since antiquity for its hot sulfuric springs (perhaps related to worship of Asclepius), was a very limited settlement in 1944 and was surrounded by extensive farmland. A road from the island's west, hugging the coast, terminated at Therma, making this the most accessible part of the eastern part of the island by automobile. No change was seen in the area in 1965, where we continued to record a small cluster of buildings and a series of intensively farmed grain fields. The first major development is recorded in the imagery from 1985, where we noted the road expanding further to the east (toward the area of Kipos Beach on the island's southeast), a noted expansion in the settlement of Therma, as well as a clear contraction of exploited farmland. In the imagery from 2005, in the same period when the harbour at Kamariotissa

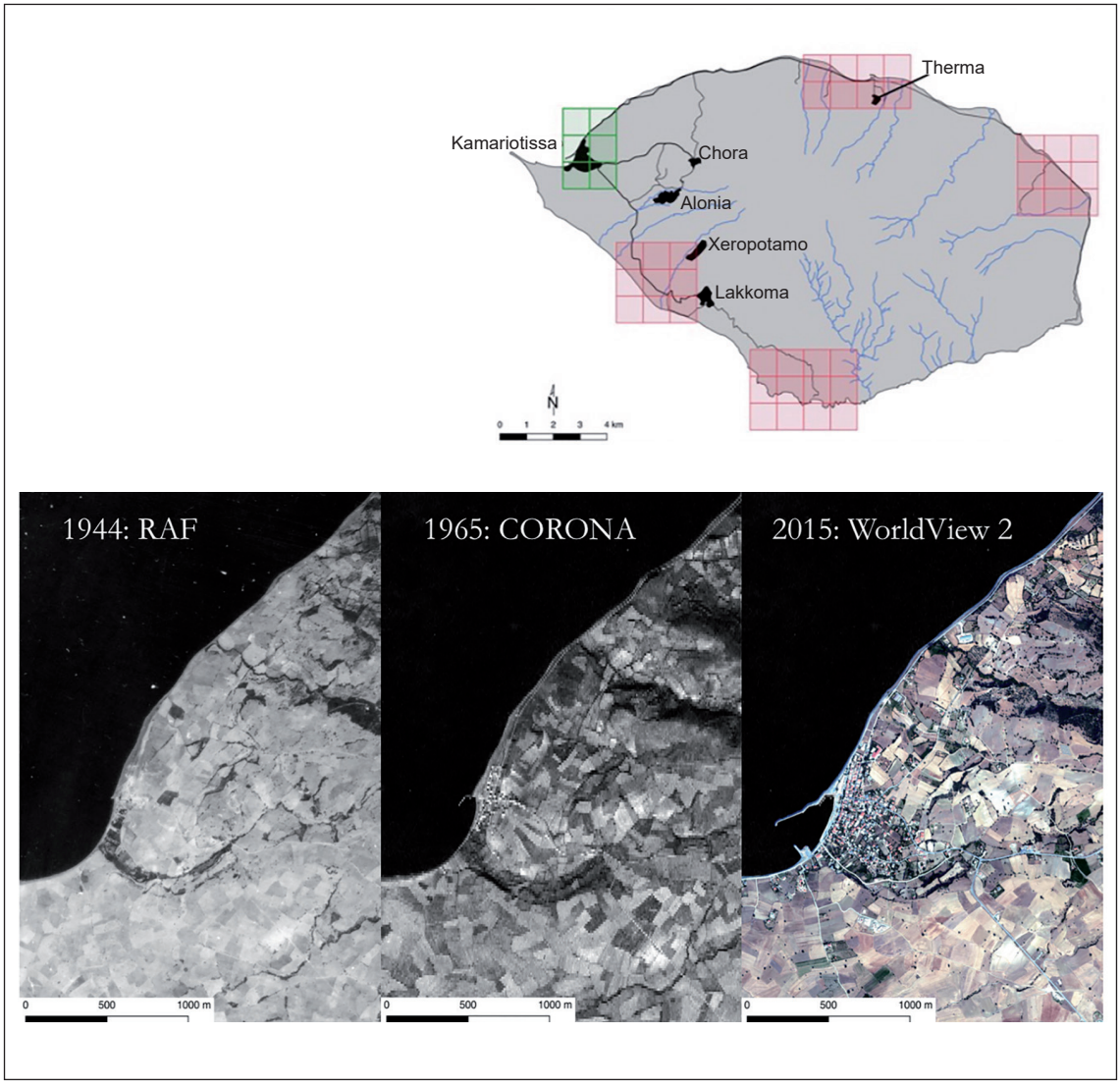


Fig. 2: Case study 1: Kamariotissa.

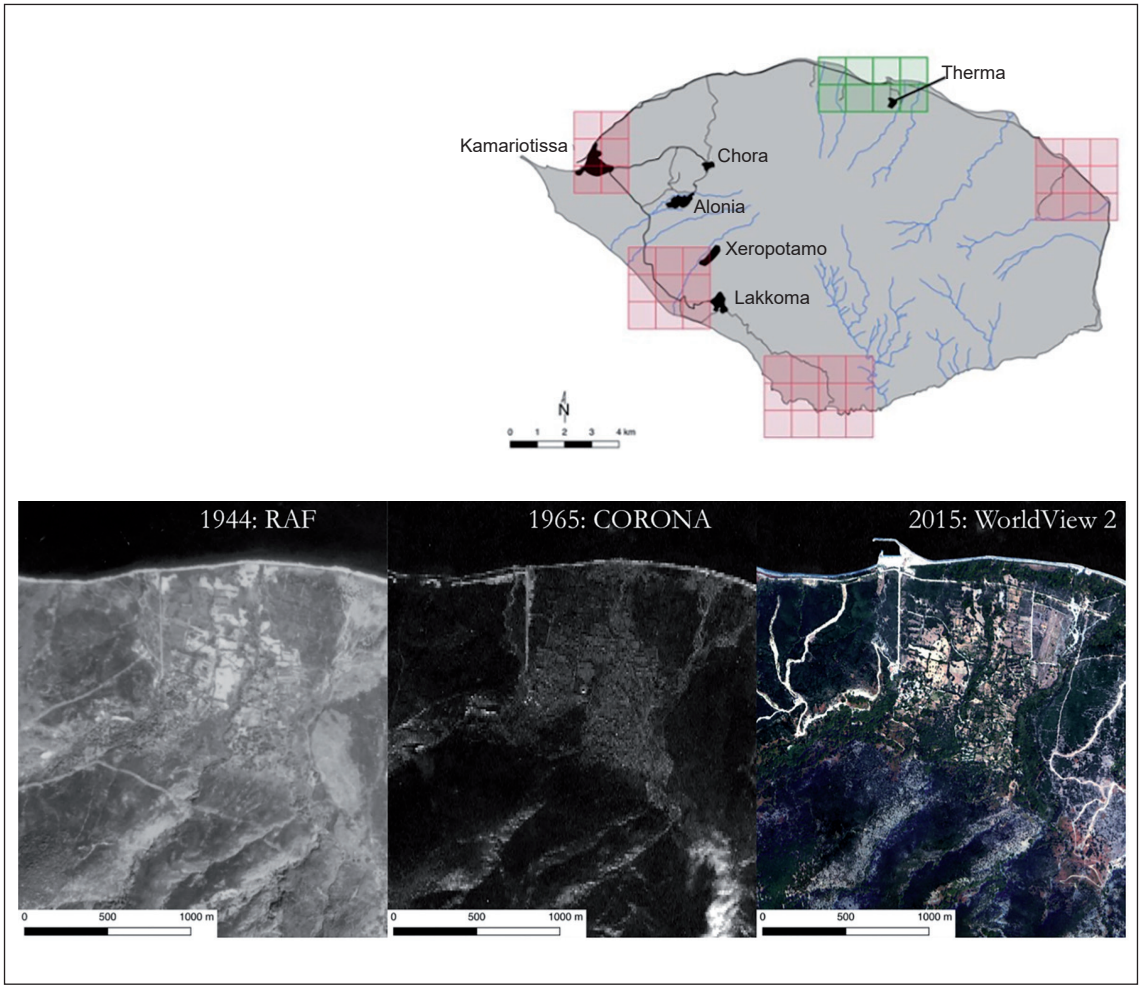


Fig. 3: Case study 2: Therma.

is expanded, we see the construction of an artificial harbour at Therma alongside the continued abandonment of farmland around the village. However, little change is apparent at the site between 2005 and 2015. Therma still receives the majority of the island's tourist visitors, who camp at the free camping sites on the island's north coast, but this has not resulted in significant change in the past decade.

This same pattern of gradual agricultural reduction, increased settlement, and the construction of amenities for tourism is not an island-wide phenomenon. The area downriver from the village of Ano Meria is notable as one of the most fertile parts of the island away from the west. This trait is exhibited by the 1944 imagery, which shows extensive farmland and the furrows of deep-plough agriculture (fig. 4). While the village to the west grew and contracted over time, these fields and others in the area remained in constant cultivation between 1985 and 2005, throughout periods of road construction and economic reorganization. In 2015, a period when there is noted growth in the nearby village of Ano Meria, we noted very little change in the agricultural landscape, field divisions, or means of cultivation.

A similar pattern is witnessed at the area on the outskirts of the village of Makrilies, at the southern end of the coastal plain on the island (fig. 5). In a similar form to the area near Ano Meria on the northeast, the area was extensively farmed in the 1940s, and the subsequent decades saw little change in the use of this area. However, a new road and some new homes were constructed toward the sea and in the nearby village during this time. In 2015, this area persists as the south-eastern boundary of intensive agricultural production, delimited – in all periods – by the Xeropotamos river.

Finally, the area of Pachia Ammos is not only the finest beach on the island, but is also one of the only accessible parts of the island's south coast which is otherwise dominated by steep cliffs covered in scree and vegetation (fig. 6). Select, albeit small-scale, farming takes place in the area around the beach, with individual fields and some terraces noted since the 1940s. However, with the construction of a road from the west in the decades between 1985 and 2005, we witnessed the development of small touristic beach installations that have grown in the past decade. A clifftop church has remained in use since 1887, but a taverna that hangs over the cliff toward the sea and beach now neighbours this older religious architecture. Examination of the high-resolution World-View imagery shows us that the beachside amenities continue to grow, and that the scattered and small-scale farming persists.

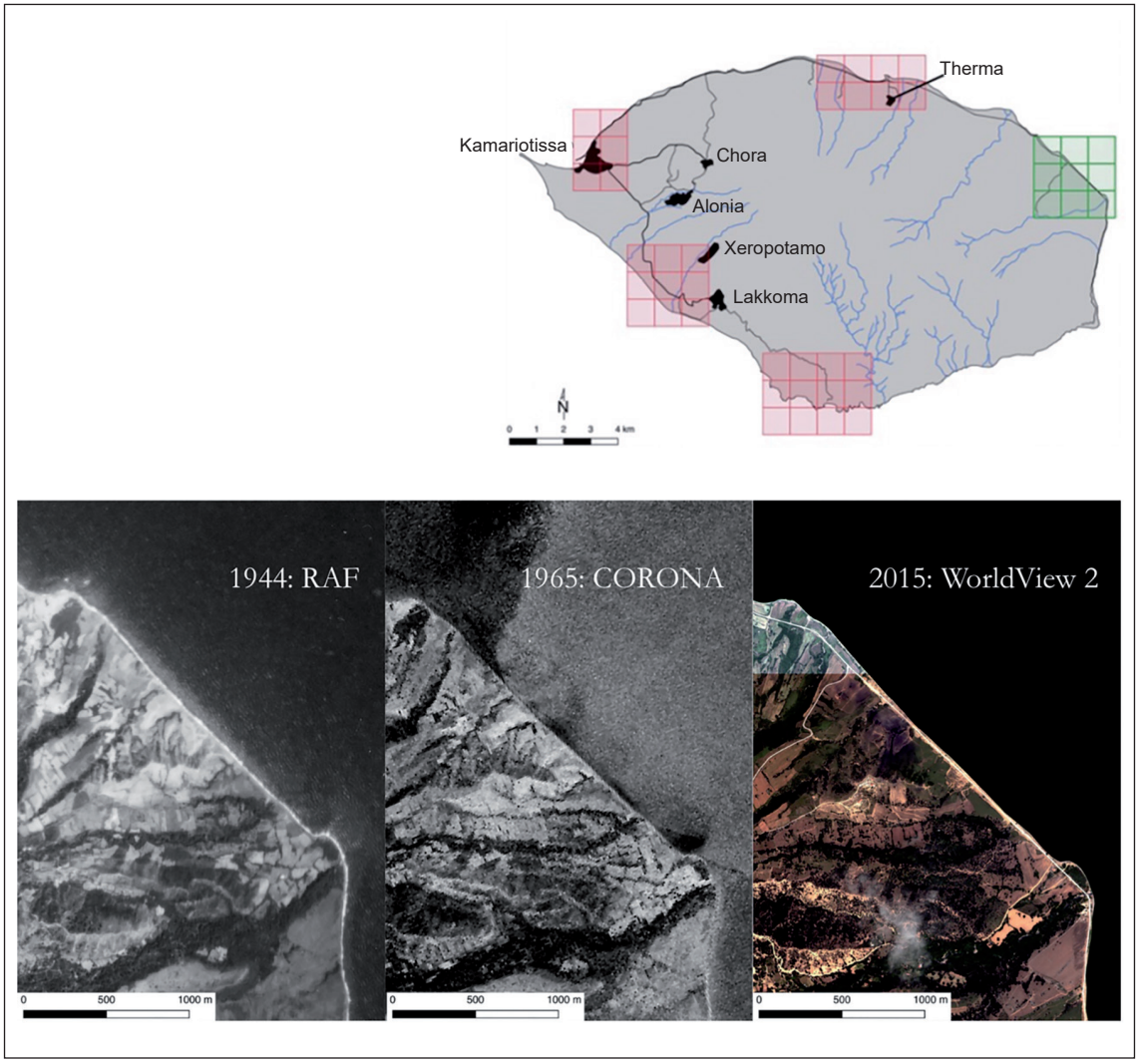


Fig. 4: Case study 3: Ano Meria.

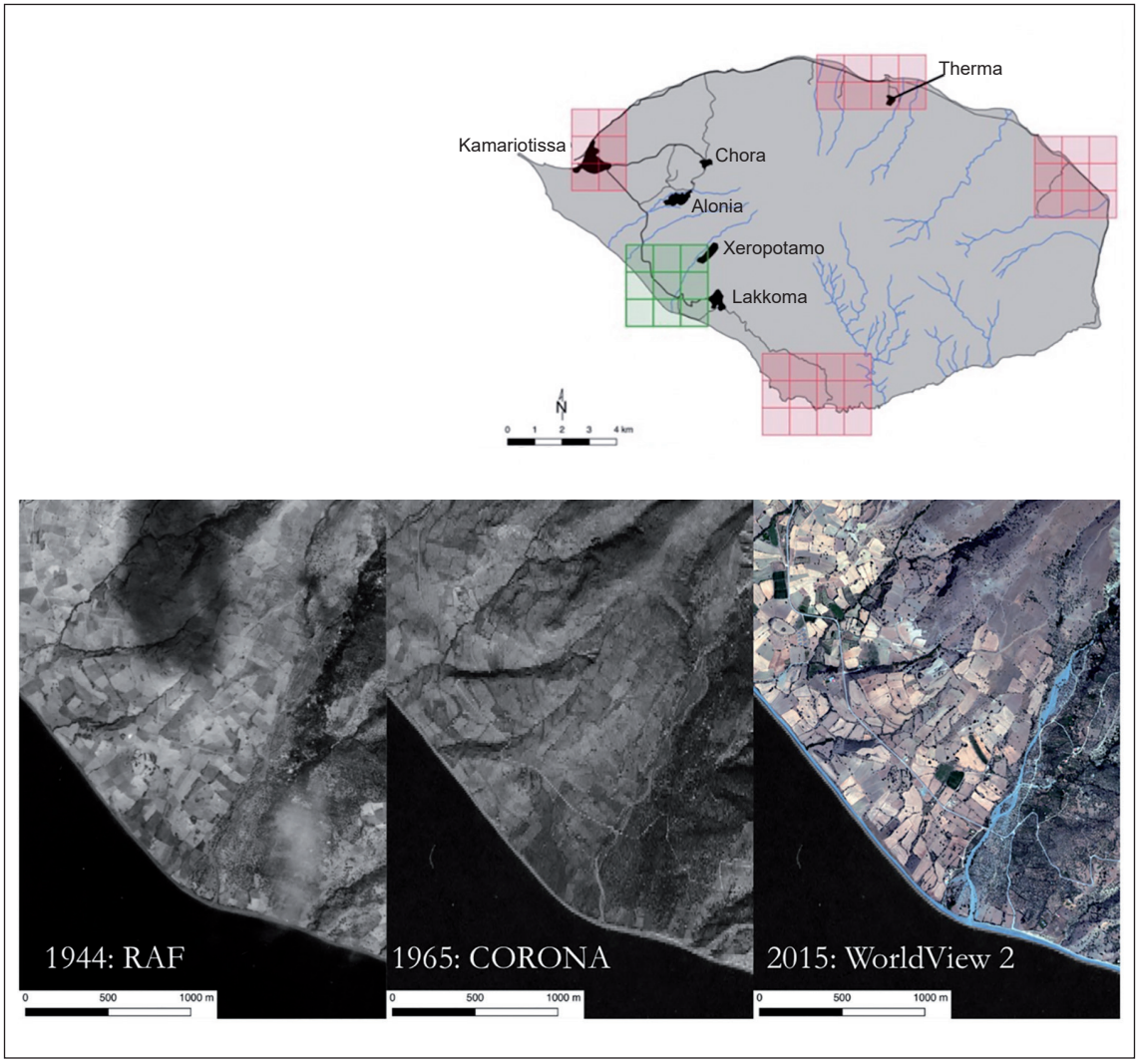


Fig. 5: Case study 4: Makrilies.

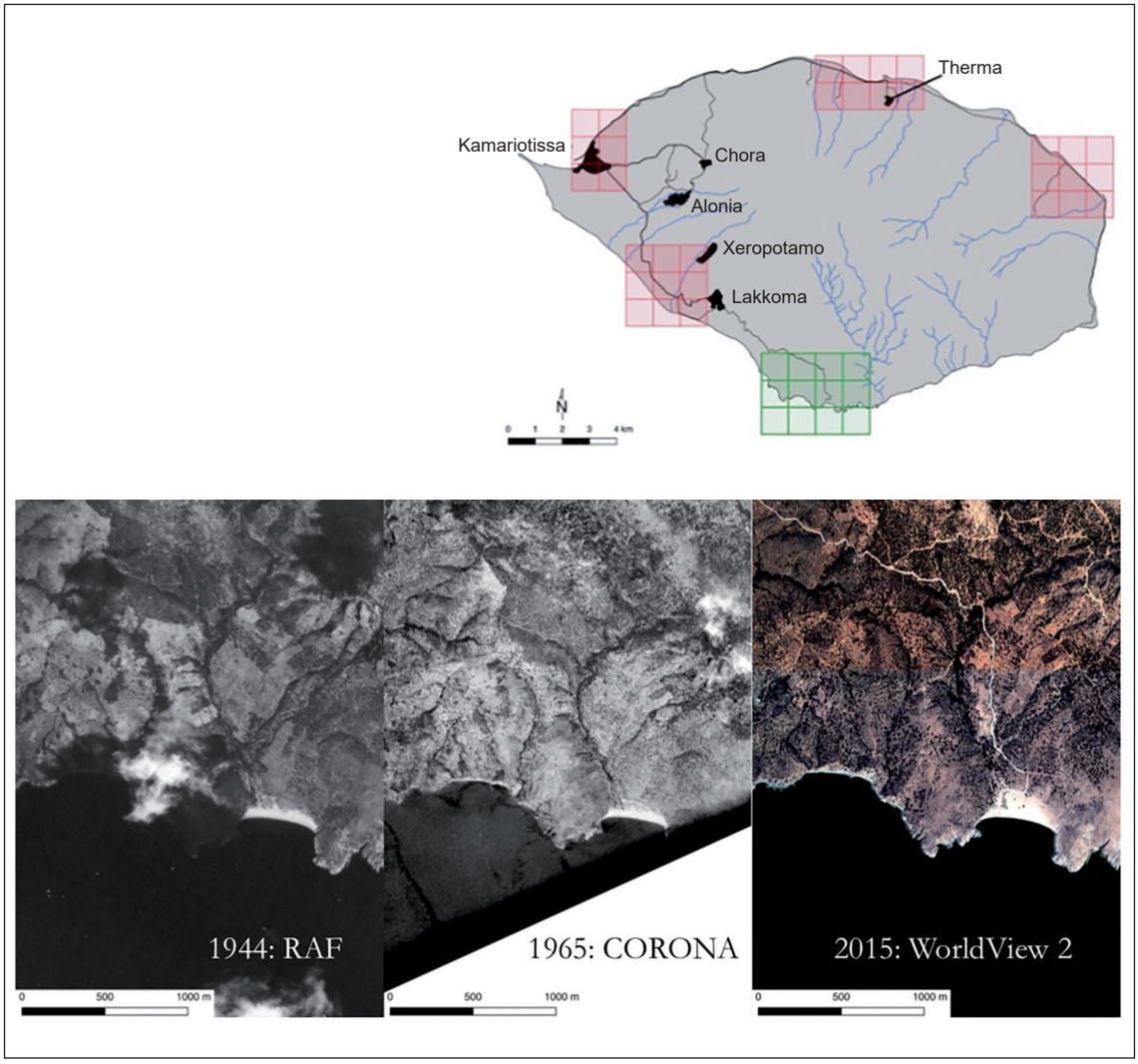


Fig. 6: Case study 5: Pachia Ammos.

Conclusion

We set out to investigate, through remote sensing, how land-use and settlement patterns on the island have changed over the course of the past 75 years. We recognized that archival, ethnographic, and archaeological data can substantially inform our understanding of these processes. For example, goat pastoralism is a major component of the Samothracian economy, with more than 90,000 goats managed relative to 3,000 inhabitants. While we can evaluate agriculture through remote sensing, signatures of pastoralism are much less pronounced in remote sensed imagery. Nevertheless, obtaining an extensive and long-term perspective on agriculture is a vital component to understand pastoral practices on the island, as many farmers also practice pastoralism. As such, we demonstrated the utility of archival and legacy remote sensing data as an additional line of evidence and complementary to these other forms of inquiry.

Beginning in the middle of the 20th century, a highly centralized population on the west side of the island, particularly around the settlement of Chora and its agricultural fields, progressively dispersed across the island. These groups increasingly exploited areas in the east, where there is also evidence of extensive Byzantine and Late Medieval settlement. It is interesting to note that a place like Kamariotissa, which was likely one of the small ancient harbours of the island, remained largely abandoned until the second half of the 20th century. Other places on the island, however, such as those around Phonias on the east coast, where there is extensive archaeological evidence for past occupation, remain uninhabited today. Instead, the primary centre for settlement on the east coast is further to the south, near the village of Ano Meria.

This study can inform archaeological research design by emphasizing discontinuities within the landscape. Even over the relatively short term, we may exhibit visual evidence that areas settled today are not necessarily those that were intensely settled in the past, and, conversely, areas that are abandoned today may have experienced settlement and exploitation in the recent past. Furthermore, the motivations for settlement and land-use are themselves a complex combination of internal and external factors, depending as much on local climate, environment, and social organization as on wider economic and political factors. We hope that by drawing attention to these data sources and the ways in which they can be utilized together, this excellent source of legacy data can continue to be utilized by archaeologists to explore changes in the recent past, shedding light on landscapes over the long-term.

Notes

[1] The authors would like to express their thanks to Bonna Wescoat & and the Samothrace excavations, Dimitris Matsas and Chryssa Keradima-Matsa, Christopher Witmore and the Texas Tech University Department of Classical & Modern Languages & Literatures, The British School at Athens and the wonderful

staff at the BSA library, DigitalGlobe & the DigitalGlobe Foundation. We would also like to thank Brown University, the Joukowsky Institute for Archaeology and the Ancient World, and the Brown University Graduate School. Finally, many thanks to the organizers of AIAC.

[2] Biel et al. 2014, 18.

[3] Syrides et al. 2009, 14.

[4] Matsas 2001.

[5] Lehmann 1998, see also <samothrace.emory.edu/bibliography> (08. 06. 2020) for a consistently updated bibliography of publications stemming from and related to this project.

[6] Reclus 1883, 95.

[7] This figure is according to the 2011 Greek census.

[8] Matsas 1991/1995; Syrides 2009.

[9] Davis 1992.

[10] Matsas 2007.

[11] Graham 2002.

[12] Lehmann 1952, 36.

[13] The single exception is a very interesting Hellenistic amphora workshop in the island's east coast, found during the construction of the main road and published by Karadima et al. 2002.

[14] This interface is available at <bsa.ac.uk/resources/raf> (08. 06. 2020).

[15] Ur 2003; Casana et al. 2013.

[16] Karpat 1985.

[17] Saos Ferries 2017.

[18] Biel et al. 2014, 29.

Image Credits

All figures by authors.

Bibliography

Biel et al. 2014

B. Biel – K. Tan – M. G. P. Historias, The Flora of Samothraki (Athens 2014).

Casana et al. 2013

J. Casana – J. Cothren, The CORONA Atlas Project: Orthorectification of CORONA Satellite Imagery and Regional-Scale Archaeological Exploration in the Near East, in: D. C. Comer – M. J. Harrower (eds.), Mapping Archaeological Landscapes from Space (New York 2013) 33–43.

Davis 1992

J. L. Davis, Review of Aegean Prehistory I: The Islands of the Aegean, AJA 96, 1992, 699–756.

Graham 2002

A. J. Graham, The Colonization of Samothrace, Hesperia 71, 2002, 231–260.

Karadima et al. 2002

C. Karadima – D. Matsas – F. Blondé, Workshop References and Clay Surveying in Samothrace. An Application to the Study of the Origin of some Ceramic Groups, in: Modern Trends in Scientific Studies on Ancient Ceramics. Papers presented at 5th European Meeting on Ancient Ceramics, Athens 1999 (Oxford 2002) 157–162.

Karpat 1985

K. Karpat, Ottoman Population, 1830–1914: Demographic and Social Characteristics (Madison, WI 1985).

Lehmann 1952

K. Lehmann, Samothrace: Fifth Preliminary Report, Hesperia 21, 1952, 19–43.

Lehmann 1998

K. Lehmann, Samothrace: A Guide to the Excavations and the Museum (6th ed. rev. by J. R. McCredie) (Thessaloniki 1998).

Matsas 1991

D. Matsas, Samothrace and the Northeastern Aegean: The Minoan Connection, StTroica 1, 1991, 159–179.

Matsas 1995

D. Matsas, Minoan Long-Distance Trade: A View from the Northern Aegean, in: R. Laffineur – W.-D. Niemeier (eds.), POLITEIA: Society and State in the Aegean Bronze Age (Liège 1995) 235–247.

Matsas 2001

D. Matsas, Samothrace: A Short Cultural Guide (Athens 2001).

Matsas 2007

D. Matsas, Archaeological Evidence for Greek-Thracian Relations on Samothrace, in: A. Iakovidou (ed.), Thrakiston Ellino-Romaïko Kosmo (Athens 2007) 387–402.

Reclus 1883

E. Reclus, The Earth and its Inhabitants: Volume I, Greece, Turkey in Europe, Rumania, Servia, Montenegro, Italy, Spain, And Portugal (New York 1883).

Syrides et al. 2009

G. Syrides – K. Vouvalidis – K. Albanakis – P, Tsourlos – D. Matsas, Palaeogeographical Evolution and Sea Level Changes during Holocene in the Prehistoric Settlement of Mikro Vouni (Samothrace Island, Greece), Zeitschrift für Geomorphologie, Supplementary Issues, 53(1), 2009, 39–54. <http://doi.org/10.1127/0372-8854/2009/0053s1-0039> (08. 06. 2020)

Ur 2003

J. Ur, CORONA Satellite Photography and Ancient Road Networks: A Northern Mesopotamian Case Study, Antiquity 77, 2003, 102–115.

Modelling Processional Movement at Ostia

Katherine A. Crawford

Introduction

Ostia hosted a rich religious landscape, its composition ranging from monumental temples to private household altars. Despite the prevalence of religious architecture and dedicatory objects found throughout the ancient city, only minimal attention has been afforded to the topic of processional rituals, which would have brought life to the city's various cults and temples. Most scholarly accounts provide either passing commentary about where processions may have transpired, such as along Ostia's *decumanus,* or address their probable occurrence in conjunction with certain cults.[1] These approaches remain largely a consequence of the nature of the Roman processional record, which favoured literary and iconographic depictions of major processions at Rome to those that occurred in smaller cities around the Empire. While we can infer the presence of processional rituals at cities such as Ostia through the comparative study of the Roman calendar with known Ostian cults that had well identified rituals, the form of processions and their impact within the city remains invisible within the archaeological record.[2]

This paper introduces a novel approach to considering how processions may have navigated Ostia during the late 2nd century CE through the use of an agent-based simulation. The model takes a spectatorship and visibility focused approach to question how different forms of viewership helped to shape possible processional routes through the city. Without some form of visibility, a procession would have been effectively meaningless.[3] Therefore, questioning how spectators engaged in various urban activities shaped routes provides one method of studying a procession's construct. For instance, if passage past shops was significant due to the possibility of granting a procession greater visibility, where might the ritual have travelled? Engaging different audiences would also have depended upon the intended purpose and message of a particular processional ritual.[4] Within the agent-based model, the built environment is used as a proxy for the different types of spectator groups that would have been found within the city. While other urban features such as street width could be used to help inform how processions navigated the city, when a route is otherwise unknown, such measurements alone cannot be used to determine full processional routes. Questioning where processions may have travelled within Ostia's urban fabric ultimately provides new insight into the extent to which Ostian cults effected urban life through virtue of their moving rituals.

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Case Study: The Serapeum

Ostia's Serapeum has been chosen as a case to test the suitability of using agent-based modelling to study processional movement and to determine the extent to which this offers new insight into the nature of the temple's ritual activity. While the small temple, which is located at the western-most edge of the excavated city (fig. 1), has received a significant amount of scholarly attention, its rituals have not received equivalent consideration.[5] As the only presently excavated Egyptian temple within the city, study of its potential processional rituals presents an ideal opportunity to question how the cult was more widely integrated within Ostia's urban landscape. Comparative evidence from across the Roman Empire attests to the practice of various Egyptian processions involving the deity Serapis.[6] Furthermore, the large quantity of evidence relating to Egyptian cults discovered at Ostia provides a strong argument towards the likely presence of processional rituals.[7] Despite the high probability for the occurrence of Egyptian processions at Ostia, existing evidence does not offer any indication into their routes through the cityscape. The methodology introduced in this paper, therefore, provides a new approach to questioning how processions originating at the temple of Serapis may have navigated Ostia's urban landscape during the late 2nd century CE.

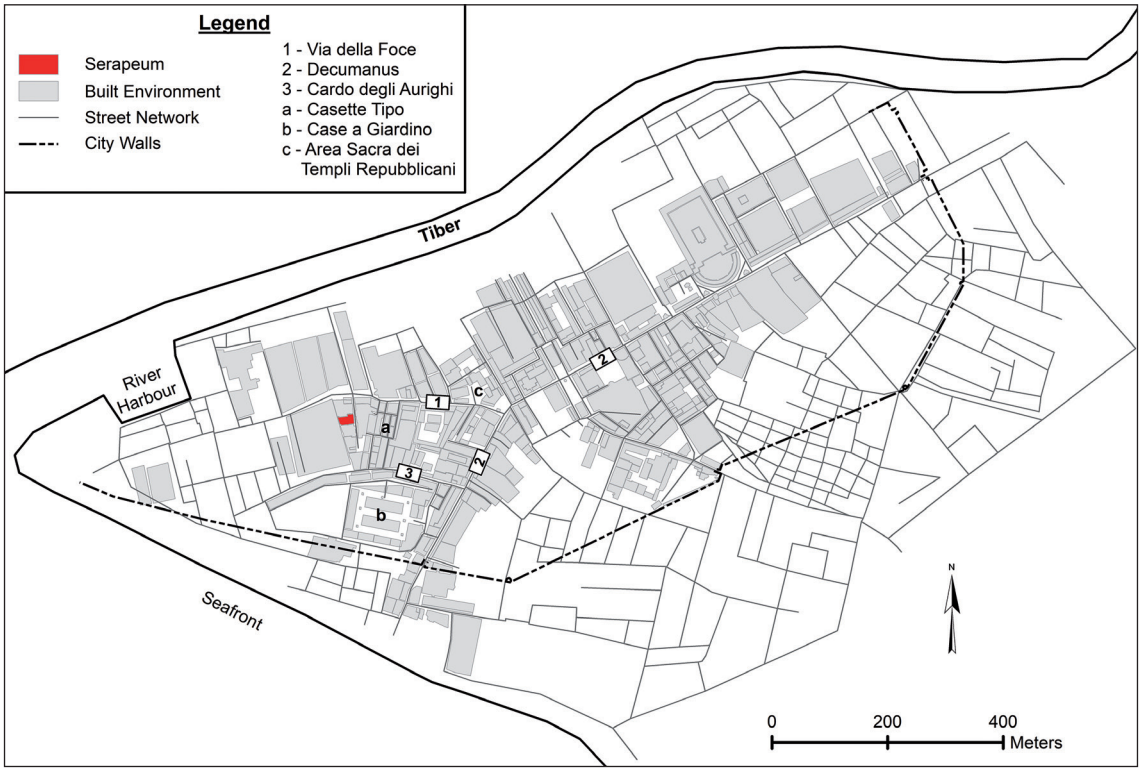


Fig. 1: Map showing the location of the Serapeum within Ostia with relevant buildings and streets noted.

Methodology

Agent-based modelling is applied to question how processions may have navigated Ostia's cityscape following the passage of buildings with different functions. An agent-based model is a simulation tool that allows the user to create a 'real-world' environment in order to study the behaviours and interactions that arise between agents within the model.[8] The results of a simulation can help us to understand how behaviours arise from various decisions. More significantly, for the present study it provides a formalised method of visualising the complex dynamics that contributed to the manifestation of a processional route. The simulation outcomes, when analysed in light of the archaeological record, provide a way of moving beyond written theories about the probable presence of processions at Ostia to studying their action within the city.

There are a variety of different platforms that support agent-based simulations. The present model was developed in NetLogo, which is fully programable in addition to having the capability of incorporating geographic information system (GIS) spatial data.[9] The spatial environment of NetLogo consists of individual cells called patches, and, while stationary, they can hold different types of information in addition to having the ability to interact with the agents that pass over them. Within the model, agents are coded to follow pre-determined rules that determine how they interact with other agents within the simulation as well as the underlying spatial environment. These coded interactions are repeated for a certain amount of time, after which the results of the model can be exported and analysed.

Model Overview

The model comprises an underlying spatial environment and three types of agents. In order to create the model's background simulation environment, GIS shapefiles specific to Ostia's built environment, street network, and individual building classifications are imported into NetLogo.[10] The landscape consists of 700-cells by 400-cells. The model's resolution corresponds to each cell measuring approximately 1 meter. The environment consists of seven different components: Ostia's unexcavated cityscape (grey), streets (black), commercial spaces (green), production spaces (orange), residential spaces (yellow), public spaces (blue), and religious spaces (pink) (fig. 2).[11]

This spatial environment has different parameters that dictate how agents can act and where they can move. Pedestrian movement associated with the procession, which is influenced by the various building classifications, can only occur along the city's street network, therefore ensuring that agents do not enter buildings. Each of the individual building classification categories can be attributed with a different 'influence' value that ranges from 1–5, which determines how desirable it is to the passing procession.



Fig. 2: Plan of Ostia shown in NetLogo's spatial grid. The different colours correspond to different building classification categories, the extended cityscape, and the city's streets. Each colour has different functions and rules that have to be followed by the agents (see text).

The model includes three different types of agents. First is the processional leader, whose goal is to determine a certain path through the urban environment that passes the highest influence value buildings while staying on the streets and not running into other agents. The second type of agents are urbanites, which wander along Ostia's streets but have no specific goal except to avoid running into other agents and to move randomly along the city's streets. The third type of agents are the observers. If observers are within a certain radius of the processional leader, they will stop for a set amount of time to "watch" the procession before continuing onwards. Like the processional leader and the urbanites, these agents are confined to moving along the street network and avoiding obstacles. The total number of urbanities and observers can be adjusted within the model. The introduction of agents into the model in addition to the processional leader serves to account for some of the possible movement dynamics that occurred along Ostia's streets. A procession, regardless of its form, would not have travelled along a completely empty street. Introducing urbanites and observers into the present model, therefore, serves to begin presenting a more realistic consideration of processional movement by making the processional leader react and move in relation to other agents within the street.

Model Experiments

The agent-based model is used to study the routes taken by a hypothetical circular procession which begins and concludes at the Temple of Serapis. Five different experiments are undertaken within this framework to test how different building classification categories affect movement patterns. The first test consisted of an unweighted model, where all building categories were weighted with a value of 1. This provided a general baseline for analysing subsequent simulations in light of the degree to which processional routes were determined by passing different building classification categories versus the shape of the built landscape. The next four models were run by separately weighting the commercial, residential, public, and religious building classification categories.[12]

Since each simulation run results in a different outcome, multiple simulations have to be undertaken for each parameter (e.g. building weight) in order to assess the degree of variation in the results. For the present model, ten simulation runs were found to adequately capture the possible variation of movement along different city streets. The results of each weighted simulation are presented using a colour gradient relating to the similarity of passing along a specific street during each of the ten runs.

Implementation of ABM and Results

Within each simulation, the route is determined by the processional leader following a movement algorithm that determines which nearby buildings have the highest influence value, walking to the edge of that building while avoiding other pedestrians, and then choosing the next building to move towards. The processional leader keeps track of where it has previously travelled, thereby ensuring that it does not travel in circles or stay in one place within the model. This movement procedure is repeated for a predetermined amount of time, at which point, the processional leader determines the best route to return to the starting temple. Each simulation is run for a total of 1,000-ticks, which equates to the procession traveling along a distance of 1,000 meters.

Prior to presenting the results of the four different weighted simulations, figure 3 shows the outcome of the unweighted simulation. The pathways are shown on a colour gradient of the streets most likely to be used during ten different simulation runs. Streets that are used during each of the ten runs are displayed in red, and streets used only once or twice are shown in green. Since all the buildings are provided with the same influence value, the resulting route is reflective of how the built landscape and street design structures movement patterns within the model. The route visualisation shows that the majority of movement occurs along the streets directly west of the Serapeum.

Figure 4 shows the results of the four different weighted simulations. Like in figure 3, the results are presented on a colour gradient of how often a street is traversed during ten different simulation runs. The routes weighted by commercial spaces (fig. 4a)

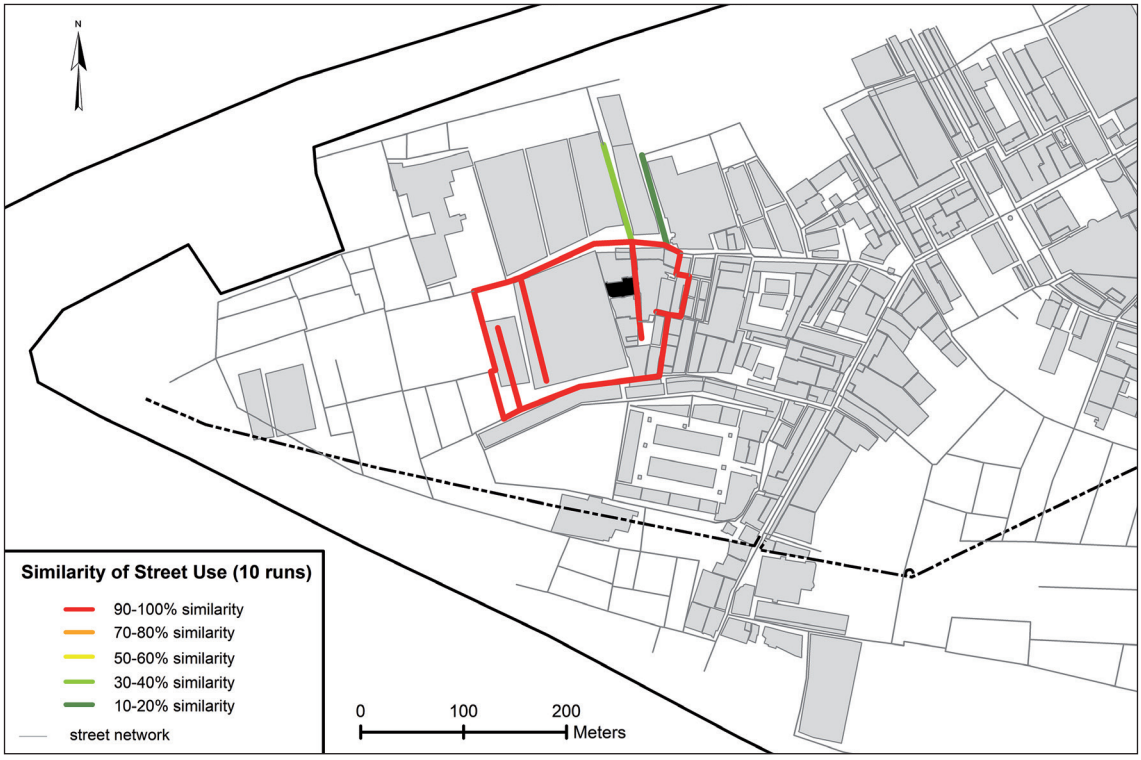


Fig. 3: Results of ten unweighted simulation runs beginning and ending at the Serapeum. The Serapeum is shown in black. The similarity of street passage is represented on a colour gradient from red to green.

travel north-west of the temple, passing several of the city's large warehouse structures. Routes weighted by residential space follow two distinct pathways (fig. 4b). The first travels east along the Via della Foce in the direction of the *forum.* The second major area of movement travels in a southern direction, passing along the streets bordering the Cassette Tipo apartments before continuing towards the Cardo degli Aurighi and past the large residential complex, the Case a Giardino. Processional routes informed by traveling past public spaces (fig. 4c) are shown to travel almost exclusively along Ostia's Via della Foce. This is unsurprising considering that the majority of public spaces are easily accessible from the city's main thoroughfares. Religious weighted routes (fig. 4d) are shown to move along Ostia's major street, the Via della Foce, with short detours past several of the religious structures located north of the Serapeum such as the Republican sacred area.

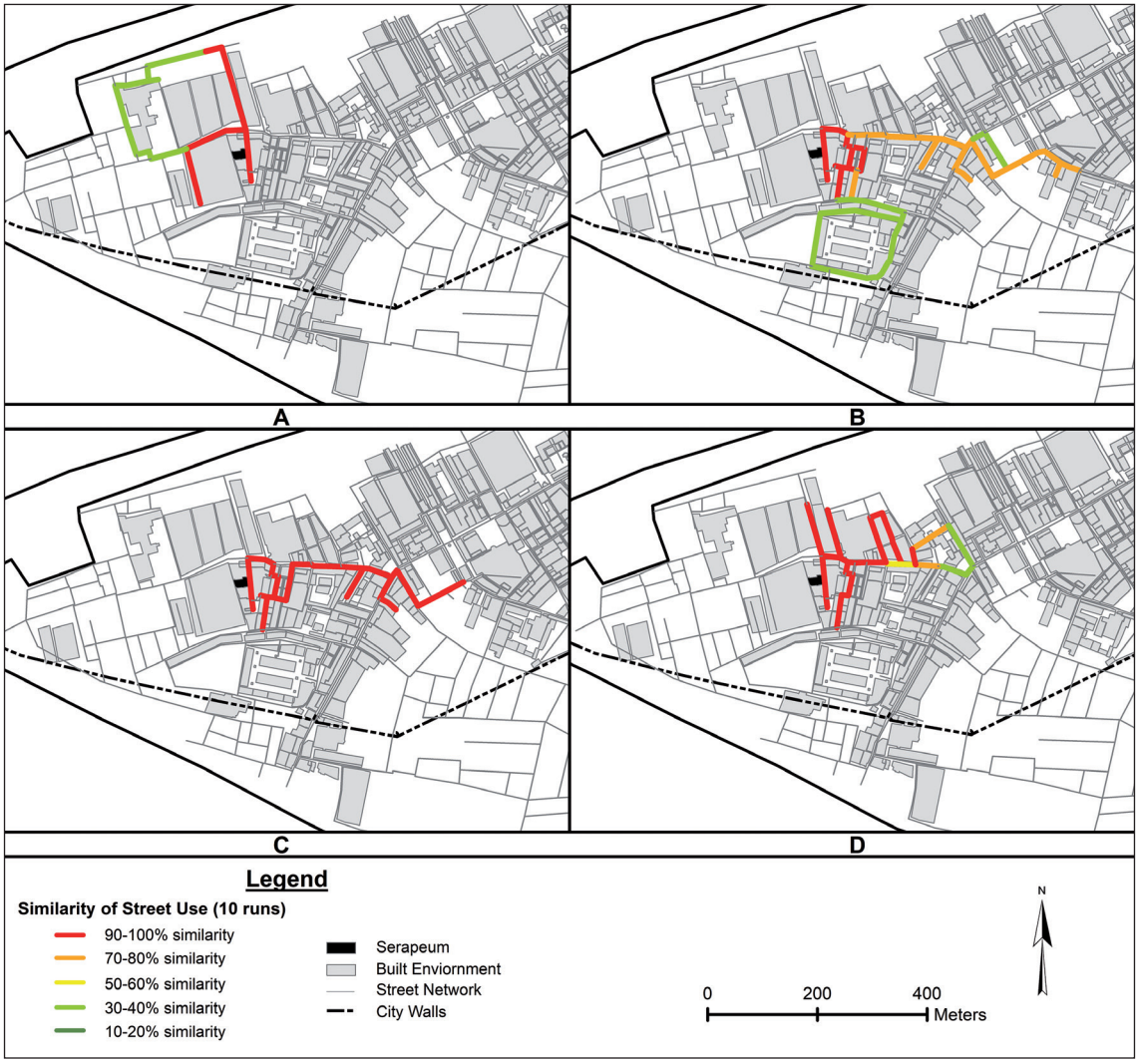


Fig. 4: Results of the four different weighted simulations: A – commercial weighted; B – residential weighted; C – public weighted; D – religious weighted. The similarity of passage along streets within each simulation is shown on a colour gradient from red to green.

Discussion

The results of the various weighted processional routes show distinct variation in movement passage when compared to the unweighted simulation. Figure 5 shows a combined illustration presenting how the four different weighted movement routes encompass distinct areas of the cityscape. Commercial and residential weighted routes are focused to areas north-west and south-west of the Serapeum respectively. Public and religious weighted routes, alternatively, both travel towards the centre of the city. The results,

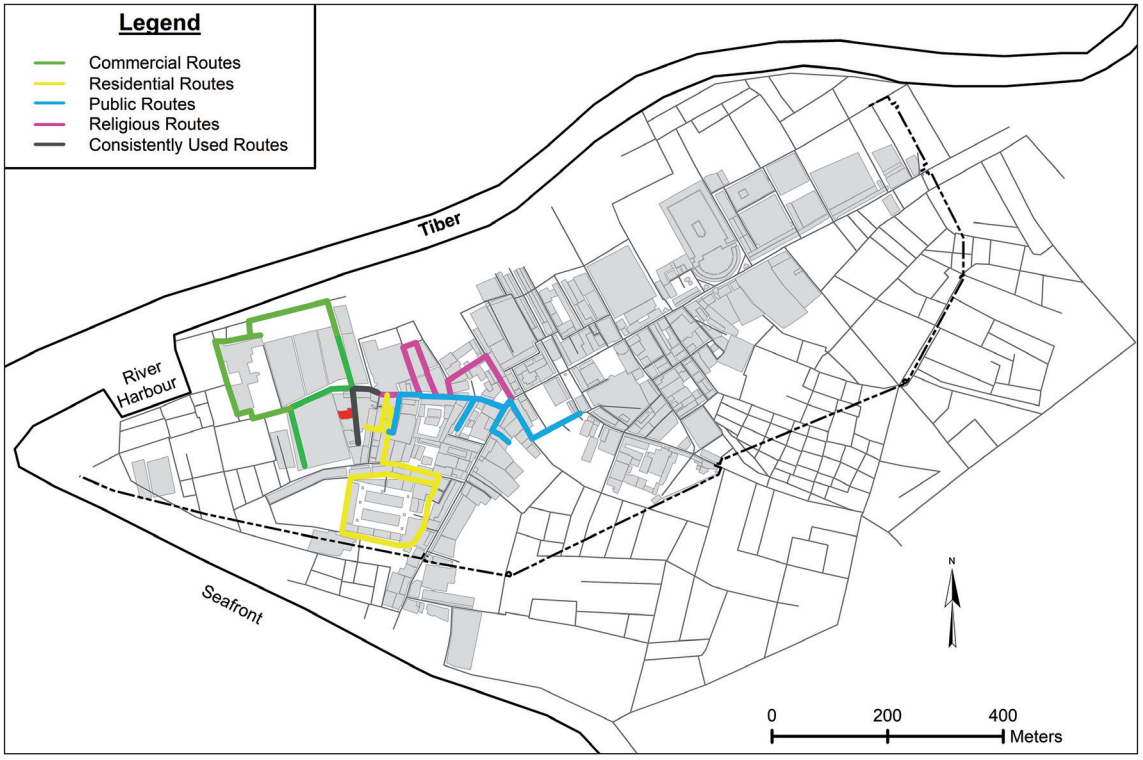


Fig. 5: Summary of the possible movement routes weighted by the four different building classification categories. The Serapeum is shown in red.

apart from highlighting the variation in potential movement passage, also show the extent to which processions allowed the rituals of the Serapeum to extend beyond the temple's precinct to encompass a portion of the Ostian cityscape.

The potential areas of movement in part served to highlight the cult's existence within the community. This would have been particularly significant since the temple's spatial location along a dead-end street did not favour unintentional interaction. A small brick panel showing a depiction of the bull Apis was located along the Via della Foce, possibly acting as a signpost for the temple's location.[13] Given the marker's size, however, prior knowledge of the temple would probably still have been necessary. Processional rituals therefore acted as a marker of both the cult's presence within the city as well as informing the surrounding population about the cult via its ritual practices.

The way in which a procession interacted with the surrounding cityscape helped to articulate its reception. As a procession travelled through different areas of Ostia's cityscape, different social groups would be engaged as temporary participants by the cult. Depending upon the intended message of the ritual, various movement areas become more or less probable. In terms of the cult's trade connections, it seems plausible that travel past the city's many large commercial structures would highlight this engagement.[14] An alternative focus may have been to interact with a large proportion of

residential spaces. The area surrounding the Serapeum has previously been interpreted as a space with a high proponent of eastern immigrants and cultic followers.[15] A procession that followed a residential weighted route would inevitably serve as a way to strengthen the identity of Ostia's Egyptian community. In such an instance, the processional rituals there not only served as an expression of devotion to the god, but also as an overt visual display of their connection to the cultic community of Serapis. While the simulation results provide possible visualisations of processional routes, these routes need to be further analysed in relation to both our understanding of the cult's social composition and existing archaeological evidence.

Conclusions

Previous studies of Roman processions have either assumed the occurrence of processions within cities or have constructed hypothetical models about how processions travelled along certain major streets. However, approaches such as these do not address the larger question about how routes were fabricated within individual cities and therefore how they can be more fully studied. The simulation introduced in this paper has attempted to move beyond hypothesizing about the probable existence of processional rituals occurring at Ostia to visualising how they were structured by the built environment and corresponding spectator activities, and therefore, how they may have navigated the city.

Different simulation experiments were used to investigate the extent to which processional routes were structured by the model's various building classification categories. The results of the Serapeum's processional simulations clearly show that distinct areas of movement occur in relation to passing different building categories. Interpretation of the most probable areas of movement subsequently need to be interpreted in light of existing archaeological evidence and our understanding about the particulars of Serapis' rituals. This can be accomplished through considering the function and connection of the buildings passed to the Serapeum. More importantly, the community engaged with the cult of Serapis needs to be accounted for in any evaluation of potential routes.

Although we must remain aware that the parameters used to run the model are not the only factors affecting the route of a procession, this approach has presented a first attempt at considering how processional rituals can be studied at Ostia using the Serapeum as a case study. Furthermore, this model provides the foundation for undertaking more complex studies of processional movement. In particular, future research avenues need to account for factors such as how different numbers of processional followers or the nature of ritual artefacts affect routes, or how street width impacts a procession's navigation through the city.

Notes

[1] For commentary about possible streets that hosted processional routes, see Bruun 2009; DeLaine 2008. For the practice of cultic processions, see Turcan 1996, 55; Rieger 2004.
[2] Taylor 1912; Squarciapino 1962; Rüpke 2011; Salzman 1990.
[3] Scheid 1998; Huet 2015.
[4] Rüpke 2012.
[5] Calza 1953; Bloch 1959; Mar 2001; Mols 2007. Only limited attention has been provided to considering the particulars of the cult's ritual practices, see Meiggs 1973, 367–368.
[6] Salzman 1990, 171; Alvar 2008; Abdelwahed 2016.
[7] Taylor 1912; Squarciapino 1962; Mar 2001.
[8] For an overview of simulations used within archaeological research, see Lake 2014; Wurzer et al. 2015.
[9] Wilensky 1999.
[10] All shapefiles were created in ArcGIS 10.3. Building classifications primarily follow the interpretations of Calza 1953; Packer 1971; Meiggs 1973; Hermansen 1982; Boersma 1985; Pavolini 2006. The commercial structures known through geophysical survey located within the western unexcavated area of Ostia have additionally been included within the model (Martin et al. 2002). The identification of the extended street network follow the works of Heinzelmann 1998/1999; Martin et al. 2000; Stöger 2011.
[11] The ABM model and code can be found at <https://github.com/K-A-Crawford/ABM-Processional-Leader> (22. 06. 2020).
[12] Production spaces have not been included as a category since there are no identified production buildings located within the immediate area of the Serapeum. Therefore, any simulation weighted by this classification will have the same results as the unweighted simulation.
[13] Mar 2001, 67. 233.
[14] Keay 2010.
[15] Taylor 1912; Meiggs 1973.

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Bibliography

Abdelwahed 2016
Y. Abdelwahed, Two Festivals of the God Serapis in Greek Papyri, Rosetta 18, 2016, 1–15.
Alvar 2008
J. Alvar, Romanising Oriental Gods: Myth, Salvation and Ethics in the Cults of Cybele. Isis and Mithras (Leiden 2008).

Bloch 1959

H. Bloch, The Serapeum of Ostia and the Brick-Stamps of 123 A.D. A New Landmark in the History of Roman Architecture, AJA 63(3), 1959, 225–240.

Boersma 1985

J. S. Boersma, Amoenissima Civitas, Block V.ii at Ostia: Description and Analysis of its Visible Remains (Assen 1985).

Bruun 2009

C. Bruun, Civic Rituals in Imperial Ostia, in: O. Hekster – S. Schmidt-Hofner – C. Witschel (eds.), Ritual Dynamics and Religious Change in the Roman Empire: Proceedings of the Eighth Workshop of the International Network Impact of Empire – Heidelberg, July 5–7, 2007 (Leiden 2009) 123–142.

Calza 1953

G. Calza (ed.), Scavi Di Ostia I, Topografia Generale (Rome 1953).

DeLaine 2008

J. DeLaine, Between Concept and Reality: Case Studies in the Development of Roman Cities in the Mediterranean, in: J. Marcus – J. Sabloff (eds.), The Ancient City: New Perspectives on Urbanism in the Old and New World (Santa Fe 2008) 95–118.

Heinzelmann 1998

M. Heinzelmann, Beobachtungen zur suburbanen Topographie Ostias. Ein orthogonales Strassensystem im Bereich der Pianabella, RM 105, 1998, 175–225.

Heinzelmann 1999

M. Heinzelmann, Neue Untersuchungen in den unausgegrabenen Gebieten von Ostia: Luftbildauswertung und geophysikalische Prospektionen, in: S. T. A. M. Mols – C. E. van der Laan (eds.), Atti del II Colloquio internazionale su Ostia Antica, Roma 1998, MededRom 58, 1999, 24–25.

Hermansen 1982

G. Hermansen, Ostia: Aspects of Roman City Life (Edmonton 1982).

Huet 2015

V. Huet, Watching Rituals, in: R. Raja – J. Rüpke (eds.), A Companion to the Archaeology of Religion in the Ancient World (Malden 2015) 144–154.

Keay 2010

S. Keay, Portus and the Alexandrian Grain Trade Revisited, Bollettino Di Archeologia Online, 2010, 11–22.

Lake 2014

M. W. Lake, Trends in Archaeological Simulation, Journal of Archaeological Method and Theory 21(2), 2014, 258–287.

Mar 2001

R. Mar, El Santuario de Serapis En Ostia (Tarragona 2001).

Martin et al. 2000

A. Martin – M. Heinzelmann, The Joint AAR-DAI Research Project at Ostia: 1998 and 1999 Seasons, MemAmAc 45, 2000, 277–283.

Martin et al. 2002
A. Martin – M. Heinzelmann – E. C. de Sena – M. G. G. Cecere, The Urbanistic Project on the Previously Unexcavated Areas of Ostia DAI-AAR 1996–2001, MemAmAc 47, 2002, 259–304.

Meiggs 1973
R. Meiggs, Roman Ostia² (Oxford 1973).

Mols 2007
S. T. A. M. Mols, The Urban Context of the Serapeum at Ostia, BABesch 82, 2007, 227–232.

Packer 1971
J. E. Packer, The Insulae of Imperial Ostia, MemAmAc 31, 1971.

Pavolini 2006
C. Pavolini, Ostia (Rom 2006).

Rieger 2004
A.-K. Rieger, Heiligtümer in Ostia (Munich 2004).

Rüpke 2011
J. Rüpke, The Roman Calendar from Numa to Constantine: Time, History and the Fasti (Chichester 2011).

Rüpke 2012
J. Rüpke, Religion in Republican Rome: Rationalization and Ritual Change (Philadelphia 2012).

Salzman 1990
M. R. Salzman, On Roman Time: The Codex-Calendar of 354 and the Rhythms of Urban Life in Late Antiquity (Berkeley 1990).

Scheid 1998
J. Scheid, Déchiffrer des Monnaies: Réflexions sur la Répresentation Figurée des Jeux Séculaires, in: C. Auvray-Assayas (ed.), Images Romaines (Paris 1998) 13–35.

Squarciapino 1962
M. R. Squarciapino, I Culti Orientali ad Ostia (Leiden 1962).

Stöger 2011
H. Stöger, Rethinking Ostia: A Spatial Enquiry into the Urban Society of Rome's Imperial Port-Town (Leiden 2011).

Taylor 1912
L. R. Taylor, The Cults of Ostia (Bryn Mawr 1912).

Turcan 1996
R. Turcan, The Cults of the Roman Empire (Cambridge, MA 1996).

Wilensky 1999
U. Wilensky, NetLogo (Evanston 1999) <http://ccl.northwestern.edu/netlogo/> (19. 06. 2020)

Wurzer et al. 2015
G. Wurzer – K. K. Gabriel – H. Reschreiter (eds.), Agent-Based Modeling and Simulation in Archaeology (Cham 2015).

SESSION 12

Other topics

Communicating Archaeology in the Digital Era

Panel 12.2

Virtual Poggio del Molino: Communicating the Archaeological Excavation to the Public

Carlo Baione

Introduction

Archaeology analyses material culture to understand the past; structures and artefacts, and in particular their material structure, their shape and decoration, influence the archaeologist's thought and work, hence guiding its interpretation. Archaeological research is constantly driven by a visual and haptic interaction with artefacts and structures, which directly influences how history is interpreted and then how it is communicated to the public.

This constant interaction led to the development of a highly standardized visual language for representing material culture in scientific print publications.[1] The standard practices for drawing and photographing artefacts are thought to facilitate an understanding of the object for those who cannot analyse it in person but at the same time are familiar with the conventions used to represent it. Although these conventions facilitate scientific research, their potential for communicating with the public is more limited: in fact, because archaeological illustration is highly conventional, it is hardly intuitive to non-specialists and it has not been created for that specific purpose.

However, archaeology's value as public asset is only as strong as its ability to maintain a communicative relationship with the community which supports it.[2] In the recent past archaeological investigations have been trying to find ways to communicate its discoveries, by using the remains of ancient cultures as visual and narrative media to present history. To this end, virtual environments and archaeological 3D digital models are actively used to engage the public and craft new forms of interaction with the past. In fact, all visual computing technologies can and must be used to enhance accessibility, by offering communication tools that permit an effective support to the visit, both to archaeological sites and museums.[3]

As part of this movement, archaeologists at Poggio del Molino, a Roman settlement in the territory of Populonia, Italy, are using digital technology to open the archaeological site to the public and to provide an alternative view of the archaeological remains on and off site. The use of 3D content, in particular, serves as a stage for creating new forms of interaction between the archaeological site and the members of the public community.

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The Archeodig Project at Poggio del Molino

Poggio del Molino is a Roman settlement which lies on the northern side of a promontory between the Gulf of Baratti (Tuscany, Italy) to the south and the Rimigliano beach to the north.[4] The archaeological site was occupied from the 2nd century BC to the 5th century AD, and is located on a plain 22 m above sea level which dominates a wide stretch of sea, as well as the hinterland, within the territory of the ancient Etruscan city of Populonia.

After a century of the dominion of Rome over Populonia, around the 2nd century BC a quadrangular fortified building measuring about 55 × 56 m with towers[5] was positioned on the plateau of Poggio del Molino. Its aim was to defend the territory from pirate attacks and to control the territory of the ancient Etruscan city.[6] In the first half of the 1st century BC, with no more danger from the sea, the fortress was re-purposed as a farm with an adjoining *cetaria,* which produced *garum* and *salsamenta.*[7] Around the middle of the 2nd century AD, after a thorough renovation, the building took on the characteristics of a maritime villa[8] with a peristyle garden around which were a residential quarter,[9] a domestic quarter,[10] and a private bath complex.[11] The villa underwent a slow impoverishment from the middle of the 3rd century AD, resulting in the abandon-



Fig. 1: Location of Poggio del Molino: view from the north-east with the promontory of Populonia in the background.

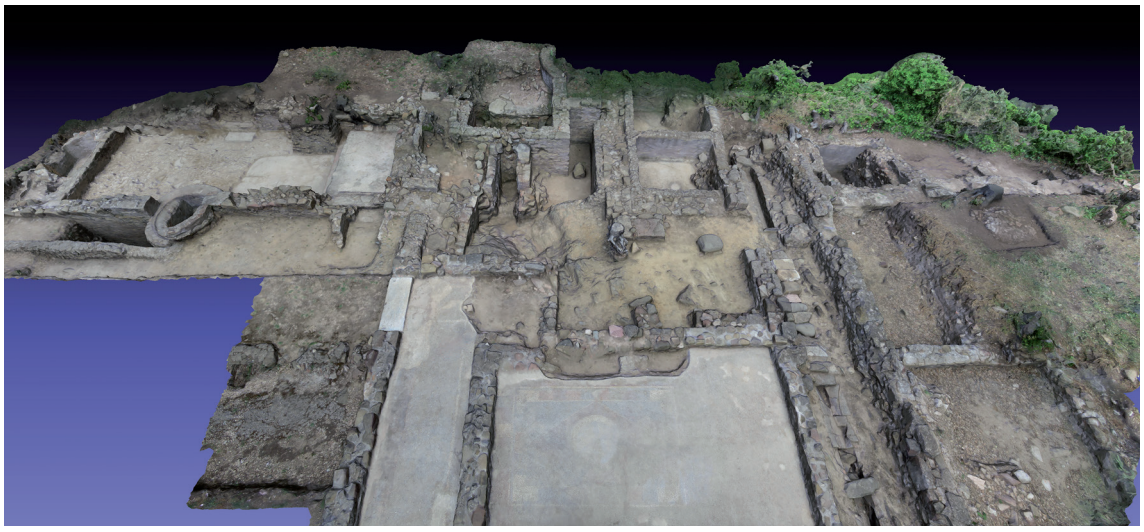


Fig. 2: Poggio del Molino. Detail of the excavation area from 3D model.

ment of the building around the beginning of the 4th century AD. It was only between the late 4th and late 5th century AD that the site was inhabited by a community that dismantled the villa's construction and the decorative materials, recycling everything into new products.[12] Furthermore, archaeologists at Poggio del Molino identified the presence of a gathering place, maybe connected with early Christians, in the residential sector of the villa.

The archaeological site of Poggio del Molino, which has always been part of the territory of ancient Populonia, forms a key piece of evidence in understanding the development of the Etruscan and Roman historical context.

The archaeological excavation of the Roman settlement was carried out for four years by the University of Florence in the 1980s, only to be interrupted due to lack of funds. The cultural association "Past in Progress" resumed the excavations in 2008 with a new archaeological field project, Archeodig. Since the very beginning, this project has united the work of professional archaeologists and Cultural Heritage specialists with international students and volunteers. The excavation is conducted in collaboration with the Superintendence of Archaeological Heritage of Tuscany, the EarthWatch Institute,[13] as well as with Italian and foreign universities.[14]

Other than the scientific aims of the research on and off the field, the Archeodig project emphasizes interaction with the public, from which it has always sought support. Public events and lectures, as well as local conferences and guided tours of the excavation site have been the backbone of the project's activities since its inception. Volunteers and students from all over the world participate in the excavation and interpretation of the site, making Poggio del Molino a site of instruction as well as research.

Financially, Archeodig is tied to private sources of funding (and public funds such as the Art Bonus or the 2 × 1,000 among others), as well as the network of support es-

tablished through the years by its parent organization, the "Past in Progress" cultural association.[15] One of the main aims of Archeodig is to return the generosity of its supporters by making its operations open and accessible to the local community.

In fact, since 2008 the area has always been open to every visitor eager to learn about the discoveries and about the archaeological field operations. In 2016, in this spirit of accessibility, the Archeodig project began developing an infrastructure to support visitors onsite, which in the near future will lead to the creation of a shared archaeology park, or PArCo (Parco di Archeologia Condivisa).[16] The aim of this project is to create new common spaces for archaeologists and the community, guided paths, and integration with the touristic routes that cross the territory of the ancient Etruscan Populonia and the Etruscan coast.

Besides this, accessibility in terms of learning and information is constantly being addressed through many different strategies such as active coordination with local museums and high schools. The main goal of the PArCo project at Poggio del Molino is to dismantle the barriers between archaeologists and citizens, making the area an open excavation site where all the aspects of research will be continuously shared with visitors on and off the site.

3D Documentation at Poggio del Molino

After ten years of field operations, the archaeological site appears to be widely excavated, and many structures, belonging to different phases of the site, have been cleared of the soil that preserved them. Rooms with mosaic floors occupy the south-west corner of the villa, while a grand bath complex is still visible all across the northernmost area.[17] Many of the structures around the area have been built, destroyed, used and repurposed throughout the centuries, thus complicating their correct interpretation and placement in the chronology of the site.

Yet, walls and pavements are what is truly helping archaeologists to understand the story of the Roman settlement, with the constant visual and haptic interaction that defines every aspect of archaeological field research. The accurate and complete documentation of structures and materials found during the excavation are thus indispensable to understanding the story of Poggio del Molino, as well as to communicate it to the wider public.

In 2015, the Archeodig project started exploring the potentials of 3D modelling as a way to complement existing classical methods[18] to document the remains of the past and to record a higher amount of data in less time. Amongst the many possibilities to record 3D data on archaeological excavations, Archeodig chose to document its discoveries with the Structure-From-Motion photogrammetry (SFM), thus taking advantage of the items already used in the field for standard documentation purposes. 3D digital photogrammetry is a cost-efficient method for generating 3D models from sequences of

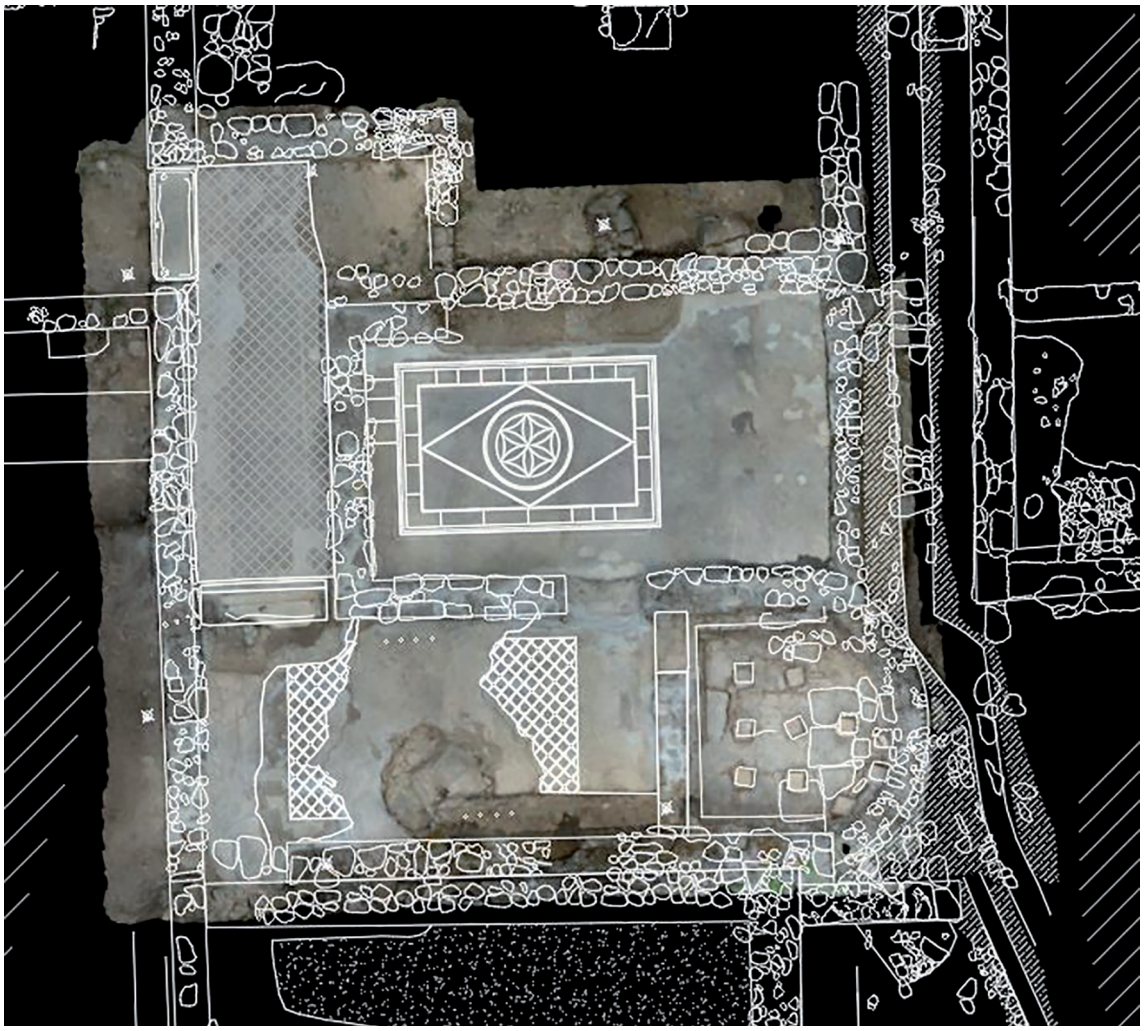


Fig. 3: Example of an orthophoto from a 3D model imported in AutoCAD. Poggio del Molino.

2D images, and it has helped Archeodig to create detailed 3D records of structures and artefacts discovered on site.

The choice to adopt SFM as the field documentation technique and to integrate it in the classic documentation workflow had many different motivations. Operating under a relatively accessible workflow, using SFM to document archaeological remains requires no more than a standard digital camera and a total station to survey the remains topographically. The sorts of 3D models produced by this method are highly accurate and render both the geometry and colour of the remains in exceptional detail. The whole process is automated by the software,[19] it is non-labour intensive and, compared to traditional archaeological approaches like hand drawing, is extremely efficient in terms of time.

In general, the benefits of SFM have been noted widely in archaeological literature[20] as the technology becomes increasingly common in field projects across the world.[21] Perhaps most importantly, 3D models are a great asset for the kind of analysis and interpretation of archaeological sites that occurs after the field operations. In fact, 3D digital data further allow professionals of Archeodig to observe the excavation site from new and different points of view. 3D models are indeed having an impact on the way archaeologists understand the site's overlaying structures and the order of actions that shaped them.

At the same time, the potential of an approach like 3D digital photogrammetry is not limited to scientific or academic benefits only. At Poggio del Molino, 3D models are becoming an indispensable tool for public outreach, with the potential to provide an engaging and informative experience to members of the public visiting the site.

Archaeology and Communication at Poggio del Molino

Archaeologists and the public have been in contact at Poggio del Molino since the very inception of the research project in 2008. The efforts Archeodig made to communicate its discoveries to the community, both at a local level and beyond, shaped the scientific communication approach as well.

The support of volunteers and students has been indispensable and forced the professionals at Archeodig to think carefully about how archaeology is communicated to non-specialists. For most of the people visiting the site to learn or help with research it is their first experience with field archaeology; their success on site depends on Archeodig's ability to explain the complexities of the site and involve them in the process of its documentation and interpretation. Also, the excavation site is open free of charge to visitors, therefore further motivating the project's interest in how to communicate archaeology and field operations to a wide audience.

Between the many issues of archaeological communication,[22] Poggio del Molino needs to face at least two apparent obstacles to deliver information to the wider public. The archaeological research on site is constantly driven by the physical interaction with the historical remains, which archaeologists can easily read to gain information and interpret history, but that perhaps can be less obvious to non-specialists. As a result, Archeodig tries to use the narrative aspects of the physical remains to communicate its discoveries to the public while focussing on how archaeologists produce that narrative from the remains themselves. Also, there are many individuals that cannot physically visit the site, and for this reason Archeodig wishes to develop a strong presence online with the goal of disseminating its findings to the global community.

Poggio del Molino's 3D contents can be used as tool to address both challenges, providing a unique form of mediation between users and material remains, supplying a reflexive user experience with ancient materials. Photorealistic 3D models, such as

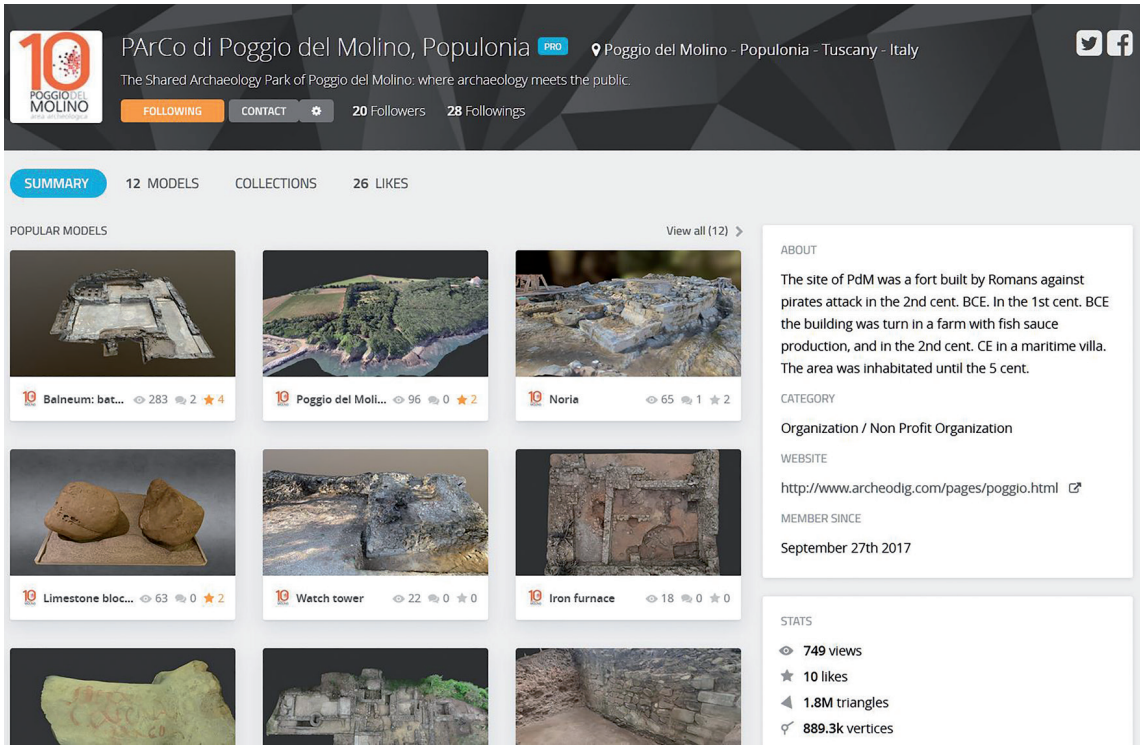


Fig. 4: Poggio del Molino Sketchfab page.

those produced on site, can in fact be packaged into user-friendly digital interfaces which guarantee the creation of immersive forms of navigation and exploration of virtual environments. These can take visitors as close as possible to the type of interaction archaeologists experience in their work every day.

3D Contents Publication. The Poggio del Molino Approach

The virtualization project presented in this paper aims to take the visitor as close as possible to the scientific effort that the archaeologists of Archeodig are making to reconstruct the life of the Roman settlement.

3D models can be used to craft new forms of experiences with archaeological materials but cannot be published uncritically because, despite their vast appeal, their use remains somewhat problematic. In fact, as a method of research and communication, 3D approaches must always address theoretical uncertainties and technical limitations.

Theoretical criticisms of 3D content in archaeology are frequently oriented around questions of fidelity, representation, and user experience.[23] Furthermore, when an archaeological project is designing a digital communication strategy, it must face a variety of technical decisions and challenges.

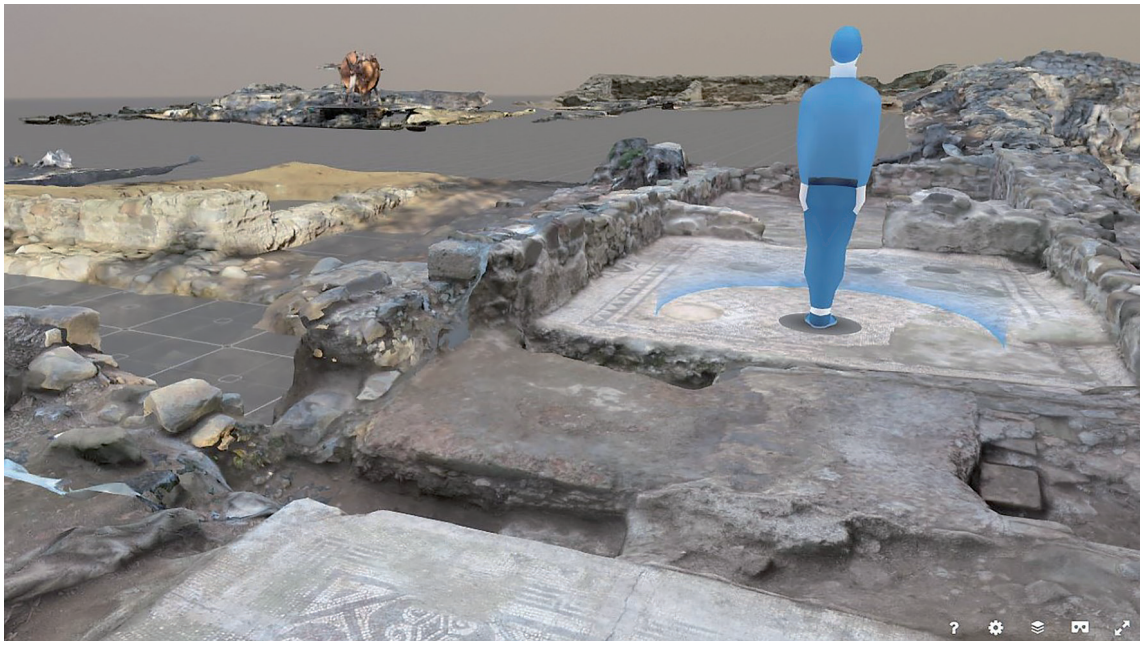


Fig. 5: Poggio del Molino. Sketchfab VR settings of a 3D scene.

Archeodig's approach to 3D content publication strives to balance these many concerns by following a strategy that seeks to be helpful to members of the public, as well as responsibly dealing with the theoretical concerns raised by academic archaeology.

The theoretical criticism of 3D content takes a variety of forms, orbiting for example around questions of fidelity and accuracy, which are partially responsible for the adoption of ever-increasing tools for gathering 3D data, such as SFM photogrammetry or laser scanning. Archeodig's team of professionals is conscious that 3D models are items which depend on the quality of source data and their post-processing, "including decimation, trimming and other modifications to the actual models that are produced".[24] However, recent advances in 3D digital photogrammetry guarantee high fidelity results in the 3D models produced at Poggio del Molino, with minor margins of error that fall within a few centimetres at most. When talking about large areas such as Poggio del Molino, this degree of fidelity is much higher than that reached in traditional hand drawn archaeological illustration; possible minor margins of error in accuracy are compensated for by their vast communication potential for public enjoyment and educational purposes.

Still, questions remain in terms of representation (how to present 3D content to a broad audience, which platforms to use and how to present 3D models), and user experience (embodiment, space and place, etc.).[25] Archeodig's 3D content representation strategy guarantees 3D models that are rich in detail and capable of actively engaging members of the community. This strategy also takes into account financial and time commitments, which are key issues for any archaeological research project.

Poggio del Molino Dissemination Strategy

Archaeologists at Poggio del Molino have taken a dual approach to disseminating archaeological 3D content to the wider public: the free online and ready-made platform Sketchfab,[26] and the game engine Unity 3D.[27] The latter is currently a work in progress and is developed to craft virtual environments and offer an immersive experience to archaeologists and visitors on and off site.

Sketchfab can potentially serve as more than a simple, but engaging, tool for updating the public on new discoveries and what happens in the field. In fact, the publication of 3D content online allows the Archeodig team to craft new forms of experiences between the visitor and archaeological materials, and it is meant to encourage exploration, critical examination, and fun for the public via graphic user interfaces.

This approach guarantees low technical demands from the archaeologist and provides immediately visible results which can be easily enjoyed through the ready-made accessible user interface. On the other hand, free websites like Sketchfab limit the flexibility in terms of template and formatting, and, to a certain extent, constrict the first-person navigation experience of the 3D models.[28]

3D models online on Sketchfab can be visualized and navigated through a simple user interface similar to what YouTube offers for videos. Sketchfab offers full interaction with the 3D model on any mobile device and computer browser with no need of installing an app or special software of any kind: the 3D digital copy can be explored in detail orbiting around a pre-set centre that can be changed at will. The navigation buttons are intuitive and change depending on the interface device used: the classic 'click&drag' with the mouse, and the 'touch', which offers an easier navigating experience.

In any case, it is easy for everyone to freely interact with the three-dimensional scenes, which are equal in form, colour and size to the physical counterparts found during the excavations. The visitor is guided through the online contents by descriptive captions in both Italian and English directly below the 3D model and by dynamic annotations on its surface that provide the necessary information to understand what is shown.

Archeodig relies on Sketchfab as a 3D content viewer to give visitors the chance of a live interaction with the in-person visit, given that it is possible to find more information on the structure right in front of them or with the artefact that helped the researchers to understand the history of the site.

In order to offer a multimodal and immersive experience that involves the visitor, Archeodig has made a fixed station with VR headset available on site at Poggio del Molino to navigate the three-dimensional copies published on Sketchfab in virtual reality. In fact, the website provides a built in Virtual Reality experience which fits Archeodig's need to transport people to the excavation quickly and easily while at the same time preserving the ancient remains.

Without replacing close contact and direct perception of the material under any circumstances, Archeodig wants to provide an immersive virtual experience that stimulates visitors by favouring the process of reading and interpretation, which are fundamental moments for the correct communication of the history of the archaeological material.

Conclusions

The destruction that archaeological excavation necessarily implies must be compensated for by an accurate documentation of the site, as well as by its communication to both academic and public audiences.[29] In fact, communication determines the transmission of culture and information at every level, and if archaeology fails to communicate its discoveries to the public it will not carry out any cultural function.[30]

The graphic restitution in archaeology, more than just being an important part of the research process, gives a more human idea of the spaces and a realistic image of the site. It is for this reason that Poggio del Molino's 3D visual contents are used to display this process to the wider public by crafting new forms of virtual interactions. Archeodig's 3D virtualization project aims at transmitting the knowledge acquired on site to a vast and diverse audience at many levels of interest and comprehension.

Notes

[1] Adkins – Adkins 1989 above all.

[2] Baione et al. 2018.

[3] Gabellone 2015.

[4] A 3D view of Poggio del Molino.

[5] Sandstone blocks with inscriptions from Poggio del Molino show the dimensions of the settlement. See here for the 3D model. The internal area of the Roman site was of about 3,145 sqm.

[6] Megale 2016; Genovesi et al. 2016, 1–7.

[7] The farm belonged to Caius Cecina Largo, a member of the Ceacina family originating from the Etruscan city of Volterra. The name of the owner is painted on the neck of a Baetic amphora found at Poggio del Molino.

[8] De Tommaso et al. 1998.

[9] The residential sector at Poggio del Molino, 3D model.

[10] The domestic quarter at Poggio del Molino, 3D model.

[11] The bath complex at Poggio del Molino, 3D model. See Bueno et al. 2012 for the analysis of the mosaics.

[12] The lime kiln built in one of the baths of the villa at Poggio del Molino, 3D model.

[13] <https://earthwatch.org/Expeditions/Unearthing-Ancient-History-in-Tuscany> (08. 06. 2020).

[14] <https://www.archaeological.org/fieldwork/afob/2510> (08. 06. 2020) for more information about the field school program at Poggio del Molino.
[15] Megale 2015.
[16] To know more about the PArCo: <http://www.archeostorie.it/che-cose-il-parco-di-archeologia-condivisa/> (08. 06. 2020).
[17] Here is a general view of the north sector of the archaeological site.
[18] Molloy – Milić 2018.
[19] The Archeodig project utilizes Agisoft Photoscan Professional Edition to create georeferenced 3D models of the archaeological site.
[20] Green et al. 2014, Lopez et al. 2016 or also Pollefeys et al. 2003 among the others.
[21] Forte et al. 2012 and Opitz 2015 for example.
[22] For a review of archaeological communication see e.g. Bonacchi 2017.
[23] For an overview and discussion of some of these and other concerns, see Olson – Caraher 2015.
[24] Molloy – Milić 2018.
[25] Friedrick 2014 and Hodder 2014 amongst others.
[26] <https://sketchfab.com/PArCo-poggiodelmolino> (08. 06. 2020).
[27] For a more detailed explanation of the Unity3D project, please refer to Baione et al. 2018.
[28] This is one of the main reasons why Archeodig is crafting immersive experiences with a game engine.
[29] Manacorda 2007.
[30] Antinucci 2014.

Image Credits

All figures and images by author.

References

Adkins – Adkins 1989
L. Adkins – R. Adkins, Archaeological Illustration (Cambridge 1989).

Antinucci 2014
F. Antinucci, Comunicare nel museo (Rome 2014).

Baione et al. 2018
C. Baione – T. D. Johnson – C. Megale, Communicating archaeology at Poggio del Molino. 3D Virtualization and the Visitor Experience On and Off Site, in: EARTH2018, Digital Environments for Education, Arts, and Heritage – International and Interdisciplinary Conference, Brixen 5-6/7 2018, forthcoming.

Bonacchi 2017
C. Bonacchi, Digital Media in Public Archaeology, in: G. Moshenska (ed.), Key Concepts in Public Archaeology (London 2017).

Bueno et al. 2012
M. Bueno – S. Genovesi – C. Megale, Nuovi mosaici dalle terme della villa romana di Poggio del Molino (Populonia, LI), in: C. Angelelli (eds.), Atti del XVIII Colloquio dell'Associazione italiana per lo Studio e la Conservazione del Mosaico (Cremona 2012) 517–526.

De Kerckhove 1999
D. de Kerckhove, L'intelligenza connettiva (Milan 1999).

De Tommaso et al. 1998
G. de Tommaso – A. Baroncelli – S. Bertone, La villa romana di Poggio del Molino (Piombino-LI). Lo scavo e i materiali, Rassegna di Archeologia 15, 119–348.

Forte et al. 2012
M. Forte – N. Dell'Unto – J. Issavi – L. Onsurez – N. Lercari, 3D Archaeology at Çatalhöyük, IJHDE 1(3), 2012, 351–378.

Gabellone 2015
F. Gabellone, Digital Technologies and Communication: Prospects and Expectations, Open Archaeology 1(1) 2015.

Genovesi et al. 2016
S. Genovesi – C. Megale, The Roman Settlement of Poggio del Molino: the Late Republican Fort and the Early Imperial Farm of Poggio del Molino. Preliminary Data, FOLD&R 347, 2016.

Green et al. 2014
S. Green – A. Bevan – M. Shapland, A Comparative Assessment of Structure from Motion Methods for Archaeological Research, JAS 46 2014, 173–181.

Hodder 2014
I. Hodder, The Entanglements of Humans and Things: A Long-Term View, NLH 45(1) 2014, 19–36.

Lopez et al. 2016
J. B. López – G. A. Jiménez – M. S. Romero – E. A. García – S. F. Martín – A. L. Medina – J. E. Guerrero, 3D Modelling in Archaeology: The Application of Structure from Motion Methods to the Study of the Megalithic Necropolis of Panoria (Granada, Spain), JAS reports 10, 2016, 495–506.

Manacorda 2007
D. Manacorda, Il sito archeologico: fra ricerca e valorizzazione (Rome 2007).

Megale 2015
C. Megale, Anche gli archeologi fanno Crowdfunding, in: C. dal Maso – F. Ripanti (eds.), Archeostorie. Manuale non convenzionale di archeologia vissuta (Milan 2015) 147–154.

Megale 2016
C. Megale, Il forte tardo repubblicano di Poggio del Molino: controllo e difesa di un territorio, in: V. di Cola – F. Pitzalis (eds.), Materiali per Populonia 11 (Pisa 2016) 245–257.

Molloy – Milić 2018
B. Molloy – M. Milić, Wonderful Things? A Consideration of 3D Modelling of Objects in Material Culture Research, Open Archaeology 4.1, 2018, 97–113. <https://doi.org/10.1515/opar-2018-0006> (08. 06. 2020).

Olson – Caraher 2015

B. R. Olson – W. R. Caraher, Visions of Substance: 3D Imaging in Mediterranean Archaeology (Grand Forks 2015).

Opitz 2015

R. Opitz, Three Dimensional Field Recording in Archaeology: an Example from Gabii, in: Olson – Caraher 2015, 73–87.

Pollefeys et al. 2003

M. Pollefeys – L. Van Gool – M. Vergauwen – K. Cornelis – F. Verbiest – J. Tops, 3D Recording for Archaeological Fieldwork, IEEE CG&A 23(3), 2003, 20–27.

Ancient Sculpture

Panel 12.5

Römische Kopien eines hellenistischen Kinderkopfes. Zum Fragment Inv. 45295 aus der Villa Hadriana (Magazzini) und zum Kopf Inv. Ma 2332 im Musée du Louvre

David Ojeda

Zwischen 2006 und 2008 führten Pilar León (Universidad de Sevilla) und Carlos Márquez (Universidad de Córdoba) ein Katalogisierungsprojekt der römischen Stücke, die in den Magazinen (Magazzini) der Villa Hadriana aufbewahrt sind, durch.[1] 1 021 dieser Stücke sind statuarische Fragmente,[2] die größtenteils nie veröffentlicht worden sind.[3] Fast alle sind ziemlich zerbrochen und weisen deswegen zwei Nachteile auf:

- Die Identifizierungen sind problematisch. Der Kopf Inv. 45286 kann dieses Problem verdeutlichen (Abb. 1, 2).[4] Er ist fast völlig zerstört, nur der obere Teil des Schädels ist erhalten. Die Frisurmotive erlauben eine Verbindung mit den Bildnissen des Elagabal in seinem 2. Bildnistypus.[5] Trotzdem es ist meines Erachtens unmöglich endgültig zu klären, ob es sich um eine Replik dieser Typologie des Elagabal-Porträts oder ein Privatporträt dieser Epoche handelt.[6]
- Fast alle Datierungen sind völlig unsicher. Zum Beispiel handelt es sich bei Fragment Inv. 45274 möglicherweise um das Bildnis eines Dieners (Abb. 3, 4),[7] dessen Chronologie schwierig zu präzisieren ist. Der schlechte Erhaltungszustand lässt keine genaue stilistische Einordnung zu, sodass das Fragment sowohl in hadrianische Zeit als auch später datiert werden kann.[8]

Nur 10 der 1 021 katalogisierten statuarischen Fragmente können mit Sicherheit als Porträts identifiziert werden.[9] Die Herausgeberinnen des Buches, in dem alle diese Stücke aufgenommen worden sind,[10] waren anderer Meinung. Deswegen sind in dem Kapitel



Abb. 1, 2: Kopffragment aus der Zeit des Elagabal. Villa Hadriana.

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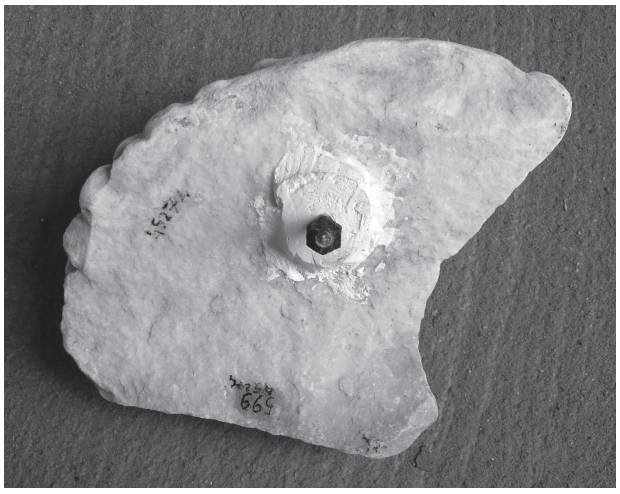



Abb. 3, 4: Diener Bildnisse. Villa Hadriana.

„Estatuas-retrato“[11] viele Stücke aufgenommen worden, die sicher nicht Porträts sind.[12] Dieses Problem betrifft z. B. den Kopf Inv. 45295[13] (Abb. 5, 6), dessen Untersuchung das Ziel dieses Aufsatzes ist.

Der Kopf wird derzeit in den ‚Magazzini‘ der Villa Hadriana aufbewahrt.[14] Seine maximale Höhe beträgt 12 cm. Nur der obere Teil des Kopfes, ein Teil der Stirnhaare, ein Teil der Stirn und eines der beiden Augen sind erhalten geblieben. Der Hinterkopf ist abgebrochen, dort sind nur Reste eines modernen Metalldübels sichtbar.[15] Die wichtigste Frage ist, ob es sich hier um ein Porträt oder einen Idealkopf handelt. Um diese Frage beantworten zu können, gibt es glücklicherweise im Louvre Museum (Inv. Ma. 2332)

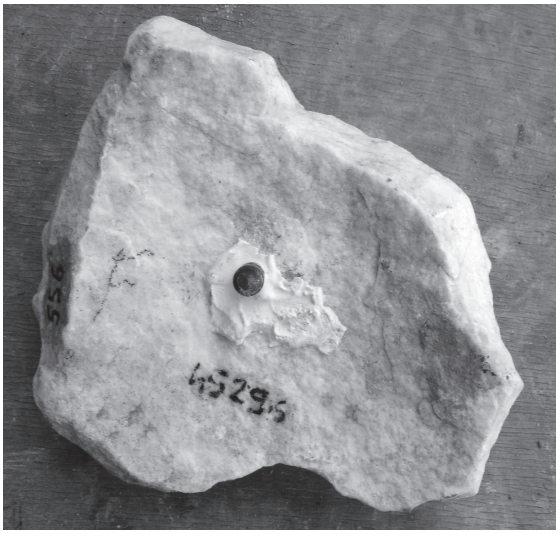



Abb. 5, 6: Kinderkopf. Villa Hadriana.

eine komplette Replik des Fragmentes aus der Villa Hadriana, die auf einer modernen Büste gesockelt ist.[16]

Bei dem Stück in Frankreich handelt es sich um einen Kinderkopf, der nach rechts gedreht ist. Der Blick ist nach oben gerichtet. Das Gesicht zeigt weit geöffnete Augen und einen klaffenden Mund. Der Kopf hat in den Katalogen des Louvre Beachtung gefunden. Nach kurzen Erwähnungen von Héron de Villefosse[17] und Michon[18] wurde er erstmals in Kersausons Katalog abgebildet.[19] Er befand sich im 19. Jahrhundert in der Sammlung Campana und gelangte 1863 in den Louvre. Sein Fundort ist unbekannt.

Kersauson hat vorgeschlagen, dass es sich um ein Kinderporträt severischer Zeit handelt.[20] Obwohl der Vergleich mit Bildnissen des Caracalla und des Geta diese Datierung bestätigt,[21] handelt es sich nicht um ein römisches Porträt. Zwei Argumente machen die Option einer Genre-Figur hellenistischer Zeit wahrscheinlicher:

1. Kinderbildnisse römischer Zeit zeigen nicht eine so ausgeprägte Mimik wie der französische Kopf. Normalerweise wurden römische Kinderporträts statisch und ausdrucklos charakterisiert.[22] Obwohl es einige Beispiele mit Kopfbewegung und aufwärts gerichtetem Blick gibt,[23] kenne ich die Verbindung dieser beiden Eigenschaften mit einem weit geöffneten Mund nicht.
2. Hingegen erscheinen diese Merkmale bei Kinderköpfen hellenistischer Zeit. Ein Vergleich des Pariser Kopfes etwa mit dem Jockey aus Athen[24] oder mit einem der Knabenkämpfer aus Fianello Sabino[25] reichen meines Erachtens aus, um dieses Möglichkeit zu stützen. Die Drehung des Kopfes, der Gesichtsausdruck, die klaffende Mundöffnung, usw. stimmen mit diesen Charakteristika der hellenistischen Figuren überein.

Wenn diese beiden Punkte zutreffen, können die Kinderköpfe im Louvre und in der Villa Hadriana als Kopien eines verlorenen hellenistischen Originals gedeutet werden. Leider ist es problematisch, eine exakte Deutung des Kopfes Typus Louvre-Villa Hadriana zu etablieren. Kämpfer, Jockey oder Diener[26] sind die wahrscheinlichsten Optionen, aber nur wenn wir eine Kopie des Körpers fänden, wäre es möglich, die Deutung des Kopfes Typus Louvre-Villa Hadriana zu sichern.

Einfacher ist die Datierung dieses verlorenen Vorbildes zu eruieren. Die Ähnlichkeit der Köpfe des Typus Louvre-Villa Hadriana mit späthellenistischen Werken ist offensichtlich.[27] Zum Beispiel kann man das Gesicht mit dem des Jockey aus Athen[28] oder denen der Kinderkämpfer aus Fianello Sabino[29] gut vergleichen; oder die Frisurmotive dem so genannten Pseudo-Seneca[30] gegenüberstellen.

Der schlechte Erhaltungszustand der römischen Kopie aus der Villa Hadriana erlaubt keine Datierung nach stilistischen Kriterien. Auch hilft die Herkunft aus der Villa Hadriana hierfür nicht weiter. Die Skulpturen aus der Villa Hadriana können in einen chronologischen Bogen datiert werden, der ab hadrianischer Zeit bis zur severischen Zeit reicht. Die frühesten Stücke aus der Villa Hadriana mit absoluter Datierung sind einige Porträts Hadrians;[31] die spätesten einige Porträts aus severischer Zeit.[32] Deswe-

gen ist eine Datierung des Fragments in hadrianische Zeit die plausibelste Option, obwohl eine spätere Zeitstellung nicht ausgeschlossen werden kann.

Anmerkungen

* Ich bedanke mich für die Erlaubnis, eine Autopsie an den drei abgebildeten Statuen vornehmen und sie fotografisch dokumentieren zu dürfen, bei P. León und T. Nogales. Für wichtige Anregungen danke ich K. Fittschen und M. Trunk. Seit ich dieses Manuskript im Jahr 2018 beendete, habe ich einige neuen Daten zum Kopf Inv. Ma 2332 im Musée du Louvre gefunden. Der Kopf wurde auch bei Backe-Dahmen 2006, 180 F44 Taf. 47a veröffentlicht. Am 25.10.2021 hat mich J. Deterling brieflich darauf hingewiesen, dass der Knabenkopf Inv. Ma 2332 im Louvre mit einem Kopf in der Villa Albani nächstverwandt ist: P. C. Bol, Forschungen zur Villa Albani I (Berlin 1989) 98–100 Nr. 23 Taf. 40–41. Zuletzt zum Kopf Inv. Ma 2332 im Louvre: D. Ojeda, Fragments of Roman Sculptures from Hadrian's Villa, AJA 125, 2021, 409–410 Taf. 21.

[1] Die grundlegende Arbeit über die statuarische Ausstattung der Villa Hadriana ist noch immer: Raeder 1983. Es gibt zwei Depots in der Villa Hadriana: die Lager am Canopus und bei den Cento Camerelle. Einige Ergebnisse dieses Katalogisierungsprojektes sind schon veröffentlicht worden: León u. a. 2008, 183–184; Lapuente u. a. 2012a, 364–375; Lapuente u. a. 2012b, 376–383; Lapuente u a. 2013, 199–223; León u. a. 2010, 91–96; Márquez 2010, 97–104, Márquez 2013, 179–197, Márquez 2014, 197–212, Márquez 2015, 187–220; Márquez 2019.

[2] Der Katalog all dieser Fragmente ist schon publiziert worden: León u. a. 2018.

[3] Einige dieser Fragmente wurden schon publiziert. Siehe z. B. Wiggers u. a. 1971, 19. 87 (Caracalla-Porträt); Fittschen 1999, 63–64 Kat. L3 Taf. 100 b–d (Commodus-Porträt).

[4] León u. a. 2018, 305 Kat. 318.

[5] Vgl. Fittschen u. a. 2014, Kat. 50 Taf. 69. Für grundlegende Literatur zum Bildnisse des Elagabal in seinem 2. Bildnistypus: Fittschen u. a. 1985, 115–117 Kat. 98. Fittschen 2008; Fittschen u. a. 2014, 56 Kat. 50; s. auch: Bergmann 1977, 22–26; Despinis u. a. 2003, 195–196 Kat. 294; Fittschen 2005, 161; Leitmeir 2011, 20–21.

[6] Es gibt einige Privatporträts, die den Bildnissen des Elagabal im 2. Typus ähnlich sind. S. z. B. drei Köpfe in Kopenhagen (Johansen 1995, 248–249 Kat. 102; Fittschen 2008, 114 Taf. 4. 8), Thessaloniki (Despinis u. a. 2003, 195–196 Kat. 294. Fittschen 2005, 161. Fittschen 2008, 114–115) und Holkham Collection (Angelicoussis 2001, 133 no. 35 pl. 59, 3. 67. 69, 1–4).

[7] León u. a. 2018, 274 Kat. 271. Dienerbildnisse mit Löckchentoupet:

a) Fano, Mus. Civico del Palazzo Malatestiano. Cf. Fless 1995, 68–69 Taf. 34. 35, 1.
b) Athen, Nat. Mus. Inv. Θ 307. Cf. Datsulis-Stavridis 1974, 187–188 Taf. 106–109. Fless 1995, 68–69 Taf. 35, 2.
c) Rom, Mus. Cap., Magazin. Inv. 3080. Cf. Fittschen u. a. 2014, 9–10 Kat. 9a Taf. 8.

Diener-Darstellungen mit Löckchentoupet sind auch auf Reliefs nachweisbar. Siehe z. B. Fless 1995, 108 Kat. 28 II Taf. 23, 1.

[8] Der Bestand der in der Villa Hadriana dokumentierten Skulpturen reicht bis in severische Zeit zurück. S. Anm. 32.

[9] León u. a. 2018, 251 Kat. 248. 275 Kat. 272. 276 Kat. 273. 276 Kat. 274. 277 Kat. 275. 278 Kat. 276. 294 Kat. 297. 304 Kat. 316. 304 Kat. 317. 305 Kat. 318.

[10] León u. a. 2018.

[11] León u. a. 2018, 249–310.

[12] Beide Herausgeberinnen habe ich mehrfach brieflich auf dieses Problem hingewiesen, aber ihre eigenen Kriterien überwogen schließlich. Folgende Stücke können m. E. nicht als Porträts identifiziert werden: Léon u. a. 2018, Kat. 271, 277, 279–286, 288–296, 298–315, 319–326.

[14] Bis 2008 war das Fragment im Depot der Cento Camerelle, Raum XXVI, Kiste 210 aufbewahrt.

[15] Der gleiche Metalldübel ist bei weiteren Fragmenten aus dem Depot der Cento Camerelle sichtbar. Siehe z. B. León u. a. 2018, 274 Kat. 271. 275 Kat. 272 (ohne Abbildungen der Metalldübel). Hier Abb. 4.

[16] Kersauson 1996, 106 Kat. 41.

[17] Héron de Villefosse 1890, 77 Nr. 3006; 1896, 136 Nr. 2332.

[18] Michon 1922, 11 Nr. 2332.

[19] S. Anm. 16.

[20] S. Anm. 16.

[21] Vgl. z. B. Fittschen 1999, Taf. 127–128.

[22] Grundlegende Literatur zum römische Kinderporträt: Fittschen 1985; Fittschen 1988; Goette 1989; Fittschen 1992; Fittschen 2010; Fittschen u. a. 2014. S. ebenso Gerke 1968; Backe-Dahmen 2006.

[23] Siehe z. B. León 2010, 20–25 Taf. 8–11. Zuletzt Fittschen u. a. 2014, 43.

[24] Vorster 2007, 303 Taf. 294 a–d.

[25] Vorster 1998, 30–33 Taf. 13–16.

[26] Für die Optionen als Jockey oder Kämpfer s. Anm. 24–25. Für die Möglichkeit eines Dieners siehe Von den Hoff 2007, 29–31 Taf. 34 a–d.

[27] Für eine Epochencharakteristik späthellenistischer Skulpturen siehe Kunze 2002, 239–241.

[28] S. oben Anm. 24.

[29] S. oben Anm. 25.

[30] Zum Pseudo-Seneca siehe zuletzt Scholl 2016, 41–43 Kat. 29.

[31] Hadrian-Porträts aus Villa Hadriana sind:

a) London, Brit. Mus. Inv. 1896. Raeder 1983, 40–41 Kat. I 13; Fittschen u. a. 1985, 46 Replik Nr. 3 Beil. 29a–b. Evers 1994, 126–127 Kat. 59 Taf. 51–52.
b) Malibu, J. Paul Getty Museum. Raeder 1983, 55–56 Kat. I 36. Fittschen u. a. 1985, 46–47 Replik Nr. 4 Beil. 29c. Evers 1994, 138–139 Kat. 74 Taf. 56.
c) Tivoli, Villa Hadriana Museum. Inv. 2260. Raeder 1983, 89–92 Kat. I 88. Für das Problem des Bildnistypus Δo s. vor allem: Bergmann 1997, 143–146. Fittschen 2009, 128–129.
d) Vatikan, Mus. Pio Clementino. Inv. 724. Raeder 1983, 105–106 Kat. I 123. Fittschen u. a. 1985, 58 Anm. 1, f. Evers 1994, 172–173 Kat. 118 Taf. 54.
e) Tivoli, Villa Hadriana Magazzini. Inv. 45476. León u. a. 2018, 275 Kat. 272.

[32] Für severische Porträts aus Villa Hadriana: Calandra 2000, 64–66 Kat. 11–18.

Abbildungsnachweis

Alle Abbildungen von M. Otero und T. Nogales.

Literatur

Angelicoussis 2001
E. Angelicoussis, The Holkham Collection of Classical Sculptures (Mainz 2001).

Backe-Dahmen 2006
A. Backe-Dahmen, Innocentissima aetas. Römische Kindheit im Spiegel literarischer, rechtlicher und archäologischer Quellen des 1. bis 4. Jahrhunderts n. Chr. (Mainz 2006).

Bergmann 1977
M. Bergmann, Studien zum römischen Porträt des 3. Jahrhunderts nach Christus, Antiquitas. Abhandlungen zur Vor- und Frühgeschichte, zur klassischen und provinzial-römischen Archäologie und zur Geschichte des Altertums 18 (Bonn 1977).

Bergmann 1997
M. Bergmann, Zu den Porträts des Trajan und Hadrian, in: A. Caballos – P. León (Hrsg.), Italica MMCC (Sevilla 1997) 139–153.

Calandra 2000
E. Calandra, Ritratti imperiali dopo Adriano a Villa Adriana, in: A. M. Reggiani (Hrsg.), Villa Adriana. Paesaggio antico e ambiente moderno (Mailand 2000) 62–75.

Datsulis-Stavridis 1974
A. Datsulis-Stavridis, Εικονιστικά, α', Αρχαιολογικόν Δελτίον 29-1, 1974, 187–193.

Despinis u. a. 2003
G. Despinis – Th. Stephanidou-Tiveriou – E. Voutiras, Κατάλογος γλυπτών του Αρχαιολογικού Μουσείου Θεσσαλονίκης (Thessaloniki 2003).

Evers 1994
C. Evers, Les portraits d'Hadrien (Gembloux 1991).

Fittschen 1985
K. Fittschen, Ritratto funerario infantile di età traianea nei Musei Capitolini. Note su un busto di recente acquisizione, BollMC 32, 1985, 13–23.

Fittschen 1988
K. Fittschen, Kinderporträt und offizielles Porträt im 2. Jh. n. Chr., in: N. Bonacasa – G. Rizza (Hrsg.), Ritratto ufficiale e ritratto privato. Atti della II Conferenza Internazionale sul ritratto romano (Rom 1988) 303–306.

Fittschen 1992
K. Fittschen, Mädchen, nicht Knaben. Zwei Kinderbüsten in Cleveland und Wellesley, RM 99, 1992, 301–305.

Fittschen 1999
K. Fittschen, Prinzenbildnisse antoninischer Zeit (Mainz 1999).

Fittschen 2005
K. Fittschen, Rez. zu G. Despinis – Th. Stephanidou-Tiveriou – E. Voutiras, Κατάλογος γλυπτών του Αρχαιολογικού Μουσείου Θεσσαλονίκης, GGA 257, 2005, 151–163.

Fittschen 2008
K. Fittschen, Elagabal aus dem Steinhaufen, BCom 109, 2008, 109–115.

Fittschen 2009
K. Fittschen, Lesefrüchte I, Boreas 32, 2009, 127–133.

Fittschen 2010
K. Fittschen, Rez. zu A. Backe-Dahmen, Innocentissima aetas. Römische Kindheit im Spiegel literarischer, rechtlicher und archäologischer Quellen des 1. bis 4. Jahrhunderts n. Chr. (Mainz 2006), GFA 13, 2010, 1083–1090.

Fittschen u. a. 1985
K. Fittschen – P. Zanker, Katalog der römischen Porträts in den Capitolinischen Museen und den anderen kommunalen Sammlungen der Stadt Rom 1 (Mainz 1985).

Fittschen u. a. 2014
K. Fittschen – P. Zanker, Katalog der römischen Porträts in den Capitolinischen Museen und den anderen kommunalen Sammlungen der Stadt Rom 4 (Berlin 2014).

Fless 1995
F. Fless, Opferdiener und Kultmusiker auf stadtrömischen historischen Reliefs. Untersuchungen zur Ikonographie, Funktion und Benennung (Mainz 1995).

Gerke 1968
W. Gerke, Untersuchungen zum römischen Kinderporträt (Hamburg 1968).

Goette 1989
H. R. Goette, Beobachtungen zu römischen Kinderportraits, AA, 1989, 453–471.

Héron de Villefosse 1890
A. Héron de Villefosse, Catalogue sommaire des marbres antiques. Monuments exposés hors vitrines (Paris 1890).

Héron de Villefosse 1896
A. Héron de Villefosse, Catalogue sommaire des marbres antiques (Paris 1896).

Johansen 1995
F. Johansen, Catalogue Roman Portraits II. Ny Carlsberg Glyptotek (Kopenhagen 1995).

Kersauson 1996
K. de Kersauson, Catalogue des portraits romains. Tome II (Paris 1996).

Kunze 2002
Ch. Kunze, Zum Greifen nah. Stilphänomene in der hellenistischen Skulptur und ihre inhaltliche Interpretation (München 2002).

Lapuente et al. 2012a
P. Lapuente – P. León – T. Nogales – H. Royo – M. Preite-Martinez – Ph. Blanc, White Sculptural Materials from Villa Adriana: Study of Provenance, in: A. Gutiérrez – P. Lapuente – I. Rodà (Hrsg.), Interdisciplinary Studies on Ancient Stone. Proceedings of the IX ASMOSIA Conference (Tarragona 2012) 364–375.

Lapuente et al. 2012b
P. Lapuente – T. Nogales – P. León – H. Royo – M. Preite-Martinez, Black Sculptural Materials from Villa Adriana: Study of Provenance, in: A. Gutiérrez – P. Lapuente – I. Rodà (Hrsg.), Interdisciplinary Studies on Ancient Stone. Proceedings of the IX ASMOSIA Conference (Tarragona 2012) 376–383.

Lapuente et al. 2013
P. Lapuente – P. León – T. Nogales, Variedades de mármol escultórico de Villa Adriana. Un ejemplo de estudio arqueométrico, in: R. Hidalgo – P. León (Hrsg.), Roma, Tibur, Baetica. Investigaciones adrianeas (Sevilla 2013) 199–223.

Leitmeir 2011
F. Leitmeir, Brüche im Kaiserbildnis von Caracalla bis Severus Alexander, in: S. Faust – F. Leitmeir (Hrsg.), Repräsentationsformen in severischer Zeit (Berlin 2011) 11–33.

León 2010
P. León, Nuevos retratos de la Bética, in: J. M. Abascal – R. Cebrían (Hrsg.), Escultura romana en Hispania VI (Murcia 2010) 15–25.

León u. a. 2008
P. León – T. Nogales, Escultura de los almacenes de Villa Adriana: un proyecto de estudio multidisciplinar, in: G. Fiocco – R. Morelli (Hrsg.), Città e campagna: un binomio da ripensare (Rom 2008) 183–184.

León u. a. 2010
P. León – T. Nogales, Sculture nei magazzini di Villa Adriana: prime riflessioni, in: M. Sapelli (Hrsg.), Villa Adriana. Una storia mai finita. Novità e prospettive della ricerca (Mailand 2010) 91–96.

León u. a. 2018
P. León – T. Nogales (Hrsg.), Villa Adriana. Esculturas de los almacenes (Roma 2018).

Márquez 2010
C. Márquez, Materiale architettonico nei depositi delle Cento Camerelle di Villa Adriana, in: M. Sapelli (Hrsg.), Villa Adriana. Una storia mai finita. Novità e prospettive della ricerca (Mailand 2010) 97–104.

Márquez 2013
C. Márquez, Caracteres generales de la ornamentación arquitectónica en la Villa de Adriano en Tivoli. Material depositado en los almacenes, in: R. Hidalgo – P. León (Hrsg.), Roma, Tibur, Baetica. Investigaciones adrianeas, Sevilla (Sevilla 2013) 179–197.

Márquez 2014
C. Márquez, Adriano: el triunfo sobre la naturaleza en la villa tiburtina, in: J. P. Monferrer – M. Rodríguez-Pantoja (Hrsg.), La cultura clásica y su evolución a través de la Edad Media (Córdoba 2014) 197–212.

Márquez 2015
C. Márquez, Capiteles corintizantes en la villa de Adriano en Tívoli. Tipologías y talleres, Romula 14, 2015, 187–220.

Márquez 2019
C. Márquez, La decoración arquitectónica de Villa Adriana. Material selecto de los almacenes (Córdoba 2019).

Michon 1922

E. Michon, Catalogue sommaire des marbres antiques (Paris 1922).

Raeder 1983

J. Raeder, Die statuarische Ausstattung der Villa Hadriana bei Tivoli (Frankfurt 1983).

Scholl 2016

A. Scholl, Katalog der Skulpturen in der Antikensammlung der Staatlichen Museen zu Berlin. Bd. 1 (Petersberg 2016).

Von den Hoff 2007

R. von den Hoff, Die Plastik der Diadochenzeit, in: P. C. Bol (Hrsg.), Die Geschichte der antiken Bildhauerkunst III (Mainz 2007) 1–40.

Vorster 1998

Chr. Vorster, Die Skulpturen von Fianello Sabino (Wiesbaden 1998).

Vorster 2007

Chr. Vorster, Die Plastik des späten Hellenismus – Porträts und rundplastische Gruppen, in: P. C. Bol (Hrsg.) Die Geschichte der antiken Bildhauerkunst III (Mainz 2007) 273–331.

Wiggers u. a. 1971

H. Wiggers – M. Wegner, Caracalla, Geta, Plautilla; Macrinus bis Balbinus (Berlin 1971).

Manifestaciones de la escultura iberorromana en las cercanías del Fretum Herculeum

Pedro Rodríguez Oliva

En el límite occidental de la provincia de Málaga y muy cerca de la actual población de Casares se localizan los restos de la antigua Lacipo,[1] nombrada como Blacippo por Plinio (nat., 3. 15) quien además indica que era una ciudad de condición estipendiaria del conventus de Gades, como Λακκιπω por Ptolomeo (geog., 2. 4. 9), que la incluye entre las poblaciones túrdulas de la Bética, y como Lacipo por Pomponio Mela (chor., 2. 94 s.) que la ubica entre las mansiones de Salduba y Barbesula en la vía de Malaca a Gades del Itin. Ant. Tal núcleo urbano mantuvo en época romana su nombre indígena con un característico sufijo en -ipo/-ippo que llevan también otras varias ciudades del entorno. Entre los siglos II–I a.C. acuñó una corta serie de monedas en bronce con el topónimo latino LACIPO,[2] lo que evidencia el nombre correcto de la población, aunque a mediados del siglo III d.C. un epígrafe de Córdoba se refiere a un individuo natural de esta ciudad como *lacipponensis*.[3] Sus ruinas, de donde proceden varios epígrafes latinos del siglo I d.C. relacionados con el culto imperial y otros posteriores de carácter funerario,[4] dominan desde su emplazamiento en la montaña[5] el acceso desde el Mediterráneo al Fretum Herculeum y a sus dos principales puntos de referencia geográfica: Calpe (Gibraltar) en la orilla europea y Abyla (Yebel Musa) en el frontero territorio africano.[6] Plinio señalaba que a quienes habitaban este litoral mediterráneo andaluz a comienzos del Imperio los romanos les consideraban como gentes púnicas (nat., 3, 8). Eran aquellas mismas poblaciones de libyphoínikes (Λιβυφοινικες, es decir, púnicos norteafricanos) a los que nombraba Avieno – que los calificaba de *feroces* (ora, 419 ss.) – y que ocupaban, aparte del entorno del Estrecho, una región indeterminada en esta zona meridional de la Península Ibérica; los mismos a los que Éforo (en el Pseudo Skymnos de Chíos, vs. 196–198) identificaba como colonos de Cartago en estos territorios surhispanos y que, según Appiano (Iber., 56), habían sido trasladados a tierras hispanas por Aníbal. Ese término etnográfico es similar al que en alguna ocasión emplean otros autores antiguos para referirse en general a los cartagineses o a las poblaciones indígenas mezcladas con las de origen púnico en la Mauretania[7] y que para el caso hispano Antonio García y Bellido opinó que así debían ser conocidos "los colonos cartagineses establecidos en el litoral andaluz del Mediterráneo".[8] Que la presencia de esas etnias en la región debía tener una cierta entidad parece inferirse del texto de Estrabón en el que este autor afirmaba que en su tiempo "la mayoría de las ciudades de Tourdetania y de las regiones vecinas" estaban habitadas por aquellos phoiníkes (Str., 3.2.13). Es este un asunto de indudable interés al que la investigación arqueológica viene dedicando adecuada atención en los últimos años[9] y sobre el que puede que unos relieves de Lacipo a los que aquí nos referiremos podrían aportar nuevas informaciones sobre las influencias durante los siglos II–I a.C. de aquellas gentes de origen púnico que habitaban las zonas aledañas al Estrecho de Gibraltar.

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De esos varios relieves en calizas locales se desconocen las circunstancias precisas de su hallazgo y quizá a algunos de ellos se refieran las noticias sobre un relieve con una cabeza de toro (*taurini capitis anaglyphum*) que a mediados del siglo XIX Juan Pérez de Vargas y Salas, vecino de Casares y tío-abuelo de Blas Infante, comunicó a Emil Hübner.[10] Las primeras fotografías de estas piezas de las que disponemos[11] son las que en una visita que hizo al yacimiento en 1934 realizó el arquitecto José González Edo.[12] Junto a los otros ejemplares ahora en el Museo de Málaga y a los que luego hemos de referirnos, una de esas fotografías muestra un relieve ahora en paradero desconocido con una imagen que parece representar a un personaje masculino vestido con ropa corta y que puede que llevara en su mano derecha un objeto que quizá sea una antorcha caída (fig. 1a), a la manera de como la llevará Cautopates en las muy posteriores representaciones mitraicas. De ese ejemplar relivario tan interesante (especialmente si su cronología fuese la misma que la de los restantes ejemplares que vamos a estudiar) podría suponerse que se trataba de un sillar de esquina de un probable monumento funerario.

Alentado por las noticias que sobre la riqueza arqueológica del lugar le facilitó González Edo, algunos años después el entonces comisario provincial en Málaga de la Comisaría General de Excavaciones Arqueológicas, Simeón Giménez Reyna (1904–1967), visitó el yacimiento arqueológico y en la era del cortijo de Ferrete pudo ver dos de esos relieves, uno con la figura de un cordero, otro con una figura femenina ("que llaman la Virgen") y a unos 300 metros del citado cortijo, en la ladera del monte de Alechipe, otro bloque "con parte de la figura de un guerrero a caballo".[13] En el verano de 1961, quien había sido comisaría general de Excavaciones Arqueológicas, el catedrático Julio Martínez Santa Olalla, trasladó tales piezas junto con una serie de epígrafes latinos de igual procedencia a Guadarranque (San Roque, Cádiz), a la casa de la dirección de las excavaciones arqueológicas de Carteia en donde estuvieron bastantes años hasta que fueron trasladados, una vez fallecido Santa Olalla, al Museo de Cádiz, centro del que fueron reclamados por el Museo Arqueológico de Málaga que, tras su recuperación, los expuso al aire libre en la zona baja inmediata al acceso al monumento musulmán donde han permanecido hasta su traslado al nuevo Museo de Málaga en el palacio de la Aduana que se ha inaugurado a fines de 2016. Pero en aquellos avatares y por causas que se desconocen uno de los relieves quedó en los almacenes del Museo de Cádiz donde debe seguir.[14] Se trata de un altorelieve tallado en un bloque calizo (0,85 × 0,40 × 0,28 m.) que lleva en su cara principal una figura femenina y velada con el brazo izquierdo dirigido a su cintura y el derecho doblado y elevado hacia la cara, postura que permite clasificarla como una orante o plañidera (fig. 1b) y que debe ser la pieza que Giménez Reyna vio en su visita a Lacipo y a la que los vecinos de aquellos campos llamaban "la Virgen". Martín Almagro Gorbea la ha emparentado con una plañidera que se representa en un monumento funerario de Alcoy.[15]

Los restantes relieves del conjunto de Lacipo, precisamente los que ahora se exponen en el Museo de Málaga, son los tres ejemplares a los que deberemos prestar nuestra atención para el tema que nos ocupa. Dos son representaciones de carneros y la terce-



Fig. 1: Lacipo (Casares, Málaga). a) Fotografía de 1934 de un relieve actualmente desaparecido que representa a un personaje masculino vestido con ropa corta y que parece llevar en su mano derecha una antorcha. b) Figura probable de una orante o plañidera velada.

ra es la imagen de un jinete sobre su caballo y armado para la caza o la guerra. Todos se han elaborado en la misma caliza areniscosa de canteras locales y los hemos venido considerando como parte de la decoración de los paramentos exteriores de uno o varios monumentos funerarios de tipo turriforme[16] de una de las necrópolis de la antigua ciudad. Para el acercamiento a su cronología sólo se ha podido recurrir a criterios estilísticos y formales, habiéndose aceptado que corresponden al último período de la escultura ibérica, al grupo que ha sido denominado "reciente" o "iberorromano"[17] y que se viene datando entre los siglos III al I a.C., la mayoría ya bajo el dominio de los romanos. Conviene tener en cuenta, además, algunos detalles sobre los que Almagro llamó la atención y es que estos relieves presentan en las caras interiores y laterales de los blo-

ques una serie de mortajas en las que encajarían grandes grapas metálicas, unas en T (20/30 × 16 cm.) otras en forma de cola de milano, y mediante las que los diversos ortostatos debían unirse entre sí.[18]

Un par de estos relieves, como hemos dicho, muestran sendos carneros,[19] de los que el mejor conservado (0,65 × 1,13 × 0,34 m.) que va al paso a la izquierda (fig. 2) presenta un cierto detalle en el tratamiento de la cabeza y su cornamenta y algo de los rizados vellones bien esculpidos sobre su cuerpo; el otro (0,67 × 0,82 × 0,32 m.), al que una fractura ha afectado a parte del lomo del animal y de la zona delantera de la cabeza, representa al carnero de perfil, exactamente igual que el anterior, en movimiento, como si embistiera a la derecha, con su cuerpo liso, bien silueteada la figura y con unos grandes y enroscados cuernos (fig. 3). Aunque es verdad que desde un punto de vista formal no son paralelos exactos de estos relieves zoomorfos de Lacipo, como comparación se pueden aducir, sin embargo, algunos relieves tardopúnicos en los que el carnero se ha representado como animal destinado al sacrificio funerario. Tal es el caso de algunas estelas de los siglos III–II a.C. de la zona de Dermech de la necrópolis de Cartago,[20] el de otro ejemplar también tardío con remate de decoración vegetal que procede del tophet de Cartago[21] o el del cordero que se ve en alguna estela del tophet de Sousse.[22] De entre las pequeñas estelas elaboradas en caliza local típicas de la Cerdeña púnica,[23] en las numerosas del tophet-santuario sardo de Sant' Antioco procede un conjunto de unas pequeñas estelas, ejemplares característicos de la producción lapidaria sulcitana[24] que se



Fig. 2: Relieve con la figura de un carnero de la ciudad antigua de Lacipo.



Fig. 3: Carnero en relieve sobre un bloque de caliza local hallado en las ruinas de Lacipo.

vienen fechando a lo largo del siglo III a.C. y que llevan en relieve figuras de carneros al paso y en la parte superior el creciente lunar (Tinnit) sobremontando al disco solar (Baal Hammon) (fig. 4).[25] Aunque el animal representado es un toro y no un óvido como en los relieves que acabamos de comentar, cabe aducir que en las monedas de bronce que se acuñaron en la ceca de Lacipo en el siglo I a.C. se empleaba un tipo animalístico que podría tenerse en cuenta como elemento de comparación con las restantes representaciones zoomorfas; por cierto, tanto el toro empleado en estas acuñaciones, como el delfín y los símbolos astrales que también aparecen en las mismas, son absolutamente semejantes a los de las monedas de Asido, una ceca de fuerte influencia púnica.[26]

El tercero de estos relieves, que probablemente se corresponde con un sillar de esquina de un monumento funerario turriforme,[27] representa sobre el fondo liso del bloque de caliza en que se ha tallado (1,04 × 0,66 × 0,38 m.) un caballo que va al paso a la izquierda y al que monta un jinete (fig. 5). Ambas figuras, a pesar de su mal estado de conservación, se observa que fueron representadas con excelente naturalismo. El caballo, al que le falta la cabeza, llevaba esculpidas con detalle las riendas y otros arreos (la cincha se ha elaborado con un relieve destacado) y cabe hacer notar que aunque va al paso, al menos la pata delantera derecha iba levantada y exenta expresando de este modo el movimiento del animal al andar. La manera como camina el caballo es semejante, aunque sea en sentido contrario, a la que vemos en la representación de un jinete de un relieve de Henchir Abbassa (Chentou).[28] En cuanto al jinete laciponense, éste porta en su brazo izquierdo un gran escudo circular con un destacado umbo con un botón central rehun-

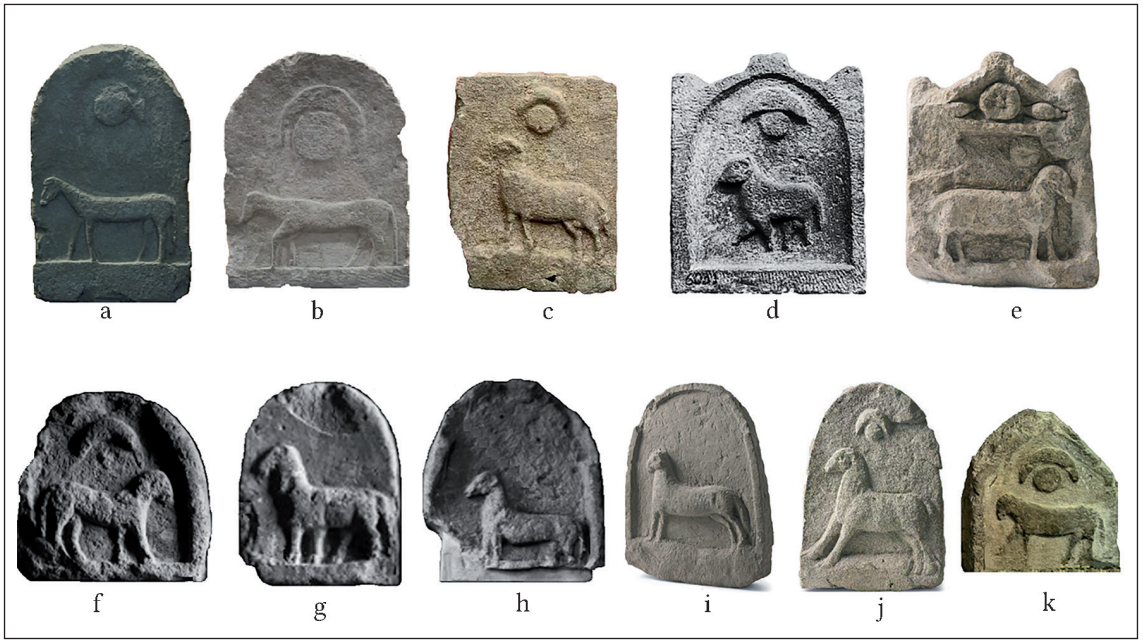


Fig. 4: Estelas con carnero al paso bajo símbolos astrales del tophet de Sant'Antioco (Cerdeña).



Fig. 5: Relieve con un jinete armado para la caza o la guerra cubierto con manto y portando un gran escudo circular, procedente de Lacipo (Casares, Málaga).

dido, y bajo el borde inferior de la rodela parece insinuarse el pie izquierdo del guerrero actualmente muy erosionado. Por fractura antigua, el personaje ha perdido la parte delantera de la cabeza, aunque bajo el cuello aún se observan unos simétricos pliegues semicirculares que deben corresponder al manto que cubría sus hombros. En el arte púnico las representaciones de jinetes se documentan desde momentos tempranos en varios casos que llevan esa escena en unos característicos discos cerámicos decorados a molde de los que se conocen ejemplares de Cartago, Utica, Ibiza e incluso del territorio malacitano cercano a la ciudad antigua de donde procede nuestro relieve. Uno de estos discos que vienen fechando en el siglo VI a.C. se ha encontrado en la misma Cartago y muestra una escena con un jinete armado y acompañado de un perro,[29] en otros casos el jinete monta un hipocampo como divinidad marina.[30] En el caso hispano conocemos dos ejemplos en los que el jinete armado se acompaña de un perro, escena a la que sobremonta un glóbulo rodeado de un creciente lunar; uno es de Ibiza[31] y el otro (fig. 6a) procede del yacimiento fenicio del Cerro del Villar en la desembocadura del rio Guadalhorce e inmediato a la antigua Malaka.[32] Disposición semejante al relieve de Lacipo la encontramos asimismo en el jinete con casco de larga cimera, gran escudo circular y lanza del reverso del denario de L. Manlius Torquatus del 113/112 a.C.[33] (fig. 6c), al igual que en tipos de jinetes lanceros con rodela y lanza de los reversos de algunas monedas hispanas[34] como las de Ikalesken (fig. 6b) y Urkesken,[35] debiendo destacarse la semejante iconografía monetal caracterizada por el gran escudo[36] que llevan los jinetes de



Fig. 6: Disco cerámico con figura de jinete (a) y representaciones de jinetes armados con casco, escudo y lanza en un denario (c) y en monedas hispanas de las cecas de Ikalesken (b), Ituci (d) y Carissa (e).

lo reversos de algunas monedas de Ituci (Tejada, Sevilla o Campo de Tejada, Huelva)[37] (fig. 6d) y Carissa (Bornos, Cádiz)[38] (fig. 6e), acuñaciones que ofrecen argumentos cronológicos en los siglos II–I a.C. a los relieves de Lacipo y que abundan en un común origen púnico del tipo, que se ha dicho es propio de norteafricanos númidas llegados a estas tierras como mercenarios en época bárquida.[39] Es cierto que también en la escultura ibérica el tema del caballo y del jinete armado para la caza o la guerra está ampliamente representado,[40] simbolizando en muchos casos la heroización del difunto.[41] Una escultura de jinete a caballo procedente de Montemayor y en el Museo Arqueológico de Córdoba[42] es un buen ejemplo de esas representaciones ecuestres de entre los siglos II–I a.C. a las que se podrían unir las de numerosos pequeños bronces fundidos de varios santuarios ibéricos o a las más antiguas y carentes de connotaciones bélicas que ofrecen los relieves del pilar-estela de Coimbra del Barranco Ancho de Jumilla (Murcia) o los dos jinetes en bulto redondo de la necrópolis de los Villares (Albacete) de principios del siglo V a.C. El conocido del jinete guerrero de Osuna evidencia su clara filiación ibérica tanto en su peinado y vestidos como sobre todo en la falcata que lleva en una de sus manos.[43] Pero al lado de esto, otras piezas como estas de Lacipo parecen demostrar que en los dos siglos antes del cambio de Era esas producciones ibero-romanas también aparecían influenciadas por la común herencia púnica que estamos viendo reflejada tanto en tierras hispanas como en las de Cerdeña y Sicilia. En este sentido conviene traer a colación unos relieves de jinetes de estelas de la siciliana Solunto, en los que en dos de ellos, uno del Museo Archeologico de Palermo (fig. 7a) y el otro del Antiquarium de So-



Fig. 7: Relieves de jinetes armados en estelas de la necrópolis de Solunto.

lunto (fig. 7b),[44] se han representado unos jinetes que llevan una lanza, pero sobre todo un escudo circular de grandes proporciones. Ana María Bisi consideraba que los jinetes de esas y otra estela soluntina eran "una delle testimonianze più significative della persistenza della cultura figurativa púnica nel territorio dell' isola durante il periodo ellenistico". Recientemente Von Hesberg ha llamado la atención sobre la falta de inscripciones en ellas y las ha fechado en los primeros momentos de la Sicilia romana a fines del siglo III a.C. recordando su relación con otras similares de Siracusa y Morgantina.[45]

Notas

[1] Puertas Tricas – Rodríguez Oliva 1980; Rodríguez Oliva 2006a, 299–327; TIR-España, J-30, 2000, 65.

[2] García-Bellido – Blázquez Cerrato 2001, 261; Villaronga, CNH, 423.

[3] CIL II2/7, 259.

[4] CIL II 1934–1937; Rodríguez Oliva 2006b, 123–157.

[5] Rodríguez Oliva 2017, 52–61.

[6] Schulten 1927, 190–201.

[7] Fischer, RE 13.1, 2002.

[8] "Punici coloni cum gente indigena conjunguntur" opinó Karl Müller en su comentario al Pseudo Skymnos de Chios. Estos blastophoinikes se vienen identificando con los "bástulos llamados púnicos" citados por Appiano (loc. cit.) en relación a un acontecimiento bélico sucedido en el 154 a.C. durante las guerras lusitanas, que son los mismos "bástulos a los que se llaman púnicos" de Ptolomeo (II, 4, 7) y de Marciano de Heraklea (p. 107).

[9] López 1995; Lacalle Rodríguez 1999, 170–171; Bendala 2000, 75–88.

[10] CIL II p. 244.

[11] Archivo J. Temboury. Biblioteca Provincial. Diputación Provincial de Málaga. Fotos 1043, a, b, c.

[12] Rodríguez Oliva 2017b, 183–187.

[13] Ficha sobre Lacipo de la Delegación provincial en Málaga de la Comisaría General de Excavaciones Arqueológicas conservada en el archivo del Museo de Málaga.

[14] La fotografía que aquí se reproduce pertenece al archivo de la asociación "Amigos de Carteia" del Museo del Istmo de la Línea de la Concepción (Cádiz).

[15] Almagro 1982a, 276. Almagro 1982b, 188. 191, núm. 31.

[16] Rodríguez Oliva 2001/2002; Id., 2003; Noguera Celdrán – Rodríguez Oliva 2008, 397–398, figs. 12–13. 409–410, fig. 19. 436–437, fig. 38.

[17] Chapa Brunet 1985, passim.

[18] Almagro – Rubio 1980, 349. 352. 356; Almagro 1983, 241.

[19] Almagro – Rubio 1980, 191. 359; Almagro 1983, 242.

[20] Hours et al. 1951, 52–53, lám. XXVI, f–h.

[21] Picard 1967, 22–24, lám. IX 1. Otra estela con representación de carnero en Lám. X, 2.

[22] Chaisemartin 1987, 68. 85–86.

[23] Moscati 2005, 206–232.

[24] Lilliu 1945, 293–418; Moscati 1986; Bartoloni 1986.
[25] Moscati 1981, 3–8; Guirguis 2017, figs. 93, 103, 389, núms. 291, 292.
[26] Puertas Tricas – Rodríguez Oliva 1980, 105–127.
[27] Almagro – Rubio 1980, 191. 359; Almagro 1982b, 188, núm. 13; Almagro 1983, 233, núm. 14.
[28] Bertrandy 1986, 58–60, fig. 1.
[29] Bertrandy 1986, 60, fig. 2.
[30] Fantar 1966, 19–32.
[31] Astruc 1956, 182 ss., núm. 68; Blázquez 1966, 101–103; Almagro Gorbea 1980, 271–273, lám. CC, 3–4.
[32] Arribas – Arteaga 1975, 89, lám. LXIV.
[33] Crawford 1974, 308, núm. 395.
[34] Almagro 1995, 235–266.
[35] Quesada – García-Bellido 1995, 65–73.
[36] García-Bellido 2010, 155–170; Mora Serrano 2014, 1431–1434.
[37] García-Bellido – Blázquez Cerrato 2001, 216–217; Villaronga CNH, 107–109.
[38] García-Bellido – Blázquez Cerrato 2001, 83–84; Villaronga CNH, 408–410; Arévalo 2011, 31–48.
[39] Quesada – García-Bellido 1995, 71.
[40] Chapa Brunet 1985, 166–185, 247.
[41] Benoit 1954, passim; Chapa Brunet 1985, 178; Noguera Celdrán – Rodríguez Oliva 2008, 397.
[42] Chapa Brunet 1985, lám. XX; López García 1999, 295–304.
[43] López García 2017, 37–39, lám. IV.
[44] Bisi 1965, 211–212, lám. LXXVI, 2; 212–213, lám. LXXVII, 1.
[45] Hesberg 2018, 167–168, figs. 4–5.

Índice de figuras

Fig. 1: Almacenes del Museo de Cádiz. – Fig. 2, 3: Museo de Málaga. – Fig. 4: Museo Archeologico Comunale Villa Sulcis, Carbonia, Museo Archeologico Ferruccio Barreca, Sant'Antioco, Museo Nazionale de Cagliari. – Fig. 5: Museo de Málaga. – Fig. 6a: Sección de Arqueología. Museo de Málaga. – Fig. 6b–e: Archivo Área de Arqueología. Universidad de Málaga. – Fig. 7: Palermo, Museo Archeologico.

Bibliografía

Almagro 1980
M. J. Almagro Gorbea, Corpus de las terracotas de Ibiza, Bibliotheca Praehistorica Hispana 18 (Madrid 1980).

Almagro 1982a
M. Almagro Gorbea, Plañideras en la iconografía ibérica, en Homenaje a Saénz de Buruaga (Madrid 1982) 265–285.

Almagro 1982b
M. Almagro-Gorbea, El monumento de Alcoy. Aportación preliminar a la arquitectura funeraria ibérica, Trab. Preh. 39, 1982, 161–210.

Almagro 1983
M. Almagro-Gorbea, Pozo Moro. El monumento orientalizante, su contexto socio-cultural y sus paralelos en la arquitectura funeraria ibérica, MM 24, 1983, 177–287.

Almagro 1995
M. Almagro Gorbea, La moneda hispánica con jinete y cabeza varonil: ¿tradición indígena o creación romana?, Zephyrus 48, 1995, 235–266.

Almagro – Rubio 1980
M. Almagro Gorbea – R. Rubio, El monumento ibérico de Pino Hermoso (Orihuela, Alicante), Trab. Preh. 37, 1980, 345–362.

Arévalo González 2011
A. Arévalo González, Algunas evidencias sobre la fabricación de moneda en Carisa, en Homenaje al Prof. A. Caro Bellido, Vol. 2 (Cádiz 2011) 31–48.

Arribas – Arteaga 1975
A. Arribas – O. Arteaga, El yacimiento fenicio de la desembocadura del río Guadalhorce, Málaga, CuadGranada 2, 1975.

Astruc 1956
M. Astruc, Empreintes et reliefs de terre cuite d'lbiza, AEspA 29, 1956, 139–191.

Bartoloni 1986
P. Bartoloni, Le stele di Sulcis. Catalogo, CSF, 24 (Roma 1986).

Bayet 1941
J. Bayet, L' omen du cheval a Carthage: Timée, Virgile et le monnayage punique, REL 19, 1941, 166–190.

Bendala, 2000
M. Bendala, Panorama arqueológico de la Hispania púnica a partir de la época bárquida, en: M. Paz García-Bellido – L. Callegarin (eds.), Los cartagineses y la monetización del Mediterráneo Occidental (Anejos de Archivo Español de Arqueología XXII), 75–88.

Benoit 1954
F. Benoit, L' heroisation équestre (París 1954).

Bertrandy 1986
F. Bertrandy, A propos du cavalier de Simitthus (Chemtou), Antiquités africaines 22, 1986, 57–71.

Bisi 1965
A. M. Bisi, Le stele puniche di Solunto, ArchCl XVll, 1965, 211–218.

Blázquez 1966
J. M. Blázquez, Dios jinete púnico sobre disco de Ibiza, Zephyrus XVII, 1966, 101–103.

Crawford 1974
M. H. Crawford, Roman Republican Coinage (London 1974).

Chaisemartin 1987
N. de Chaisemartin, Les sculptures romaines de Sousse et des sites environnants, (CSIR, Tunisie Proconsulaire II (Byzacium) 2), Ecole Française de Rome (Roma 1987).

Chapa Brunet 1985
T. Chapa Brunet, La escultura ibérica zoomorfa en piedra, Ministerio de Cultura (Madrid 1985).

Fantar 1966
M. H. Fantar, Le cavalier marin de Kerkouane, Rev. Africa I–II, 1966–1968, 19–32.

García-Bellido – Blázquez Cerrato 2001
M. P. García-Bellido – C. Blázquez Cerrato, Diccionario de cecas y pueblos hispánicos, Vol. II: Catálogo de cecas y pueblos (Madrid 2001).

García-Bellido 2010
M. P. García-Bellido, Etnias y armas en Hispania: los escudos, Gladius 30, 2010, 155–170.

Guirguis 2017
M. Guirguis, La Sardegna fenicia e punica. Storia e materiali (Nuoro 2017).

Hesberg 2018
H. von Hesberg, Immagini e iscrizioni. Le stele di legionari e ausiliari nelle province romane, en: C. Márquez – D. Ojeda (eds.), Escultura romana en Hispania VIII. Homenaje a Luis Baena del Alcázar (Córdoba 2018) 163–185.

Hours-Miedan 1951
M. Hours-Miedan, Les représentations figurées sur les stèles de Carthage, CahByrsa, 1951, 15–160.

Lacalle Rodríguez 1999
R. Lacalle Rodríguez, Ensayo de definición arqueológica de las etnias prerromanas de Andalucía, Spal 6, 1999, 165–186.

Lilliu 1945
G. Lilliu, Le stele puniche di Sulcis (Cagliari), MonAnt XL, 1945, 293–418.

López Castro 1995
J. L. López Castro, Hispania Poena. Los fenicios en la Hispania romana (206 a.C.–96 d.C.) (Barcelona 1995).

López García 1999
I. López García, El jinete de la Rambla (Córdoba): una nueva interpretación, XIV Congreso Nacional de Arqueología, Vol. 4 (Murcia 1999) 295–304.

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

Mora Serrano 2014
B. Mora Serrano, La imagen de la moneda hispana de época preagustea como producto artesanal en XVIII CIAC (Centro y periferia en el Mundo Clásico) (Mérida 2014) 1431–1434.

Moscati 1981
S. Moscati, Stele sulcitane con animale passante, RANL 36, 1981, 3–8.

Moscati 1986
S. Moscati, Le stele di Sulcis. Caratteri e confronti, CSF 23 (Roma 1986).

Moscati 2005

S. Moscati, Fenici e Cartaginesi in Sardegna (Nuoro 2005).

Noguera Celdrán – Rodríguez Oliva 2008

J. M. Noguera Celdrán – P. Rodríguez Oliva, Scultura ispánica in epoca repubblicana: Note su generi, iconografia, usi e cronologia, en: J. Uroz Sáez et al. (eds.), Iberia e Italia: modelos romanos de integración territorial (Murcia 2008) 379–454.

Picard 1967

C. Picard, Thèmes hellénistiques sur les stèles de Carthage, Antiquités africaines 1, 1967, 9–30.

Puertas Tricas – Rodríguez Oliva 1980

R. Puertas Tricas – P. Rodríguez Oliva, Estudios sobre la ciudad romana de Lacipo, Studia Archaeologica 64 (Valladolid 1980).

Quesada – García-Bellido 1995

F. Quesada – M. P. García-Bellido, Sobre la localización de ikale(n)sken y la iconografía de sus monedas, en La moneda hispánica. Ciudad y territorio, Anejos de Archivo Español de Arqueología XIV (Madrid 1995) 65–73.

Rodríguez Oliva 2006a

P. Rodríguez Oliva, Investigaciones arqueológicas en Lacipo (Casares, Málaga), en: I Jornadas sobre Patrimonio de Casares, Ayuntamiento de Casares – Diputación Provincial de Málaga (Málaga 2006) 299–327.

Rodríguez Oliva 2006b

P. Rodríguez Oliva, Unas inscripciones funerarias de Lacipo (Casares, Málaga) que evocan el establecimiento en Carteia (San Roque, Cádiz) de la Colonia Latina Libertinorum, Baetica 28(2), 2006, 123–158.

Rodríguez Oliva 2017a

P. Rodríguez Oliva, El yacimiento arqueológico de Lacipo (Casares, Málaga), Revista PH. Instituto Andaluz del Patrimonio Histórico 92, 2017, 52–61.

Rodríguez Oliva 2017b

P. Rodríguez Oliva, El arquitecto José J. González Edo y el descubrimiento de la ciudad romana de Lacipo (Casares, Málaga), Anuario R. Acad. B. A. San Telmo 17, 2017, 179–188.

Rodríguez Oliva 2003

P. Rodríguez Oliva, Esculturas zoomorfas de época romano-republicana de la provincia de Málaga, Mainake XXV, 2003, 321–357.

Rodríguez Oliva 2001/2002

P. Rodríguez Oliva, Sobre las esculturas ibéricas e ibero-romanas de los territorios malacitanos, Anales de Prehistoria y Arqueología. Universidad de Murcia 16–17, 2001/2002, 467–485.

Schulten 1927

A. Schulten, Die "Säulen des Herakles", en: O. Jessen, Die Strasse von Gibraltar (Berlin 1927) 174–206.

Villaronga 2002

L. Villaronga, Corpus nummum Hispaniae ante Augusti aetatem (CNH) (Madrid 2002).

Repertorio escultórico romano-provincial de la *colonia Iulia Genetiva* (Osuna, Sevilla)

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Las "Misiones Francesas" en España motivaron actuaciones dirigidas a la recuperación de conjuntos arqueológicos. Así, las excavaciones de Arthur Engel y Pierre Paris a principios del siglo XX en la muralla romano-republicana ("pompeyana") de la antigua *Vrso,* pusieron a la luz un elenco de relieves romanos figurados,[2] a la vez que desencadenaron una ferviente actividad arqueológica en el seno primigenio de la colonia romana *Iulia Genetiva,*[3] concretamente donde años antes habían sido rescatados fragmentos de la *Lex Vrsonensis* y se vislumbraba el teatro, junto a otros vestigios con probabilidad del foro colonial.[4]

En esta atmósfera proclive al acopio de antigüedades locales, Antonio Gutiérrez Martín, primogénito de Antonio Gutiérrez Caballos, quien desde fines del período decimonónico se contaba entre los mayores contribuyentes de Osuna, adquirió en marzo de 1903 ante notario y como titular único, un predio inmediato a uno de los antiguos ejes coloniales, en el área superior del flanco suroeste de la *cavea* del edificio escénico.[5]

Ese solar albergaba en sus lindes un pozo de uso hidráulico, cuyo vaciado y limpieza durante el estío de 1903 despejaría el propio Gutiérrez Martín junto a su progenitor y a Carlos Álvarez de Perea y Valcárcel, poniendo entonces de manifiesto que había sido amortizado en fecha ignota con series escultóricas, arquitectónicas y epigráficas, tal como se describiría en el periódico semanal local (El Paleto de Osuna),[6] darían noticia los hispanistas galos[7] y fotografiaría Jorge Bonsor.[8] El redescubrimiento de este elenco escultórico[9] ha permitido tener constancia de su conservación actual en sendas colecciones particulares en Murcia más allá de un siglo después de su hallazgo.[10]

Bajo aquellas circunstancias se exhumó un repertorio marmóreo de efigies mayoritariamente colosales, entre las que destacan el posible retrato idealizado de canon policlético de un príncipe julio-claudio y la efigie de *Dea Roma,* junto a otros materiales estatuarios fragmentarios, uno de los cuales – un pie con sandalia – presenta el *titulus* BALIAR(icus fecit). No es improbable considerar que el mencionado pozo hubiese sido colmatado con materiales procedentes del programa decorativo bien del inmediato teatro, bien del espacio forense, habiendo contenido, además – con base en las noticias publicadas por el rotativo ursaonense y en las citas de los arqueólogos franceses –, otros fragmentos marmóreos, tanto escultóricos – caso de una cabeza de Hermes o Sileno y un torso de Venus –, como arquitectónicos y epigráficos, de paradero ajeno a nuestro conocimiento.

Centrándonos en un análisis detallado de cada unos de los fragmentos emanados de aquella actuación, el 16 de agosto de 1903,[11] apareció una cabeza escultórica masculina (fig. 1) de proporciones bastante superiores al natural, colosales,[12] elaborada en un mármol blanco de grano fino, compacto y pulimento mate, con vestigios de pigmentos ro-

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Fig. 1: Vista frontal de la cabeza masculina de Osuna.

jizos en los mechones del sector superior y lateral izquierdo de la testa. La fractura del cuello afecta a la parte izquierda del mentón, con una fisura que recorre la mejilla de ese lado. Lo conservado nos exhibe un rostro juvenil, de expresión grave y rasgos idealizados de tipo clasicista, con ojos enmarcados por párpados en cinta, con un tabique nasal proporcionado y la boca levemente entreabierta de densos labios y sólido mentón. El peinado se distribuye en mechones que se curvan en distintas direcciones y nos presenta como elemento distintivo, una gran horquilla en la frente organizada en cuatro bucles que se contraponen y giran hacia el eje central a la altura de los ojos. La parte superior de la misma someramente labrada, presenta una horadación de sección cuadrada probablemente destinada a recibir un perno metálico que garantizara su anclaje en un marco arquitectónico mayor.

Las proporciones equilibradas, la dermis tersa y las facciones despejadas e idealizadas aproximan esta figura a las producciones escultóricas de Policleto y encuentra la inspiración en la disposición de la gran horquilla de la frente en la disposición del cabello en obras como el Hércules y, sobre todo, el Doríforo del escultor griego.[13] Asimismo, es evidente que mantiene el modelo del Doríforo en la disposición de los rizos en la sien izquierda en torno a la oreja. Si bien, el resto de la organización del cabello sigue una disposición diversa, que no encuentra paralelo exacto en los modelos policleteos. También diverge en la semblanza del rostro, alejado de los tipos más maduros de Hércules o Doríforo, y mucho más próximos a las creaciones de personajes más jóvenes, como efebos, del entorno mismo de Policleto o de sus seguidores o incluso en recreaciones de época helenística.[14] No obstante, puede observarse que la propia colocación de la cabeza, que no aparece bruscamente girada hacia un lado y el propio sistema de rizos lo alejan de esquemas como los contemplados en obras del tipo de los efebos de Dresde y de Westmacott. Iconográficamente consiste en una obra sumamente singular y ecléctica, que sin duda fue una reelaboración original de época romana y que quizás hay que asociar con el posible nombre del escultor aparecido en una de las siguientes piezas, *Baliar(icus).* Asimismo, destaca por su monumentalidad, lo que unido a la fecha temprana de ejecución, que podría ocupar la primera mitad del siglo I d.C., aporta un mayor grado de extrañeza a la hipótesis de una grandiosa estatua ideal que representara a un efebo en un programa estatuario de fecha temprana en una ciudad como la Osuna romana, que, a pesar de ser fundada como colonia romana en el tercer cuarto del siglo I a.C., no era en época julioclaudia ni siquiera capital conventual en la *provincia Hispania Vlterior Baetica.* Ese carácter colosal de la obra final, que deberemos interpretar como de cuerpo entero, cobraría un mayor sentido en el marco de la estatuaria bética de esos momentos si se asociara a un programa imperial. Recuérdese especialmente la cabeza de *Divus Augustus* de *Italica,* de dimensiones mayores a la pieza ursaonense[15] y que ha sido datada en época tiberiano-claudia,[16] o incluso, en época augustea.[17] Es por ello que, junto al examen completo de la testa y no sólo mediante una fotografía,[18] quizá sea más factible retomar la posibilidad de que pudiera corresponder a una representasión idealizada de un príncipe julio-claudio, lo que nos llevaría a identificarlo incluso

como Lucio César, que tiene la particularidad de presentar una gran horquilla de raigambre policletea sobre la frente en algunos tipos, lo que llevaría a una datación tardoaugustea,[19] o relacionarlo con otros retratos de príncipes identificados de los reinados de Tiberio-Calígula,[20] y que en la Bética tienen dos ejemplos evidentes en sendos retratos procedentes uno del Cortijo de Alhonoz, en Herrera[21], con el que tiene más afinidad estilística la pieza de Osuna y que fue considerado como Lucio César por D. Boshung, y otro del teatro de *Italica,*[22] de similares dimensiones.[23] No obstante, en ambos paralelos quedan más evidente, por un lado, el carácter retratístico de los representados frente al más idealizado de la pieza ursaonense y, por otro lado, la disposición más simplificada del cabello, con rasgos más acordes con sus identificaciones como retratos.

De notables proporciones, aunque menores que la anterior,[24] exhumada en la tercera semana de agosto de 1903,[25] es una cabeza femenina con casco, de buen estado de conservación, con la salvedad de la fractura de la nariz y la erosión superficial de los labios y el mentón (fig. 2). De semblante ideal, un delicado arco superciliar enmarca los ojos de párpados superiores resaltados y boca entreabierta de labios carnosos, inclinando levemente su cabeza hacia la derecha. El peinado se distribuye desde una raya central en dos secciones de mechones ondulados ordenados de modo simétrico a ambos lados del rostro, sintetizándose hacia la región parietal. Se cubre con casco ático de remate helicoidal perceptible en el flanco izquierdo, mientras que en el derecho una fractura en talud revela el ensamblaje de una pieza externa que completaba esa parte, hoy perdida. La superficie sin pulimentar de la parte correspondiente al casco indica que éste era pieza aparte, quizás metálico. Sin más atributos de juicio, su correcta adscripción no está exenta de complejidad. Arthur Engel y Pierre Paris creyeron ver la efigie de Minerva, lo que no es descartable, si bien la corriente actual de opinión se inclina por la imagen de *Dea Roma,*[26] con un buen paralelo en la cabeza de la *Dea Roma* del foro de *Italica,*[27] de época tardoadrianea. Es posible que en ese caso fuera tributaria del tipo amazónico, de pie, que tuvo buena acogida en *Hispania.* De hecho, en cuanto a su propuesta de destino de la *frons scaenae* del teatro romano de *Vrso* es buen paralelo la estatua acéfala de *Dea Roma/Virtus* del teatro romano de *Segobriga,* elaborada en mármol de Luni-Carrara y datada a mediados del siglo I d.C.[28] De contexto arqueológico desconocido en cambio es la escultura femenina de *Basilippo* expuesta en el Museo Arqueológico de Sevilla, que reproduce el tipo de la *Dea Roma* amazónica, obra de un taller provincial.

Asimismo, debe recordarse la descripción en fecha coincidente de un fragmento de torso femenino semidesnudo[29] recuperado en el pozo, hoy en paradero desconocido, que podría ser complementario a esta cabeza, respondiendo a este prototipo, o a una Venus de proporciones colosales,[30] tal vez de época tardoaugustea, como en el caso masculino anteriormente descrito. De considerarse una imagen sesgada de la propia *Vrbs,* pudo concebirse en el seno del mismo lenguaje iconográfico, es decir, formando parte de un repertorio escultórico que bien tendría cabida en el contexto del teatro romano o bien estaría destinado al foro de la *colonia Iulia Genetiva,* siempre con una nítida connotación política e ideológica, en clara alusión a la divinización de Roma y al mensaje



Fig. 2: Cabeza femenina con casco de Osuna.

propagandístico diseñado por Augusto para su dinastía, incluyendo en este caso al propio Lucio César (si consideramos esa datación) o a un príncipe posterior julioclaudio y, tal veza, la propia Venus.

Adscrita a una estatua imperial *thoracata* debieron pertenecer los dos fragmentos escultóricos que unen entre sí y representan el sector inferior de la indumentaria, del que perviven los extremos de las cinco launas labradas con rebajes paralelos que reposan sobre el borde del *colobium,* así como la pierna izquierda con un delicado trabajo anatómico perceptible en la abultada rótula y en la tensión muscular[31] (figs. 3, 4). La parte anterior presenta el *mulleus* con la común cabeza y garra de felino. Puede datarse en época julioclaudia y sus paralelos béticos se hallan, sobre todo, en la escultura segmentada *thoracata* de edad tiberiana del probable foro de *Sexi* (Almuñécar) y en ejemplares de Baena o – fuera del ámbito de las estatuas *thoracatas* – en la colosal escultura de Artemis o Diana de *Italica.*[32]

A una estatua de divinidad femenina pudo sumarse el pie derecho calzado con una sandalia del tipo *crepida,* pero con alta suela, que remata su empeine con el motivo de una palmeta[33] (fig. 5), donde el tratamiento anatómico es repetitivo y el dedo meñique se muestra en un tamaño desproporcionadamente menor. Como particularidad se observan las huellas de la gradina o cincel dentado en el lateral de la menor de las falanges y vestigios de policromía rojiza aplicada sobre el mármol.[34] De idéntica procedencia es el pie desnudo[35] de mayor tamaño que el natural, segmentado en dos fragmentos (fig. 6), donde el escultor presta atención a la talla cuidada de las extremidades y el maléolo izquierdo, una pieza desmembrada de escultura ideal de este contexto espacial y simbólico.[36] Un interés ambivalente reside en la representación escultórica de un pie femenino izquierdo con inscripción[37] (fig. 7) calzado con una sandalia de tiras trenzadas que confluyen en un motivo de hoja de hiedra.[38] No obstante, su originalidad se acentúa porque en el frente de la suela se ha grabado el *titulus BALIAR* en escritura *capitalis quadrata.*[39] Su correcta lectura debe conducirnos al *cognomen Baliar(icus)* alusivo a la procedencia del escultor y el sentido de la inscripción de firma de escultor se interpreta como *Baliar(icus fecit).*

Por último, cierra el conjunto de la colección de los herederos de Gutiérrez Martín la pata leonina,[40] en estado fragmentario, de la peana de una mesa *delphica* o de un *monopodium,* bien de ambiente doméstico, o más bien de un espacio público, cuyo material de labra se distancia de los anteriores al ser un mármol de tonalidad blanco-grisácea (fig. 8).

En conjunto, estos testimonios figurados guardan unidad en el acabado de las áreas carnosas, el tratamiento lineal de los mechones, el fino pulimento de la epidermis, la sutil idealización y el uso de un soporte marmóreo posiblemente de origen foráneo; no obstante, denotan su ejecución en un taller romano-provincial perceptible en descuidos como la labra inacabada del reverso de las orejas del retrato masculino, los vestigios cromáticos de tonalidad rojiza aplicados directamente sobre el mármol, la desatención a las áreas menos visibles, la desproporción de las falanges, la huella de elementos de



Fig. 3: Fragmento de estatua thoracata. Detalle de la vestimenta.

ensamblaje o la introducción de soluciones propias como la dilatada horquilla del rostro masculino.

En definitiva, este repertorio resume el mensaje contenido de un programa oficial de época augustea o julioclaudia que debió erigirse en la colonia *Iulia Genetiva* para ser interpretado por los ciudadanos, fuese en el teatro romano o en algunos de los edificios públicos del *forum,* acorde con la nueva ideología y culto de la *Domus Augusta.* Como reflexión y no sin cautela, tal vez pudieron acomodarse en las exedras del frente escénico del teatro, siguiendo la tradición impuesta por Augusto de generar en este marco un lenguaje ideológico-político reforzando el culto a Roma y el ciclo dinástico de la casa imperial, con la serie de imágenes del emperador y su familia, entre otros personajes mitológicos o ilustres; se trata de una concepción que reside en los retratos del teatro de *Tarraco* que formaron parte de la *scaena frons*[41] si bien de fecha más avanzada, o manifiestan los hallazgos escultóricos del foro de Torreparedones (Baena, Córdoba).[42]

El edificio escénico ursaonense responde al tipo mixto provincial, con una *cavea* que se despliega casi íntegramente sobre el declive del terreno subdividida en cuatro *cunei* encintados por *scalariae* y coronado por un sector superior, que sería bien edilicio, bien lígneo.[43] Asimismo, una reciente prospección geofísica en la zona y su consiguiente alzado planimétrico, plantea la suma de un cuadripórtico *post scaenam* y de un frente escénico articulado en dos órdenes de columnas.[44] Su construcción debiera datarse en el tránsito de Era o en los albores del siglo I d.C. en el contexto de prosperidad augustea,[45]



Fig. 4: Fragmento de estatua thoracata. Detalle de la pierna.



Fig. 5: Detalle del pie con caliga.



Fig. 6: Pie desnudo colosal.

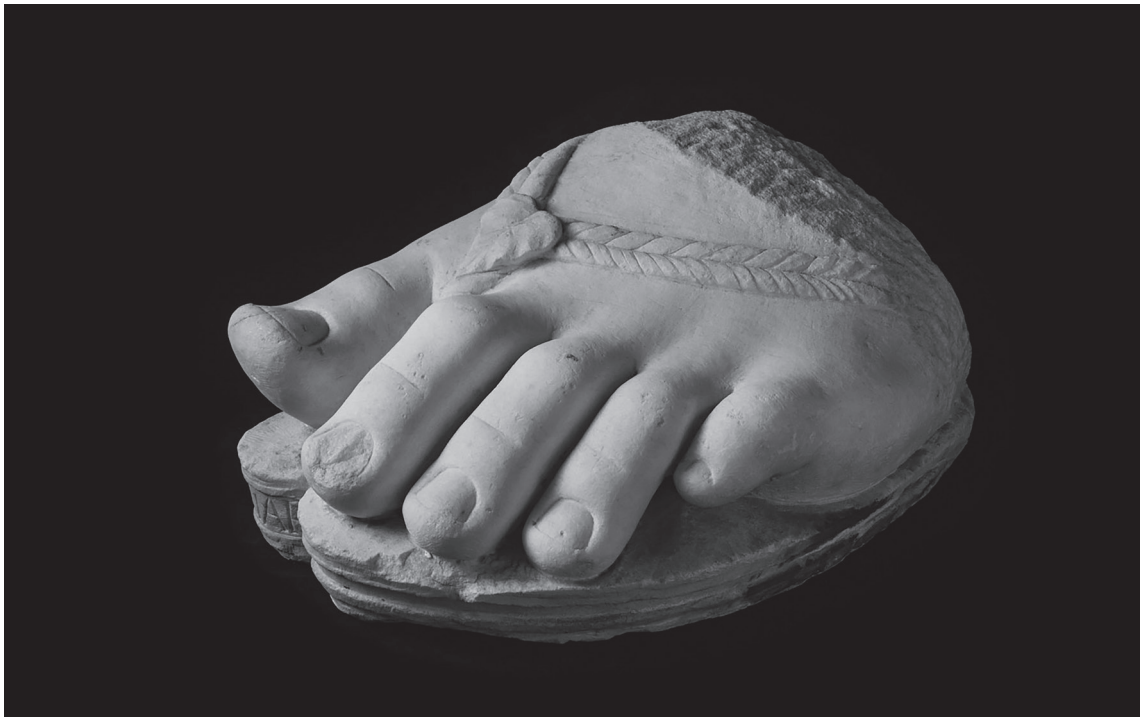


Fig. 7: Fragmento de pie femenino izquierdo con inscripción.

cuando se dota a muchas ciudades hispanas de edificios vinculados a la ideología imperial reproduciendo los modelos arquitectónicos y decorativos de la corriente oficial romana.

En conclusión, los *disiecta membra* escultóricos que presentamos pudieron encontrar acomodo en un espacio de autorrepresentación imperial en el área pública de la romana *Vrso,* ocupando posiblemente un lugar preferente en su teatro, pero sin obviar su admisible filiación con el *forum,* que debía organizarse entre este edificio escénico y uno de los principales ejes de la colonia.



Fig. 8: Fragmentos de pata leonina.

Notas

[1] Universidad de Málaga (milopez@uma.es; grupo de I+D HUM 343, del PAI) y Universidad de Sevilla (jbeltran@us.es; grupo de I+D HUM 402, del PAI). Se enmarca dentro de los trabajos de los Proyectos I+D+i HAR2013-42078-P y HAR2017-89004-P, del Ministerio de Economía y Competitividad de España, cofinanciados con Fondos FEDER.

[2] López 2017.

[3] González 1989.

[4] Salas 2002.

[5] "Trece celemines de tierra o […] sesenta y nueve áreas y cincuenta y una centiárea de hectáreas de olivar al Sitio de la Farfana o las Alcaidías de este ruedo y término, que linda al norte con tierras calmas de Doña Dolores Escacena, al Levante con otras de Don José Postigo, al Mediodía más de Doña Margarita Quijada y al Poniente con la vereda real de las Canteras", A.M.O. Protocolo notarial de Enero-Junio de 1903, sig. 1348, fols. 267 rto–267 vto.

[6] Salas 2002, 137–156.

[7] Engel – Paris 1906, 19–29; Paris 1908, 5; Paris 1910, 151 s.

[8] Sin autor, Colección Fotográfica de Jorge Bonsor 2001, no. 723–727.

[9] Beltrán 2005, 88–89; Beltrán 2008, 519–538, láms. 13–21; Beltrán 2009, 27–32; López 2017, 77–83. 119–123; Ruiz 2004, 68–71; Ruiz 2007, 163–165, figs. 7.22–7.27; Ruiz – Jofre 2005, 363–376.

[10] Propiciado por la comprometida dedicación del Prof. Noguera Celdrán en esta investigación, así como por la gentileza de ambas herederas de este palimpsesto, quienes nos facilitaron su estudio directo. A ellos les expresamos nuestro sincero agradecimiento. Posteriormente a la redacción de este trabajo la Junta de Andalucía ha adquirido las piezas de una de las colecciones, aunque no la otra, en la que se encuentra la cabeza de príncipe julio-claudio y un relieve sepulcral decorado con con un león, que no estudiamos aquí.

[11] "Los Sres. Gutiérrez Ceballos, Gutiérrez Martín y Álvarez de Perea y Valcárcel, a cuyas expensas se está limpiando el cada día renombrado pozo del solar de don José Postigo, han tenido buena fortuna en la última semana, pues durante ella han encontrado porción de objetos de valor arqueológico y, principalmente, una cabeza labrada en finísimo mármol, de tamaño casi triple al natural y de gran mérito por la corrección con que está trabajada. Esta hermosa producción de arte escultórico está casi completa, pues sólo le falta un pedazo del labio inferior y la parte izquierda de la barba, y cuantas personas han tenido ocasión de verla y admirarla la estiman y considera como una obra artística", Anónimo de Osuna 1903a; cfr. Salas 2002, 149.

[12] Lo conservado mide 42 cm. alt., 36 cm. anch., 35 cm. gr. max. Altura del mentón al cráneo 30 cm. (aunque falta el extremo del mentón) y al labio inferior 21 cm.; diámetro del cuello 21 cm.

[13] Hafner 1997.

[14] Beltrán 2008, 524–525.

[15] Mide 73 cm, de altura y 43 cm, de mentón a cráneo, aunque faltaría una pieza superior, y está elaborada en mármol pentélico.

[16] León 1995, 74–75, no. 19.

[17] Boschung 1993, 131, no. 47.

[18] Beltrán 2008, 525–528, se barajaban ambas hipótesis y se apostaba finalmente por su identificación como escultura ideal.
[19] López 2017, 78–80, no. 73; López – Beltrán 2018, 598–600, figs. 1–5.
[20] *Cfr.,* Boschung 1989, 62 ss.
[21] León 2001, 264–265; id. 2009, 208–209, figs. 276–277.
[22] León 2001, 266–269.
[23] Mide 50 cm. de alt. máxima y 0,33 cm. de mentón a cráneo.
[24] Dim.: 50 cm. alt., 32 cm. anch., 31 cm. gr. Cuello: 19 cm. anch.
[25] "Han hallado en el pozo a cuya limpieza proceden, otra hermosa cabeza, como de diosa, artísticamente labrada en mármol blanco, de mayor perfección aún que las dos que reseñamos en nuestro número anterior y cuyo tamaño se acerca también al triple del natural", Anónimo de Osuna, 1903b; cfr., Salas, 2002, 150.
[26] Beltrán 2008, 529–530; López 2017, 77–78, no. 72; López – Beltrán 2018, 600–602, figs. 6–10.
[27] León 1995, 150–151, no. 49; Rodríguez Oliva 2009, 112–113.
[28] Noguera 2012, 49–54.
[29] "También han encontrado parte de una estatua de mujer, al parecer desnuda y con un solo cinturón por debajo de los pechos, uno de los cuales se ve perfectamente, faltando el otro, sobre el cual debía haber, sin duda, algún objeto que le cubría y ha desaparecido. Es asimismo de muy buen arte", Anónimo de Osuna, 1903a; cfr., Ruiz 2004, 69; Ruiz 2007, 164; Salas 2002, 149.
[30] Beltrán 2008, 531.
[31] En conjunto: 56 cm alt., 14,5 cm anch., 17 cm gr. Fragmento de indumentaria: 28 cm alt., 23,5–37 cm anch., 20 cm gr. Mulleus: 21 cm alt.
[32] Beltrán 2008, 522–523; López 2017, 80–81, no. 76; López – Beltrán 2018, 602, figs. 11–13.
[33] Dim.: 20,5 cm larg., 17 cm anch., 8 cm alt.
[34] Beltrán 2008, 533; López 2017, 81–82, no. 78; López – Beltrán 2018, 602, figs. 14–15.
[35] Dim.: 28,5 cm. alt., 46,5 cm. larg., 18,5 anch. (empeine). Dedo índice 9 cm. larg. Diámetro del tobillo: 15.5 cm.
[36] Beltrán 2008, 528; López 2017, 82, no. 79; López – Beltrán 2018, 602, figs. 16–17.
[37] Dim.: 33 cm. larg., 15,5 cm. anch., 12,5 alt. Pulgar: 10 cm. larg, índice: 12,5 cm. larg., meñique: 6,8 cm. larg. Motivo en forma de hiedra: 5 cm. anch., 4,3 cm. alt. Inscripción: 2 cm. alt., 1,2 cm. anch. media.
[38] Beltrán 2008, 531–533; Beltrán 2009, passim; López 2017, 81, no. 77; López – Beltrán 2018, 602–603, figs. 18–20.
[39] Según la referencia de Engel y Paris (1906, 376) sobre un brazo escultórico – desaparecido hoy – se había grabado asimismo la inscripción *BALIAR LEG,* que, aunque ha sido interpretada como *Baliar(icus) leg(atus),* creemos que debe corregirse fácilmente como *Baliar(icus) fec(it),* en un error de lectura de confundir *fec* por *leg* (Beltrán 2009).
[40] Dim.: 36,5 cm. alt., 13 cm. anch. López – Beltrán 2018, 603, fig. 21.
[41] Koppel 1995, 180–181.
[42] Márquez et al. 2013, 351–376.
[43] Ruiz 2008, 253–265; Ruiz – Pachón 2012, 47–54; Ventura 2008, 218, fig. 215.
[44] Ruiz – Pachón 2012, 69–80.
[45] Jansen 2005, 412; Jiménez 1993, 233.

Índice de figuras

Todas las imágenes de J. Inchaurrandieta.

Bibliografía

Anónimo de Osuna 1903a
Anónimo de Osuna 1903a, Descubrimientos arqueológicos, El Paleto de Osuna, 16. 08. 1903, no. 54.

Anónimo de Osuna 1903b
Anónimo de Osuna 1903b, Descubrimientos arqueológicos, El Paleto de Osuna, 23. 08. 1903, no. 55.

Beltrán 2005
J. Beltrán Fortes, Novedades de esculturas de carácter público en ciudades de la Bética. Los casos de *Urso* y *Conobaria*, en: Preactas V Reunión sobre Escultura Romana en Hispania (Murcia 2005) 85–89.

Beltrán 2008
J. Beltrán Fortes, Escultura romanas de *Conobaria* (Las Cabezas de San Juan) y *Vrso* (Osuna). La adopción del mármol en los programas estatuarios de dos ciudades de la Baetica, en: Escultura Romana en Hispania V (Murcia 2008) 501–543.

Beltrán 2009
J. Beltrán Fortes, Firmas de escultor, en dos inscripciones de la *Colonia Iulia Genetiva Urso* (Osuna, Sevilla), en: Espacios, usos y formas de la epigrafía hispana en épocas antigua y tardoantigua, Homenaje al Dr. Armin Stylow, Anejos de AEspA XLVIII (Mérida 2009) 27–32.

Boschung 1989
D. Boschung, Die Bildnisse des Caligula (Berlin 1989).

Boschung 1993
D. Boschung, Die Bildnisse des Augustus (Berlin 1993).

Engel – Paris 1906
A. Engel – P. Paris, Une forteresse ibérique à Osuna (Fouilles de 1903), Nouvelles Archives des Missions Scientifiques et Littéraires, t. XIII, 4 fasc. (Paris 1906), J. A. Pachón – M. Pastor – P. Rouillard (eds.), Una fortaleza ibérica en Osuna (Granada, 1999).

González 1989
J. González (ed.), Estudios sobre Urso Colonia Iulia Genetiva (Sevilla 1989).

Hafner 1997
G. Hafner, Polyklet Doryphoros (Frankfurt 1997).

Jansen 2005
B. Jansen, Römische Theater in der Baetica, MM 46 (Madrid 2005) 289–416.

Jiménez 1993
J. L. Jiménez Salvador, Teatro y desarrollo monumental urbano en Hispania, S. F. Ramallo Asensio – F. Santiuste de Pablos (eds.), Teatros de Hispania Romana (Murcia 1993) 225–238.

Koppel 1995
E. M. Koppel, Príncipe julio-claudio, La mirada de Roma. Retratos de los museos de Mérida, Toulusse y Tarragona (Barcelona 1995) 180–181.

León 1995
P. León Alonso, Esculturas de Itálica (Sevilla 1995).

León 2001
P. León Alonso, Retratos romanos de la Bética (Sevilla 2001).

León 2009
P. León Alonso, El retrato, P. León (ed.), Arte Romano de la Bética. Escultura (Sevilla 2009) 153–233.

López 2017
I. López García, Osuna (provincia de Sevilla, Hispania Ulterior Baetica), CSIR-España, Vol. I. fasc. 7 (Tarragona 2017).

López – Beltrán 2018
I. López García – J. Beltrán Fortes, Esculturas reencontradas. Un conjunto de la Colonia Iulia Genetiva (Osuna, Sevilla), en: C. Márquez – D. Ojeda (eds.), Escultura romana en Hispania VIII, Homenaje a Luis Baena del Alcázar (Córdoba 2018) 597–623.

Márquez et al. 2013
C. Márquez – J. A. Morena – A. Ventura, El ciclo escultórico del foro de Torreparedones (Baena, Córdoba), Escultura Romana en Hispania VII (Santiago de Compostela 2013) 351–376.

Noguera 2012
J. M. Noguera Celdrán, Segobriga (provincia de Cuenca, Hispania citerior), CSIR-España, Vol. I, fasc. 4 (Tarragona 2012).

Paris 1908
P. Paris, Promenades archéologiques en Espagne, Bulletin Hispanique X(1), 1–16.

Paris 1910
P. Paris, Promenades Archéologiques en Espagne I (Paris 1910).

Rodríguez 2009
P. Rodríguez Oliva, La escultura ideal, P. León (ed.), Arte Romano de la Bética Escultura (Sevilla 2009) 41–152.

Ruiz 2004
J. I. Ruiz Cecilia, Un hallazgo olvidado: las esculturas romanas encontradas en el olivar de José Postigo en 1903, Cuadernos de los Amigos de los Museos de Osuna 6, 2004, 68–71.

Ruiz 2007
J. I. Ruiz Cecilia, Testimonios arqueológicos de la antigua Osuna, Spal Monografías VII (Sevilla 2007).

Ruiz 2008
J. I. Ruiz Cecilia, El teatro romano de Osuna: una revisión historiográfica, en: Hispania Romana. Actas del IV Congresso de Arqueología Peninsular (Faro, 14 a 19 de Setembro de 2004) (Faro 2008) 253–265.

Ruiz – Jofre 2005

J. I. Ruiz Cecilia – C. A. Jofre Serra, Un legat de les Balears a la Colonia Genetiva Iulia. Les escultures romanes trobades el 1903 a Osuna (Sevilla), Bolletí de la Societat Arqueològica Lul·liana 61, 2005, 363–376.

Ruiz – Pachón 2012

J. I. Ruiz Cecilia – J. A. Pachón Romero, Jorge Bonsor y el teatro romano de Osuna, Cuadernos de los Amigos de Osuna 14, 47–54.

Salas 2002

J. Salas Álvarez, Imagen historiográfica de la antigua Urso (Osuna, Sevilla) (Sevilla 2002).

Ventura 2008

A. Ventura Villanueva, Teatros, en: P. León Alonso (ed.), Arte Romano de la Bética, I. Arquitectura y Urbanismo (Sevilla 2008) 172–221.

Sin autor 2001

Sin autor, Colección fotográfica de Jorge Bonsor, CD-Rom (Sevilla 2001).

Sanctuaries and Rituals

Panel 12.6

Louteria fittili dal santuario di Hera alla foce del Sele (Paestum)

Bianca Ferrara

1. L'area sacra

Lungo il margine settentrionale della pianura poseidoniate, a circa 8 km dalla città greca di Poseidonia, sorge il santuario di Hera alla foce del Sele[1] (fig. 1), fondato dagli Achei provenienti da Sibari agli inizi del VI secolo a.C.

Le analisi geologiche e palinologiche hanno consentito di riscostruire le caratteristiche naturali dell'area sacra che si presenta come una laguna frastagliata con bassa vegetazione palustre che si alterna a zone più lussureggianti e boschi con olmi, pioppi e salici. Il fiume Sele, largo e navigabile, costituisce il *temenos* naturale del santuario che, oggi, è distante circa un chilometro e mezzo dalla foce per il fenomeno di avanzamento



Fig. 1: Paestum. Il santuario di Hera alla foce del Sele. Veduta aerea.

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della linea di costa. Il fiume segna il confine naturale tra l'etrusca Pontecagnano posta sulla riva destra e la greca Poseidonia su quella sinistra.

L'attività cultuale del santuario è caratterizzata da semplici cerimonie sacre su un piccolo altare di ceneri. Allo stesso periodo risale anche l'occupazione da parte degli stessi coloni Achei/Sibariti del territorio a Sud con la fondazione della città.

L'area sacra viene definita a Nord e a Sud da due edifici di accoglienza per i fedeli; si tratta di edifici porticati, a pianta rettangolare, con pilastri lignei e tetto spiovente. La vera e propria monumentalizzazione del santuario avviene solo alla fine del VI secolo a.C. con la costruzione del grande tempio dorico, octastilo, e dei due altari affiancati, con imponenti gradinate.

Alla fine del V secolo a.C., una nuova popolazione, i Lucani, provenienti dalla Campania interna, realizzano una serie di importanti trasformazioni in città e, nell'area sacra, costruiscono diversi edifici, due *stoai,* per accogliere i pellegrini nella zona nord-orientale, e un'altra struttura posizionata alle spalla degli altari, dalla peculiare pianta quadrata, e con un'apertura verso Sud.

Con la fondazione della colonia latina nel 273 a.C. e l'arrivo dei Romani viene costruito il *sacellum sine tecto,* c. d. *thesauros,* e ristrutturata e ampliata una strada, esistente fin dall'età lucana, che dalla città porta all'ansa del fiume.

Nel 1987, con la direzione scientifica di Giovanna Greco e Juliette de La Geniére, viene ripresa la ricerca nel santuario, scoperto negli anni '30 da Paola Zancani Montuoro e Umberto Zanotti Bianco; i risultati delle nuove campagne di scavo (1987–2006) sono stati editi in due volumi degli Atti e Memorie della Società Magna Grecia,[2] rivista sulla quale, periodicamente, si presentano i risultati delle nuove ricerche.

L'esplorazione sistematica delle aree limitrofe al santuario (zona C e B) prende l'avvio nel 2011 con la scoperta di altre strutture e la definizione di nuove aree di ricerca[3] (fig. 2) al di fuori del cuore dell'area sacra (zona A).

2. I contesti di rinvenimento

I *louteria* rinvenuti provengono da ambiti ben definiti del santuario: l'area del c.d. edificio per lustrazioni, la stipe ellenistica, la zona intorno al tempio.

Il contesto che si prospetta più coerente e unitario, presentato brevemente in questa sede, è certamente quello intorno al c.d. edificio per lustrazioni, nella zona N/E del santuario, oggi interpretato come un *hestiatorion*[4] (fig. 3a).

Già Paola Zancani, nella prima, fondamentale, pubblicazione degli scavi, segnalava i frammenti pertinenti a tre esemplari, interpretandoli come funzionali allo svolgimento di sacrifici e abluzioni;[5] la studiosa, sulla base della planimetria e dei rinvenimenti, aveva avanzato una prima ipotesi funzionale dell'edificio quale officina, un laboratorio dove si lavorava la ceramica; successivamente, a una lettura più attenta, ne propose l'interpretazione come edificio di accoglienza.[6]

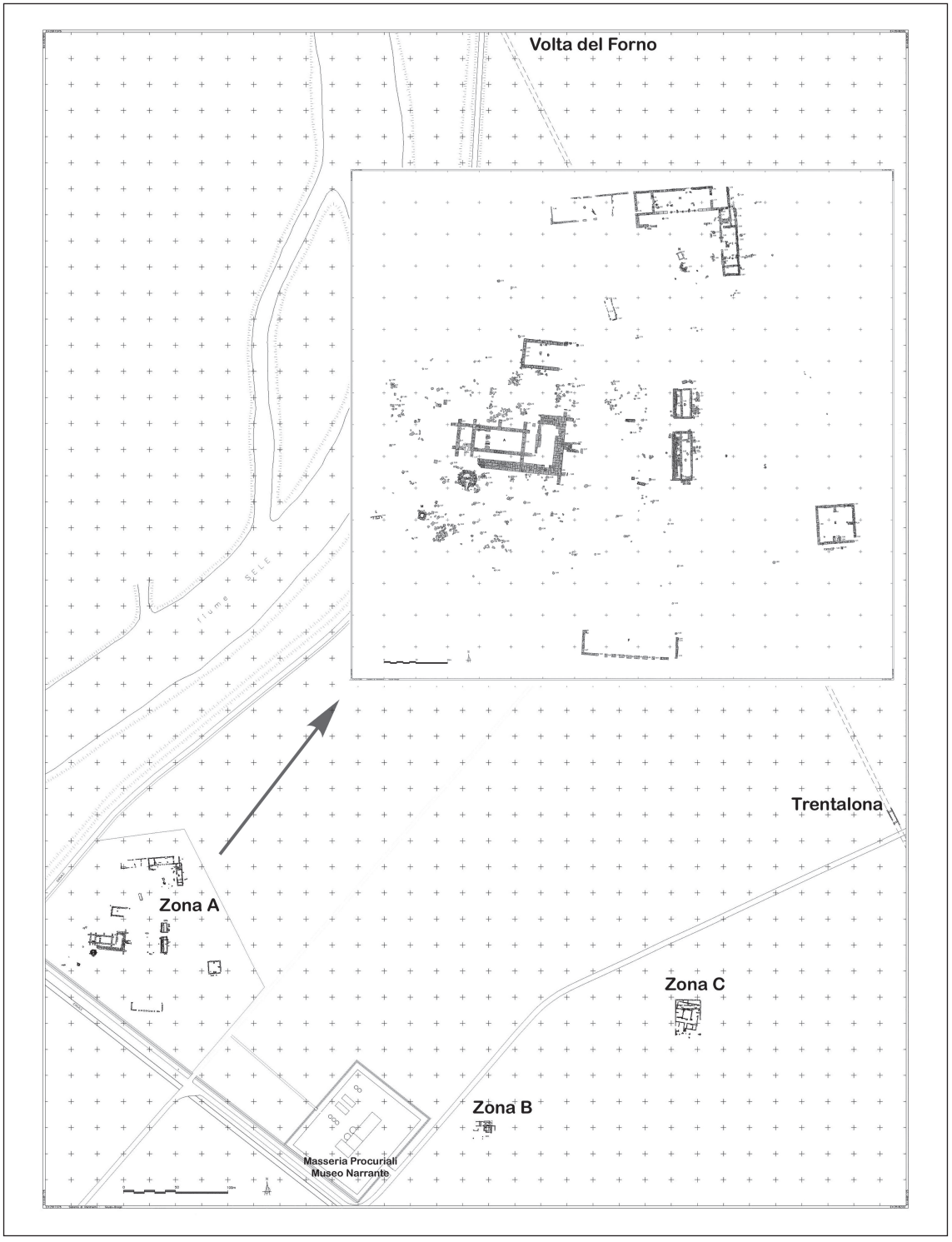


Fig. 2: Paestum. Santuario di Hera alla foce del Sele. Planimetria generale con le aree individuate e particolare della Zona A.



Fig. 3: Paestum. Santuario di Hera alla foce del Sele. a) Planimetria del settore N/E; b) Plaminetria dell'*hestiatorion* con le diverse fasi costruttive; c) Ipotesi ricostruttiva dell'edificio rettangolare come *hestiatorion.*

Uno dei frammenti, la base di una vasca fittile, è stato ritrovato vicino alla parete di divisione del vano principale tra il forno angolare e la porta; i frammenti della vasca erano sparsi tutt'intorno.[7]

La Zancani dà notizia, inoltre, del recupero di frammenti relativi ad almeno due altri grandi *labra* in terracotta lavorati in due pezzi: il sostegno, alto circa mezzo metro, costituito da una colonna ionica con base e capitello, e un largo piatto circolare poco concavo, decorato a stampo, il cui fondo s'inseriva nel capitello; databile, secondo la studiosa, alla seconda metà del V secolo a.C.[8]

La presenza di questi *louteria* nell'area a N/E del tempio tardo arcaico è funzionalmente molto adatta a questa zona dell'area sacra, caratterizzata dalla presenza di tre edifici attigui, deputati allo svolgimento di specifiche pratiche rituali, all'accoglienza e al ristoro dei pellegrini.

Durante gli scavi del 2009–2013[9] sono state distinte due fasi costruttive con un cambiamento evidente nella planimetria (fig. 3b).

Costruito con blocchi isodomi di arenaria e calcare provenienti da strutture più antiche, tra i quali anche due delle metope tardo arcaiche del tempio con la rappresentazione di fanciulle in corsa,[10] l'edificio risulta contraddistinto da una planimetria rettangolare allungata, orientato N/S, con un'ampia sala centrale, caratterizzata dalla presenza di due fornetti, e uno stretto vano sul lato sud.

Successivamente, nell'area di raccordo con la stoa lucana, vengono realizzati tre vani, due stretti e allungati, il terzo dalla forma rettangolare, dalla funzione incerta.[11]

La ricerca condotta negli ultimi anni e lo scavo stratigrafico hanno consentito di sottolineare e precisare le diverse fasi di realizzazione, affinando la cronologia e proponendo una nuova ipotesi funzionale di cui si presenta la proposta di ricostruzione (fig. 3c). I materiali rinvenuti al disotto delle fondazioni e la successione stratigrafica permettono di precisare la costruzione dell'edificio, per la sua prima fase, alla metà/fine del IV secolo a.C.[12]

3. I materiali

Lo studio dei materiali degli scavi Zancani-Zanotti è risultato essere complesso, come aveva già scritto Paola Zancani: «gli oggetti sono numerosissimi, ma ancora chiusi in casse e da restaurare, non possono per ora essere descritti analiticamente»;[13] conservati in casse di grandi dimensioni, ancora avvolti nelle carte di giornali o custoditi in scatole di sigarette o di biscotti, hanno restituito preziosi biglietti con indicazioni puntuali o annotazioni relative al luogo del rinvenimento.

In questo lungo lavoro di risistemazione, che ha visto impegnati molti studenti e specializzandi dell'Università degli Studi di Napoli Federico II,[14] è stato possibile riconoscere numerosi frammenti di bacini e sostegni di *louteria* fittili.

Si ricostruiscono, parzialmente, da diversi frammenti: quattro bacini, un sostegno con fusto scanalato, a forma di colonnetta con capitello ionico per appoggiare la grande vasca, due capitelli ionici con attacco di fusto scanalato, una base con un fusto scanalato, due basi, più altri tre frammenti pertinenti a fusti scanalati e a un fondo di bacino con il perno per il posizionamento nel sostegno.

I *louteria* rientrano in una classe ceramica ben definita nella sua tipologia e nella sua funzionalità; grandi bacini su piede più o meno alto, sono destinati a contenere acqua per una funzione sia privata che pubblica; la loro presenza all'interno di uno spazio sacro, contribuisce non poco a definire forme di ritualità che si svolgevano al suo interno.

La definizione di questi oggetti, sostanzialmente utilizzati per l'arredo sia domestico che santuariale, ha per lungo tempo oscillato in maniera impropria tra differenti terminologie; oggetti caratterizzati da bacini sorretti da supporto di diverse forme sono stati di volta in volta associati al *thymaterion* o al *perirrhanterion*.[15] Tuttavia già la pubblicazione di Ginouvès[16] agli inizi degli anni '60 del '900 aveva chiarito la funzione legata all'uso dell'acqua e in particolare del bagno sia pubblico che privato; sarà poi una serie

di lavori, in particolare quelli di Ugolini, Zaccagnino e, nel 2005, di Krauskopf,[17] incentrati più specificatamente sulla problematica lessicale, a chiarire ruolo e funzione di oggetti differenti fra loro e soprattutto con usi e finalità ben distinte.

Oggi, grazie anche all'edizione di numerosi contesti[18] dove è attestato l'impiego di questo oggetto e a ritrovamenti sporadici,[19] la confusione terminologica è largamente superata e la distinzione tra *louterion, perirrhanteion* e *thymaterion* sembra risolta e universalmente accettata.

I *louteria,* considerati sostanzialmente oggetti di arredo domestico, sono largamente attestati anche nei santuari e nelle aree sacre; fonti iconografiche e letterarie mostrano chiaramente come questi oggetti fossero usati anche in contesti sacri ed è opinione diffusa che la loro presenza fosse legata prevalentemente alla simbologia lustrale.

Moltissimi autori antichi narrano di abluzioni, sacrifici espiatori, rituali di aspersione, e, d'altra parte, il loro ruolo ha una certa continuità nel tempo se si considera la funzione che hanno le moderne acquasantiere nelle chiese cristiane.[20]

Una ricerca, molto preliminare, di *louteria* presenti nelle aree sacre, evidenzia come questo tipo di vasellame fosse molto diffuso, ma la confusione terminologica ha reso complessa la reale comprensione della classe e creato molte discrepanze.

Infatti, gli esemplari più imponenti, raffinati e decorati sono proprio attestati nei santuari dove, per questa ricercatezza e valore, vengono definiti con il termine di *perirrhanterion,* inteso, in questo senso, come un grande bacino per l'acqua, dunque un *louterion,* ma con l'esclusiva utilizzazione sacrale e cultuale.

Nei grandi santuari ellenici sono presenti grandi *louteria* in pietra o marmo, testimonianza eloquente della valenza attribuita a questi oggetti. I numerosi esemplari provenienti dall'Italia meridionale e dalla Sicilia evidenziano, in realtà, una diffusione e una circolazione della tipologia molto estesa sin dall'età arcaica con una maggiore diffusione, quasi capillare, a partire dall'età ellenistica.

La funzione che il *louterion* rivestiva in un santuario è sempre quella legata all'acqua, ma con una valenza specifica nelle aree sacre dove si svolgevano rituali iniziatici femminili legati al matrimonio con tutte le cerimonie e i riti che prevedevano il bagno purificatore. È il caso del santuario di San Biagio alla Venella[21] dove i *louteria* in terracotta, alcuni anche dipinti, si datano già a partire dalla fine del VII secolo e poi nel corso del VI secolo a.C. Il legame con l'acqua sorgiva risulta essere predominante, perché questo tipo di acqua è considerata più pura; anche il legame con Hera e il matrimonio sacro sono tutti elementi che contribuiscono a comprendere al meglio la funzione di questi oggetti nei santuari.

D'altro canto, se si considera il repertorio iconografico tratto dalla ceramica attica sia a figure nere che rosse, risalta con evidenza come il *louterion* sia sempre associato a contesti sacrali e rituali.[22]

Al santuario di Foce Sele, si può dimostrare questa funzione legata sostanzialmente a rituali purificatori prima dei sacrifici; il fatto che si trovano numerosi nei pressi dell'*hestiatorion* è la spia di una loro funzione legata alla purificazione con l'acqua prima del

banchetto e prima del sacrificio al *bothros,* situato nell'area di fronte all'edificio; dunque anche quando Hera perde le sue caratteristiche olimpiche per assumere caratteri più ctoni, rimane costante il rapporto *louterion*/acqua che purifica.

3.1. Le attestazioni

Nel santuario di Hera alla foce del Sele sono documentati solo *louteria* in terracotta realizzati in due o tre parti spesso distinte che vengono poi successivamente assemblate: base più o meno modanata con fusto a corpo cilindrico, coppa/bacino.

I quattro bacini (fig. 4) attestati presentano una vasca poco profonda, con profilo rettilineo, orlo ispessito, largo e piatto, sagomato all'esterno, con una o più riseghe all'interno della vasca appena concava. Il bacino si incastra nel fusto del sostegno con un plinto cilindrico o parallelepipedo e non presenta mai prese plastiche o intacchi laterali. Sulla parte superiore del bordo compaiono motivi decorativi, stelle, tralci vegetali o d'ulivo, mentre il fondo della vasca è decorato con zigrinature a spina di pesce. La lavorazione è a impressione con stampigliatura e i motivi decorativi sono ricavati da matrici a cilindretti mobili.

Le striature nella vasca sono una decorazione propria della tipologia più diffusa per questa classe di oggetti dove i disegni incisi hanno lo scopo di ottenere effetti ottici con l'acqua che riempie il bacino.[23]

La forma dei bacini ritrovati nel santuario di Hera alla foce del Sele trova confronti puntuali con i gruppi A e B della tipologia di Mario Iozzo relativa ai *louteria* calabresi; in questo caso la cronologia piuttosto alta del primo gruppo (fine del VI–inizi V secolo a.C.) tende ad abbassarsi per gli esemplari del gruppo B dove è riconoscibile in una delle vasche un motivo a spina di pesce riconducibile alla fine del IV–inizio del III secolo a.C.[24]

Più articolata è la composizione del sostegno cilindrico, liscio o a colonna scanalata; al Sele si registrano: un esemplare reintegrato da più frammenti privo di base modanata (fig. 5); uno che presenta la base e il supporto cilindrico scanalato lavorati unitariamente, senza distinzione delle parti (fig. 6); diversi frammenti di fusto scanalato.

Il supporto cilindrico si presenta a colonna con scanalature distanziate e profonde a sezione semicircolare separate da listello; alla sommità delle scanalature, si notano larghe lunule ricadenti da un piatto collarino decorato con tralcio vegetale reso a matrice a cilindretto; su questo si imposta un capitello ionico caratterizzato da volute ravvicinate senza l'occhio centrale definito; il canale delle volute presenta una sezione concava ed è delimitato da un listello arrotondato; l'echino ha una decorazione a ovuli piuttosto larghi con i dardi appena accennati in basso e ai margini, negli angoli, palmette capovolte, racchiuse in ovale; l'abaco, quasi quadrato, è forato per consentire l'innesto del bacino; ben evidente è il balaustrino liscio con modanatura centrale.

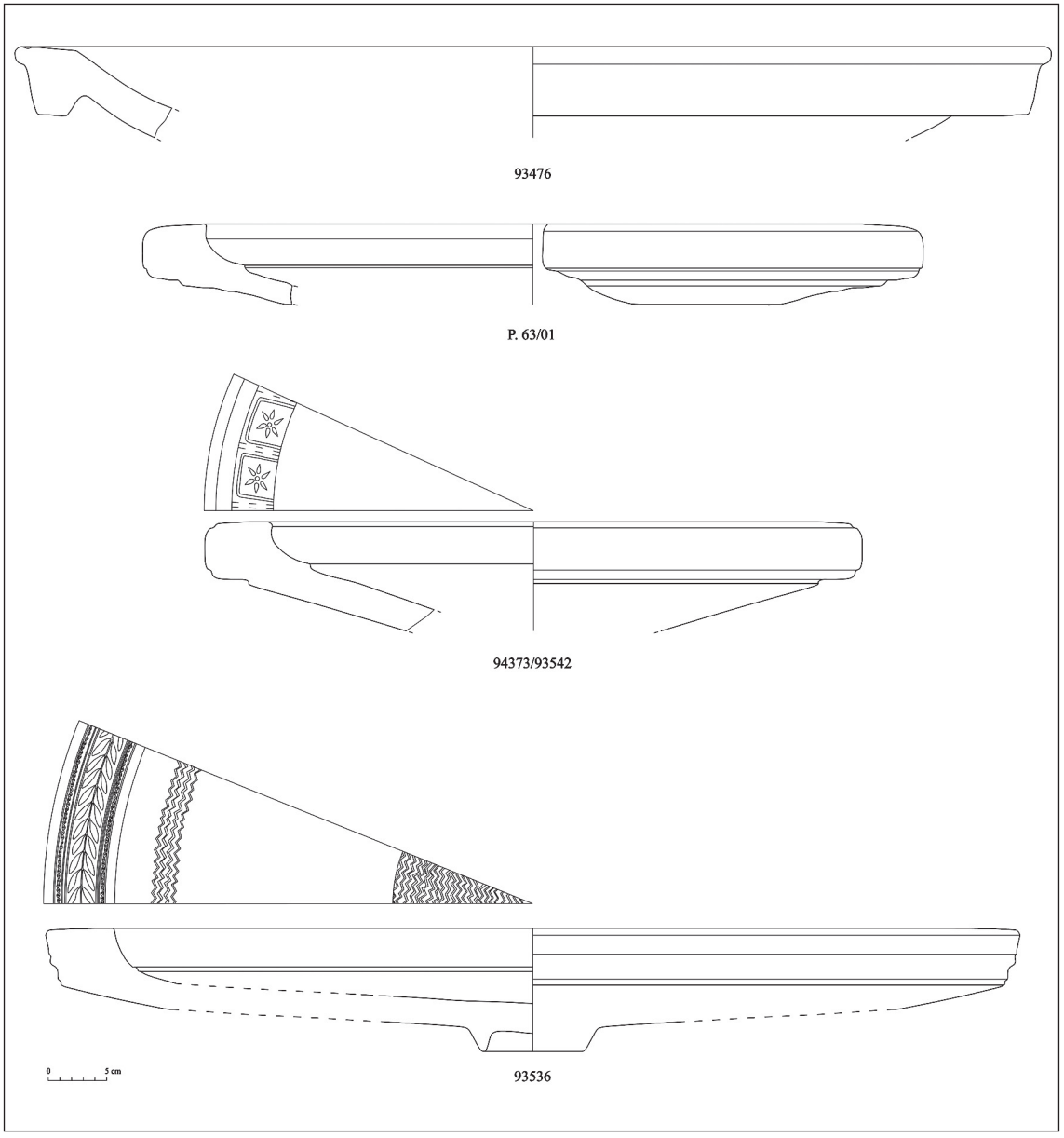


Fig. 4: Paestum. Santuario di Hera alla foce del Sele. Bacini: nn. inv. 93476, P. 63/01, 93473/93542, 93536.



Fig. 5: Paestum. Santuario di Hera alla foce del Sele. Sostegno n. inv. 935561.

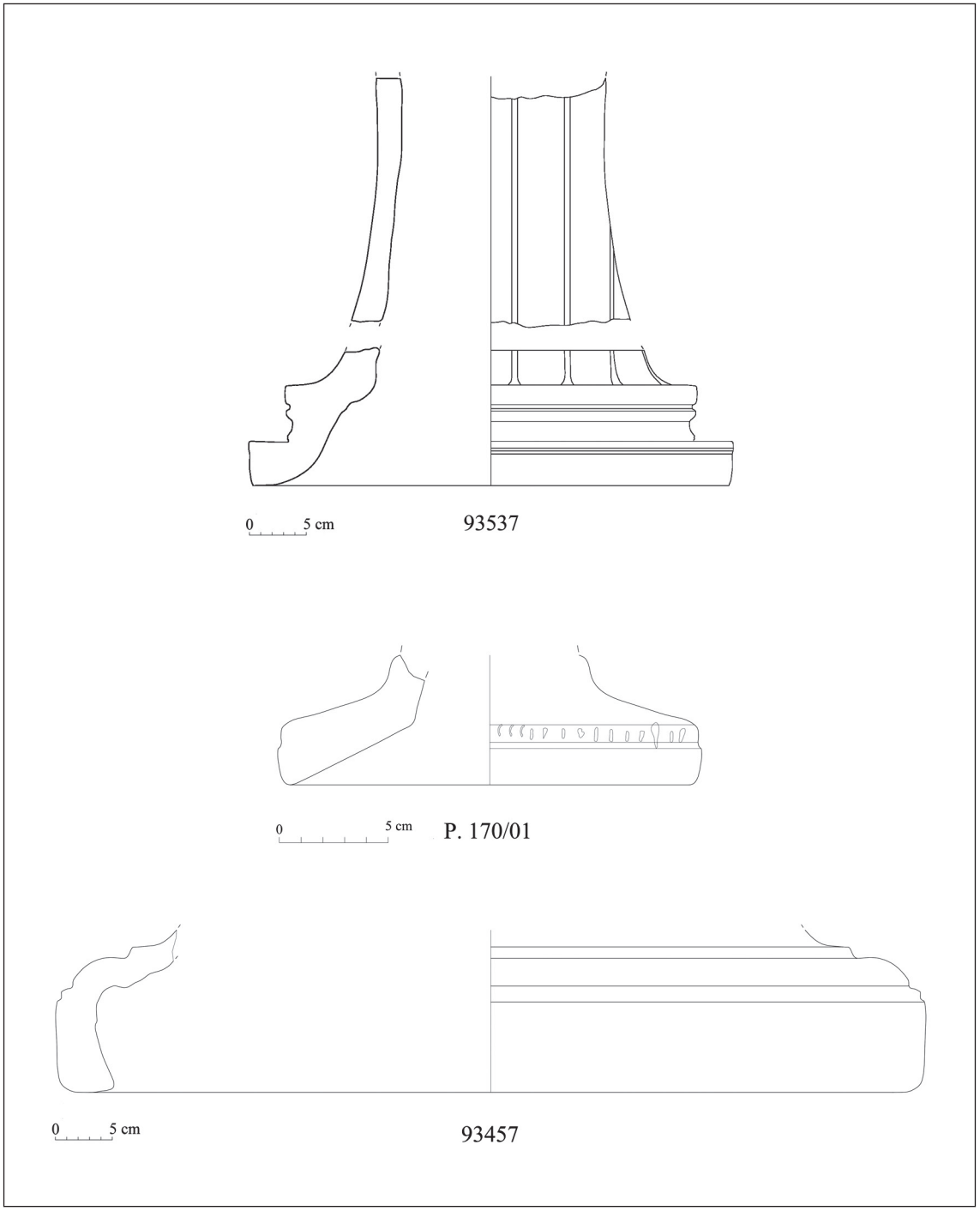


Fig. 6: Paestum. Santuario di Hera alla foce del Sele. Base di sostegno: nn. inv. 93537, P. 170/01, 93457.

Va sottolineata la presenza di altri due esemplari con terminazione, nel punto di attacco della vasca, a forma di capitello ionico (fig. 7); le identiche caratteristiche formali, gli stessi motivi e la sintassi decorativa, le dimensioni ritornano in tutti e tre gli esemplari, sì da giustificare l'ipotesi di un modello di riferimento riprodotto nella bottega artigianale in più esemplari e l'esistenza, forse, di uno stampo con cui venivano realizzati.

Il modulo che è stato possibile ricostruire, grazie all'esemplare di cui si conserva il supporto quasi per intero, è circa di 60 cm di altezza, sul quale si imposta il grande bacino (fig. 8). Dai frammenti, anche senza contiguità fisica, è stato possibile realizzare la ricostruzione grafica dei due capitelli che restituiscono la stessa grandezza del primo più integro, intorno ai 35 cm. Di dimensioni maggiori è, invece, l'esemplare con base e il supporto cilindrico scanalato lavorati unitariamente che restituisce un fusto più largo di circa 8 cm. Le dimensioni sono un elemento molto importante perché evidenziano un prodotto costoso, di difficile produzione e dunque di alto artigianato specializzato. Più in

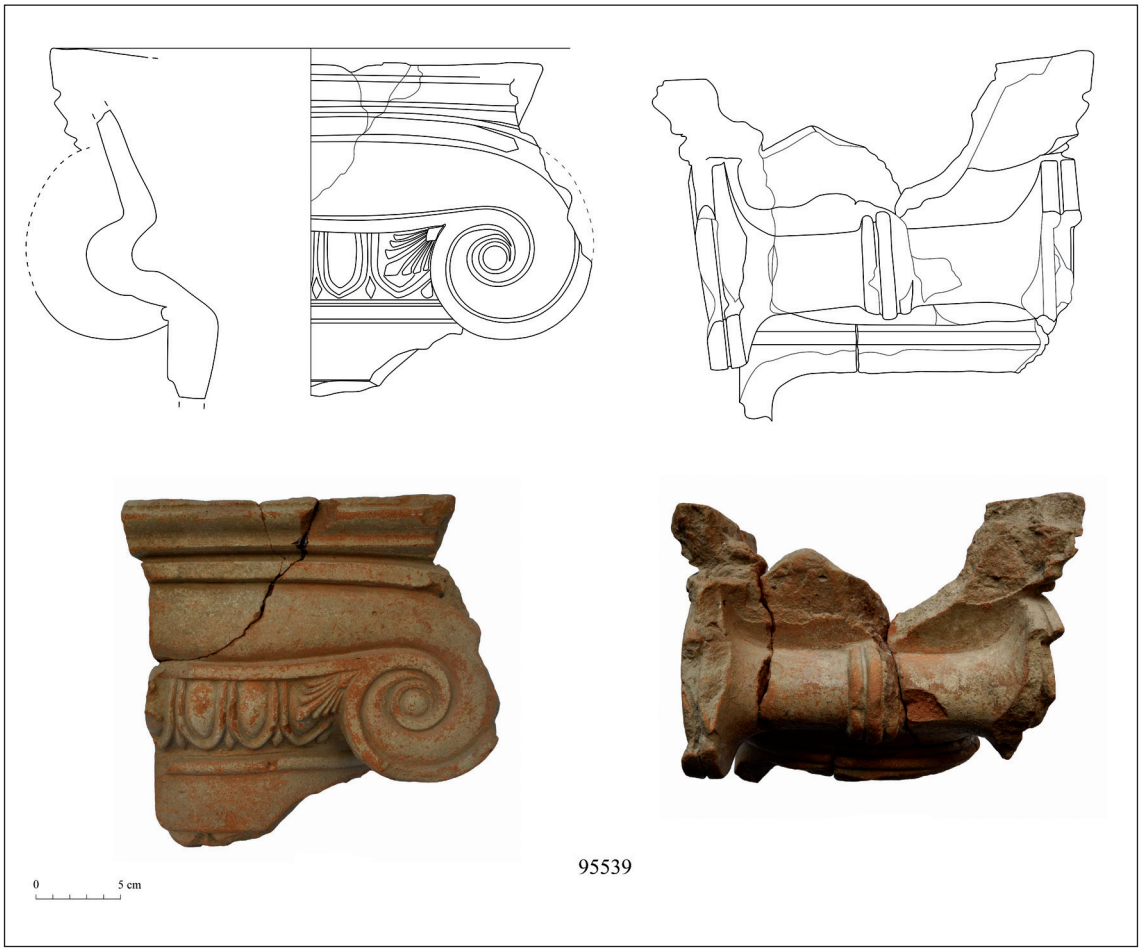


Fig. 7: Paestum. Santuario di Hera alla foce del Sele. Parte superiore di sostegno n. inv. 935539.

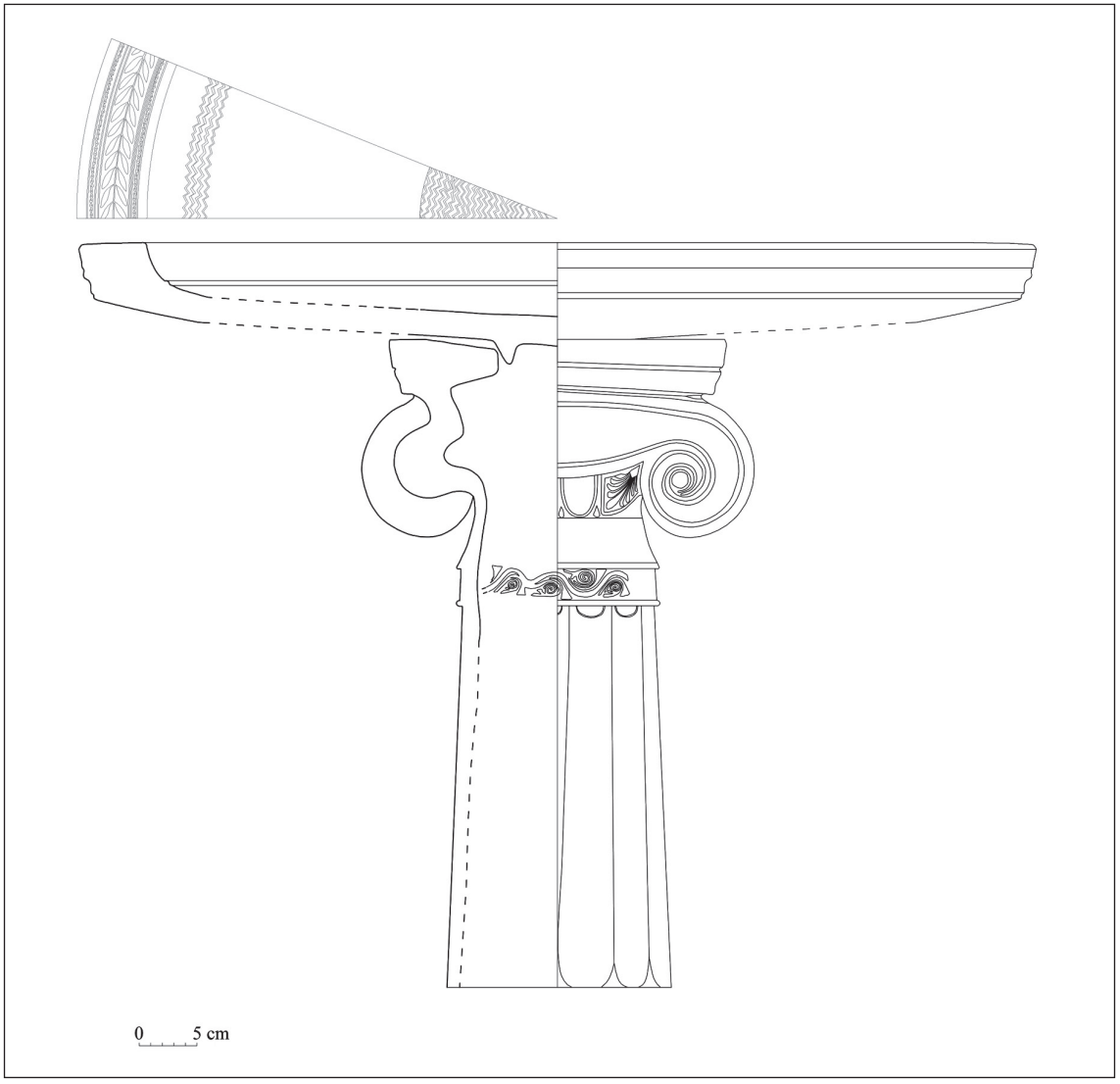


Fig. 8: Paestum. Santuario di Hera alla foce del Sele. Ricostruzione del sostegno con bacino.

generale, sono frequenti i *louteria* che si attestano tra i 20 e i 30 cm di altezza e che costituiscono la replica, in modulo inferiore, di un prodotto più pregiato e costoso.

Le proporzioni dell'insieme del capitello con l'abaco dalla forma quasi quadrata, la distanza tra gli assi delle volute, i motivi decorativi, la presenza delle lunule ricadenti tra le scanalature delle colonne portano a una cronologia riconducibile all'inizio del III secolo a.C.; queste ultime pur essendo attestate dal VI secolo a.C. divengono canoniche nel periodo ellenistico e frequenti fino al I secolo a.C.[25]

Infine sono attestati due diverse basi circolari a echino rovesciato, con carenatura, probabilmente pertinenti a cilindri lisci (fig. 6); la più piccola presenta linguette incise

come decorazione. Possono rientrare nei gruppi C e D di Mario Iozzo[26] ed essere inserite in un ambito cronologico di IV secolo a.C.

La forma della vasca, a profilo continuo e quasi rettilineo, la base modanata, la decorazione della colonnina di supporto e della sua terminazione portano alla definizione di una tipologia molto particolare e specifica di alcuni esemplari di *louteria* ritrovati nel santuario del Sele.

La terminazione a capitello ionico costituisce una peculiarità molto accentuata dei manufatti analizzati; trovare questo tipo di decorazione in tre diversi esemplari praticamente identici è la conferma di una committenza puntuale e dunque di una produzione mirata a soddisfare una richiesta specifica che risponde a un gusto e a una moda del momento.

I motivi decorativi realizzati a stampo, a matrice o a cilindretto rientrano in un repertorio quanto mai diffuso, comune, per altro, al repertorio decorativo accessorio della ceramica figurata; il tralcio vegetale come quello a foglie d'ulivo ricorrono frequentemente nella ceramica figurata come in quella della prima produzione dello stile di Gnathia; in particolare il motivo del ramoscello d'ulivo rappresenta uno schema decorativo che fa la sua apparizione già nella ceramica attica del V secolo a.C. e diventa prevalente, e schematicamente reiterato, nel corso del IV secolo a.C. nelle diverse botteghe delle officine vascolari italiote a figure rosse. È' interessante sottolineare che alcuni motivi decorativi, come il bollo con rosetta a sei punte, si possono ritrovare nelle stampigliature impresse sulle forme della ceramica a vernice nera.

La produzione di *louteria* tra età classica e la prima età ellenistica rientra in una attività artigianale specializzata, diffusa tanto in area siceliota e apula quanto in area tirrenica; è nel *kerameikos* di Pithecusa[27] che è stata documentata una variegata e ricca produzione di questi oggetti che venivano poi commercializzati sulla costa tra Neapolis, Pompei e i centri dell'entroterra campano, nel corso dell'età ellenistica.

Una produzione artigianale ricca e variegata di diverse classi di materiali è tuttavia ben documentata anche a Paestum in particolare proprio tra età tardo classica e il primo ellenismo. L'evidenza maggiore è restituita dalla ingente varietà di coroplastica votiva e di vasellame da mensa e da dispensa prodotta su larga scala e diffusa anche nei centri limitrofi; la nascita, poi, delle officine ceramiche a figure rosse conferma appieno la capacità produttiva degli artigiani pestani.

Che questi *louteria* dal Sele possano provenire da una bottega specializzata pestana sembra plausibile; indipendentemente dall'analisi delle argille che, a una semplice lettura autoptica sembrano rientrare perfettamente tra le argille accertate come locali, pur se provenienti da banconi e filoni differenti, è la tipologia dell'oggetto e la sua reiterazione a far propendere per una produzione locale tesa a soddisfare una «special commission».

I tre *louteria* con terminazione a capitello ionico costituiscono, a oggi, nel panorama del ricco e noto artigianato pestano, degli *unica;* non trovano; alcun riscontro nei contesti sia santuariali che domestici scavati in tutti questi decenni in città e nel suo ter-

ritorio, anche estendendo la ricerca a aree limitrofe dalla significativa documentazione come l'area sacra di Fratte di Salerno e quella, forse più domestica, di Pompei.

A Fratte[28] è stato individuato un gruppo piuttosto numeroso e omogeneo, per argilla e tecnica, di *louteria* fittili caratterizzati da larghi e piatti bacini che si impostano su colonnine scanalate o sagomate poggianti a loro volta su basi anch'esse variamente sagomate. I motivi decorativi sono vari e diversificati, dalla corsa di bighe con Nike o auriga, ai motivi floreali o vegetali o, più semplicemente, riquadri metopali o bolli; il fondo della vasca è decorato con motivi a spina di pesce, rombi zigrinati, losanghe o motivi quadrangolari ondulati. Prodotti localmente tra la metà del IV e il III secolo a.C. possono essere assimilati sia a produzioni di area siceliota quanto a quelle tarantine e pestane.

Da sottolineare il grande favore che dalla fine del IV secolo a.C. i *louteria* incontrano come arredo domestico di lusso in ambito italico-romano, da Pompei al territorio metapontino.[29] A Pompei,[30] in particolare, sono stati ritrovati numerosi frammenti, essenzialmente bacini, variamente decorati con quadrighe, *Nikai,* riquadri metopali, motivi geometrici e vegetali, reimpiegati nella costruzione di nuove murature o utilizzati in livelli di riempimento di case demolite o in disuso. Rientrano in una produzione che richiama modelli sicelioti o magno-greci, inquadrabile tra la seconda metà del IV e la prima metà del III secolo a.C.[31]

L'analisi restituisce qualche dato per ciò che concerne la tipologia formale e il repertorio decorativo, ma non trova alcun riscontro per questa peculiarità, tutta pestana, di una terminazione del supporto a capitello ionico che caratterizza invece i tre *louteria* del Sele.

Un unico confronto, piuttosto lontano cronologicamente e geograficamente, ma alquanto suggestivo, viene dal contesto della «Casa del sacello domestico» di Mozia,[32] dove durante gli scavi del 2002 è stato ritrovato, sul pavimento di uno degli ambienti, un sostegno di *louterion* con fusto scanalato e terminazione superiore a capitello eolico, databile alla metà del V secolo a.C.

4. Cronologia e funzione

Sono la curva della vasca quasi rettilinea e i motivi decorativi a definire una tipologia dei *louteria* del Sele che si diffonde e si afferma a partire dal IV secolo e caratterizza la produzione ellenistica di questa classe di oggetti, così come confermano i tanti confronti che si possono proporre con gli esemplari provenienti da Fratte o da Pompei. Più complesso è definire la cronologia dei sostegni a colonna con terminazione a capitello ionico; è, infatti, la formulazione del prototipo a porre qualche difficoltà maggiore per un inquadramento cronologico. Se la forma del capitello, con le volute ravvicinate e l'abaco quasi quadrangolare porta, infatti, verso espressioni più tarde e riprese di forme e motivi di età classica, l'elaborazione di un prototipo raffinato, ricercato e certamente commissionato appositamente per l'offerta al santuario al Sele, può, invece, aver avuto

tempi più lunghi e suggerimenti differenti. Per altro la ripresa di forme architettoniche arcaiche è ben documentata, nel santuario, nel dono specifico della stele o del cippo costantemente presente nel corso del tempo nel sistema dei doni votivi. Un esempio evidente è restituito da un piccolo capitello in calcare rinvenuto all'interno del c.d. *thesauros,* in realtà un recinto rettangolare *sine tecto* innalzato nel periodo della colonia latina; il capitello, del tipo a sofà, ripropone le identiche forme dei capitelli arcaici ionici; lavorato su tutti i lati, era chiaramente la terminazione di una stele votiva che doveva trovarsi al centro del recinto.[33]

La ripresa di forme e motivi arcaici e classici, quasi la conservazione di una memoria non solo cultuale, sembra dunque una prerogativa delle offerte votive e della cultura materiale al Sele; in questa cornice di riferimento si potrebbe inquadrare anche la formulazione di questi *louteria* così peculiari da giustificare l'ipotesi di una «special commission».

Il fatto stesso che il maggior numero di frammenti provenga dall'area degli edifici laici, permette delle osservazioni e suggerisce delle ipotesi anche in relazione al sistema dei doni votivi attestati nel santuario, caratterizzato da una diversità funzionale che è possibile cogliere grazie all'analisi dei pozzi votivi, dove sono stati recuperati numerosissimi materiali cronologicamente riferibili a un periodo piuttosto ampio, che va dalla metà del IV all'inizio del II secolo a.C.

Tra le offerte dei fedeli alla divinità rientrano, probabilmente, le terrecotte figurate, gli unguentari, i pesi da telaio e la ceramica miniaturistica, mentre i numerosi vasi riconducibili a categorie funzionali come la ceramica a vernice nera, la comune da mensa e da cucina, associate ai diversi tipi di utensili potevano avere un loro specifico uso durante le cerimonie che comprendevano, tra l'altro, il consumo di pasti in comune. Si può ipotizzare che i *louteria* non rientrino nel sistema dei doni votivi, vista anche la loro assenza nei *bothroi* e in quasi tutte le stipi; appartengono quindi a quella classe di oggetti, molto attestati nei santuari, privi di un valore votivo, ma prettamente funzionale e che potevano far parte di vero e proprio servizio utilizzato per le attività quotidiane legate alla mensa e al consumo dei pasti.

Averli individuati, infatti, soprattutto nella zona del santuario riservata agli edifici laici conferma l'uso funzionale di questi oggetti destinati dunque a cerimonie comunitarie e lustrali nel corso dei rituali che si svolgevano nel santuario.

Si tratta di oggetti raffinati, certamente non comuni, a corredo di un edificio con funzioni particolari, la cui frequentazione doveva riguardare forse un ceto sacerdotale o aristocratico, così come è stato prospettato per l'edificio quadrato dove è stata ipotizzata la presenza di fanciulle dell'aristocrazia lucana che trascorrevano il loro periodo di preparazione alle nozze nel santuario; dunque edifici con funzioni del tutto peculiari che i nuovi fruitori del santuario, i Lucani, costruiscono nel corso del IV secolo a.C.

Note

[1] Heraion I–II; Santuario di Hera alla foce del Sele 2010.
[2] Santuario di Hera alla foce del Sele 2010.
[3] Greco – Ferrara 2017, 43–64; Ferrara 2017, 335–346.
[4] Greco 2012, 207–208; Ferrara 2016, 411–417; Cava 2017, 523–528.
[5] Heraion I, 44.
[6] Zancani et al. 1937, 297; Heraion I, 46.
[7] Zancani et al. 1937, 297.
[8] Zancani et al. 1937, 297, nota 3.
[9] Ferrara 2016, 411–417; Cava 2017, 523–528.
[10] Zancani et al. 1937, 346.
[11] Zancani et al. 1937, 290.
[12] Cava 2012/2013; Greco 2012, 208–209; Ferrara 2016, 411–417; Cava 2017, 523–528.
[13] Heraion I, 25, n. 6.
[14] Il progetto, ripreso nel 1987, prevede il coinvolgimento di numerosi studenti, specializzandi e dottorandi del Dipartimento di Studi Umanistici della Federico II. Un caro ringraziamento a Giovanna Greco e Juliette de La Geniére che mi hanno inserito nel gruppo di scavo, stimolandomi alla riflessione e discutendo con me ogni spunto della ricerca.
[15] Weinberg 1954, 109–137, tavv. 25–33; Amyx 1958, 221–228; Pimpl 1997.
[16] Ginouvès 1962.
[17] Ugolini 1983, 449–472; Zaccagnino 1998; Krauskopf 2005, 178–183.
[18] A mero titolo esemplificativo con tutta la bibliografia precedente cfr.: Marconi 1929, 209; Kallipolitis-Feytmans 1965; Hamdorf 1974, 47–64; Orlandini 1980, 175–215; Iozzo 1981, 143–202; Allegro 1982, 115–116; Iozzo 1987, 355–417; Iozzo 1989, 7–61; Greco 1990, 153–156; Nardi 1991, 1013–1035; Pizzo 1992, 87–96, fig. 153; De Miro 2000, 118. 181; Fergola-Scatozza et al. 2001/2002, 143–166; Vecchio 2002, 260–261; Nigro 2005, 567–577; D'Andrea-Jacobsen 2009, 1–16; D'Andrea 2010, 283–286; Carfora 2016, 71; Concilio 2016, 345–350; De Cesare 2017, 89–97; Olcese 2017, 176–181; Ward 2018, 1–14.
[19] Kapitän 1979, 97–120; Radic 1991, 155–160.
[20] Kenner 1935, 109–154; Iozzo 1981, 145.
[21] Ugolini 1983, 449–472.
[22] Iozzo 1981, 144.
[23] Ginouvès, 308.
[24] Iozzo 1981, 174; Fergola-Scatozza et al. 2001/2002, 148.
[25] Iozzo 1981, 188.
[26] Iozzo 1981, 178–193.
[27] Olcese 2017.
[28] Greco 1990, 153–156; Serritella 2011, 73.
[29] Carter 1977, 845, fig. 144.
[30] Fergola-Scatozza Höricht 2001/2002, 143–166.
[31] Fergola-Scatozza Höricht 2001/2002, 162.

[32] Nigro 2005, 567–577.
[33] Greco 2012, 207–208. 219–225.

Indice delle Figure

Fig. 1: Dipartimento di Studi Umanistici – Università degli Studi di Napoli Federico II. – Fig. 2: Dipartimento di Studi Umanistici – Università degli Studi di Napoli Federico II, Pietro Cifone. – Fig. 3a: Dipartimento di Studi Umanistici – Università degli Studi di Napoli Federico II, Pietro Cifone. – Fig. 3b: Dipartimento di Studi Umanistici – Università degli Studi di Napoli Federico II, Rachele Cava. – Fig. 3c: Dipartimento di Studi Umanistici – Università degli Studi di Napoli Federico II, Rachele Cava, Daniela Capece. – Fig. 4: Dipartimento di Studi Umanistici – Università degli Studi di Napoli Federico II, Daniela Capece. – Fig. 5: Disegni: Dipartimento di Studi Umanistici – Università degli Studi di Napoli Federico II, Daniela Capece, Anna Nenna; Foto: Museo Archeologico Nazionale di Paestum: Enzo Passarella. – Fig. 6: Dipartimento di Studi Umanistici – Università degli Studi di Napoli Federico II, Daniela Capece, Anna Nenna. – Fig. 7: Disegni: Dipartimento di Studi Umanistici – Università degli Studi di Napoli Federico II, Anna Nenna; Foto: Museo Archeologico Nazionale di Paestum: Enzo Passarella. – Fig. 8: Dipartimento di Studi Umanistici – Università degli Studi di Napoli Federico II, Daniela Capece.

Bibliografia

Allegro 1982
N. Allegro, *Louteria* a rilievo da Himera, in: N. Allegro – N. Bonacasa – O. Belvedere (eds.), Secondo Quaderno Imerese. Studi e materiali dell'Ist. di Archeologia dell'Univ. di Palermo 3 (Roma 1982) 115–166.

Amyx 1958
D. A. Amyx, The AtticStelai: Part III. Vases and Other Containers, Hesperia 27, 1958, 221–228.

Carfora 2016
P. Carfora, Il complesso della domus VII: *Louteria,* in: S. Quilici Gigli, Norba. Edilizia privata e viabilità, Atlante Tematico di Topografia Antica. Suppl. 21 (Roma 2016) 71.

Carter 1977
J. C. Carter, Scavi dell'Università del Texas nel territorio di Metaponto, in: Locri Epizefirii. Atti del XVI convegno di studi sulla Magna Grecia, Taranto 3–8 ottobre 1976 (Napoli 1977) 845–853.

Cava 2012/2013
R. Cava, Intorno a un probabile *hestiatorion* nel santuario di Hera alla Foce del Sele, Tesi di Specializzazione in Archeologia Classica, Università degli Studi di Napoli Federico II, a.a. 2012/2013.

Cava 2017
R. Cava, Un *Hestiatorion* nel santuario di Hera alla Foce del Sele, in: A. Pontrandolfo – M. Scafuro (eds.), Dialoghi sull'Archeologia della Magna Grecia e del Mediterraneo, Atti del I Convegno Internazionale di Studi – Paestum 2016 (Paestum 2017) 523–528.

Concilio 2016
A. Concilio, *Louteria,* in: F. Silvestrelli – I. Edlund Berry (eds.), The *Chora* of Metaponto 6. A Greek Settlement at Sant'Angelo Vecchio (Austin 2016) 345–350.

D'Andrea et al. 2009
M. D'Andrea – J. K. Jacobsen, *Louteria* di produzione corinzia dal Timpone Motta di Francavilla Marittima: osservazioni preliminari, BdA 6, 2009, 1–16.

D'Andrea 2010
M. d'Andrea, Bacini corinzi dal Timpone Motta, in: J. K. Jacobsen – S. Handberg (eds.), Excavation on the Timpone della Motta 1992–2004. I. The Greek Pottery (Bari 2010) 283–286.

De Cesare 2017
M. de Cesare, Nel segno di Zeus: su alcuni *louteria* fittili da Akragas, Mare Internum 9, 2017, 89–97.

De Miro 2000
E. de Miro, Agrigento. I santuari urbani. L'area sacra tra il tempio di Zeus e porta V (Roma 2000).

Fergola et al. 2001/2002
L. Fergola – L. A. Scatozza Höricht, *Louteria* fittili da Pompei, RSP 12/13, 2001/2002, 143–166.

Ferrara 2016
B. Ferrara, Un *Hestiatorion* nel santuario di Hera alla Foce del Sele, in: A. Russo – F. Guarneri (eds.), Santuari Mediterranei tra Oriente e Occidente. Interazioni e contatti culturali, Atti del Convegno Internazionale – Civitavecchia-Roma 2014 (Roma 2016) 411–417.

Ferrara 2017
B. Ferrara, Le indagini archeologiche dell'Università Federico II di Napoli nell'area di Foce Sele (2013–2016): nuove scoperte e dati inediti relativi alle modalità insediative dell'area dall'età arcaica all'età romana, in: A. Pontrandolfo – M. Scafuro (eds.), Dialoghi sull'Archeologia della Magna Grecia e del Mediterraneo, Atti del I Convegno Internazionale di Studi – Paestum 2016 (Paestum 2017) 335–346.

Ginouvès 1962
R. Ginouvès, Balaneutikè. Recherchessur le baindans l'antiquité grecque (Parigi 1962).

Greco 1990
G. Greco, *Louteria* fittili, in: G. Greco – A. Pontrandolfo (eds.), Fratte. Un insediamento etrusco-campano (Modena 1990) 153–156.

Greco 2012
G. Greco, Il santuario di Hera alla foce del Sele, in: A. M. Biraschi – M. Cipriani – G. Greco – M. Taliercio Mensietieri (eds.), Culti greci in Occidente 3. Posedonia-Paestum (Taranto 2012) 171–246.

Greco – Ferrara 2017
G. Greco – B. Ferrara, Santuario di Hera alla foce del Sele. Per un aggiornamento delle ricerche, AMSMG, 2017, 43–64.

Hamdorf 1974
F. W. Hamdorf, Lakonische perirrhantérien, AM 89, 1974, 47–64.
Heraion I
P. Zancani – U. Zanotti Bianco, Heraion alla Foce del Sele, I (Roma 1951).
Heraion I–II
P. Zancani – U. Zanotti Bianco, Heraion alla Foce del Sele, I–II (Roma 1951–1954).
Iozzo 1981
M. Iozzo, *Louteria* fittili in Calabria. Analisi e classificazione preliminare, ArchCl 33, 1981, 143–202.
Iozzo 1987
M. Iozzo, Corinthian basins on high stands, Hesperia 56, 1987, 355–417.
Iozzo 1989
M. Iozzo, Bacini corinzi su alto piede, ASAtene 63, 1989, 7–61.
Kallipolitis-Feytmans 1965
D. Kallipolitis-Feytmans, Les «*Louteria*» attiques, ADelt 6 (Atene 1965).
Kapitän 1979
G. Kapitän, *Louteria* from the Sea, IJNA 8, 1979, 97–120.
Kenner 1935
H. Kenner, Das *Luterion* im Kult, AlmanachWien 29, 1935, 109–154.
Krauskopf 2005
I. Krauskopf, *Perirrhanterion/Louterion,* ThesCRA 5, 2005, 178–183.
Marconi 1929
Marconi, Agrigento. Topografia e arte (Firenze 1929).
Nardi 1991
G. Nardi, Per una tipologia dei *louteria* fittili ceretani, ArchCl 43, 1991, 1013–1035.
Nigro 2005
L. Nigro, Un arredo in terracotta conformato a capitello eolico da Mozia, Scienze dell'antichità. Storia, Archeologia, Antropologia 11, 2005, 567–577.
Olcese 2017
G. Olcese, Pithecusan Workshops. Il quartiere artigianale di S. Restituta di Lacco Ameno (Ischia) e i suoi reperti (Roma 2017) 176–181.
Orlandini 1980
P. Orlandini, *Perirrhanterion* fittile arcaico con decorazione a rilievo dagli scavi dell'Incoronata, in: AA.VV., Attività archeologica della Basilicata 1964–1977. Scritti in onore di Dinu Adamesteanu (Matera 1980) 175–215.
Pimpl 1997
H. Pimpl, *Perirrhanteria* und *Louteria:* Entwicklung und Verwendung großer Marmor- und Kalksteinbecken auf figürlichem und säulenartigem Untersatz in Griechenland (Berlino 1997).
Pizzo 1992
M. Pizzo, Bacini fittili, in Ricerche archeologiche all'incoronata di Metaponto. Dal villaggio indigeno all'emporio greco. Le strutture ed i materiali del saggio T (Milano 1992) 87–96.

Radic 1991

I. Radic, Three more *Louteria* Finds in the Eastern Adriatic, IntJNautA 20, 1991, 155–160.

Santuario di Hera alla foce del Sele 2010

J. de la Geniere – G. Greco (eds.), Il santuario di Hera alla foce del Sele. Indagini e studi 1987–2006, AMSMG, 2010.

Serritella 2011

A. Serritella, Inquadramento cronologico e tipologico della ceramica, in: A. Pontrandolfo – A. Santoriello (eds.), Fratte. L'area a vocazione artigianale e produttiva (Paestum 2011) 66–73.

Ugolini 1983

D. Ugolini, Tra *perirrhanteria, louteria* e *thymiateria.* Note su una classe ceramica da S. Biagio della Venella (Metaponto), MEFRA 95, 1983, 449–472.

Vecchio 2002

P. Vecchio, Ceramica comune, in: M. L. Famà (ed.), Mozia. Gli scavi nell'abitato. La zona A (Bari 2002) 260–261.

Ward 2018

A. F. Ward, Modelling Regional Networks and Local Adaptation: West-Central Sicilian Relief Louteria, Les Carnets de l'ACoSt 17, 2018, 1–14.

Weinberg 1954

S. Weinbeg, Corinthian Relief Ware: Pre-Hellenistic Period, Hesperia 23, 1954, 109–137.

Zaccagnino1998

C. Zaccagnino, Il *Thymiaterion* nel mondo greco: analisi delle fonti, tipologia, impieghi (Roma 1998).

Zancani et al. 1937

P. Zancani – U. Zanotti Bianco, Capaccio. Heraion alla foce del Sele (Relazione preliminare), NSc 13, 1937, 206–354.

The Sanctuary of the Divine Palikoi: Cult Activities and Economic Activities around the Sacred Lakes

Laura Maniscalco – Brian E. McConnell

The Sanctuary of the Divine Palikoi was the main cult center of Sicily's indigenous Sikel people. It was known to Greek and Latin authors throughout Antiquity, and its location has been known to the scholarly world since the 16th century. Limited archaeological exploration of the site, called Rocchicella di Mineo, was conducted in the 1960s by Luigi Bernabo Brea and Paola Pelagatti, while consistent excavation and development of the site as a visitable location began in the 1990s (fig. 1).[1]

The cult of the Divine Palikoi must have been a major presence in eastern Sicily and the source of major political power; according to evidence from the excavations and the information derived from the literary sources, it even was an economic focus for the centres in the Margi river valley.

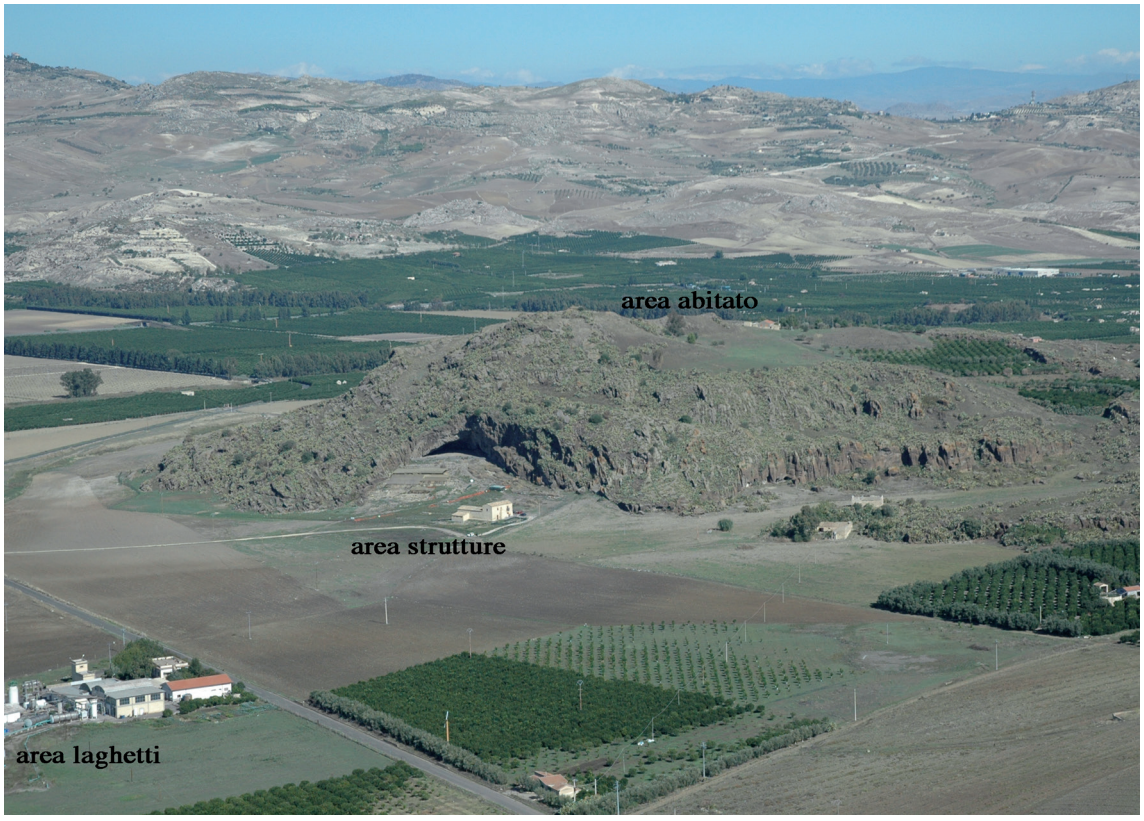


Fig. 1: Rocchicella – Mineo, aerial view.

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The core of the sanctuary was a series of so-called 'boiling lakes' that were located on the plain below the low hill. The built structures of the sanctuary were erected around and on these hills as a kind of service area. The natural phenomenon, which is described by several ancient authors such as Hippys of Rhegion and Diodorus Siculus, consisted in the movement of water that seemed to boil, although it was not hot, and emitted upward jets accompanied by noises similar to those of thunder. Other notable aspects were said to be the smell of sulphur and the danger of the vapours present in the surrounding area.[2]

The phenomenon was thought to be the manifestation of twin boys born of the nymph Thalia and Zeus, boys who had been hidden under the earth by their mother in order to escape the wrath of Zeus' consort, Hera. The waters of the lakes were said to be used for *ordalia,* or capital trials, as they could determine the truth of sworn statements written on tablets thrown into the water. According to the ancient author Polemon, if the tablet floated, the statement was true; if not, it was false. The fame of the sanctuary was due to the sacrality of the oaths and the juridical validity of its trials. The sanctuary was also considered to have oracular powers consulted at times of drought, and in Roman times the sanctuary offered asylum to fugitive slaves.

Geologically the phenomenon is a combination of vulcanological activity along the interface between the African and the European tectonic plates and the dissolution of limestone beneath the ground surface that produces carbon dioxide.[3] While dramatic graphic illustrations and photographs of the lakes were made in the 18th and 19th centuries, today the water is completely missing, and instead the phenomenon is used as an economic resource that provides carbon dioxide for bubbly beverages and other purposes. The archaeological structures, which were built at a safe distance and a discretely higher elevation from the lakes, are preserved as an archaeological park.

The archaeological reality is actually quite complex and rich. The sequence of occupation runs seemingly without interruption from the Mesolithic period through the Middle Ages. Not many locations can boast that long a history! The areas of occupation include the gentle slope that extends below a large grotto, the area in front of the grotto itself, where there are the remains of the sanctuary's service structures, and the upper region of the Rocchicella, where there is a small settlement and another sanctuary. The two areas, one above and one below, are connected by a long, monumental stairway.

The site is perhaps best known for its monumental buildings of the 5th century BC, and, in a very prominent position, a *hestiaterion* (fig. 2). In Hellenistic times, a monumental platform was built in front of this building, and the platform must have given a fantastic, panoramic view out toward the lakes. The monumental buildings of the Classical period, which obliterated a preceding complex dating as early as the 7th century BC, could well be attributable to an historical figure, whom Diodorus calls 'Douketios'. This leader created a league of Sikel cities that for a time asserted their independence from the colonial Greek cities, such as Syracuse and Agrigento. The monumental buildings, which now have been excavated almost completely, are all part of a larger layout with



Fig. 2: Rocchicella – Mineo, *hestiaterion.*

common axes that extend to the boiling lakes and even to the settlement to the east, Mineo, which was said to be the hometown of Douketios. (fig. 3)

Diodorus' account shows us that the sanctuary and its buildings were still quite functional at the outset of the Roman Empire, but excavation tells us that by the later 3rd century AD the *hestiaterion* had been transformed into a farm structure. By the 6th century AD, the building was covered by an apsidal chapel and a new, Byzantine settlement had been built over much of the area on the gentle slope below.[4]

We do not really know when the cult of the Divine Palikoi came into being. It is attested as a presence as early as the 7th century BC, but there was much cult activity before that, too, as early as the Copper Age (*facies* di Malpasso). In the area in front of the grotto, ten pits have been identified in the compact soil of an area bordered on the south by a mighty double wall (fig. 4–5). The pits had inside them grindstones and vases, in particular ribbed cups on high feet, and carbonized animal bones. It seems plausible that if the cult activity in historical times was derived from the presence of the geological phenomenon of the boiling lakes, then the same phenomenon may have prompted similar activities also during prehistoric times. The end of the cult seems likely to have come with the creation of farm facilities within the former *hestiaterion* and the subsequent renaming of the boiling lakes as the *Laghi di Naphtia,* as they are known today.

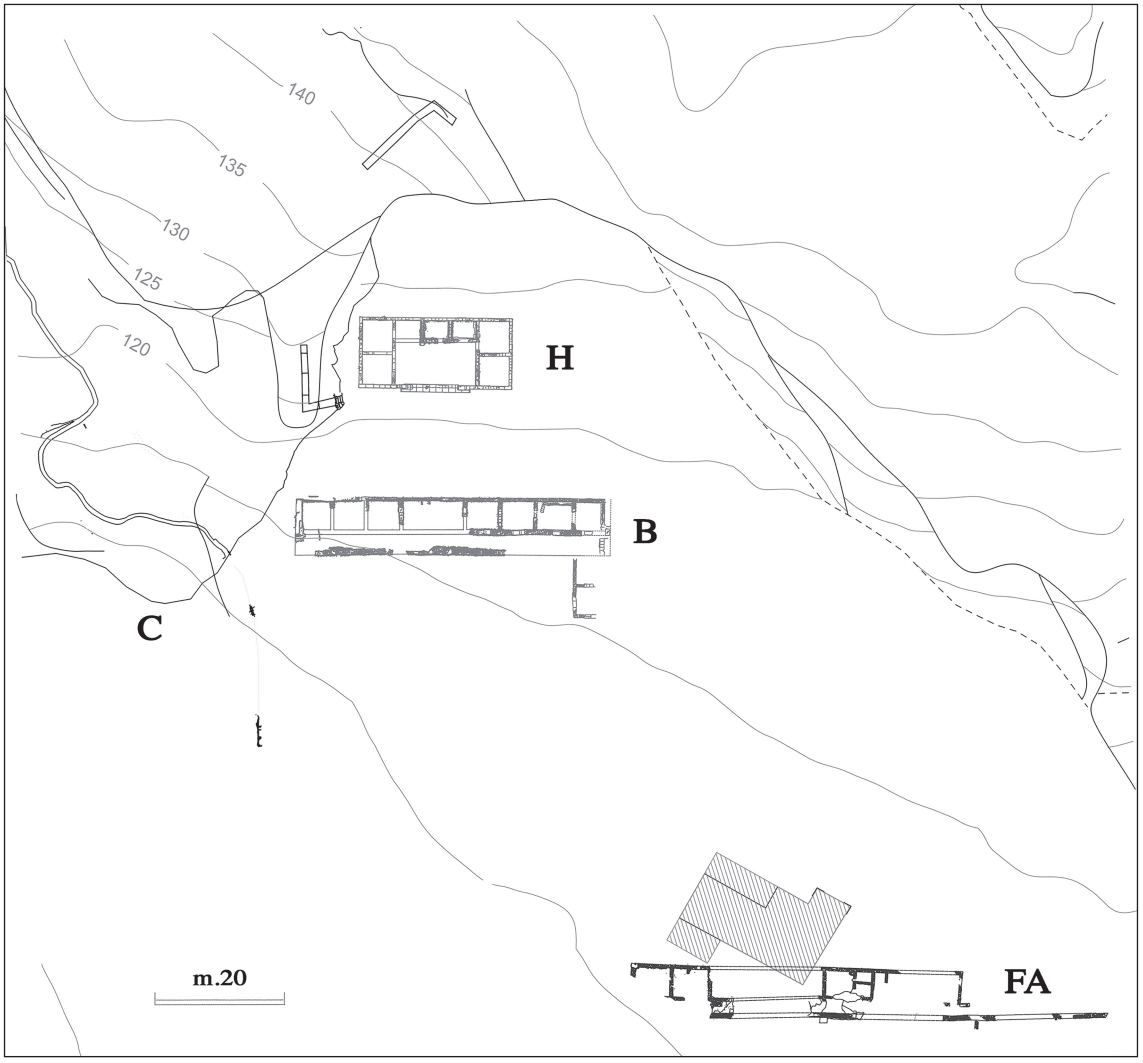


Fig. 3: Rocchicella – Mineo, *hestiaterion* (H), *stoai* (B, FA), and canali (C).

In the area of the Grotto, the 5th century BC complex includes the *hestiaterion* and the *stoai* (Stoa B and Stoa FA). Diodorus uses the term '*stoa*' in his description of the site, and the *hestiaterion* is likely to have been the principal building that he calls 'every kind of amenable lounging-place'. The structure (fig. 2) has been identified because of its four dining rooms, two on each side of a central foyer, that are of standard Greek dining room dimensions (5 × 5 m) and have off-centre doorways for the arrangement of dining couches along the walls. There may even be a portion of one couch structure preserved in one of the rooms. An important use of the *hestiaterion* may well have been political rather than religious. The sanctuary was probably also the seat of the league of Sikel cities created by Douketios, and it seems likely that this structure served as a place of meeting and deliberation, albeit in smaller groups.[5]

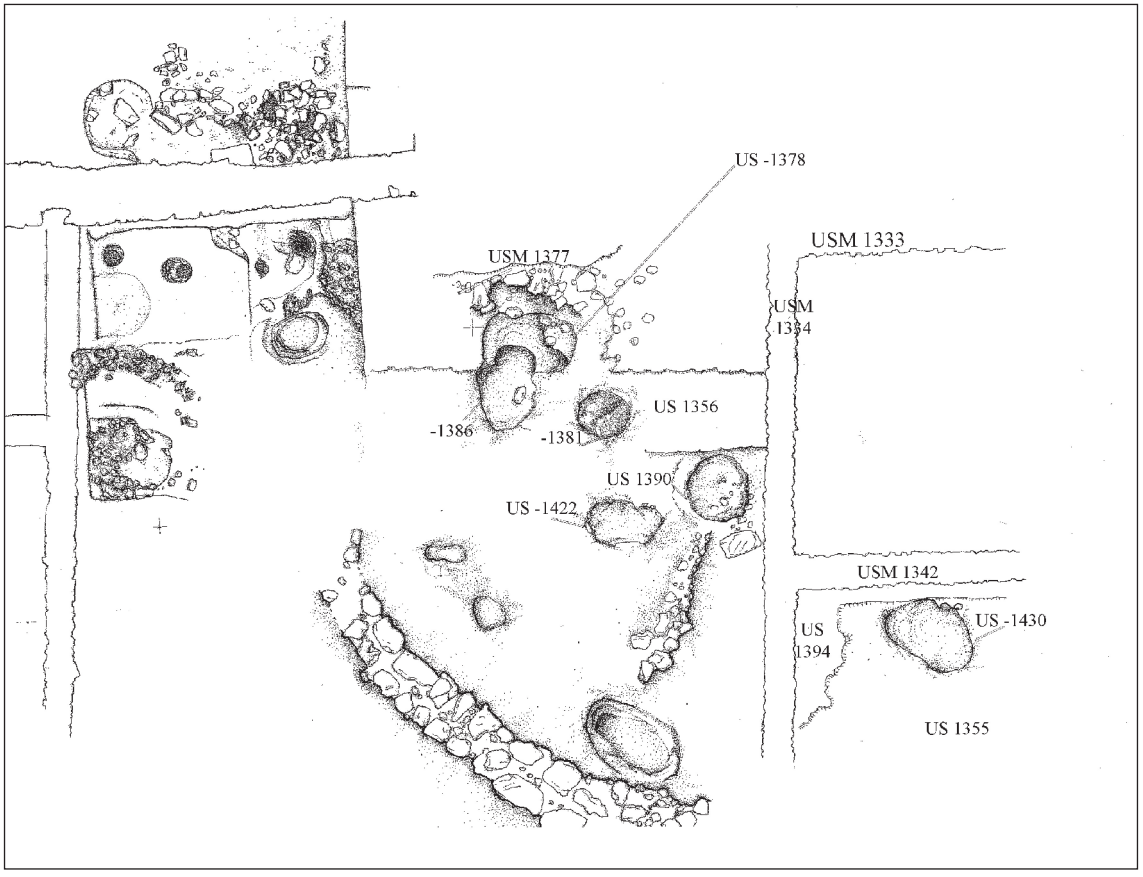


Fig. 4: Rocchicella – Mineo, Copper age structures and pits.

The *stoai,* on the other hand, were multi-purpose buildings, which could have served a variety of cultic and economic functions. Both Stoa B and Stoa FA, the latter of which probably marked the edge of the built service area, were oriented together with the *hestiaterion* directly toward the lakes. Stoa B is marked by what appears to be an open, central room (Room 6, fig. 6), which was larger than the other rooms and had a *trapeza;* around this there were found Attic black glazed cups, an iron dagger, kitchen pottery, grindstones, the remains of meals such as shells, and a tub resting on a stone support.[6]

In a sector separated by a wall made of mudbrick, there is a *bothros* inside which we found *skyphoi,* two lamps, a fragment of a grindstone, carbon fragments from fir trees, the burnt bones of very young sheep and goats, and five coins of Camarina (two *tetrantes* and three *onkiai*). On the edge of the *bothros* inside a small pit there were four coins (two of Leontinoi and two of Gela), and on the floor of the room were three other coins, two of Camarina and one of Agrigento.[7]

In the *trapeza,* we can identify the *mensa* for the divinity according to *theoxenia,* a religious rite well documented in the literary sources and in Sicily at Selinunte by a lead inscription dating back to the first half of the 5th century BC.[8] Divinities honoured with



Fig. 5: Rocchicella – Mineo, Copper age pit.

this practice include Apollo, the Dioscuri, and heroes in general. The practice included the preparation of a table spread with meat, focaccia, fruit, wine, and other drinks offered in cups, and it could be accompanied by blood sacrifices, in our case documented in the nearby *bothros.* In the pit we found the bones of sheep and pig and *skyphoi* that seemed to be broken in a ritual manner.[9]

The analysis of the arrangement of the finds allows us to hypothesize a ritual that included:

1. a purification with water, collected in the large *pithos* that was found next to the wall, using the *louterion* found next to the *bothros,*
2. a libation of liquids during which the *skyphoi* were used, then ritually broken, and abandoned on the ground or thrown into the *bothros,* and,
3. the killing of animals and the deposition of their remains.

The nature of the liquids offered on the table and/or poured into the *bothros* can be suggested by the tub and by the crushed grape berries found nearby. It is interesting to note that only *skyphoi* were used in the area of the *bothros* for the libations, while cups were used in the area of the *trapeza* for the preparation of the table. The iron dagger found on the floor under the *trapeza* may have been used during the bloody sacrifice. The pres-

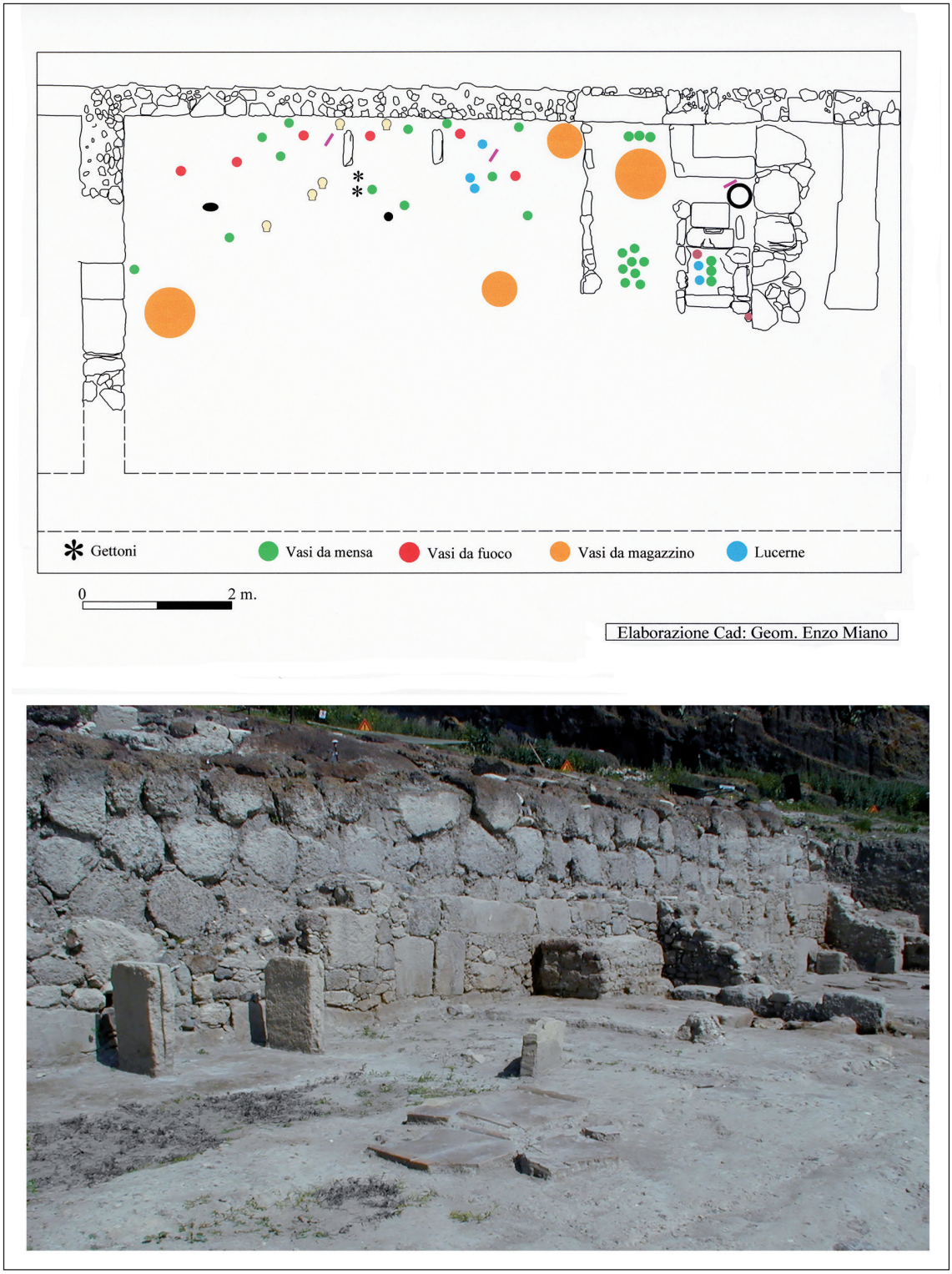


Fig. 6: Rocchicella – Mineo, Stoa B – room 6.

ence of lamps both in the area of the *trapeza* and in the *bothros* area suggests that these actions took place at night, or in any case after sunset, elements that refer to the ritual of offerings to chthonic deities like the Palikoi, divinized heroes strictly connected to the underground.

We know from Polemon (*FHG III* fr. 83) that in the ritual related to oaths at the Sanctuary of the Palikoi the accused would appear purified and crowned, dressed in a chiton without a belt and shaking a twig while approaching the edge of the crater (as Polemon called the lakes), from which the accused must read the formula of the oath. This oath involved not only the accused that was swearing, but also those that made him swear. It is unclear who the latter could be: accusers or judges? the priests of the sanctuary? It should be noted that those who swear have the obligation to provide guarantors that must cover the purification costs necessary in the event of perjury. Since the punishment consisted in the immediate death of perjurer, this death would result in a state of impurity of the sacred precinct that the deceased would not be able to correct. We can imagine, therefore, that the defendant making the oath, prior to its utterance, was expected to make the sacrifice or otherwise to provide the materials for the purification offering that could then be deposited by the priests, as we see in the *bothros* of Room no. 6. The discovery of the coins both inside the *bothros* and inside the little pit next to it suggest that this action was accompanied by the payment of a kind of purification tax.

Stoa FA was an architectural border between the area of the lakes and the built sanctuary. The commercial function of this stoa, which may have been two stories high, can be suggested by the decentralized location of the entrance door to the rooms so as to make possible the insertion of a window that could facilitate commercial activities: among the finds from the stoa and the area around are a bronze stylus and transport amphorae. The multiplicity of rooms available in both the *stoai* would suggest that multiple cultic and economic activities could have been incorporated into the physical structure of the sanctuary.

In addition to the construction of monumental buildings at the site, one must also consider the marvelous engineering that is displayed particularly in the management of water.[10] The Rocchicella hill itself is a porous geological entity that holds water and offers water in the form of springs. Water came from many sources (some regularly, some intermittently), and a system was created, since Archaic times, both to gather and distribute this life-giving liquid. Sharply cut channels brought water down along the western edge of the grotto area and from above the area of Stoa B. They seem to flow down to the alignment of a much larger canal that runs along the western flank of the Rocchicella for approximately 330 m (fig. 7). This latter structure is of monumental proportions that can be seen in the vertical cuts in the rock that permitted the passage of a channel that was roughly one meter deep below a flanking walkway. The channel gathered water along the way and distributed it in several directions by means of an irregularly sloping base and a series of overflow points.



Fig. 7: Rocchicella – Mineo, canal.

Since at least one tract of the channel goes in the direction of the lakes, it is possible to think that this work could have served also to regulate the water level of the lake, which by itself could count only on the rain and some ground water as sources, and that it was important for the performance of the ritual there to have a certain amount of water. The great importance that the correct conservation of water had at the sanctuary can also be understood from the fact that in this sanctuary not only the water itself received worship but also that water was the main instrument of ritual. In addition to the purifying ablutions common to all sanctuaries, at the Sanctuary of the Palikoi the movement of water in the lake was the very reason for the rise of the cult and represented the fundamental element of the trials.

Water management was certainly important to every sanctuary, but particularly to sanctuaries of an oracular nature. For the climatic conditions of the Mediterranean, characterized by long summer droughts, water was important for hygiene. For this reason, water management was the responsibility of sanctuaries, which issued precise regulations and required certain fees to be paid to the sanctuary for the use of the water.[11] It was certainly in the interest of the sanctuary's authorities to create and develop a water system that would become a reference point for the district and its surrounding communities, and this is what our sanctuary seems to confirm.

To summarize, then, the cult activity at the sanctuary of the Divine Palikoi had economic significance in several respects. Water management may have permitted the sanctuary to control the rich agricultural resources of the surrounding territory. The "purification tax" required for ritual offerings and the information from Polemon on the guarantee that had to be given before trials suggests an economical value connected with the rituals themselves. Diodorus tells us that slaves that had succeeded in escaping from *latifunda* in his time and who made their way to the domain of the sanctuary were able to receive protection and obtain favourable treatment from their cruel masters through 'assurances' that were given to the sanctuary. This exchange seems to stand as some kind of payment, and the sanctuary administration must have held considerable temporal power or at least religious cache in order to exact it.

Although Diodorus Siculus talks of a town that was laid out at Palikè by Douketios, there is no known settlement other than the one on the plateau of the Rocchicella, which is laid out with streets but without recognizable public buildings. Effectively, the Sanctuary of the Divine Palikoi stands as a rural center, again, much akin to a medieval monastery. Nevertheless, the presence of the sanctuary must have served as an economic focus for activities in the many centres that are found in the hills surrounding the Margi river valley, including Monte Catalfaro, Montagna di Ramacca, Occhiola, and Mineo itself. The Sanctuary of the Divine Palikoi would have been the focus of activity long before Douketios brought these centres together in a Sikel league, and the socio-economic reality that it represented was likely what kept it in existence long after the political demise of Sikel unity. Only the long-term, Mediterranean-wide changes in socio-economic organization that came with the evolution of the Roman Empire in Late

Antiquity would bring an end to the significance of the Sanctuary of the Divine Palikoi as a cult-center in its own territory. Continued exploration not only at the sanctuary itself, but also in neighbouring areas should help to clarify the nexus of cult activity and the lifeways of the Sikel heartland.

Notes

[1] Excavations by the "Soprintendenza per i Beni Culturali ed Ambientali di Catania" under the direction of Laura Maniscalco have been made with funds from the Regional Sicilian Government and from the European Community, and work continues to this day through a Florida Atlantic University project under the direction of Brian E. McConnell. See Maniscalco 2008; Maniscalco – McConnell 2003; and Maniscalco – McConnell 2015.

[2] Detailed analyses of the ancient sources are found in Bello 1960 and Cusumano 1990.

[3] Caracausi et al. 2003.

[4] Maniscalco 2008, 27–36; Cirelli 2008, 257; McConnell 2008.

[5] Maniscalco – McConnell 2003, 170–177.

[6] Maniscalco 2008, 58. 114–118; Randazzo 2008, 187–198, figs. 138–142.

[7] The coins have been identified by Orazio La Delfa, who is studying the numismatic finds of the area.

[8] Brugnone 2003.

[9] Maniscalco 2008, 115–120; di Patti – Lupo 2008, 396.

[10] La Fico Guzzo et al. 2015.

[11] Crouch 1993; Panessa 1983.

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References

Bello 1960

L. Bello, Ricerche sui Palici, Kokalos 6, 1960, 71–97.

Brugnone 2003

A. Brugnone, Riti di purificazione a Selinunte, Kokalos 45, 2003, 11–26.

Caracausi et al. 2003

A. Caracausi – R. Favara – S. Giammanco – F. Italiano – A. Paonita – G. Pecoraino – A. Rizzo, Mount Etna: Geochemical Signals of Magma Ascent and Unusually Extensive Plumbing System, Geophysical Research Letters 30.2, 1057. <doi: 10.1029/2002GL015463, 2003> (22. 06. 2020)

Cirelli 2008

C. Cirelli, Il santuario in età romana, in: Maniscalco 2008, 244–290.

Crouch 1993

D. P. Crouch, Water Management in Ancient Greek Cities (New York 1993).

Cusumano 1990

N. Cusumano, Ordalia e soteria nella Sicilia antica. I Palici, Mytos, Rivista di Storia delle Religioni 2, 1990, 9–186.

Cusumano 2015

N. Cusumano, Adrano, Efesto e i Palici (Caltanissetta 2015).

di Patti – Lupo 2008

C. di Patti – F. Lupo, La fauna: indagine archeozoologica, in: Maniscalco 2008, 387–400.

Gentili 1962

G. V. Gentili, Cinturione eneo con dedica da Palikè, RM 69, 1962, 14–20.

La Fico Guzzo et al. 2015

F. la Fico Guzzo – L. Maniscalco – B. E. McConnell, Il sistema idrico del santuario dei Palici (Rocchicella-Mineo), in: G. Bruno (ed.), Atti del Convegno, la Geoarcheologia come chiave di lettura per uno sviluppo sostenibile del territorio, Supplemento a GdA 2, 2015, 26–35.

Maniscalco 2008

L. Maniscalco (ed.), Il Santuario dei Palici. Un centro di culto nella Valle dei Margi (Palermo 2008).

Maniscalco – McConnell 2003

L. Maniscalco – B. E. McConnell, The Sanctuary of the Divine Palikoi (Rocchicella di Mineo, Sicily): Fieldwork from 1995 to 2001, AJA 107, 2003, 145–180.

Maniscalco – McConnell 2015

L. Maniscalco – B. E. McConnell, Recent Discoveries at the Sanctuary of the Divine Palikoi, in: P. M. Militello – H. Oniz (eds.), Proceedings of the 15th Symposium on Mediterranean Archaeology, BAR 2695, 2015, 517–521.

McConnell 2008

B. E. McConnell, Monumental Architecture in the Area of the Grotto, in: Maniscalco 2008, 310–362.

Panessa 1983

G. Panessa, Le risorse idriche dei santuari greci nei loro aspetti giuridici ed economici, Annali della Scuola normale superiore di Pisa, classe di Lettere e Filosofia 3, 1983, 359–387.

Randazzo 2008

M. Randazzo, I livelli di età classica della stoà B: primi dati sui materiali, Maniscalco, 2008, 187–203.

Una nuova area sacra sul Piano del Tamburino, Himera. Contesti e dinamiche rituali

Marcella Boglione

Frequentata per un periodo di 240 anni (648–409 a. C.),[1] la colonia greca di Himera si caratterizza non solo per la sua breve vita, ma anche per la particolare localizzazione geografica sul versante settentrionale della Sicilia, a stretto contatto con l'ambiente sicano e a pochi chilometri dalla componente fenicio – cartaginese rappresentata da Palermo e Solunto.[2] Descritta da Tucidide (VII, 58, 2) come la sola *polis* affacciata sul Mar Tirreno, Himera si colloca in un'area particolarmente favorevole per lo sviluppo di una colonia greca, al centro di un ampio golfo racchiuso tra i due promontori di Cefalù e Termini Imerese e nei pressi della foce del Fiume Imera Settentrionale o Fiume Grande, importante via di comunicazione con la Sicilia centrale.

La prima identificazione del sito della città si deve a Tommaso Fazello[3] nel XVI secolo, ma solo tra il 1928 e il 1929, Pirro Marconi diede inizio alle esplorazioni archeologiche nell'area del Tempio della Vittoria, demolendo un casale, sorto intorno a una torre cinquecentesca.[4] Uno scavo sistematico, tuttavia, è stato condotto soltanto a partire dal 1963 grazie all'Istituto di Archeologia dell'Università di Palermo, concentrate nell'abitato della città alta e nel santuario di *Athena.*[5]

In questo contesto si inseriscono le ricerche condotte dall'*Institut für Archäologische Wissenschaften* dell'Università di Berna, concentrate, sin dal 2012, sul Piano del Tamburino (fig. 1), un'area della colonia fino a quel momento poco indagata.[6]

Durante le dieci campagne di scavo, sono state finora individuate due differenti aree sacre, site in due diverse zone del pianoro, denominate Area 11 e Area 12 (fig. 2). L'area 11 occupa un'area pianeggiante nella zona centro-orientale del pianoro a circa 90 m sul livello del mare, come il Piano di Imera, da cui è separato da un valloncello. Quest'area ospita un edificio *astylos* compreso entro un muro di delimitazione rettangolare e un probabile altare intorno al quale si trova una zona ricca di attività votive.[7]

La seconda area, sulla quale si focalizza il presente testo, si trova a sud dell'Area 11 ed è caratterizzata da un vasto spazio ipetrale e dalla presenza, al momento, di due edifici, denominati Edificio Sud e Edificio Est (fig. 3).

Le indagini archeologiche svolte nell'Area 12 hanno portato alla luce la presenza di una settantina di azioni rituali e di deposito, che gettano nuova luce sulla natura del sacro e delle offerte votive a Himera.

Esaminando le dinamiche rituali del Piano del Tamburino (tenendo però conto delle evidenze provenienti dal Piano di Imera), si fa pressante la comprensione degli spazi dedicati al rito.[8] Il gesto di *depositare,* che giunge fino a noi attraverso ciò che riusciamo a leggere nel terreno, può apparire come il più semplice nella catena degli eventi per lo svolgimento di un rito, ma acquista invece valore se esaminato nelle sue varianti spaziali, per esempio di offerta presso un altare, in un deposito o in uno scarico. La situa-

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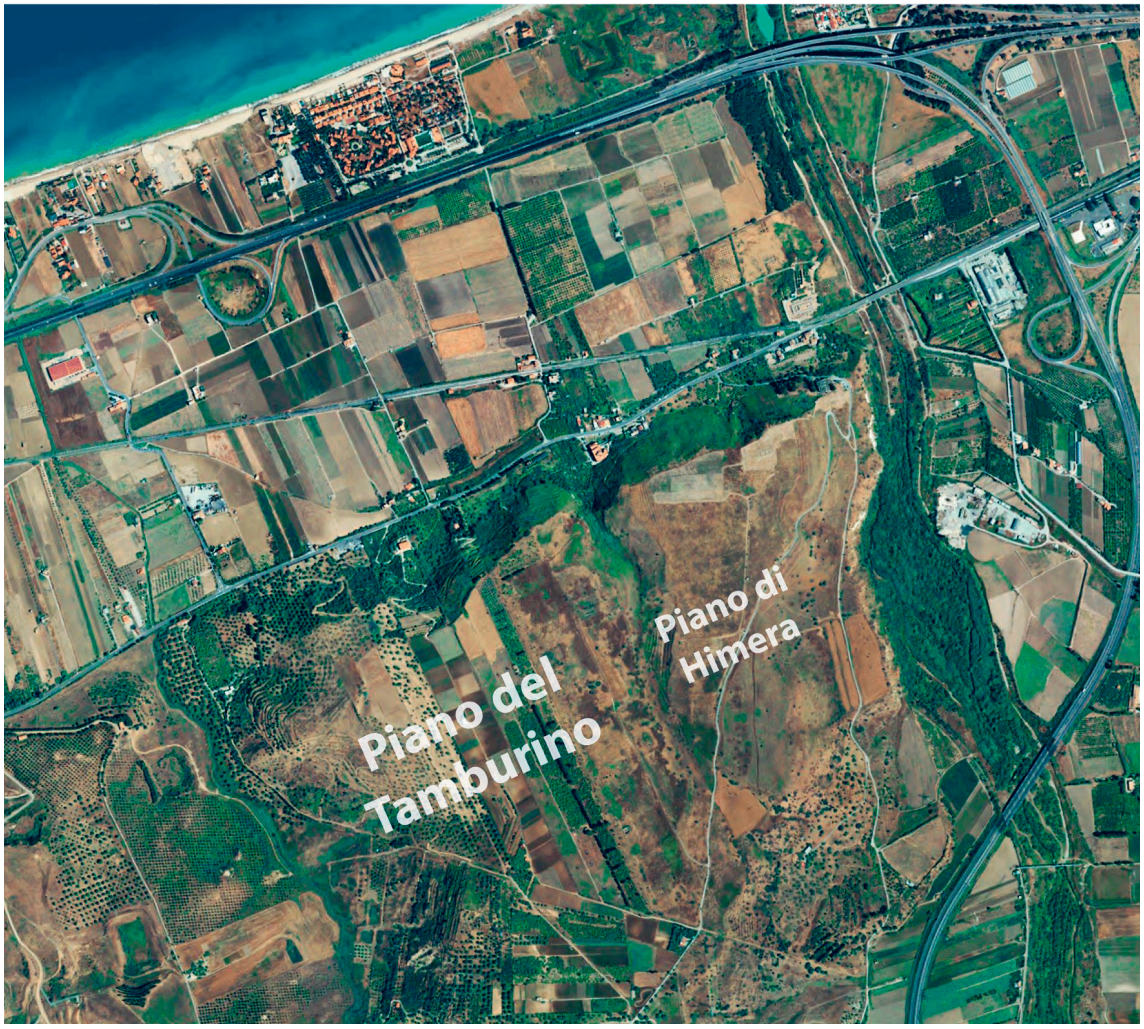


Fig. 1: Foto satellitare di Himera.

zione di un oggetto nello *spazio* di un santuario fornisce elementi sul momento che ha condizionato la sua ultima posizione, determinandone così lo *status* che riconosciamo in lui al momento della scoperta.

Il rituale non è una categoria solitaria, è un insieme di attività che serve come funzione sociale di base per creare e mantenere la comunità.[9] Le attività rituali devono quindi essere analizzate nei loro diversi contesti archeologici, topografici e culturali. Una maggiore conoscenza delle attività rituali e delle azioni di deposizione rinvenute sul Piano del Tamburino ci porta direttamente al cuore della problematica dell'interpretazione delle tracce rituali e ci indirizza verso la comprensione del carattere e degli attributi delle divinità venerate, del loro culto, ma anche della stessa comunità utilizzatrice del santuario. Per questo motivo l'offerta, che sia oggetto singolo o contenuto di una deposizione, viene analizzata in correlazione con il suo contesto non solo pretta-

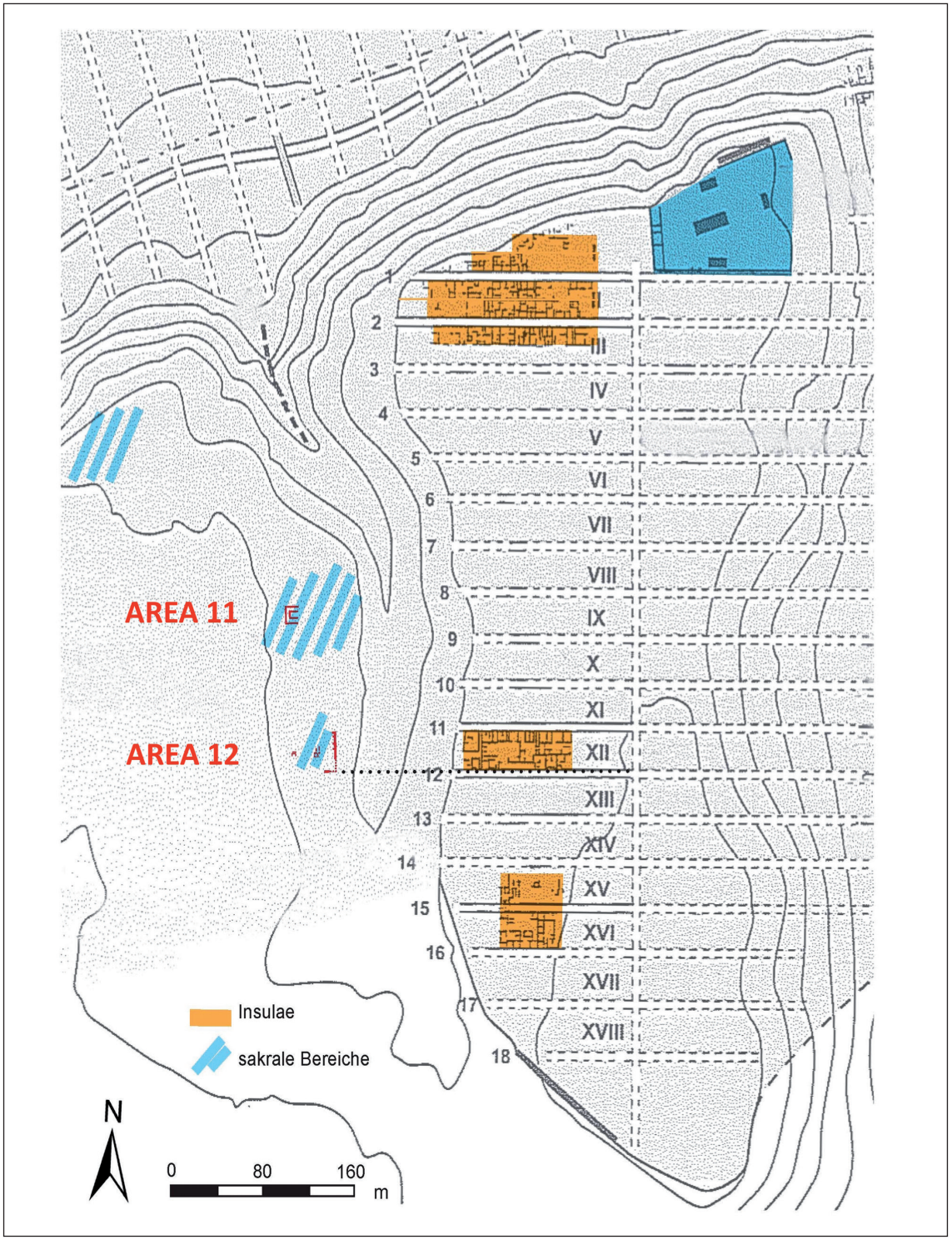


Fig. 2: Himera, Piano del Tamburino, correlazione tra Piano di Imera e il Piano del Tamburino.

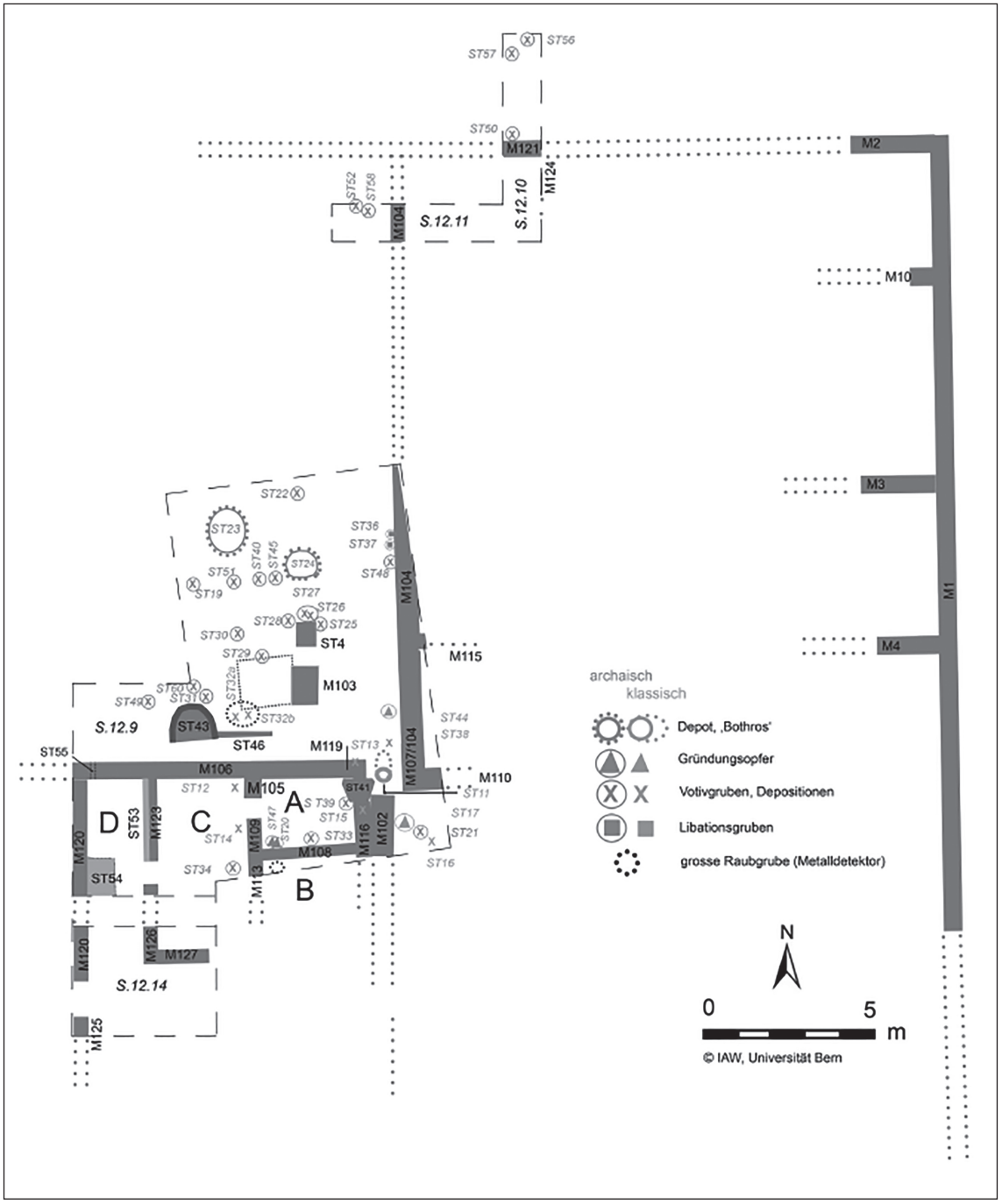


Fig. 3: Himera, Piano del Tamburino, Area 12, zona centrale: pianta schematica con i saggi di scavo, i sondaggi, le mura e le strutture.

mente archeologico, topografico, ma anche culturale. I criteri utilizzati per classificare le unità votive sono basati sui loro aspetti strutturali, spaziali e funzionali, sulla loro cronologia e, naturalmente, sul loro contenuto. Un'attenzione speciale è rivolta all'analisi della natura funzionale di queste unità votive al fine di poter distinguerne le diverse tipologie, come ad esempio depositi di fondazione, di abbandono o ancora, semplici azioni rituali.

Perché dovrebbe essere importante la deposizione votiva e perché affrontarla con un approccio multidisciplinare?[10] Affrontando lo studio dei contenti di culto, emerge la complessità dell'azione rituale di deposito. Le modalità di deposizione rivelano una pratica codificata nell'esecuzione di un rituale e, allo stesso tempo, la ricchezza delle sue varianti, utili all'identificazione delle abitudini di una comunità o, quantomeno, di un gruppo sociale al suo interno.[11]

Poiché la cultura materiale si trova ovunque gli assemblaggi votivi consacrati, attraverso un'offerta, saranno analizzati per tentare una ricostruzione del rituale in uso.[12] La loro posizione e il trattamento loro riservato indicano il valore attribuito in tempi antichi. Lasciando che l'interesse analitico vada oltre le dediche monumentali, di carattere chiaramente eccezionale, che ritroviamo negli inventari dei grandi santuari, portiamo la riflessione sulle piccole offerte, di modesto valore economico.[13] Parliamo di oggetti ordinari di diverse tipologie, metalli, ossa, conchiglie, ma anche carbone e ciottoli.[14]

Tipologie di deposizione: dati preliminari dall'Area 12

L'Area 12, oltre che dai due edifici sopra elencati, è in gran parte occupata da un ampio *open space* e ospita, al momento, quattro altari (M103, ST4, ST41 e ST43).[15] Quest'area si presenta ricca di azioni rituali, compiute sia intorno agli altari, che nello spazio aperto, ricostruibili a volte, solo in parte in conseguenza alle ripetute violazioni moderne.

La ST43 (fig. 4) presenta una forma absidale di circa 80 cm di larghezza (interna) ed è stata rinvenuta nel 2017, a circa 50 centimetri a nord dell'edificio Sud. Questo deposito è stato trovato fortunatamente intatto, con la copertura di pietre ancora *in situ,* benché si trovasse non distante dal piano moderno e la zona era stata più volte visitata dai tombaroli. La struttura vera e propria è costituita da due filari di pietre sovrapposte, per la maggior parte ciottoli posati a secco, di diverse grandezze, a volte sbozzati; il suo lato sud è delimitato da due lastre di calcare molto sottili, circa 1 cm, che rivelano tracce di fuoco. All'interno è stato trovato un deposito di consacrazione della struttura, interpretata quindi come altare.[16] Questa ipotesi trova ulteriore verosimiglianza per la presenza nel livello di utilizzo corrispondente, non solo di altre piccole deposizioni votive, ma anche di fondi di ceramica, che sembrano esser stati intenzionalmente forati, ritrovati in posizione rovesciata. A questi elementi si aggiunge il particolare allineamento di pietre miste a tegole, rilegato alla stessa struttura, una sorta di prolungamento, denominato ST46 (fig. 4), che corre parallelo al muro dell'edificio Sud, al quale non è ancora stato



Fig. 4: Foto di scavo, ST43 e ST46.

possibile dare un'interpretazione oltre la funzione di delimitazione delle deposizioni e attività rituali rinvenute a nord di esso.

All'interno di ST43 (fig. 5) è stata realizzata una deposizione ancora in corso di studio, che prosegue sotto la cornice di pietre, come dimostrano i frammenti ceramici ancora presenti, visibili nel profilo della stessa e ci impedisce dunque di vederne i limiti. Questo fatto indica la posteriorità della cornice di pietre rispetto alla deposizione vera e propria che può essere servita come consacrazione per l'altare in questione. All'interno della deposizione sono stati rinvenuti numerosi reperti, pertinenti a diverse categorie: vasellame di piccolo formato in ceramica acroma (*oinochoai* e coppette), ma anche qualche frammento di ceramica da cucina, e ceramica a vernice nera, come un piede di un cratere a colonnette, una presa di coperchio di un'anfora, una coppetta Iato K480 e due frammenti di due coppe. L'elevato numero di piccole *oinochoai* presenti nella deposizione ne fanno la forma maggiormente attestata insieme alle piccole coppe e ci potranno fornire spunti per lo studio del deposito. Alla classe ceramica si aggiungono il ritrovamento di conchiglie, lumache, ciottoli e frammenti di carbone.

Per quanto riguarda la coroplastica, sono state rinvenute due statuette in terracotta. La prima è stata ritrovata in frammenti all'interno del deposito e rappresenta una figura



Fig. 5: Foto di scavo, ST43.

femminile, seduta su un trono, con diadema e *alto polos* (forse una dea?). I frammenti rinvenuti sparsi all'interno del deposito, le gambe poste in cima e il resto del corpo più in profondità, lasciano intravedere una precisa volontà di deposizione frammentaria. Questa volontà è sottolineata anche dal ritrovamento di una seconda statuetta femminile, sempre in posizione seduta, ma questa volta intatta, e deposta in posizione orizzontale su di una delle lastre di calcare sopra citate.[17] La seconda statuetta sembra quindi indicare una diversa volontà, attraverso una deposizione separata e attenta, in un angolo della struttura con vicino uno *skyphos* a vernice nera e un cratere miniaturistico. La figura presenta inoltre altre particolarità: sul petto è rappresentata una mezza luna rovesciata racchiusa tra due dischi e, in secondo luogo presentava al suo interno due lumache, come inserite a forza all'interno del corpo cavo, elemento sicuramente inconsueto.[18]

Sul Piano del Tamburino è stato possibile identificare, finora, alcune categorie deposizionali illustrate brevemente qui di seguito: il deposito di fondazione, il deposito di dismissione,[19] depositi di consacrazione (come l'altare ST43 sopra descritto) e altre pratiche rituali votive, come libagioni o offerte alimentari. Piccole offerte (frammenti di ceramica, conchiglie, ossa, ecc.) si trovano anche intorno ai quattro altari (M103, ST4,

ST43 e ST41), a testimone di una dimensione di ritualità diffusa, soprattutto concentrata nell'*open space.*

Il rinvenimento nel 2014 dell'allora definito *bothros* ST11 (fig. 6), ha aperto la strada alla categoria del deposito, cosiddetto di dismissione. Questa struttura presenta una forma circolare irregolare ed era concentrata in uno spazio delimitato da un altare (ST41) e il muro orientale dell'edificio Est. La fossa conteneva numerosi frammenti di calchi per terrecotte e frammenti di figure in terracotta di diverse dimensioni[20], ceramica (in particolare brocche, tazze e frammenti di utensili da cucina), una notevole quantità di frammenti di tegole mescolati con pezzi di carbone di legna e una piccola conchiglia.[21] Le diverse classi di materiali dedicati, ma anche le condizioni del loro rinvenimento (ad esempio la scelta stessa della forma, la selezione di solo una parte di un vaso, la frammentazione stessa) supportano la funzione di deposito di dismissione. Dal punto di vista tipologico possiamo osservare alcune logiche costitutive[22]: il metodo di inclusione dei materiali, la loro scelta, il trattamento loro riservato e la loro associazione, permettono di intravedere un approccio sistematico che non è solo di utilità, ma sottende anche una dimensione rituale. La stessa peculiare frammentazione di alcuni frammenti metallici,

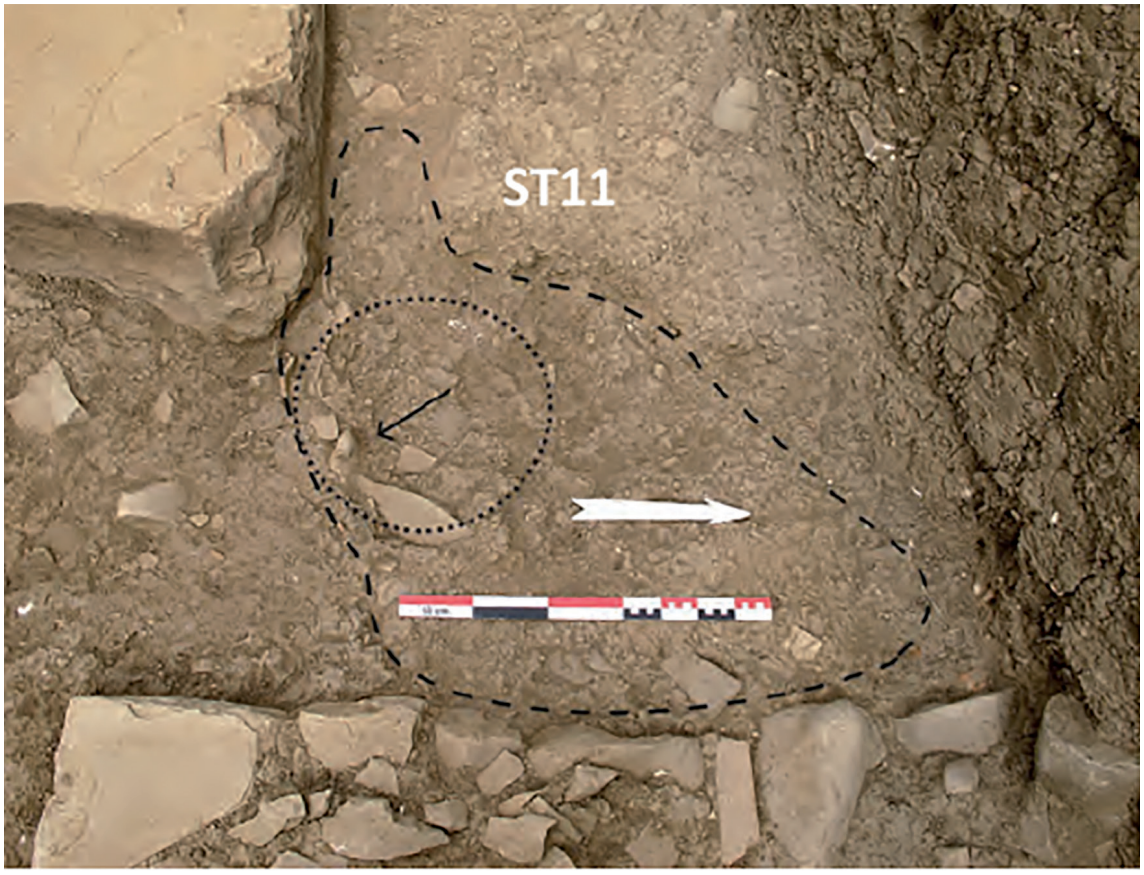


Fig. 6: Foto di scavo, ST11.

trovati in ST11, corroborano questa interpretazione. Le analisi preliminari dei contenuti di questa struttura suggeriscono una data di deposizione verso la seconda metà del V secolo a. C.

Una seconda categoria, ben presente nell'Area 12, è il deposito di fondazione, caratterizzato da una stretta relazione spaziale e cronologica con la struttura a cui si riferisce.[23] Questo è il caso, per esempio, di ST17 (diametro di circa 40 cm e profondità di 56 cm), incorniciato da un cerchio di ciottoli di varie dimensioni, in relazione con il muro M102 (fig. 7). La cornice di pietre come elemento strutturale di segnalazione della superficie è presente anche in strutture di carattere diverso e di conseguenza questo *marker* non sembra essere esclusivo ai depositi di fondazione (ad esempio ST38). Al contrario, sorgono domande sulle diverse volontà di marcare le deposizioni in superficie; qual era il loro scopo? Il deposito conteneva, oltre a conchiglie, resti di carbone e frammenti ceramici (come *pars pro toto* – la maggior parte dei quali sono forme aperte e da cucina – risalenti alla metà del V secolo a. C.). Alcuni frammenti inoltre, sono stati frantumati, come triturati in frammenti piccolissimi e suggeriscono il rituale della frammentazione. Quest'ultimo elemento, deve essere considerato un'azione rituale aggiuntiva, che ha avuto luogo prima della chiusura della *deposizione*. È anche degno di nota il ritrovamento di frammenti di orlo di due diverse anfore puniche, uno in fondo e l'altro in cima alla fossa, come se fossero stati inseriti a delimitare il contenuto.[24]



Fig. 7: Foto di scavo, ST17.

Un'altra categoria sono quelle testimonianze rituali in piccole fossette nel livello di utilizzo esemplificate, per esempio, dalle strutture ST36 e ST37 (fig. 8), poste di fronte a uno dei passaggi in precedenza chiusi dal muro M104, bloccato quindi prima che l'azione rituale avesse avuto luogo.[25]

Un confronto tra i due *assemblages* del contenuto di queste strutture mostra somiglianze che suggeriscono parallele modalità di deposizione delle offerte votive: oggetti come brocche, *hydriai,* tazze e *skyphoi,* frammenti di metallo, resti organici (ossa, denti) e tracce di carbone. Un'ulteriore similitudine si ritrova nella perforazione intenzionale che presentano due fondi ceramici (uno *skyphos* in ST36 e un'*hydria* in ST37). Questi elementi sono forse da correlare alle pratiche di libagione associate alle divinità con connotazione ctonia con l'uso di liquidi versati direttamente nella terra e la pratica di lasciare il frammento impiegato in una posizione invertita nel luogo in cui è stata perpetrata la libagione.[26] Possiamo definire questa libagione come un'*azione rituale di un solo momento* qui, probabilmente legata alla chiusura di un passaggio di fronte al quale sono collocate. Dall'analisi dei materiali possiamo datare queste azioni verso la fine del sesto secolo a. C.

In mancanza di una conclusione plausibile in questa fase della ricerca, è possibile offrire alcuni spunti di riflessione riguardo alla natura delle offerte. I pochi esempi citati dimostrano la varietà e le potenzialità delle deposizioni votive sul Piano del Tamburino. All'interno dei depositi ogni tipo di oggetto poteva essere dedicato, dal manufatto ceramico alla figurina di terracotta fino alla più semplice conchiglia. La loro stessa natura di oggetti fa sì che essi possano non esser stati concepiti dall'inizio come dedica, ma aver



Fig. 8: Foto di scavo, ST36 e ST37.

avuto una vita precedente attraverso un uso quotidiano ed essere stati trasformati, in un secondo momento, in dedica mediante la loro consacrazione.

La metodologia impiegata vuole inoltre cercare di stabilire se possa esistere una logica nelle associazioni dei materiali impiegati nelle deposizioni e una ricorrenza di un oggetto (piuttosto che un altro) per diverse tipologie di rituale, operazione possibile solo attraverso l'osservazione del contesto originale di un oggetto associato ad altri. La valutazione della sua disposizione nello spazio sacro sarà fatta non solo rispetto alla sua posizione sul Piano del Tamburino, ma verrà messa a confronto con le altre aree sacre conosciute ad Himera.

Rimane in sospeso l'attribuzione della titolarità del culto per entrambe le aree, non desumibile al momento con certezza dagli elementi finora in possesso, anche se il quadro fornitoci dalle esplorazioni archeologiche ci indirizza verso una o più divinità femminili.[27] Lo studio dell'evoluzione cronologica dei votivi e la ricerca degli elementi centrali del rituale, potrebbero tuttavia fornirci non solo indicazioni su aspetti peculiari delle divinità venerate e le loro epiclesi, ma soprattutto circa l'individuazione delle logiche rituali della comunità (o delle comunità) coinvolta (e).

Note

[1] Diodoro Siculo (13, 62, 4) descrive la distruzione della città nel 409, 240 anni dopo la sua fondazione.

[2] Per un inquadramento generale su Himera vd. Himera I, Himera II, Himera III, Himera V, Quaderno Imerese, Secondo quaderno Imerese.

[3] Fazello, Deca prima, 272, ss.

[4] Marconi 1931, Himera, lo scavo del tempio della Vittoria e del Temenos.

[5] Adriani 1970, 11–12.

[6] Vd. i rapporti preliminari di scavo: Mango 2013–2018.

[7] Vd. Mango 2014, 152–157 Abb. 2 Taf. 17, 1; Mango 2015, 192–195, Abb. 1; Mango 2016, 112–113 Abb. 1.

[8] Vd. Patera 2016, 57–67, per una discussione sulla consacrazione dello spazio.

[9] Bell 1997, 171.

[10] Osborne 2004, 2.

[11] Lippolis – Parisi 2012, 425–426.

[12] Boivin 2008, 26.

[13] Patera 2012, 10, da lei definita «piété quotidienne».

[14] Saranno eseguite analisi archeo-zoomorfe per stabilire il tipo di animale trovato, se possibile la sua età ed eventuali presenze di tracce residue di uso sulle ossa stesse. Analisi che potranno anche essere effettuate sui resti di carbone per ricavarne dati utili sulla vegetazione dell'area, quali piante sono state usate per scopi rituali e se, probabilmente anche per la produzione di oli aromatici.

[15] Mango 2018, 111–115.

[16] Mango – Boglione 2018, 116–117.

[17] Mango – Boglione 2018, 116–117, Taf. 18, 4.

[18] Mango – Boglione, op. Cit. (nota17). Probabilmente le lumache sono da considerarsi moderne.
[19] Parisi 2017, 544–554.
[20] Le terrecotte del deposito ST11 sono materia del dottorato in corso di M. Edel all'Università di Berna.
[21] Mango 2015, 197–199, Taf. 26–27, per una prima analisi per quanto concerne la ST11.
[22] Parisi 2017, 544–549.
[23] Lippolis – Parisi 2012, 444.
[24] Mango 2016, 118, per una prima descrizione e valutazione del deposito.
[25] Mango 2017, 117 nota 18 per descrizione e interpretazione.
[26] Osanna 2004, 58–59.
[27] Mango 2018, 120 con bibliografia precedente.

Indice delle figure

Fig. 1: Foto IAW Unibe. – Fig. 2: AntK, 58, 2015, 201 Abb. 3. – Fig. 3: AntK, 61, 2018, 114 Abb. 2. – Fig. 4–8: IAW Unibe.

Bibliografia

Adriani 1970
A. Adriani, Introduzione, in: A. Adriani (ed.), Himera I, campagne di scavo 1963–1965 (Roma 1970) 1–20.

Bell 1997
C. Bell, Ritual – Perspectives and Dimensions (New York 1997).

Boivin 2008
N. Boivin, Material Cultures, Material Minds – The Impact of Things on Human Thought, Society and Evolution (Cambridge 2008).

Lippolis – Parisi 2012
E. Lippolis – V. Parisi, La ricerca archeologica e le manifestazioni rituali tra metropoli e apoikiai, Alle origini della Magna Grecia, Mobilità, Migrazioni, Fondazioni (Taranto 2012) 423–470.

Mango 2013
E. Mango, Dritter Vorbericht zu den Forschungen in Himera (2012), AntK 56, 2013, 131–142, Taf. 19–20.

Mango 2014
E. Mango, Zweiter Vorbericht zu den Forschungen in Himera (2013), AntK 57, 2014, 152–161, Taf. 17–19.

Mango 2015
E. Mango, Dritter Vorbericht zu den Forschungen in Himera (2014), AntK 58, 2015, 191–203, Taf. 26–27.

Mango 2016
E. Mango mit einem Beitrag von M. Edel, Vierter Vorbericht zu den Forschungen in Himera (2015), AntK 59, 2016, 112–122, Taf. 13–14.

Mango 2017
E. Mango mit einem Beitrag von M. Edel, Fünfter Vorbericht zu den Forschungen in Himera (2016), AntK 60, 2017, 113–123, Taf. 16–17.

Mango 2018
E. Mango unter Mitarbeit von M. Boglione, Sechster Vorbericht zu den Forschungen in Himera (2017), AntK 61, 2018, 111–122, Taf. 18–19.

Marconi 1931
P. Marconi, Himera, lo scavo del tempio della Vittoria e del Temenos (Roma 1931).

Osanna 2004
M. Osanna, Rituali sacrificali e offerte votive nel santuario lucano di Torre di Satriano, ARG 6, 2004, 44–61.

Osborne 2004
R. Osborne, Hoards, Votive, Offerings: the Archaeology of the Dedicated Object, World Archaeology 36(1), 2004, 1–10.

Parisi 2017
V. Parisi, I depositi votivi negli spazi del rito, Analisi die contesti per un'archeologia della pratica cultuale nel mondo siceliota e magnogreco (Roma 2017).

Patera 2016
I. Patera, La consécration de l'espace: action rituelle, investissement spatial et visibilité, in: Y. Lafond – V. Michel (eds.), Espaces sacrés dans la Méditerranée antique (Rennes 2016) 57–67.

Patera 2012
I. Patera, Offrir en Grèce. Gestes et contextes (Stoccarda 2012).

Idalion

Panel 12.7

A Sanctuary of a Female Goddess Excavated by Max Ohnefalsch-Richter (1850–1917) at the Gialias River in Idalion (Cyprus)

Angelika Corinna Walther

The paper presented at the congress dealt with the first results of the author's PhD project editing a yet unpublished excavation carried out by M. Ohnefalsch-Richter in the ancient city of Idalion in 1885.

Max Ohnefalsch-Richter, a German self-taught archaeologist who excavated numerous sites all over the island of Cyprus in the late 19th century, excavated the so-called "Temple of Aphrodite" in the short period of time of only three months in 1885. During the excavation, more than 500 votive offerings were found. Despite this rich spectrum of finds, publications about the temenos are sparse. The sanctuary is mentioned several times in Ohnefalsch-Richter's dissertation[1] as well as in his main work "Kypros, the Bible and Homer",[2] but a general publication of all the finds, the architectural features, and the type of cult is still a great desideratum. An unpublished manuscript by Ohnefalsch-Richter and his correspondence with Salomon Reinach, which also included numerous photographs of the objects, form two of the main sources for the author's research on the sanctuary.

The general plan of the sanctuary, which Ohnefalsch-Richter published in several versions[3] shows a sanctuary of the open courtyard type with adjacent rooms, which is commonly found all over Cyprus during the Iron Age.[4] The votives were placed on bases in the open courtyard which was limited by a *peribolos* wall. A large rectangular basis made of ashlars may have been the basis for some kind of cult image or a *baetylos*. A hearth in one of the adjacent rooms could have been used for the incineration of offerings.

Thanks to a recently rediscovered glass negative of Ohnefalsch-Richter it is now possible to relocate the sanctuary within the modern city of Dhali.[5] Today, the area of the sanctuary is covered by a private garden area and no traces of the sanctuary are visible on the surface.

The finds from the excavation include votives made from terracotta and limestone, metal objects such as iron forks that were found in the hearth room, as well as pottery and lamps. The broad variety of themes and motifs includes anthropomorphic figures of votive bearers, musicians or representations of Astarte, and also animals, (e.g. horses and birds), and other objects, such as flowers. A stylistic analysis reveals local productions as well as imports from other workshops from various other city kingdoms, as well as a strong influence of Levantine art, but also Egyptianizing motifs.[6]

Today, the finds from the so-called "Temple of Aphrodite" are spread throughout various museums and collections all over Europe. While a smaller part of the objects according to the law remained in the Cyprus Museum,[7] the bigger part of it was sold

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to the Berlin museums.[8] From Berlin, more than 150 objects were sold to the Badisches Landesmuseum at Karlsruhe,[9] while other objects were transferred to Moscow[10] after the second World War.

Notes

[1] Ohnefalsch-Richter 1891, 6 f.

[2] Ohnefalsch-Richter 1893. The book was also published in German in the same year.

[3] Ohnefalsch-Richter 1891, Pl. VII; Ohnefalsch-Richter 1893, Pl. VII. X. Another unpublished version is preserved in the archives of the Museumsinsel in Berlin.

[4] For the most recent treatment of the sanctuary see Ulbrich 2008, 322 f. "ID7".

[5] These results will be published soon by the current author in an upcoming conference volume of "Studia Cyprologica Berolinensia".

[6] For the identification of regional styles see Fourrier 2007; Gaber-Saletan 1986.

[7] Most of these objects are today kept as part of the so-called Old Collection without any indication of their provenance. See also Myres – Ohnefalsch-Richter 1899, 157–160.

[8] Brehme et al. 2001.

[9] Schürmann 1984, 4–8.

[10] Akimova et al. 2014, 419–535.

References

Akimova et al. 2014

L. I. Akimova – D. A. Kaliničev – O. Y. Samar – V. V. Smolenkova, The Art of Ancient Cyprus in the Pushkin State Museum of Fine Arts (Moscow 2014).

Brehme et al. 2001

S. Brehme – M. Brönner – V. Karageorghis – G. Platz-Horster – B. Weisser, Ancient Cypriote Art in Berlin. Antikensammlung, Museum für Vor- und Frühgeschichte, Münzkabinett (Nicosia 2001).

Fourrier 2007

S. Fourrier, La coroplastie chypriote archaïque: identités culturelles et politiques a l'époque des royaumes (Lyon 2007).

Gaber-Saletan 1986

P. Gaber-Saletan, Regional Styles in Cypriote Sculpture: the Sculpture from Idalion (New York 1986).

Myres – Ohnefalsch-Richter 1899

J. Myres – M. Ohnefalsch-Richter, A Catalogue of the Cyprus Museum (Oxford 1899).

Ohnefalsch-Richter 1891

M. Ohnefalsch-Richter, Die antiken Cultusstätten auf Kypros (Dissertation Leipzig University 1891).

Ohnefalsch-Richter 1893

M. Ohnefalsch-Richter, Kypros, the Bible and Homer. Oriental Civilisation, Art and Religion in Ancient Times. Elucidated by the Author's own Researches and Excavations during Twelve Years Work in Cyprus (London 1893).

Schürmann 1984

W. Schürmann, Katalog der kyprischen Antiken im Badischen Landesmuseum Karlsruhe. Corpus of Cypriote Antiquities, SIMA 20,9 (Gothenburg 1984).

Ulbrich 2008

A. Ulbrich, Kypris. Heiligtümer und Kulte weiblicher Gottheiten auf Zypern in der kyproarchaischen und kyproklassischen Epoche (Königszeit), AOAT 44 (Münster 2008).

A Sanctuary of a Female Goddess Excavated by Max Ohnefalsch-Richter (1850–1917) on the Eastern Acropolis in Idalion (Cyprus)

Sophie Geraldine Horacek

The German autodidact Max Ohnefalsch-Richter (*1850, †1917; hereafter MOR) investigated or rather excavated the sanctuary of a female deity on the eastern acropolis of Idalion[1] (at present-day Dali, Cyprus) in several campaigns in the 19th century. MOR was a workaholic and frequently changed professions. He studied agricultural sciences in Halle (an der Saale, Germany), was a painter, a photographer, a journalist, a businessman/entrepreneur and moreover tried to be accepted as an academic. Therefore, he attempted to interact with other scientists appropriately, at which he demonstrably did not succeed very well.[2] This is one of the reasons why he sometimes lacked the necessary funds for his projects. He planned to publish the results of his research on the sanctuary of a female deity (fig. 1) in a comprehensive monograph on the ancient sites of Tamassos and Idalion in 1896, but due to misunderstandings and financial problems it was never realized.[3]

Idalion is defined by two city hills or *acropoleis* separated by a road. This road leads in a north-south direction through the city (fig. 1). The Lower City, which is situated to the north of the two *acropoleis,* spreads north up to the Gialias River. The sanctuary of the female deity is located on the eastern acropolis, called Moutti tou Arvili. MOR specifies this area as "Temenos Nr. 8" and describes it as a 125-meter-long and 85-meter-wide precinct, in delivering his opinion that the eastern hill is devoted to Aphrodite-Astarte. He refers to Vergil's Aeneid (I 680–682, 691), which deals with Aphrodite, who is said to own a house on the sacred place of the heights of Idalion. For him it was clear that this only could be the eastern hill of Idalion, because he locates a sanctuary of Athena on the western acropolis. No inscription has been found to this day that could confirm the name of the goddess. The deity worshipped on the eastern acropolis is represented by enthroned goddesses, the goddess with a vegetal *kalathos* or crown, so-called Astarte-figurines who are touching or supporting their breasts, and *kourotrophoi,* females who are holding children on their arms or laps. Nevertheless, neither the name nor the title of the goddess of the cult place could be identified.[4]

MOR often visited Dali between 1883 and 1895.[5] His first excavation on the east acropolis took place in 1883 on behalf of Charles Newton, Keeper of the British Museum, in area no. 7 (fig. 1).[6] He discovered stone sculptures and terracotta figurines, all of them depicting females. According to MOR, these pieces were later acquired by the British Museum.[7] In 1887 he identified the sanctuary of the female deity (*temenos* no. 8),[8] while he tried to trace the course of the fortifications in order to make a map of the ancient city (fig. 1). A year later, the farmers of Dali were searching for building materials on the acropolis. He supervised their work and undertook a sondage together

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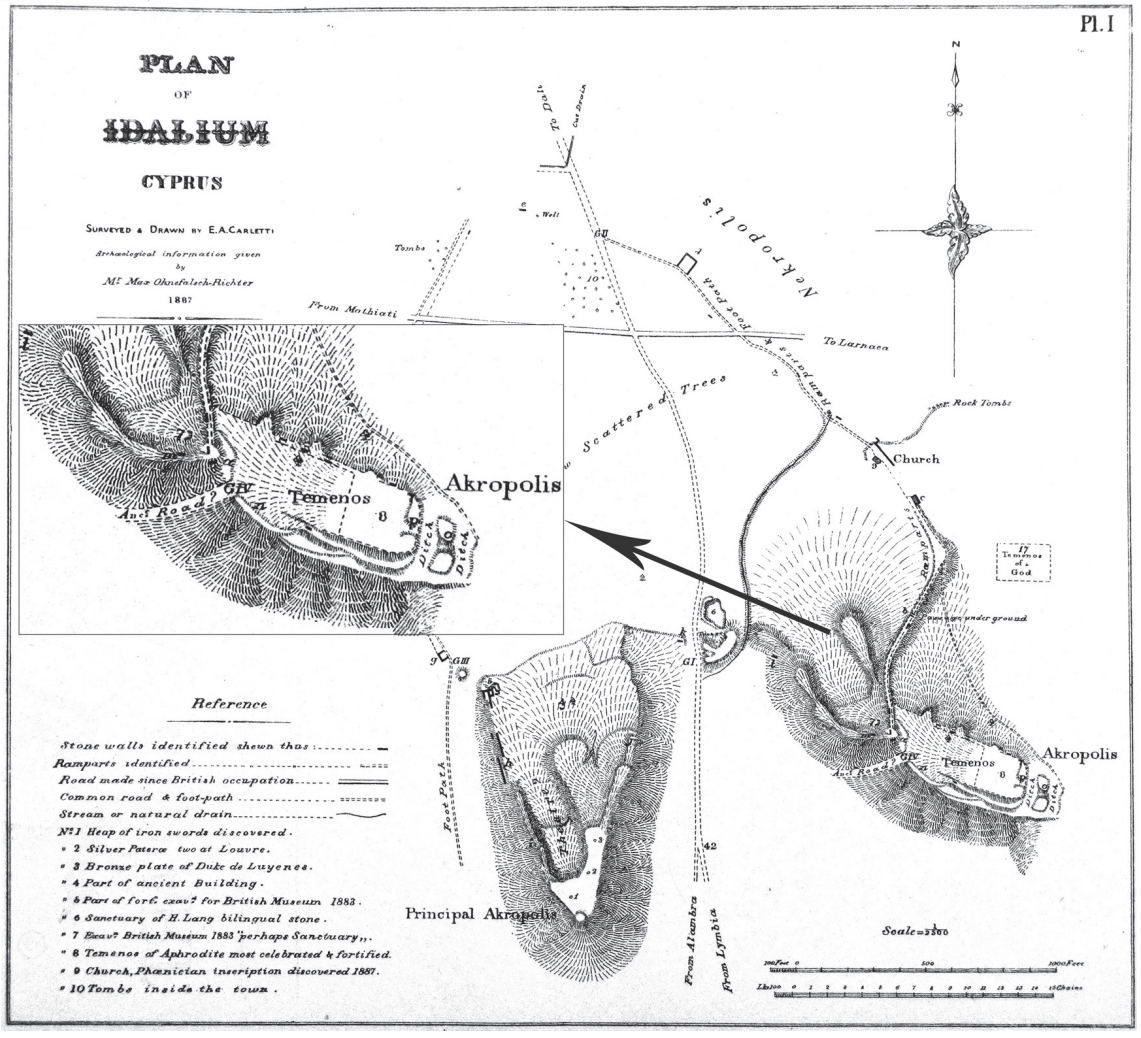


Fig. 1: City map of Idalion made by MOR and Carletti in 1887. The sanctuary of the female deity is located on the eastern acropolis (no. 8). The place where MOR excavated for the first time (no. 7) is not architecturally structured.

with the Daliot Abraami Charalambos, at spot S1, the so-called southern bastion (fig. 3). In 1889, Adolf Furtwängler (*1853, †1907),[9] assistant director at the Antiquarium of the Royal Museums in Berlin, was commissioned by the Berlin Museums to guide MOR and to regulate the dispatch of antiquities to the Royal Museums in Berlin.[10]

In 1890, Wilhelm Dörpfeld (*1853, †1940), architect and archaeological building researcher, later director of the German Archaeological Institute (DAI),[11] travelled through Cyprus and visited MOR on the acropolis. He took, as MOR mentions, photographs of the findings of an "illegal excavation" of the farmers at point S1 with the excavator as scale.[12] Dörpfeld took these photographs for the German Archaeological Institute of Athens, where some of them can still be ordered today.[13] A ten-day excava-

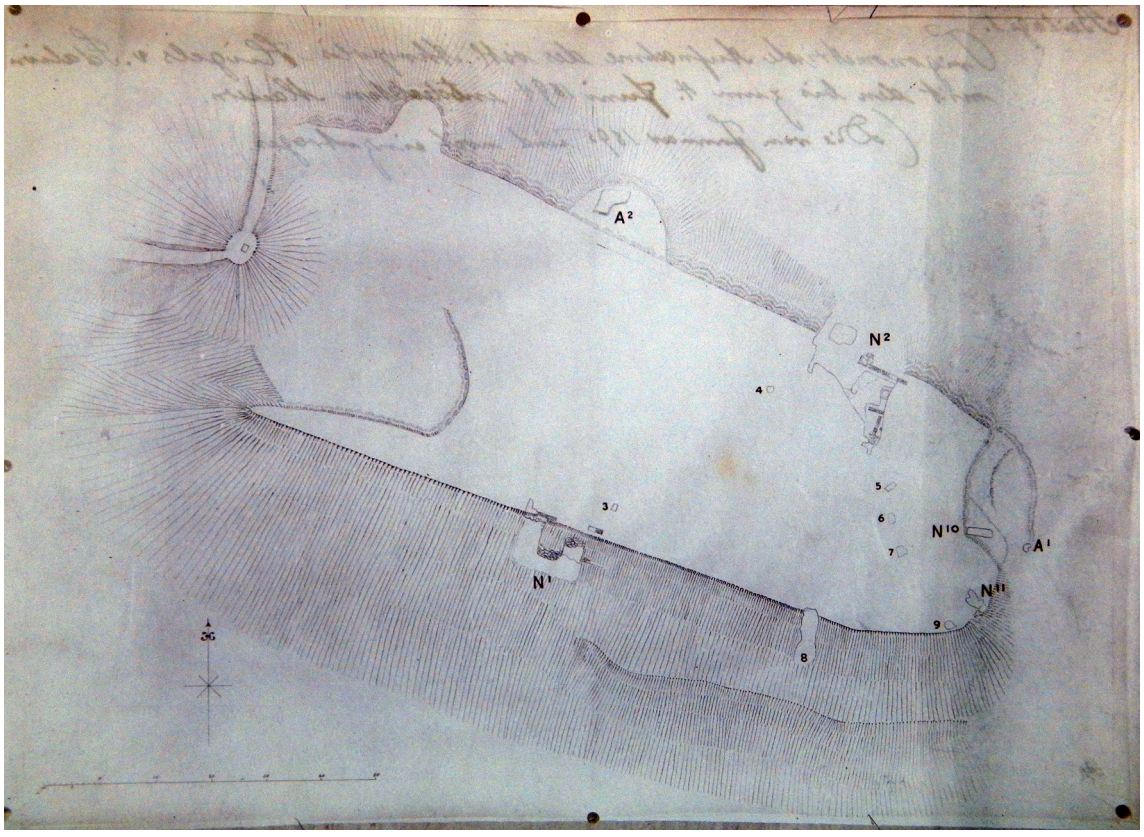


Fig. 2: Detailed plan of the eastern acropolis with the so-called southern bastion S1 (here N1) and the *temenos* no. 8. The latter was mainly excavated in the years 1894/1895 in area N2.

tion campaign began on May 24, 1894 both at spots S1, N2, and also trench 6 (fig. 3) for the Prussian government and the Royal Museums in Berlin. Furtwängler was also on site to support the excavation. The northern edge was in their interest, because there the farmers had also begun to dig for building materials. The next campaign began on January 25, 1895 and lasted only 7 days, because MOR was deprived of the excavation permit, but misinterpreting the telegram, he started excavating anyway. His sponsors from Saxony withdrew from the project.[14] He spent 17 days in total excavating at 12 locations during the years 1894/1895. There is no detailed description for the years 1883, 1887, 1888 and 1889/90. Likely, these years comprised chiefly limited spatial work. For example, for the year 1888 according to the typescript, just 4 objects were registered in the find lists.[15] MOR's excavations, though not comparable with modern standards, were probably relatively rather advanced, especially with the support of Dörpfeld and Furtwängler. The excavator himself describes that he set up tents directly on the excavation side, protecting the freshly excavated objects from the impact of weather.[16] Thanks to his training as a photographer and painter, he handled the results of excavation in a

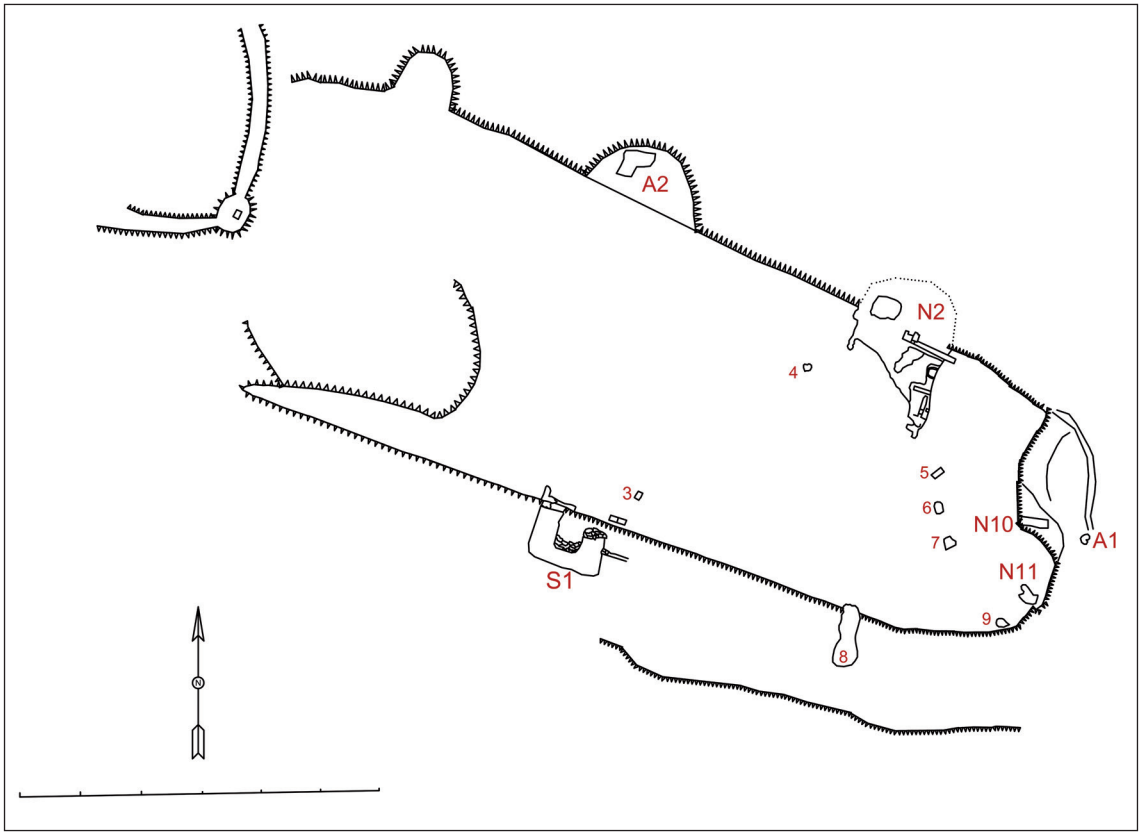


Fig. 3: Digitized plan of the eastern acropolis. This plan correlates surprisingly well with modern satellite images.

way that was not a standard at that time, and many of his archaeological sites and their finds have been documented, described, drawn and photographed.[17] The comprehensive manuscript and the related typescript for the east acropolis, partially revised by Robert Zahn (*1870, †1945),[18] as well as two detailed plans and many illustrations made by MOR himself, are now stored in the archive of the Antikensammlung Berlin, Staatliche Museen Preußischer Kulturbesitz.

Concerning the sanctuary on the east acropolis, two different parts of the typescript are relevant. There are parts of the document in which MOR deals explicitly with the sanctuary,[19] and others where he wrote about the topography of Idalion.[20] In the latter he refers increasingly often to the *temenos* or sacred precinct no. 8. The magazine of the Antikensammlung, Staatliche Museen Preußischer Kulturbesitz, contains some of the unpublished limestone statuettes, terracotta figurines, metal objects, coins and ceramic vessels from the excavation. Some of the artefacts are considered lost, because either the information on the repository in the manuscript/typescript is missing, or since the finds in the museums themselves are no longer assignable. They have been scattered in Nicosia, Dali, Limassol, Vienna, Leipzig, Berlin and Moscow due to the ex-

cavation history, the transforming nature of antiquities law in Cyprus[21] and the related acquisition history of the artefacts.

MOR, together with E. A. Carletti (a Surveyor of the Government of Cyprus) made a city map of ancient Idalion in 1887 (fig. 1). On this map the topographical conditions and the position of the sanctuary become clear. For example, the shape of an "ancient road" or path, which led up to the east acropolis and which MOR characterized with a question mark in the city map,[22] can still be made out in the area today. Also, the three outcrops on the north side of the plateau are still visible in the terrain. MOR added structures of fortification walls on the map, defined as double broken lines. One of these fortification walls rises from the chapel of Hagios Georgios, still existing today, to the east acropolis, and is marked as "ramparts" (fig. 1). But he also speaks of some more walls, which enclosed *temenos* no. 8, and which he had seen thanks to the farmers of Dali searching for building materials in 1887.[23]

While the west acropolis falls off sharply on all sides, except for the north, the natural hill of the east acropolis declines mainly on the southern side. It becomes flatter on the northwest, north, and northeast sides. Thus, fortification of the east acropolis against a probable siege of the city would make sense. There are some historical clues for subsequent fortification. All City-Kingdoms – except Amathous – are said to have followed the Ionian Revolt in 499 BC. After the Cypriot Revolt was crushed a year later, the Persians and Phoenicians besieged the cities and partially destroyed them. Idalion was besieged unsuccessfully by the Medes and Kitions around 478 BC.[24] After that it was conquered around 450 BC by Kition.[25] The reasons were certainly political and economic interests, as Kition could now benefit from the copper mines of Idalion.[26] The arrowheads and sling stones excavated by MOR on the eastern acropolis could also support this hypothesis, but no inscriptions exist linking the fortification to the mentioned historical events, so a skeptical approach is required.

What is not clear from the city map, is that the actual ridge of the east acropolis is much higher. Up there the Moutti tou Arvili passes over into the Aloupophournos. Thus, the sanctuary is not located at the highest possible point of this natural ridge. But from the precinct of *temenos* no. 8, lying on the summit plateau, one can get a good overview of the plain of Idalion and the Gialias River to the north, Agios Sozomenos to the northeast, and the west acropolis to the west. As stated above, MOR left behind two detailed plans which are stored in the archive of the Antikensammlung Berlin and which can help to relocate the finds. The first plan shows the outline of the east acropolis (fig. 2). The thinner long lines, especially on the south side, can give a good impression of the sloping terrain. The small numbers 3 to 9 indicate sondages on the hill plateau. As the excavator describes 16 of these small numbers on the plan, but there are just 7 of them marked, it becomes clear that this is an unfinished copy of the original. It is most likely that Robert Zahn, who made handwritten notes on the typescript pages, was in possession of the original plan, since he did not indicate a query concerning where the plan with the 16 numbers has gone, as he had done for other issues elsewhere in the typescript. It is

much the same with the further numbers on the plan. There are A1 to A2, N1 to N2 and then a gap up to N10 to N11: obviously, the numbers N3 to N9 are missing. On the south side of the plateau, it is still possible to see a large depression in the terrain where MOR had most likely unearthed the so-called southern bastion S1 (fig. 3). In the plan he refers to the place as N1 (fig. 2), but from his descriptions in the typescript it is clear that he meant structure S1.[27] For this spot he did not produce a more detailed excavation plan, but he did for N2 (fig. 4). The N2 plan makes it clear that the sanctuary was architecturally structured. In the typescript, the description of the plan contains information of a room for votives and a place or room for burnings and offerings. Even though it was not a formal stratigraphic study, it is still possible to find references to an exact finding place or relative layer sequences – especially for a more frequently mentioned ash layer, which is marked in the plan by an "A" (fig. 5). Individual finds of the list are described as above, below or within the ash layer.[28] MOR provided a lot of details about the discovery place of these, not only for the detailed plan of N2, but also for the ground plan of the acropolis. This makes it possible to attribute individual objects both to the sanctuary and to the city fortification. For example, the pillar capital[29] no. 12, which according to the typescript was found at the fortification N2, was recorded on a photograph made by MOR (fig. 6a).[30] MOR numbers his related photographs and has in many cases noted the figure numbers in the find lists. He labels the photographs with "N. S.", standing for "new series" of illustrations, indicating his preparations for the publication of the monograph "Tamassos und Idalion" (fig. 6b). He assigned Roman numerals to collective depictions and Arabic numbers to individual depictions. As this is an image of a single object, you can read "N. S. 22" in blue characters for the number of the photograph and "12" in red for the object number 12, as well as the additional information of the finding place "Nordseite", which is explained in more detail in the typescript.[31] MOR tells us that this capital was transferred to the landowners Savida and Georgiades in 1894, when the finds were divided. During a visit to the Dali Museum in Cyprus, the capital could be reassigned with the help of the photograph. Previously, this capital had been recovered from the staircase of a house in Nisou in 1987.[32] Masson – Hermary 1988, on the other hand, state that capital no. 12 should be in the Kunsthistorisches Museum Vienna. In the same way Alfred Bernhard-Walcher confirms: "The capital was acquired in July 1895 by Max Ohnefalsch-Richter with the statement "from the Acropolis of Idalion (eastern part)".[33] A comparison with MOR's photograph no. 12 shows that it looks very different from the capital which Masson – Hermary 1988 designate as no. 12. The description from MOR also does not correspond with the illustration in Masson – Hermary 1988. Since the lower two volutes should be broken off, fig. 7 in Masson – Hermary 1988 cannot possibly be capital no. 12. After comparing the photographs of MOR, it turned out that Masson – Hermary 1988 actually shows capital no. 8 of the finds listed in the typescript. For capital no. 8, MOR writes that it probably got sent to Philadelphia. He does not state why. However, capital no. 8 is present in Vienna at the Kunsthistorisches Museum[34] (fig. 7a–b). Thus, Masson – Hermary 1988 are not wrong in claiming that the

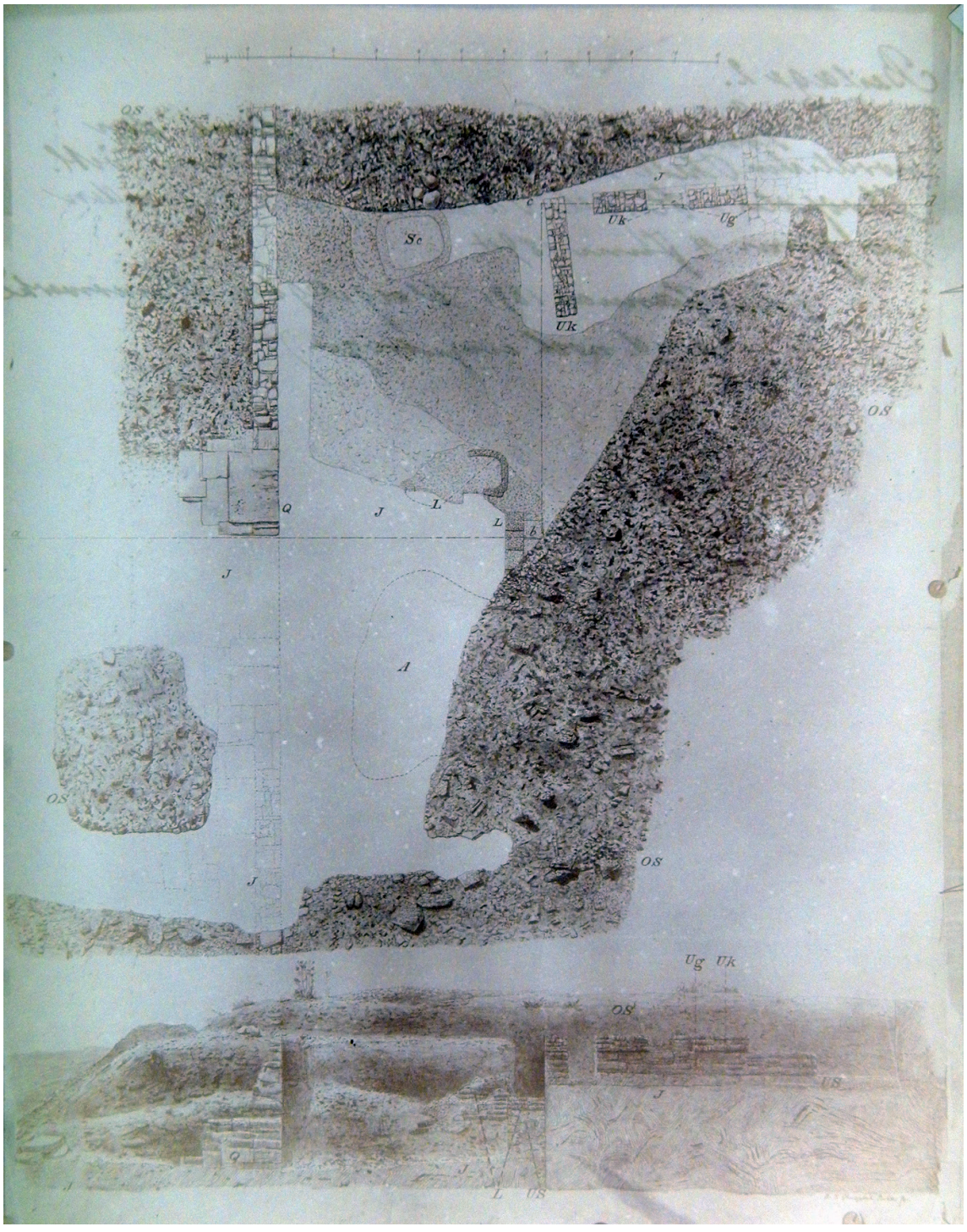


Fig. 4: Detailed plan of the walls of N2. MOR inserted this plan in a smaller scale into the plan of the acropolis (fig. 2–3).

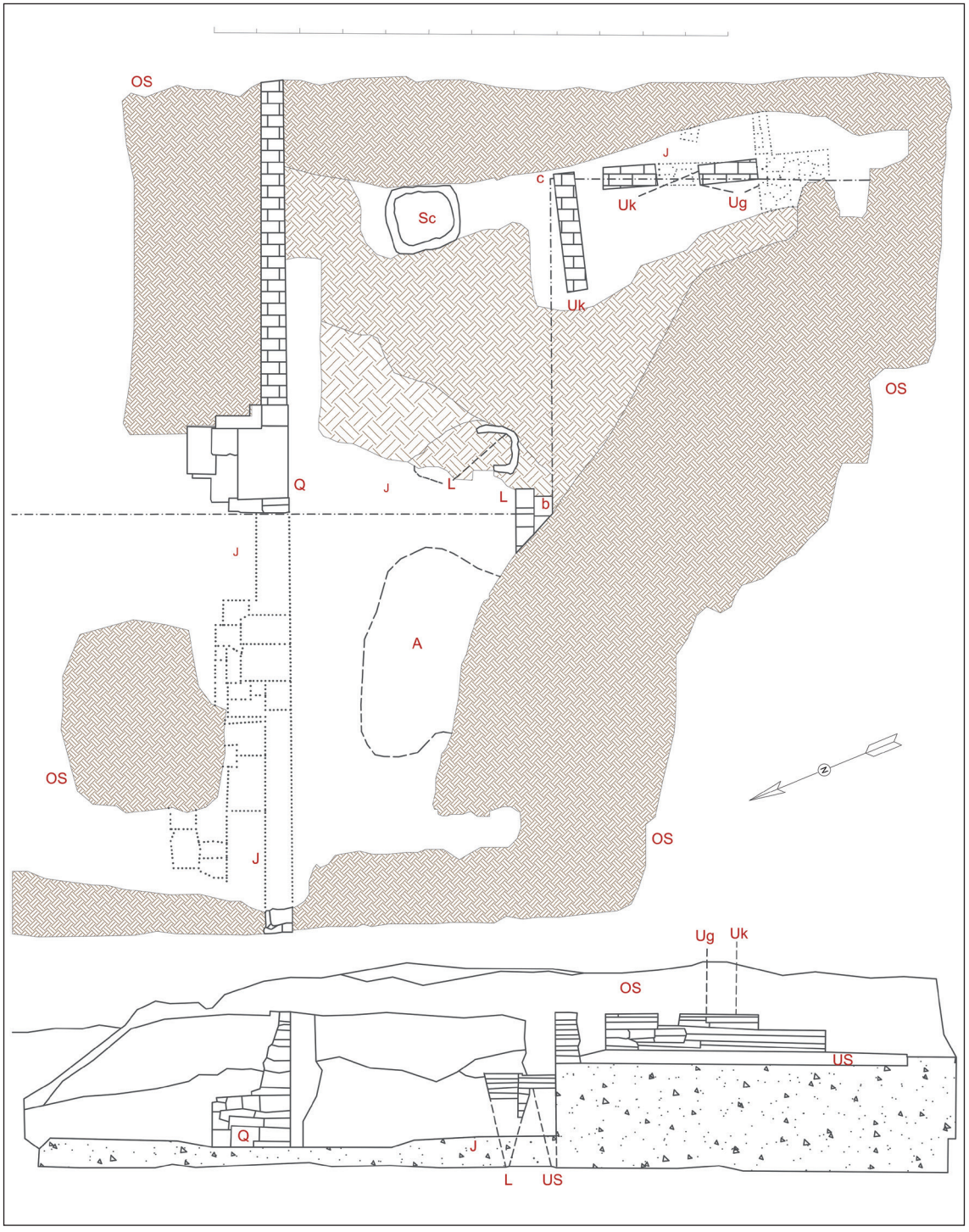


Fig. 5: Digitized plan of N2 with the ash layer marked by an "A". Ground plan above and cross-section below.

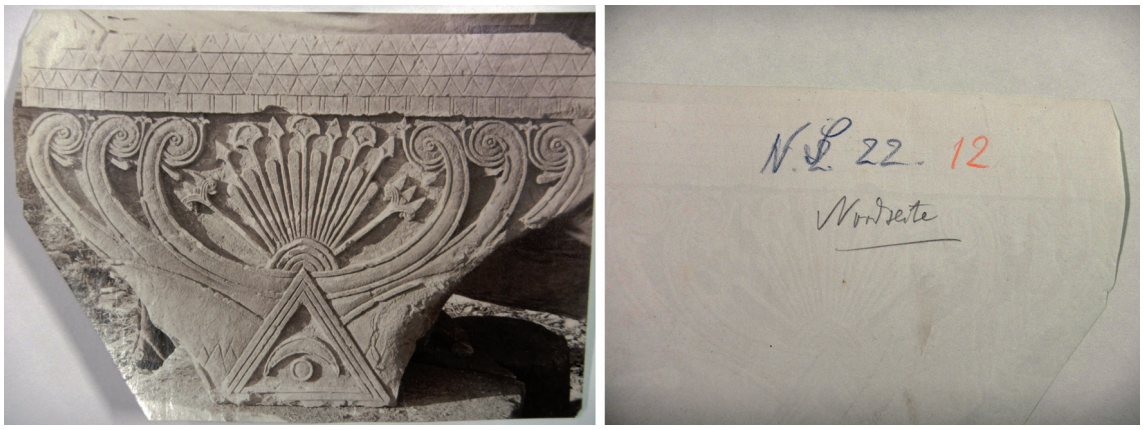


Fig. 6: a–b: Front- and backside of the photograph "MOR N. S. 22" depicting capital no. 12, nowadays stored in the Dali Museum, Cyprus. The two huge downward curved volutes in the lower part are broken off.



Fig. 7: a–b: Comparison of capital no. 8 in the Kunsthistorisches Museum Vienna and old photograph of capital no. 8 made by MOR or Dörpfeld from the eastern acropolis. Like capital no. 12, it has the typical Phoenician palmette, which is formed by six volutes and surrounds a vegetal fan, as well as the triple triangle with sun and crescent moon and an imitated abacus.

piece on the photo came to Vienna, but it is capital no. 8 and not capital no. 12, which is exhibited in the Dali Museum.

Many of the finds, especially from the excavation in 1894, arrived in Berlin and came to Russia after the Second World War. Therefore, the catalogue of the documentation of losses in Berlin has been consulted.[35] In this catalogue, 19 limestone objects can be reassigned to the eastern acropolis excavation. By matching the entries in the find lists of the typescript, 12 objects matched up. Some finds from Idalion, which could be relevant for the cult place no. 8, demonstrably reached the Pushkin State Museum of Fine Arts in Moscow in 1945.[36] Reviewing the catalogue entries of the Pushkin Museum, so far 9 objects could be reassigned to the excavation on the eastern acropolis. These are 5 fragments of terracotta statues and 4 limestone statuettes. All 9 objects from the Pushkin catalogue could be matched with the find numbers of MOR. Particularly gratifying was the attribution of five terracotta fragments in Moscow only known to originate from Idalion but with no further information. By comparing photographs from MOR, those pieces were attributed to the sanctuary of a female deity. These are e.g. MOR TK 252,[37]



Fig. 8: Collective depiction of larger and smaller terracotta objects found by MOR on the "northside" of the acropolis, as the note on the back of the photo states. One can see the name of the photo – III.4 – as well as the Arabic numbers for each object.

MOR TK 254,[38] and MOR TK 240[39] in the find lists (fig. 8). The search for possible finds from the sanctuary in private collections and museums continues. The next stage, which has already commenced, is to sift through the Cypriote finds from the magazine of the Antikensammlung in Berlin to get a better overview over the preserved inventory.

Notes

[1] The research and publication of the unpublished manuscript and the associated typescript for the sanctuary, is the focus of my doctoral thesis, which is supervised by Prof. Dr. Stephan G. Schmid (Humboldt-Universität zu Berlin), Prof. Dr. Andreas Scholl (director of the Antikensammlung, Staatliche Museen zu Berlin) and Prof. Dr. Giorgos Papasavvas (University of Cyprus). I especially thank Prof. Dr. Andreas Scholl and Prof. Dr. Georg Plattner (director of the Antikensammlung, Kunsthistorisches Museum Wien) for their kind permission to reproduce the illustrations. Likewise, I want to thank Dr. Will Leveritt (University of Nottingham) for reviewing my English. All mistakes are my own.

[2] For a more detailed discussion of his life and work see Brönner – Ohnefalsch-Richter 2001, 228–236; Vaelske 2018; Schmid 2018, 53–113.

[3] Ohnefalsch-Richter 1894; Masson – Hermary 1988, 4; Brönner – Ohnefalsch-Richter 2001, 232–233. 236–244.

[4] The Syro-Phoenician Astarte has much in common with the Greek Aphrodite, as for example the dove was a sacred bird of both, and as both deities of love deal with fertility. It is difficult to separate the Syro-Phoenician Astarte from the Cypriot Goddess and the Greek Aphrodite. Also, another deity, the Egyptian goddess Hathor played a role in the votive offerings in Cypriote sanctuaries. She was equated to the Cypriot Goddess, who later was identified with the Greek Aphrodite. For a more detailed discussion see Smolenkova 2014, 422; Ulbrich 2010, 193; Ulbrich 2008, 53–63; Seifert 2009, 19 f.; Schröter 2009, 46 f.; Ulbrich 2005, 199 f.; Brehme 2002, 169.

[5] Ohnefalsch-Richter 1908a, E. Die gräkophönikische Zeit in Idalion. A. die geschichtliche Stadt Idalion a) 49

[6] Ohnefalsch-Richter 1893, 19, no. 31. Because spot no. 7 was not profitable enough, he stopped the investigation. But MOR suspects that no. 7 might have belonged to no. 8, which is also supported by Anja Ulbrich. Ulbrich thinks it could be a small branch sanctuary: Ulbrich 2008, 318, Anm. 29; Ohnefalsch-Richter 1888a, 41; Ohnefalsch-Richter 1893, 237.

[7] Ohnefalsch-Richter 1908b, 1. Die topographische Arbeit im Gebiete der alten Stadt und ihrer nächsten Umgebung, 3.; Ohnefalsch-Richter 1888b, 55.

[8] Ohnefalsch-Richter 1893, 18, no. 29.

[9] Lullies 1988a, 10.

[10] Ohnefalsch-Richter 1891, IX; Ohnefalsch-Richter 1894; Masson – Hermary 1988, 4.

[11] Herrmann 1988.

[12] Ohnefalsch-Richter 1908a, 2. Beschreibung der Ausgrabungsstellen und Fundumstände an der Hand der Grundrisse und Abbildungen A. Die Hauptstelle am Südrande der Akropolis S1, 10.

[13] Dörpfeld 1891, 89–91; Recke 2012, 88 with note 4.

[14] Schmid et al. 2017, 247; Schmid et al. 2018, 239–241.
[15] Ohnefalsch-Richter 1908a, 2. Beschreibung der Ausgrabungsstellen und Fundumstände an der Hand der Grundrisse und Abbildungen A), 10.
[16] Ohnefalsch-Richter 1908a, 2. Beschreibung der Ausgrabungsstellen und Fundumstände an der Hand der Grundrisse und Abbildungen A), 10, 28.
[17] Ulbrich 2001, 98 f.
[18] Zahn was initially a freelancer in the Antikensammlung Berlin and later became director of the collection: Lullies 1988b, 175 f.
[19] Ohnefalsch-Richter 1908a.
[20] Ohnefalsch-Richter 1908b.
[21] Pilides 2012, 22 f.; Pilides et al. 2018, 195 f.
[22] Ohnefalsch-Richter 1908b, E. Die gräcophönikische Zeit in Idalion γ.) Die Festungswerke von Idalion, deren Bauart, deren Bauherren und Bauausführer, 63.
[23] Ohnefalsch-Richter 1908a, 2. Beschreibung der Ausgrabungsstellen und Fundumstände an der Hand der Grundrisse und Abbildungen A), 9.
[24] Bronze tablet of Idalion: Hill 1940, 153–155; Masson 1961, 235–244, no. 217, pls. 34–36.
[25] Appearance of coinage of 'Oziba'al King of Kition and Idalion: Gaber 1995, 35.
[26] Ulbrich 2008, 26.
[27] Ohnefalsch-Richter 1908a, 2. Beschreibung der Ausgrabungsstellen und Fundumstände an der Hand der Grundrisse und Abbildungen A), 10–12.
[28] MOR gives a summary of these objects: Ohnefalsch-Richter 1894.
[29] The excavator refers to these capitals as 'Votivstelen/votive stelae' or 'Votivkapitelle/votive capitals'. In research, they are also referred to as "proto-Aeolic" capitals: http://arachne.uni-koeln.de/item/objekt/109899 (access on 10th October 2018) or voluted capitals with Phoenician palmettes: Bernhard-Walcher 1999, 210.
[30] For other examples see: Schmid et al. 2018, 261–263; Schmid et al. 2017, 247–248 with fig. 7.
[31] Ohnefalsch-Richter 1908a, 3. Beschreibung der Funde A. Steinskulpturen a. Die Votivstelen, 6.
[32] Karageorghis 1988, 796.
[33] Masson – Hermary 1988, 9 with note 39, pl. IV, fig. 7; Bernhard-Walcher 1999, 209, cat. 103.
[34] Inv. I 717, Bernhard-Walcher 1999, 208–210.
[35] Miller 2005.
[36] Akimova et al. 2014a; Akimova et al. 2014b; Akimova 2010.
[37] Inv. AT 4408: Akimova u.a. 2014b, 429–430 cat. 368.
[38] Inv. AT 3332: Akimova u.a. 2014b, 461, 463 cat. 406.
[39] Inv. AT 3439: Akimova u.a. 2014b, 534 cat. 491.

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Fig. 1: Antikensammlung, Staatliche Museen zu Berlin – Preußischer Kulturbesitz – Inv. Z1122–1123. – Fig. 2: Antikensammlung, Staatliche Museen zu Berlin – Preußischer Kulturbesitz – Inv. Z1122–1123. – Fig. 3: by author (reproduction of Abb. 02). – Fig. 4: Antikensammlung, Staatliche Museen zu Berlin – Preußischer Kulturbesitz – Inv. Z1122–1123. – Fig. 5: by author (reproduction of Abb. 04). – Fig. 6a: Antikensammlung, Staatliche Museen zu Berlin – Preußischer Kulturbesitz – Inv. Z 1120. – Fig. 6b: Antikensammlung, Staatliche Museen zu Berlin – Preußischer Kulturbesitz – Inv. Z 1120. – Fig. 7a: KHM-Museumsverband – Inv. I 717. – Fig. 7b: Antikensammlung, Staatliche Museen zu Berlin – Preußischer Kulturbesitz – Inv. Z1120. – Fig. 8: Antikensammlung, Staatliche Museen zu Berlin – Preußischer Kulturbesitz – Inv. Z 1121.

References

Akimova 2010

L. I. Akimova, Bestand, Zustand und Wiederherstellungsprozess der verlagerten antiken Kunstschätze im Staatlichen Museum für Bildende Künste A. S. Puschkin, in: G. Schauerte (ed.), Archäologie des Krieges. Archäologische Sammlungen der Staatlichen Museen zu Berlin und des Staatlichen Puschkin-Museums Moskau; Erforschung und Untersuchung, Restaurierung und Konservierung archäologischer Objekte; Kolloquium aus Anlass der Ausstellung "Archäologie des Krieges. Rückkehr aus dem Nichts" 5.–6. 10. 2005, Staatliches Museum der Bildenden Künste A. S. Puschkin, Moskau = Archeologija vojny (Berlin 2010) 20–27.

Akimova et al. 2014a

L. I. Akimova – D. A. Kalinichev – O. Y. Samar – V. V. Smolenkova (eds.), The Art of Ancient Cyprus in the Pushkin State Museum of Fine Arts 1 (Moscow 2014).

Akimova et al. 2014b

L. I. Akimova – D. A. Kalinichev – O. Y. Samar – V. V. Smolenkova (eds.), The Art of Ancient Cyprus in the Pushkin State Museum of Fine Arts 2 (Moscow 2014).

Bernhard-Walcher 1999

A. Bernhard-Walcher, Kalksteinskulpturen. Katalognummern 76–103, in: W. Seipel (ed.), Die Sammlung zyprischer Antiken im Kunsthistorischen Museum, Sammlungskataloge des Kunsthistorischen Museums Wien 2 (Vienna 1999) 165–210.

Brehme 2002

S. Brehme, Kalksteinplastik. Zypro-archaisch, Zypro-klassisch und spätere Perioden, in: S. Brehme – M. Brönner – V. Karageorghis – G. Platz-Horster – B. Weisser (eds.), Antike Kunst aus Zypern. Antikensammlung, Museum für Vor- und Frühgeschichte, Münzkabinett (Berlin 2002) 160–174.

Brönner – Ohnefalsch-Richter 2001

M. Brönner – Max Ohnefalsch-Richter, Der letzte Abschnitt seines Lebens, ActaPraehistA 33, 2001, 227–251.

Dörpfeld 1891
W. Dörpfeld, Sammlung der verkäuflichen Photographien des Instituts in Athen, AA 1891, 74–91.
Gaber 1995
P. Gaber, The History of Idalion. A History of Interaction, in: P. W. Wallace (ed.), Visitors, Immigrants, and Invaders in Cyprus (New York 1995) 32–39.
Herrmann 1988
K. Herrmann, Wilhelm Dörpfeld, in: R. Lullies – W. Schiering (eds.), Archäologenbildnisse. Porträts und Kurzbiographien von Klassischen Archäologen in deutscher Sprache, Schriften von Reinhard Stupperich 32 (Berlin 1988) 112–113.
Hill 1940
G. Hill, A History of Cyprus. To the Conquest by Richard Lion Heart 1 (Cambridge 1940).
Karageorghis 1988
V. Karageorghis, Chroniques de fouilles et découvertes archéologiques à Chypre en 1987, BCH 112, 1988, 793–855.
Lullies 1988a
R. Lullies, Adolf Furtwängler, in: R. Lullies – W. Schiering (Hrsg.), Archäologenbildnisse. Porträts und Kurzbiographien von Klassischen Archäologen in deutscher Sprache, Schriften von Reinhard Stupperich 32 (Berlin 1988) 110–111.
Lullies 1988b
R. Lullies, Robert Zahn, in: R. Lullies – W. Schiering (Hrsg.), Archäologenbildnisse. Porträts und Kurzbiographien von Klassischen Archäologen in deutscher Sprache, Schriften von Reinhard Stupperich 32 (Berlin 1988) 175–176.
Masson 1961
O. Masson, Les Inscriptions chypriotes syllabiques, École française d'Athènes. Études chypriotes 1 (Paris 1961).
Masson – Hermary 1988
O. Masson – A. Hermary, Les Fouilles d'Ohnefalsch-Richter à Idalion en 1894, CahCEC 10(2), 1988, 3–14, Pl. I–VI.
Miller 2005
M. Miller (ed.), Skulpturen, Vasen, Elfenbein und Knochen, Goldschmuck, Gemmen und Kameen. Staatliche Museen zu Berlin, Preußischer Kulturbesitz, Dokumentation der Verluste 5 Antikensammlung 1 (Berlin 2005).
Ohnefalsch-Richter 1888a
M. Ohnefalsch-Richter, Topographical Studies in Cyprus. District II. Idalion. Ancient Idalion and Neighbourhood, The Owl. Science, Literature and Art 6, 1888, 41–47, Pl. 1–2.
Ohnefalsch-Richter 1888b
M. Ohnefalsch-Richter, Topographical Studies in Cyprus. District II – Idalion. Ancient Idalion and Neighbourhood, The Owl. Science, Literature and Art 7, 1888, 54–56.
Ohnefalsch-Richter 1891
M. Ohnefalsch-Richter, Die antiken Cultusstätten auf Kypros (Dissertation Universität Leipzig 1891).

Ohnefalsch-Richter 1893
M. Ohnefalsch-Richter, Kypros, die Bibel und Homer. Beiträge zur Cultur-, Kunst-, und Religionsgeschichte des Orients im Alterthume mit besonderer Berücksichtigung eigener zwölfjähriger Forschungen und Ausgrabungen auf der Insel Cypern, Textband (Berlin 1893).

Ohnefalsch-Richter 1894
M. Ohnefalsch-Richter, Excavations in Cyprus for the Berlin Museum, The Times 34, 1894, 415. 7.

Ohnefalsch-Richter 1908a
M. Ohnefalsch-Richter, I. Idalion. Das Aphroditeheiligtum auf der östlichen Akropolis. Staatliche Museen, Preußischer Kulturbesitz. Z1112 Bd. 2 (Archiv der Antikensammlung, Berlin).

Ohnefalsch-Richter 1908b
M. Ohnefalsch-Richter, II. Idalion. Die topographische Arbeit im Gebiete der alten Stadt und ihrer nächsten Umgebung. Staatliche Museen, Preußischer Kulturbesitz. Z1112 Bd. 1 (Archiv der Antikensammlung, Berlin).

Pilides 2012
D. Pilides, From Treasure Hunting to Systematic Excavation, in: N. Papadimitriou – D. Pilides (eds.), Ancient Cyprus. Cultures in Dialogue. Exhibition Catalogue, Brussels 31. 10. 2012–17. 02. 2013 (Nicosia 2012) 22 f.

Pilides et al. 2018
D. Pilides – M. Ohnefalsch-Richter, Der rechtliche Rahmen und das Cyprus Museum, in: S. G. Schmid – S. G. Horacek (eds.), "I don't know what am I myself, it is so very difficult to explain." Max Ohnefalsch-Richter (1850–1917) und die Archäologie Zyperns, SCB 1 (Berlin 2018) 195–212.

Recke 2012
M. Recke, Deutschland und das antike Zypern. Beiträge zur Geschichte einer archäologischen Disziplin, CahCEC 42,1, 2012, 87–116.

Schmid 2018
S. G. Schmid, Max, Magda und Hermann Ohnefalsch-Richter: Beiträge zu biographischen Flickenteppichen, in: S. G. Schmid – S. G. Horacek (eds.), "I don't know what am I myself, it is so very difficult to explain." Max Ohnefalsch-Richter (1850–1917) und die Archäologie Zyperns, SCB 1 (Berlin 2018) 53–128.

Schmid et al. 2017
S. G. Schmid – S. G. Horacek, A Head Definitely not from Rantidi. And a Tribute to Olivier Masson, CahCEC 47, 2017, 239–252.

Schmid et al. 2018
S. G. Schmid – S. G. Horacek, Idalion, in: S. G. Schmid – S. G. Horacek (eds.), "I don't know what am I myself, it is so very difficult to explain." Max Ohnefalsch-Richter (1850–1917) und die Archäologie Zyperns, SCB 1 (Berlin 2018) 239–263.

Schröter 2009
M.-G. Schröter, Die phönizische Astarte – Schwester der kyprischen Göttin, in: M. Seifert (ed.), Aphrodite. Herrin des Krieges, Göttin der Liebe (Mainz am Rhein 2009) 46–62.

Seifert 2009

M. Seifert, Aphrodite – Eine Liebesgöttin auf einer langen Reise, in: M. Seifert (ed.), Aphrodite. Herrin des Krieges, Göttin der Liebe (Mainz am Rhein 2009) 14–26.

Smolenkova 2014

V. V. Smolenkova, Idalion, in: L. I. Akimova – D. A. Kalinichev – O. Y. Samar – V. V. Smolenkova (eds.), The Art of Ancient Cyprus in the Pushkin State Museum of Fine Arts 2 (Moscow 2014) 418–535.

Ulbrich 2001

A. Ulbrich, An Archaeology of Cult? Cypriot Sancturies in 19th Century Archaeology, in: V. Tatton-Brown (ed.), Cyprus in the 19th Century AD. Fact, Fancy and Fiction. 22nd British Museum Classical Colloquium 1998-12 (Oxford 2001) 93–106.

Ulbrich 2005

A. Ulbrich, The Worship of Anat and Astarte in Cypriot Iron Age Sanctuaries, in: J. Clarke (ed.), Archaeological Perspectives on the Transmission and Transformation of Culture in the Eastern Mediterranean, Levant supplementary series 2 (Oxford 2005) 198–206.

Ulbrich 2008

A. Ulbrich, Kypris. Heiligtümer und Kulte weiblicher Gottheiten auf Zypern in der kyproarchaischen und kyproklassischen Epoche (Königszeit), AOAT 44 (Münster 2008).

Ulbrich 2010

A. Ulbrich, Images of Cypriot Aphrodite in Her Sanctuaries During the Age of the City-Kingdoms, in: A. C. Smith – S. Pickup (eds.), Brill's Companion to Aphrodite (Leiden 2010) 165–193.

Vaelske 2018

V. Vaelske, "[…] an ignorant, intrusive, and superserviceable busybody." Über den archäologischen Parvenü Max Ohnefalsch-Richter, in: S. G. Schmid – S. G. Horacek (eds.), "I don't know what am I myself, it is so very difficult to explain." Max Ohnefalsch-Richter (1850–1917) und die Archäologie Zyperns, SCB 1 (Berlin 2018) 499–510.

3D Documentation and Interpretation of Ancient Buildings

Panel 12.8

Visualizing Culture: What Can Go Wrong Behind the Scenes? Terrestrial Laser Scanning of an Early Christian Basilica on the Island of Kalymnos

Maria Papaioannou – Peter Dare – Mihalis Koutellas*

Abstract

Terrestrial laser scanning is one of the most advanced technological methods currently employed in creating three-dimensional models of artifacts, buildings and sites. Data acquisition and analysis is used for study and archival purposes and for reconstruction projects associated with the preservation, conservation, and protection of cultural heritage, whilst researchers and the general public are able to access the material from around the globe. This digital database can also be used to create 3D visualization theories when combined with cultural elements sourced from archaeological, textual, historical and ethnographic data. The end result allows a better understanding of society and culture. However, most are unaware of the technical problems associated with such projects as they are only presented with the end product: the final model. The data collecting and analyses processes can be time consuming and fraught with technological challenges. In an effort to create a digital archival record of the early Christian basilica of Christ of Jerusalem dating to the 5th–6th centuries on the Greek island of Kalymnos, we present highlights of what goes on "behind the scenes" during data acquisition and analysis. In addition to the technological challenges, the scope of this project is to employ a virtual approach to the study of the monument by incorporating cultural elements to create a 3D extended reconstruction of the site. Such a model will enhance our knowledge concerning the various activities that contributed to the island's wealth and the involvement of the Church in the economic life of the island.

Introduction

The application of Terrestrial Laser Scanning (TLS) to the study of monuments and sites that have been investigated using traditional empirical methods affords a unique opportunity for a reinvestigation through a collaborative interdisciplinary approach.[1] The 5th century early Christian Basilica of Christ of Jerusalem on the Greek island of Kalymnos was selected for this study as it is one of the best-preserved and well-documented monuments of this period, in an area that was once the political and religious centre of the island (fig. 1).[2] TLS was chosen as an exploratory tool because it is a non-invasive and highly accurate surveying method. The instrument used, a Trimble TX5, scans and generates a dense "point cloud," a colour image which is made up of billions of points

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Fig. 1: Remains of the early Christian Basilica of Christ of Jerusalem on Kalymnos.

and is viewed in 3D, unlike a digital photograph which produces only colour information in 2D. The raw data collected is processed using SCENE, a software package, to create a reality-based 3D digital model, from which measurements are used to produce topographical maps, plans, cross-sections, elevations, line drawings, and ortho-images. The objective was to generate a 3D digital archival record of a vastly larger and more accurate volume of measurements of the basilica for documentation, conservation, preservation, restoration and interactive visualization purposes.[3] Thus Scholars and professionals from around the globe can access this digital record for research and educational purposes.[4]

For this paper, the intent was to create an extended reconstruction of a digital 3D model of the basilica and associated subsidiary structures by introducing cultural elements obtained from archaeological, textual, and ethnographic data.[5] This would allow for the display of various activities that took place at the site and contributed to its economic development and that of the island, in general, during Late Antiquity.

The scanning process however was challenging as numerous technological problems were encountered while collecting and analysing the data: mechanical failure, software glitches, and loss of raw and processed data.[6] As a result of these drawbacks, recommendations are made for the manufacture of more robust equipment for use at remote and isolated archaeological sites and guidelines for easy access to technical support through one telephone number valid world-wide. An introduction to the site and the laser scanning procedure are presented below followed by a proposal for an extended reconstruction of a 3D model of the site that includes cultural elements for research and educational purposes.

Case Study: The 5th Century Basilica of Christ of Jerusalem on Kalymnos (fig. 1)

The basilica of Christ of Jerusalem was selected for study, as it is the best-preserved early Christian basilicas on the island, that lies within the ancient sanctuary of Apollo Dalion. This site was once the political and religious centre of the island and appears to have maintained its significance into Late Antiquity (4th to the 7th centuries), for it became an important Christian centre on the island. The basilica was investigated in 1854–55 by the British archaeologist Charles Newton, and in 1937 by the Italian epigraphist Mario Segre.[7] In fact, both the basilica and its mosaic pavements have been the subject of numerous studies over the last 152 years,[8] however, the first systematic excavations did not begin until the 21st century by the Greek archaeologist of Kalymnos, Mixalis Koutellas, under the auspices of the Ephorate of the Dodekanessa. In all three instances (Newton, Segre, and Koutellas) the monument was investigated using traditional (manual) empirical methods of excavation and documentation.[9] Excavations by Koutellas focused on the basilica and associated subsidiary structures and service areas, and exploration of the surrounding area comprising approximately 10,000 sqm (fig. 2).[10]



Fig. 2: Highlighted Google Earth map of the archaeological remains of the pilgrimage site with the basilica of Christ of Jerusalem.

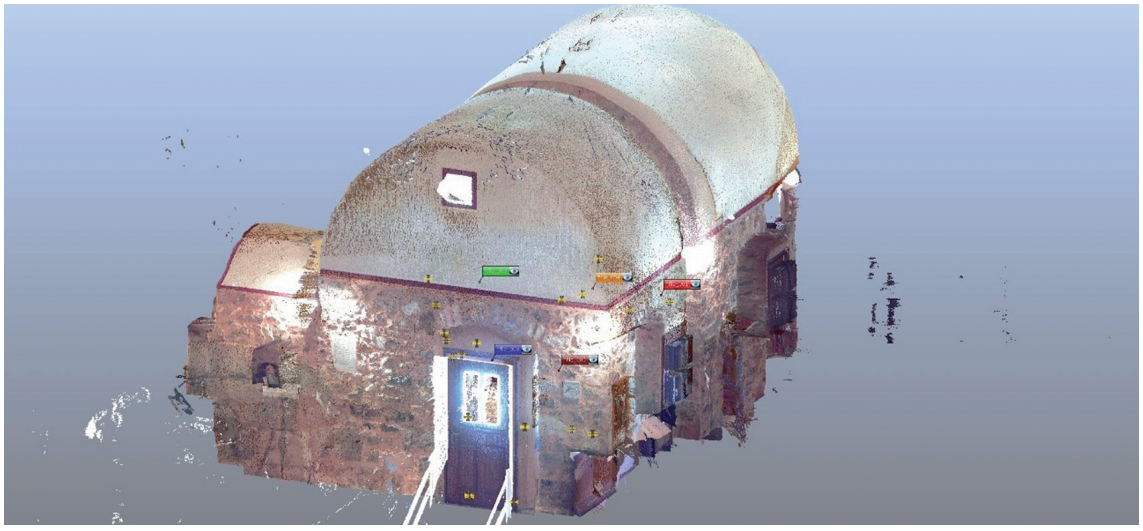


Fig. 3: Point cloud (incomplete) of the exterior view of the Chapel of Ypakoue.

The site was transformed into an archaeological park and features the early Christian basilica complex that includes: a baptistery, cooking facilities, a possible burial area and service areas, a triconch basilica of Saint Sophia to the east, an ancient roadway to the west, and a series of chambers and remains of a lime pit to the south, an area for industrial activity associated with the construction of the early Christian structures.[11] According to Newton's account, numerous other apsidal and rectangular structures were erected in this area, which he thoroughly destroyed as "the labor of this work of demolition was very considerable."[12]

The TLS project focused on scanning the basilica and ancillary buildings connected to the structure. Thus, the small church of Panaghia Ypakoui at the south-east corner of the basilica, constructed in 1902 and currently in use, was also scanned. It replaced a previous existing small chapel built in the Byzantine period. The chapel was constructed from spolia originating from the basilica and was included in the project for archival purposes.[13] The resulting high resolution digital data bank collected will be used for displaying and presenting spatial relationships of the chapel in a 3D surface model for preservation and conservation purposes (fig. 3).

Fieldwork

A quantitative approach was used to conduct the study, by applying TLS and appropriate software to collect and process data. A Trimble TX5 was chosen, a non-invasive small and portable surveying, laser-based instrument that sends out millions of laser pulses while slowly rotating in a 360 degrees horizontal circle and +/– 90 degrees vertically. Each pulse strikes an object and is reflected back to the scanner, which determines

the 3D coordinates (x, y, z) of every point to an accuracy of a few millimetres. The returned pulses create a grid, with the grid size varying from sub-millimetre to a few centimetres. Special software (SCENE) is used to generate a dense "point cloud" that is a colour image, which is made up of billions of points and is viewed in 3D, unlike a digital photograph which produces only colour information in 2D. From a distance, the point cloud looks almost photorealistic, while close-up it resembles just a series of dots.[14]

The basilica was scanned in sections and spheres were setup as a boundary marker for stitching the images (a process called registration) in order to produce a coloured point cloud image of the site using SCENE software and Trimble RealWorks v7.2 software. A Global Positioning System (GPS) receiver was also used to enable the point cloud to be tied to the national geodetic coordinate system of Greece (ΕΓΣΑ87).

During the first day (day 1) in the field, the interior of the chapel of Ypakoui was scanned; eight scans were required to complete data acquisition. However technical problems were encountered and it was therefore necessary to rescan the interior. Data analysis and processing of the point cloud of the interior was completed with difficulties (fig. 4), but the point cloud view of the exterior was not completed as the red roof is missing (fig. 3). Not all set ups of the exterior scans of the chapel and the aerial and angle views of the basilica have been processed (figs. 5, 6).

Technical problems and major hardware issues were encountered near the end of day 1, while scanning the exterior of the basilica. The bright sunlight for example made it difficult to view the scanner screen so a temporary covering (in this case a plastic bag) was required to cover the instrument. Additional problems were met while scanning the mosaic pavements and the east side of the basilica during the morning and midday, as some sections of the apse were in the shade, whereas others were too bright or not visible at all. Scanning of the mosaics required direct sunlight from above in order to avoid shadows and the apse was rescanned in the late afternoon when the entire east side of the basilica was in the shade.



Fig. 4: Point cloud, interior view of the Chapel of Ypakoue.

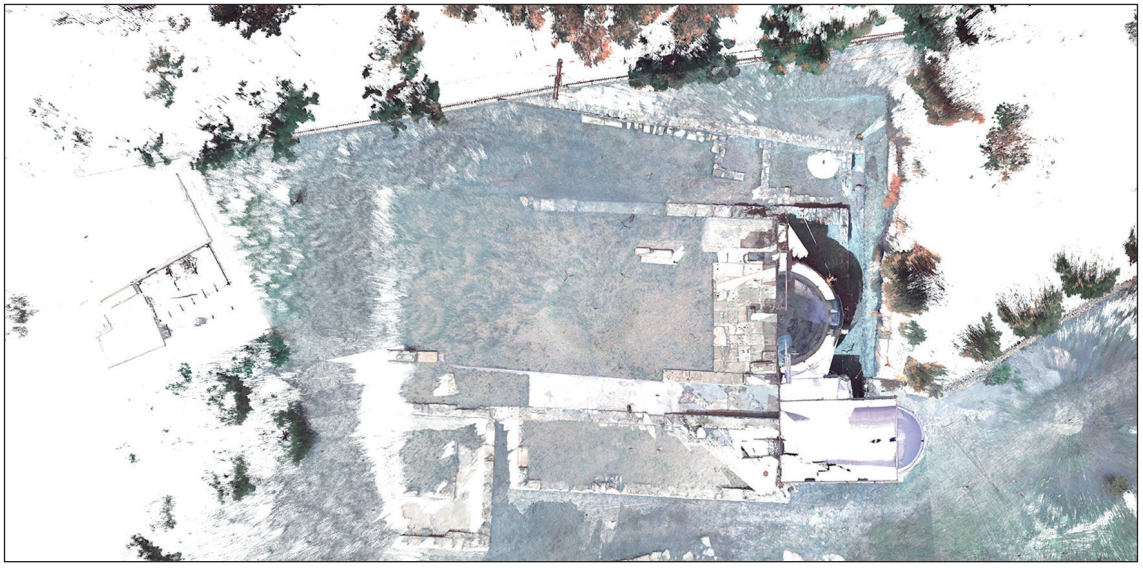


Fig. 5: Point cloud (incomplete) of the basilica of Christ of Jerusalem, top view.

Another mechanical problem occurred after the first setting was scanned and processed successfully. The scanning results from the second scan were inadequate and the third setting was unsuccessful as the scanner ceased to function and the message "scanner operation failure" appeared on the screen. A series of SOS messages were sent to Trimble dealers in Greece, Canada, and US for assistance. Additional problems were encountered while installing the new program, as the message "error while installing new firmware program" appeared on the screen, and many hours and sleepless nights were spent testing the software and processing the raw data to confirm that the program worked. In the end though, the scanning project was completed, taking of course much longer than what had been anticipated.[15] In sum, problems of this nature can in most instances be readily resolved if appropriate guidelines for easy access to technical support were available, such as a telephone number valid world-wide with 24-hour technical support.

In total, 79 setups were required to scan the monument and six billion points were amassed within eight days. During the first six days, 69 medium resolution quick scans, of 15 minutes each, were conducted, and on days 7 and 8 a series of ten one-hour, high resolution scans. Rescanning at a higher resolution reveals details of smaller features that may have been missed (such as mason marks) and produces clearer images of the letters found on the inscribed blocks used to construct the basilica.

Since TLS collects an enormous amount of data, which far outstrips that which is collected by traditional surveying or photogrammetric techniques, this volume of data is difficult to manage and most computers are unable to store and process it at the same. A Dell Alienware laptop was purchased in 2016 for the project, but it too could not store and process the raw data concurrently. In fact, a malfunction of the laptop resulted in



Fig. 6: Point cloud (incomplete) of the basilica of Christ of Jerusalem and the Chapel of Ypakoue.

the loss of all data processed at the site, including aerial photographs and video taken with the drone, only the raw data was saved.[16]

OUTCOMES: Proposed 3D Visualization

Once processed, TLS data assists in preparing visualization theories, scientific models and an extended reconstruction of the basilica for study and display purposes, similar to the models produced for the site of Uruk. Technical models of urban structures from Uruk were created by adding texture, realistic lighting, and scientific details from excavation data, satellite imagery and geo-archaeological surveys. A multidisciplinary approach was used to contextualize these models (by adding cultural elements utilizing archaeological, textual, and ethnographic data) and create an extended reconstruction

depicting a specific religious ceremony of the Sumerian New Year in the 21st century BC. The intent was to reconstruct an ancient society and bring to life not just the architectural and landscape elements of a cityscape, but to demonstrate "how space was occupied and utilized, and present 'a glimpse of everyday life'".[17]

The basilica of Christ of Jerusalem on Kalymnos and its ancillary structures serve as an excellent case study for creating a similar, cultural visualization theory, but one which focuses on the day-to-day economic activities of a major pilgrimage centre in the 4th to 7th centuries. The material remains and the location of the site lend credence to the proposal that the early Christian basilica was part of a major Episcopal centre that featured: at least two church complexes of which one was a *Martyrium* (basilica of Saint Sophia), numerous service structures, possibly a bishop's residence, as well as housing for those involved with the function and maintenance of the site.[18] This hypothesis is further strengthened by the discovery of a 5th-century inscription that makes reference to an *economos,* a certain *Eygenios,* one who oversees the economic affairs of a bishopric.[19] The site is nestled at the crossroads of a main arterial east-west route and the mountain pass into the small fertile valley of Vathy to the west (fig. 7) and the prosperous early Christian town of Hellenika, a centre of trade and commerce, with its five basilicas.[20]

Such early Christian complexes became important religious and community centres, providing shelter and food for travellers, the poor and pilgrims, and also functioning

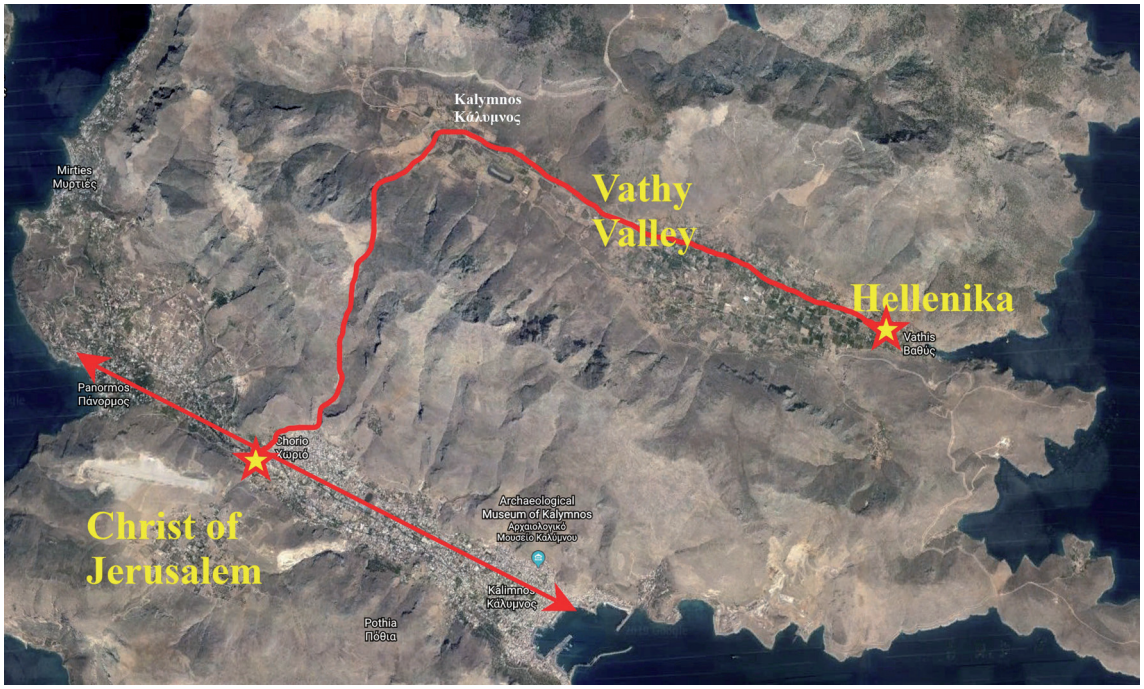


Fig. 7: Highlighted Google Earth map of sites: Christ of Jerusalem, Vathy Valley, Hellenika and associated basilicas.

as hospices and hospitals for the ill. To accommodate the public, a variety of facilities were constructed including lodges, baths, kitchens, and facilities for the storage of food and utensils, as well as for various economic pursuits such as wine and oil production, industrial activities and shops. Similar subsidiary structures adjoining major basilicas have been documented at other sites in Greece, and further afield in Jerusalem, Palestine, North Africa, Syria and in the rural settlements of Anatolia.[21]

One of the structural features of particular interest in the proposed visualization theory is the area Γ (17,35 × 4,35 m) attached to the south aisle of the basilica (fig. 8). It has been tentatively identified by the excavator as a possible *diakonikon* a space used for

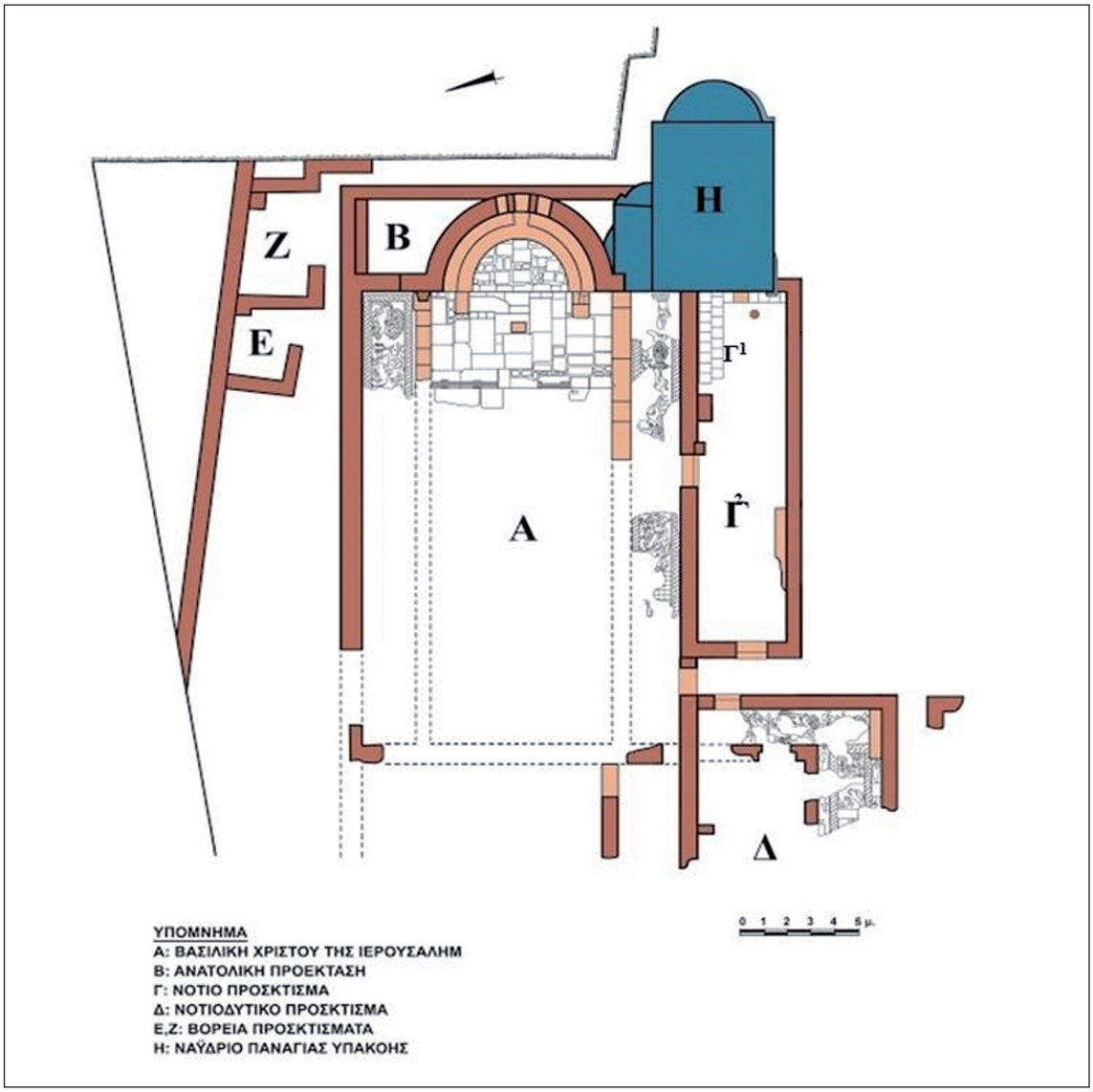


Fig. 8: Plan of early Christian basilica of Christ of Jerusalem, Kalymnos.

preparing the gifts for Liturgy and storage of associated implements based on literary accounts.[22] Alternatively, it may have functioned as a hospice, *xenodocheion,* a structure that also served as a shelter for travellers, pilgrims and envoys of bishops, and space for storing and preparing food.[23] No moveable artifacts however were found to support either theory. Therefore, in producing a 3D extended reconstruction of this space the architectural remains must be examined.

The structure was divided into two distinct areas defined by a narrow corridor: Γ^1 one to the east is defined by a terracotta tile floor and Γ^2 to the west.[24] In a domestic context, terracotta tile pavements were commonly associated with bathing areas, latrines, certain types of storage facilities, areas for food preparation, and in general for areas open to the sky.[25] Therefore this eastern part of the structure could have served as a service area for storage or preparation of food, an activity well documented in basilica complexes. Conversely the area to the west which featured a bench along the wall could have served as a rest area for pilgrims, a *xenodocheion,* but also used by the local community for various philanthropic pursuits of the church.[26] These different interpretations of the function of space Γ would ultimately influence its reconstruction. Would both spaces (Γ^1 and Γ^2) have shared the same roof, or would area Γ^1, defined by the terracotta floor tiles, have been roofless, reserved for the outdoor preparation of meals perhaps? If the area to the west, which featured a bench along its south wall, functioned as a *xenodocheion,* did it have a second story to accommodate pilgrims overnight?[27] We look forward to solving the answers to these and other questions, concerning the types of daily activities and the nature of the built environment, and to provide a glimpse into the economic life of an early Christian centre.

Conclusion

Despite the challenges associated with technological tools in documenting material remains, the end results are most promising. Digital data with the use of appropriate software packages can be used to create visualization projects (visualization theories, virtual reconstructions and interactive visualizations) for scholarly research, professional and educational purposes. When combined with cultural and historical knowledge they not only recreate the physical and built environments of a society but also display human activities, that is how space was utilized and populated. For the Early Christian Basilica of Christ of Jerusalem such a model will highlight the various economic pursuits and daily activities of this major pilgrimage centre and its contributions to the island's wealth and the involvement of the Church in the economic life of the island. Visualization projects therefore are but intermediary steps in the research process that facilitate in the interpretation of material remains and understanding of past cultures. They serve as a tool for addressing important research questions and hypotheses, concerning for example the formation of urban identities, urban development, or economic networks.

For professional and educational purposes an updated permanent digital archival record can be used to document changes in the stability and/or deterioration rate of a monument. In turn this would allow museum professionals and government agencies to take appropriate conservation and preservation measures, create education-awareness programs for the protection of cultural heritage, and enhance museum visitor experience for students and the public TLS therefore "is one of the most effective instruments in monitoring the remains of past human activities."[28]

Acknowledgements

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Notes

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[1] Pavlidis et al. 2007.

[2] Koutellas 2016.

[3] Tsingas et al. 2008; Scheiblauer et al. 2009; Haddad 2011; Núñez Andrés et al. 2012; Barber et al. 2014

[4] For deterioration of monuments, see Warscheid and Braams 2000; Dewey 1999.

[5] Uruk project, see Hageneuer 2014.

[6] No technical difficulties were encountered in 2016 while scanning the "Insula of Houses" at Abdera (Greece) an area of ca. 50 × 100 m that was scanned with 50 setups in three (10 hr) days.

[7] Newton 1883/1856; Serge 1938, 1944/45; Karabatsos 1994; Koutellas 2016, 47.

[8] Ragkavis 1854; Phlegel 1896; Reises 1913; Tarsouli 1948; Lazarides 1953; Pelekanidis 1974; Volanakis 1980; Assimakopoulou-Atzaka 1991; 2014, 45–46, 53; Koutellas 2006.

[9] Pavlidis et al. 2007.

[10] The project was funded by the local city council of Kalymnos and the Regional Economic Government Development Program of the Southern Aegean Islands 2000–2006, Koutellas 2009; 2016, 49.

[11] Koutellas 2006; 2016. The triconch basilica was probably a *martyrium.*

[12] Newton 1856, 27.

[13] Newton 1856, 25–27; Koutellas 2016.

[14] Tsingas et al. 2008; Barber et al. 2014; Chow 2014; Dare – Ahn 2014.

[15] Preliminary results of the Chapel of Ypakoue were presented at a poster session at the CHNT 21st Conference in Vienna, Nov. 2017.
[16] Dell laptop Alienware features: 1 TB 7200RPM; 32 Gb memory; Intel Core i7-6820HK; Quad-Core [4 CPUs], 8 MB Cache; Dynamically overclocked up to 4.1 GHz. Processing raw data to create orthophotos and fly-throughs is time consuming, and equipment malfunctions can occur that result in delays and the loss of many hours of work.
[17] Hageneuer 2014. Technical models are suitable for display in museum and exhibit areas.
[18] Possibly the various buildings destroyed by Newton 1856.
[19] ΕΠΙ ΕΥΓΕΝΙΟΥ ΟΙΚΟΝΟΜΟΥ ΕΤΕΛΙΩΘΗ ΤΟ ΕΡΓΟΝ, Koutellas 2016.
[20] Zisimou-Tryfonidi 2014, 178–196; Karabatsos 1994, 259–362; Koutellas 2003.
[21] At Paliambela, see Karavieri 2017; Halkidiki, Mesogai, and Lavriotiki, see Zisimou-Tryfonidi 2014; 2014; villa of Herodes Atticus at Eva Loukou, Papaioannou 2018, 350–351. 353–354.
[22] Identification based on location as mentioned in the *Testamentum Domini nostri Jesu Christi* and the "Apostolic Canons", see Koutellas 2016, 67.
[23] Some were simple rooms adjacent to a church, see Cilliers et al. 2002, 63; Zisimou-Tryfonidi 2014.
[24] The pavement in Γ² is destroyed, see Koutellas 2016, 66–69.
[25] Papaioannou 2003.
[26] Room with bench and domestic activities next to narthex of Knossos basilica, Zisimou-Tryphonidi 2014,100.
[27] The width of the walls (0.62 m) were sufficient to support a second storey, see Koutellas 2016.
[28] Haddad 2011, 117.

Image Credits

Fig. 1: M. Koutellas. – Fig. 2: Google Earth. – Fig. 3–6: by author. – Fig. 7: Google Earth. – Fig. 8 modified from Koutellas 2016, 77, eik. 6.

References

Assimakopoulou-Atzaka 1991
P. Assimakopoulou-Atzaka, "The Mosaic Pavements of the Aegean Islands During the Early Christian Period," XXXVIII Corso Di cultura sull' arte Ravennate e Bizantina, Ravenna (Ravenna 1991) 33–64.

Assimakopoulou-Atzaka 2014
Π. Ασημακοπούλου-Ατζακά, Τα ψηφιδωτά δάπεδα των νησιών του Αιγαίου, με έμφαση στα Δωδεκάνησα, κατά την Ύστερη Αρχαιότητα. Σχέσεις με τα ψηφιδωτά των προς Ανατολάς γειτονικών περιοχών, "*Αρχαιολογία και Τέχνη στα Δωδεκάνησα κατά την Ύστερη Αρχαιότητα, Πρακτικά ημερίδας στη μνήμη του Ηλία Κόλλια, Ρόδος 19 Νοεμβρίου 2011*", *ΕΥΛΙΜΕΝΗ ΣΕΙΡΑ Αυτοτελών Εκδόσεων* 2 (Ρέθυμνο 2014) 41–80.

Barber et al. 2014

D. M. Barber – W. A. Ross – D. Mills – P. Mills, Laser Scanning for Architectural Conservation, Journal of Architectural Conservation 12(1), 2014, 35–52.

Chow 2014

J. C. K. Chow, Multi-Sensor Integration for Indoor 3D Reconstruction (PhD Thesis University of Calgary 2014). <http://www.ucalgary.ca/engo_webdocs/DL/04.20399_JackyCKChow.pdf> (08. 06. 2020).

Cilliers et al. 2002

L. Cilliers – F. P. Retief, The Evolution of the Hospital from Antiquity to the End of the Middle Ages, Curationis 25/4, 2002, 60–66.

Dare – Ahn 2014

P. Dare – Y. Ahn, Terrestrial Laser Scanning: the 'New' Technology for Geomatics'. Presented at the National Surveyors' Conference "The Changing Tides of Technology", St. Andrews, NB, May 12, 2014.

Dewey 1999

C. C. Dewey, An Investigation into the Effects of an Herbicide on Historic Masonry, E-book, University of Pennsylvania (Philadelphia 1999).

Haddad 2011

N. A. Haddad, From Ground Surveying to 3D Laser Scanner: A Review of Techniques Used for Spatial Documentation of Historic Sites, Journal of King Saud University-Engineering Sciences 23, 2011, 109–118.

Hageneuer 2014

S. Hageneuer, The Visualization of Uruk. First Impressions of the First Metropolis in the World, International Conference on Cultural Heritage and New Technologies, Vienna, 2013, Proceedings, CHAT 18, 2014, 1–11.

Karabatsos 1994

V. Karabatsos, The Early Christian Churches of Kalymnos and Telendos, συλογικός τόμος Κάλυμνος-Ελληνορθόδοξος Ορισμός του Αιγαίου, Metropolis of Leros, Kalymnou and Astypalaias (Athens 1994) 269–277.

Karavieri 2017

V. Karavieri (ed.), The Early Christian Basilica of Arethousa in Macedonia I. Production, Consumption and Trade, Papers and Monographs of the Finnish Institute at Athens XXIII, 2017.

Koutellas 2003

M. Koutellas, Οι παλαιοχριστιανικές βασιλικές της Καλύμνου, CORPUS 49, 2003, 74–85.

Koutellas 2006

M. Koutellas, Κάλυμνος, Ιστορία – Αρχαιολογία – Πολιτισμός (Kalymnos 2006).

Koutellas 2009

M. Koutellas, Η ανάδειξη του αρχαιολογικού χώρου του Χριστού της Ιερουσαλήμ στην Κάλυμνο, Καλυμνιακά Χρονικά 18, 2009, 33–55.

Koutellas 2016

M. Koutellas, Η Παλαιοχριστιανική Βασιλική του Χριστού της Ιερουσαλήμ στην Κάλυμνο, Καλυμνιακά Χρονικά 21, 2016, 45–92.

Lazarides 1953

P. Lazarides, Συμβουλή εις την Μελέτην των Παλαιο-χριστιανικών Μνημείων της Δωδεκανήσου, Acts of the 9th International Byzantine Congress 1, Thessaloniki, Athens, 1953, 227–248.

Newton 1856

Ch. T. Newton, Excavations and Discoveries at Calymnos, AJ 13, 1856, 17. 24–30.

Newton 1883

Ch. T. Newton, The Collection of Ancient Greek Inscriptions in the British Museum II (Oxford 1883).

Núñez Andrés et al. 2012

A. Núñez Andrés – F. B. Pozuelo – J. R. Marimón – A. de Mesa Gisbert, Generation of Virtual Models of Cultural Heritage, Journal of Cultural Heritage 13(1), 2012, 103–106.

Papaioannou 2018

M. Papaioannou, Villas in Roman Greece, in: G. P. R. Métraux – A. Marzano (eds.), Roman Villas in the Mediterranean Basin (Cambridge 2018) 327–375.

Papaioannou 2003

M. Papaioannou, Domestic Architecture of Roman Greece, Unpublished Ph.D. dissertation (Vancouver 2003).

Pavilidis et al. 2007

G. Pavlides – A. Koutsoudis – F. Arnaoutoglou – V. Tsioukas – C. Chamzas, Methods for 3D Digitization of Cultural Heritage, Journal of Cultural Heritage 8(1), 2007, 93–98.

Pelekanidis 1974

S. Pelekanidis, Corpus Mosaicorum Christianorum Vetustiorum Pavimentorum Graecorum, Vol. 1, Grecia Insularis (Thessalonike 1974).

Phlegel 1896

K. Phlegel, Η Νήσος Κάλυμνος (Konstantinople 1896).

Ragkavis 1854

I. R. Ragkavis, Τα Ελληνικά, Vol. 3 (Athens 1854).

Reises 1913

D. Reises, Περιγραφή της νήσου Καλύμνου (Athens 1913).

Scheiblauer et al. 2009

C. Scheiblauer – N. Zimmermann – M. Wimmer, Interactive Domitilla Catacomb Exploration. Proceedings of the 10th International Conference on Virtual Reality, Archaeology and Cultural Heritage. Eurographics Association (Aire-la-Ville 2009) 65–72.

Segre 1938

M. Segre, Relazione preliminare sulla prima campagna di scavo nell' isola di Calino, Memorie III, 1938, 33–55.

Segre 1944–1945

M. Segre, Tituli Calymnii, ASAtene VI/VII, 1944/1945, 1–250.

Tarsouli 1948

A. Tarsouli, Δωδεκάνησα, Vol. B (Athens 1948).

Tsingas et al. 2008

V. Tsingas – C. Liapakis – V. Xylia – D. Mavromati – D. Moulou – L. Grammatikopoulosa – C. Stentoumisa, 3D Modelling of the Acropolis of Athens Using Balloon Images and Terrestrial Laser Scanning, Int'l Arch. Photogram. Remote Sens. Spatial Inform. Sci 37 B5, 2008, 1101–1105.

Valanakis 1980

J. E. Volanakis, Νεώτεροι Έρευναι επί των Παλαιοχριστιανικών Μνημείων της Δωδεκανήσου, Archaiologiki Ephemeris, 1980, 1–17.

Warscheid et al. 2000

Th. Warscheid – J. Braams, Biodeterioration of Stone: a Review, International Biodeterioration & Biodegradation 46, 2000, 343–368.

Zisimou-Tryfonidi 2014

E. Zisimou-Tryfonidi, The Church's Involvement in the Economic Life of Early Christian Greek Towns (Ph.D. Thesis University of Birmingham 2014).

POSTER SESSIONS

Rivine – Crkvina: An Example of Production Quarters by a Church

Josipa Baraka Perica – Ante Uglešić

The site of Rivine – Crkvina is a late antique site situated in the vicinity of the city of Stolac (about 6 km in a straight line in NW direction, coordinates 43°6'58.64"N/17°53'55.23"E) in Bosnia and Herzegovina, fig. 1 (area of the Roman province of Dalmatia in Late Antiquity). The biggest part of the site has been discovered in the archaeological excavations, and only a small part of the central vaulted tomb in the sacral segment of the complex has been known before the archaeological excavations (fig. 2).[1]

Four excavation campaigns have been conducted in the period from 2011 to 2014 covering the area of 700 m². Systematic archaeological research at the site was organized and conducted by the Faculty of Philosophy of the University of Mostar, program study

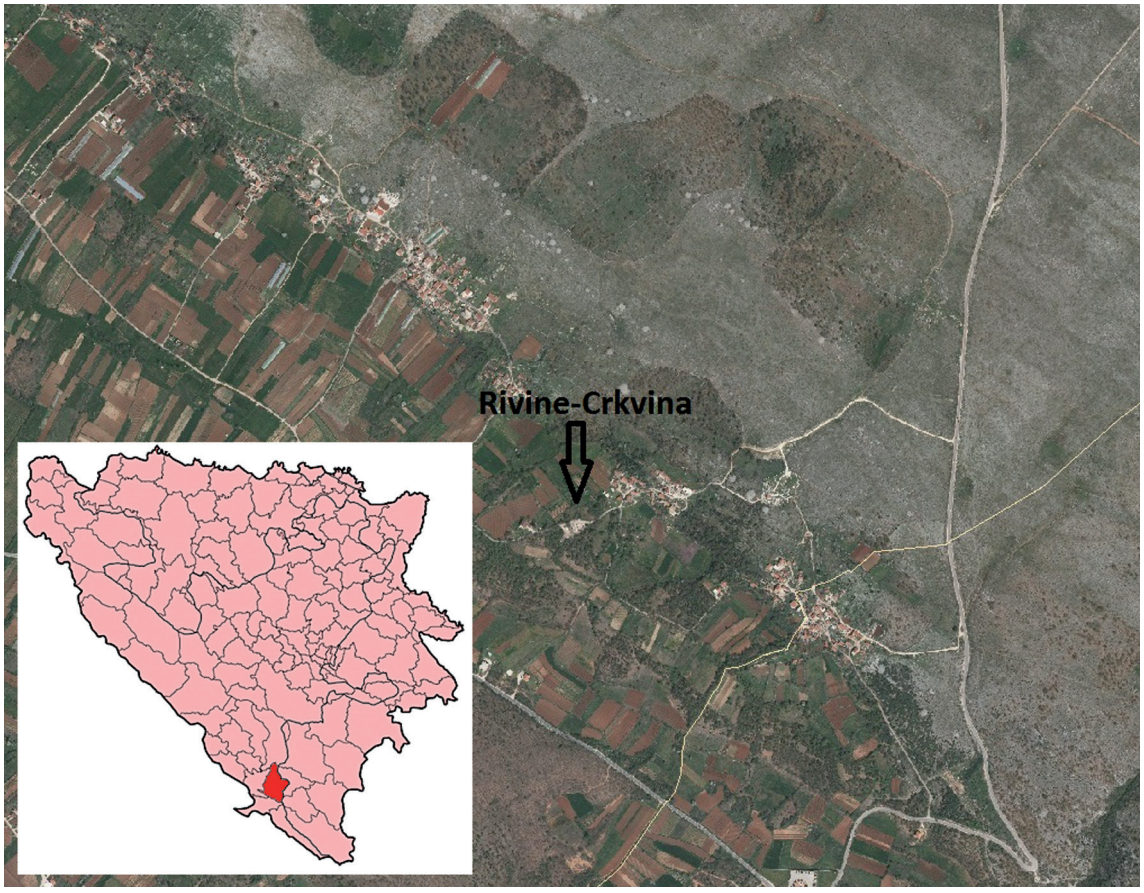


Fig. 1: a) Position of the city of Stolac on the map of Bosnia and Herzegovina and b) aerial photograph of the site of Rivine-Crkvina.

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Fig. 2: Aerial photograph of the site of Rivine-Crkvina.

of archaeology (led by Brunislav Marijanović to whom we thank for giving us research results for publication). The excavations were organized within the field practice of the students of archaeology of the University of Mostar.[2]

The site consists of a sacral and funerary segment and outbuildings or production quarters that may have had residential function as well (fig. 3). The relationship of the Early Christian church and the production quarters is a special characteristic of this site that has proven to be unique for the Roman province of Dalmatia that is exceptionally rich in late antique and early Christian sites.

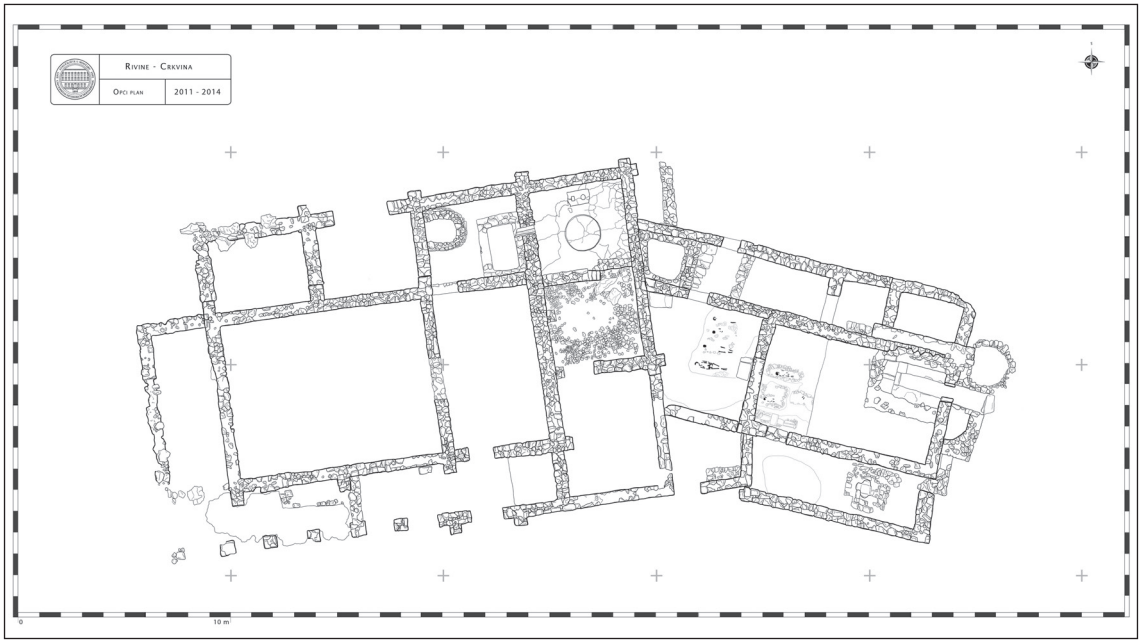


Fig. 3: Ground plan of the site of Rivine-Crkvina.

Production Quarters

Production quarters are situated in the western part of the site (fig. 4) and the architectural remains have different orientation in relation to the sacral and funerary part of the complex. These two parts had not been originally joined together, but only at some later point, as evident from firmly joint walls that do not indicate that some walls were removed in order to build new ones i.e. that one part of the complex destroyed a segment of another.

Production quarters of the complex also exhibit several building phases. The base of this complex was a rectangular room (dimensions 10,75 × 8 m) with a wide entrance (2 m) on the eastern side, and three buttresses on the northern and southern side. Since there is a doorstep on the southern side, it is possible that there was an entrance on this side as well. In the following building phase new rooms were built around the central room, and some of its buttresses were extended growing into walls (as clearly visible). A porch was built on the southern side. Several more additional rooms were built in the next phase and the wide entrance on the eastern side of the central room was closed. In this phase a segment of the porch was walled in and a plastered floor was made. In the north-eastern part of the object new rooms were added, and constructions for processing grapes or olives were added in the existing rooms. We refer primarily to the segment of a press called *ara* (a round base used for pressing grapes or olives).

Squeezed liquid poured through a channel into a closed basin – a rectangular container on the western side. Another semi-circular object of unknown function was lo-

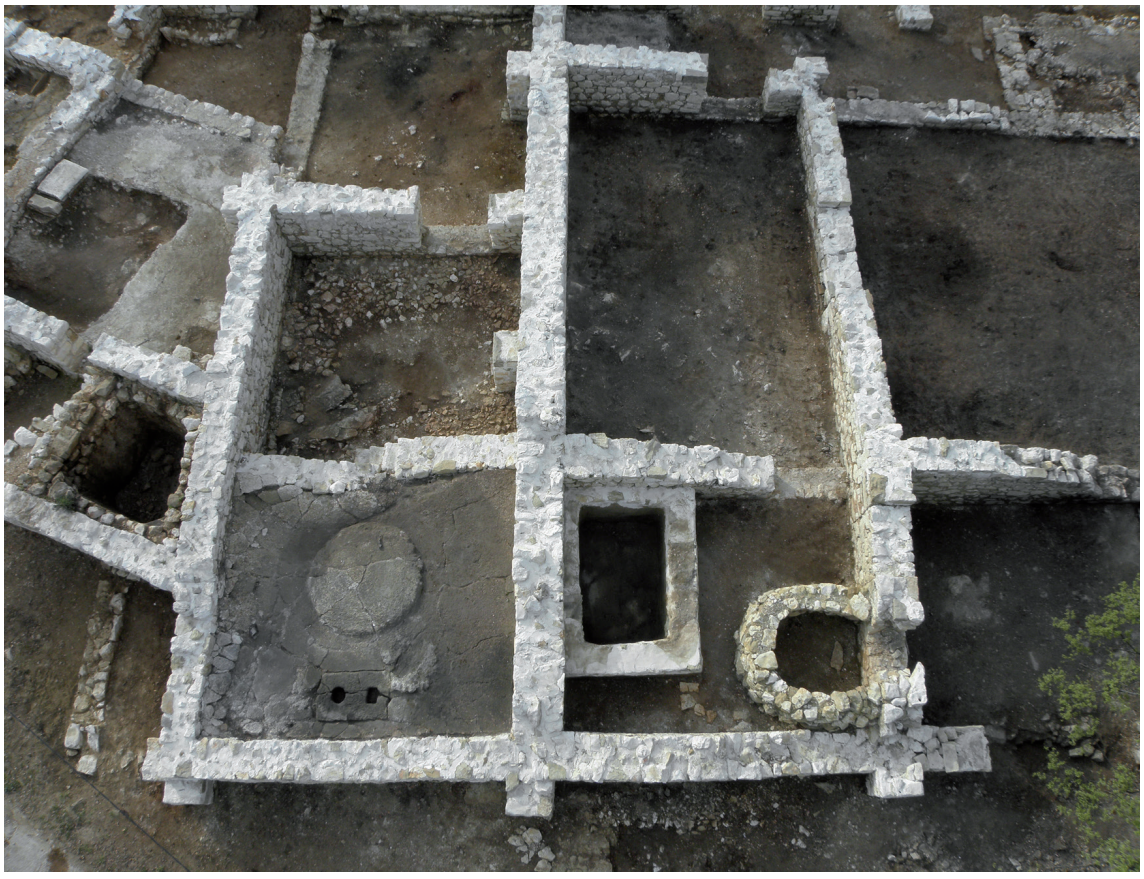


Fig. 4: Production quarters of the site of Rivine-Crkvina.

cated next to it, but it was evidently associated with the production in this part of the complex (it was not plastered; therefore, it was not used for keeping liquid). Upper part of the press construction has not been preserved, except for the stone base of the horizontal beam support.

Sacral and Funerary Segment of the Site

Sacral and funerary segment is in the eastern part of the site (fig. 5). It consists of a church with a baptistery and a small cemetery. Different building phases can be recognized. The oldest part of this complex is a late antique vaulted tomb that was preceded by older, probably funerary architecture (similar situations are found on several archaeological sites of Roman Dalmatia).[3] Then a church was erected so that a presbytery was built directly over the vaulted tomb that determined the church orientation. Then a baptistery with a cruciform baptismal font was built, extending from the southern wall of the church.



Fig. 5: Sacral and funerary segment of the Rivine-Crkvina site.

The architecture analysis indicates that at a certain point the baptistery was no longer connected with the church and probably it lost its primary function. It is possible that the church area changed its function. The area in front of the baptistery and in the baptistery was used for burials as well as the church area. In this phase eastern and western part of the complex were connected. A cistern lined with hydraulic mortar with corresponding stairway represents the youngest part of the site built at the very end of Late Antiquity or beginning of the Early Middle Ages. Building characteristics are far inferior in comparison to the other phases.

Conclusion

This late antique complex is most likely a part of a larger settlement whose remains are situated in immediate vicinity. Namely, in the last century, along northern and north-western side of the site, a road was built, unfortunately destroying thereby a large part of architectural remains. Furthermore, west of the excavated part is a small wood

where architectural remains from antiquity have been recorded but not excavated as yet.

The site can be dated to Late Antiquity for the most part, but it was built in different phases that are difficult to date precisely for now. We can only broadly date bigger part of the site to the 5th and 6th centuries.

The position has not been published so we will use an opportunity to present it to wider professional and scholarly public exactly at this congress dealing with archaeology and economy.

Notes

[1] Čović 1988, 170; Miličević-Capek 2011, 225; Raguž 1987, 27–28.

[2] The information about the course of excavation see in Čuljak, Tomas 2013, 330–348.

[3] Rašić, Baraka Perica 2018, 149–153.

Image Credits

Fig. 1: Figure 1a. Wikipedia; 1b. GeoPortal of Bosnia and Herzegovina – Fig. 2: GeoPortal of Bosnia and Herzegovina. – Fig. 3: Photo from documentation of Department of Archaeology of University of Zadar, Croatia; Department of Archaeology, Faculty of Philosophy, University of Mostar, Bosnia and Herzegovina. Photo by Dario Vujević. – Fig. 4: Photo from documentation of Department of Archaeology of University of Zadar, Croatia; Department of Archaeology, Faculty of Philosophy, University of Mostar, Bosnia and Herzegovina. Photo by Dario Vujević. – Fig. 5: Photo from documentation of Department of Archaeology of University of Zadar, Croatia; Department of Archaeology, Faculty of Philosophy, University of Mostar, Bosnia and Herzegovina. Photo by Dario Vujević.

References

Čović 1988

B. Čović, Arheološki leksikon Bosne i Hercegovine, III, Sarajevo 1988.

Čuljak et al. 2013

N. Čuljak – T. Tomas, Terenska istraživanja odjela za arheologiju Filozofskog fakulteta u Mostaru, HUM-časopis Filozofskog fakulteta u Mostaru 10, 2013, 330–348.

Miličević-Capek 2009

I. Miličević-Capek, Novi nalazi kasnoantičkih grobnica na svod u Donjoj Hercegovini, Archaeologia Adriatica 3, 2009, 223–236.

Raguž 1987

Ž. Raguž, Ranokršćanska bazilika u Dubravama, Slovo Gorcina, Stolac 1987, 27–28.

Rašić et al. 2018

M. Rašić – J. Baraka Perica, The early Christian complex in Doci near Vitina: results from the revised archeological research/Starokršćanski kompleks u Docima kod Vitine: rezultati revizijskih arheoloških istraživanja, Prilozi Instituta za Arheologiju 35, 2018, 135–154.

The Reconstruction of the Organization of Space and Work through Iron-Working Micro-Residues Distributional Analysis: the Case of the Roman Smithy of Montebelluna (Treviso, Italy)

Leonardo Bernardi*

Abstract

The archaeological investigations on the site of Montebelluna, loc. Posmon (Treviso, Italy), carried out by an interdisciplinary équipe of the University of Padua (Dept. of Cultural Heritage), led to the discovery of a Roman forge used during the 1st and 2nd centuries AD. This paper deals with the typological and distributional study of iron-working micro-residues. This kind of debris, being indicators of production often left in primary deposition, led to identify which activities were carried out and how the smithy was used. The use of a grid, the total collection of the soil strata with micro-residues and a subsequent magnetic separation have allowed to draw up distribution maps; the comparison between these maps and the archaeological remains allowed to reconstruct two preferential blacksmith's working position and to assume the function of the permanent features. Typological study, supported by preliminary diffraction analysis (XRPD), led to compare the micro-residues found with those already present in the specialized literature.

The Site of Montebelluna, loc. Posmon: the Building and the Smithy

Excavations carried out between 2006 and 2010 by an interdisciplinary équipe of the Department of Cultural Heritage of the University of Padua led to the discovery of a Roman building used during the 1st and 2nd centuries AD and progressively abandoned during the 3rd century AD.[1]

The building is characterized by a rectangular shape of almost 210 mq and consists of 7 rooms (A, B, C, D, E, F and G) arranged around a central courtyard (I) and a small room in the North-East corner (H) (fig. 1).

The distinctive character of the building is the great number of technological permanent features; there are six fireplaces (three in room A, one in rooms C, E and F), a small oven in room B and two water tanks, one of rectangular shape inside room D and one large and ellipsoidal outside the building. Rooms E and probably F had to have domestic purposes; in the other rooms the permanent features had a productive destination, but it is not possible to clarify if they were or not connected to the main activity carried out in the building.

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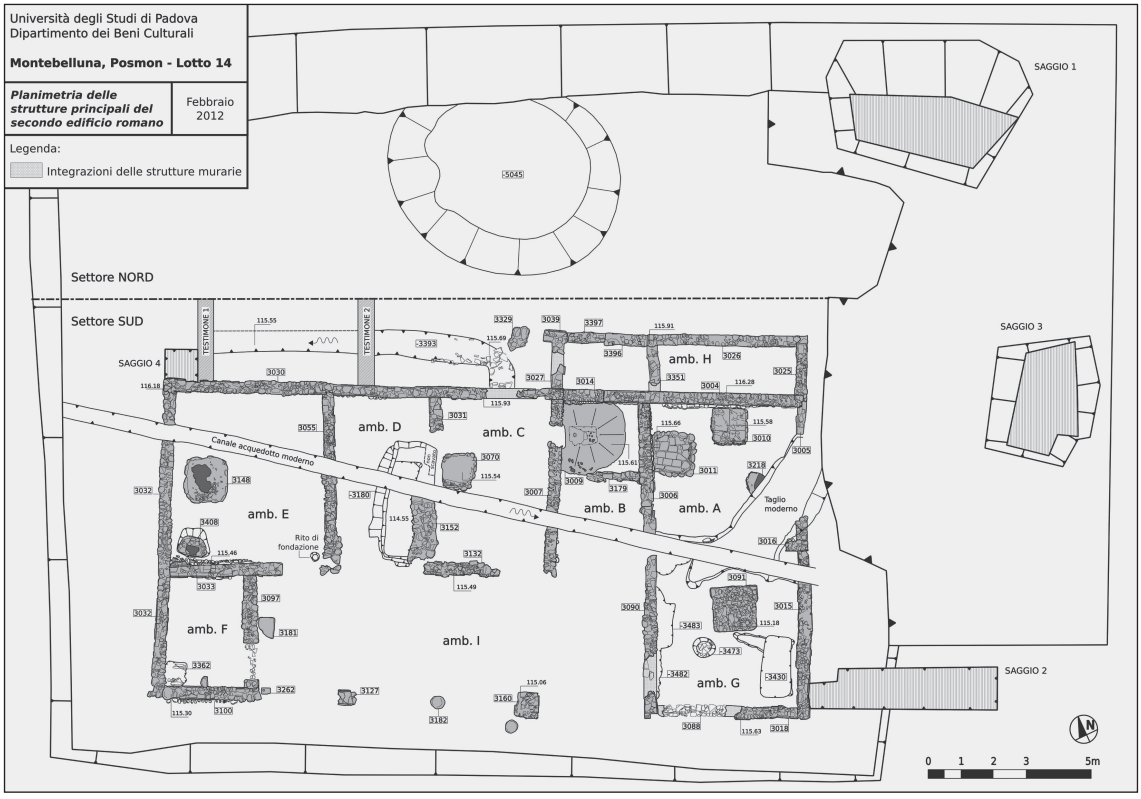


Fig. 1: Montebelluna, loc. Posmon: plan of the building.

The smithy (room G; 4.35 m × 4.75 m) (fig. 2) represented, in fact, the productive core of the building; located in the South-East corner, it was equipped with an independent access from the South.

Thanks to an accurate excavation and archaeometrical analyses on slags and wall forge remains found in an outer discharge, planned in collaboration with the Department of Geoscience (University of Padua),[2] numerous permanent features related to iron-working have been recognized in this room. In the North, a square basement (UG 3091; 1.45 × 1.40 m) was preliminary interpreted as a base for a raised forge, a type of structure represented in the iconographic sources but not so easily identifiable on the field; to the South-West, a concentric series of ellipsoidal cuts (UG −3473; diam. 70 cm) was presumably the location of a stump for the anvil. Against the western wall, two different negative traces (UG −3482 and UG −3483) have been attributed to wooden structures, that is a tool rack and a work bench. Finally, in the South-East corner there was a rectangular tank (UG −3430; 1,90 m × 0,90 m); between the tank and the square basement a triangular trace (UG −3509) has been interpreted as the print left by a bellows or by its support.

The floor consisted of a series of light and dark alternating layers: they correspond to layers made up of silt-clay matrix laid out voluntary to restore the floor and dark levels

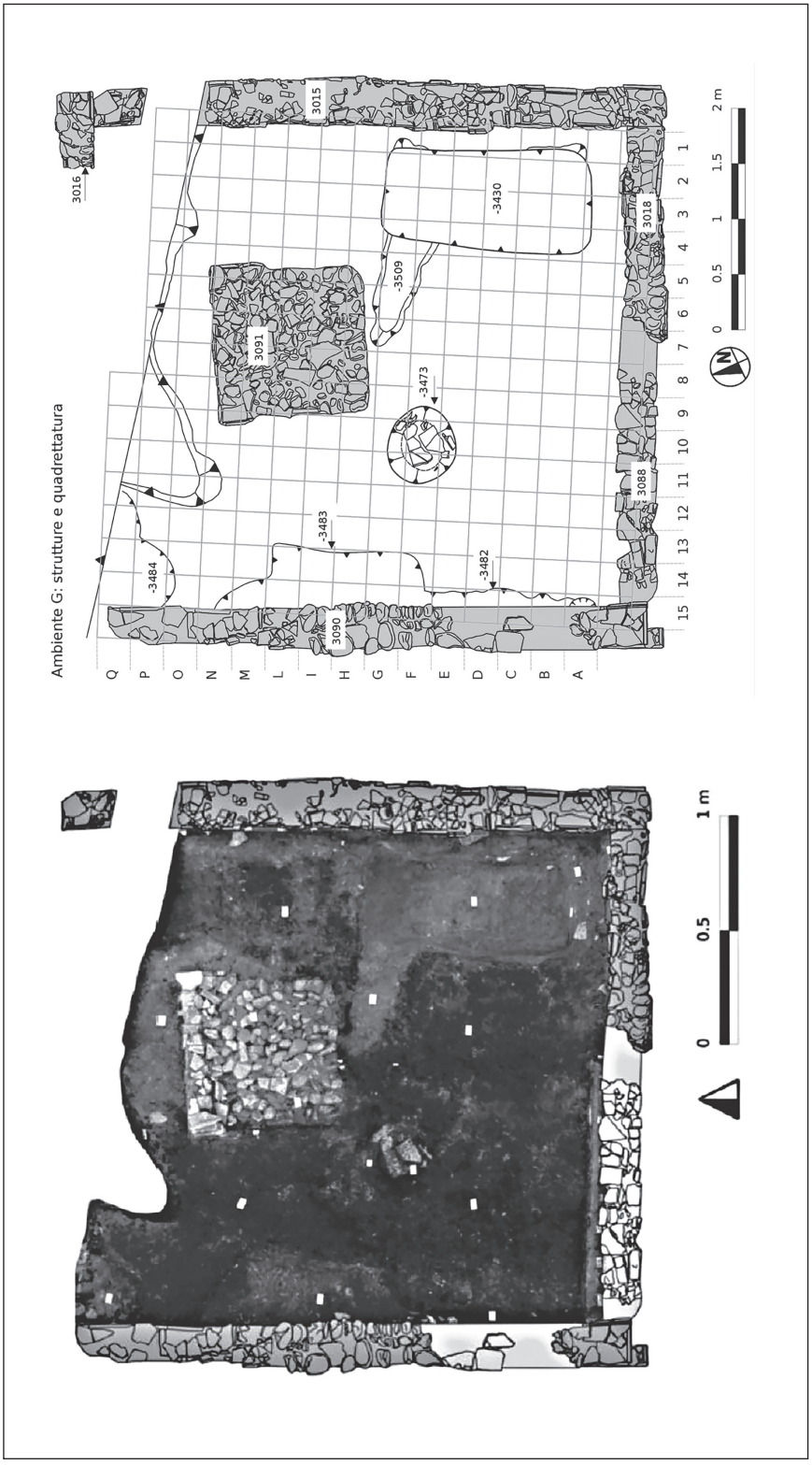


Fig. 2: Zenithal photo and plan of the smithy (room G) and the technological permanent features linked to iron-working.

composed of charcoal, ashes, slags and, above all, micro-residues produced during the metallurgical activities.

Iron-Working Micro-Residues: the Distributional Analysis

The Materials

Iron-working micro-residues include mostly hammerscale, that are the sparks emitted by hot iron when struck with a hammer at the anvil. They are divided, according to their macroscopic appearance, in flake hammerscale and spheroidal hammerscale: if the former is generated by the detachment of the oxidation layer present on the object being processed, the spheroidal ones are formed preferably during welding operations.[3]

Micro-residues include also other materials characterized by a prevalent scoriaceous aspect and composition, whose formation is due to internal dynamics of the forge.[4]

The deposition of these material creates black strata within the smithy that, if not removed, are most of times left in primary deposition context; thus, these materials can be used to understand the spatial organization of the smithy.

Methodology

The presence within the smithy of dark layers rich of micro-residues made it necessary to adopt an excavation strategy that aims at reconstructing, afterwards, distribution maps of their concentration.

The state of the art shows some examples of distributional analysis of micro-residues and they all applied the same methodology: excavation following a grid and measurement of the magnetic concentration.[5]

In the smithy of Montebelluna the layers rich of micro-residues were excavated following a 30 × 30 cm grid, the ground removed and collected entirely. In lab, the magnetic component was subsequently divided from the matrix, proceeding through three steps: the weighing of the soil not yet separated, the isolation of the magnetic component and the weighing of the magnetic fraction.

This operation allowed to obtain two maps of the magnetic fraction concentration: the first map shows the percentage values of the micro-residues with respect to the totality of the soil, whereas the second shows the weight value of the magnetic fraction. Not all the squares were treated, but only those according to eight preferential axes that found their center in correspondence of the negative evidence (UG –3473).

QGIS software and a geometric progression method, defined as "Geometric intervals",[6] were used to process data and to create distribution maps, where the different tones of color represent the variation in value.

Data

The excavation proved the presence of three dark strata with micro-residues, but only UG 3239, that represents the last work surface, was entirely preserved. The other two layers (UG 3449–3487 and UG 3448–3493) were partially removed and covered with a silt-clay stratum in order to restore the floor. Thus, UG 3239 give the most complete data useful to understand how processes were carried out within the smithy.

The mapping of the percentage and weight values both shows the greatest concentration of magnetic residues to the South/South-East of the concentric series of ellipsoidal cuts and their progressive decrease moving away from it (fig. 3).

Discussion and Interpretation

At first, these data confirm that iron-smithing operations took place in this room and, secondly, that the anvil was located where previously thought, that is in correspondence of the concentric series of ellipsoidal cuts (UG –3473) South-West of the raised forge.

Moreover, according to the data found during excavation and the strong comparison with the iconographic sources, the previous preliminary interpretation of the technical installations within the smithy (cfr. *supra*) has been confirmed.

But most importantly, this study allowed to place the blacksmith at work. Imagining that the micro-residues are deposited mostly beyond and on the sides of the anvil and a smaller quantity at the artisan's feet, we can place the craftsman North of the anvil, in a comfortable position to reach the forge on his left and the workbench on the right. The bellows, probably placed South of the raised forge at a sub-triangular imprint, was presumably worked by an apprentice (fig. 4) or by the same blacksmith when, by himself, he worked South of the forge with the anvil to his left, being able to work in perfect autonomy.

Iron-Working Micro-Residues: the Preliminary Archaeometrical Study

The distributional analysis of the micro-residues has been followed by a preliminary archaeometrical study.

The observation of a sample in OM (Optical Microscopy) and preliminary XRPD-analyses permit to recognize 12 typologies of micro-residues. Flake and spheroidal hammerscale are mostly present, but there are also other residues with prevalent scoriaceous aspect and composition: some of them can be compared to the slags of bigger size found within the smithy and in the outer discharge (forge walls remains and siliceous slags), whereas other typologies has never been recognized but their genesis has not been understood yet.

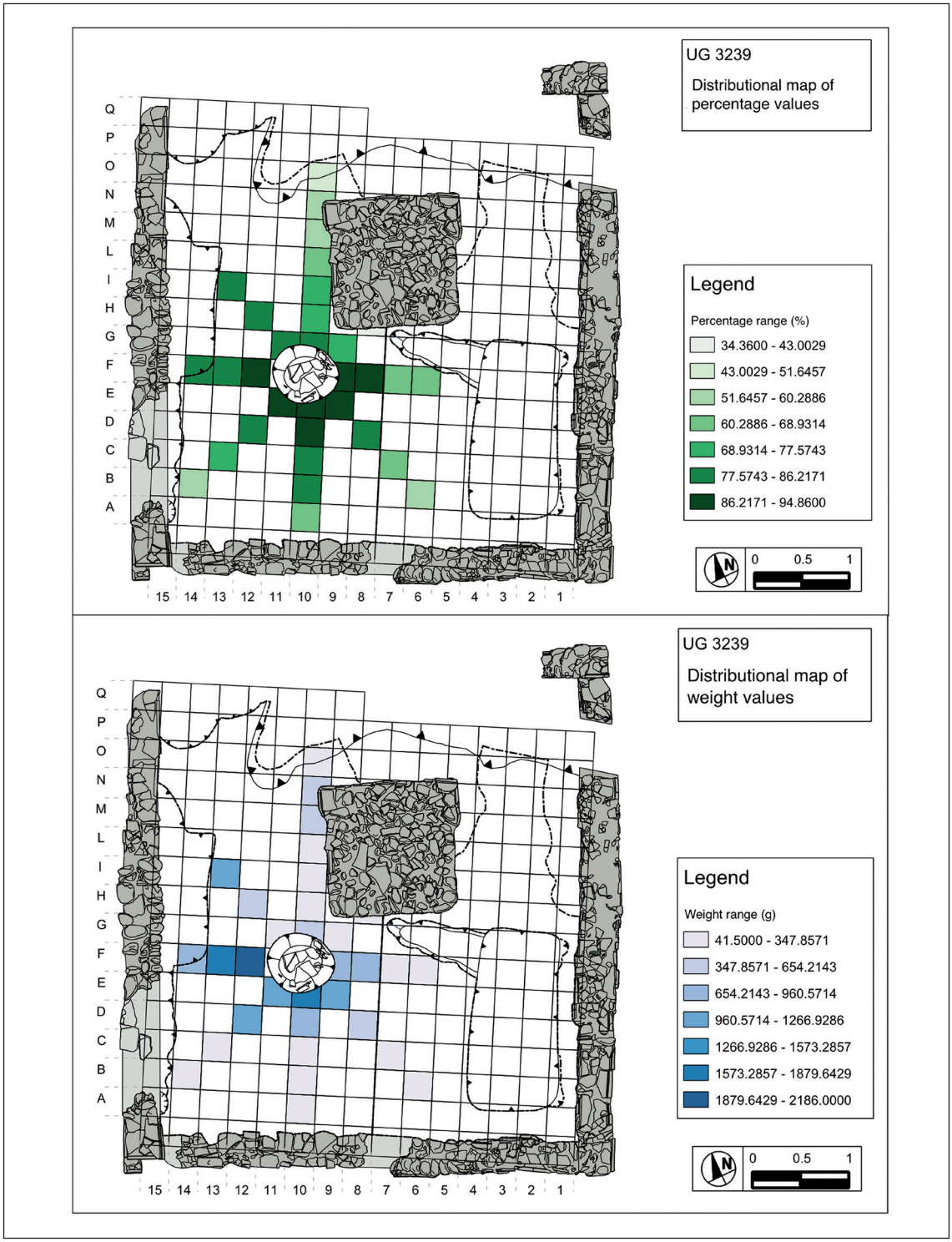


Fig. 3: Distributional maps of the micro-residues of UG 3239. On top the maps of percentage values; above the weight values.

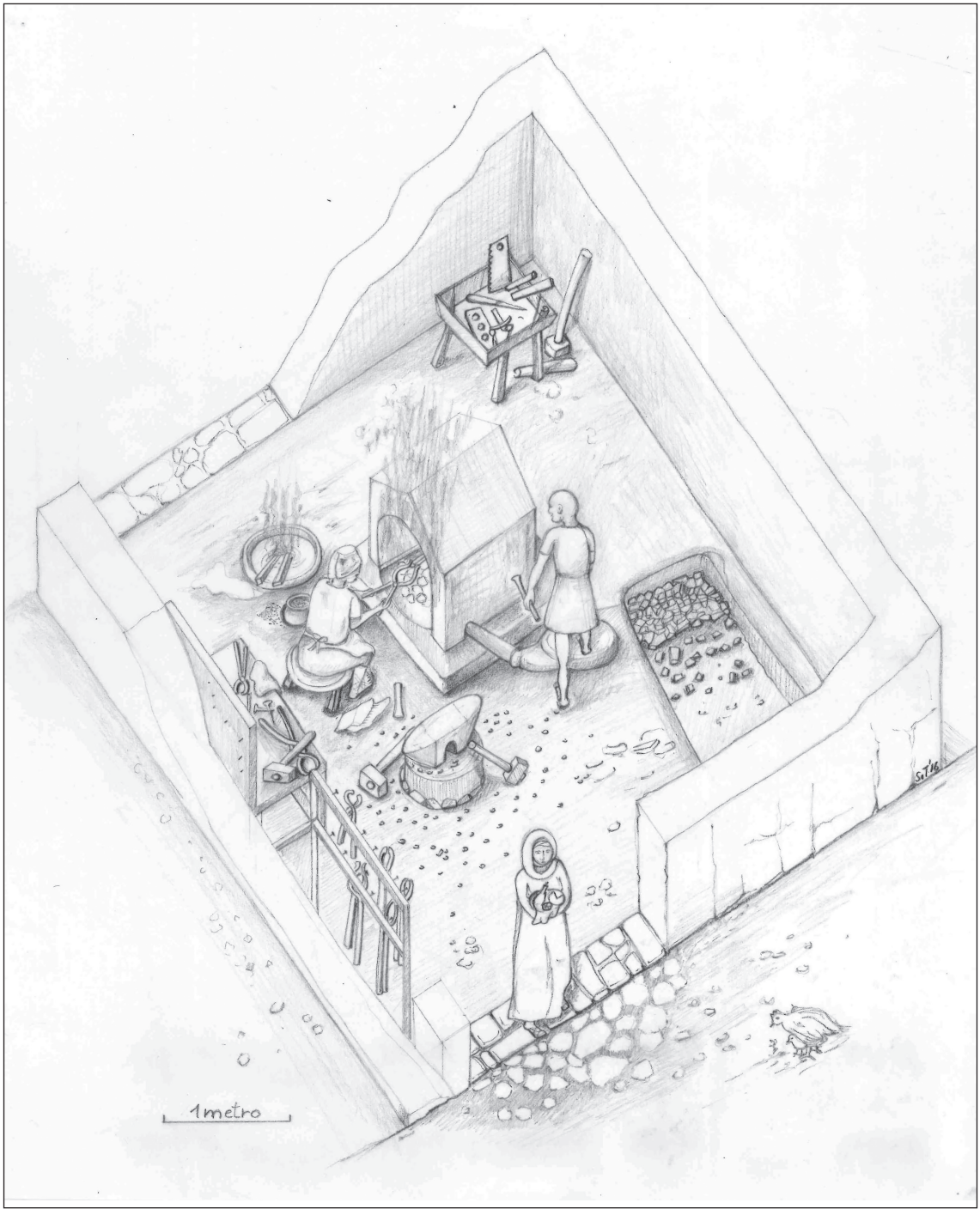


Fig. 4: Reconstruction proposal of the smithy with the permanent features and artisans at work (drawn by Silvia Tinazzo).

Conclusion

This work proves how an accurate excavation strategy, planned from the beginning of the excavation, a careful study of stratigraphic evidences and of the distributional features of materials connected to production processes and, finally, a comparison with the coeval iconographic sources, could be the right key to understand deeply and successfully the spatial organization of whatever atelier.

Notes

* Dept. of Cultural Heritage, University of Padua.

[1] Busana et al. 2012, 233–273.

[2] The archaeometallurgical analysis have been carried out in collaboration with dr. I. Angelini.

[3] Dungworth – Wilkes 2009, 33–46; Starley 1995; Unglik 1991, 92–98.

[4] Young 2011, 26–41.

[5] Paynter 2007, 15–31; Veldhuijzen – Rehren 2007, 189–201; Roames 2011, 149–155.

[6] Conolly – Lake 2006, 141–144.

Image Credits

Fig. 1: Busana et al. 2012, 238–239. – Fig. 2, 3 and 4: Bernardi 2016, 125. 137; Bernardi 2016, 138; Bernardi 2016, 145–146.

References

Bernardi 2016

L. Bernardi, La fucina romana di Montebelluna, località Posmon (Treviso). Studio dei micro-residui di forgiatura del ferro, Archeologia Veneta 39, 2016, 122–151.

Busana et al. 2012

M. S. Busana – D. Francisci – I. Angelini, Un edificio artigianale di età romana a Montebelluna (Posmon, Lotto 14): risultati preliminari, in: Carta geomorfologica e archeologica del Comune di Montebelluna. Il progetto Archeogeo, Museo di Storia Naturale ed Archeologia di Montebelluna, Montebelluna (TV) (Verona 2012) 233–273.

Conolly – Lake 2006

J. Conolly – M. Lake, Geographical Information System in Archaeology (Cambridge 2006).

Dungworth – Wilkes 2009

D. Dungworth – R. Wilkes, Understanding Hammerscale: the Use of High-Speed Film and Electron Microscopy, Historical Metallurgy Society News 43, 2009, 33–46.

Leblanc 2002

J.-C. Leblanc, Sur l'identification de la chaîne opératoire de forgeage du fer antique, associée à l'archéometrie des battitures (Diss. Université Paul-Sebatier di Toulouse III 2002).

McDonnel 1984

J.G. Mcdonnel, The Study of Early of Smithing Residues, in: B. G. Scott – H. Cleere (eds.), Crafts of the Blacksmith (Belfast 1984) 47–52.

Paynter 2007

S. Paynter, Romano-British Workshop for Iron Smelting and Smithing at Westhawk Farm, Kent, Journal of Historical Metallurgy Society 41(1), 2007, 15–31.

Roames 2011

J. Roames, The Early Iron Age Workshop at Tell Tayinat, Turkey, in: P. Vandiver – W. Li – J. L. Ruvalcaba Sil – C. L. Reedy – L. D. Frame (eds.), Material Issues in Archaeology and Art IX, Material Research Society Symposium Proceedings Volume 1319, Symposium held November 29–December 3, Boston, Massachusetts, U.S.A. (Cambridge 2011) 149–155.

Starley 1995

D. Starley, The Historical Metallurgy Society: Archaeology Datasheet No 10 (London 1995).

Unglik 1991

H. Unglik, Observations on the Structures and Formations of Microscopic Smithing Residues from Bixby Blacksmith Shop at Barre Four Corners, Massachussetts, 1824–55, Journal of Historical Metallurgy Society, 25 (2), 1991, 92–98.

Veldhuijzen – Rehren 2007

H. A. Veldhuijzen – T. Rehren, Slags and the City, Early Iron Production at Tell Hammeh, Jordan, and Tel Beth-Shemesh, Israel, in: S. La Niece – D. Hook – P. Craddok (eds.), Metals and Mines (London 2007) 189–201.

Young 2011

T. Young, Some Preliminary Observations on Hammerscale and its Implications for Understanding Welding, Journal of Historical Metallurgy Society, 45 (1), 2011, 26–41.

The Purchase of the Collection Gargiulo in the National Archaeological Museum of Naples

Riccardo Berriola

The proposal of selling Raffaele Gargiulo's terracotta collection to the Museum of Naples was made in December 1852. Gargiulo was an affirmed ceramist, restorer of ancient vases and bronzes, and one of the main figures of the Museum of Naples and of the trade of antiquities in Europe, besides being one of the greatest Neapolitan merchants of the 20s and 30s of the 19th century.

It was only on May 29th, 1855, after two years of heated confrontations about the price and the extent of the sale, that an agreement was reached on the price of about six thousand ducats. Two more smaller sales would lead to the purchase of a few more objects on December 13th, 1856 and December 16th, 1859.

Gargiulo was born of Aniello Gargiulo on March 17th, 1785, in Naples. In April 1808 he demanded to become part of the Restoration Workshop of Etruscan Vases of the Royal Museum of Naples. On June 15th, 1808, Gargiulo enters the Restoration Workshop of Etruscan Vases as "Second Restorer", although still unpaid. In February 1811 he was finally admitted among the salaried employees, with a monthly wage of 18 ducats, which was augmented by one third the following year. In 1812 he applied to become Restorer of Carolina Murat's private museum, for whom he claimed to have already repaired almost all the vases in the famous collections of Monsignor Terrusio and Giovanni Caminada, which had both been incorporated in her museum. In 1814 he restored, once more for Carolina Murat, the famous vases which had been excavated the year before in the hypogeum Monterisi Rossignoli in Canosa, and which are today preserved in Monaco. In 1816 he was promoted "Chief Restorer" of the Vases, his wage being of 28 ducats, and he was given an assistant, Domenico Fortunato (son of Michelangelo, who was himself a vase restorer) who, from the 30s, would often take Gargiulo's place in the material execution of the restorations. In 1817 he became the Director of the Workshop for the Restoration of Bronzes. In 1822 he was appointed Director of the Restoration Workshop of Vases. From 1832 he became Associate Correspondent from Naples for the Institute of Archaeological Correspondence. During these same years he also began to work as an antiquity merchant, as it is testified in a letter sent on January 3rd, 1824 to the Minister of Casa Reale:

> *"Out of pleasure I cultivated the study of the Fine Arts and Antiquities; subsequently forced by circumstances to support my old Parent, one Aunt and two Sisters, I devoted myself to the restoration of the so-called Etruscan Vases, the Bronzes and other ancient Monuments, also becoming myself engaged in the trading of such…"*

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Fig. 1: Group of Perseus and Andromeda. National Archaeological Museum of Naples, Inventory numbers 20247+25553. Provenance: Egnazia. III BC.



Fig. 2: Terracotta sarcophagus. National Archaeological Museum of Naples, Inventory number 24229. Provenance: Tuscania. Half II BC.



Fig. 3: Youth bust. National Archaeological Museum of Naples, Inventory number 21019. Provenance: Cales. First half III BC.

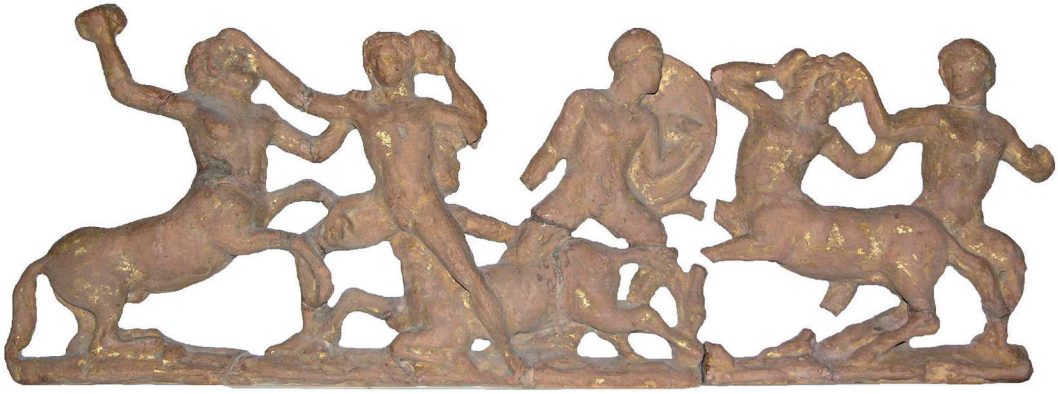


Fig. 4: Relief with struggle between Centauri and Lapiti. National Archaeological Museum of Naples, Inventory number 22342. Provenance: Capua. End IV BC.

In 1845 he became "Assistant Supervisor" of the Royal Museum which involved him, together with the Supervisor and the Director, in the daily managing of the Museum. In the same years, besides his assignments at the museum and the tasks performed for the Neapolitan monarchs, Gargiulo also worked as private restorer, having among his clients members of royal houses and famous collectors such as the Duke of Blacas, the French ambassador, who was one of the most famous collectors and patrons of his time. It was on one of the vases of the Blacas collection that Gargiulo experimented for the first time – between 1820 and 1821 – a glue of his invention, which very much enhanced the resistance and quality of the recomposition of ceramics and which, the following year, on August 17th 1822, was officially adopted by the Bourbonic Museum.

In December 1822 the king of Prussia, who was visiting Naples, entrusted him with the restoration of the vases which Ferdinand I. has just donated to him; two years before he had already carried out other restoration works for the Hereditary Prince Christian of Denmark.

Around 1820 he opened up a public antiquity warehouse in Naples, in Via Santa Lucia 87–88, apparently in the name of Salvatore Calì, who was a marble worker and a colleague of his at the Museum. About during this same period, and certainly not later than 1821, in order to reduce the competition in business and improve the productivity of his activities, he decided to join in business two of his colleagues, Giuseppe De Crescenzo, a Neapolitan antiquities merchant, and Onofrio Pacileo, a hunter of ancient objects. During these same years, together with Pasquale Mollica, a famous ceramist, he founded a new society aimed at the production and selling of objects in the Etruscan style. They opened a new shop strategically placed within tourists' reach, right in front of the building of the Royal Bourbonic Museum.

Gargiulo is also present, in November 1839, at the first public photographic experiment in town, thus becoming the first Neapolitan ever to be portrayed in a daguerreotype, only a few months after its invention in Paris.

He was also committed in the promotion of his own image through a brief but interesting scientific production – which was not new for arts merchants in the 18th century – and published some volumes and several papers. One of these papers, published for the first time in Naples in 1825, the "Collection of the most interesting Monuments of the Bourbonic Museum and various private collections", was actually an efficient means of promotion of his own societies which went far beyond what the title anticipated. The book was in fact sold for decades not only in his own shops, but also at the Royal Museum, thus representing a smart marketing operation. Half of the objects in the tables were in fact, besides being part of private collections, sold by the Gargiulo Enterprise. This way Gargiulo promoted in press that his objects had been sold and distributed among the most famous private and public collectors in the Continent: The Duke of Blacas, Chevalier Durand, and Millingen at the Royal Museum of Berlin.

He probably died after 1864, date of the edition of his non-posthumous "Historical and descriptive notes on the building of the National Museum with Guide" and prob-

ably even later than 1876, when he still appeared as Associate Correspondent from Naples for the Institute of Archaeological Correspondence. Although the first phases of Gargiulo's activity as a collector are unknown, it seems likely that his collection had already been assembled in 1822, the year of the edition of another of his volumes, the "*Collection of drawings of the so-far known different shapes of the Italic-Greek vases, commonly referred to as Etruscan*". The collection was nevertheless already famous in 1829 when, together with other private collections, it began to be visited by the major scholars of the time, like Panofka who, in a paper of that same period, mentions the "collection of Mr. Gargiulo, De Crescenzo and Pacileo". In 1847 Gerhard and Panofka again visited Gargiulo's terracotta collection – which he was already willing to sell – at his own house in Vico Santa Maria della Purità 23, Materdei, Naples, and they compared it to the one which was considered the most important collection at that time, that of the Marquis Campana in Rome.

April 8th, 1843 is the date of the first purchase of objects belonging to Gargiulo concluded by the Royal Bourbonic Museum. They were "eleven excellent column shafts made of many types of marble, with the corresponding bases", which were bought for 490 ducats. Strong with this past economic transaction, the following year Gargiulo asks for the permission to export out of the Reign, to Rome, "21 Italic-Greek vases, and twenty-one bronze objects", under the pseudonym of Giuseppe Aurelio di Gennaro, most likely in order not to have troubles connected to his double role of arts merchant on one hand, and of employee of the Bourbonic Royal Museum on the other. Of the entire negotiation nothing more is known for several years: neither if the objects were actually exported to Rome by Gargiulo, nor if they were instead purchased and absorbed by the Royal Museum.

The material being from a private collection, it cannot be associated to any particular offering set or tomb, and therefore has no stratigraphic or chronological reference; for this reason, it is not possible to gain a unique picture from it, but only a few data. Small figures are undoubtedly the best represented class of material, building up as much as about three fourths of the entire terracotta collection, 443 specimens on 605, 73.88% of the collection. The percentage data about pottery (59 specimens, 9.59%) and, most of all, about large figures (46 specimens, 7.60%), which are not always common in 19th century collections, are the most relevant. There are also 34 Architectural Elements (5.12%), 22 Lamps (3.64%), and 1 Personal Ornament.

The areas of provenance indicated in Gargiulo's catalogue are mainly Apulia (336 objects, 55.54%) and Campania (242 objects, 40%), in all 578 objects, 95.54% of the entire collection. Campania's preeminence can be easily explained by Gargiulo's presence in the region, while Apulia should not be so surprising as, in 19th century, the route between Naples and Apulia was extremely exploited in the trading of antiquities.

About the single areas, in the first places one may note the Apulian (Egnatia, 163 specimens, 26.95%, Ruvo, 87 specimens, 14.38%, and Canosa 82 specimens, 13.56%)

and Campanian (Capua, 128 objects, 21.16%, and Cales, 40 objects, 6.61%) areas which were more famous for their coroplastic products.

While the chronology of the architectural elements' spans over a very long period, from the end of the VI BC. to the I century AD, coroplastic elements are mostly dating between mid-IV BC and the end of the III BC. It should be remembered that the production of such generic themes as animals or standing, sitting and recumbent figures, was particularly extended in its average duration, although with adaptations deriving from the stylistic trends of the moment. As far as pottery is concerned, its chronologic span ranges between IV and III century BC, especially for pottery with plastic and polychrome decoration and unpainted pottery. The chronology of plastic vases is more varied, with specimens which can be dated between the end of the IV and the III century BC Lamps are all dated between the first half and the last quarter of the I century AD.

Image Credits

Fig. 1–4: Riccardo Berriola (Su concessione del Ministero dei Beni e delle Attività Culturali e del Turismo – Museo Archeologico Nazionale di Napoli).

La ceramica laconica figurata dal deposito votivo di piazza San Francesco a Catania

Giacomo Biondi

Il deposito votivo di un santuario di Demetra[1] – parzialmente recuperato, a Catania, negli anni Cinquanta dello scorso secolo[2] – ha restituito una gran quantità di terrecotte figurate e un vasto e ricco campionario delle ceramiche circolanti nel Mediterraneo durante il VI secolo a. C. (a fine scavo si contavano ben 1.200 cassette). Una monografia è stata dedicata alle *kotylai* corinzie e una alla ceramica greco-orientale.[3] Le altre forme e classi ceramiche, compresa quella laconica, e le terrecotte figurate sono in corso di studio o di pubblicazione da parte di vari studiosi.

Sono stati finora individuati i frammenti di undici vasi potori laconici figurati e di uno di imitazione. Questi verranno pubblicati in dettaglio in un volume di studi in memoria di Giovanni Rizza (*Sicilia Antiqua* 2019) curato da Ernesto De Miro: in questa sede, per ragioni di spazio, faremo solo alcune precisazioni e osservazioni preliminari.

I frammenti figurati appartengono a *kylikes* e, uno soltanto di essi, KC 4783, a un *krateriskos* (fig. 1). Quasi tutti tali frammenti, sebbene inediti, sono stati inseriti in vari repertori, a volte con imprecisioni di vario tipo. Per evitare confusioni, ambiguità e il perpetuarsi di errori nelle citazioni bibliografiche, vanno corrette, innanzitutto, tali imprecisioni. La coppa di tipo Droop KC 4716,[4] ad esempio, a medaglione interno figurato, è stata erroneamente considerata a vernice nera.[5] Il piede frammentario KC 4713 non presenta, al contrario, alcun medaglione interamente occupato da un motivo floreale,[6] ma bensì una piccola rosetta, che faceva da riempitivo ad una scena figurata di cui non si conserva alcun particolare. I frammenti del *krateriskos* KC 4783 (fig. 1), attribuito al Pittore dei Pesci di Taranto pur in assenza di immagini edite o di descrizioni dettagliate, sono citati con un numero d'inventario errato.[7] Non ci sono frammenti di *kylikes,* inoltre, raffiguranti Eracle e Cerbero[8] né Eracle e l'Idra di Lerna.[9] I frammenti di due *kylikes* con "le teste di serpenti aggrovigliate con corpi umani", così descritti nella presentazione preliminare dei materiali,[10] appartengono, in realtà alla *kylix* del Pittore della Caccia KC 4710 raffigurante solamente Cerbero[11] (fig. 2) e alla *kylix* KC 4709 verosimilmente raffigurante Eracle in lotta con il leone nemeo (fig. 3).

Il frammento di *kylix* KC 4708[12] (fig. 4), inoltre, sulla base di un'immagine in realtà mai pubblicata, è stato assegnato ad un seguace del Pittore di Arkesilas, probabilmente un imitatore.[13] Ad un esame autoptico, sembra di riconoscere, invece, i tratti distintivi proprio del Pittore di Arkesilas: le incisioni con cui sono resi ginocchia, mano, pettorale, orecchio e altri dettagli del comasta più integralmente conservato, infatti, non sono altro che la versione affrettata degli stessi particolari anatomici nel Prometeo della nota coppa dei Musei Vaticani.[14] Né le figure sono disposte a raggiera, come i demoni alati visibili sulla coppa di Sparta *LV* cat. n. 204 portata a confronto, ma su un piano orizzontale. Si nota, infine, un'esecuzione veloce e sicura e non tremolante e incerta.

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Fig. 1: Frammenti del *krateriskos* KC 4783.

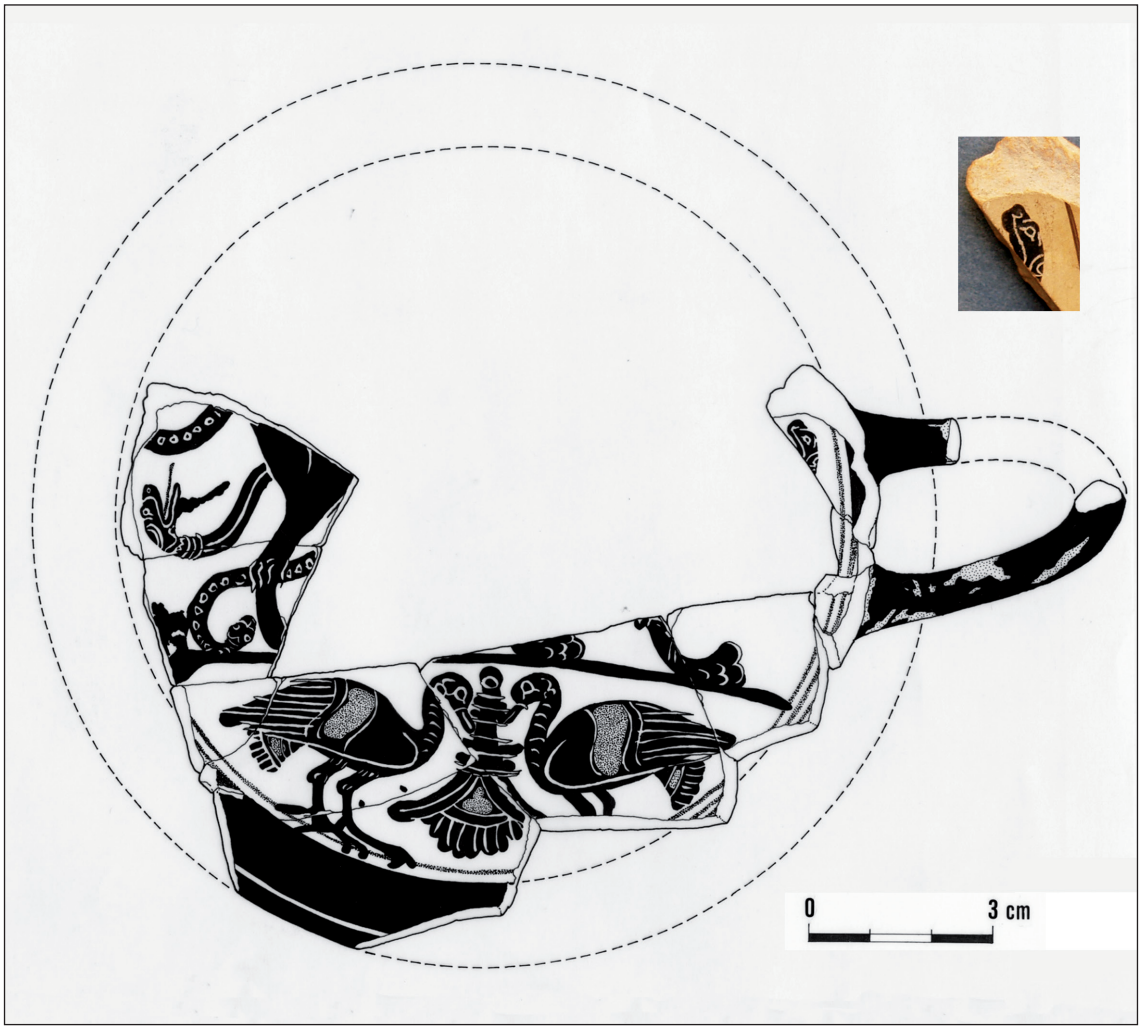


Fig. 2: *Kylix* frammentaria KC 4710.

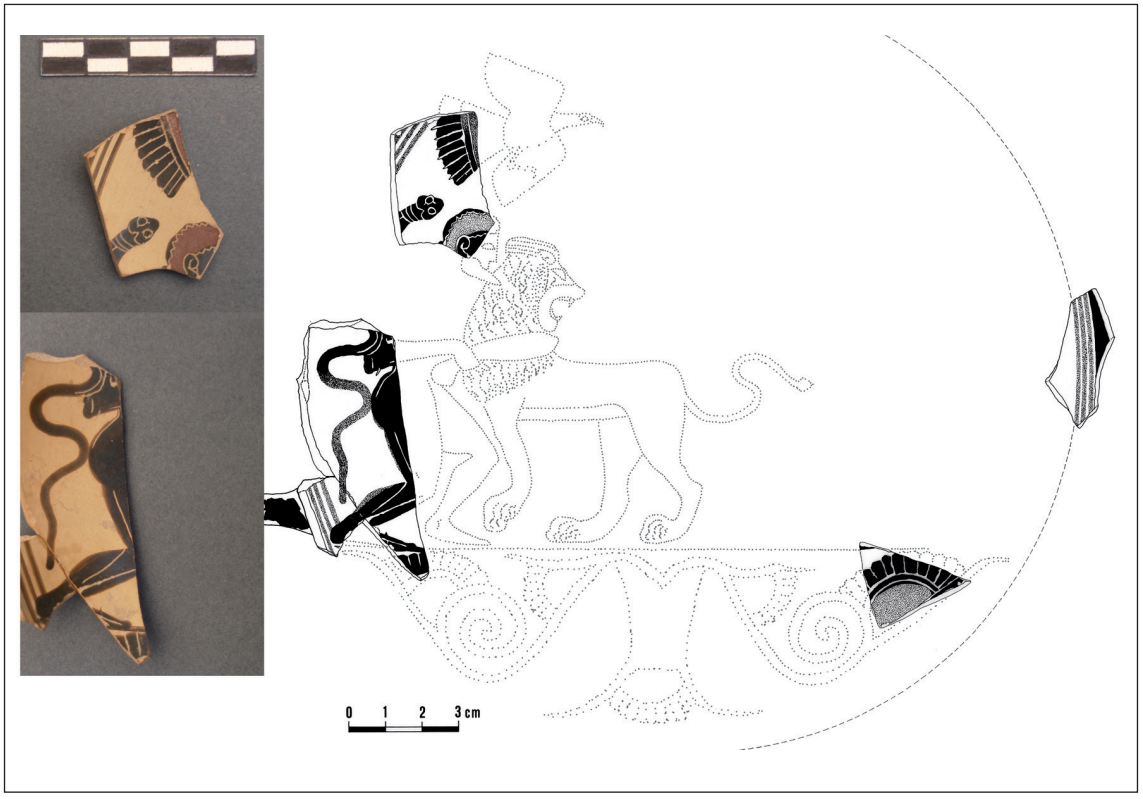


Fig. 3: Frammenti della *kylix* 4709.

La *kylix* frammentaria KC 4711[15] – raffigurante un oplita che con la lancia trapassa al collo un leone dalla coda di serpente (Bellerofonte e la chimera?) – già assegnata "probabilmente" al Pittore del Cavaliere,[16] va senz'altro attribuita a quest'ultimo. Alcuni particolari grafici, evidenti all'esame autoptico, come il caratteristico occhio ad estremità aperte, e l'assenza dell'ingobbio nella fascia attorno al piede del vaso, all'esterno, sono tipici di tale pittore. Si tratta di una delle sue opere di esecuzione più accurata.

In via preliminare, infine, si possono fare alcune considerazioni.

Il *krateriskos* KC 4783 (fig. 1) appartiene ad una forma poco diffusa della ceramica laconica. È l'unico figurato rinvenuto in Sicilia. La decorazione sembra alternare campi metopali con motivi a X, retaggio di una tradizione decorativa del VII secolo a.C.,[17] a campi metopali con i tipici palmipedi dalla coda bicolore. La stessa forma, pur rara, è rappresentata, nel deposito di Catania, anche da altri esemplari (almeno due) senza tracce di figure. Uno di questi trova perfetto confronto con un esemplare di Taranto.

La *kylix* a basso piede KC 4707,[18] attribuibile al Pittore di Naukratis, è l'unica non inserita nei citati repertori di ceramica laconica e quindi del tutto inedita. È la sola figurata del suddetto pittore attestata in Sicilia e si può considerare la massima espressione della nota tendenza corinzieggiante di quest'ultimo. Al fruitore antico il vaso doveva apparire del tutto simile a quelli corinzi. Il fregio esterno di sfingi e grifoni, già di per sé di



Fig. 4: Frammento di *kylix* KC 4708.

ispirazione corinzia, infatti, a differenza delle altre *kylikes* del Pittore di Naukratis, non è limitato alla parte inferiore della vasca esterna, ma ne invade tutta l'altezza in maniera del tutto simile a quelle decorate dai pittori del Corinzio medio, simili alla nostra anche per il profilo del vaso.[19]

Altrettanto interessante è la *kylix* KC 4709 (fig. 3), a cui appartengono esigui frammenti attribuibili alla stessa mano di KC 4708 (fig. 4), quella del Pittore di Arkesilas. Se l'integrazione proposta è esatta, si tratta di una delle poche attestazioni del tema di Eracle in lotta con il leone nemeo documentate nella ceramica laconica.

Note

[1] I materiali rinvenuti sono attualmente custoditi nei magazzini del Museo Regionale Interdisciplinare di Catania. I numeri d'inventario sono stati assegnati prima del trasferimento, avvenuto nel 1998, dai magazzini del Museo Civico di Castello Ursino al deposito di "Casa Vaccarini", dove si trovavano fino al 2015.
[2] Rizza 1960.
[3] Grasso 1998; Pautasso 2009.
[4] Rizza 1960, 251.
[5] Pelagatti 1990, cat. n. 62 bis; l'errore è riportato in Coudin 2009, cat. n. CAT037 ("groupe Gf").
[6] *LV*s cat. n. 191, 81, nota 321.
[7] "K 4669", in *LV*s cat. n. 246.
[8] *LV* cat. n. 229; Coudin 2009, 145.
[9] Coudin 2009, 145.
[10] Rizza1960, 251, fig. 11.
[11] Il particolare in alto a destra, isolato per la frattura del vaso, appartiene, ovviamente, alla testa di uno dei serpenti di Cerbero e non a una clava.
[12] Rizza 1960, 251.
[13] *LV*s cat. n. 121, 51. L'autore cita Rizza 1960, fig. 11, dove, in realtà, il frammento non è riprodotto.
[14] *LV* cat. n. 196.
[15] Rizza 1960, 251, fig. 11.
[16] *LV* cat. n. 318.
[17] Cfr. *LBP* 1, cat. n. A1, fig. 1. Per lo stesso motivo decorativo in età successiva, si veda *LBP* 2, 62, nota 245.
[18] Di prossima pubblicazione su *Sicilia Antiqua* 2019.
[19] Cfr., ad es., la *kylix* Amyx 1988, 194, tav. 75,1a–b, del Pittore di Berlino Inv. 4507, accostabile a quella di Catania anche per superficie interna non figurata.

Crediti

Fig. 1: Foto dell'autore. – Fig. 2: Disegno di L. Muni. – Fig. 3: Disegno di L. Muni, con integrazioni dell'autore. – Fig. 4: Foto dell'autore.

Bibliografia

Amyx 1988
D. A. Amyx, Corinthian Vase-Painting of the Archaic Period (Berkeley 1988).
Coudin 2009
F. Coudin, Les Laconiens et la Méditerranée à l'époque archaïque (Napoli 2009).
LBP 1
C. M. Stibbe, Laconian Mixing Bowls. Laconian Black-Glazed Pottery, Part 1 (Amsterdam 1989).

LBP 2

C. M. Stibbe, Laconian Drinking Vessels and Other Open Shapes. Laconian Black-Glazed Pottery, Part 2 (Amsterdam 1994).

LV

C. M. Stibbe, Lakonische Vasenmaler des sechsten Jahrhunderts v. Chr. (Amsterdam 1972).

LVs

C. M. Stibbe, Lakonische Vasenmaler des sechsten Jahrhunderts v. Chr. Supplement (Mainz am Rhein 2004).

Grasso 1998

L. Grasso, *Stipe votiva del Santuario di Demetra a Catania.* Kotylai e coppe corinzie figurate, Studi e Materiali di Archeologia Greca 4.1.1 (Palermo 1990).

Pautasso 2009

A. Pautasso, *Stipe votiva del Santuario di Demetra a Catania.* La ceramica greco-orientale, Studi e Materiali di Archeologia Greca 9 (Siracusa 2009).

Pelagatti 1990

P. Pelagatti, Ceramica laconica in Sicilia e a Lipari. Materiali per una carta di distribuzione, supplemento a BdA 64, 1990, 123–220.

Rizza 1960

G. Rizza, Stipe votiva di un santuario di Demetra a Catania, BdA 45, 1960, 247–262.

A New Attic Late Protogeometric Krater from the Siderospilia Necropolis of Prinias (Crete)

Giacomo Biondi

Consistent fragments of a large-sized (lip diameter 53 cm) Attic Late Protogeometric krater (inv. P266) were found in the Early Iron Age Siderospilia necropolis of Prinias,[1] at the geometric centre of Crete, around 500 m far from the related settlement arising on the so-called Patela plateau.[2] The most popular shape called "krater"[3] in this period is an oversized (lip diameter 20–30 cm) circle skyphos with central panel,[4] which has nothing in common with the Siderospilia vessel.

The shape and decoration of the Siderospilia krater (fig. 1) – with double loops handles and panels filled with rectilinear motifs between two sets of vertical circles – are of the same design as a contemporary Attic vase kept in the "Museum Antiker Kleinkunst" in Munich (purchased in 1908 on the art market).[5] The decorative details – vertical zigzags, chequerboard and alternating diagonals filling narrow panels – and the loose way they are painted occur on another large-sized Attic krater, dating to the second half of the 10th century BC, found above a pyre of the cemetery at Nea Ionia, just out-

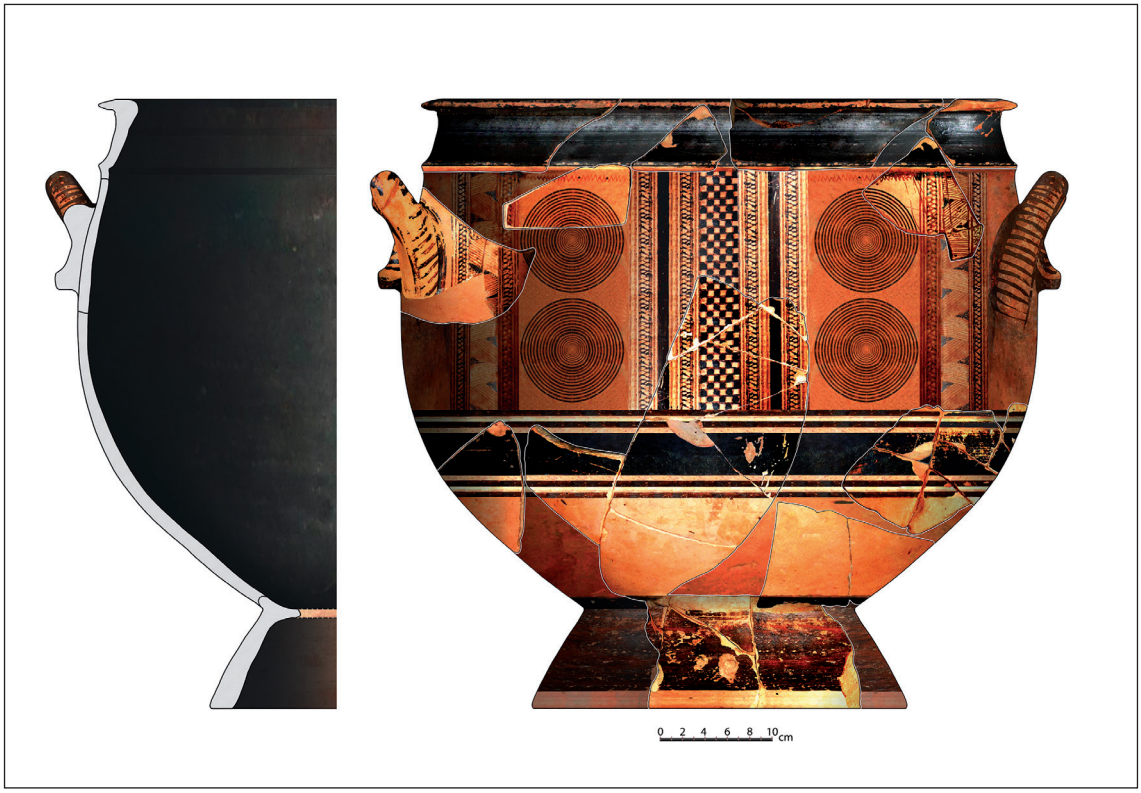


Fig. 1: The krater P266 from Siderospilia graphically integrated.

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side Athens.[6] Such affinity suggests that the Siderospilia and the Nea Ionia vessels could have been manufactured in the same workshop.

The Siderospilia specimen – the southernmost one exported in the Aegean Sea – is the third Attic Late Protogeometric large-sized krater whose shape and decoration are well preserved and the only one preserving the profile of the foot (missing in the Munich and Nea Ionia ones). Just one fragment of what appears to be a similar vessel was found in the settlement area of Knossos.[7] The fragments of two other examples from the Cyclades (Naxos and Paros) could belong to locally made vases.[8] Other Attic Late Protogeometric shapes, however, were widely exported (and imitated) in many sites of the Aegean.[9] Lefkandi and Knossos were the most receptive ones.[10] The causes of such distribution are matter of speculation (practice of gift exchange, intermarriages, trade…).[11]

As for the Siderospilia cemetery, the recipients of the krater and of other, valuable, imported metal products from Egypt[12] and Cyprus[13] must have been the members of wealthy local aristocracies.[14] Their need to exhibit these products in the context of expensive mortuary practices, which were in use among the social élites of the Aegean area at the beginning of the first millennium, had to be the leading cause for attracting such prestige goods from the outside world. Such practices at Siderospilia included also the killing of horses and dogs and the deposition of weapons and jewels among the grave goods. The central position of the settlement of the Patela plateau on the route connecting the northern and southern coasts of central Crete, on the east slopes of the Ida massif, made easier the contacts with the Aegean world. In Crete, in fact Attic Protogeometric pottery imports are distributed along such route: at Knossos and Kanli Kastelli,[15] at Siderospilia and at Gortina.[16] A clay stand fragment found in the sanctuary of Hermes Kranaios at Patsos[17] testifies that Attic Protogeometric pottery travelled also along the Amari valley, on the route connecting the northern and southern coasts of the island, to the west of the Ida massif.[18]

Notes

[1] As for the necropolis in the Protogeometric period (970–840 BC), see Rizza 2011, 25–41, and Biondi forthcoming.

[2] Rizza 2008.

[3] E. g. Coldstream – Catling 1996, 398, (no. 207.7); Coldstream 1972, 73, no. B41–2, fig. 5 ("Small krater"), 76, no. C43, tav. 19 ("Krater").

[4] The same shape has been recently called "crater bowl" by Lemos 2002, 39, 46–48, pls. 79.1–4.

[5] CVA Deutschland, München 3, 9, 9, pls. 103–104.1–2; Lemos 2002, 51, pls. 75.1–2.

[6] Smithson 1961, 151–152, 167–168, no. 48, pl. 29; Lemos 2002, 51, pl. 76.1; Coulié 2013, 38.

[7] Coldstream – Macdonald 1997, 235, no. B43, tav. 36.

[8] Lemos 2002, 51.

[9] Coldstream – Catling 1996, 716; Catling 1998, 368–378, fig. 1; Seroglou 2009.
[10] Coldstream – Catling 1996, 716; Seroglou 2009.
[11] Seroglou 2009, 30.
[12] Matthäus 2014; Matthäus 2017.
[13] Matthäus 2016.
[14] Biondi forthcoming.
[15] Catling 1998.
[16] Santaniello 2013, 254, fig. 3 (a fragment of "crater bowl").
[17] Κούρου – Καρέτσου 1994, 141–142, no. 74, fig. 90, drawings 32–33.
[18] Kanta – Karetsou 1998, 171.

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Fig. 1: Drawing by O. Pulvirenti.

References

Biondi forthcoming
G. Biondi, La necropoli protogeometrica di Siderospilia e i contatti esterni dell'anonimo insediamento sulla Patela di Priniàs agli inizi del I millennio a.C., in: N. Stampolidis (ed.), Eleutherna, Crete and the Outside World. Conference held at Rethymno, 31 May – 2 June 2018.

Catling 1998
H. W. Catling, Exports of Attic Protogeometric Pottery and Their Identification by Non-Analitical Means, BSA 93, 1998, 365–378.

Coldstream 1972
J. N. Coldstream, Knossos 1951–61: Protogeometric and Geometric Pottery from the Town, BSA 67, 1972, 63–93.

Coldstream – Catling 1996
J. N. Coldstream – H. W. Catling (eds.), Knossos North Cemetery. Early Greek Tombs, British School at Athens Supplementary 28 (London 1996).

Coldstream – Macdonald 1997
J. N. Coldstream – C. Macdonald, Knossos: Area of South-West Houses, Early Hellenic Occupation, BSA 92, 1997, 191–245.

Coulié 2013
A. Coulié, La céramique grecque aux époque géometriqué et orientalisante (Xie–VIe siècle av. J.-C.) (Paris 2013).

Kanta – Karetsou 1998

A. Kanta – A. Karetsou, From Arkadhes to Rytion. Interactions of an Isolated Area of Crete with the Aegean and the East Mediterranean, in: V. Karageorghis – N. Stampolidis (eds.), Eastern Mediterranean: Cyprus-Dodecanese-Crete. 16th–6th cent. B.C. Prooceedings of the International Symposium, Rethymnon 13–16 May 1997 (Athens 1998) 159–173.

Κούρου – Καρέτσου 1994

Ν. Κούρου – Α. Καρέτσου, Το Ιερό του Ερμού Κραναίου στην Πατσό Αμαρίου, in: L. Rocchetti (ed.), Sybrita. La Valle di Amari fra Bronzo e Ferro (Rome 1994), 81–164.

Lemos 2002

I. Lemos, The Protogeometric Aegean. The Archaeology of the Late Eleventh and Tenth Centuries BC (Oxford 2002).

Matthäus 2014

H. Matthäus, Ägypten und die Ägäis am Beginn des 1. Jahrtausends vor Christus, in: H. Craig Melchert, E. Rieken, T. Steer (Hrsg.), Munus amicitiae Norbert Oettinger a collegis et amicis dicatum (Ann Arbor 2014) 181–214.

Matthäus 2016

H. Matthäus, Kipriaka in der Siderosopilia-Nekropole von Prinias, Mittelkreta, CahCEC 46, 2016, 175–200.

Matthäus 2017

H. Matthäus, One more Aigyptiakon from Lefkandi: the Bronze Jug from Toumba, Tomb 47.18, in: V. Vlachou – A. Gadolou (eds.), ΤΕΡΨΙΣ. Studies in Mediterranean Archaeology in Honour of Nota Kourou (Brussels 2017) 359–357.

Rizza 2008

G. Rizza, Priniàs. La città arcaica sulla Patela. Scavi condotti negli anni 1969–2000 (Catania 2008).

Rizza 2011

G. Rizza, Identità culturale, etnicità, processi di trasformazione a Priniàs, in: G. Rizza (ed.), Identità culturale, etnicità, processi di trasformazione a Creta fra Dark Age e Arcaismo, Atti del Convegno di Studi "Per i cento anni dello scavo di Priniàs", Atene, 9–12 novembre 2006 (Palermo 2011) 21–56.

Santaniello 2013

E. Santaniello, Gortyn between the late 10th and the 6th Century BC. Local Pottery Imports and Imitations, in: W.-D. Niemeier – O. Pilz – I. Kaiser (Hrsg), Kreta in der geometrischen und archaischen Zeit (Memmingen 2013) 253–262.

Seroglou 2009

F. Seroglou, The Dissemination of Attic Pottery during the Protogeometric and Geometric Periods, in: G. Deligiannis – Y. Galanakis (eds), The Aegean and its Cultures, BarIntSer 1975, 2009, 29–35.

Smithson 1961

E. L. Smithson, The Protogeometric Cemetery at Nea Ionia, 1949, Hesperia 30, 1961, 147–178.

A Monumental Structure on the Riverfront. Archeology and Architecture of the *Felicitas Iulia Olisipo cryptoporticus* (Lisbon, Portugal)

Ana Caessa – Nuno Mota

The Roman Monument's Historiography

The Roman building commonly known as "Galerias da Rua da Prata" was discovered in Lisbon following the earthquake of 1755, when a block was being rebuilt between the streets of Conceição and Prata, in the presently protected historical "Baixa Pombalina" area (fig. 1). This flooded subterranean building consisting of a complex of vaulted communicating galleries of different sizes, whose construction was, almost since its discovery, recognized to be from the Roman period, served as an urban cistern until the middle of the 19th century. Nevertheless, it is one of the emblematic monuments of *municipium ciuium romanorum Felicitas Iulia Olisipo.*



Fig. 1: *Cryptoporticus* location in Lisbon's old city center (Baixa Pombalina).

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The monument has been subjected to several interpretations. In the 18th and 19th centuries, it was identified as part of a thermal building – due to the fact that it was flooded, the water seemed to sprout naturally from the ground and a pedestal with an inscription dedicated to *Aesculapius* was found nearby.[1] A baths building, for medicinal purposes or not, is the interpretation offered by most of the bibliography produced in the 20th century.[2] Meanwhile, this interpretation has been rejected due to the state of conservation of the galleries (the cracks in the building allow the water to ingress) and from the result of the analyses of the water that floods it (the water belongs to the phreatic veins that cross lower Lisbon and has no medicinal properties). There were also those who suggested that the subterranean structure had been a cistern since its origins.[3] But the most consensual interpretation, from the last quarter of the 20th century, is that it is a Roman *cryptoporticus,* an engineering solution used to overcome slopes or build on unstable terrain, creating artificial platforms and functioning as a foundation for other structures.[4] Theoretical speculation has also arisen regarding which buildings would be based on the subterranean structure. In addition to the version that the thermal complex was built on the *cryptoporticus,*[5] certain hypotheses have appeared suggesting that there were storage facilities (*horrea*),[6] or a port *forum* with commercial vocation also associated to religious functions of the *Aesculapius* cult.[7]

There is no ancient description of *Felicitas Iulia Olisipo,* but there are enough traces available to give an idea of this capital of municipality of Roman citizens enrolled in the *Galeria* tribe. The *forum,* where one could find the main administrative and religious public buildings, has not yet been located. Other public constructions, such as the *theatrum*[8] and *thermae,* private[9] and public,[10] are blended in the urban fabric (fig. 2). In the outskirts of the city, along the *viae,* there could be found the necropolises[11] and other constructions, such as the *circus*[12] and, in the riverfront, salted fish processing units[13] as well as *horrea.*[14] Lisbon's epigraphy provides obvious proof of a brilliant municipal life, where all the magistrates have a perfectly Latin nomenclature, which differs significantly from other harbor centers where the Greek *cognomina* appear in the social group holding power. Greek *cognomina,* however, are numerous in *Felicitas Iulia Olisipo,* often related to freed men. These names could be the result of a cultural Hellenizing fashion but may also refer to a population of eastern origins, usually numerous in the large ports of the Empire.[15]

Due to its geographical location – a harbor city between the Mediterranean and the Atlantic – *Felicitas Iulia Olisipo* had some commercial importance and could have had a second *forum,* built over the artificial platform created by the *cryptoporticus,* with mostly economic functions, near the area of the port[16] and the industrial area of salted fish processing units. This hypothesis would have found parallels in *Hispalis* and *Ostia.*[17] In this context, the location of the *cryptoporticus* should, in fact, be related to the riverfront and its sandy river beach, as well as the city's harbor, the *horrea* and the numerous salted fish processing units presently known.

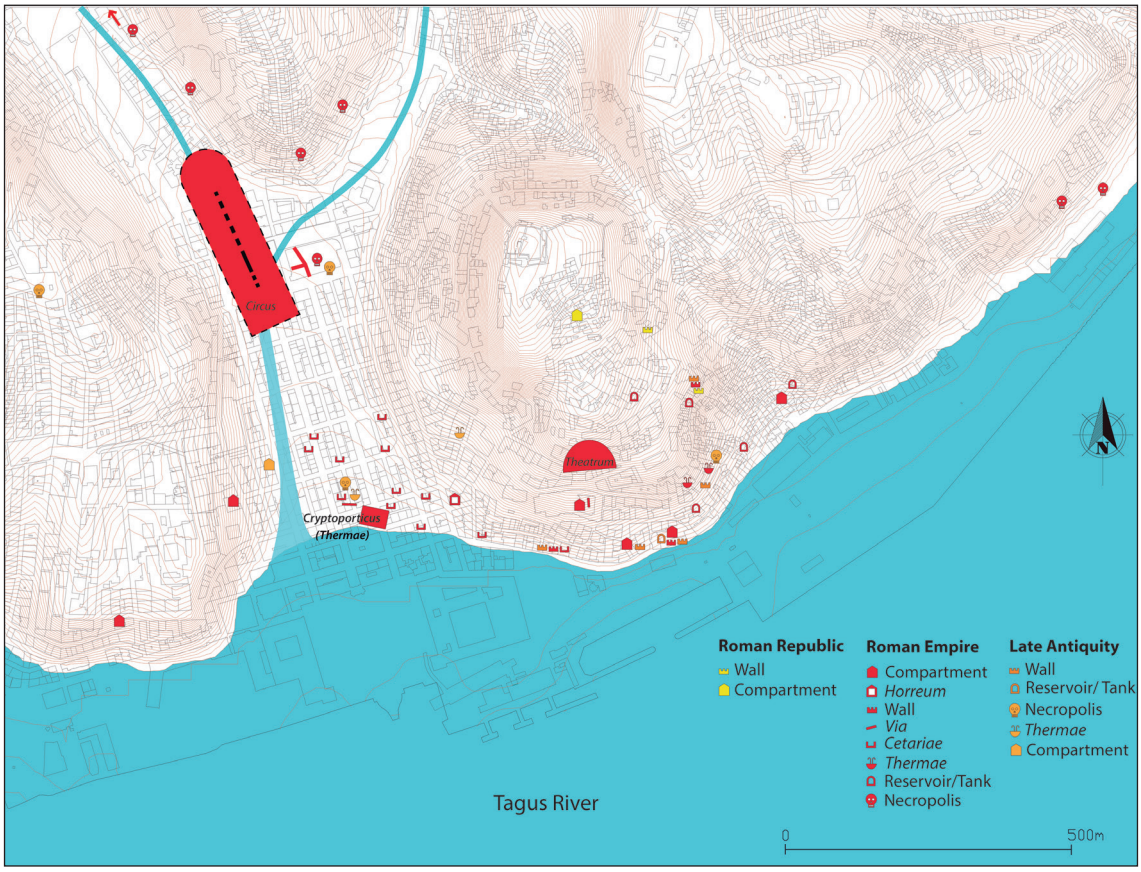


Fig. 2: Plan of the most relevant Roman period archaeological evidences in Lisbon's historical center (ancient Roman riverfront).

The Archaeological Approach (2015–2018)

The available archaeological information about Roman Lisbon, along with the latest results of the *cryptoporticus*'s archaeological approach, led by Lisbon's Center of Archaeology (CAL),[18] have finally enabled us to put forward hypothesis about the monument's original function and chronology, and get to know some of the technical contingencies of its construction.

The archaeological excavations that took place inside some of present-day buildings supported by the *cryptoporticus* showed related archaeological evidence: the remains of the *cryptoporticus* riverfront boundary wall built in *opus quadratum* and *opus caementicium;* a polychromatic marble flooring and water tanks in *opus signinum* coated with white marble associated with a *frigidarium,* on the west side; an inner wall and an external *cloacae;* and an *hypocaustum* on the top of the vaulted lower part of the subterranean complex, on the East side (fig. 3, 4). These remains seem to confirm the 18th century interpretation, suggesting a public port *thermae* supported by the *cryptoporticus.* The

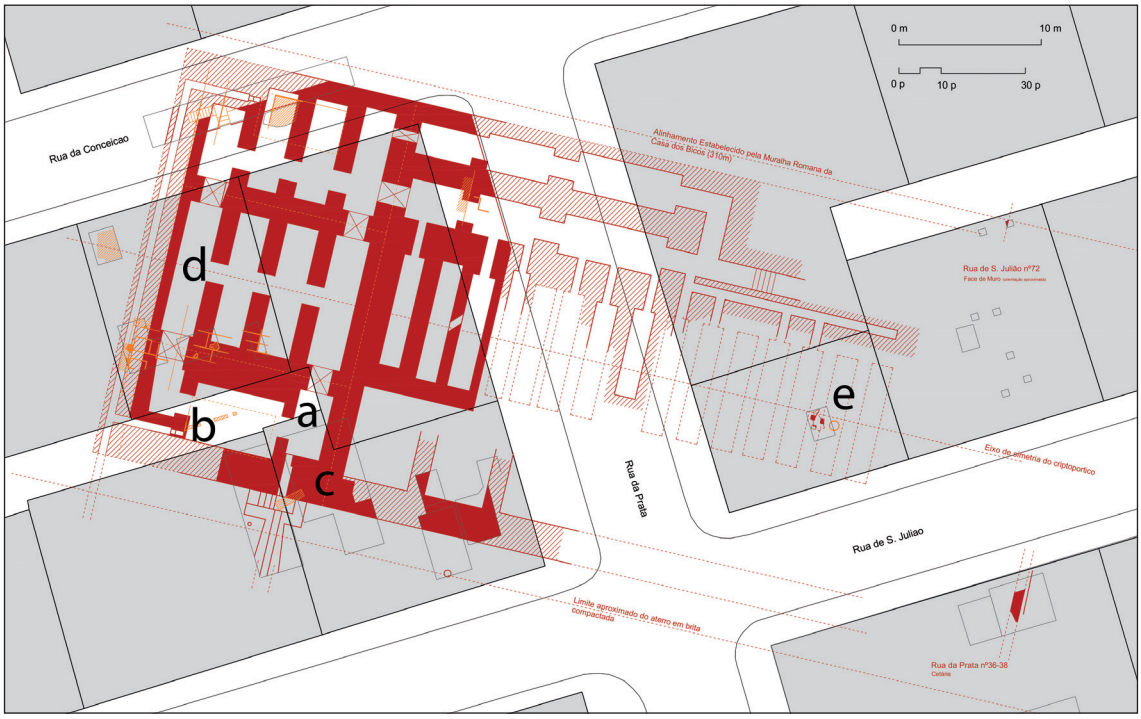


Fig. 3: *Cryptoporticus* plan study based on old surveys and on the information revealed by the recent archaeological excavations. Visitable area in deep red (Pedro Vasco Martins – *Forma Urbis* Lab).

construction and abandonment of the building's primary function occurred from the middle of the 1st century AD to the 4th/5th centuries AD. The underground structure was accidentally flooded during the Roman period (probably after an earthquake during its construction or shortly thereafter) leading to significant reconstruction works in this building that should have had some importance on the riverfront as a monumental harbor structure.[19]

Summing up, the *cryptoporticus* seems to be the remains of a public monumental *thermae* with a port vocation in the city's riverfront.[20]

A complex of vaulted communicating galleries related with a Roman baths complex is not unusual and it can be found in *Lutecia* ("Thermes du Nord" in Paris),[21] *Pictavium* (Poitiers)[22] and *Cassinomagus* (Chassenon),[23] all built in the early Empire. Roman *thermae* complexes offer several options in what concerns the scale, the specific organization of the functional parts, and the urban context.[24] In these matters, one can also find parallels for this Lisbon's structure in the so-called port *thermae* in *Barcino* (Barcelona),[25] *Tarraco* (Tarragona)[26] and *Baelo Claudia* (Bolonia).[27]

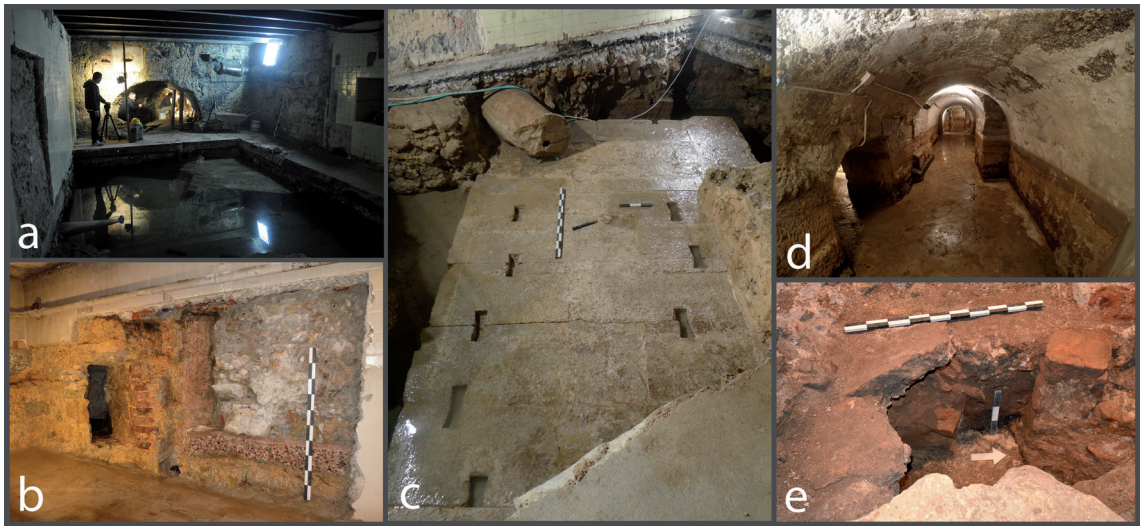


Fig. 4: The breaking of a basement wall that concealed one of the main galleries is going to be the new, permanent, safe and inclusive entrance (a); remains of a cold-water tank (with a related drain) coated with white marble – *frigidarium* (b); *cryptoporticus* riverfront boundary wall (integrating a *cloaca*) dismantled in the Late Antiquity (c); view of the set of subterranean galleries that make up the interior of the *cryptoporticus* (d); remains of *suspensura* and *pilae* from the *hypocaustum* – *caldarium* or *tepidarium* (e).

Lisbon's Roman *cryptoporticus* Research and Valorization Project (CRLx)

The Lisbon Town Council has played an active role in the Roman *cryptoporticus* since the second half of 19th century, promoting initiatives towards its investigation, conservation and divulgation. Among these activities, the most important was the monitoring of the accessible part of the monument.

The current dynamics of urban rehabilitation of Lisbon's historic center and the interest of the local administration in the valorization of the city archaeological heritage promoted an investigation and conservation project in 2015. CAL is developing CRLx, a municipal and multidisciplinary project that gathers internal and external partnerships, bringing together renowned institutions (linked to Archaeology, Geology, Hydrology, Engineering, Architecture and Urbanism) and collaborations with several investigators, working together in research and in promoting the use and enjoyment of the monument by the public.[28]

The project has been creating numerous possibilities for the scientific study of the *cryptoporticus,* namely through archaeological interventions and rigorous architectural surveys which were almost impossible to accomplish beforehand. Conservation and restauration solutions are also being studied and tested.[29]

The monument is very difficult to access. In fact, this flooded structure continues to support buildings. In a few days the public may visit the galleries on a yearly basis, once

complicated water drainage procedures and risky downward stairways in the middle of a busy street have been finalized. Meanwhile, there are currently no signs or visual information at the site of the monument or in the present day Lisbon's urban landscape.

A great number of procedures are to be undertaken so as to turn the Lisbon's Roman *cryptoporticus* into a monument, which will be permanently open and well known to the public. The CRLx's final goal is to create a new, safe and inclusive entrance and an interpretation center for the monument. The new access will be open at the basement of an 18th century building, whose reconstruction in 1913 damaged part of the *cryptoporticus.* A past heritage attack became an opportunity in the present.

Notes

[1] Serpa 1963.

[2] Castilho 1935,144–157; Figueiredo 1889; Martins 1909; Silva 1934; Moita 1977.

[3] Sequeira 1967, 306–308; Maciel 1993–1994.

[4] Encarnação 1973; Garcia 1974/1975, 10–11; Mantas 1976, 165; Moita et al. 1986, 59–60; Fabião 1994; Ribeiro 1994a; Ribeiro 1994b; Ribeiro 1994c, 83–84; Salvado 1994, 505.

[5] Alarcão 1988, 124–125; Moita 1994, 50.

[6] Almeida, 1973, 80; Garcia 1974–1975, 10–11.

[7] Ribeiro 1994a; Ribeiro 1994b; Ribeiro, 1994c, 83–84.

[8] Hauschild 1990.

[9] Bugalhão 2001, 66; Filipe et al. 2007; Filipe et al. 2016.

[10] Encarnação, 2009.

[11] Silva 2012, 201–203.

[12] Vale et al. 2002.

[13] Amaro 1982; Diogo et al. 2000; Bugalhão 2001; Sepúlveda et al. 2003; Fernandes et al. 2011; Amaro et al. 2013.

[14] Amaro et al. 2013.

[15] Mantas 1994, 71–73.

[16] Fabião 1994, 69.

[17] Ribeiro 1994b, 193.

[18] Caessa et al. 2015a; Mota et al. 2018b; Mota et al. 2018c; Sarrazola et al. 2018a; Sarrazola et al. 2018b; Vieira 2016.

[19] Mota et al. 2018a.

[20] Interpretation of the archaeological structures done in collaboration with Pedro Vasco Martins (architect) from *Forma Urbis* Lab/Faculty of Architecture (University of Lisbon).

[21] Krencker 1929, 251.

[22] Krencker 1929, 252.

[23] Boyer et al. 1966.

[24] Cf. Krencker 1929; Nielsen 1993; Yegul 2009.

[25] Miró 2014.
[26] Macias 2004.
[27] Bernal et al. 2013.
[28] Caessa et al. 2015b.
[29] Caessa et al. 2018.

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References

Alarcão 1988
J. Alarcão, Roman Portugal. Volume II, Fasc 3 Evora, Faro & Lagos (Wiltshire 1988).

Almeida 1973
F. Almeida, As chamadas termas romanas da Rua da Prata. Monumentos e Edifícios Notáveis do Distrito de Lisboa, Volume 1, Lisboa: Assembleia Distrital de Lisboa, 1973, 79–80.

Amaro 1982
C. Amaro, Casa dos Bicos, notícia histórico-arqueológica, in: Arqueologia 6, Porto: Grupo de Estudos Arqueológicos do Porto, 1982, 96–111.

Bernal et al. 2013
D. Bernal – A. Arévalo – J. J. Díaz – J. Lagóstena – J. M. Vargas – M. Lara – E. Moreno – A. M. Sáez – M. Bustamante – J. A. Expósito – A. Muñoz, Las termas y el Suburbium Marítimo de Baelo Claudia: avance de un reciente descubrimiento. Revista Onoba 1, 2013, 115–152.

Boyer et al. 1966
E. Boyer – P. Flottes, Réssurection de Cassinomagus (Chassenon, en Charente). Etudes Charentaises 1, 1966, 6–19.

Bugalhão 2001
J. Bugalhão, A indústria romana de transformação e conserva de peixe em *Olisipo*. Núcleo Arqueológico da Rua dos Correeiros. Trabalhos de Arqueologia 15 (Lisboa, Instituto Português de Arqueologia 2001).

Caessa et al. 2015a
A. Caessa – N. Mota – C. Nozes, Relatório Final da Intervenção na Rua da Conceição (excavation report) (Lisboa 2015) 75–77.

Caessa et al. 2015b
A. Caessa – N. Mota – C. Nozes, Projeto de Estudo e Valorização do Criptopórtico Romano de Lisboa (CRLx) (Lisboa 2015).

Caessa et al. 2016
A. Caessa – C. Nozes – N. Mota, Novas descobertas no criptopórtico romano de Lisboa – Rua da Conceição (primeira fase), Almadan II série 20, 2016, 220–221.

Caessa et al. 2018
A. Caessa – N. Mota, Projeto de Investigação Plurianual de Arqueologia – Projecto de Estudo e Valorização do Criptopórtico romano de Lisboa (CRLx):1º Relatório de Progresso (policopiado) (Lisboa 2018).

Castilho 1935
J. Castilho, Lisboa antiga: bairros orientais, in: Serviços Industriais da Câmara Municipal de Lisboa I(2ª) (Lisboa 1935).

Diogo et al. 2000
D. Diogo – L. Trindade, Vestígios de uma unidade de transformação do pescado descobertos na Rua dos Fanqueiros, em Lisboa, in: Revista Portuguesa de Arqueologia 3, 2000, 181–196.

Encarnação 1973
J. Encarnação, Criptopórtico romano no subsolo de Lisboa, in: Jornal da Costa do Sol 489 (Cascais 1973) 4–6.

Encarnação 2009
J. Encarnação, As Termas dos Cássios em Lisboa – Ficção ou Realidade?, in: J. G. Gorges – J. Encarnação – T. Nogales Bassarate – A. Carvalho, (eds.), Lusitânia Romana – Entre o Mito e a Realidade. Actas da IV Mesa Redonda Internacional sobre Lusitânia Romana (Cascais 2009) 481–493.

Fabião 1994
C. Fabião, The Roman Monument in Rua da Prata. in: Subterranean Lisbon (Lisbon, February–December 1994) (Lisbon 1994) 67–69.

Fernandes et al. 2011
L. Fernandes – A. Marques – V. Filipe – M. Calado, A transformação de produtos piscícolas durante a Época Romana em *Olisipo:* o núcleo da Rua dos bacalhoeiros (Lisboa), Revista Portuguesa de Arqueologia 14, 2011, 239–261.

Fernandes et al. 1995–1996
L. Fernandes – M. Leitão, Relatório Final dos Trabalhos Arqueológicos Realizados nas Galerias da Rua da Prata, Lisboa, DGPC (excavation report) (Outubro 1995 – Maio 1996) (Lisboa 2018).

Figueiredo 1889
A. B. Figueiredo, As thermas romanas da Rua Bella-da-Rainha (vulgo Rua da Prata) em Lisboa. Revista Archeologica Vol. III (Lisboa 1889) 23–35.

Filipe et al. 2007
V. Filipe – M. Calado, Ocupação Romana no Beco do Marquês de Angeja, Alfama: evidências de estruturas termais junto da porta Nascente de *Olisipo,* 2007, 55–64. <https://issuu.com/almadan/docs/almadan_online_15> (31. 07. 2020).

Filipe et al. 2016
V. Filipe – R. Santos, Um complexo termal romano na Rua da Adiça (Lisboa), in: Almadan IIª série, 2016, 224.

Filipe 2017
V. Filipe, Relatório Final da Intervenção Arqueológica da Rua da Prata 45–51 com a Rua de São Julião 84 (excavation report), Lisboa, Cota 80/86, 2017.

Garcia 1974/1975
J. M. Garcia, Lisboa Romana e Visigótica. Separata de Olisipo, Boletim do Grupo "Amigos de Lisboa" No. 137/138, 1974/1975.

Hauschild 1988
T. Hauschild, Das Römische Theater von Lissabon. Planaufnhame 1985–1988, MM 31, 1988, 348–392.

Krencker 1929
D. Krencker, Die Trierer Kaiserthermen, in: B. Filser (Hrsg.), Trierer Grabungen und Forschungen I(1), 1929.

Macias 2004
J. Macias (ed.), Les termes publiques de l'àrea portuária de Tàrraco, Carrer de Sant Miquel de Tarragona, Institut Català d'Arqueologia Clàssica, Sèrie Documenta 2 (Tarragona 2004).

Maciel 1993/1994
J. Maciel, A propósito das chamadas conservas de água da Rua da Prata, in: Conimbriga 32/33, 1993/1994, 145–156.

Maia 1973
M. Maia, Actividades da APOM, in: Associação Portuguesa de Museologia – Informações 3, 1973, 4–8.

Mantas 1976
V. G. Mantas, Notas acerca de três inscrições de *Olisipo,* Conímbriga 15, 1976, 151–169.

Mantas 1994
V. G. Mantas, Olisiponenses: Epigraphy and Society in Roman Lisbon, in: Subterranean Lisbon (Lisbon, February – December 1994) (Lisbon 1994) 70–77.

Miró 2014
C. Miró, Las termas marítimas de la Colonia Barcino, in: J. M. Álvarez – T. Nogales – I. Rodà (eds.), Actas XVIII Congreso Internacional Arqueología Clásica (Mérdia 13–17 Mayo 2013) (Mérida 2014) 879–882.

Moita 1977
I. Moita, As termas romanas da Rua da Prata em Lisboa, in: Publicações Culturais da Câmara Municipal de Lisboa, 1977.

Moita et al. 1986
I. Moita – C. Leite, Recuperar *Olisipo* a partir de Lisboa. Possibilidades e Limitações. I Encontro Nacional de Arqueologia Urbana (Setúbal 1985), Trabalhos de Arqueologia 3 (Lisboa 1986) 55–67.

Moita 1994
I. Moita, Capítulo II B: Das origens pré-históricas ao domínio romano – o domínio romano. In: I. Moita (ed.), O Livro de Lisboa, Lisboa: L94, Livros Horizonte, 1994, 35–68.

Mota et al. 2018a

N. Mota – P. V. Martins, Criptopórtico romano de Lisboa: arqueologia e arquitectura de uma estrutura portuária (um esboço preliminar), in: J. C. Senna-Martinez et al. (eds.), Meios, vias e Trajetos … Entrar e sair de Lisboa, (Fragmentos de Arqueologia de Lisboa, No. 2) (Lisboa 2018) 85–108.

Mota et al. 2018b

N. Mota – C. Nozes – A. Caessa, Intervenção arqueológica no edificado sito na Rua da Prata 45–51/Rua de São Julião 86–106 (RP 45-RSJ106): Relatório Final (excavation report) (Lisboa 2018).

Mota et al. 2018c

N. Mota – A. Caessa – A. Sarrazola – R. Peace, 2ª Adenda ao Relatório Final dos Trabalhos Arqueológicos – Projecto de Recuperação de Edifício de Habitação e Comércio Rua de São Julião 78–84/Rua da Prata 46–50 (Sondagem de Diagnóstico), (excavation report) (Lisboa 2018).

Nielsen 1993

I. Nielsen, *Thermae et Balnea.* The Architecture and Cultural History of Roman Public Baths (Aarhus 1993).

Ribeiro 1994a

J. C. Ribeiro, Criptopórtico, in: F. Santana – E. Sucena (eds.), Dicionário da História de Lisboa, Lisboa: L94, Carlos Quintas & Associados, 1994, 321–324.

Ribeiro 1994b

J. C. Ribeiro, Breve nota acerca do criptopórtico de *Olisipo* e da possível localização do fórum corporativo. Revista Cultural da Câmara Municipal de Braga 45, 1994, 191–200.

Ribeiro 1994c

J. C. Ribeiro, *Felicitas Iulia Olisipo,* algumas considerações em torno do catálogo Lisboa Subterrânea. Almadan II série, 3, 1994, 75–95.

Salvado 1965

J. Salvado, Segredos que Lisboa guarda. Diário de Notícias, 35.683, ano 101, Lisboa, 1965, 2.15.

Salvado 1967

J. Salvado, Os romanos tomavam banho onde hoje é a Rua Augusta. Flama, 1012, Ano XXIV (Lisboa 1967) 4–5.

Salvado 1994

S. Salvado, Lisboa. Evolução: Período Romano, in: F. Santana – E. Sucena (eds.), Dicionário da História de Lisboa, Lisboa: L94, Carlos Quintas & Associados, 1994, 503–509.

Sarrazola et al. 2018a

A. Sarrazola – R. Peace, Relatório Final dos Trabalhos Arqueológicos – Projecto de Recuperação de Edifício de Habitação e Comércio Rua de São Julião 78–84/Rua da prata 46–50 (Sondagem de Diagnóstico), (excavation report) (Lisboa 2018).

Sarrazola 2018b

A. Sarrazola – R. Peace, Adenda ao Relatório Final dos Trabalhos Arqueológicos – Projecto de Recuperação de Edifício de Habitação e Comércio Rua de São Julião 78–84/Rua da Prata 46–50 (Sondagem de Diagnóstico), (excavation report), (Lisboa 2018b).

Sepúlveda et al. 2003

E. Sepúlveda – N. Gomes – R. B. Silva, Intervenção arqueológica urbana na Rua dos Douradores/Rua de São Nicolau (Lisboa), 1: a *Terra Sigillata,* Revista Portuguesa de Arqueologia 6(2), 2003, 401–414.

Sequeira 1967

G. M. Sequeira, Depois do terramoto. Subsídios para a história dos bairros ocidentais de Lisboa, Vol. IV (Lisboa, Academia das Ciências de Lisboa 1967) 304–308.

Serpa 1963

E. Serpa, Memória acerca dos banhos da Rua dos Fanqueiros em Lisboa: manuscrito inédito de Francisco Martins de Andrade existente na Biblioteca Nacional de Lisboa lido e comentado, in: Boletim da Sociedade Portuguesa de Espeleologia 6, 2ª série, Vol. 1, No. 1, 2º semestre (Lisboa 1963) 39–62.

Silva 1944

A. V. Silva, Epigrafia de *Olisipo,* subsídios para a história da Lisboa romana, in: Publicações Culturais da Câmara Municipal de Lisboa (Lisboa 1944).

Silva 1966

A. V. Silva, As termas romanas da Rua da Prata em Lisboa. Anaes das Bibliotecas Museus e Arquivo Histórico Municipais, ano IV, No. 13 (Lisboa 1934) 19–29

[reeditado em: Dispersos de Augusto Vieira da Silva, Vol. II, Lisboa, Biblioteca de Estudos Olisiponenses, 1966, 309–320].

Silva 2012

R. B. Silva, As Marcas de oleiro na *Terra Sigillata* e a circulação dos vasos na Península de Lisboa, Tese de Doutoramento em História, especialidade de Arqueologia (Lisboa 2012).

Vale et al. 2002

A. Vale – L. Fernandes, Intervenção arqueológica na Praça D. Pedro IV (Rossio) em Lisboa, in: L. Barros – F. Henriques (eds.), Actas do 3º Encontro de Arqueologia Urbana (20–23 de Fevereiro de 1997) (Almada 2002) 109–121.

Vieira et al. 2009

V. Vieira – P. Rebelo, Acompanhamento Arqueológico na Rua da Prata (excavation report), Mem Martins: Neoépica Ldª (Lisboa 2016).

Yegul 2009

F. Yegul, Bathing in the Roman World (Cambridge 2009).

Glass Beads from Apollonia Pontica: Chronology and Types

Mila Chacheva*

> "The main difficulty in studying beads lies in the neglect with which they have been treated by investigators who rarely have figured and described them properly. Description alone cannot make a lasting impression on the mind of the investigator. While figures in black and white might serve the purpose in some cases, these in colour alone can give us a true understanding of their appearance and nature."[1]

In 1963, Y. Mladenova published the glass beads from the excavations in the necropolis of Apollonia in the 1940s.[2] Since then, some new evidence has accumulated.[3] The present paper attempts to offer a general picture of the beads with some dates – most come from burials and the chronology is based on the accompanying inventory.

The 6th–Early 5th Century BC

The earliest glass beads in Apollonia – *trailed eye beads* – were found on the island of St. Kirik, where the Archaic *temenos* and settlement has been located,[4] in context that could be dated between the early 6th and early 5th century BC (although they are probably earlier). Both examples are fragmentary (fig. 1: 1, 2). One of the beads is of the "triangular" type of *trailed eye-beads* with spiral eye rings, well attested in the Aegean (fig. 1: 1).[5] Numerous examples from the second half of the 8th and the 7th century BC were found at the Artemision of Ephesos,[6] as well as in Lindos,[7] Methone,[8] and Central Macedonia.[9] The second one has similar decoration, but most probably belongs to the "rectangular" shape with four spiral eye-rings (fig. 1: 2).[10]

Second Half of the 5th Century BC

There is a gap in our knowledge about glass beads in Apollonia in the first half of the 5th century BC, and all later evidence comes from the necropolis. The earliest known grave with glass beads dates from the third quarter of 5th century BC (fig. 1: 15). All examples are rod-formed, and two main categories could be distinguished – monochrome and polychrome. Among monochrome, there are two groups of shapes – simple and compound. The former comprise basic shapes, although one should keep in mind that "ancient hand manufacture only very rarely succeeded in making beads of regular geometrical shape".[11] Most examples are globular or flattened globular, but there is also one ellipsoid opaque orange barrel-shaped bead (fig.1: 9). The compound group com-

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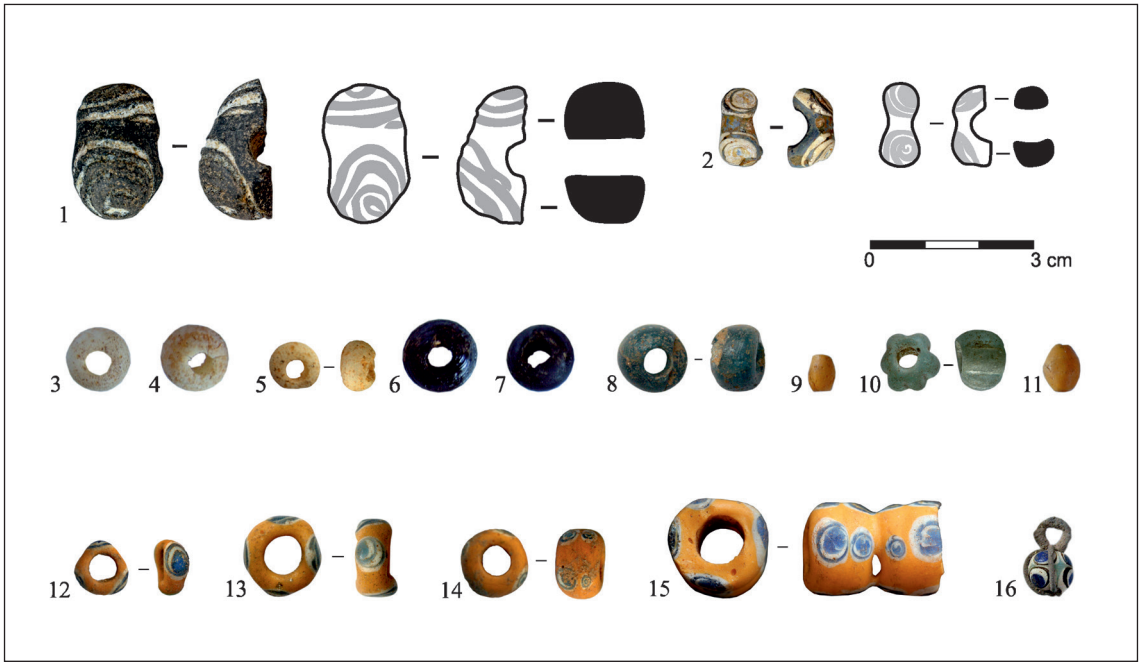


Fig. 1: Archaic and Classical glass beads from early 6th to second half of 5th century BC from Apollonia Pontica.

prises more complex shapes or combinations of more than one geometrical figure (e.g. biconical). Two types are attested – the so-called *melon – beads* and *biconical beads* (fig. 1: 10–11).

The polychrome category comprises various *eye-beads,* all with stratified eyes: the matrix is made of opaque orange glass and the eyes consist of four or six alternating layers in white and blue. Several eye-patterns could be seen – three eyes so that the bead looks "triangle" (fig.1: 12), four eyes or four paired eyes for the globular/flattened globular shapes (fig. 1: 13–15). There is one double bead – or two unseparated beads, each one with four pairs of eyes (fig. 1: 15). Another example is a globular bead-pendant of light blue opaque glass with three-colour (blue, black, and white) stratified eyes, wrapped in silver wire to form a hoop (fig. 1: 16). These beads are thought to originate from the Eastern Mediterranean, with parallels from Cyprus.[12]

In terms of colour and the opacity, white, dark blue, and orange beads are opaque, while some lighter blue shades were originally translucent (fig. 1: 8, 10). In the graves, some later 5th century BC beads were found together with other elements forming strings, but more often, only single glass beads were discovered. Generally, these are more or less exceptional finds from graves of children and women.

The 4th Century BC

There is more information for Late Classical times. Most beads are still rod-formed, but there is some evidence for air-forming/drawing technique.[13] Unlike in the previous period, polychrome beads are more numerous. Most are globular or flattened globular, but there is a new pyramidal type (fig. 2: 3). The opaque colours are white, blue, dark blue, and aquamarine, and there is one blue translucent example (fig. 2: 16). Compound shapes are globular and ellipsoid *melon-beads* (fig. 2: 6, 13), made of light blue translucent or blue opaque glass.

Air-formed monochrome beads are not yet widespread, but there are three flattened rhomboid beads (*grain d'orge* according to M.-D. Nenna[14]) that were probably made from premanufactured glass tubes by means of drawing (fig. 2: 6, 9). They are among the earliest known examples from the second quarter of 4th century BC. The type is much more popular in Late Hellenistic times.

There are two main groups of polychrome beads from the 4th century BC – *eye-beads* and *trailed beads.* Depending on the technique of the eyes, they can be simple, stratified, and mosaic.[15] Simple eyes have three technological variants – they are spot and/or trailed or with only two layers or made of bichrome cut canes, while the stratified eyes are multi-layered. Mosaic ones are also made of premanufactured canes but with more than two layers/colours cut in slices. Most beads are globular/flattened globular and only rarely cylindrical, and four main patterns could be distinguished according to the number and placing of the eyes:

1. Three Symmetrically Placed Eyes. The matrix is mainly in various shades of blue. Most often, the eyes are simple with two layers (fig. 2: 1, 3) and rarely stratified with four layers (fig. 2: 23) of white and blue. Two dark blue beads are different – with simple eyes of yellow and brownish glass (fig. 2: 12), or with two yellow relief dots between the white-blue eyes (fig. 2: 3).

2. Four Symmetrically Placed Eyes. Such stratified beads with opaque orange matrix continue from the previous period with four or six layers (fig. 2: 19–22). There is one poorly preserved dark blue example (fig. 2: 13).

3. Four Symmetrically Placed Paired Eyes. The pattern is typical for beads with opaque orange matrix, known already from the 5th century BC (fig. 2: 1, 7, 10, 18).

4. "Two-one-two" or Alternating Paired and Single Eyes. Beads with this pattern always have blue to dark blue matrix with nine simple two-layered white-blue eyes (three pairs and three single). They are very typical of the 4th century BC (fig. 2: 2, 3, 6, 10–13), with the earliest examples from the first quarter.



Fig. 2: Classical glass beads from 4th century BC from Apollonia Pontica.

5. "Three-plus-four" Eye Beads. One example (fig. 2: 8) illustrates this East Mediterranean or Phoenician-Punic type with "three eyes around one perforation and four around the other… [T]he term "three-plus-four" is used for want of a better one".[16] The bead from Apollonia has the same pattern, but only traces remain from the eyes and the colour of the matrix is probably different from the original. The type dates mainly from the 6th–5th century BC, but there are later versions. The bead was found in a grave from the second quarter of the 4th century BC.

The second group of polychrome rod-formed beads are the *trail-decorated.* There are few from 4th century BC graves, as they are more common for the Hellenistic Period and later. Two subtypes of cylindrical beads are distinguished – with spirally applied white decoration and with the so-called "festoon ornament" (fig 2: 6, 13).

A globular bead with six premanufactured rosettes, dated broadly to the 4th century BC, is also an early example of the so-called *mosaic decoration* (fig. 2: 13).

The 4th century BC glass beads are often found in strings with other elements, including anthropomorphic and zoomorphic glass pendants that are not discussed here (fig. 2: 1, 3, 4, 6). There are also glass scaraboid, pierced coins, animal teeth, seashells, and ceramic beads (fig. 2: 3, 5, 7–9, 11–13). They are found mainly in graves of children[17] and sometimes of women (fig. 2: 17).

The 3rd Century BC

In the Hellenistic Period, glass bead industry flourished in the ancient Mediterranean. The same is true about the West Pontic coast and Apollonia in particular, where all available evidence dates from the 3rd century BC. The strings are less numerous but much richer than in the previous period. Some earlier types of monochrome rod-formed beads continue their existence, e.g. globular and flattened globular, but new translucent colours appear – green and amber-brownish (fig. 3: 6). *Melon-beads* are still very common, though they seem to be of poorer quality and different colours compared to the earlier examples – white and dark blue opaque (fig. 3: 1, 4). New types appear – pinched globular (like *melon-beads* but with two grooves) (fig. 3: 3), conical, elongated conical and flattened conical, tubular and bottle-shaped (fig. 3: 1, 6). The colours could be both opaque and translucent – white, blue, red, brown, green, and amber-yellowish or brownish.

With some exceptions (fig. 3: 2), 3rd century BC *eye-beads* are with mosaic premanufactured cut-cane eyes of two or three colours. There are also eye-beads with simple eyes – small rings of contrasting colours (white or yellow) applied on the matrix (fig. 3: 1, 3–5). The decoration consists of three or four symmetrically placed eyes. The paired eyes, so popular in the 4th century BC, are absent on beads with cut-cane eyes.

Trailed beads are more numerous. The simplest are the globular opaque blue beads with one or two white trails in the centre (fig. 3: 3–5). More complex is the feather



Fig. 3: Hellenistic glass beads from 3rd century BC from Apollonia Pontica.

pattern on the cylindrical or ellipsoid beads (fig. 3: 3). Two new mosaic patterns appear on globular beads: multi-coloured zigzags of longitudinal stripes (fig. 3: 1), or a wider mosaic strip of oblique parallel lines in the centre and two thinner monochrome stripes near the openings (fig. 3: 5). Another new type is the *aryballos-shaped bead* with crumb-decoration (fig. 3: 1) of tiny pieces of multi-coloured crushed glass melted on the matrix.

Conclusion

Glass beads from Apollonia Pontica cover a period from Late Archaic to Middle Hellenistic times. On one hand, when studied in their context, they offer information for the chronology and distribution of the various types. On the other, they could provide some observations regarding the social status of the buried with such ornaments. Based on existing parallels, their appearance in Apollonia is indicative for the trade routes from the Aegean and the coast of Asia Minor in the Archaic Period. There is also evidence for connections with the Eastern Mediterranean, and most probably Rhodian and Cypriot production appear in later periods.

Notes

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[1] Eisen 1916, 1.

[2] Младенова 1963, 305–312.

[3] Lyubomirova et al. 2014; Chacheva 2015a, 2016; Chacheva 2015b.

[4] Panayotova et al. 2014.

[5] Spaer 2001, 80.

[6] Seipel 2008, Kat. Nos 203–206.

[7] Spaer 2001, 80.

[8] Ignatiadou 2015, fig. 1.

[9] Adam-Veleni 2010, 356, nos 386–387.

[10] Kunter 1995, Taf. 3, nos 41–42.

[11] Venclova 1990, 46.

[12] Spaer 2001, 84. 91.

[13] Spaer 2001, 46–48.

[14] Nenna 1999, 134.

[15] Spaer 2001, 52.

[16] Spaer 2001, 84.

[17] Chacheva 2015a; 2016.

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Fig.1: Photos and drawings by the author. – Fig.2: 6 after Mladenova 1963, Pl. 164: 998; Pl. 166: 1011; all other elements photographed by the author except for the head pendant in 1 and the glass scaraboid in 3 – by Loïc Damelet, CCJ. – Fig.3: 1 photographed by Daniela Cherneva, NHM, Sofia; 3 after Mladenova 1963, Pl. 164: 1005; 4 after Mladenova 1963, Pl. 166: 1009; all other photographed by the author.

References

Adam-Veleni 2010

P. Adam-Veleni, Glass Cosmos (Thessaloniki 2010).

Chacheva 2015a

M. Chacheva, Trinkets for the Afterlife: Personal Ornaments from Graves of Children in the Necropolis of Apollonia Pontica, Archaeologia Bulgarica XIX, 1, 1–21.

Chacheva 2015b

М. Чачева, Антропоморфни стъклени пандантиви от гръцките колонии по Западния Понт, Археология LVI, кн. 1–2, 2015, 49–61.

Chacheva 2016

M. Chacheva, Adornments or Amulets? Personal Ornaments of Apollonian Children in Pontic Context, in: M. Manoledakis (ed.), The Black Sea in the Light of New Archaeological Data and Theoretical Approaches, Proceedings of the 2nd International Workshop on the Black Sea in Antiquity held in Thessaloniki 18–20 September 2015 (Oxford 2016) 139–151.

Eisen 1916

G. Eisen, The Characteristics of Eye Beads from the Earliest Times to the Present, AJA 20, 1, 1916, 1–27.

Ignatiadou 2015

D. Ignatiadou, Early Glass in Methone, in: I. Lazar (ed.), Annales du 19e Congrès de l'Association Internationale pour l'Histoire du Verre. Piran, 17th – 21st September 2012 (Koper 2015) 81–88.

Kunter 1995

K. Kunter, Glasperlen der vorrömischen Eisenzeit IV nach Unterlagen von Th. E. Haevernick. Schichtaugenperlen, Marburger Studien zur Vor- und Frühgeschichte 18 (Espelkamp 1995).

Lybomirova et al. 2014

V. Lyubomirova – Ž. Šmit – H. Fajfar, Chemical Composition of Glass Beads from the Necropolis of *Apollonia Pontica* (5th–3rd Century BC), Archaeologia Bulgarica XVIII, 2, 2014, 1–17.

Mladenova 1963

Я. Младенова, Предмети от стъкло и алабастър от некропола на Аполония, in: И. Венедиков – Т. Герасимов – Ц. Дремсизова – Т. Иванов – Я. Младенова – В. Велков (eds.), Аполония. Разкопките в некропола на Аполония през 1947–1949 г (София 1963) 305–312.

Nenna 1999

M.-D. Nenna, Exploration Archéologique de Délos. Fascicule XXXVII. Les Verres, École française d'Athènes (Athens 1999).

Panayotova et al. 2014

K. Panayotova – M. Damyanov – D. Stoyanova, Apollonia Pontica: The Archaic Temenos and Settlement on the Island of St. Kirik, in: J. M. Alvarez – T. Nogales – I. Roda (eds.), Centre and Periphery in the Ancient World. Proceedings of the XVIIIth International Congress of Classical Archaeology 1 (Merida 2014) 595–598.

Seipel 2008

W. Seipel, Das Artemision von Ephesos. Heiliger Platz einer Göttin (Vienna 2008).

Spaer 2001

M. Spaer, Ancient Glass in the Israel Museum. Beads and Other Small Objects (Jerusalem 2001).

Venclova 1990

N. Venclova, Prehistoric Glass in Bohemia (Praha 1990).

Economy of Cult – Examples from Macedonia during the Roman Period

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The issue of the possible economic benefits of the sanctuaries that derived from donations or offerings is examined in specific examples from Macedonia during the Roman period.

A) The product of the vine harvest is an economic benefit of a sanctuary that derived from a donation to Zeus Hypsistos. A marble votive stele to Zeus Hypsistos from Upper Macedonia (Elimeia, Kozani. Archaeological Collection of Kozani. Inv. No 51) (2nd–3rd century AD) depicts the vine-grower Chrysseros (*Χρυσέρως*) offering two rows of vines from his property to Zeus[1] (fig. 1).



Fig. 1: Marble votive stele to Zeus Hypsistos. Elimeia, Kozani – Upper Macedonia. Archaeological Collection of Kozani. Inv. No 51. Section of Greek and Roman Antiquity, National Hellenic Research Foundation. Photographic Archive.

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Χρυσέρως Φιλίππου / ἀνπελουργὸς Διὶ Ὑψίσ- / τῳ εὐχαριστήριον ὑπὲ[ρ] / κυρίου· ἀπονομάζει vac. δὲ αὐτῷ ἀμπέ- / λων δύω ὄρχου- / ς ἐκ τῶν πε- / κουλαρίων.

The term *πεκουλάριοι ἄμπελοι* which is written on the stele comes from the Latin adjective *pecularius* and it refers to private property. Vine offerings to various deities are also known from other areas of Macedonia and the most distinctive example is an inscription of the 3rd century AD from Thessaloniki,[2] whereas there are much more similar offerings in Asia Minor.[3] The verb *ἀπονομάζειν* in the inscription could mean that the slave Chrysseros promises to offer a part of the vineyard to Zeus, specifically two rows of vines, which must be the product of the vine harvest,[4] since he is not able to offer[5] the *peculium*. The reason of the donation is worth mentioning. The slave offers Zeus *ὑπέρ κυρίου* and this could mean either that he pays a debt to his master with this donation or that he ensures that his master is commemorated in the sanctuary according to the custom due to their good relationship. In this case, as in the above-mentioned inscription from Thessaloniki, the donation of the vine to the sanctuary as an economic benefit would take place to cover the cost of the commemoration of the deceased master. This donation also ascertains that the status of the slaves seems to be enhanced during the Imperial period and this is possibly related to the politics of specific emperors,[6] whereas the possibility that the donation takes place due to the manumission of Chrysseros is not excluded.[7]

There are several mentions of farmers (*γεωργὸς, γεωργικῶς ἔμπειρος, ἀμπελουργὸς*) in epigrams.[8]

Similar is the significance of a text of unknown provenance, probably from Pamhylia dated to 2nd/3rd century AD written on a bronze *tabula ansata* reporting that a certain Toues purchased an orchard, and confirming that the seller has received the price stating that "the buyer donated the field to the priests of Zeus squaring the account". Probably Toues did not make a donation to the sanctuary of Zeus, but he delivered his field in order to repay loans he had received from the sanctuary.[9]

B) A large number of manumission acts comes from the sanctuaries of deities in Central and Western Macedonia (*Merides*). They are usually correlated with female deities and their sanctuaries. The following are typical examples.

Five published manumission acts[10] have been traced on architectural members of the sanctuary of Enodia at Exochi in Eordaia in Upper Macedonia. The inscribed plaque kept in the Archaeological Collection of Kozani. Inv. No 1003[11] (fig. 2) reads the following text of a manumission act:[12]

Ἔτους δνσ΄ σεβασ- / τοῦ κὲ <α>οτ vac Δύ[[υ]]σ- / στρου δωδεκά- / τη οὔσας τε- / λετῆς κὲ συ- / ναγωγῆς Αὐρη- / λεία Ἰουλεία ἡ / προχρηματείσα- / σα Ἀμύντου ἐχαρι- / [σ]άμην θεῷ Ἐνοδί- / ᾳ ὀνόματει Ἑρμῆν / δοῦλον. Βούλομε τὸν / τῆς ζοῆς



Fig. 2: Marble plaque with manumission act to Enodia. Eordaia, site of Exochi – Upper Macedonia. Archaeological Collection of Kozani. Inv. No 1003.

χρόν<ον> προσ-/μεῖνέ μοι κὲ γηροβοσκῆσε/ὑπηρετοῦ<ν>τα τῇ θεῷ τὲς/ἐθεί-μοις συναγωγές, ἶνε/δὲ αὐτὸν μετὰ τὴν ἐμὴ/ν [vac] τελευτὴν ἀνεπίλη[[π]]-/πτον.

According to the text, Aurelia Ioulia (*Αὐρηλία Ἰουλία*) frees her slave Hermes (*Ἑρμῆς*) with a conditional donation to the goddess. The donation to the deity is stated with the common verb *ἐχαρισάμην*.[13] The slave is obliged to stay with his mistress throughout her life (*τὸν τῆς ζωῆς χρόν<ον> προσμεῖνε μοι*) and, at the same time, to serve at the sanctuary (*ὑπηρετοῦντα τῇ θεῷ*). The publishers of this inscription notice that the slave's stay (*paramone*)[14] is connected with his obligation to take care of his mistress in her old age in the text (emphatically stated with the use of the verb *βούλομε*[15]). The year of the manumission is stated with both the Actian and the Macedonian dating.[16] The legal status of the slave after the death of his mistress, which is stated with the expression *ἶνε ἀνεπίληπτον* (therefore, it was forbidden for anyone to enslave him pleading any right), is the only case among the manumission inscriptions from Macedonia.[17]

The texts of the inscriptions follow the rite of the manumissions with the expression *ἐφ' ᾧ προσμείνῃ, χαρίζομαι, οἰκογενής, ὃν ζώομεν χρόνον*.[18]

The testimony on the cult of the goddess Passikrata in Upper Macedonia comes from Suvodol, between southern Pelagonia and Lyncestis. Three manumission inscriptions with a dedication of the slave to the deity have been carved on a marble quadrangular altar (F.Y.R.O.M., Musej na Makedonija. Inv. No 400).[19] Inscription a) (2nd–3rd century AD) seems quite interesting:

Ἔτους θκυ΄ Δεσίου ἐνάτῃ ἐ-/ορτῆς ἀγομένης θεᾶς Πασι-/κράτας τῆς καθιδρυ-μένης/ἐν κώμῃ Ἰουνία Αὐρηλία ἔχου-/σα τριῶν τέκνων τὸ δίκαι<ο>ν ἀνέ-/θηκα θεᾷ Πασικράτᾳ δούλην μο[υ]/ὀνόματι Κοπρυλλώ, ἧς κὲ τὴν ὠν[ὴν]/καὶ τὴν κατοχὴν παρέδωκα· ἐάν/τις ἀν<ά>πτῃ, δώσι τῷ ἱερωτάτῳ/ταμείῳ * μυριάδες π<έ>ντε· Ἰο[υ(νία)]/Αὐρηλία μετὰ τῆς/θρεπτῆς κὲ πεδίον/Ζοείλον.

Iounia Aurelia (*Ἰουνία Αὐρηλία*) dedicates her slave Kopryllo (*Κοπρυλλώ*) to the goddess during the festival in her honour in the area. The text[20] also reveals the value of the slave.

The *kome* that is mentioned in line 4 should be identified with a site within the boundaries of Heraclea Lyncestis, according to F. Papazoglou.[21] It is possible that it comes from a *kome* near modern Suvodol, east of Heraclea,[22] where apparently there was a sanctuary of Passikrata, goddess-guarantor of the manumission acts.

The manumission acts with a dedication of a slave (or slaves) to the deity are important legal documents of the Antiquity and they date to the Imperial period, mostly the 3rd century AD. The basic structure of these documents includes specific terms and expressions that provide valuable information about the political, religious and social life.[23] These documents depict the regulations of the Roman Law as it was dictated by Rome itself and was evolved to the regional law in 212 AD, which was a milestone. At

the same time the regional law unofficially included the Hellenic Law at a local level. Most manumission acts come from Western Macedonia.[24]

They concern the donation of slaves who will eventually offer their services to the sanctuary via these acts. The increase of the manumission acts of slaves after the 2nd century AD at sanctuaries with wide popularity is generally observed in Macedonia. This special phenomenon is possibly related to the management of slaves as an asset and the sanctuaries' financials. However, this might be a simple peak of the public display of the manumission acts without being attributed to a particular reason.

The manumission act that is performed as part of the donation to the deity has special validity and the person who performs it fulfils his promise to the deity or pays a debt or a loan. The sanctuary uses the slaves that have been freed, as long as they are necessary, without affecting their designated legal status. The people who perform the manumission acts are mostly women, with a few exceptions, possibly due to the lack of men because of their recruitment during these periods, and there are usually female goddesses (Mother of the Gods Autochthon, Ma, Enodia, Artemis with various cult epithets, Nemesis, Passikrata) and some male deities (Zeus Hypsistos, Dionysus, Heracles Kynagidas), which is possibly random since these sanctuaries simply were widely popular. The ability of the Macedonian citizens to guarantee the manumissions of slaves is a phenomenon that is more frequent in Macedonia than the rest of Greece.[25]

The evidence from ancient Macedonia (3rd century BC – 4th century AD) provides several information regarding the slaves and the freedmen, and therefore makes it possible to examine their legal status and form a picture of their daily lives and their relationships with their masters or others. Within this framework, the evidence that is relevant to the manumissions of slaves, which are private actions, concern specific sanctuaries. Many issues can be examined, such as the origin of the slaves, the payment of the manumission fee and the legal and social status of the freedmen.[26]

C) A number of examples of the sanctuaries' savings comes from the second use of the monuments mainly due to the lack of the material (stone). This concerns mostly the donators, but the sanctuary possibly participates in some way [e.g. the manumissions acts that were carved onto pre-existing architectural members of the sanctuary of Enodia in Eordaia in Upper Macedonia (fig. 3)[27]].

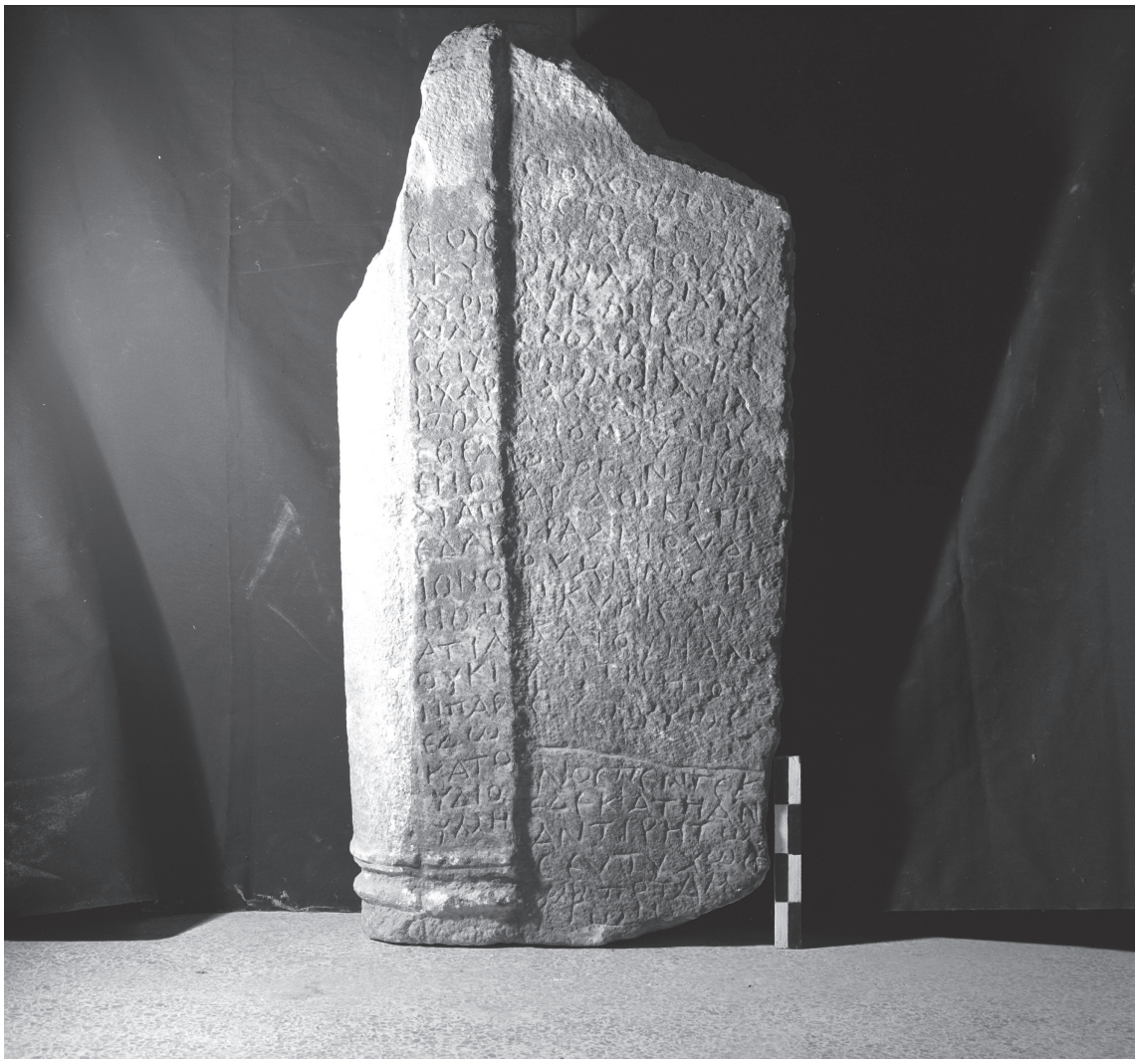


Fig. 3: Part of a marble door with two manumission acts to Enodia. Eordaia, site of Exochi – Upper Macedonia. Archaeological Collection of Kozani. Inv. No 147. Section of Greek and Roman Antiquity, National Hellenic Research Foundation. Photographic Archive.

Notes

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[1] Rizakis – Touratsoglou 1985, cat. no 22 pl. 8.22; Chatzinikolaou 2011, 38–40. 236–237 cat. no 24 with previous bibliography; Yiouni 2011, 124.

[2] IG X 2.1 260: κατα/λίπω εἰς μνί/ας χάριν αἰω/νίας ἀνπέλων/πλέθρα δύο/σύν τες τάφροις. Pikoulas 2000–2003, 396–397.

[3] Robert 1945, 65. Robert 1966, 34–38.

[4] Rizakis – Touratsoglou 1985, supra (n. 1) with relevant examples.
[5] The slaves had very limited legal rights. Regarding whether the slaves had the possibility to offer to deities from the peculium or to make donations see Nörr 1971. Cf. Papazoglou 1981, 179 ff.
[6] Sverkos 2000, 112 ff. Cf. Chatzinikolaou 2011, 38; 80.
[7] Yiouni 2000, 40.
[8] Robert 1943, 188. On the vine cultivation see Pikoulas 2000–2003. Pikoulas 2004, 19–26 with ancient sources and bibliography. On cases of vine cultivation in Macedonia see Lilimbaki-Akamati 1988; Lilimbaki-Akamati 1998.
[9] Arnaoutoglou 2014. Cf. Chaniotis 2017, 280 no 6.
[10] The number of published manumission acts from the Roman province of Macedonia has increased significantly lately, mostly after the publication of the manumission acts of the sanctuary of Leukopetra in Hemathia. On the issue see Petsas et al 2000 with the previous bibliography. On manumission acts from Macedonia already published see Voutiras 1986; Hatzopoulos 1987, 403–404. Cf. Bull. Épigr. 1988, 835. SEG XXXVI, 616–621; Panayotou – Chrysostomou 1993, 362 (Edessa); 378 (Kyrros); 384 (Giannitsa). Cf. Bull. Épigr. 1994, 403; 410; Hatzopoulos 1994, 64 ff. (Beroia); Nigdelis – Souris 1996 (Exochi at Eordaia); Allamani-Souri – Voutiras 1996 (Beroia). IG X 2.2 (sporadically); Gounaropoulou – Hatzopoulos 1998 (sporadically); Gounaropoulou et al. 2015 (sporadically). On manumissions in general see Ricl 2001.
[11] Nigdelis – Souris 1996. Cf. Chatzinikolaou 2011, 305–306 cat. no 160; Yiouni 2011, 136.
[12] The first examination of the manumission acts with dedication to the deity was presented by Nörr 1971. Papazoglou 1981, 171–179, attempted to clarify some issues based on epigraphic texts, mostly from Leukopetra in Hemathia. See also Petsas et al. 2000. Cf. Chatzinikolaou 2011, 121–123; Chatzinikolaou 2012, 605–606.
[13] On the use of the verbs χαρίζομαι and δωροῦμαι in the texts of the manumission acts of Leukopetra in Hemathia see Petsas 1984, 286–288.
[14] On the term see Samuel 1965, 221–311; Voutiras 1986, 230; Yiouni 2000, 100 ff.
[15] Nigdelis – Souris 1996, 71.
[16] On the issue of the dating of the Macedonian inscriptions see Papazoglou 1963; Daux 1964; Rizakis – Touratsoglou 1985, 28.
[17] On similar examples outside Macedonia see Nigdelis – Souris 1996, 76.
[18] On the terms and expressions that are typical in manumission inscriptions see SEG XXVII, 291–294; Petsas et al. 2000. Cf. Yiouni 2000, 47 ff.; Yiouni 2008.
[19] IG X2.2 18. Cf. Chatzinikolaou 2011, 313–314 cat. no 171.
[20] Kaser 1971, 320.
[21] Papazoglou 1988, 372 and n. 104.
[22] Sverkos 2000, 94.
[23] Chatzinikolaou 2012, 605–606.
[24] Chatzinikolaou 2011, 121–123.
[25] Le Bohec-Bouet 2006, 189–195.
[26] Yiouni 2011. On the deities that were worshipped especially by slaves see Bömer 1960.
[27] [27] Rizakis-Touratsoglou 1985, cat. no 117 a+b pl. 44.117; Chryssostomou 1998, 79–80 no 3–4; Chatzinikolaou 2011, 307–308 cat. no 162.

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Fig. 1: After Rizakis-Touratsoglou 1985, 22. pl. 8.22. – Fig. 2: After Nigdelis-Souris 1996. – Fig. 3: After Rizakis-Touratsoglou 1985, pl. 44.117α+β.

References

Allamani-Souri – Voutiras 1996

V. Allamani-Souri – E. Voutiras, New Documents from the Sanctuary of Herakles Kynagidas at Beroia, in: E. Voutiras (ed.), Επιγραφές της Μακεδονίας, Γ΄ Διεθνές Συμπόσιο για τη Μακεδονία, Θεσσαλονίκη 8–12 Δεκεμβρίου 1993 (Thessaloniki 1996) 13–39.

Arnaoutoglou 2014

I. N. Arnaoutoglou, Displaying a Proof of Ownership in Roman Pamphylia, ZPE 191, 2014, 185–192.

Bömer 1960

F. Bömer, Untersuchungen über die Religion der Sklaven in Griechenland und Rom, II: Die sogenannte sakrale Freilassung in Griechenland und die (*douloi*) *hieroi* (Wiesbaden 1960).

Chaniotis 2017

A. Chaniotis, Epigraphic Bulletin for Greek Religion 2014, Kernos 30, 2017, 273–311.

Chatzinikolaou 2011

K. G. Chatzinikolaou, Οι λατρείες των θεών και των ηρώων στην Άνω Μακεδονία κατά την αρχαιότητα (Ελίμεια, Εορδαία, Ορεστίδα, Λυγκηστίδα) (Thessaloniki 2011).

Chatzinikolaou 2012

K. Chatzinikolaou, "Ἀρτέμιδι Σιβοννικῇ…". Περιπτώσεις τοπικών λατρειών Άρτεμης στη Μακεδονία, in: P. Adam-Veleni – K. Tzanavari (eds.), Δινήεσσα. Τιμητικός τόμος για την Κατερίνα Ρωμιοπούλου (Thessaloniki 2012) 601–608.

Chryssostomou 1998

P. Chryssostomou, Η Θεσσαλική θεά Εν(ν)οδία ή Φεραία θεά (Athens 1998).

Daux 1964

G. Daux, Sur la chronologie des inscriptions de la Macédoine romaine, BCH 88, 1964, 416–419.

Gounaropoulou – Hatzopoulos 1998

L. Gounaropoulou – M. B. Hatzopoulos, Επιγραφές Κάτω Μακεδονίας (Μεταξύ του Βερμίου όρους και του Αξιού ποταμού) Α΄: Επιγραφές Βεροίας. P. Nigdelis – G. Souris (collaboration) E. Kalogridis – P. Paschidis (eds.). (Athens 1998).

Gounaropoulou et al. 2015

L. Gounaropoulou – P. Paschidis – M. B. Hatzopoulos, Επιγραφές Κάτω Μακεδονίας (Μεταξύ του Βερμίου όρους και του Αξιού ποταμού) Β΄: Part Α΄: Επιγραφές Αλώρου, Αιγεών, Μίεζας, Μαρινίας, Σκύδρας, Νεαπόλεως, Έδεσσας. Part Β΄: Επιγραφές Κύρρου, Γυρβέας, Τύρισσας, Πέλλας, Αλλάντης, Ιχνών, Ευρωπού, Βόρειας Βοττιαίας, Αλμωπίας. D. Andrianou – M. Kalaitzi – E. Martin Gonzalez (collaboration) (Athens 2015).

Hatzopoulos 1987
M. B. Hatzopoulos, Artémis Digaia Blaganitis en Macédoine, BCH 111, 1987, 397–412.
Hatzopoulos 1994
M. Hatzopoulos, Cultes et rites de passage en Macédoine, ΜΕΛΕΤΗΜΑΤΑ 19 (Athens 1994).
Kaser 1971
M. Kaser, Das römische Privatrecht I, Rechtsgeschichte des Altertums ²(Munich 1971).
Le Bohec-Bouet 2006
S. Le Bohec-Bouet, Réflexions sur la place de la femme dans la Macédoine antique, in: M. Guimier-Sorbets – M.B. Hatzopoulos – Y. Morizot (eds.), Μελετήματα 45, Rois, cités, nécropoles. Institutions, rites et monuments en Macédoine, Actes des colloques de Nanterre (Décembre 2002) et d'Athènes (Janvier 2004) (Athens 2006) 187–198.
Lilimbaki-Akamati 1988
M. Lilimbaki-Akamati, Πέλλα: Στοιχεία "Τεωργικής τέχνης", AErgoMak 2, 1988 [1991], 91–99.
Lilimbaki-Akamati 1998
M. Lilimbaki-Akamati, Η καλλιέργεια του αμπελιού και στοιχεία της λατρείας του Διονύσου στην Πέλλα, in: Αμπελοοινική ιστορία στο χώρο της Μακεδονίας και της Θράκης, Ε΄ Τριήμερο Εργασίας, Νάουσα 17–19 Σεπτεμβρίου 1993, ΠΤΙ ΕΤΒΑ (Athens 1998) 60–67.
Nigdelis – Souris 1996
P. M. Nigdelis – G. A. Souris, Απελευθερωτική επιγραφή από ιερό της Ενοδίας (Εξοχή Κοζάνης), Τεκμήρια Β΄, 1996, 69–82.
Nörr 1971
D. Nörr, Bemerkungen zur sakralen Freilassung in der späten Prinzipatszeit, in: Studi in onore di Edoardo Volterra II, A. Giuffrè (Milan 1971) 619–645.
Panayotou – Chrysostomou 1993
A. Panayotou – P. Chrysostomou, Inscriptions de la Bottiée et de l'Almopie en Macédoine, BCH 117, 1993, 1, 359–400.
Papazoglou 1963
F. Papazoglou, Notes d'épigraphie et de topographie macédoniennes, BCH 87, 1963, 517–544.
Papazoglou 1981
F. Papazoglou, Affranchissements par consécration et hiérodoulie, ŽivaAnt 31, 1981, 171–179.
Papazoglou 1988
F. Papazoglou, Les villes de Macédoine à l'époque Romaine, BCH Suppl. 14 (Paris 1988).
Petsas 1984
Ph. Petsas, Οι χρονολογημένες επιγραφές από το ιερό της Μητρός των Θεών Αυτόχθονος στη Λευκόπετρα, in: Πρακτικά του Η΄ Διεθνούς Συνεδρίου Ελληνικής και Ρωμαϊκής Επιγραφικής, Αθήνα 3–9 Οκτωβρίου 1982, Vol. I, Hellenic Ministry of Culture (Athens 1984) 281–307.
Petsas et al. 2000
Ph. Petsas – M. Hatzopoulos – L. Gounaropoulou – P. Paschidis, Inscriptions du sanctuaire de Mère des Dieux autochtone de Leukopétra (Macédoine), ΜΕΛΕΤΗΜΑΤΑ 28 (Paris 2000).

Pikoulas 2000–2003

G. A. Pikoulas, Οι αρχαίοι αμπελώνες στο ιερό του Διός στη Νεμέα, Horos 14–16, 2000–2003, 395–400.

Pikoulas 2004

G. A. Pikoulas, Αμπελοφυτεύειν, in: G. A. Pikoulas (ed.), Οίνον ιστορώ, III, Τ'αμπελανθίσματα, Επιστημονικό συμπόσιο, Κτήμα Γεροβασιλείου, Επανωμή Θεσσαλονίκης, 15 Μαΐου 2004 (Athens 2004) 19–26.

Ricl 2001

M. Ricl, Donations of slaves and freeborn children to deities in Roman Macedonia and Phrygia: A reconsideration, Tyche 16, 2001, 127–160.

Rizakis – Touratsoglou 1985

Th. Rizakis – I. Touratsoglou, Επιγραφές Άνω Μακεδονίας (Ελίμεια, Εορδαία, Νότια Λυγκηστίς, Ορεστίς) Vol. A΄ (Athens 1985).

Robert 1943

L. Robert, Notes et discussions, RPhil 17, 1943, 3e série, 184–188.

Robert 1945

L. Robert, Le sanctuaire de Sinuri près de Mylasa, I. Les inscriptions grecques (Paris 1945).

Robert 1966

L. Robert, Documents de l'Asie Mineure méridionale, inscriptions, monnaies et géographie (Paris 1966).

Samuel 1965

A. E. Samuel, The Role of *Paramone* Clauses in Ancient Documents, JJurP 15, 1965, 221–311.

Sverkos 2000

E. K. Sverkos, Συμβολή στη ιστορία της Άνω Μακεδονίας των ρωμαϊκών χρόνων (Πολιτική Οργάνωση-Κοινωνία-Ανθρωπωνυμία) (Thessaloniki 2000).

Voutiras 1986

E. Voutiras, Bemerkungen zu zwei makedonischen Freilassungsurkunden, Tyche 1, 1986, 227–234.

Yiouni 2000

M. S. Yiouni, *Provincia Macedonia,* Θεσμοί ιδιωτικού δικαίου στη Μακεδονία επί ρωμαιοκρατίας (Athens-Komotini 2000).

Yiouni 2008

M. Yiouni, Η νομική διάσταση των απελευθερωτικών πράξεων στη Μακεδονία των ρωμαϊκών χρόνων, in: El. Sverkos (ed.), Β΄ Πανελλήνιο Συνέδριο Επιγραφικής, (Πρακτικά), Θεσσαλονίκη 24–25 Νοεμβρίου 2001, Στη μνήμη της Φανούλας Παπάζογλου (Thessaloniki 2008) 73–84.

Yiouni 2011

M. S. Yiouni, Δούλοι και απελεύθεροι στη Μακεδονία, in: D. B. Grammenos (ed.), Στη Μακεδονία. Από τον 7ο αι. π.Χ. ως την ύστερη αρχαιότητα, Μελέτες και λήμματα για την 3η εκθεσιακή ενότητα της μόνιμης εκθεσης του Αρχαιολογικού Μουσείου Θεσσαλονίκης (Thessaloniki 2011) 121–146.

A Mortuary Testimony as a Guide for a Society's Economic Evaluation. Case Study: the Establishment of Protogeometric Stamna in Aetolia, Greece[1]

Gioulika Olga Christakopoulou*

Death is nothing at all[2]
Canon Henry Scott-Holland (1847–1918)

In a world where heroes tend to vanish, the need to search for and identify with the best representatives of an ancient population, has been a constant objective of the scientific community in recent years. The reconstruction of an economic and social model with all possible cultural implications that may arise through the study of burial remains is considered unconventional by many, as it is based on the ability of each scholar to interpret the dynamics of the model under study. For the same reasons and in the same unconventional ways, an attempt to reconstruct the important establishment of the Early Iron Age Stamna through the study of burial architecture is equally challenging as a small elite group was buried within the large cemetery. This presentation deals with the burial evidence in all its manifestations, in order to define or re-establish social hierarchy and relations as a guide of economic practices of this specific social group.

Uncovering the Layers

In order to appreciate the economic dynamics of the Stamna community we should first look into demographics. This would be achieved by taking into account the information obtained from the excavated material. One might wonder… Is that possible? According to published data, the graves excavated so far are more than 700 and by taking into account the extent of the area that remains unexcavated, the total amount of graves in the cemetery should be at least three times higher. An analysis of the demographics, based on circa 500 tombs which have formed my PhD dissertation, reveals an elderly population overall (that is, by taking into account the life expectancy at the time). The skeletal remains, reveal men and women of working age who were responsible for the financial costs necessary in order to promote and establish their social status after death.

The practice of burying the dead in demarcated clusters, the use of lavish burial structures, the cremation of the deceased and their deposition either in bronze tripod lebes or clay tripod pithos, the performance of a symposium and the funerary rituals are indicative of social and economic norms that reflect the patterns of sustainability and the corresponding social and economic provisions of a community, which was possibly heterogeneous in the Protogeometric period.

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The plethora of the offerings is not a determining factor in detecting the status of the deceased, since burial customs, grave typology and types of offerings (particularly vessels) are more indicative towards this end, compared to the mere and potentially random placement of objects on a percentage basis. The population of the cemetery, whose identity remains elusively enigmatic and at the same time attractively traceable through modern literature, was organised in almost 30 clusters. In several clusters, different types of tombs co-existed (fig. 1), most of which were pithos burials, followed by cists pit graves and a special category of built graves. The latter were standing out in



Fig. 1: Pithos burials and cist graves.

different clusters and were distinguished from the rest as representative of a distinct kin group.

By analyzing the tomb architecture as well as the social hierarchy across each cluster, we observe a shift from the Mycenaean model of death. This is because the monumental features in the Mycenaean tholoi are replaced by apsidal tombs and eventually stone-lined pits with clay tripods and bronze tripod cauldrons/basins within them. Regardless of the burial practices performed over the centuries, these tombs were intended for the higher echelons of the Stamna population and potentially its distinguished leaders.

Over 50% of the graves in the cemetery are connected to pithos burials (fig. 2), intended for funerary use and a small percentage of about 7% to storage pithos, intended for practical use. Their manufacturing techniques, the addition of wax rings externally, the construction and use of clay lids and discoid stone carvings for sealing them, demonstrate a high standard of productivity towards a specific production model, from which not only the labor cost of the particular production was calculated but also the profit of the enterprise. In other words, the evidence points towards a trade-oriented society with structured pottery crafts that manufactured utilitarian products, which yielded a profit and were a powerful financial resource.

Moreover, in some cases it is possible to observe the process of repairing these vessels and this indicates the value of the clay pithos overall as well as the degree of difficulty in terms of filling their financial reward – for some people it was preferable to repair



Fig. 2: Pithos burials



Fig. 3: The vaulted tomb with the built bench.

them rather than buy new ones. By taking into account the 34 different types of clay pithos that come from the cemetery, their decoration, the fact that most of them were intact and did not have any repairs, it is possible to infer that this was a prosperous community.

Some architecturally distinct, funerary built constructions at the Stamna cemetery should also be mentioned. These are: **A.** a vaulted tomb with a built bench (fig. 3), which was probably built for the founder and leader of the Stamna community. The tomb contained four burials: one inhumation and three cremations in two amphorae and a tripod clay pithos. Presumably the tomb was built to house the inhumation. **B.** Built, well-



Fig. 4: The built well type grave T378/2000.

shaped graves, where a tripod clay pithos and a bronze tripod cauldron (fig. 4), were deposited. These vessels contained the cremated remains of the prominent inhabitants of Stamna. For these dead a more expensive way of burial was selected as revealed from a. the engagement of workers for the carving of the graves, b. the transition of the use of a valuable and rare object such as the bronze cauldron which has now been used as an urn and c. the corresponding conversion from the utilitarian to the burial use of the large and also important (with regard to their urban use), tripod (or not) clay pithos.

Regarding the burial practice, the most distinctive differentiation is that between cremation and inhumation. The aristocratic class of Stamna maintained its exclusive

right to select their own burial customs and reserved the cremation entirely for them. The uniqueness of cremation was indeed a powerful demonstration of social and high economical status, as it was an extremely expensive practice.

The burial data presented above, testifies the existence of markets, ports, clay industries, and possible trade routes via a well organized land network or via the Aetoliko lagoon itself since it was navigable. The economic activity of the Stamna region, possibly concerned with the processing of new commercial and craft opportunities, enabled the citizens to prosper after the decline of the Mycenaean civilization and the people's migration.

Notes

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[2] Canon of St Paul's Cathedral "The King of Terrors", a sermon of death delivered in St Paul's Cathedral on Whitsunday 1910, while the body of King Edward VII was lying in state at Westminster. It was published in Facts of the Faith in 1919.

Image Credits

Fig. 1–4: by author from Christakopoulou 2009.

References

Christakopoulou 2001

G. Christakopoulou, Πρωτογεωμετρικός τάφος στη Σταμνά Μεσολογγίου, in: N. Chr. Stampolidis (ed.) Cremations in Bronze and Early Iron Age, Proceedings of International Symposium (Rhodes, 29.4.–2.5.1999) 155–168. (Athens 2001), available from: <https://www.academia.edu/2408644/2001> (23.02.2021).

Christakopoulou 2006

G. Christakopoulou, Σωστικές ανασκαφές στη Σταμνά και το Αγγελόκαστρο Αιτωλοακαρνανίας, in: Πρακτικά της Α΄ Αρχαιολογικής Συνόδου Νότιας και Δυτικής Ελλάδος, Πάτρα 9–12 Ιουνίου 1996 (Athens 2006) 511–518, available from: <https://www.academia.edu/2408701/2006> (23.02.2021).

Christakopoulou 2009

G. Christakopoulou Somakou, Το Νεκροταφείο της Σταμνάς και η Πρωτογεωμετρική περίοδος στην Αιτωλοακαρνανία. (Ph.D diss. National and Kapodistrian University of Athens 2009), available from: <https://www.didaktorika.gr/eadd/handle/10442/18271> (24. 02. 2021).

Christakopoulou 2016

G. Christakopoulou, The Protogeometric Settlement at Stamna, Aetolia. Some Thoughts on the Settlers' Origin Based on the Typology of the Graves, in: E. Papadopoulou Chrysikopoulou – V. Chrysikopoulos – G. Christakopoulou (eds.), ACHAIOS, Studies presented to Professor Thanasis I. Papadopoulos. (Oxford 2016) 59–76.

Christakopoulou 2018

G. Christakopoulou, To Die in Style! The Residential Lifestyle of Feasting and Dying in Iron Age Stamna, Greece (Oxford 2018).

Un edificio arcaico sulle sponde del Tevere: testimonianze produttive e commerciali nella bassa valle tiberina

Laura Cianfriglia – Stella Falzone – Ivana Montali – Federica Michela Rossi

Abstract

Since 2005 the archaeological investigations carried out by the Soprintendenza Speciale per i Beni Archeologici di Roma in Via delle Idrovore della Magliana (Rome) a few hundred meters away from the Tiber, have allowed to discover a two meter high building consisting of 4 rooms, with a surface area of about 250 square meters. This building, made of splinters and irregular blocks of local tufa and clay, shows 2 phases (– between the sixth century and the beginning of the fifth century BC), due to floodings. In the external area a well, some tufa basins and a long containment wall for the water were found. The discovery of a big quantity of pottery (mainly local but also imported, such as some amphorae and black-figure vases), and waste of ceramic workmanship allow hypothesizing a prominent function of storage place along the Tiber during the Archaic period.

In via delle Idrovore della Magliana 121 a Roma, nell'ambito di attuazione di un Programma di Recupero Urbano, sono state realizzate, fra il 2005 e il 2017, indagini archeologiche sotto la direzione della allora Soprintendenza Speciale per i Beni Archeologici di Roma.[1]

L'area, situata nel quadrante sud-ovest di Roma, comprende una vasta superficie posta tra la stessa via delle Idrovore della Magliana e la riva destra del Tevere, nel punto di confluenza con il Fosso di Affogalasino.

Nel corso di tali indagini sono state riportate alla luce, a oltre m. 4,5 dal p. d. c., strutture appartenenti a diverse fasi di occupazione del territorio: un edificio in scapoli di tufo e argilla, di età tardo-arcaica (fig. 1), un lungo muro di contenimento realizzato in opera cementizia con schegge di tufo rosso e frammenti di cocciopesto collegato a una struttura quadrangolare della prima età imperiale, un manufatto in cementizio non bene identificato.[2]

Tali strutture sono strettamente legate alla presenza del Tevere e del Fosso di Affogalasino, importanti vie di collegamento con il mare, nonché con gli abitati dell'entroterra. La vicinanza di questi percorsi fluviali ne ha tuttavia determinato la fine: le esondazioni hanno coperto e sigillato le stratigrafie con depositi talmente consistenti di argilla e sabbia,[3] che le strutture posteriori non sono mai andate ad intercettare quelle più antiche, le cui murature si sono pertanto conservate per una notevole altezza, mentre gli strati hanno reso una grandissima quantità di materiali.

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Fig. 1: Via Idrovore della Magliana (Roma), veduta dell'edificio arcaico.

Non sono stati rinvenuti elementi riconducibili a tracciati viari nell'area in oggetto: possiamo dunque solo ipotizzare una viabilità di collegamento con il percorso della *via Campana,* situata ai piedi delle colline, strada che metteva in comunicazione Roma con le saline e il porto.

L'edificio più antico è costituito come si diceva da murature in scheggioni e blocchi irregolari di tufo rosso e rosato legati da pochissima argilla e conservati per ca m 2 di altezza;[4] è articolato in 4 vani, copre una superficie di ca 250 mq ed era provvisto di un tetto di tegole. Sono state individuate due fasi costruttive intervallate da un evento alluvionale. La più antica comprendeva tre ambienti probabilmente seminterrati (fig. 2, A–B–C), caratterizzati da muri con bassa fondazione in cavo e piani pavimentali realizzati in schegge di tufo rosso[5] (fig. 2, nn. 1–4). Si può inoltre ipotizzare, in base ai ritrovamenti effettuati, che all'esterno il piano di calpestio fosse costituito da un strato di ciottoli, con la duplice funzione di livellamento e di drenaggio dell'area circostante.[6] Riferibili a questo momento sono anche spazi esterni di lavorazione, testimoniati da piani di bruciato e concotto (fig. 2, nn. 5–6).

Nella seconda fase tutta l'area fu interessata da un rialzamento del piano di calpestio di ca 1 m, probabilmente dovuto ad un'esondazione del Tevere. L'edificio, riempito an-



Fig. 2: Via Idrovore della Magliana (Roma), planimetria dell'edificio e delle altre evidenze di epoca arcaica.

ch'esso in parte da un alto deposito di argilla, venne ampliato con la costruzione di un grande ambiente sul lato occidentale con ampio accesso da Ovest e piccolo piano di cottura (fig. 2, vano D). Fu aggiunto inoltre, in asse con l'ingresso, un pozzo quadrangolare in opera quadrata di tufo con blocchi sagomati internamente dopo la messa in opera, profondo 5 metri e provvisto di pedarole (fig. 2, n. 7). Anche in questa fase l'esterno dell'edificio presentava una pavimentazione in ciottoli di fiume, conservata in lacerti lungo i muri perimetrali (fig. 2 nn. 8–9). Contestualmente, sul lato nord fu costruito un muro lungo 16 metri in blocchi di tufo su tre filari sovrapposti (fig. 2, n. 10) con probabile funzione di contenimento o regimentazione delle acque provenienti anche da questo versante.[7] A Sud dell'edificio sono state rinvenute irregolari e ampie concentrazioni di blocchi, grandi lastre e scheggioni di tufo, misti a numerosi materiali fittili, inglobati nell'argilla, alcuni dei quali interpretabili come resti di vasche di decantazione, di lastricati di tufo e annessi del fabbricato principale. All'interno dell'edificio invece fu sistemata, sempre in questa fase, una vaschetta di lavorazione ricavata da un unico blocco di tufo e alta circa cm 15 (fig. 2, n. 11).

Dalle stratigrafie indagate nell'area circostante l'edificio (quelle al suo interno si sono rivelate quasi completamente sterili), provengono inoltre ingenti quantità di frammenti ceramici, oltre 40.000, caratterizzati da un'ampia tassonomia tipologica, e da un basso indice di frammentarietà. Ciò ha permesso di ricostruire un elevato numero di individui afferenti a varie classi ceramiche (bucchero, ceramica depurata, ceramiche di impasto rosso-bruno, ceramiche di impasto chiaro-sabbioso), cronologicamente inquadrabili tra la fine del VI e gli inizi del V secolo a. C., e tipologicamente ascrivibili ad ambiti produttivi in prevalenza romano laziali, pur con evidenti contaminazioni dall'Etruria Meridionale[8] (fig. 3).

Inoltre, il cospicuo numero di frammenti ceramici interpretabili come scarti di lavorazione,[9] scarti di cottura, la presenza di distanziatori e di piani di cottura, sempre nell'area esterna dell'edificio, appaiono come indicatori certi di un'attività manifatturiera. Associata a questa, può essere ipotizzata anche una funzione commerciale o di stoccaggio di materiali lungo il corso del Tevere, vista la straordinaria incidenza di anfore di epoca arcaica (tra cui contenitori massilioti, etruschi e di produzione corinzia)[10] e di ceramica fine di importazione greca a figure nere, tra le quali si annoverano *lekythoi* (fig. 4) e *kylikes*.[11]

Queste evidenze, insieme a quelle di altre due strutture coeve recentemente rinvenute, una sulla riva destra del Tevere in via Pierantoni zona Marconi,[12] l'altra in via di Ponte Galeria sulla sponda sinistra del Rio Galeria,[13] consentono di acquisire nuovi elementi utili alla comprensione della distribuzione e della tipologia degli insediamenti nel VI–V secolo a. C. Tali insediamenti inoltre, trovandosi tutti lungo vie fluviali, sono accomunati dalla presenza di possenti strati alluvionali che hanno sigillato le strutture murarie e i materiali, consentendone una notevole conservazione. Strettamente legati alla presenza di acqua, sembrano da ritenersi parte di un sistema atto al controllo ed allo sfruttamento di questo territorio, al confine tra Roma e Veio, alla fine dell'epoca arcai-

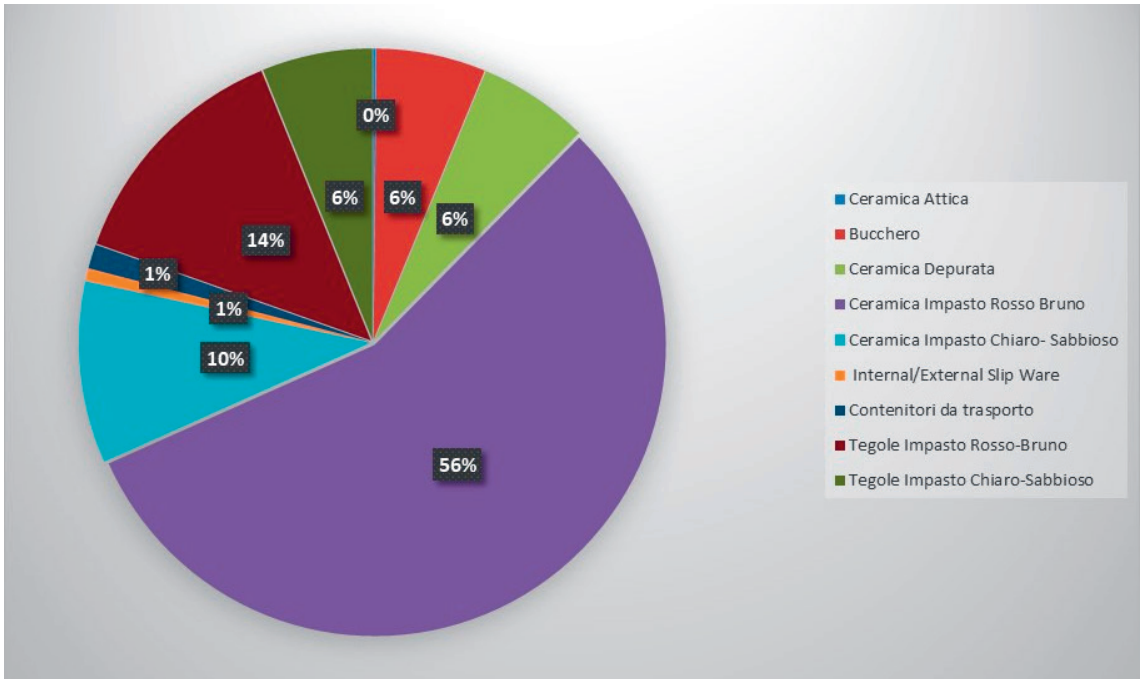


Fig. 3: Via Idrovore della Magliana (Roma), Grafico con le attestazioni delle classi ceramiche rinvenute nell'area dell'edificio arcaico.



Fig. 4: Via Idrovore della Magliana (Roma), Frammenti riferibili ad una *lekythos* attica a figure nere.

ca. L'abbandono degli insediamenti, avvenuto intorno alla prima metà del V secolo a. C., seppur strettamente collegato a fenomeni naturali, va collocato in una più generale dinamica territoriale, incentrata sia sulla funzione di cerniera delle fasce a ridosso del fiume, sia sul ruolo di questi insediamenti per la definizione dei confini dell'*ager Romanus antiquus* e delle forme di controllo esercitate da Roma sulle rive del Tevere tra l'età arcaica e la prima età repubblicana.[14]

Note

[1] Le indagini sono state realizzate sotto la direzione scientifica della dr.ssa L. Cianfriglia Funzionario Responsabile della SSBAR (attualmente Soprintendenza Speciale Archeologia, Belle Arti e Paesaggio di Roma), con la collaborazione della dr.ssa C. Ariosto; lo scavo è stato eseguito sotto il controllo delle dr.sse F. M. Rossi e S. Falzone; la cernita e prima catalogazione dei materiali sono state effettuate dalla dr.ssa I. Montali; la documentazione grafica è stata curata dal dr. P. Dalmiglio. In questa sede viene proposta un'anticipazione di un più ampio lavoro sull'intero contesto archeologico, in corso di preparazione.

[2] Ariosto et al. 2016, 392–395.

[3] Cianfriglia 2006, 499.

[4] Non si sono trovati esempi di murature confrontabili precisamente con quelle rinvenute, si può solo suggerire un parallelo con quelli relativi alle fondazioni della fattoria dell'*Auditorium,* nel periodo 1, fase 2, 550–500 a. C. (Cifani 2007, 337 con bibliografia; D'Alessio 2007a, 72, fig. 34). Per strutture di diverse dimensioni ma afferenti al medesimo orizzonte cronologico e affini per tipologia v. D'Alessio 2007b, 93–95 con bibliografia.

[5] Esempi simili in Cifani 2008, 245.

[6] Pavimentazioni in ciottoli in aree scoperte sono frequenti sia in ambito residenziale (v. ad esempio Cifani 2008, 189) sia cultuale (v. Rossi 2009, 221 e nota 32 con bibliografia).

[7] Per esempi simili v. Borsari 1898, in particolare 453–454, fig. 2 e; Buccellato et al. 2009, 546–547, nota 58.

[8] Ci si riferisce alle ceramiche fini attestate (in prevalenza bucchero e ceramica depurata), che sembrerebbero riconducibili a officine locali e non a vasellame di importazione (su tali questioni cfr. Falzone et al. 2009, in particolare 41). L'analisi del materiale in impasto, inoltre, ha evidenziato la presenza di un cospicuo numero di olle prodotte in rosso arcaico, che si ispirano almeno idealmente a prototipi in impasto rosso del periodo orientalizzante, ma che per analogia e tecnica di lavorazione è interpretabile come un probabile prodotto di manifattura locale (v. *infra*). La maggior parte delle olle attestate presenta il tipico corpo globulare, un labbro svasato curvilineo decorato con scanalature concentriche; alcune recano sulla superficie una decorazione a pettine costituita da solcature alternate ad un motivo ondulato. L'assenza del caratteristico ingobbio, le pareti più spesse e la fattura approssimativa non lasciano tuttavia dubbi sull'identificazione di questi manufatti, interpretabili come «contaminazioni» tra produzioni, rispondenti a scelte di gusto o a «sperimentazioni di bottega» (cfr. Falzone 2001, 185–186; ten Kortenaar 2009, 343–344) in analogia con altri esemplari rinvenuti in contesti cronologicamente affini (su tutti si rimanda ad Argento 2006, 352–353).

[9] Tra i manufatti visibilmente deformati dal calore della fornace durante le fasi di cottura si registrano alcune olle in impasto rosso-bruno, un fondo di una brocca in ceramica depurata, una coppetta anch'essa in ceramica depurata ed alcune tegole prodotte in impasto chiaro sabbioso.
[10] Tra questi si sottolinea la presenza di un contenitore di origine massaliota riconducibile al tipo I della classificazione di Bertucchi (cfr. Bertucchi 1992, 37–51) e due anfore di produzione etrusca pertinenti ai tipi 3C e 5 della tipologia di Py (cfr. Py 1985).
[11] In particolare si sottolinea la presenza di almeno 10 esemplari, tutti riconducibili a vasi di produzione attica a figure nere. Tra questi si segnala una *lekythos* pertinente al gruppo di Phanyllis, decorata con un oplita ed il suo corteo nell'atto del congedo, ancora in corso di ricomposizione (fig. 4) (cfr. Iacobazzi 2004, nr. 1346, 456; in generale per il gruppo di Phanyllis si rimanda a: Giudice 1978, 631–640; Giudice 1983).
[12] In c. d. s., v. Cianfriglia 2013, 1–7.
[13] Una notizia preliminare del rinvenimento, in c. d. s., è stata data in Cianfriglia et al. 2015, 350–351.
[14] Non è possibile esaminare in questa sede tali questioni nel dettaglio. Per un inquadramento diacronico sulle trasformazioni delle forme di insediamento nei territori lungo le due rive del Tevere si rimanda alle considerazioni in: De Cristofaro et al. 2016, in particolare 58–67 (con bibliografia precedente).

Indice delle figure

Fig. 1: S. Falzone. – Fig. 2: P. Dalmiglio. – Fig. 3: I. Montali. – Fig. 4: F. M. Rossi.

Bibliografia

Argento 2006
A. Argento, Le classi ceramiche: Periodi 1 e 2, in: A. Carandini – M. T. D'Alessio – H. Di Giuseppe (eds.), La fattoria e villa dell'Auditorium nel quartiere Flaminio di Roma, BullCom, Supplementi 14, 2007, 341–375.

Ariosto et al. 2016
C. Ariosto – L. Cianfriglia – S. Falzone – F. M. Rossi, Via delle Idrovore della Magliana. Forme di occupazione dell'area golenale (Mun. XI), BullCom CXVII, 2016, 392–395.

Bertucchi 1992
G. Bertucchi, Les amphores et le vin de Marseille: VIe s. avant J.-C. IIe s. après J.-C. (Parigi 1992).

Borsari 1898
L. Borsari, Nuove scoperte nella città e nel suburbio, Via Ostiense, NSc, 1898, 450–455.

Buccellato et al. 2009
A. Buccellato – M. L. D'Annibale – C. Torri, Elementi ricostruttivi del paesaggio suburbano d'epoca repubblicana nel territorio compreso tra la via Laurentina moderna e il corso del Tevere, in: Jolivet et al. (ed.), Suburbium II: il suburbio di Roma dalla fine dell'età monarchica alla nascita del sistema delle ville, V–II secolo a. C. (Roma 2009) 531–533.

Carandini et al. 2007
A. Carandini – M. T. D'Alessio – H. Di Giuseppe (eds.), La fattoria e villa dell'Auditorium nel quartiere Flaminio di Roma, BullCom, Supplementi 14 (Roma 2007).

Cianfriglia 2006
L. Cianfriglia, Portuense Magliana (Municipio XV): inquadramento topografico, in: Tomei 2006, 499–502.

Cianfriglia 2013
L. Cianfriglia, Ritrovamenti recenti nel territorio del XV Municipio, Rome, le Tibre, le littoral. 3000 ans d'histoire, le défis du présent, Rome 1–7 <http://romatevere.hypotheses.org/318> (03. 08. 2020).

Cianfriglia et al. 2015
L. Cianfriglia – C. Ariosto – M. Stacca – P. Gringmuth, Il Municipio XI (già XV) di Roma. Il SITAR a supporto della tutela del territorio. L'abitato arcaico-repubblicano di Ponte Galeria. Il SITAR nella ricerca italiana verso la conoscenza archeologica condivisa. Atti del III Convegno, Roma Museo Nazionale Romano, 23–24 maggio 2013, in: Archeologia e Calcolatori, Supplemento 7, 2015, 350–351.

Cifani 2007
G. Cifani, I caratteri edilizi, in: Carandini – D'Alessio – Di Giuseppe (eds.), La fattoria e la villa dell'Auditorium nel quartiere Flaminio di Roma (Roma 2007) 337–339.

Cifani 2008
G. Cifani, Architettura romana arcaica. Edilizia e società tra monarchia e Repubblica (Roma 2008).

D'Alessio 2007a
M. T. D'Alessio, FASE 2. La fattoria e ii suo annesso (550–500 a. C.), in: Carandini – D'Alessio – Di Giuseppe (eds.), La Fattoria e villa dell'Auditorium nel quartiere Flaminio di Roma (Roma 2007) 72–77.

D'Alessio 2007b
M. T. D'Alessio, La ricostruzione, in: Carandini – D'Alessio – Di Giuseppe (eds.), La Fattoria e villa dell'Auditorium nel quartiere Flaminio di Roma (Roma 2007) 86–98.

De Cristofaro et al. 2016
A. De Cristofaro – A. Piergrossi, Ripa Veientana. Per una storia del territorio tra Veio e Roma dall'VIII al IV sec. a. C., Mediterranea XII–XIII, 2015–2016, 31–76.

Drago Troccoli 2009
L. Drago Troccoli (ed.), Il Lazio dai Colli Albani ai Monti Lepini tra preistoria ed età moderna (Roma 2009).

Falzone 2001
S. Falzone, Ceramica di impasto rosso di epoca orientalizzante, in: P. Pensabene – S. Falzone (eds.), Scavi del Palatino, I. L'area sud-occidentale del Palatino tra l'età protostorica e il IV secolo a. C.: scavi e materiali della struttura ipogea sotto il tempio della Vittoria (Roma 2001) 185–196.

Falzone et al. 2009

S. Falzone – F. M. Rossi, L'area sud-ovest del Palatino tra l'VIII e il VI sec. a. C. Il bucchero e la depurata come indicatori della produzione e della circolazione di vasellame di uso domestico e sacrale, in: M. Rendeli (ed.), Ceramica, abitati, territorio nella bassa valle del Tevere e Latium Vetus – Atti del Convegno (Roma 2003), Collection de l'ÉcoleFrançaise de Rome 425 (Roma 2009) 31–49.

Giudice 1978

F. Giudice, La classe di Phanyllis e i problemi delle esportazioni di ceramica attica in Sicilia alla fine del VI secolo, in: Un decennio di ricerche in archeologiche 2, Quaderni della Ricerca Scientifica 100, 1978, 631–640.

Giudice 1983

F. Giudice, I pittori della classe di Phanillys. Organizzazione, Produzione distribuzione dei vasi di un'officina di età pisistratideo-clistenica (Catania 1983).

Iacobazzi 2004

B. Iacobazzi, Le ceramiche attiche a figure nere, Gravisca 5 (Bari 2004).

Jolivet et al. 2009

V. Jolivet – C. Pavolini – M. A. Tomei – R. Volpe (eds.), Suburbium II. Il Suburbio di Roma dalla fine dell'età monarchica alla nascita del sistema delle ville (V–II secolo a. C.) (Atti del Convegno, Roma 16 novembre, 3 dicembre 2004 e 17–18 febbraio 2005) (Roma 2009).

Pensabene et al. 2001

P. Pensabene – S. Falzone (eds.), Scavi del Palatino, I. L'area sud-occidentale del Palatino tra l'età protostorica e il IV secolo a. C.: scavi e materiali della struttura ipogea sotto il tempio della Vittoria (Roma 2001).

Py 1985

M. Py, Les Amphores étrusques de Gaule Meridionale, in: Il commercio etrusco arcaico, Atti dell'Incontro di Studio – Roma 5–7 dicembre 1983 (Roma 1985) 73–94.

Rendeli 2009

M. Rendeli (ed.), Ceramica, abitati, territorio nella bassa valle del Tevere e Latium Vetus – Atti del Convegno (Roma 2003), Collection de l'ÉcoleFrançaise de Rome 425 (Roma 2009).

Rossi 2009

F. M. Rossi, Indagini nel temenos del tempio della Magna Mater sul Palatino: strutture murarie, materiali e cronologia, in: V. Jolivet – C. Pavolini – M. A. Tomei – R. Volpe (eds.), Suburbium II. Il Suburbio di Roma dalla fine dell'età monarchica alla nascita del sistema delle ville (V–II secolo a. C.) (Atti del Convegno, Roma 16 novembre, 3 dicembre 2004 e 17–18 febbraio 2005), (Roma 2009) 213–225.

Ten Kortenaar 2009

S. ten Kortenaar, L'Impasto Rosso nel Lazio: note sulla produzione dell'orientalizzante antico e medio, in: L. Drago Troccoli (ed.), Il Lazio dai Colli Albani ai Monti Lepini tra preistoria ed età moderna (Roma 2009) 321–353.

Tomei 2006

M. A. Tomei, Roma. Memorie dal sottosuolo. Ritrovamenti archeologici 1980–2006 (Roma 2006).

Una fase del proceso de comercialización del vino de la costa este de *Hispania Citerior*: La producción de ánforas *parvae*[1]

Enric Colom Mendoza – Ramon Járrega Domínguez

Resumen

El trabajo que aquí presentamos se ha llevado a cabo mediante el estudio pormenorizado de algunos ejemplares de ánforas de diversas tipologías, algunos ya publicados y otros inéditos. A través de este análisis, queremos ofrecer una muy breve sistematización de la existencia de la fabricación de estos contenedores, con unas dimensiones inferiores a las habituales, en diferentes centros de producción alfarera. Los casos analizados pertenecen a las tipologías Greco-itálica, Dressel 1A, Oberaden 74, Pascual 1 y Dressel 2–4, fabricadas en diferentes *figlinae* de la costa este mediterránea de la *Provincia Hispania Citerior.*

Abstract

The work presented here has been carried out through the detailed study of some amphora specimens, some already published and others unpublished. We realised the existence of the manufacture of these containers with much smaller dimensions than usual in some ceramic workshops. The cases analysed belong to the Greco-Italic, Dressel 1A, Oberaden 74, Pascual 1 and Dressel 2–4 typologies, made in different pottery workshops of the Mediterranean east coast of the Provincia Hispania Citerior.

Las ánforas greco-itálica y Dressel 1 *parvae* de Valls

En el vertedero cerámico de la *figlina* del Vilar (Valls, Tarragona), en el transcurso de una revisión de materiales que hemos llevado a cabo recientemente, hemos podido documentar una producción local de ánforas que imitan las formas Greco-Itálica y Dressel 1A. Pero lo sorprendente del caso es que algunas de estas producciones presentan un tamaño muy inferior al normal, hecho que ya fue remarcado por el equipo que lo excavó,[2] si bien estos materiales permanecieron inéditos hasta día de hoy, exceptuando la publicación de algunos dibujos.[3] Por los fragmentos conservados podemos restituir la forma original, con unos diámetros externos de boca que oscilan entre los 9–10 cm de diámetro (fig. 1.8) en comparación a los 15–16 cm de los modelos estándar (fig. 1.7), unos pivotes huecos y cortos, de unos 5 cm (fig. 1.6), y una longitud total aproximada de unos 50 cm. Por tanto, podemos afirmar que se trata de auténticas ánforas en miniatura

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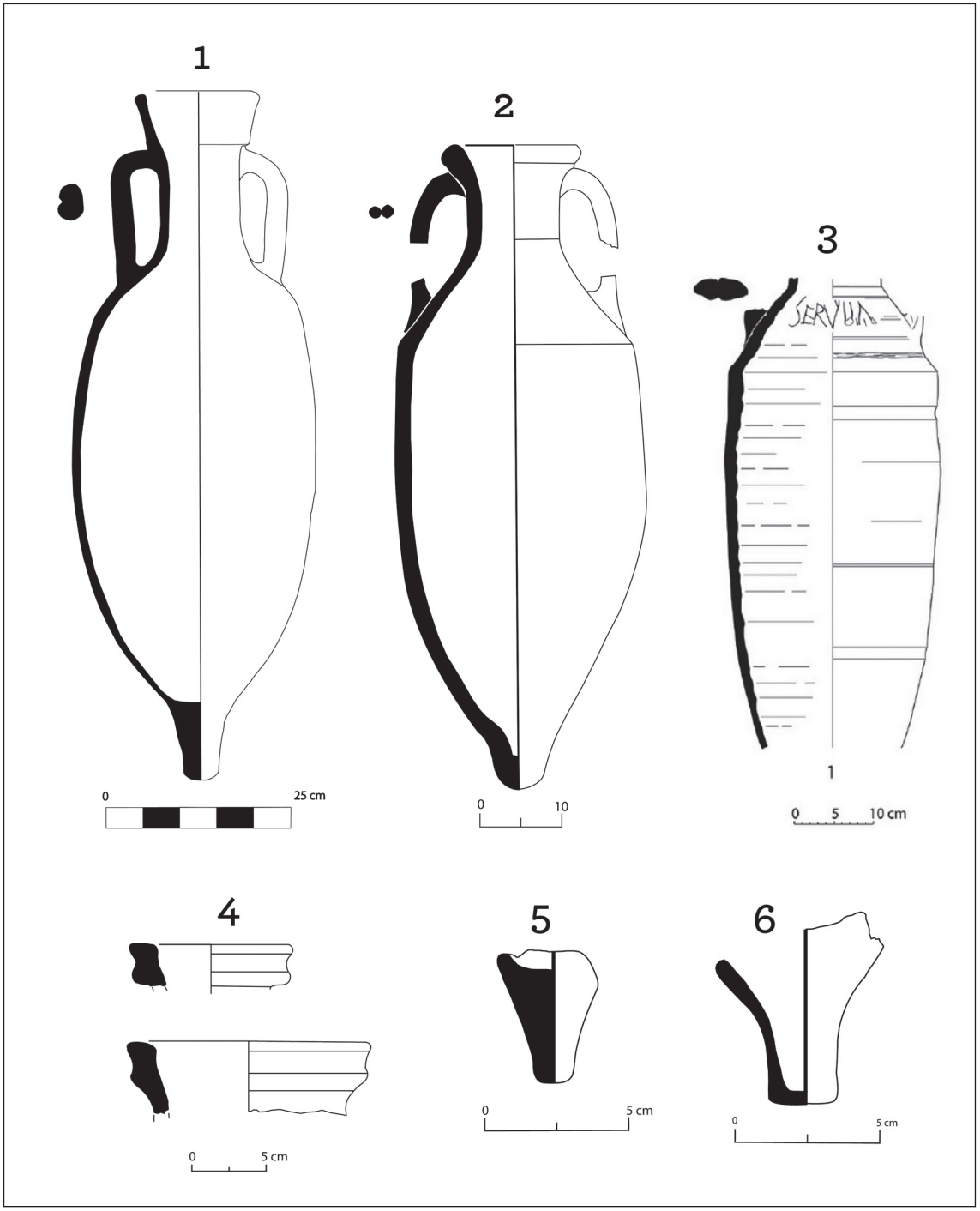


Fig. 1: 1.1: Pascual 1 parva de Mas d'Aragó. – 1.2: Dressel 2–4 parva de Sagunto. – 1.3: Dressel 2 de la Cisterna III del Puig de Santa Llúcia, Ibiza. – 1.4: Variación en los diámetros de la boca en las Oberaden 74 de la Canaleta. – 1.5: Pivote de tipología desconocida de Mas del Catxorro. – 1.6: Pivote de Greco-itálica/Dressel 1A parva del Vilar.

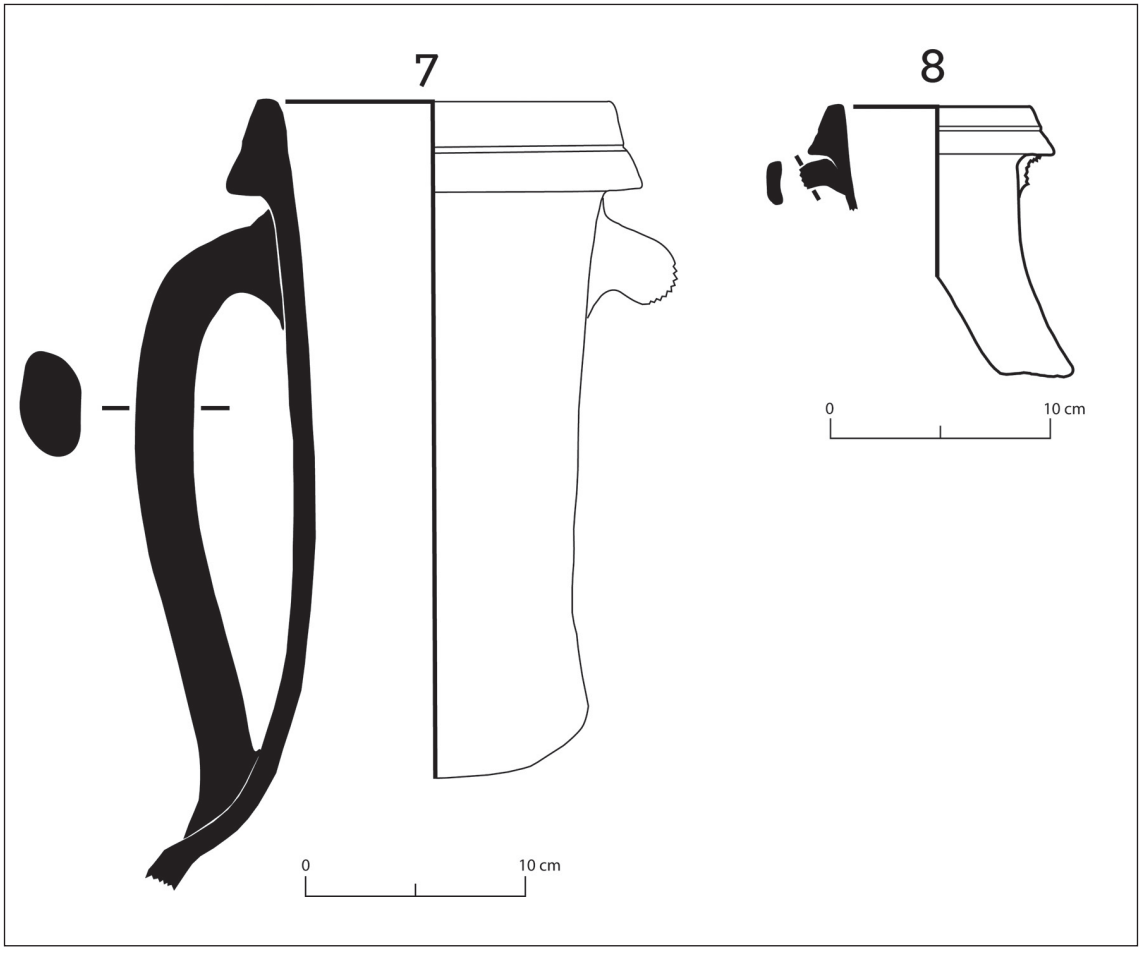


Fig. 1: 1.7: Dressel 1A estándar del Vilar. – 1.8: Dressel 1A parva del Vilar.

con la mismas características morfológicas de las producciones estándar de Greco-Itálica y Dressel 1A que se fabricaron en esta *figlina* del *territorium* de *Tarraco.*

La Pascual 1 *parva*

El caso mejor estudiado, y del que ya presentamos una publicación[4] es la Pascual 1 *parva* de la *figlina* de Mas d'Aragó (Cervera del Maestrat, Castelló) en la que se encontró un ejemplar completo (fig. 1.1), del que ya se había publicado una imagen.[5] Si bien las ánforas de tipología Pascual 1 típicas suelen medir unos 105 cm y presentar un marcado perfil fusiforme, ésta presenta unas dimensiones inferiores a las normales, con 86 cm de longitud, mientras que el perfil general del cuerpo presenta una morfología más ovoide. Los cálculos de volumen realizados arrojan una cifra de 25,02 litros de capacidad. Eso le confiere una capacidad muy similar a los ejemplares de Pascual 1 estándar, pero con un tamaño y peso más contenido, por lo que podemos afirmar que presenta un mejor diseño desde el punto de vista técnico.

Las Dressel 2–4 *parvae*

También hay que destacar que algunas de las producciones locales de Dressel 2–4 de *Saguntum,*[6] parecen seguir esta línea. En base a algunos de los dibujos arqueológicos publicados (fig. 1.2) podemos ver como algunas de estas ánforas también deben ser consideradas como *parvae,* ya que su longitud total es de unos 70 cm y su perfil general es ligeramente diferente a las formas Dressel 2–4 típicas de la zona, si bien el perfil de los bordes y la sección de las asas, permiten relacionarlas con dicha forma.

En la ciudad de Ibiza (Illes Balears) durante las excavaciones llevadas a cabo en la Cisterna III del Puig de Santa Llúcia, se documentó un ánfora de tipología Dressel 2 (fig. 1.3) que presentaba un grafito *post cocturam* "SERVILA", y cuya forma completa restituida presentaría una longitud total de unos 70 cm. Los mismos autores de la publicación ya advirtieron que se trataba de un ejemplar que entraría dentro de la categoría de *parva,*[7] ya que los ejemplares de Dressel 2 suelen tener unas dimensiones que oscilan entre los 100–105 cm de longitud.[8]

Por otro lado, se tiene constancia de una pequeña producción de Dressel 2 *parva* en el centro productor del Vila-sec (Alcover, Tarragona), que se encuentra en fase de estudio.[9]

La Oberaden 74 *parva.* El caso de la Canaleta

Contamos también con el caso de la *figlina* de La Canaleta (Vila-seca, Tarragona), donde se tiene constancia de la producción de ánforas de tipología Oberaden 74 con las marcas

PHILODAMVS y SEX·DOMITI.[10] Los ejemplares documentados de Oberaden 74 presentan oscilaciones muy marcadas en cuanto al diámetro interno de la boca (fig. 1.4), la gran mayoría de unos 14cm, mientras que otros ejemplares de tan sólo 8 cm[11] por tanto de módulo inferior al estándar de esa producción. No pensamos que tal variación en las medidas responda a diferencias inherentes al trabajo artesanal, si no que se perseguía intencionadamente la creación de envases de tamaño inferior.

El pivote de tipología desconocida *parva* de Mas del Catxorro

En la villa romana de Mas del Catxorro (Benifallet, Tarragona), en los hornos asociados a la *pars fructuaria* de este emplazamiento, se fabricaron ánforas de las tipologías Dressel 2–4, Pascual 1, Oberaden 74 y Dressel 7–11, con las marcas epigráficas C·MVSSID·NEP y MAVL·GAL.[12] En una revisión de materiales procedentes de uno de los vertederos cerámicos, pudimos documentar un pivote de tan sólo tres centímetros de longitud (fig. 1.5), del que no podemos asegurar con total seguridad que fuese producido en el alfar, si bien la pasta cerámica utilizada es similar a las demás producciones del mismo. Con toda probabilidad ha de corresponder a una de las producciones documentadas en este taller (Pascual 1, Dressel 2–4 y Dressel 7–11), pero las características intrínsecas del fragmento son insuficientes para precisarlo.

Reflexión final

En base a este breve resumen del estado de la cuestión de las formas *parvae* producidas en la costa mediterránea de la *Provincia Hispania Citerior,* podemos plantear las siguientes reflexiones:

1. Existen formas *parvae,* como la Pascual 1 de Mas d'Aragó, que aunque sean de tamaño más reducido, cuentan con una mejor *ratio* peso/capacidad que las tipologías estándar.
2. En cambio, las producciones del Vilar y, al parecer, las de La Canaleta son auténticas miniaturizaciones, *ergo* con una capacidad inferior a las formas que imita. Eso plantea la siguiente pregunta: ¿por qué invertir tiempo y esfuerzo en unas ánforas que no son útiles para transportar gran cantidad de líquidos? Algunos autores han planteado que se trate de envases de muestra, o para realizar catas del producto. Pensamos que esta hipótesis no tiene mucho sentido, ya que por la cantidad de fragmentos de formas *parvae* encontradas en el vertedero cerámico del Vilar, se trata de una producción que representa un importante porcentaje del total, en cuyo estudio nos encontramos trabajando a día de hoy.
3. Por tanto, podríamos plantear la hipótesis preliminar de que el vino, u otros líquidos contenidos en ánforas *parvae* de menor capacidad, correspondan a un producto

de mayor calidad que el contenido en las formas canónicas. Esto podría explicar la inversión en tiempo, esfuerzo y recursos para fabricar ánforas de este tipo. Basamos esta afirmación con los hallazgos de las excavaciones subacuáticas llevadas a cabo en 2015 por el Centre d'Arqueologia Subaquàtica de Catalunya (CASC) en Cala Aiguablava (Begur, Girona), donde apareció el primer ejemplar de Dressel 20 *parva* con un *titulus pictus* que se podía leer como *Oleum dulce,* es decir, un producto apreciado en la Antigüedad y que, posiblemente, debido a su mayor cotización, pudo estar envasado en ánforas más pequeñas y de menor capacidad para facilitar su comercialización. La existencia de Dressel 20 *parvae* es conocida desde hace algún tiempo,[13] y podemos, en este sentido, recordar una ánfora Dressel 20 miniaturizada hallada en *Dertosa* (Tortosa, Tarragona).[14]

4. El área geográfica donde se desarrollan las producciones a las que nos hemos referido parece estar concentrado en el área del *ager Tarraconensis, ager Dertosanus* y *ager Saguntinus,* desde inicios del siglo I a.C., con la imitación de las tipologías Greco-itálica y Dressel 1A en el centro de producción de Valls, pasando por la época de Augusto con las formas Oberaden 74 y Pascual 1 hasta, como mínimo, inicios de época flavia con las Dressel 2 *parvae* del Vila-sec y las Dressel 2–4 de Sagunto. Estas producciones podrían paralelizarse con el caso de las producciones de Dressel 20 *parva* e incluso miniaturizada que se documentan en la Bética, a las que nos hemos referido brevemente más arriba.
5. Estas producciones, a día de hoy, no han sido objeto de un análisis más exhaustivo, por lo que serán necesarias nuevas investigaciones en un futuro que nos ayuden a precisar la naturaleza de estas producciones.

Notas

[1] Este trabajo se encuadra en el marco del proyecto de I+D+i financiado por el MINECO "Amphorae ex Hispania: sistematizacion y accesibilidad en red de los centros de produccion" (HAR2015-68554-P, MINECO-FEDER).

[2] Adserias et al. 2004.

[3] López et al. 2008, 35, fig. 1.

[4] Járrega et al. 2017.

[5] Fernández 2006, 276, fig. 5; Aranegui 2008, 229, fig.1.

[6] Aranegui 1992; Mantilla 1987.

[7] Marlière et al. 2016, 415.

[8] Sciallano et al. 1985, entre otros.

[9] Agradecemos a Joan Francesc Roig la información.

[10] Gebellí et al. 2011.

[11] Gebellí 1996, 74.

[12] Izquierdo 1993.

[13] Remesal et al.1997.

[14] Járrega et al. 2014, 165, fig. 10.14.

Índice de figuras

Fig. 1.1: De autor. – Fig. 1.2: A partir de Mantilla 1997. – Fig. 1.3: A partir de Marlière et al. 2016. – Fig. 1.4: A partir de Gebellí 1996. – Fig. 1.5–8: De autor.

Bibliografía

Adserias et al. 2004

M. Adserias Sans – E. Ramon Sariñena, La villa romana del Vilar (Valls, Alt Camp), Quaderns de Vilaniu 45 (Valls 2004) 5–18.

Aranegui 1992

C. Aranegui Gascó, Testimonios del vino saguntino, entre otras cuestiones, Miscel·lània Arqueològica a J. Mª Recasens (Tarragona 1992) 35–43.

Aranegui 2008

C. Aranegui Gascó, La producción y el comercio de ánforas tarraconenses en el País Valenciano, in: A. López Mullor – X. Aquilué (eds.), La producció i el comerç de les àmfores de la Provincia Hispania Tarraconense. Homenatge a Ricard Pascual i Guasch (Barcelona 17.–18. 11. 2005), Monografies MAC 8 (Barcelona 2008) 227–240.

Fernández 2006

A. Fernández Izquierdo, Aproximación a la villa romana de Mas d'Aragó (Cervera del Maestrat, Castellón): producción cerámica del alfar. Quaderns de Prehistòria i Arqueologia de Castelló 25 (Castelló 2006) 271–300.

Gebellí 1996

P. Gebellí Borràs, Un nou centre productor d'àmfores al Camp de Tarragona. El forn de la canaleta i el segell Philodamvs (Vila-seca, Tarragonès), BATarr 18, 1996, 69–96.

Gebellí et al. 2011

P. Gebellí Borràs – R. Járrega Domínguez, La terrisseria romana de la Canaleta (Vila-seca), in: M. Prevosti – J. Guitart (eds.), Ager Tarraconensis 2. El poblament (Tarragona 2011) 547–562.

Izquierdo 1993

P. Izquierdo Tugas, Un nou centre productor d'àmfores a la vall de l'Ebre: El Mas del Catxorro de Benifallet, Estudis Universitaris Catalans. Homenatge a Miquel Tarradell (Barcelona 1993) 753–765.

Járrega et al. 2014

R. Járrega – J. Diloli – R. Ferré – J. Vilà, Elementos urbanísticos de abandono y una posible crisis estructural en la ciudad de *Dertosa* (Hispania Citerior) en el siglo II d. C., in: S. Ramallo – A. Quevedo (eds.), Las ciudades de la Tarraconense oriental entre los s. II–IV d. C. Evolución urbanística y contextos materiales (Murcia 2014) 149–172.

Járrega et al. 2017

R. Járrega Domínguez – E. Colom Mendoza, Una nueva variante anfórica de la Hispania Citerior: La Pascual 1 parva, Quaderns de Prehistòria i Arqueologia de Castelló 35 (Castelló 2017) 127–140.

López et al. 2008

A. López Mullor – A. Martín Menéndez, Tipologia i datació de les àmfores tarraconenses produïdes a Catalunya, in: A. López Mullor – X. Aquilué (eds.), La producció i el comerç de les àmfores de la Provincia Hispania Tarraconense. Homenatge a Ricard Pascual i Guasch (Barcelona 17–18. 11. 2005), Monografies MAC 8 (Barcelona 2008) 33–94.

Mantilla 1987

A. Mantilla, Marcas y ánforas romanas encontradas en Saguntum, Saguntum 21 (Sagunto 1987) 379–416.

Marlière et al. 2016

E. Marlière – A. Martín – J. Torres, Rubrum, piperatum et servilianum. Algunos vinos y preparados vinarios consumidos en Ebusus, in: R. Járrega – P. Berni (eds.) Amphorae ex Hispania: paisajes de producción y consumo. III Congreso Internacional de la Sociedad de Estudios de la Cerámica Antigua (SECAH). Tarragona, 10–13 de diciembre de 2014. Monografías Ex Officina Hispana III (Tarragona 2016) 407–422.

Remesal et al. 1997

J. Remesal – V. Revilla – C. Carreras – P. Berni, Arva: prospecciones en un centro productor de ánforas Dressel 20 (Alcolea del Río, Sevilla), Pyrenae 28, 1997, 151–178.

Sciallano et al. 1985

M. Sciallano – B. Liou, Les épaves de Tarraconaise à chargement d'amphores Dressel 2–4, Archaeonautica 5, 1985, 5–178.

The ARCEA Project. Production Centres and Trade Relations in the Early Empire. Analysis of the Amphorae Production from the Tarraconensis Central Coast[1]

Daniel Mateo Corredor – Juan Francisco Álvarez Tortosa – Rubén Santana Onrubia – Jaime Molina Vidal

Introduction

The amphorae production of the Tarraconensis central coast during the Early Empire is mainly linked to the wine trading, becoming apparent a clear predominance of Dressel 2–4 type, while other wine amphorae (Gauloise 4 and Almadrava IV) are only produced in the *territorium* of *Dianium,* as well as the oil amphorae Oliva 3.[2]

Although over the last years, the scientific community has shown a great interest in the studies focused on the production and trade of Roman amphorae in the Iberian Peninsula, the advances in the knowledge of Hispanic amphorae productions have been uneven, being the Tarraconensis northern coast and Baetica the best-known areas. On the contrary, amphorae production of the Tarraconensis central coast is less known, despite the fact that these containers would be traded in the western empire, as shown by classic authors' references[3] and the amphorae findings. For this reason, a research programme has been started which intends to improve the knowledge of this production and its distribution: The ARCEA project. The project is mainly based on three complementary action areas.

Geophysical Survey, Excavation and Analysis of the Pottery Production Centre of La Rana (Gata de Gorgos, Alicante, Spain)

Regarding the production landscape, despite the evidences of amphorae production centres in the areas of *Edeta, Valentia* and *Saetabis,* most part of the *figlinae* belonged to the *territorium* of *Saguntum,*[4] and mainly, *Dianium,*[5] where 16 kilns have been detected (fig. 1). However, the number of archaeological excavations has been very low and the most part of the data collected comes from surveys or scattered findings, whose results have been published in a limited and uneven way.

Thus, in order to characterize its structures, the ceramic production and the stratigraphic sequence, we consider necessary the integral analysis of the Roman site of La Rana (Gata de Gorgos, Alicante, Spain). The site was discovered thirty years ago[6] and the surface materials indicated the existence of a pottery production centre dated around the 2nd and 3rd century AD. and whose extension could reach 9000 m².

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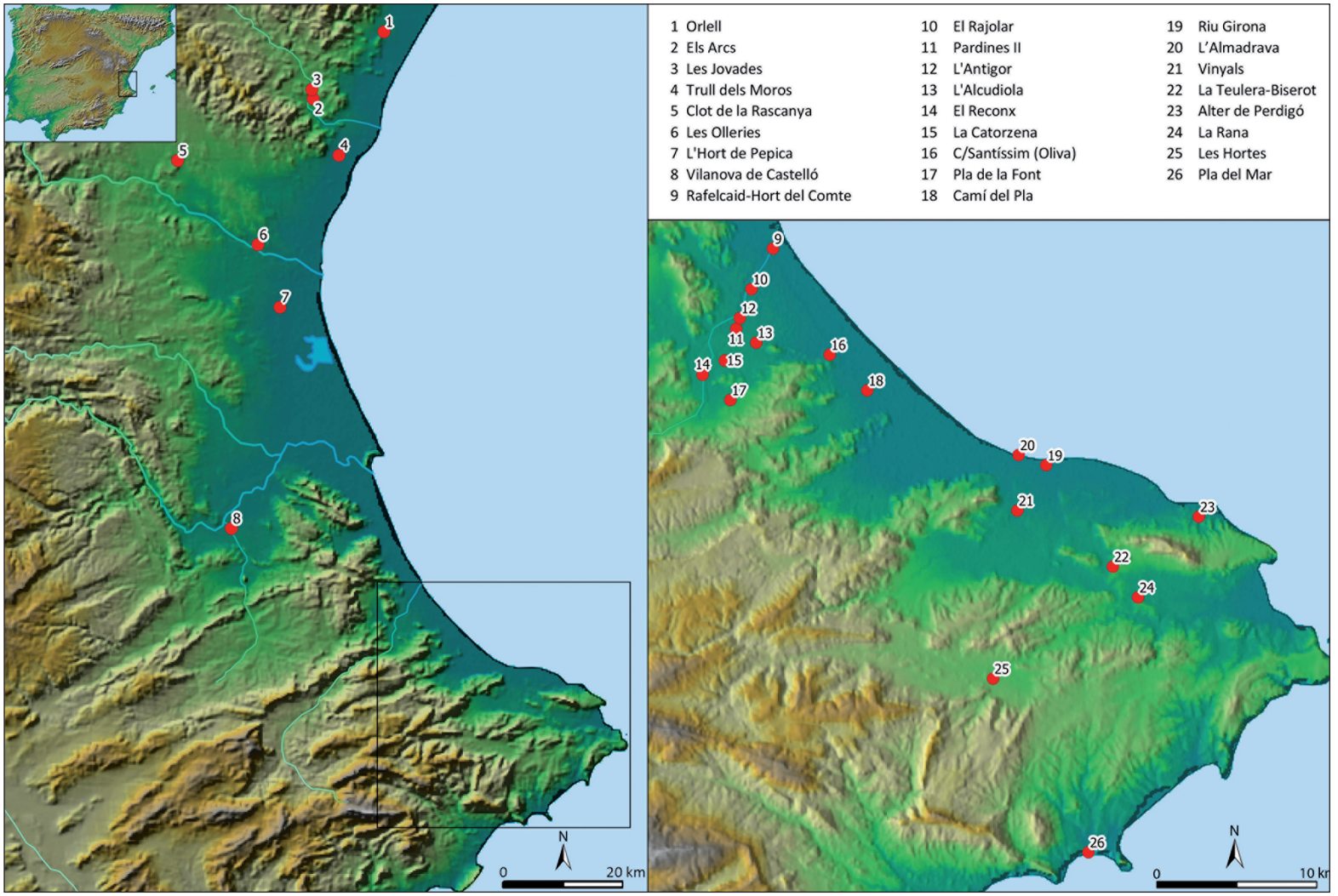


Fig. 1: Map location of the sites with evidence of amphorae production from the Tarraconensis central coast.



Fig. 2: Neck of Dressel 2–4 found during the excavation in La Rana.

One of the first actions of the project has been a geophysical survey with a StreamX georadar, in collaboration with a team led by L. Lagóstena Barrios (University of Cádiz). This action has allowed us to know the potential of the site and to improve the planning of the archaeological excavation tasks. In 2018, under the direction of J. Bolufer, J. Molina and D. Mateo, the first excavation campaign has been carried out.[7] Among other aspects, this intervention has made it possible to register oven discards that come to testify, not only the elaboration of the Roman amphorae types Gauloise 4, Almadrava IV and probably Dressel 2–4 (fig. 2), but also of construction materials and a wide range of common ware. The analysis of this campaign, still in process, and the realisation of new excavation campaigns in the coming years will allow us to enhance the knowledge of this Roman *figlina* and its productions.

Analysis of the Mariposa E Shipwreck Cargo

The knowledge about the trade extension of the wine and oil amphorae from the Tarraconensis central coast is limited due to the fact that these amphorae present a similar morphology than other types produced in other best-known areas. Thus, the most part of the findings outside its regional area, have been made through sherds with epigraphy. In any case, besides its recurrent presence in the south and central Tarraconensis coasts, these amphorae have been detected in Galia and Rome.[8]

A key element to assess the real scope of the exports is the analysis of the Mariposa E wreck. This shipwreck, excavated in the 90s,[9] is located in Alghero, in the northwest of Sardinia (Italy). It presents a main cargo formed by Dressel 2–4 amphorae and an interesting epigraphic collection of graffiti, *tituli picti* and MPM stamps (fig. 3), which enabled us to hypothesize its *Saguntum* origin.[10] In collaboration with V. Gavini, we



Fig. 3: Amphorae from the Mariposa E shipwreck.

have proceeded to the analysis of the cargo placed in the Alghero Museum and Sassari, confirming its origin in the Tarraconensis central coast. It constitutes the main evidence of the commercialization in transit of the wine produced on the Tarraconensis central coast. The study includes the next points:

- Characterize the amphorae, morphologically and typologically, using also digital photogrammetry techniques.
- Specify the areas of origin of the amphorae through archaeometric analysis.
- Carry out a complete analysis of the amphorae epigraphy.
- Refine the time frame of the wreck reviewing the rest of the materials.
- Analyse the possible route of the shipwreck and its trade dynamics.

Typological Revision and Archaeometric Characterisation of the Central Tarraconensis Amphorae

The third line of action of the project consists in the analysis of the amphorae material from different pottery kilns of the Tarraconensis central coast. The direct analysis of the material will consist of the morphological study, with a more adjusted typological characterisation that allows to know better its evolution, together with the characterization of the ceramic fabrics. The ceramic fabric analysis will be, first of all, macro-

scopic, obtaining samples for each of the groups of fabric identified. From each sample, a macroscopic photograph is obtained that facilitates its identification. Later, they will be subjected to a multidisciplinary study using X-ray diffraction (XRD), X-ray fluorescence (XRF) and thin section (fig. 4).

A catalogue of ceramic fabrics from the main amphorae production areas of the Tarraconensis central coast will be generated, a tool that will allow for the improvement of its identification in consumption contexts, helping to detect the real scope of their exports and to specify areas of origin.

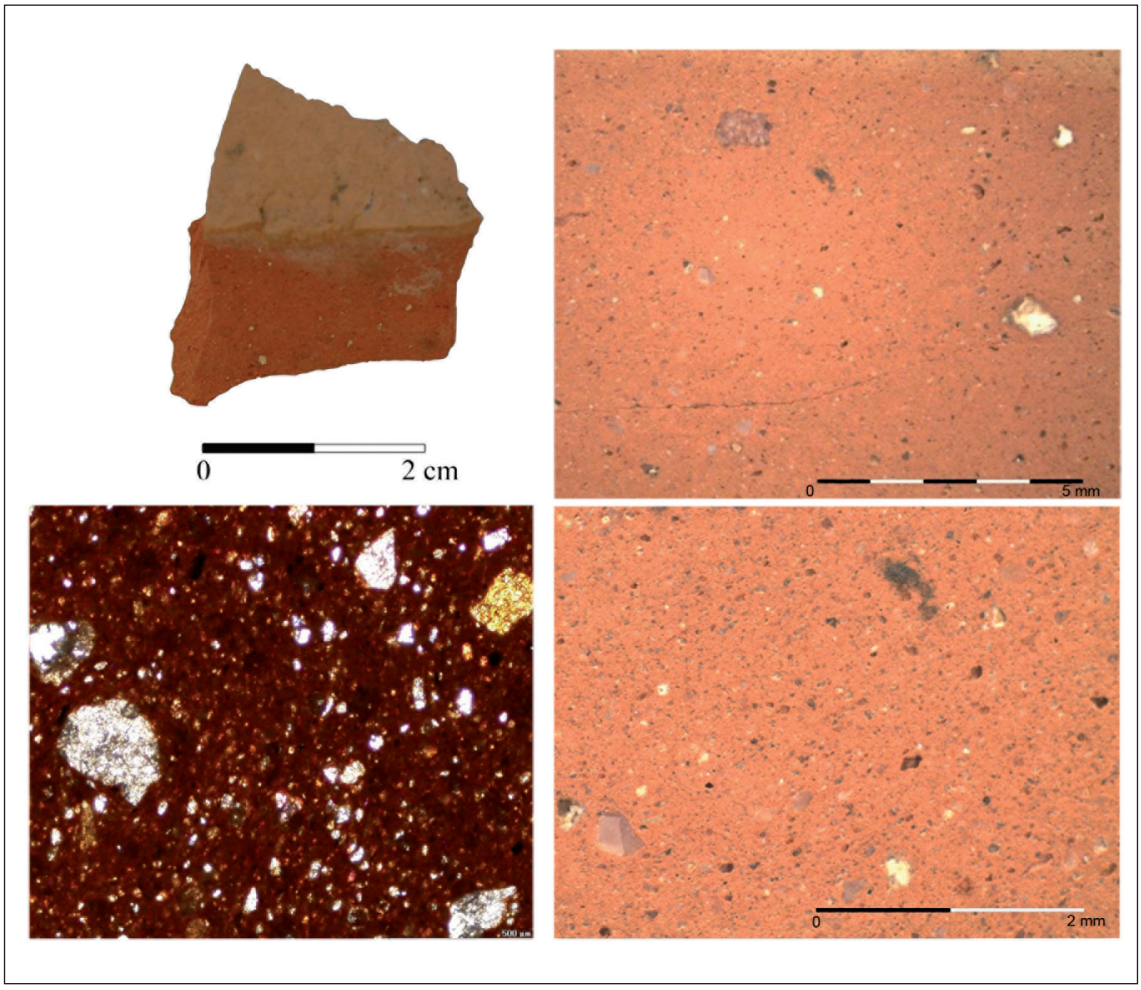


Fig. 4: Macrophotographs of a representative sample (8× and 20×) and thin section.

Notes

[1] This research has been developed in the context of the projects GRE-03, PGC2018-099843-B-I00 (MCIU/AEI/FEDER, UE), PID2019-107264GB-I00 and GV/2020/060.
[2] An updated synthesis of each of these types in Mateo Corredor – Molina Vidal 2016a; 2016b; 2016c; 2016d.
[3] Juvenal (SAT., V, 26–30) and Fronto (Epistulae I, 4, 8–13).
[4] Aranegui Gascó 2008.
[5] Gisbert Santonja 1999; 2009.
[6] Bolufer Marqués – Banyos 1995.
[7] Mateo Corredor et al. 2018. With the support of the University of Alicante, Soler Blasco Archaeological and Ethnographic Museum and the Gata City Council.
[8] *Vid.* Mateo Corredor 2018.
[9] Gavini 2013.
[10] MPM stamp was found in the kiln of Els Arcs (Estivella, Valencia) (Aranegui Gascó – Mantilla Collantes 1987, 101).

Image Credits

Fig. 1–3: By the authors. – Fig. 4: D. Mateo Corredor 2015, 118–120.

References

Aranegui Gascó 2008
C. Aranegui Gascó, La producción y el comercio de ánforas tarraconenses en el País Valenciano, in: A. López – X. Aquilué (eds.), La producció i el comerç de les àmfores de la Provincia Hispania Tarraconensis. Homenatge a Ricard Pascual i Guasch (Barcelona 2008) 227–240.

Aranegui Gascó – Mantilla Collantes 1987
C. Aranegui Gascó – A. Mantilla Collantes, La producción de ánforas Dr 2–4 de Sagunto, in: El Vi a l'antiguitat. Economia, producció i comerç al Mediterrani occidental: II Col·loqui Internacional d'Arqueologia Romana, actes (Badalona, 28–30 de novembre i 1 de desembre de 1985) (Badalona 1987) 100–104.

Bolufer Marqués – Banyos 1995
J. Bolufer Marqués – I. Banyos, Un nuevo taller de ánforas del territorio de Dianium (La Rana/Gata, Marina Alta, País Valencià, in: XXI Congreso Nacional de Arqueología, Teruel, 8 a 10 de octubre de 1991 y Albarracin, 11 de octubre de 1991 (Zaragoza 1995) 1043–1056.

Gavini 2013
V. F. Gavini, Il relitto "E" del Mariposa (Alghero), Erentzias 1, 2013, 235–244.

Gisbert Santonja 1999

J. A. Gisbert Santonja, Àmfores i vi al territorium de Dianium (Dénia): Dades per a la sistematització de la producció amforal al País Valencià, in: El Vi a l'antiguitat. Economia, producció i comerç al Mediterrani occidental: II Col·loqui Internacional d'Arqueologia Romana, actes (Barcelona 6–9 de maig de 1998) (Badalona 1999) 383–417.

Gisbert Santonja 2009

J. A. Gisbert Santonja, Vi tarraconense al País Valencià. Una mirada des dels forns d'àmfores, arqueologia de les vil.les i derelictes de la costa de Dianium (Dénia), in: M. Prevosti – A. Martín (eds.), El vi tarraconense i laietà: ahir i avui (Tarragona 2009) 125–150.

Mateo Corredor 2015

D. Mateo Corredor, Caracterización de pastas cerámicas procedentes de ánforas púnicas yromanas (Alicante 2015), <http://hdl.handle.net/10045/46688> (15. 06. 2018)

Mateo Corredor 2018

D. Mateo Corredor, La producción de ánforas en el área costera central de la Tarraconense, Ex Officina Hispana 3, 2018, 133–152.

Mateo Corredor et al. 2018

D. Mateo Corredor – L. Lagóstena Barrios – J. Bolufer Marqués – J. Molina Vidal, La figlina de la Rana (Gata de Gorgos, Alicante). Prospección geofísica y primeras actuaciones arqueológicas de un centro alfarero altoimperial, in: R. Járrega Domínguez – E. Colom Mendoza (eds.), Figlinae hispaniae. Nuevas aportaciones al estudio de los talleres cerámicos de la Hispania romana (Tarragona 2018) 159–168.

Mateo Corredor – Molina Vidal 2016a

D. Mateo Corredor – J. Molina Vidal, Dressel 2–4 (Tarraconensis central coastal area), Amphorae ex Hispania. Paisajes de producción y consumo, <http://amphorae.icac.cat/amphora/dressel-2-4-tarraconensis-central-coastal-area> (25. 10. 2016).

Mateo Corredor – Molina Vidal 2016b

D. Mateo Corredor – J. Molina Vidal, Oliva 3 (Tarraconensis central coastal area), Amphorae ex Hispania. Paisajes de producción y consumo, <http://amphorae.icac.cat/amphora/oliva-3-tarraconensis-central-coastal-area> (25. 10. 2016).

Mateo Corredor – Molina Vidal 2016c

D. Mateo Corredor – J. Molina Vidal, Gauloise 4 (Tarraconensis central coastal area), Amphorae ex Hispania. Paisajes de producción y consumo, <http://amphorae.icac.cat/amphora/gauloise-4-tarraconensis-central-coastal-area> (25. 10. 2016).

Mateo Corredor – Molina Vidal 2016d

D. Mateo Corredor – J. Molina Vidal, Almadrava IV (Tarraconensis central coastal area), Amphorae ex Hispania. Paisajes de producción y consumo, <http://amphorae.icac.cat/amphora/almadrava-iv-tarraconensis-central-coastal-area> (25. 10. 2016).

On the Chronology of the Earliest Greek Metallurgy in Apollonia Pontica

Margarit Damyanov – Krastina Panayotova

Apollonia in the Black Sea (present-day Sozopol in Bulgaria) was founded by Milesian settlers in the late 7th century BC.[1] It possessed an excellent harbour, the first safe stop after the Bosporus and a vital port of call for the ships sailing up along the coast. While the place did not command vast arable land – a shallow coastal plain, encompassed from the southwest by the chain of Medni Rid (Bulgarian for "Copper Ridge"), it had another advantage, namely its proximity to the metal deposits in the hills. Although the scarce written sources remain silent about the exploitation of those riches, a telling hint is offered by Pliny's information (*NH* 34, 18) of the colossal (c. 13 m high) bronze statue of Apollo, created by Kalamis and erected by Apollonians in the second quarter of the 5th century BC.[2]

In these circumstances, only archaeology is able to shed light on the beginnings of the Greek metallurgy in Apollonia. Already in the early 1970s, field surveys detected traces of ancient mining on the western slopes of Medni Rid,[3] to the west and northwest of Apollonia. A recent campaign added a wealth of new information, including finds of Late Archaic pottery.[4]

Since 2009, investigations on the small offshore island of St. Kirik revealed the main *temenos* of Apollonia with two temples, one Archaic with a large altar, and one probably Early Classical, as well as traces of the early Archaic settlement that emerged in the late 7th century BC.[5] A conspicuous specific of the Archaic cultural layer on the island are the omnipresent traces of metallurgy, mainly pieces of slag that are found in all contexts on the island (pits, dwellings, etc.).

Due to limitations of space, the present paper will discuss shortly the pottery from only one such context that could shed light on the chronology of the process. While it is not the earliest possible assemblage, it presents a clear-cut situation that is sufficiently revealing. The so-called "House 1" is a small (c. 5 × 5 m), almost square structure that is overlain by the Archaic altar,[6] thus it is could serve as a *terminus post quem* for the first monumental structures in the *temenos.* An important circumstance is that part of the floor was levelled with pieces of slag, plastered with clay. Therefore, the materials from the layer above the floor provide a *terminus ante quem* for the metallurgical activity that produced the slag.

Unsurprisingly, the assemblage has a pronounced East Greek character. There are quite a few fragments of North Ionian and related cups. There is at least one bird-bowl, of which only a hatched diamond between vertical lines is preserved (figs. 1. 1; 2. 1). More numerous and of varying size are the rosette-bowls, some of which illustrate early types with purple-and-white stripes in the interior (figs. 1. 2–6; 2. 2–3, 5–8) and could be dated to the first decades of the 6th century BC.[7] One larger example with a basket of

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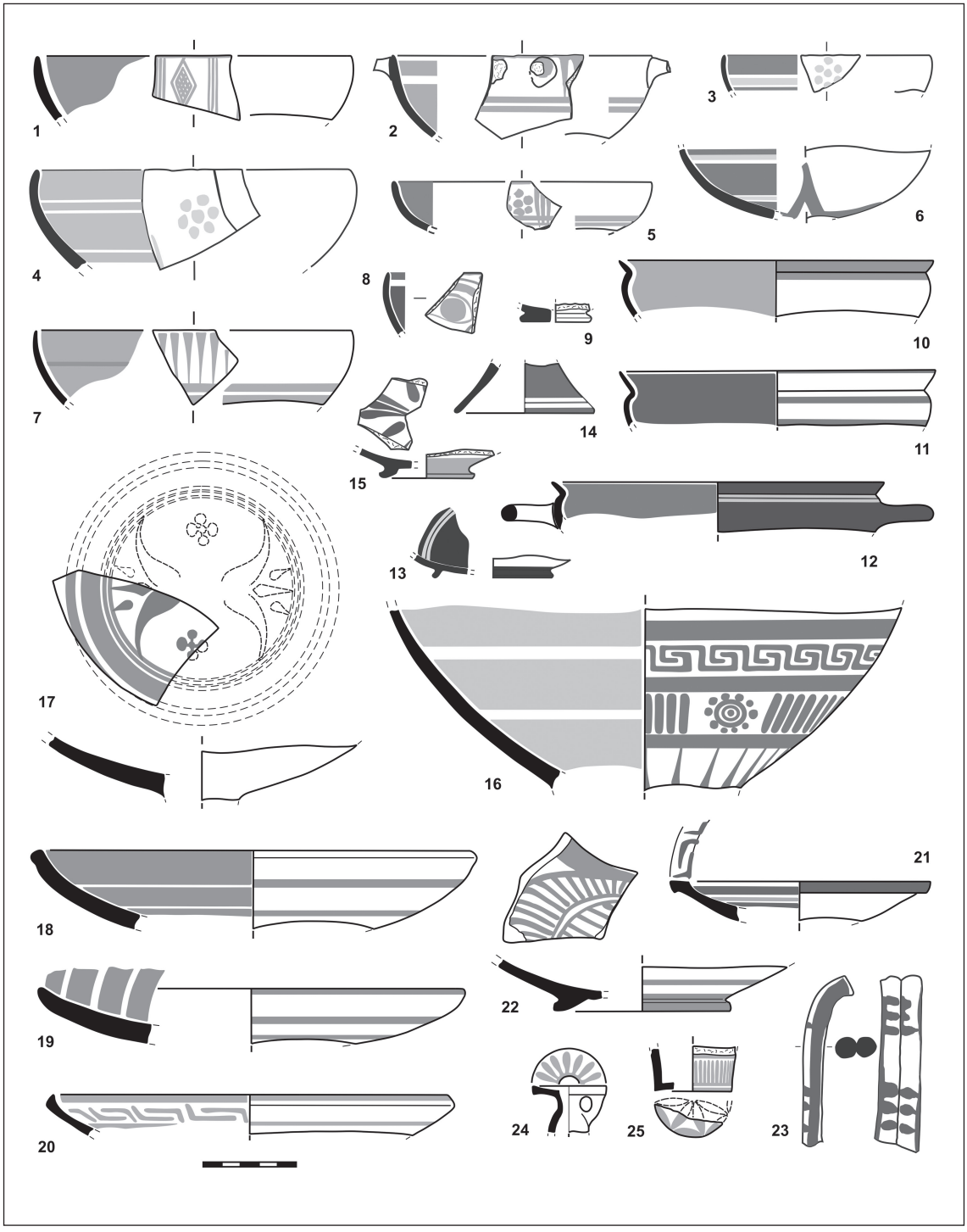


Fig. 1: Archaic fine wares from House 1 on the island of St. Kirik, Apollonia Pontica, first half of the 6th c. BC (excavations in 2010–2011).

outlined rays and without horizontal bands beneath the rosette has good parallels from the earliest levels at Tocra.[8] A small fragment (figs. 1. 8; 2. 9) belongs to an eye-bowl that dates from the first quarter of the 6th century BC;[9] such vases are well-presented in the early Milesian colonies in the Black Sea like Istros and Berezan.[10] A rim with carefully drawn vertical rays (figs. 1. 7; 2. 4) belongs to a similar vase.

The fragments of Ionian cups (*Knickrandschalen*) are less numerous. The earliest is a Villard-Vallet B1, Tocra V, or Gravisca III.1 type that belongs to the early 6th century BC (figs. 1. 12–13; 2. 12).[11] Two more should be slightly later: one is of Villard-Vallet B2, Tocra VIII, or Miletos 9,1.C type (figs. 1. 11; 2. 13), reaching down to the mid-6th century BC,[12] and the other belongs to one of the variants of Group 10 from Miletos (figs. 1. 10; 2. 14), also from before 550 BC,[13] with good parallels from the North Pontic region.[14]

A fragment from the foot of a Chian chalice (figs. 1. 14; 2. 16) should be added to the shapes for drinking and could be dated to the late first or early second quarter of the 6th century BC.[15]

Among the larger shapes in the assemblage, there are two or three fragments (figs. 1. 16; 2. 17–19) from an open vase, possibly a North Ionian *randlos Schale* – a shape that was very popular in Naukratis, but also with examples from the Black Sea, earlier in the first half of the 6th century BC.[16] Above a basket of rays, there are friezes of groups of vertical sticks with rosettes between them and of meander, separated by solid bands; above them, there is an animal frieze.

A fragment with a "cable" ornament (fig. 2. 21) probably belongs to the neck of a North Ionian LWG amphora,[17] and there is also a handle of such a vase (fig. 1. 23). A few more fragments are from larger closed LWG vases with parts of animals and blobby rosettes (fig. 2. 22, 24).

There are numerous fragments of plates, among them two thick-walled stemmed examples (*Pokalfußteller*) with decoration of concentric bands (figs. 1. 18–19; 2. 25–26) that have good parallels from Assessos with the respective early date (as early as late 7th century BC).[18] To the first half of the following century belong fragments of the popular North Ionian plates with broken meander along the rim: one larger, stemmed (fruit-stand), and with slightly incurving rim (figs. 1. 20; 2. 29),[19] and the other quite small, with flat rim, thick walls, and less careful decoration (figs. 1. 21; 2. 31).[20] Of the same period, there are more fragments of plates with floral and geometrical decoration (figs. 1. 17, 22; 2. 23, 27–28, 30, 32–34).

Thus, the painted pottery from the assemblage could be dated within the limits of the first and earlier second quarter of the 6th c. BC, with a few fragments possibly as early as c. 600–590 BC (the bird-bowl, the Villard-Vallet B1 cup), while others could continue down to the middle of the century.[21] One Corinthian fragment also seems to be early (fig. 1. 24).

This impression is confirmed by the amphorae from House 1, where fragments of Milesian (or South Ionian), Klazomenian, and Lesbian containers were found. It has been noted that the same combination is typical of the earliest period of the settlement



Fig. 2: Archaic fine wares from House 1 on the island of St. Kirik, first half of the 6th c. BC (excavations in 2010–2011).

on the island of Berezan, down to the middle of the 6th century BC.[22] In fact, the assemblage of amphorae closely resembles the picture on Berezan.[23] Most numerous are the Milesian amphorae, mostly rims and a foot (fig. 3. 1–4, 12); the earliest types known in the Black Sea are not represented, but the specimens could be dated to the first half and the middle of the 6th century BC.[24] Two Lesbian red rims (fig. 3. 8–9) could be dated to the first half of the 6th century BC.[25] Among the more exotic specimens is the fragment of an Attic SOS-amphora (fig. 3. 11).[26]

The assemblage is completed by other categories, among which numerous grey-ware vases. In addition to various bowls, more intriguing are several larger vases – a table amphora (fig. 3. 14), a mortarium (fig. 3. 15) and a dinos with incised decoration on the rim (fig. 3. 16). They all have parallels from other early contexts in Apollonia.[27]

The brief overview of the pottery from the so-called "House 1" shows that the deposits that sealed the floor, insulated with pieces of slag, accumulated within the lifespan of the first-second generation of Milesian colonists, indicating they quickly gained access to the metal riches of Medni Rid. Other contexts with slag could be dated even earlier – with materials from the late 7th century BC (fig. 4), immediately after the colonisation. This fact and the location of the deposits in the wooded hills at a certain distance from Apollonia suggest some kind of agreement with the native population, or even joint efforts. In fact, all early contexts with slag contained also fragments of coarse hand-made vessels of Thracian shapes.

While the role metals played in the Greek colonisation has been questioned,[28] the case of Apollonia deserves reconsidering. The city was founded several decades after the first Greek ventures in the northwestern part of the Black Sea (Istros, Orgame, Borysthenes/Berezan), therefore Ionian settlers should have been able to collect information about the resources in the area. Respectively, it could be claimed that metallurgy played an important role in the economy of Apollonia in the Archaic Period and beyond.

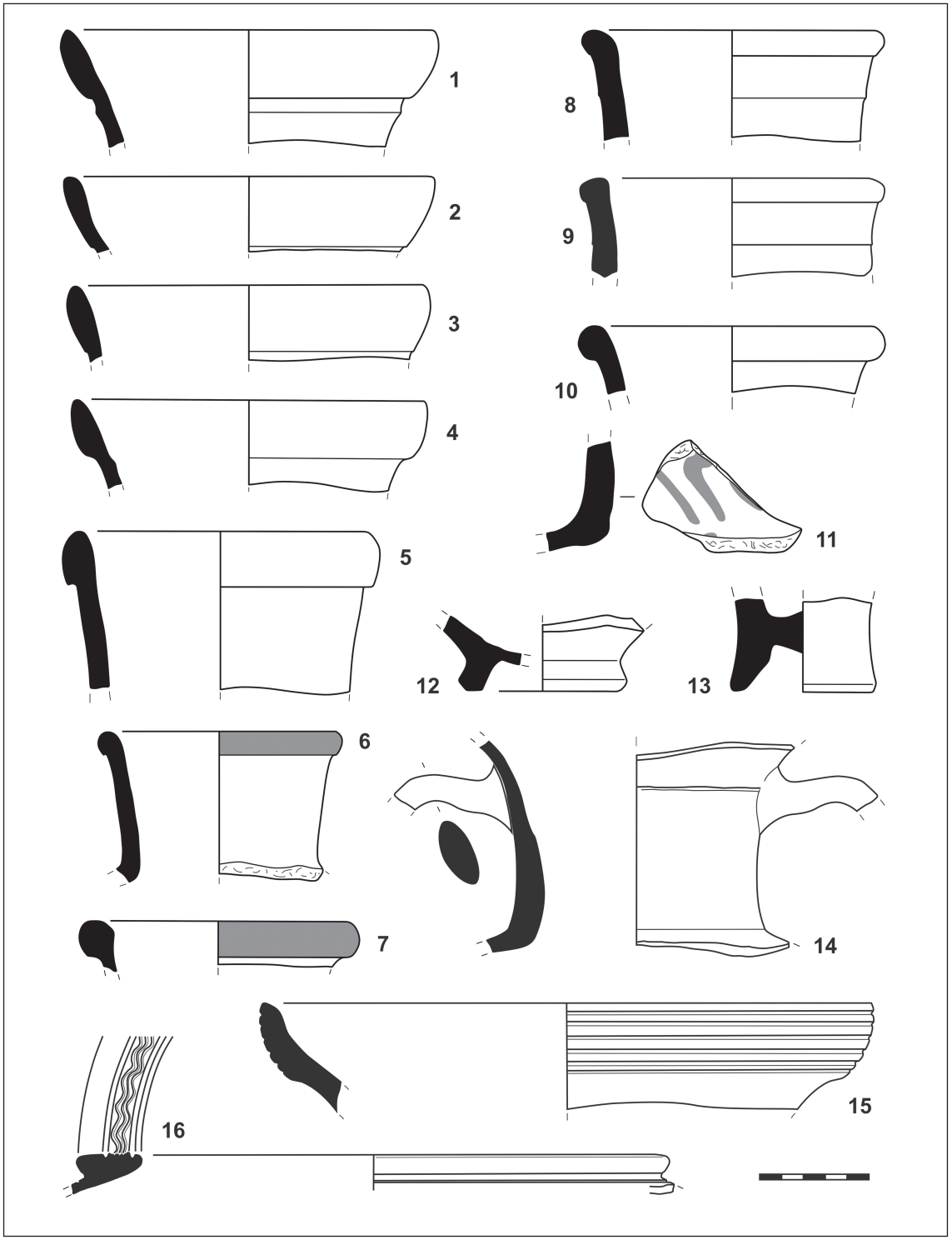


Fig. 3: Archaic transport amphorae (1–13) and monochrome grey-ware vessels (14–16) from House 1, first half of the 6th c. BC (excavations in 2010–2011).

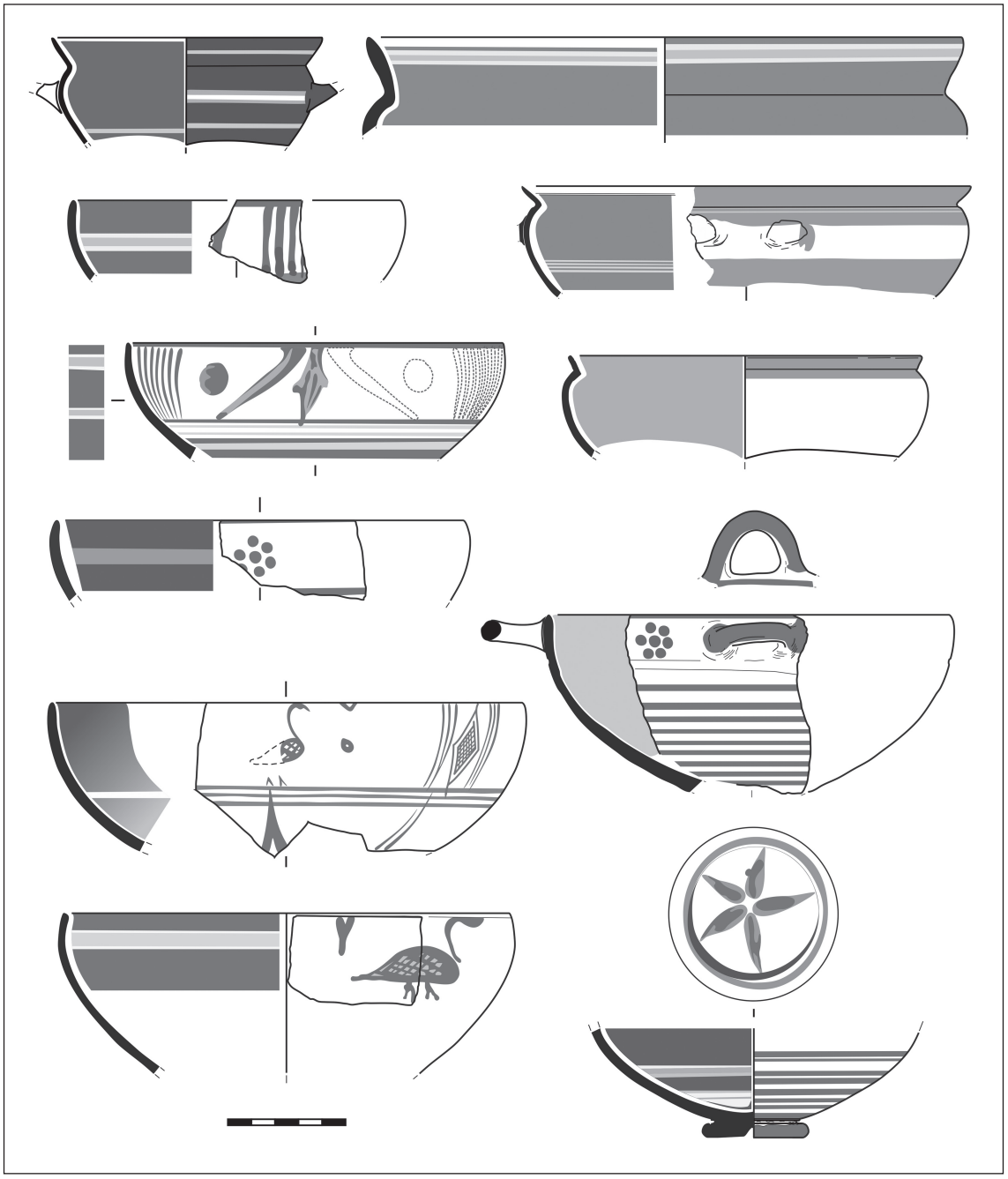


Fig. 4: East Greek cups from Archaic pits with pieces of slag on the island of St. Kirik, late 7th–early 6th c. BC (excavations in 2010–2011).

Notes

[1] On Apollonia, see Nedev – Panayotova 2003.
[2] Mattusch 1988, 140–141.
[3] Chernykh 1978, 19–24.
[4] Kunze et al. 2018, 605–606 figs. 17–18.
[5] Panayotova et al. 2014.
[6] Panayotova et al. 2014, fig. 1: House 1 is numbered 1 on the plan, under the Archaic altar IV.
[7] See Bujskikh 2013, 107.
[8] Boardman – Hayes 1966, no. 723 pl. 38; Boardman – Hayes 1973, nos. 2031–2032 pl. 13.
[9] Cook – Dupont 1998, 28.
[10] Alexandrescu 1978, nos. 224–233; Solovyov 2005, no. 45; Posamentir 2006, 163 fig. 11.
[11] Cook – Dupont 1998, 131 fig. 18. 1b; Boardman – Hayes 1966, 112, no. 1197 fig. 55; Boldrini 1994, 158–159 tav. 8.
[12] Cook – Dupont 1998, fig. 18. 1d; Boardman – Hayes 1966, 113; Schlotzhauer 2001, nos. 174–179.
[13] Cf. Schlotzhauer 2001, nos. 255–256. 296.
[14] Cf. Bujskikh 2016, 38 fig. 7.
[15] Cf. Boardman – Hayes 1966, nos. 783–784 = Lemos 1991, nos. 927–928 pl. 124.
[16] Cf. Walter-Karydi 1973, nos. 1008–1021 pl. 124–125.
[17] Cf. Boardman – Hayes 1966, nos. 580–581; Solovyov 2005, no. 53.
[18] Kalaitzoglou 2008, nos. 295–301.
[19] Cf. Boardman – Hayes 1966, no. 621; Solovyov 2005, nos. 62–63.
[20] Cf. Boardman – Hayes 1966, nos. 654–664.
[21] Cf. Chistov 2012, 65–66 pl. 65–67.
[22] Chistov 2018, 22.
[23] See Chistov 2012, 20–24 pl. 1, 7, 13.
[24] See Birzescu 2012, 127–143; Sezgin 2012, 150–159; Bujskikh 2014, 94–96 fig. 9.
[25] Birzescu 2012, 36–37; Sezgin 2012, 221–222.
[26] Cf. Birzescu 2012, 175–177; Bujskikh 2014, 96 fig. 12.
[27] See Nikov 2012, figs. 23. 37. 43.
[28] Treister 1996, 169–170; Tsetskhladze 2009, 335.

Image Credits

Fig. 1–4: by Margarit Damyanov.

References

Alexandrescu 1978

P. Alexandrescu, La céramique d'époque archaïque et classique (VIIe–IVe s.), Histria IV (Bucharest 1978).

Bîrzescu 2012

I. Bîrzescu, Die archaischen und frühklassischen Transportamphoren, Histria XV (Bucarest 2012).

Boardman – Hayes 1966

J. Boardman – J. Hayes, Excavations at Tocra, 1963 to 1965. The Archaic Deposits I, BSA Suppl. 4 (London 1966).

Boardman – Hayes 1973

J. Boardman – J. Hayes, Excavations at Tocra, 1963 to 1965. The Archaic Deposits II and Later Deposits, BSA Suppl. 10 (London 1973).

Boldrini 1994

S. Booldrini, Le ceramiche ioniche, Gravisca. Scavi nel santuario greco 4 (Bari 1994).

Bujskikh 2013

А. Буйских, Архаическая расписная керамика из Ольвии (восточногреческая, лаконская, коринфская, имитации) (Киев 2013).

Bujskikh 2014

А. Буйских, Амфоры конца VII – первой половины V в. до н.э. из Борисфена, Археологія і давня історія України 1 (12), 2014, 88–100.

Bujskikh 2016

А. Буйских, Йонийские килики из Борисфена, Археологія і давня історія України 1 (18), 2016, 29–42.

Chernykh 1978

Е. Черных, Горное дело и металлургия в древнейшей Болгарии (София 1978).

Chistov 2012

Д. Чистов (ed.), Материалы Березанской (Нижнебугской) античной археологической экспедиции, Том 2, Исследования на острове Березань в 2005–2009 гг. (Санкт-Петербург 2012).

Chistov 2018

Д. Чистов, Импорт товаров в амфорной таре на Березанское поселение в VI–V вв. до н.э. (по материалам раскопок участка "О-Западный" в 2004–2016 гг.), Боспорские исследования XXXVI, 2018, 19–36.

Cook – Dupont 1998

R. Cook – P. Dupont, East Greek Pottery (London 1998).

Kalaitzoglou 2008

G. Kalaitzoglou, Assesos: Ein geschlossener Befund südionischer Keramik aus dem Heiligtum der Athena Assesia, Milesische Forschungen 6 (Mainz 2008).

Kunze et al. 2018

R. Kunze – J. Abele – P. Leshtakov – K. Dimitrov – R. Krauß – T. Rödel, Archaeometallurgical Prospections in the Highlands of Medni Rid, Southeastern Bulgaria. Preliminary Report on Fieldwork 2013–2015 with a Focus upon Remote Sensing Methods by Means of LiDAR, JASc 19, 2018, 596–617.

Lemos 1991

A. Lemos, Archaic Pottery of Chios: The Decorated Styles (Oxford 1991).

Mattusch 1988

C. Mattusch, Greek Bronze Statuary, From the Beginnings through the Fifth Century B.C. (Ithaca 1988).

Nedev – Panayotova 2003

D. Nedev – K. Panayotova, Apollonia, in: D. Grammenos – E. Petropoulos (eds.), Ancient Greek Colonies in the Black Sea, Vol. I (Thessaloniki 2003) 95–155.

Nikov 2012

K. Nikov, Grey Monochrome Pottery from Apollonia Pontica (Veliko Tarnovo 2012).

Panayotova et al. 2014

K. Panayotova – M. Damyanov – D. Stoyanova – T. Bogdanova, Apollonia Pontica: The Archaic Temenos and Settlement on the Island of St. Kirik, in: J. M. Alvarez – T. Nogales – I. Roda (eds.), Centre and Periphery in the Ancient World. Proceedings of the XVIIIth International Congress of Classical Archaeology, Vol. I (Merida 2014) 595–598.

Posamentir 2006

R. Posamentir, The Greeks in Berezan and Naukratis: A Similar Story?, in: A. Villing – U. Schlotzhauer (eds.), Naukratis: Greek Diversity in Egypt. Studies on East Greek Pottery and Exchange in the Eastern Mediterranean (London 2006) 159–167.

Schlotzhauer 2001

U. Schlotzhauer, Die südionischen Knickrandschalen. Eine chronologische Untersuchung zu den sog. Ionischen Schalen in Milet (Inauguraldissertation, Ruhr-Universität, Bochum 2001).

Sezgin 2012

Y. Sezgin, Arkaik Dönem Ionia Üretimi Ticari Amphoralar (Istanbul 2012).

Solovyov 2005

С. Соловев (ed.), Борисфен-Березань. Начало античной эпохи в Северном Причерноморье (Санкт-Петербург 2005).

Treister 1996,

M. Treister, The Role of Metals in Ancient Greek History (Leiden 1996).

Tsetskhladze 2009

G. Tsetskhladze, The Black Sea, in: K. Rauflaub – H. van Wees (eds.), A Companion to Archaic Greece (Oxford 2009) 330–346.

Walter-Karydi 1973

E. Walter-Karydi, Samische Gefässe des 6. Jahrhuderts v. Chr., Samos VI.1 (Bonn 1973).

Der Handel und die Verteilung des spanischen Olivenöls Richtung Gallien und Germanien zwischen dem 1. und dem 3. Jahrhundert n. Chr.

Corinne Dubler[1]

Einleitung

Heutzutage ist eine reichhaltige Bibliografie verfügbar, die den Dressel 20 (Dr. 20) Amphorenstempel gewidmet ist,[2] wobei zwischen zwei verschiedenen Stempelkatalogen unterschieden werden kann: diejenigen, dessen Grundlage die Stempel der Produktionsstätte sind und deren Verbreitung ins römische Reich aufgezeichnet wird[3] und diejenigen, die direkt die Konsumationszentren und das Vorkommen der Dr. 20 Stempel untersuchen.[4] Darüber hinaus gibt es Inventare, die auf makroregionale Studien spezialisiert sind und spezifische mikroregionale Studien, welche die Amphorenbestände eines einzigen Ortes analysieren.[5] Unentbehrlich bezüglich der Verteilung von Dr. 20 Stempel ist die Datenbank von CEIPAC, die seit 2002 online benutzt werden kann und von J. Remesal Rodríguez geleitet wird. Dieses Online-Portal wird kontinuierlich mit publizierten archäologischen Daten versorgt. Dies macht es zu einem unverzichtbaren Arbeitsinstrument.[6]

Die folgende Zusammenfassung, die nicht vorgibt, vollständig zu sein, gibt einen Überblick über die seit 2008 veröffentlichten Publikationen, die Stempel auf Dr. 20 Amphoren erwähnen (Tab. 1).[7]

In den jüngeren Forschungsarbeiten findet man selten eine detaillierte Analyse bezüglich der Kommerzialisierung der Amphoren. Oftmals ist es schwierig, aufgrund gewisser Stempelvorkommen, Rückschlüsse auf die Olivenölversorgung einzelner Orte zu ziehen.[8] A. Tchernia bemerkte im Jahr 2004, dass es nur Sinn macht, die Verteilung von Amphorenstempel zu untersuchen, wenn man eine großflächige Studie anlegt, die möglichst viele Stempel in einem großen Verteilungsgebiet einbezieht.[9] Die folgende, hier präsentierte, Dissertation basiert auf Stempelvorkommen in den römischen Provinzen der Narbonensis, Aquitania, Lugdunensis, Belgica, Germania Inferior und Germania Superior. Dieser Beitrag beabsichtigt eine kurze Präsentation dieser Forschungsarbeit, was u. a eine kritische Auseinandersetzung mit der Methodik von Verteilungsstudien hinsichtlich Dr. 20 Stempel beinhaltet.

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Land	Villa	Landgut	Agglomerationen (primär und sekundär)	Hafenstadt	Militärlager	Amphorendepot/ Grube-Brunnen/„vide sanitaire“	Verschiedene Orte
Niederlande					**Vechten** (Van den Berg 2014) **Nijmegen** (Berni Millet 2017)		
Deutschland			**Heidelberg** (Hensen 2009) **Kempten** (Schimmer 2009) **Rommerskirchen** (Hundt 2011) **Köln** (Mayer 2016) **Bonn** (Höpken 2016)		**Haselburg** (Fleer 2011) **Neuss** (Berni Millet, Carreras 2015)		**Kollektion Bonn** (Römer-Strehl, Krämer, Schuster 2011) **Germania inferior** (Gonzales Cesteros 2014)
Frankreich	**Saint-André de Codols** (Barberan 2012)		**Bordeaux** (Berthault 2009) **Ambrussum** (Fiches 2009) **Rodez und Millau** (Bigot 2014) **Thonon-les-Bains** (Courault 2013) **Strasbourg** (Arnold, Bébien-Dabek 2017)	**Fos-sur-Mer** (Marty, Zaaraoui 2009) **Fréjus** (Brentchaloff 2009 et Rivet *et al.* 2010) **Arles und Narbonne** (Garrote Sayó, Marimon Ribas 2011) **Arles** (Bigot *et al.* 2014) **Saintes-Maries-de-la-Mer** (Duperron *et al.* 2017)		**Cantegrel** (Berthault 2010) **Sète – Le Barrou** (Bigot, Duperron 2016) **Aix-en-Provence** (Huguet 2013) **Murviel-lès-Montpellier** (Boisson 2017) **Roumèges** (Duperron 2017)	**Zentrum Frankreichs** (Barthélémy-Sylvand 2008) **Nord-Westen Frankreichs** (Laubenheimer, Marilère 2010) **Narbonensis** (Garrote Sayó 2015) **Östliche Pyrenäen und Ruscino** (Savarèse 2011 et 2017)
Portugal			**Monte Molião** (Viegas, Arruda 2013)			**Lagos** (Roberte de Almeida, Moros Diaz 2014)	**Lusitanien** (Fabiao, Guerra 2016)

Tab. 1: Bibliografische Zusammenstellung der seit 2008 existierenden Publikationen, die Dr. 20 Stempel erwähnen (1–3 Jahrhundert n. Chr.).

Land	Villa	Landgut	Agglomerationen (primär und sekundär)	Hafenstadt	Militärlager	Amphorendepot/ Grube-Brunnen/„vide sanitaire“	Verschiedene Orte
Italien			**Rom** (Biundo 2008)	**Ostia** (Rizzo 2014)		**Monte Testaccio** (Blázquez Martinez, Remesal Rodríguez 2010 und 2014)	
Schweiz		**Langendorf** (Brombacher, Harb, Wullschleger 2010) **Oberwenigen und Schleinikon** (Horisberger 2012)	**Basel** (Marti 2012) **Kempraten** (Ackermann 2013) **Oberwinterthur** (Roth, Janke 2016) **Augst** (Dubler et coll. 2017)				
Großbritannien					**Vindolanda** (Sheehan-Finn 2012)		

Tab. 1: (Fortsetzung).

Eigener Forschungsansatz und Grenzen der Forschung

Ziel der Untersuchung ist es, mit Hilfe eines interaktiven Stempelkataloges,[10] mögliche Forschungsfragen objektiv behandeln zu können. Beabsichtigt wird eine Zusammenstellung von Fragen, die auf zukünftige Stempelkataloge angewendet werden können. Außerdem ist es wichtig, Aussagen zu definieren, die aufgrund von Wissenslücken nicht an solche Datenbanken gestellt werden sollten.

Der Ausgangspunkt der Analyse bilden die, in den Konsumationszentren gefundenen, Stempel und deren Herkunftsbestimmung.[11] Der erste zu untersuchende Fragekomplex betrifft die Verteilung der Stempel aller Produktionszentren der Baetica Richtung Gallien und Germanien. Mittels geografischen Verteilungskarten wird die Verbreitung von zeitgleich gestempelten Dr. 20 Amphoren illustriert. Diese Analyse basiert auf der Makroproduktions-region (*conventus* Hispalis, Cordoba und Astigi) Richtung Mikrokonsumationsregion (Gallien und Germanien) (Abb. 1–2).

Anschließend wird der Fokus umgedreht, da die Verteilung von einer Mikro-produktionsregion (*conventus* Astigi) Richtung Makrokonsumationsregion (ganzes römisches Reich) untersucht wird.[12] Dank diesen beiden Auswertungen wird sich herausstellen, ob die Resultate gleich ausfallen und ob diese unterschiedlichen Skalen miteinander verglichen werden können.

Die Vergleichsstudie zwischen verschiedenen Konsumationszentren und deren Stempelvorkommen bildet ein weiterer Teil dieser Forschungsarbeit. Es wird darum gehen, mögliche Handelsnetzwerke zu ermitteln und festzustellen, ob an Orten mit unterschiedlichem Charakter dieselben Amphorenstempel gefunden wurden. An dieser Stelle muss daran erinnert werden, dass dieser Vergleich grundsätzlich durch den unterschiedlichen Forschungsstand erschwert wird. Der Dokumentationsstand unterscheidet sich häufig auf quantitativer sowie qualitativer Ebene. Aus diesem Grund wird für die Untersuchung eine Klassifizierung der verschiedenen Konsumationsorten und deren Stempeldokumentation erstellt. Es können nur Orte miteinander verglichen werden, die den gleichen Forschungsstand aufweisen.[13]

Ferner kommt die Schwierigkeit hinzu, dass nur ein bestimmter Prozentsatz der Amphoren, welche die Werkstätte verließen, gestempelt wurde. Dieser Prozentsatz, der uns unbekannt ist,[14] unterscheidet sich sowohl von einer Werkstatt zur anderen, aber auch von einer Zeitperiode zur anderen. Zu dieser Frage liefern jüngste Ausgrabungen der Werkstatt von Las Delicias (Écija, Andalusien) einige Einblicke. Im Amphorendepot des 1. Jahrhundert n. Chr. waren 20 % der entdeckten Amphoren gestempelt. Zwei weitere Depots des 2. Jahrhundert n. Chr. lieferten unterschiedliche Prozentanteile: im Ersten fand man 10,5 % Amphoren mit Stempeln, im Zweiten 63 %. Im 3. Jahrhundert n. Chr. steigt der Anteil der gestempelten Amphoren auf 80 %.[15]

Weitere Schätzungen wurden bereits am Monte Testaccio in Rom gemacht. Angesichts der Art der Ausgrabung sind die Datierungen aus dem 1. Jahrhundert n. Chr. unerreichbar und können daher nicht berücksichtigt werden.[16] Die Grabungen der Schich-

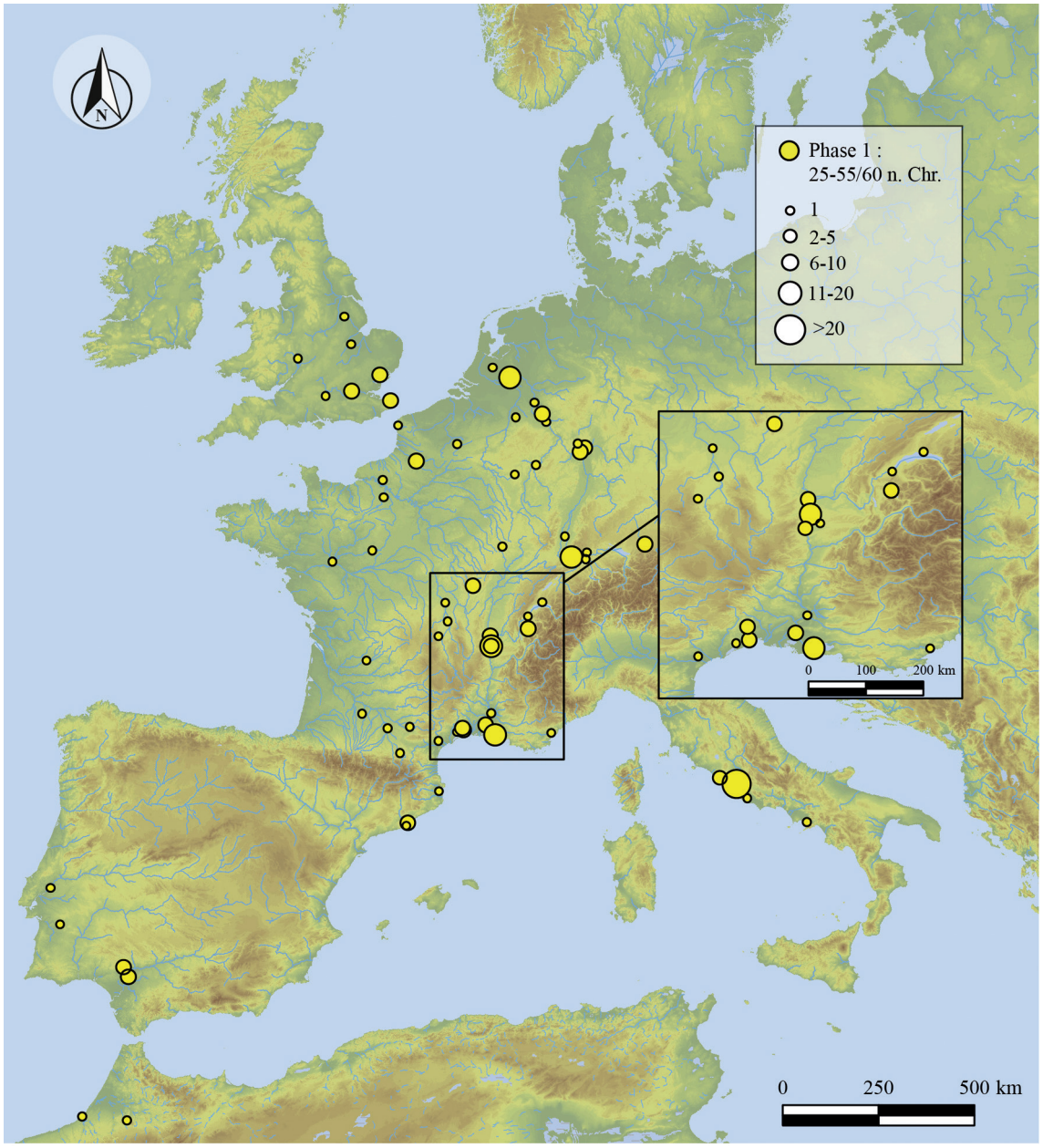


Abb. 1: Verteilungskarten der Stempel aus der Werkstatt von Las Delicias (Écija, Andalusien) während drei unterschiedlichen Zeitperioden Richtung Gallien und Germanien.

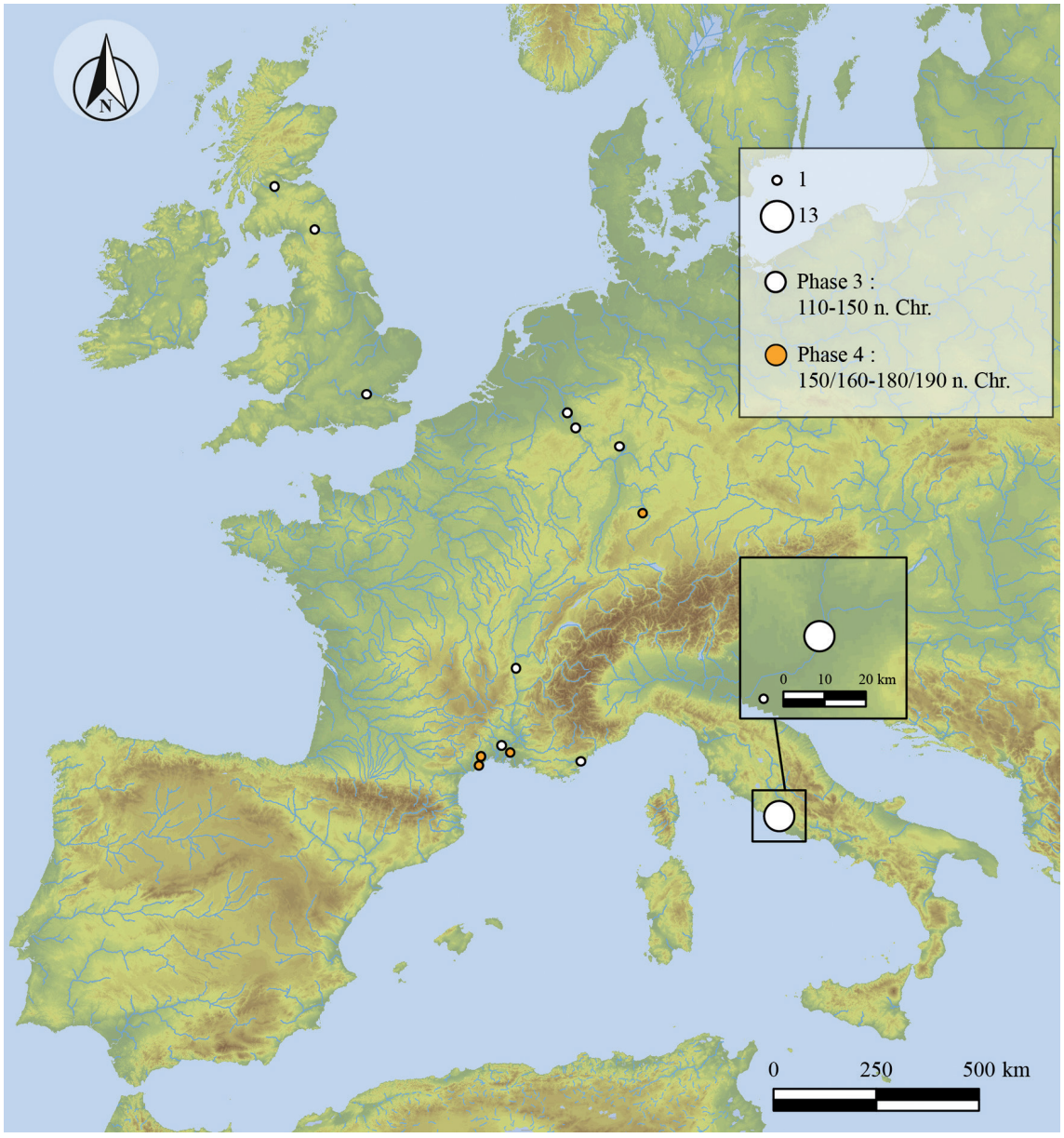


Abb. 2: Verteilungskarten der Stempel aus der Werkstatt von Las Delicias (Écija, Andalusien) während drei unterschiedlichen Zeitperioden Richtung Gallien und Germanien.

ten des 2. Jahrhundert n. Chr. haben ergeben, dass 30 % der Amphoren gestempelt waren, wogegen im 3. Jahrhundert n. Chr. ganze 70 % der Amphoren Stempel tragen.[17] Diese Statistiken zeigen eine gewisse Tendenz der Stempelprägung von Dr. 20 Amphoren auf. Klar ersichtlich ist, dass die Zahlen je nach Zeit und Produktionsort variieren und nicht als allgemeingültig angesehen werden können.

Ein zusätzlicher Faktor muss ebenfalls berücksichtigt werden. Tatsächlich können gewisse Amphoren mehrere Stempel aufweisen. Diese Praxis ist besonders für das 3. Jahrhundert n. Chr. bewiesen, wobei sie sich auch auf frühere Perioden beziehen kann.[18]

Zudem befassen sich viele Stempelkataloge nur mit den gestempelten Amphoren, die Ungestempelten werden ignoriert. Aus diesem Grund kann keine quantitativ präzise Studie des Olivenölkonsums erstellt werden. Ein letzter zu beachtender Faktor betrifft die Stempel, welche bis heute keinem Produktionsort zugewiesen werden können („*timbre orphelin*"). Diese müssen aus der kartographischen Analyse der Verbreitung der Stempel ausgeschlossen werden.

Mittels dieser Forschungsarbeit wird sich ferner zeigen, ob die seit langem diskutierte Kontroverse rund um die Nutzung der Atlantikroute und der Mittelmeerroute[19] aufgrund der Stempelvorkommen behandelt werden kann.

Der letzte Forschungsschwerpunkt dieser Dissertation bezieht sich auf den Vergleich der Onomastik der Stempelinhalte, mit denen, die uns dank dem *Titulus β*[20] bekannt sind. Unabdingbar bei dieser Untersuchung wird es sein, die Handelsnamen, die uns aus Rom bekannt sind, mit den wenigen aus Gallien und Germanien zu vergleichen. Dabei sollte erfasst werden, ob es sich hierbei um dieselben Personen handelte oder ob wir es mit anderen Handelsnetzwerken zu tun haben.

Anhand der oben aufgeführten Fragestellungen und Grenzen der Auswertungen, wird ein Beitrag geleistet, zukünftige Verteilungsstudien objektiv und methodisch besser zu erfassen und mit neuen Forschungsfragen ergänzen zu können.

Anmerkungen

[1] Dr. phil. hist., ehemalige Doktorandin an der Universität Paul-Valéry, Montpellier 3/LabEx Archimede und UMR5140 CNRS „ASM" Montpellier. Dieser Artikel ist Teil des OLEASTRO-Programms von LabEx Archimede-ANR-11-LABX-0032-0.

[2] Étienne – Mayet 2004, 11.

[3] z. B. Chic Garcia 1985 und 2001, Barea et al. 2008.

[4] z. B. Remesal Rodríguez 1986 und 1997; Carreras Monfort – Funari 1998.

[5] z. B. Martin-Kilcher 1987; Ehmig 2003.

[6] <http://ceipac.ub.edu/> (15/02/2021).

[7] Es wurde versucht, die in den letzten 10 Jahren (bis und mit 2018) veröffentlichten Forschungsarbeiten zusammenzutragen, die Dr. 20 Stempel erwähnen, um die bestehende Bibliographie in der wesentlichen Arbeit von P. Berni Millet (2008) zu vervollständigen.

[8] Sehe dazu Kapitel 6, Ehmig 2003.
[9] Tchernia 2004, 71.
[10] Es soll hier nochmals betont werden, dass dieser Katalog ohne CEIPAC nicht annähernd so vollständig geworden wäre. Zurzeit beinhaltet er über 6000 Dr. 20 Amphorenstempel, einschliesslich solche, die nicht publiziert sind und durch Grabungsberichte und persönliche Dokumentation in Museen zutage gebracht wurden.
[11] Dank der beiden Forschungsprogramme PAEBR und OLEASTRO kennen wir heute über 110 Töpferateliers. <https://www.casadevelazquez.org/recherche-scientifique/fouilles-archeologiques/oleastro/presentation/objectifs/> (15/02/2021).
[12] Zusammenarbeit mit O. Bourgeon (Universität Paul-Valéry, Montpellier 3/LabEx Archimede und UMR5140 CNRS „ASM).
[13] Remesal Rodríguez 1997, 21; Ehmig 2003, 32–34.
[14] Remesal Rodríguez 1997, 18.
[15] Bourgeon et al. 2016, 320.
[16] Siehe dazu Abb. 55 in Rodríguez Almeida 1984. Derzeit sind uns die Datierungen folgender Schichten des Monte Testaccios bekannt: 145–161; 174–180; 207–224 und 246–254 n. Chr. (Berni Millet 2008, 43).
[17] Berni Millet 2008, 33–34.
[18] Sicherlich gehört die in Worms entdeckte Amphore zu den wohl aufschlussreichsten Funden, denn sie weisst gleichzeitig drei verschiedene Stempel auf. Auf einem Henkel finden wir den Namen des Werkstattbesitzers (IIIVNMELISSI/ETMELISSE), auf dem gegenüberliegendem Henkel steht der antike Name der *figlina* (F.PATERNI) und auf dem Bauch hat der *officinator* seinen Namen angebracht (VENERF) (Callender 1965, Nr. 879).
[19] Remesal Rodríguez 1997, 50–51; Tchernia 2011, 327.
[20] Rodríguez Almeida 1984, 177.

Abbildungsnachweise

Tab. 1: C. Dubler. – Abb. 1–2: C. Dubler nach dem Kartengrund von H. Bohbot (UMR5140, Montpellier).

Literatur

Ackermann 2013
R. Ackermann, Der römische Vicus von Kempraten, Rapperswil-Jona. Neubetrachtung anhand der Ausgrabungen Fluhstrasse 6–10 (2005–2006) (St. Gallen 2013).

Arnold – Bébien-Dabek 2017
E. Arnold – C. Bébien-Dabek, Étude de la production d'un four de potiers au 8–20 route des romains (Strasbourg-Koenigshoffen). Nouvelles données sur la céramique du vicus d'Argentorate, SFECAG, 2017, 573–592.

Barberan 2012
S. Barberan, La céramique antique entre la fin du 1er et le 5ème siècle après, in: H. Pomarèdes – S. Barberan – O. Maufras – L. Sauvage (Hrsg.), La Villa de Saint-André de Codols (Nîmes, Gard) du Ier au XXIIème siècle de n. è (Lattes 2012) 234–293.

Barea Bautista et al. 2008
J. S. Barea Bautista – J. L. Barea – J. Solís Siles – J. Moros Díaz, Figlina Scalensia. Un centro productor de ánforas Dressel 20 de la Bética, Col·lecció Instrumenta 27 (Barcelona 2008).

Barthélémy-Sylvand 2008
C. Barthélémy-Sylvand, Les estampilles sur amphores hispaniques Pascual 1 et Dressel 20 découvertes en région Centre: approche cartographique des circuits de distribution, SFECAG 2008, 655–670.

Berni Millet 2008
P. Berni Millet, Epigrafía anfórica de la Bética: nuevas formas de análisis, Col·lecció Instrumenta 29 (Barcelona 2008).

Berni Millet 2017
P. Berni Millet, Amphorae-Epigraphy: Stamps, Graffiti and Tituli Picti from Roman Nijmegen (Chapter 8), in: C. Carreras Monfort – J. Van den Berg (Hrsg.), Amphorae from the Kops Plateau (Nijmegen): Trade and Supply to the Lower-Rhineland from the Augustan Period to AD 69/70 (Oxford 2017) 185–282.

Berni Millet – Garrate Sayó 1998a
P. Berni Millet – E. Garrote Sayó, L'Eix Empúries – Narbona en els circuits comercials de l'oli Bètic durant l'imperi romà, CEIPAC, 243–255.

Berni Millet – Carreras 2015
P. Berni Millet – C. Carreras, Hispanic Imports in the First Military Camps of Novaesium (Neuss): Lager 1–7 (Augustus-Flavians), Marburger Beiträge zur antiken Handels- und Wirtschaft und Sozialgeschichte 32, 2015, 173–207.

Berthault 2009
F. Berthault, Les amphores de Bordeaux-Chapeau-Rouge: étude sur les relations commerciales de Burdigala au début de l'Empire, Aquitania 25, 2009, 143–197.

Berthault 2010
F. Berthault, Amphores des puits et du dépotoir de Cantegrel: présence d'une population allochtone dans l'agglomération d'Excisum, in: Ch. Chabrie – M. Daynes – J.-F. Garnier (Hrsg.), La présence militaire au 1er siècle à Eysses (Villeneuve-sur-Lot, 47). Puits et dépotoir du site de Cantegrel, Documentation archéologique du grand Sud-Ouest (Bordeaux 2010) 123–132.

Bigot 2014
F. Bigot, Les amphores des agglomérations de Rodez (Segodunum) et Millau (Condatomagus) entre la fin du Ier s. et le IVe s. Réflexions sur le commerce des denrées méditerranéennes dans la cité des Rutènes, Cahiers d'archéologie aveyronnaise 27, 2014, 87–130.

Bigot et al. 2014
F. Bigot – G. Duperron – L. Long, Nouveaux timbres sur amphores à huile de Bétique découvert à Arles, SFECAG 2014, 753–774.

Bigot – Duperron 2016
F. Bigot – G. Duperron, Le dépotoir subaquatique du Barrou à Sète (Hérault): contribution à la connaissance du commerce antique dans le bassin de Thau, Cahiers d'Archéologie subaquatique 23, 2016, 35–70.

Biundo 2008
R. Biundo, I bolli sulle anse delle anfore Dressel 20, in: F. Filippi (Hrsg.), Horti et sordes – Uno scavo alle falde del Gianicolo (Rom 2008) 284–294.

Blázquez Martínez – Remesal Rodríguez 2010
J. M. Blázquez Martínez – J. Remesal Rodríguez (Hrsg.), Estudios sobre el Monte Testaccio V, Col·lecció Instrumenta 35 (Barcelona 2010).

Blázquez Martínez – Remesal Rodríguez 2014
J. M. Blázquez Martínez – J. Remesal Rodríguez (Hrsg.), Estudios sobre el Monte Testaccio (Roma), VI, Col·lecció Instrumenta 47 (Barcelona 2014).

Boisson 2017
A. Boisson, Un ensemble d'amphores dans un dépotoir du centre monumental du Castellas à Murviel-lès-Montpellier, SFECAG 2017, 457–468.

Bourgeon et al. 2016
O. Bourgeon – E. García Vargas – S. Mauné, Investigación arqueológica en el alfar de las Delicias (Écija, Sevilla) 2013–2015: un primer balance, in: D. Járrega – P. Berni Millet (Hrsg.), Amphorae ex Hispania: paisajes de producción y consumo: III congreso internacional de la Sociedad de Estudios de la Cerámica Antigua (SECAH), Tarragona, 10–13 de diciembre de 2014, Monografías Ex Officina Hispana 3 (Tarragona 2016) 310–333.

Brentchaloff 2009
D. Brentchaloff, Amphores et Amphorettes, in: Ch. Goudineau – D. Brentchaloff – P. Columeau (Hrsg.), Le camp de flotte d'Agrippa à Fréjus: Les fouilles du quartier de Villeneuve (1979–1981) (Paris 2009) 535–550.

Brombacher et al. 2010
Ch. Brombacher – P. Harb – M. Wullschleger, Der römische Gutshof von Langendorf Kanton Solothurn, Antiqua 46 (Basel 2010).

Callender 1965
M. H. Callender, Roman amphorae with index of stamps (London 1965).

Carreras Monfort – Funari 1998
C. Carreras Monfort – A. P. P Funari, Britannia y el Mediterraneo: estudios sobre el abastecimiento de aceite bético y africano en Britannia, Col·lecció Instrumenta 5 (Barcelona 1998).

Chic García 1985
G. Chic García, Epigrafía anfórica de la Bética. I. Las marcas impresas en el barro sobre ánforas olearias (Dressel 19, 20 et 23) (Sevilla 1985).

Chic García 2001
G. Chic García, Datos para un estudio socioeconómico de la Bética: marcas de alfar sobre ánforas olearias (Écija 2001).

Courault 2013
Ch. Courault, La Bética en los alpes: analisis de sellos de anforas Dressel 20 descubiertos en Thonon-les-Bains, Arte, Arqueología e Historia. Revista de la Asociación „Arte, Arqueología e Historia“ 20, 2013, 183–188.

Dubler et al. 2017
C. Dubler – O. Bourgeon. Les importations d'amphores Dr. 20 dans la colonie romaine d'Augusta Raurica (Augst) – Provenance et datation des timbres, SFECAG 2017, 543–560.

Duperron et al. 2017
G. Duperron – F. Bigot – R. Bourgaut, Un ensemble céramique de la fin du IIe siècle sur les rives de l'étang de Thau: le dépotoir FS2002 de l'établissement rural de Roumèges à Poussan (Hérault), SFECAG 2017, 437–450.

Duperron et al. 2017
G. Duperron – F. Bigot – L. Long, Les dépotoirs portuaires des Saintes-Maries-de-la-Mer à l'époque romaine. Recherches sur les trafics commerciaux antiques dans l'avant-port d'Arles, SFECAG 2017, 327–350.

Ehmig 2003
U. Ehmig, Die Römischen Amphoren aus Mainz (Möhnesee 2003).

Étienne – Mayet 2004
R. Étienne – F. Mayet, L'huile hispanique. Corpus des timbres sur amphores Dressel 20, II (Paris 2004).

Fabiao – Guerra 2016
C. Fabiao – A. Guerra (Hrsg.), Marcas de ânforas romanas na Lusitânia (do Museu Nacional de Arqueologia de Lisboa ao Museo Nacional de Arte Romano de Mérida), Corpus Internationale des Timbres Amphoriques 19 (Lissabon 2016).

Fiches 2009
J.-L. Fiches (Hrsg.), Une maison des Ier-IIe siècles dans l'agglomération routière d'Ambrussum (Villetelle, Hérault). Fouille de la zone 9 (1995–1999), MAM 26 (Lattes 2009).

Fleer 2011
K. Chr. H. Fleer, Das Kastell Haselburg: Gemeinde Reinhardsachsen, Neckar-Odenwald-Kreis (Stuttgart 2011).

Garrote Sayó 2015
E. Garrote Sayó, La presència de l'oli bètic a la Gallia Narbonensis (Diss. Universitat de Barcelona 2015).

Garrote Sayó – Marimon Ribas 2011
E. Garrote Sayó – P. Marimon Ribas, Nouvelles données sur l'huile de Bétique en Narbonnaise, in: C. Sanchez – M.-P. Jézégou (Hrsg.), Espaces littoraux et zones portuaires de Narbonne et sa région dans l'antiquité, MAM 28 (Languedoc-Roussillon 2011) 237–244.

González Cesteros 2014
H. González Cesteros, Ánforas hispanas en la Germania inferior antes de la formación de la provincia (20 A. C.–69 D. C.) (Diss. Universität Rovira i Virgili Tarragona 2014).

Hensen 2009
A. Hensen, Das römische Brand- und Körpergräberfeld von Heidelberg I, Forschungen und Berichte zur Vor- und Frühgeschichte Baden-Württemberg 108 (Stuttgart 2009).

Höpken 2016
C. Höpken, Amphoren aus dem zivilen vicus von Bonn, Bonner Beiträge zur vor- und frühgeschichtlichen Archäologie 19, 2016, 137–212.

Huguet 2013
C. Huguet, Le dépotoir péri-urbain de Notre-Dame de la Merci à Aix-en-Provence (Bouches-du-Rhône): données céramologiques, chronologie et modalités de constitution, SFECAG, 2013, 365–384.

Hundt 2011
M. Hundt, Rom in Rommerskirchen. Viereinhalb Jahrhunderte Römische Siedlungsgeschichte auf der Rommerskirchener Lössplatte, Beiträge zur Geschichte der Gemeinde Rommerskirchen 6 (Rommerskirchen 2011).

Laubenheimer – Marlière 2010
F. Laubenheimer – E. Marlière, Échanges et vie économique dans le Nord-Ouest des Gaules. Le témoignage des amphores du IIe siècle avant J.-C. au IVe siècle après J.-C., II vol. (Besançon 2010).

Liou et al. 1990
B. Liou – J.-M. Gassend – R. Roman, L'épave Saint-Gervais 3 à Fos-sur-Mer (milieu du 2ème siècle après J.-C. – Inscriptions peintes sur amphores de Bétique, vestiges de la coque), Archaeonautica 10, 1990, 157–264.

Marti 2012
R. Marti, Jahresbericht 2011. Dokumentationen und Funde. Archäologie Baselland, Liestal (Muttenz 2012).

Martin-Kilcher 1987
S. Martin-Kilcher, Die römischen Amphoren aus Augst und Kaiseraugst. Ein Beitrag zur römischen Handels- und Kulturgeschichte (Augst 1987).

Marty – Zaaraoui 2009
F. Marty – Y. Zaaraoui, Contextes céramiques du haut-empire de la bonification de l'Estagnon à Fos-sur-Mer (Bouches-du-Rhône), SFECAG 2009, 397–426.

Mayer 2016
D. Mayer, Stempel auf Amphoren aus Köln, KölnJb 49, 2016, 309–366.

Remesal Rodríguez 1986
J. Remesal Rodríguez, La annona militaris y la exportacion de aceite betico a germania – con un corpus de sellos en anforas Dressel 20 hallados en: Nimega, Colonia, Mainz, Saalburg, Zugmantel y Nida (Madrid 1986).

Remesal Rodríguez 1997
J. Remesal Rodríguez, Heeresversorgung und die wirtschaftlichen Beziehungen zwischen der Baetica und Germanien: Materialien zu einem Corpus der in Deutschland veröffentlichten Stempel auf Amphoren der Form Dressel 20 (Stuttgart 1997).

Rivet et al. 2010
L. Rivet – P. Columeau – J.-L. Paillet, Recherches archéologiques au cœur de Forum Iulii. Les fouilles dans le groupe épiscopal de Fréjus et à ses abords (1979–1989) (Aix-en-Provence 2010).

Rizzo 2014
G. Rizzo, Le anfore, Ostia e i comerci mediterranei, in: C. Panella – C. Rizzo (Hrsg.), Ostia VI. Le terme del nuotatore (Studi Miscellanei 38) (Rom 2014) 210–227.

Römer-Strehl et al. 2011
Chr. Römer-Strehl – R. P. Krämer – K. M. J. Schuster, Hellenistische und römische Amphorenstempel in der Sammlung des Akademischen Kunstmuseums Bonn, KuBA 1, 2011, 149–164.

Rodríguez Almeida 1984
E. Rodríguez Almeida, Il Monte Testaccio. Ambiente, storia, material (Rom 1984).

Roth – Janke 2016
M. Roth – R. Janke, Forschungen im Zentrum des Vicus Vitudurum: Ausgrabungen an der Römerstraße 169a und 173 sowie andere kleine Untersuchungen, Zürcher Archäologie 33 (Zürich 2016).

Savarese 2011
L. Savarese, Les marques sur amphores découvertes dans les Pyrénées-Orientales (France), Sylloge Epigraphica Barcinonensis 9, 2011, 207–296.

Savarese 2017
L. Savarese, Les marques amphoriques de Ruscino, in: G. Baratta (Hrsg.), Studi su Ruscino. Sylloge Epigraphica Barcinonensis, Annexos II (Barcelona 2017) 125–206.

Schimmer 2009
F. Schimmer, Amphoren aus Cambodunum – Kempten: ein Beitrag zur Handelsgeschichte der römischen Provinz Raetia, Münchner Beiträge zur Provinzialrömischen Archäologie 1 (München 2009).

Sheehan-Finn 2012
K. Sheehan-Finn, Vindolanda's Amphora Stamps 2007–2012 (with a catalogue of 96 previously published stamps). Excavation Report. The Vindolanda Trust (Bardon Mill 2012).

Tchernia 2004
A. Tchernia, Quel sens donner à la publication des timbres sur amphores romaines ? in: J. Remesal Rodríguez (Hrsg.), Epigrafía anfórica, Col·lecció Instrumenta 17 (Barcelona 2004) 67–73.

Tchernia 2011
A. Tchernia, Les romains et le commerce (Neapel 2011).

Van den Berg 2014
J. J. H. Van den Berg, Amphora stamps from Fectio (Vechten, NL), in: J. M. Blázquez Martínez – J. Remesal Rodríguez (Hrsg.), Estudios sobre el Monte Testaccio (Roma) VI, Col·lecció Instrumenta 47 (Barcelona 2014) 683–724.

Viegas – Arruda 2013
C. Viegas – A. M. Arruda, Ânforas romanas de época imperial de Monte Molião (Lagos) as Dressel 20, Arqueologia em Portugal, 150 años, 2013, 727–735.

Puteoli tra Est ed Ovest: nuovi dati sulla colonia di età tardo – repubblicana

Renata Esposito

Gli scavi archeologici condotti a partire dagli anni Novanta del secolo scorso, in un ampio progetto di valorizzazione e riqualificazione del Rione Terra, promontorio su cui venne fondata la colonia romana di *Puteoli* nel 197 a. C., ha fornito dati importanti sulla città flegrea in età tardo repubblicana.

Le ricerche hanno ampliato le conoscenze sui monumenti e la topografia della città antica, inoltre stanno contribuendo alla ricostruzione della storia socio economica della città in età tardo-repubblicana grazie alla cospicua quantità di frammenti ceramici.

Fino ad allora la storia socio-economica della città in età tardo-repubblicana è stata ricostruita principalmente sulla base delle fonti letterarie ed epigrafiche.

L'istituzione della colonia tardo-repubblicana di *Puteoli* oltre alla componente militare aveva avuto anche uno scopo mercantile legato alla politica di Scipione e del suo gruppo politico. L'area portuale della città ebbe un ruolo chiave per il collegamento e il controllo con il ricco retroterra già durante la seconda guerra punica.[1]

Polibio[2] riferendosi al suo tempo, in un più ampio quadro dell'economia campana, annovera la città tra le splendide località costiere della regione frequentate da naviganti che provenivano da Oriente. Il poeta Lucilio[3] la definì *Delus Minor,* la città infatti dopo la creazione del porto franco di Delo nel 166 a. C. divenne probabilmente lo scalo obbligato per le merci dirette a Roma provenienti dalla Spagna, Sicilia e Africa da un lato e da Oriente dall'altro.

L'analisi dei frammenti ceramici documenta due aspetti principali:

1 – Il rinvenimento di un consistente numero di frammenti di ceramica a vernice nera identificati come scarti di fornace, ha permesso di individuare una produzione locale databile tra la prima metà del II secolo a. C. e la prima metà del I secolo a. C. Sono state individuate 4 forme tipologiche (Morel[4] 2787, 2788, 2941 e 2954) che trovano un'ampia diffusione nei principali siti del Mediterraneo e nei relitti coevi.[5]

Questo nuovo centro produttivo deve considerarsi parte del più ampio sistema produttivo della Campana A del golfo di Napoli, che come già supponeva J. P. Morel era organizzato su una articolata rete di ateliers.[6]

2 – Il secondo aspetto riguarda i prodotti d'importazione; sono presenti contenitori ceramici che documentano la presenza di merci da altri siti della Campania e dal Lazio, ma soprattutto contenitori provenienti dal Mediterraneo orientale e in quantità più contenuta dalla Spagna.

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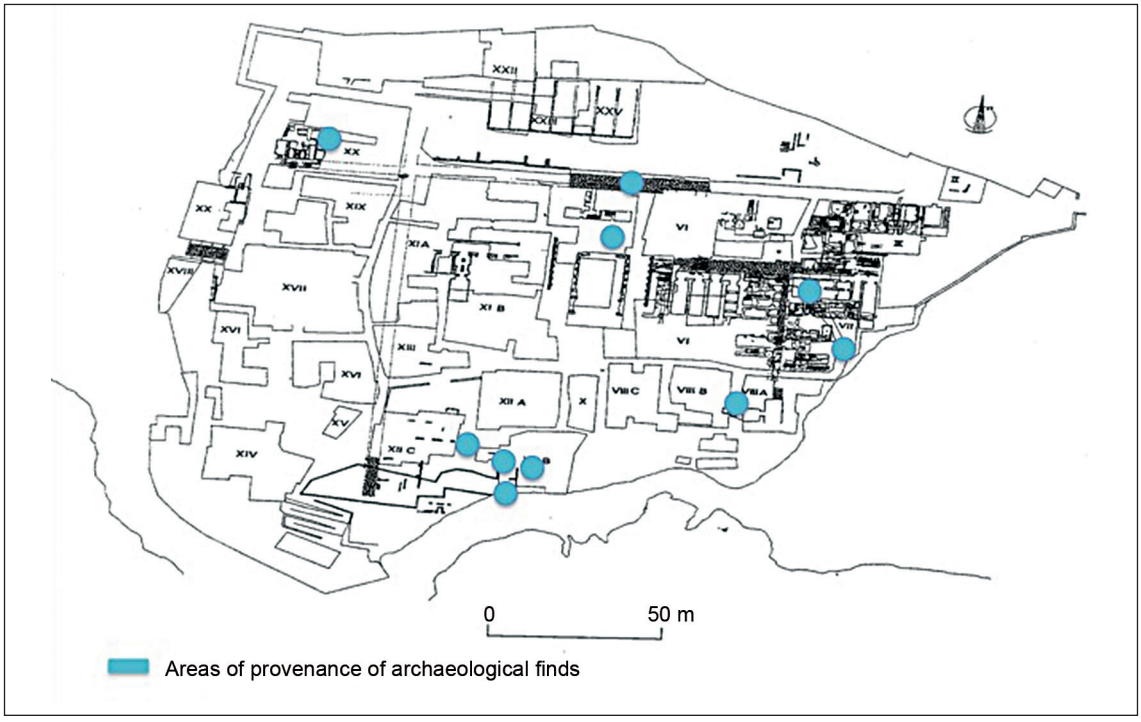


Fig. 1: Pozzuoli, Rione Terra, aree dei rinvenimenti archeologici.



Fig. 2: Esemplari restaurati di ceramica a vernice nera prodotta a *Puteoli.*



Fig. 3: Frammenti di prodotti importati dal Mediterraneo orientale: Terra sigillata orientale A, bracieri, anfore da trasporto rodie, *lagynoi,* coppe ellenistiche a rilievo, lucerne.

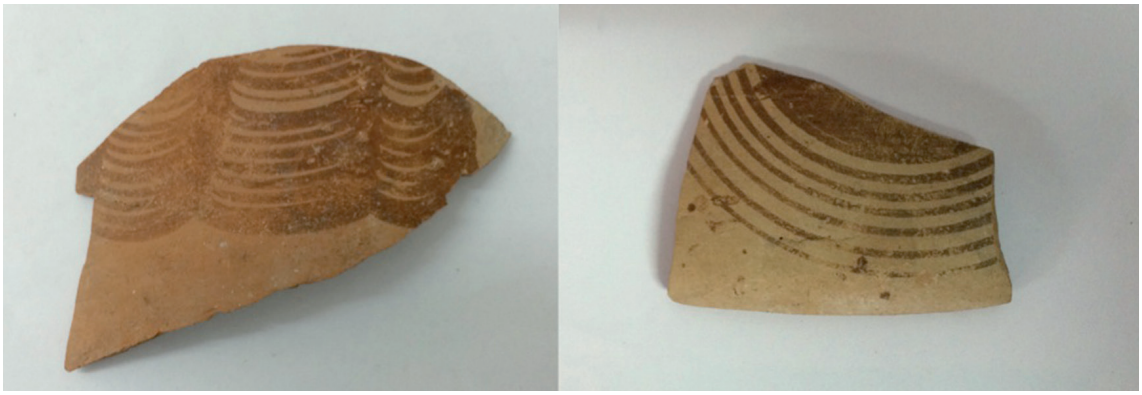


Fig. 4: Merci provenienti dal Mediterraneo occidentale: *kalathoi* iberici sovra dipinti (frammenti).

I prodotti importati dai principali siti del Mediterraneo orientale sono: Terra Sigillata orientale A, *lagynoi,* bracieri rodii, lucerne, anfore da trasporto puniche, *kalathoi* iberici sovra dipinti e ceramica grigia ampuritana.

Dalle città orientali giungevano nella città flegrea anche prodotti lussuosi che a causa della loro natura deperibili ci sono noti solo dalle fonti.[7]

Tra la fine del II secolo e gli inizi del I secolo a. C. aumentano i prodotti provenienti dall'Oriente e compaiono i prodotti provenienti dalla Spagna. I prodotti importati dal Mediterraneo occidentale provengono soprattutto dalla penisola iberica, dove la presenza di Campani è nota anche dalle fonti epigrafiche in riferimento al commercio di metalli provenienti dall'area di *Carthago Nova.*[8]

L'incremento dell'incidenza dei prodotti di importazione soprattutto orientali a partire dalla metà del II secolo a. C. è indubbiamente da mettere in correlazione con l'istituzione del porto franco di Delo, dove erano presenti anche Cumani, Neapolitani, Puteolani e Capuani[9] che gestivano i commerci marittimi ad ampio raggio. L'isola era nota soprattutto per essere uno dei principali mercati di schiavi a cui attingevano i Romani per la coltivazione delle loro terre e per la gestione delle ville rustiche, il cui sistema organizzativo ci è noto da Catone e poi successivamente da Varrone.[10] Sempre da Delo provenivano altri prodotti legati ad un artigianato artistico sia per quanto riguarda le sculture in marmo che gli oggetti in bronzo.[11]

Gli Orientali sono nella città flegrea già dal 105 a. C., la loro presenza è documentata dal testo della *lex parieti faciundo* in cui viene menzionato il tempio di Serapide nella città.[12]

L'intenso rapporto tra l'Oriente e la città flegrea è documentato anche dalla presenza degli arabi Nabatei, mercanti di prodotti di lusso, che possedevano un luogo di culto, un *mahramta,* eretto al centro dell'emporio sicuramente nel 50 a. C.[13] L'intenso traffico commerciale con l'Oriente è testimoniato infine anche da Strabone, che descrive i mercantili provenienti da Alessandria d'Egitto a *Puteoli.*[14]

Nel commercio marittimo a larga scala il ceto dirigente era protagonista, le notizie sono fornite sempre da Cicerone, che era amico di numerosi esponenti della città flegrea e grande conoscitore della società puteolana.

I personaggi noti dalle orazioni e dall'epistolario appaiono coinvolti in attività armatoriali e nel commercio marittimo ad ampio respiro su scala mediterranea, grazie all'ausilio di un'imponente rete clientelare.[15]

M. Cluvius[16] era un intermediario di credito di senatori e cavalieri, tra cui anche Pompeo Magno; la presenza a Delo di uno schiavo di *Cluvius* e l'onore decretato a *M. Cluvius M. f.* a Magnesia al Meandro, due importanti mercati di schiavi, attestano interessi curati fino in Asia Minore. Nelle Verrine sono documentati consolidati rapporti commerciali lungo le rotte commerciali dall'Oriente e dall'Egitto per beni di pregio; tra i personaggi menzionati sono i puteolani *P. Granius* e *M. Annius.*[17]

Il commercio nel Mediterraneo occidentale, in Africa, Cirenaica e Spagna è documentato sempre da Strabone, che attesta i *navicularii* della Betica nei porti di Ostia e

Puteoli,[18] inoltre come si è detto, la presenza dei Campani era legata anche al commercio di metalli.

I materiali ceramici oggetto di studio provengono da un contesto di abitato quindi dimostrano che la città flegrea era anche un centro di consumo di tali beni; purtroppo l'area del porto è stata indagata limitatamente con interventi di emergenza; alcuni ambienti lungo l'area identificata come *vicus Larditianus* sono stati identificati come magazzini databili al I secolo a. C.[19] e dalle indagini subacquee sono parzialmente noti i magazzini imperiali del *Portus Julius.* Anche in assenza di testimonianze archeologiche delle infrastrutture portuali, il ruolo di rilievo della città già in età tardo-repubblicana, documentato soprattutto dalle fonti è evidenziato anche dalla conformazione geologica del bacino portuale che lo rendeva il luogo più idoneo per l'istallazione di un porto-emporio per l'approdo e la gestione delle merci delle grandi navi onerarie.

Il variegato panorama di prodotti importati conferma quanto tramandato dalle fonti letterarie ed epigrafiche, si delinea più chiaramente quindi il ruolo socio economico della città flegrea anche per il II secolo a. C., poiché le notizie letterarie si concentrano principalmente per il I secolo a. C. grazie alle opere di Cicerone.

Infine l'identificazione di una produzione di ceramica a vernice nera a *Puteoli* spinge ad una rilettura della produzione, del consumo e della circolazione della produzione della Campana A sia in ambito regionale che mediterraneo.

L'esame della diffusione di una specifica produzione imprescindibile ai fini dell'indagine sull'economia antica e i suoi meccanismi, rivela dinamiche produttive o commerciali combinate (come nel caso del trasporto di anfore vinarie e di ceramica a vernice nera nei relitti), di fenomeni di redistribuzione, delle rotte e delle vie di comunicazione antiche.

In questo filone di studi la città flegrea, quindi, fornisce nuovi dati utili alla comprensione dell'organizzazione produttiva e tecnologica rispetto alla città di *Neapolis,* del territorio circostante e di Roma. I dati emersi forniscono elementi utili alla comprensione dell'organizzazione del sistema di distribuzione a medio e lungo raggio e il rapporto tra le città portuali di *Neapolis* e *Puteoli,* che sono ancora poco chiari soprattutto nella prima fase di vita della colonia.

Note

[1] Zevi 1993, 9–15.

[2] Plb. III, 91. 4.

[3] Fest. 109 L. s. v. *Minorem Delum;* Lucil. 123.

[4] Morel 1981.

[5] Parker 1992; Olcese 2012, Strauss 2013.

[6] Morel 1976, 263–324.

[7] De Romanis 1993, 61–72.

[8] Stefanile 2013, 57–64.
[9] Hasenohr 2007, 77–90.
[10] Catone *de agri cultura;* Varrone, *De re rustica.*
[11] Coarelli 2016.
[12] Il testo dell'iscrizione informa su lavori di costruzione di un muro davanti al Tempio di Serapide (cfr. Zevi 2016, 295–314).
[13] L'edificio era eretto nell'area dell'attuale villa comunale. Sulla presenza degli Orientali a *Puteoli* cfr. Soricelli 2007 e bibliografia di riferimento.
[14] Str. XVII, 1, 7.
[15] Camodeca 1994, 103–128.
[16] Cic. *Att.* XIII, 37, 4; 46 3–5; *Att.* XIV 10. 3.
[17] Cic. *Verr.* II, 5, 56; II, 5, 145–6; II, 60, 157.
[18] Str. III, 2, 6; l'autore tramanda dati riferibili all'80. a. C. attinti da Posidonio, sua fonte per il III libro; cfr. Camodeca 1993, 38.
[19] Ceraudo et al. 2001, 73–83.

Indice delle figure

Fig. 1: Cartografia da Gialanella 2000 modificata. – Fig. 2–4: Foto dell'autore.

Bibliografia

Camodeca 1993
G. Camodeca, La società e le attività produttive, in: Zevi 1993, 31–47.

Ceraudo et al. 2001.
G. Ceraudo – C. Gialanella – D. I. Pellandra, Tra terra e mare: nuove ricerche lungo la ripa puteolana, in: P. A. Gianfrotta – F. Maniscalco (eds.), Forma maris: Forum internazionale di archeologia subacquea, Pozzuoli, 22–24 settembre 1998 (Napoli 2011) 73–83.

Coarelli 2016
F. Coarelli, I mercanti nel tempio. Delo: culto, politica, commercio (Atene 2016).

De Romanis 1993
F. De Romanis, Puteoli e l'Oriente, in: Zevi 1993, 61–72.

Gialanella 2000
C. Gialanella, Nova Antiqua phlegraea. Nuovi tesori dai campi flegre (Napoli 2000).

Gialanella 2010
C. Gialanella, Appunti sulla topografia della colonia del 194 a. C. sul Rione Terra di Pozzuoli, in: C. Gasparri – G. Greco – R. Pierobon Benoit (eds.), Dall'immagine alla storia. Studi per ricordare Stefania Adamo Muscettola. Quaderni di Studi di Magna Grecia 13 (Pozzuoli 2010) 310–335.

Hasenohr 2007

C. Hasenohr, Italiens et Phenicies à Délos: organisation et relations de deux groupes d'étrangers résidents (IIe-Ier siècles av. J.-C.), in: C.-G. Compatangelo-Soussignan – C. G. Schwentzel (eds.), Étrangers dans la cité romaine: actes du colloque de Valenciennes, 14–15 octobre 2005, Habiter une autre patrie: des incolae de la République aux peuples fédérés du Bas-Empire (Rennes 2007) 77–90.

Morel 1976

J. P. Morel, Aspects de l'artisanat dans la Grande Grèce Romaine, CMGr 15, 1976, 263–324.

Morel 1981

J. P. Morel, La Céramique Campanienne: Les Formes (Roma 1981).

Olcese 2012

G. Olcese, Atlante dei siti di produzione ceramica (Toscana, Lazio, Campania e Sicilia), Immensa Aequora 2 (Roma 2012).

Parker 1992

A. J. Parker, Ancient Shipwrecks of the Mediterranean and the Roman Provinces, BARIntSer 992 (Oxford 1992).

Soricelli 2007

G. Soricelli, Comunità orientali a Puteoli, in: C.-G. Compatangelo-Soussignan – C. G. Schwentzel (eds.), Étrangers dans la cité romaine: actes du colloque de Valenciennes, 14–15 octobre 2005, Habiter une autre patrie: des incolae de la République aux peuples fédérés du Bas-Empire (Rennes 2007) 129–144.

Stefanile 2013

M. Stefanile, Roman Lead Ingots From Shipwrecks: A Key to Understanding Immigration From Campania, Southern Latium, and Picenum in the Mining District of Carthago Nova in the Late Republican and Early Imperial Eras, ACUA 2013, 57–64.

Strauss 2013

J. Strauss, Shipwrecks Database. Version 1.0. Accessed (date): <oxrep.classics.ox.ac.uk/databases/shipwrecks_database/> (31. 07. 2020).

Zevi 1993

F. Zevi (ed.), Puteoli (Napoli 1993).

Zevi 2016

F. Zevi, Honos a Puteoli. In margine alla *lex parieti faciundo,* in: V. Gasparini (ed.), Vestigia: miscellanea di studi storico-religiosi in onore di Filippo Coarelli nel suo 80° anniversario (Stoccarda 2016) 295–314.

Notas acerca del comercio de la *terra sigillata* hispánica de origen bético. El caso de los alfares romanos de Los Villares de Andújar (Jaén, España)

Mª Isabel Fernández-García – Manuel Moreno-Alcaide

Resumen

La ciudad romana de «Isturgi» (Los Villares de Andújar) albergó un importante barrio artesanal destinado a la manufactura de diversas clases cerámicas. Unas estructuras de producción plenamente consolidadas permitieron la difusión de sus productos, especialmente la *terra sigillata* hispánica, hacia los mercados a corta, media y larga distancia.

Introducción

En la provincia de la *Baetica,* de todos los centros productores que elaboraban vajilla fina de mesa (fig. 1), el mejor conocido es el vinculado a la antigua ciudad de «Isturgi» (Los Villares de Andújar, Jaén, España). Un barrio artesanal que en época Julio-Claudia comienza a elaborar masivamente manufacturas en *terra sigillata* desbancando, en volumen de producción, a todas las demás clases cerámicas confeccionadas anteriormente,[1] que continuarán con su fabricación, aunque sin la elevada proporción de las *sigillatae.* Cuando estos productos irrumpen en los alfares isturgitanos sus estructuras de producción están consolidadas, lo que favoreció su difusión hacia diferentes mercados a corta, media y larga distancia. El camino hacia la reconstrucción de las estructuras de comercialización de los alfares isturgitanos es una tarea compleja, no exenta de inconvenientes propiciados por la diversidad de los datos que manejamos (informes de excavaciones antiguas, publicaciones, excavaciones contempladas en los diferentes proyectos de investigación que coordinamos, entre otros). Un primer intento de aproximación a la difusión de los productos isturgitanos se centrará tanto en los *sigilla* como en las sintaxis compositivas de determinadas *officinae* cuyas creaciones con personalidad propia permiten diferenciarlas del resto de los alfares de *sigillata* hispánica conocidos tanto de la *Baetica* como de la *Tarraconense.*

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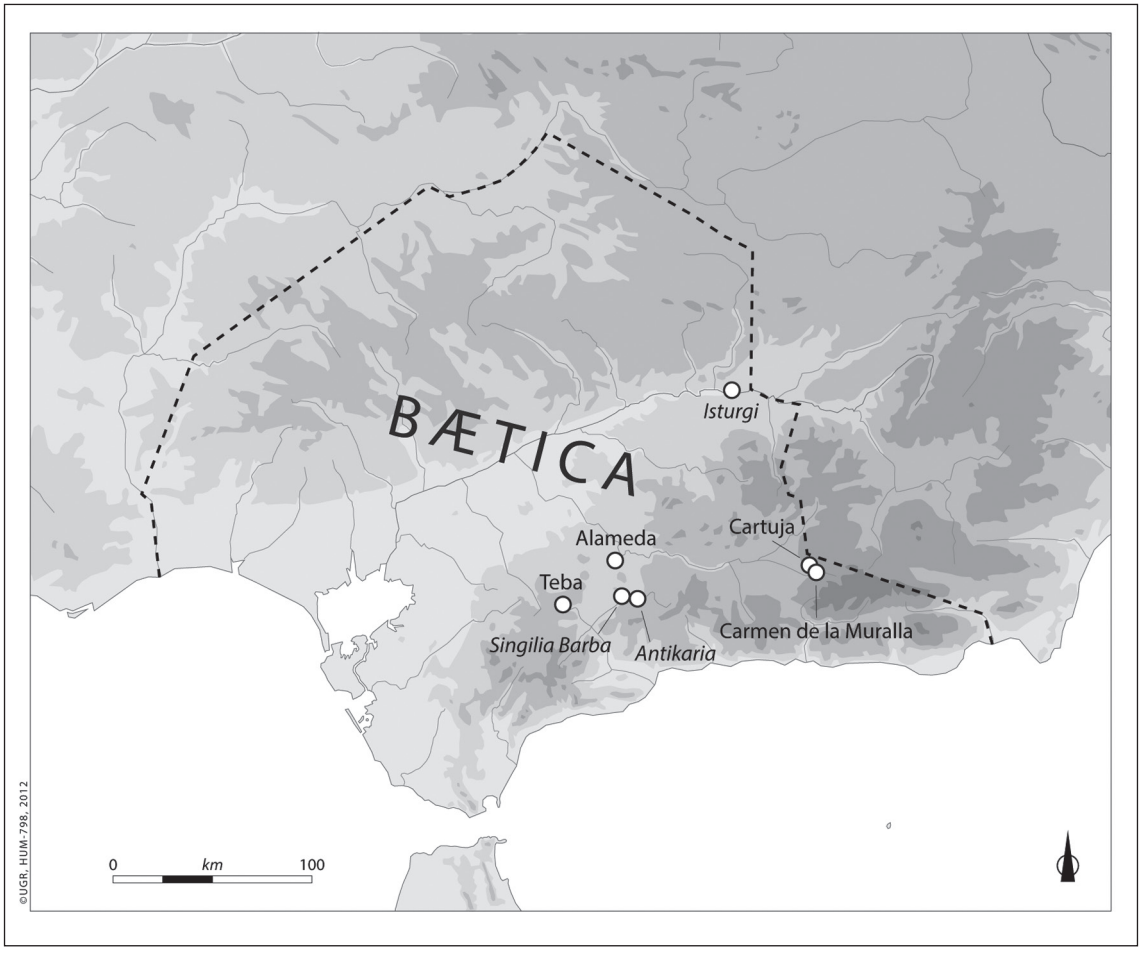


Fig. 1: Alfares de *terra sigillata* hispánica de la *Baetica.*

La vajilla isturgitana y sus centros de consumo

La propia ubicación del complejo artesanal con «Isturgi» como núcleo vertebrador del territorio circundante, con una vía secundaria que conectaba con un ramal de la *via Augusta* y con el río *Baetis* con unas estructuras portuarias a los pies del propio alfar (localizadas en una prospección efectuada en 1995), propiciaron el desarrollo de actividades artesanales, entre las que se hallaban las manufacturas cerámicas y, por tanto, facilitaron la difusión de sus productos hacia los distintos mercados. En sus inicios, en momentos preflavios, tan sólo unas pocas *officinae* detentan el posible control del sector productivo, destacando sobremanera *M.S.M. (M…SATRVS MONTANVS)* al que le siguen en importancia dos *officinae QVARTIO* y *CVDAS.* De los restantes talleres (*C.P.F, MS, M.S.F, M.T.F, OP, OPTATVS, Q.S.P., TITI OPPI*) no sabemos con certeza qué grado de consideración gozaban dentro del engranaje productivo. En contraposición a esa etapa, se opera en época flavia, un cambio materializado, entre otras cuestiones[2] en una gran pro-

liferación de *officinae* que rubrican sólo ejemplares lisos (*A, AA, AHE, CA, CAA, CAH, CL, DACI, GAA, G.CL, G.I.C., GITR, IC, LA, LC, LCA, LIA, LPF, MA, MC, MCF, MOV, MPF, NA, P, PE, PES, PF, PM, PT, PTF, TIF, TITIVS OPPIVS, VD, VS*). Esto debe relacionarse con la situación de apertura de todos los mercados a la recepción de *sigillatae* tanto peninsulares como extrapeninsulares; incluso en este momento algunos ejemplares de calidad más bien mediocre son objeto de transacción. Finalmente, en los últimos años del siglo I y durante el siglo II, asistimos a una transformación en la manera de signar los ejemplares. Las fórmulas epigráficas desaparecen dando paso a la manera anepígrafa mediante las marcas de entalles[3] como una nueva forma de rubricar determinadas piezas.

Todas estas *officinae* elaboraban sus productos para un comercio exterior, independientemente de su consumo en la propia ciudad de «Isturgi». La distribución de las manufacturas isturgitanas consideradas en su globalidad (fig. 2) abarcaron a diversas zonas tanto de *Hispania* como de *Mauritania.* Su mayor difusión se sitúa en época flavia. Pocos productos hemos documentado de la tercera generación tan sólo en *Mentesa Oretana*[4] y Villanueva de la Reina.[5] En comparación con ésta última, en la primera generación se observa una mayor distribución de los productos, considerando *sigilla* y sintaxis compositivas en los vasos carentes de marcas. En este sentido, se han evidenciado, adscritos a la primera generación (fig. 3) las *officinae* de *C.P.F.* en Tarragona.[6] *CVDAS* en Torreparedones,[7] Castillones[8] y Cerro de los Infantes.[9] *M.S.M.* en Valle de Abdalajís,[10] Cerro de los Infantes,[11] Cercadilla,[12] Alcaudete,[13] Osuna,[14] *Ilici,*[15] Ampurias[16] y Lisboa.[17] *QVARTIO* en Cerro de los Infantes,[18] Moraleda de Zafayona,[19] Alcaudete,[20] Castillones,[21] Osuna,[22] *Iuliobriga,*[23] Ampurias,[24] *Lixus*[25] y *Septem Fratrem* (comprobación personal). *TITI OPPI* en Moraleda de Zafayona,[26] Castillones,[27] *Singilia Barba*[28] y Lisboa.[29]

Estamos en los inicios de un largo camino hacia la reconstrucción de los mercados que acogieron productos isturgitanos. Los alfares, a lo largo de la vida productiva, mantuvieron un comercio más activo de lo que hace algunos años podríamos pensar. Los hallazgos que se van sucediendo nos permiten dibujar, paulatinamente, el mapa de distribución de estas manufacturas que, confiamos ir ampliando en un intento de aproximarnos a lo que fueron sus estructuras de comercialización.

Agradecimiento

El presente trabajo ha contado con el soporte de los Proyectos de I+D «Producción y adquisición de cerámicas finas en el proceso de configuración de las comunidades cívicas de la Bética y la Hispania Meridional durante el Alto Imperio Romano (HAR2016-75843-P)» y «Producción y adquisición de cerámicas finas en la Hispania altoimperial: sigilla hispaniae» (PID2019-105294GB-I00) financiado por el MCIN/AEI/10.13039/501100011033. Ministerio de Ciencia e Innovación del Gobierno de España.

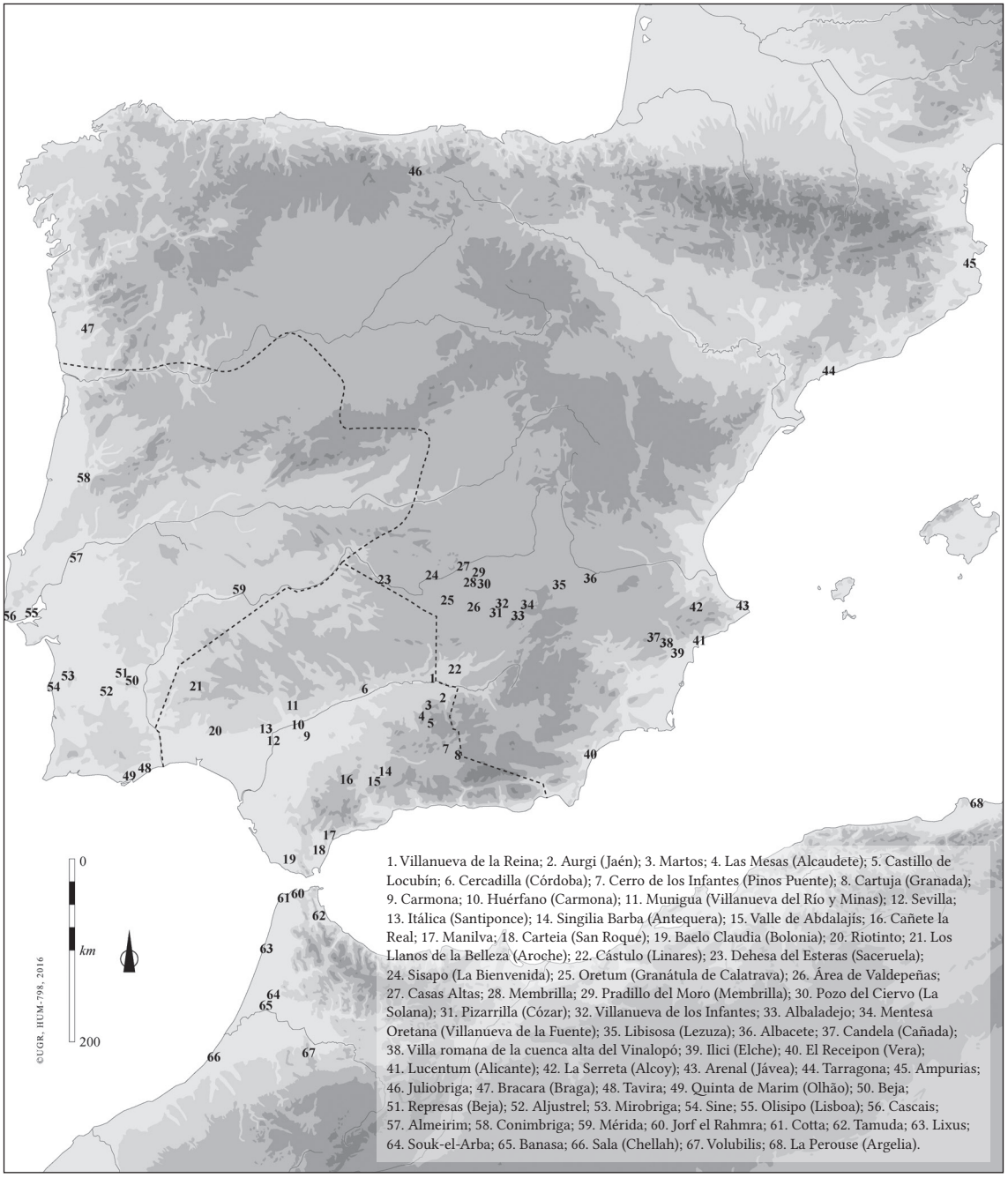


Fig. 2: Centros receptores con marcas de alfareros de isturgitanos correspondientes a las tres generaciones.

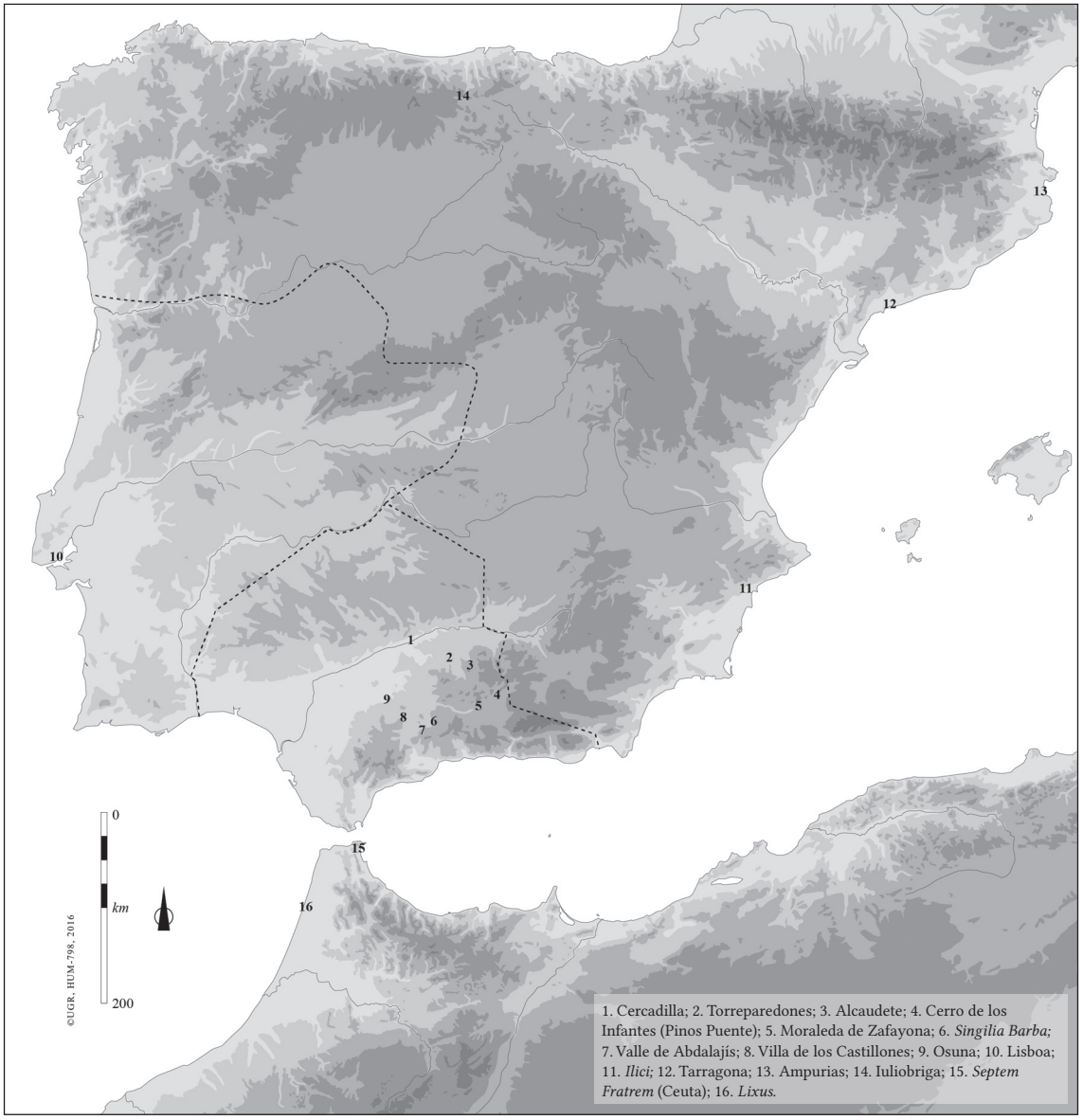


Fig. 3: Centros receptores de vasos isturgitanos correspondientes a la primera generación de alfareros.

Notas

[1] Fernández-García 2013a, 155–318.
[2] Fernández-García 2013b, 317–319.
[3] Sotomayor 1988.
[4] Zarzalejos 2001, 123–125.
[5] Bitacora 2014.
[6] Mayet 1984, 130.
[7] Serrano 1983, 153.
[8] Serrano 2007, fig. 3, 9.
[9] Serrano 1980, fig. 1, 1.
[10] Serrano 2007, 239.
[11] Serrano 1980, 116.
[12] Moreno 1998, 252.
[13] Serrano 1983, 152.
[14] Serrano 1980, fig. 2, 22.
[15] Poveda 1999, 213.
[16] Balil 1965, 156.
[17] Banha da Silva 2005, pl. 59.176.
[18] Serrano 1980, fig. 2, 24.
[19] Román et al. 2012, fig. 48.
[20] Serrano 1980, fig. 3, 35.
[21] Serrano 2007, fig. 3, 4.
[22] Serrano 1983, 157.
[23] Balil 1965, 147.
[24] Balil 1965, 157.
[25] Boube 1965, pl.XVI, c.
[26] Román et al. 2012, fig. 48.
[27] Serrano 1999, fig. 8, 79.
[28] Serrano 2007, 240.
[29] Banha da Silva 2005, fig. 72, 221.

Índice de figuras

Fig. 1: Elaboración propia dentro del grupo de investigación HUM798 y del proyecto «Isturgi». – Fig. 2–3: Elaboración propia.

Bibliografía

Banha Da Silva 2005

R. Banha Da Silva, Marcas de oleiro em terra sigillata da Praça da Figueira (Lisboa): contribuição para o conhecimento da economia de Olisipo (séc. I a. C. – séc. II d. C.) (Braga 2005) <http://hdl.handle.net/1822/8130> (03. 08. 2020).

A. Balil 1965

A. Balil, Materiales para un índice de marcas de ceramista en terra sigillata hispánica, Archivo Español de Arqueología XXXVIII, 1965, 139–169.

Bitácora 2014

La Bitácora de Jenry, Confirman la existencia de una gran posada romana en Villanueva de la Reina (Jaén), noticia 25/07/2014 <http://labitacoradejenri.blogspot.com.es/SantaPotenciana> (03. 08. 2020).

Boube 1965

J. Boube, La Terra sigillatta hispanique en Maurétanie Tingitane I. Les marques de potiers (Rabat 1965).

Fernández-García 2013a

Mª I. Fernández-García (ed.), Una aproximación a Isturgi romana: El complejo alfarero de Los Villares de Andújar, Jaén España (Roma 2013).

Fernández-García 2013b

Mª I. Fernández-García, Una aproximación a la cronología de los alfares isturgitanos, in: Mª I. Fernández-García (ed.) Una aproximación a Isturgi romana: El complejo alfarero de Los Villares de Andújar, Jaén España (Roma 2013) 317–320.

Mayet 1984

F. Mayet, Les céramiques sigillées hispániques. Contribution à l'histoire économique de la Péninsule Ibérique sous l'Empire Romain, Vol. 2 (Paris 1984).

Moreno 1998

M. Moreno Almenara, Importaciones e imitaciones de cerámica romana en el yacimiento de Cercadilla (Córdoba) siglos I al III d.C, AnCord 9, 1998, 247–272.

Poveda 1999

A. Poveda Navarro, Las producciones de terra sigillata hispánica y su comercialización en el sureste de Hispania, in: M. Roca Roumens – Mª I. Fernández García (eds.), Terra Sigillata Hispánica: centros de fabricación y producción de época altoimperial (U. Granada – U. Málaga 1999) 209–230.

Román et al. 2012

J. Román Punzón – Mª I. Fernández García, El conjunto cerámico del Cerro de la Mora, in: J. Román Punzón – J. A. Pachón Romero – J. Carrasco Rus – M. Pastor Muñoz (eds.), La cuenca alta del Genil en época romana: el cerro de la Mora (Moraleda de Zafayona, Granada) (Sevilla 2012) 81–172.

Serrano 1980

E. Serrano Ramos, Sigillata hispanica del Cerro de los Infantes (Granada), Baetica 3, 1980, 101–122.

Serrano 1983

E. Serrano Ramos, Dispersión de la Sigillata Hispánica fabricada en los talleres de la Betica, BMusMadr I(2), 1983, 151–157.

Serrano 1999

E. Serrano Ramos, La T.S.H. de la villa de los Castillones de Campillos (Málaga), Baetica 21, 1999, 249–272.

Serrano 2007

E. Serrano, La terra sigillata hispánica en el territorio malacitano, Baetica, 29, 2007, 217–249.

Sotomayor 1988

M. Sotomayor Muro, Fondos de sigillata de Andalucía con marcas interiores de entalles, Anejos de Gerion I, 1988, 253–262.

Zarzalejos 2001

M. Zarzalejos Prieto, La *terra sigillata* de Mentesa Oretana (Villanueva de la Fuente, Ciudad Real). Campañas de 1998 a 2000, in: Mentesa Oretana, 1998–2001, 107–144.

La *terra sigillata* hispánica de origen bético: una aproximación a su simbología

Mª Isabel Fernández-García – Manuel Moreno-Alcaide

Resumen

En determinadas sintaxis compositivas de la *terra sigillata* hispánica de origen bético se puede discernir una simbología dirigida, quizá en los primeros momentos, hacia unas élites indígenas siempre deseosas de productos novedosos por cuanto implicaban de prestigio y representación de la adquisición de esas manufacturas.

Introducción

Conocemos en la *Baetica* siete complejos alfareros productores de *terra sigillata* hispánica (fig. 1). Uno ubicado en la antigua ciudad de «Isturgi» (Los Villares de Andújar), dos en *Iliberri* (Granada), uno en *Antikaria* (Antequera, Málaga), uno en *Singilia Barba* (término de Antequera, Málaga) y dos en los actuales núcleos de Teba y Alameda (provincia Málaga). Las peculiaridades de sus sintaxis compositivas, así como las técnicas decorativas aplicadas a las *sigillatae* lisas, permiten una clara distinción entre ellos. Igualmente dentro de cada complejo alfarero es posible determinar las diferentes *officinae,* conocidas o anónimas, que elaboraban productos ornamentados. Influjos alóctonos combinados con elementos autóctonos confieren cierta originalidad a estas manufacturas. De todos estos alfares, sin lugar a duda, el barrio artesanal ubicado en la antigua ciudad de *Isturgi* sobresale del resto tanto por su volumen de producción como por su amplia comercialización. A través de las sintaxis compositivas de las diferentes manufacturas de origen bético, recuperadas en los centros productores y receptores, es posible discernir una simbología dirigida quizá hacia unas élites indígenas, ávidas de novedades, por cuanto implicaban de prestigio y representación.

Lectura de la sintaxis compositiva como reflejo identitario de la sociedad hispana

Hasta el presente, se han documentado en los alfares isturgitanos la existencia de, al menos, tres generaciones de alfareros productores de *terra sigillata* hispánica que se corresponden, respectivamente, con época Julio-Claudia, Flavia y finales siglo I/siglo II.[1] Cada una muestra sus propias peculiaridades desde el punto de vista morfológico y ornamental. Las sintaxis compositivas efectuadas mediante unidades mínimas y/o máximas decorativas[2] nos acercan a un universo decorativo donde influjos autóctonos y

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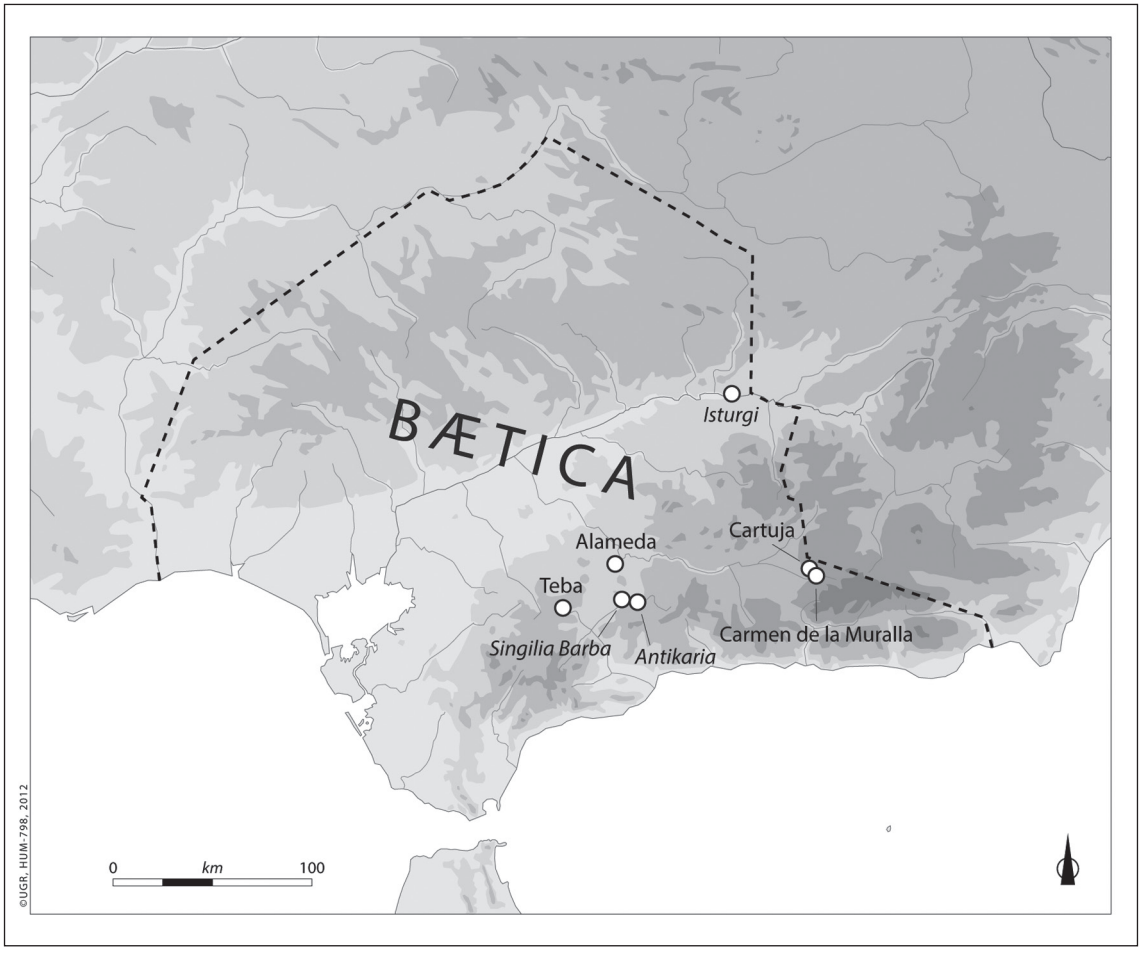


Fig. 1: Alfares de *terra sigillata* hispánica de la *Baetica.*

alógenos se funden en un todo originando composiciones, en ocasiones, no exentas de cierta originalidad. Frente a manufacturas con fuerte reminiscencia en el mundo íbero a base de elementos de carácter circular con o sin motivo inscrito (fig. 2.1, 2.2) nos encontramos con creaciones que evocan ornamentaciones presentes en los productos galos de *terra sigillata,* aunque adaptados al gusto hispano. En este sentido, toda una serie de creaciones decorativas se muestran ante el receptor de estos productos, en cuanto mero espectador de un discurso figurativo destinado, en los primeros momentos, a esas élites indígenas detentadoras del poder socioeconómico cuando no político. Dioses, héroes, elementos antropomorfos, fitomorfos o zoomorfos plasman bien una realidad o bien un imaginario. En relación con ello, asistimos a escenas en las que, por una parte, el hombre es tratado como un individuo aislado, desprovisto de cualquier posible significado más allá de su representación unitaria (fig. 2.3). Por otra, el hombre aparece en compañía de otros elementos decorativos formando una especie de conjunto. El hombre representado caminando junto a un equino, no sabemos si en posible alusión al importante

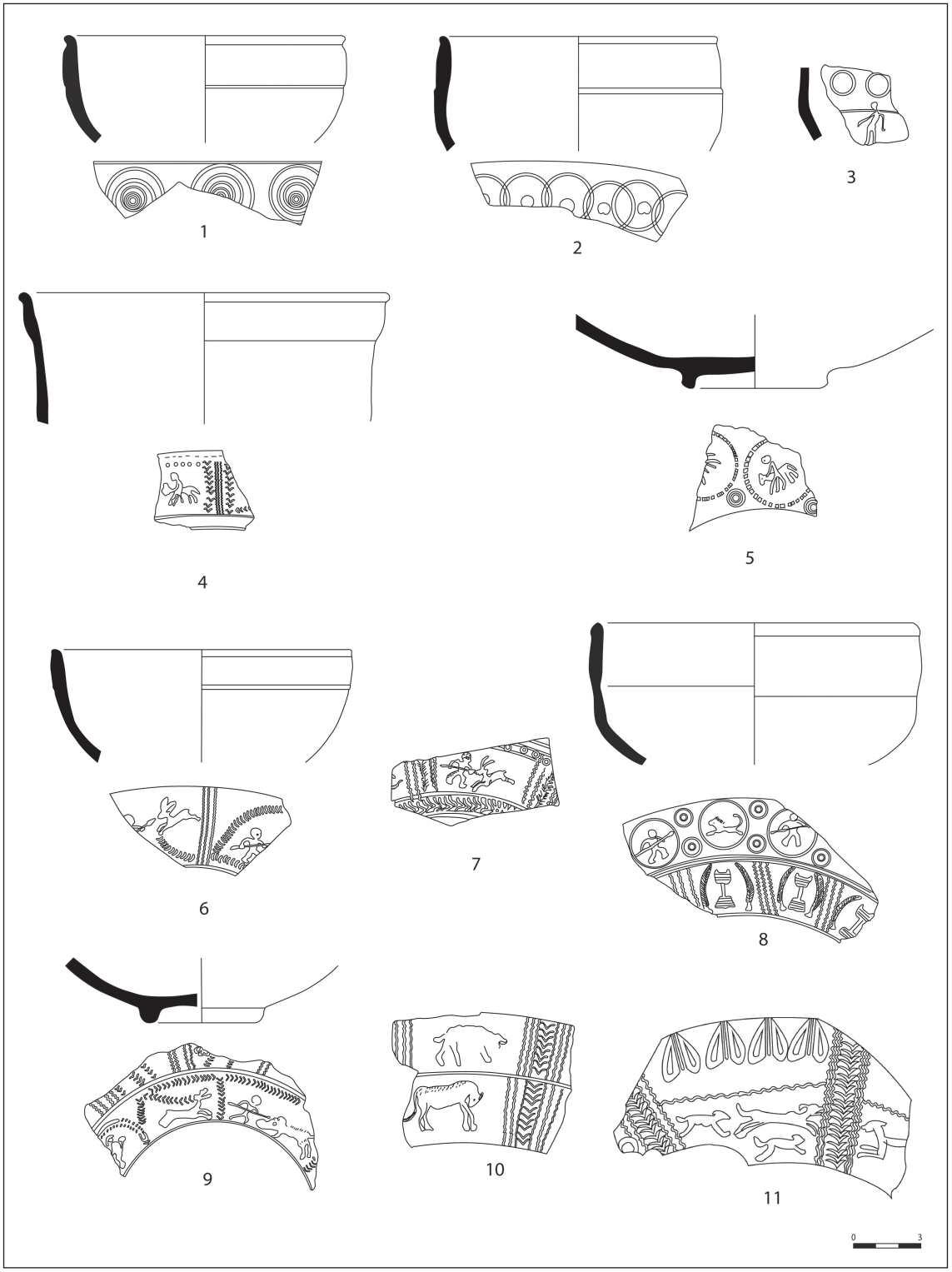


Fig. 2: *Terra sigillata* hispánica decorada isturgitana.

papel desempeñado por estos animales en la sociedad íbera en cuanto símbolo socioeconómico de un poder local (fig. 2.4, 2.5). El hombre constituyendo una escena de caza (fig. 2.6, 2.7, 2.8) cuyos animales representados – jabalí, cabra montesa, liebre – forman parte de una realidad cercana, de una naturaleza cotidiana, cuyo tratamiento rememora manufacturas de talleres del sur de la *Gallia*.[3] En un ejemplar isturgitano (fig. 2.9) se podría plantear, con las debidas reservas, si realmente se trata de una escena de carácter cinegético o de una representación, en este caso, minimalista del tema de Meleagro y el Jabalí, plasmado en productos galos.[4] Quizá las actividades cinegéticas suponen una exaltación del ser humano patente tanto en los productos isturgitanos como en los galos por el tamaño notablemente inferior de algunos animales frente a su perseguidor.[5]

Junto a esas escenas, todo un auténtico cosmos zoomorfo se refleja en los productos isturgitanos, bien en composiciones con otros animales bien combinados con elementos fitomorfos o antropomorfos, ya sean simples mortales o deidades. Ejemplares que muestran una fauna propia del entorno isturgitano (aves, conejos, liebres, jabalíes, cabra montesa, ciervo, entre otros) frente a animales ajenos a ese hábitat (león, pantera, dromedario, mono, cebra, oso …). Animales sin formar narrativa (fig. 2.10), agrupados (fig. 2.11), en situación de acoso (fig. 3.1, 3.3), en proceso reproductivo (fig. 3.2), en conjunción con elementos fitomorfos que evocan la frondosidad de un bosque (fig. 3.4). En definitiva, representaciones que nos remiten a una realidad, a una cotidianeidad.

Dentro de esa mayor o menor creatividad que caracteriza a las manifestaciones artesanales, hallamos sintaxis ornamentales cuya combinación de motivos fitomorfos, zoomorfos y deiformes acercan al poseedor a un momento alegórico al entrar en un espacio de naturaleza cultual, a un momento conocido y posiblemente partícipe del mismo. Es el caso de algunas manufacturas en las que se representa a Baco con algunos elementos de su apoteosis, bien acompañado por su pantera (fig. 3.5), por una gacela y por vides (fig. 3.6) o bajo la omnipotente mirada de Júpiter (fig. 3.7). Tema recurrente en las producciones de *sigillata* extrapeninsulares,[6] los ejemplares isturgitanos responden a una adaptación hispana de la temática báquica. Anubis (fig. 3.8, 3.9) igualmente con correspondencia en producciones de *sigillata* extrapeninsulares[7] cuya simbología en productos hispanos, excluida su función de psicopompo, se ha establecido como una correlación de Anubis/Mercurio[8] en cuanto enviado de los dioses y benefactor de los viajeros o de Anubis con una función que recuerda a Cupido o Venus en cuanto dispone de los filtros amorosos.[9] En relación con ello, la fragmentariedad de los ejemplares recuperados no permite precisar ninguna consideración al respecto y no se puede obviar que fuese simplemente el resultado motivado por un deseo de modelos pseudoegipcios sin ninguna otra significación.[10]

Todo un universo decorativo se plasma en los productos isturgitanos. Frente a esa riqueza ornamental, los restantes talleres de *terra sigillata* hispánica de la *Baetica* muestran una parquedad en los elementos decorativos utilizados en las sintaxis compositivas. Más allá de algunos elementos animales aislados (conejo) o vegetales en conjunción con animales poco más se puede precisar. Nada, por el momento, se ha recuperado que nos

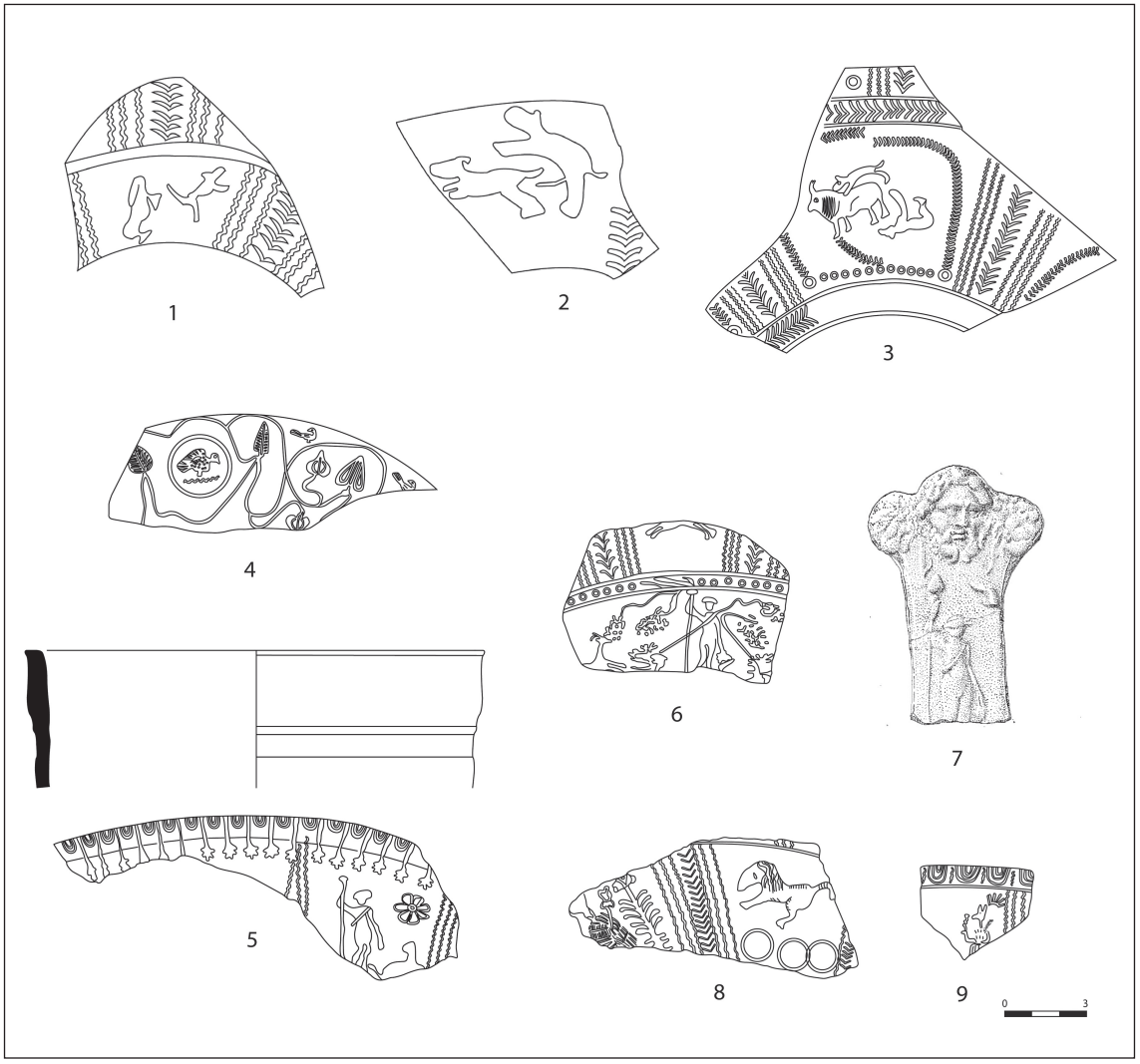


Fig. 3: *Terra sigillata* hispánica decorada isturgitana.

permita pensar en la posibilidad de una simbología al estilo de los alfares isturgitanos o de los propios alfares riojanos de la *Tarraconensis*. Sea como fuere, determinadas *officinae* isturgitanas parece ser que elaboraron algunas composiciones con cierto simbolismo que las aproxima a la capacidad narrativa de las manufacturas galas especialmente en las primeras etapas productivas donde estos productos eran codiciados por sectores socioeconómicos dominantes.

Agradecimiento

El presente trabajo ha contado con el soporte de los Proyectos de I+D «Producción y adquisición de cerámicas finas en el proceso de configuración de las comunidades cívicas de la Bética y la Hispania Meridional durante el Alto Imperio Romano (HAR2016-75843-P)» y «Producción y adquisición de cerámicas finas en la Hispania altoimperial: sigilla hispaniae» (PID2019-105294GB-I00) financiado por el MCIN/AEI/10.13039/501100011033. Ministerio de Ciencia e Innovación del Gobierno de España.

Notas

[1] Fernández-García 2013, 317–319.
[2] Fernández-García 2011, 83–86.
[3] Hermet 1934, fig. 88,9; fig. 97,8.
[4] Oswald et al. 1984, lám. XXXVI.15.
[5] Demarolle 1993, 199.
[6] Oswald 1936–37, lám. XXVII y XVIII.
[7] Oswald 1936–37, lám. XXVI, 549–551.
[8] Martínez González 2002, 212–213.
[9] Elvira Barba 1981, 66–67.
[10] Martínez González 2002, 215.

Índice de figuras

Fig. 1: Elaboración propia dentro del grupo de investigación HUM798 y del proyecto «Isturgi». – Fig. 2–3: Elaboración propia.

Bibliografía

Demarolle 1993
J. M. Demarolle, Imaginaires: le bestiaire de la sigillée ornée au Haut-Empire, DialHistAnc 19(2), 1993, 187–212.

Elvira Barba 1981
M. A. Elvira Barba, Los dioses romanos en la terra sigillata hispánica, in: La Religión romana en Hispania (Madrid 1981) 59–67.

Fernández-García 2011
Mª I. Fernández-García, Decoración y conceptualización. Una propuesta metodológica, in: CVDAS, Revista de Arqueología e Historia 9–10 (2008–2009), 2011, 81–99.

Fernández-García 2013

Mª I. Fernández-García, Una aproximación a la cronología de los alfares isturgitanos, in: Mª I. Fernández-García (ed.), Una aproximación a Isturgi romana: El complejo alfarero de Los Villares de Andújar, Jaén España (Roma 2013) 317–320.

Hermet 1934

F. Hermet, La Graufesenque (Condatomago). I Vases sigillès. II Graffites (Paris 1934).

Martínez González 2002

Mª M. Martínez González, Jarra de terra sigillata hispánica con decoración isíaca encontrada en Baradán (La Rioja) in Iberia, Revista de la Antigüedad 5, 2002, 207–216.

Oswald 1936–1937

F. Oswald, Index of Figures-Types on Terra Sigillata (Samian Ware) (Liverpool 1936–1937).

Oswald et al. 1984

F. Oswald – Th. D. Pryce, Introduction á l'etude de la cèramique sigillèe, Revue archèologique SITES hors serie 24, 1984.

A Work in Progress: Late Roman Amphorae from Garrison's Camp Area, Nea Paphos; the Most Attested Types and Some Considerations about

Mariagrazia Giuseppina Finistrella*

The town of Nea Paphos was one of the major eastern Hellenistic-Roman settlements and was the capital of Cyprus for a long period from the time of the Ptolemeis to the 4th century AD becoming thus one of the most important commercial harbours of the island and the chief naval base during the Ptolemaic time. It continued thriving, though many earthquakes affected it especially in the 4th century and at least till the early Byzantine time, partly because of its good trading relationship with Constantinople, capital of the Eastern Roman Empire.[1] The kinds of transport amphorae found at Nea Paphos are instrumental in understanding the economic situation of the town and they are useful tools for reconstructing the Eastern Mediterranean commercial routes that affected the site.[2]

Since 1988 the Italian Archeological Mission of the University of Catania, has been making excavations at Nea Paphos, in the area called "sanctuary of Apollo at Toumballos". At the moment the excavations take place at the so-called "Garrison's Camp", situated in the northwestern part of the site. A few lines could summarize the main phases of the 1988–1999 period. In the early stages the activity of the Italian Archaeological Mission was concentrated on the plain to the east and west of a series of underground rooms dug into rock discovered in the 1950's by Cypriot archaeologists and interpreted as an hypogeic sanctuary, perhaps dedicated to Apollo, but part of this area was ravaged by holes: they discovered a long dromos (72 metres) acting as an entrance to the west-east bound till a rocky ridge, where there are several rooms, and lastly to go out from it in a north-south direction. At the end of the 4th century AD the Hellenistic-Roman sanctuary because of the spread of Christianity was no more a worship place. Just westward from the subterranean rooms of the sanctuary, archaeologists have discovered the ruins of an early Christian basilica, that was almost certainly a martyrium, dating back to the end of the 4th century AD, as it was shown by the surveys made under the foundation of the northern wall of the central aisle. The basilica took advantage partly of the structures of the subterranean pagan sanctuary and this counts for its special form (fig. 1). It's probable that the sacred area has been attributed to Saint Hilarion, who preached and was active in Nea Paphos towards the end of the 4th century AD, as it is stated by his contemporary Saint Jerome in his Vita Hilarionis. Actually a rebuilding of the whole area of the sanctuary – going back to the end of the 4th – beginning of the 5th century AD till arrived the Arabs (7th century AD) – has been shown too by the discovery of a series of rooms, partly tessellated (maybe it is the new Christian quarter, which was built as opposed to the southwestern pagan one), which were built on the inner part of the northern wall of the dromos[3] (fig. 2).

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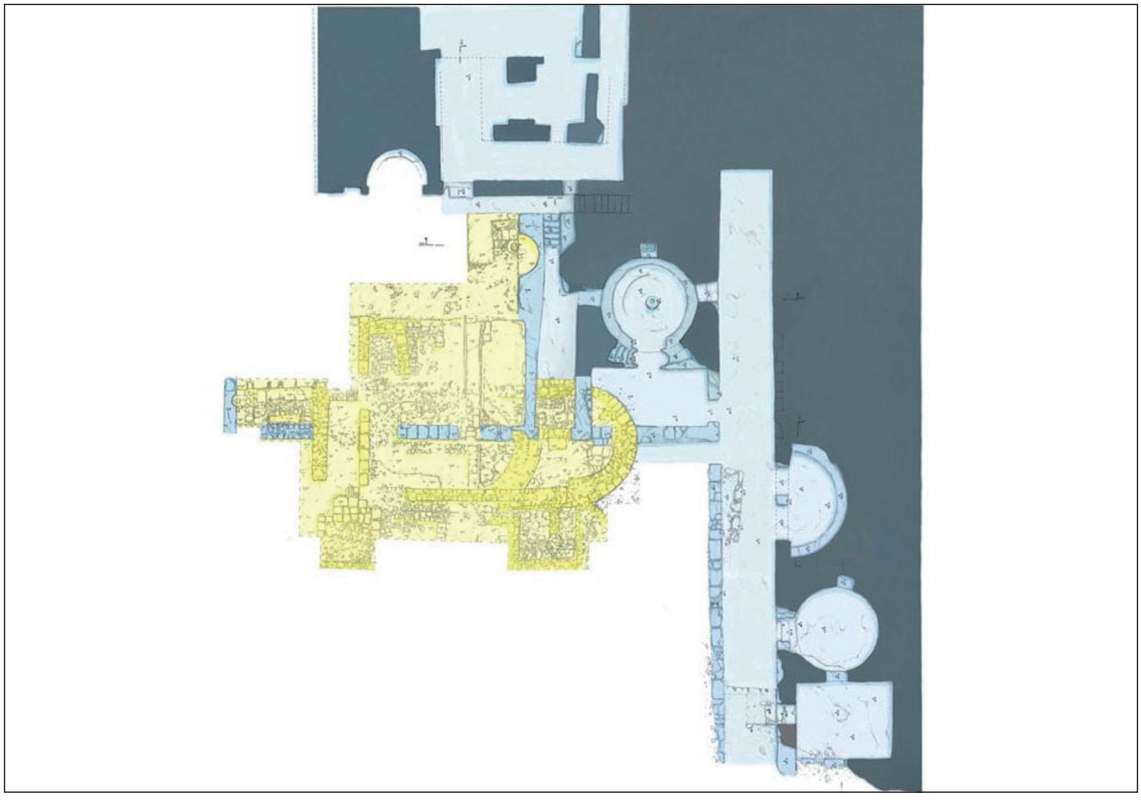


Fig. 1: The Early Christian Basilica (4th century AD) and the subterranean Hellenistic-Roman sanctuary.



Fig. 2: Christian structures from the northern wall of the dromos of the subterranean Hellenistic-Roman sanctuary.

The analysis, it should be emphasized, still in progress and in revision of the transport amphorae from Garrison's Camp area (1988–1999) reveals the presence of numerous types, coming in particular from the Eastern Mediterranean, in the thousands of fragments attested in the Late Roman – Early Byzantine time (4th–7th century AD).[4] Relating to the 4th century AD, there are still several late attestations of amphorae produced particularly in the previous years, like, with regard to the western productions, some Baetic, Campanian, Sicilian and African types, mostly from Tunisia, while among the eastern productions, in particular the Kapitän II amphora and the late variant of the Agora G 199 amphora should be reported. With regard to the amphorae more properly datable in the Late Roman – Early Byzantine time,[5] the Late Roman Amphora 1 (LRA1) is the most attested type, present in several typological variants and in various fabrics. It is flanked by other late eastern productions such as the LRA2, the LRA3, the LRA4, the LRA 5/6, and probably the LRA7 and the LRA13, as well as some types from the Black Sea region, above all the Zemer 40 amphora, or from the Palestinian area such as the Agora M 334 amphora. Among the western productions the presence of some Tunisian amphorae like the African IIIB and the African IIIC or the Spatheia could be reported. With regard to the ongoing reconstruction of trade and commercial routes involving the site of Nea Paphos, the late 4th century attestations of some amphorae are what remains of an intense richer economic activity (that has its origins in the lively trade framework of the Hellenistic-Republican age), witnessed by the fragments from Garrison's Camp area throughout the Mediterranean. They reveal, as it concerns only the origins of the western productions, proceeding from west to east, the presence of various Iberian types, in particular from the Hispania Baetica, Gaulish types, above all from Gallia Narbonensis, Italic types, both from the Tyrrhenian and Adriatic areas, and Sicily, and then African types too, particularly from Tunisia, but also from Tripolitania and from Cyrenaica; for the Eastern part the exchanges activities appear lively mostly with the Microasiatic area, in particular with Cilicia, as well as with Syro-Palestinian and Aegean areas. This important commercial vitality is, then, replaced by a geographical contraction of the production places of amphorae towards the east – the vessels come, proceeding from north to south, from the Black Sea region, Microasiatic (including Cyprus), Aegean and Syro-Palestinian areas, and from Egypt, except for the Tunisian amphorae – up to the destructive Arab raids in the 7th century AD.[6]

The transport amphorae may reveal more or something new about the context of the findings. If the late attestations of some types of amphorae testify the presence of flourishing economic activities that must be understood as related to the reality of the pagan hypogeic sanctuary, the change that occurs in the area since the 4th century AD, with the closing of the pagan cults and its resettlement as a religious ensemble – due to the presence of the martyrium – and a residential complex – due to the presence of the other Christian structures – is, also in this case, well emphasized by the amphoric productions that, once again, highlight an interesting economic reality with regional and above all extra-regional exchanges, with a wider valence. The presence of some

productions could be, in fact, connected to the ritual needs of the martyrium: it is the case, above all, of the amphorae of the Syro-Palestinian area carrying wine, such as, particularly, the LRA4[7] (fig. 3). Other amphorae appear more specifically linked to the network of activities and exchanges concerning the residential structures of the area, certainly not free from connections with the religious complex, as, above all, the LRA1 (fig. 4) or the amphorae from the Black Sea region. An interesting case is the presence



Fig. 3: Fragments of Late Roman Amphora 4 from Garrison's Camp area.



Fig. 4: Fragment of Late Roman Amphora 1 from Garrison's Camp area

of the LRA1, in the variant LRA1 B form 3, as it appears by the analysis, particularly, of fragmentary handles, a Cypriot type datable between the end of the 5th and the beginning of the 6th century AD.[8] This amphora, in fact, seems to have been produced specifically to meet the needs of the Quaestura Exercitus, created in 536, that, for this reason, promoted the agriculture in the island.[9] If it is as it seems, all this would shed new light on a more precise interpretation of the late structures set on the Hellenistic-Roman ones, in the Garrison's Camp area (starting from the end of the 4th – beginning

of the 5th century AD), already understood, more generically, as structures in primis for probable agricultural use: these data are moreover strengthened by the discovery of olive millstones in the area.[10]

Notes

* Supervisor: Prof. F. Rumscheid

[1] Bocci 1963; Mitford 1980, 1309–1315; Maier et al.1984; Michaelides 1996a.

[2] For the economy of Cyprus during the Greek and Roman time, see particularly Michaelides 1996b.

[3] Giudice 1992; Giudice 1993; Giudice 1994; Giudice 1996; Giudice 1997; Giudice 1999; Giudice et al. 1999; Giudice et al. 2000; Giudice et al. 2001; Giudice et al. 2004; Giudice et al. 2007; Giudice et al. 2010; Giudice 2016; Giudice et al. 2017a; Giudice et al. 2017b.

[4] This is only a part of the research project I am working on. It is aimed at analyzing trade in Nea Paphos and in the Eastern Mediterranean through the study of the transport amphorae coming from the site, dating from the Hellenistic-Republican to the Late Roman – Early Byzantine time. I am taking into account both the publications about the area and the considerable amount of data coming from the thousands fragments of transport amphorae found in Garrison's Camp during the 1988–1999 excavations (until now, only a small quantity has been published in RDAC). At the moment, about 10,000 fragments, of which a first cataloguing was made, have been collected, most of them during my PhD. A typological classification of the amphorae is actually in fieri, a petrographic analysis of a selection of the fabrics and a statistical study will be carried out too. It should be added that all the fragments of amphorae from 1988–1999 excavations, moreover, appear substantially representative of those found between 2000 and 2014 by the Italian Archaeological Mission – the excavations were resumed in 2017. A preliminary analysis of the amphorae found during this period was carried out too (about 6,000 fragments were collected, most of them during my PhD), in view of a further study.

[5] According to the classification of the types after Riley 1981.

[6] About the transport amphorae and the maritime routes concerning Nea Paphos (and Cyprus) from Hellenistic until Late Roman – Early Byzantine times, there are several publications, especially from the 1970s onwards. Very important is Hayes 1991; the recent contribution of Lawall et al. 2013, with a rich bibliography, is particularly significative. The proceedings of the two international conferences about Nea Paphos, Balandier 2016, and those in press of Nea Paphos and Western Cyprus – New Archaeological and Historical Perspectives (Paphos, 11–15 October 2017), should be reported too. Finally, a very useful online resource about, generally, Roman and Late Roman amphorae is, among others, University of Southampton 2014.

[7] Piéri 2005, 110–113.

[8] Demesticha 2013; Demesticha 2014.

[9] See note 8.

[10] See note 3.

Image Credits

Fig. 1: Graphic reconstruction by Architect Fabio Mosca. – Fig. 2: Photo by Italian Archaeological Mission of University of Catania. – Fig. 3: Photo by Dr. Mariagrazia Giuseppina Finistrella. – Fig. 4: Photo by Dr. Mariagrazia Giuseppina Finistrella.

References

Balandier 2016
C. Balandier (ed.), Nea Paphos, Fondation et développement urbanistique d'une ville chypriote de l'antiquité à nos jours. Études archéologiques, historiques et patrimoniales. Actes du 1er colloque international sur Paphos – Avignon 30–31 octobre et 1er novembre 2012 (Bordeaux 2016).

Bocci 1963
EAA V (1963) 943 s. v. Paphos (P. Bocci).

Demesticha 2013
S. Demesticha, Amphora Typologies, Distribution and Trade Patterns: The Case of the Cypriot LR1 Amphorae, in: M. Lawall – J. Lund (eds.), The Transport Amphorae and Trade of Cyprus (Nicosia 2013) 169–178.

Demesticha 2014
S. Demesticha, Late Roman Amphora Typology in Context, in: N. Poulou-Papadimitriou – E. Nodarou – V. Kilikoglou (eds.), Late Roman Coarse Ware 4: The Mediterranean: A Market Without Frontiers (Oxford 2014) 599–606.

Giudice 1992
F. Giudice, Paphos, Garrison's Camp, Campagna 1988, RDAC 1992, 201–250.

Giudice 1993
F. Giudice, Paphos, Garrison's Camp, Campagna 1989, RDAC 1993, 279–327.

Giudice 1994
F. Giudice, Paphos, Garrison's Camp, Campagna 1990, RDAC 1994, 215–268.

Giudice 1996
F. Giudice, Paphos, Garrison's Camp, Campagna 1991, RDAC 1996, 171–267.

Giudice 1997
F. Giudice, Paphos, Garrison's Camp. Va Campagna (1992), RDAC 1997, 187–204.

Giudice 1999
F. Giudice, Paphos, Garrison's Camp. VIa Campagna, RDAC 1999, 279–314.

Giudice et al. 1999
F. Giudice – G. Giudice, The Excavations of the Italian Mission in the "Sanctuary of Apollo at Toumballos" at Nea Paphos, in: P. Negri Scafa (ed.), Cyprus: the Italian Archaeological and Archaeometric Activities in Cyprus – Nicosia, Archaeological Museum 2–8 September 1998 (Roma 1999) 31–69.

Giudice et al. 2000
F. Giudice – G. Giudice – E. Giudice, Paphos, Garrison's Camp. VII[a] Campagna, RDAC 2000, 259–298.
Giudice et al. 2001
F. Giudice – G. Giudice – E. Giudice, Paphos, Garrison's Camp. VIII[a] Campagna, RDAC 2001, 255–290.
Giudice et al. 2004
F. Giudice – G. Giudice – E. Giudice, Paphos, Garrison's Camp. IX[a] Campagna, RDAC 2004, 1–46.
Giudice et al. 2007
F. Giudice – E. Giudice – G. Giudice, Paphos, Garrison's Camp. X[a] Campagna, RDAC 2007, 327–376.
Giudice et al. 2010
F. Giudice – E. Giudice – G. Giudice, Paphos, Garrison's Camp. XI[a] Campagna, RDAC 2010, 437–496.
Giudice 2016
F. Giudice, Gli scavi della missione italiana a Nea Paphos 1988–2013: l'area dei Grandi Santuari (già detta di "Garrison's Camp"), in: C. Balandier (ed.), Nea Paphos, Fondation et développement urbanistique d'une ville chypriote de l'antiquité à nos jours. Études archéologiques, historiques et patrimoniales. Actes du 1[er] colloque international sur Paphos – Avignon 30–31 octobre et 1[er] novembre 2012 (Bordeaux 2016) 79–90.
Giudice et al. 2017a
F. Giudice – E. Giudice – G. Giudice, Paphos, Garrison's Camp. XII[a] Campagna (1999) RDAC 2017, 771–809.
Giudice et al. 2017b
F. Giudice – E. Giudice – G. Giudice, Venticinquennale degli scavi della missione italiana a Nea Paphos. L'area dei Grandi Santuari (già detta di Garrison's Camp) 1988–2014 (Catania 2017).
Hayes 1991
J. W. Hayes, Paphos III: Hellenistic and Roman Pottery (Nicosia 1991).
Lawall et al. 2013
M. Lawall – J. Lund (eds.), The Transport Amphorae and Trade of Cyprus (Nicosia 2013).
Maier et al. 1984
F. G. Maier – V. Karageorghis, Paphos: History and Archaeology, (Nicosia 1984).
Michaelides 1996a
EAA Suppl. 2 (1996) 247–250 s. v. Paphos (D. Michaelides).
Michaelides 1996b
D. Michaelides, The Economy of Cyprus During the Hellenistic and Roman Periods, in: V. Karageorghis – D. Michaelides (eds.), The Development of Cypriot Economy from Prehistoric Period to the Present Day (Nicosia 1996) 139–152.
Mitford 1980
T. B. Mitford, Roman Cyprus, ANRW 2.7.2, 1980, 1285–1384.
Piéri 2005
D. Piéri, Le commerce du vin oriental à l'époque Byzantine (V[e]–VII[e] siècles). Le témoignage des amphores en Gaule, BAH 174 (Beirut 2005).

Riley 1981

J. A. Riley, The Pottery from Cisterns 1977.1, 1977.2 and 1977.3, in: J. H. Humphrey (ed.), Excavations at Carthage 1977 Conducted by the University of Michigan, VI (Ann Arbor 1981) 85–124.

University of Southampton 2014

University of Southampton, Roman Amphorae: a digital resource – University of Southampton 2005 (updated 2014), <http://archaeologydataservice.ac.uk/archives/view/amphora_ahrb_2005/> (15. 10. 2018).

The Villa of Quinto Voconio Pollione in the Suburbium of Rome: Indicators of Production from Recent Excavations

Agnese Livia Fischetti

Introduction

The villa of Quinto Voconio Pollione, located in Ciampino, a municipality close to Rome, is one of the most important *villae* in the Roman *Suburbium.* Q. V. Pollione was one of the owners as it was found written on a lead pipe uncovered in one of the rooms of the villa.

The villa was discovered at the end of the 19th century,[1] when the Marcandreola locality was considered a good field to survey thanks to the ancient structures came to light during the building of the railway from Rome to Albano.[2]

Before that time the only ruins of this villa already known, given that they had never been covered were the structures pointed out by Pietro Rosa on his map.[3] These consisted of a huge exedra linked to a squared space defined by walls and rooms.[4] According to Lanciani they could have been part of a *therma* or a *nymphaeum,* used until the IV century AD.

After occasional discoveries, a more intensive survey was planned. From 1884 to 1885, three excavation campaigns were conducted by Luigi Boccanera,[5] who obtained the permission to carry out them out in the "Tenuta delle Frattocchie in località Marcandreola", in the property of the Colonna's family. Boccanera worked under the supervision of Rodolfo Lanciani, at the time "Capo Ufficio Tecnico degli Scavi di Antichità di Roma".[6]

Even though the uncovered remains were reburied a few years later, we can deduce an idea of the villa's layout and the artefacts found inside the excavated structures thanks to the precious documentation of Rodolfo Lanciani. He pointed out the strategic location of the site (fig. 1), described the richness of the residential space – which was organized in the typical layout of Roman villas – and provided a lot of detail about the building and about the furniture, the decorative elements and the marble statues, which highlighted the *status* of its former owner.

Excavatios in the Nineteenth Century

Based on the available documentation, the villa extended over three consecutive terraces, on a raised level compared to the rest of the area, confined in it's east side with a ditch (the "Fosso di Pantanicci"), and was surrounded on its western side by a big colonnaded garden. It was located in the middle of a road network, taking advantage

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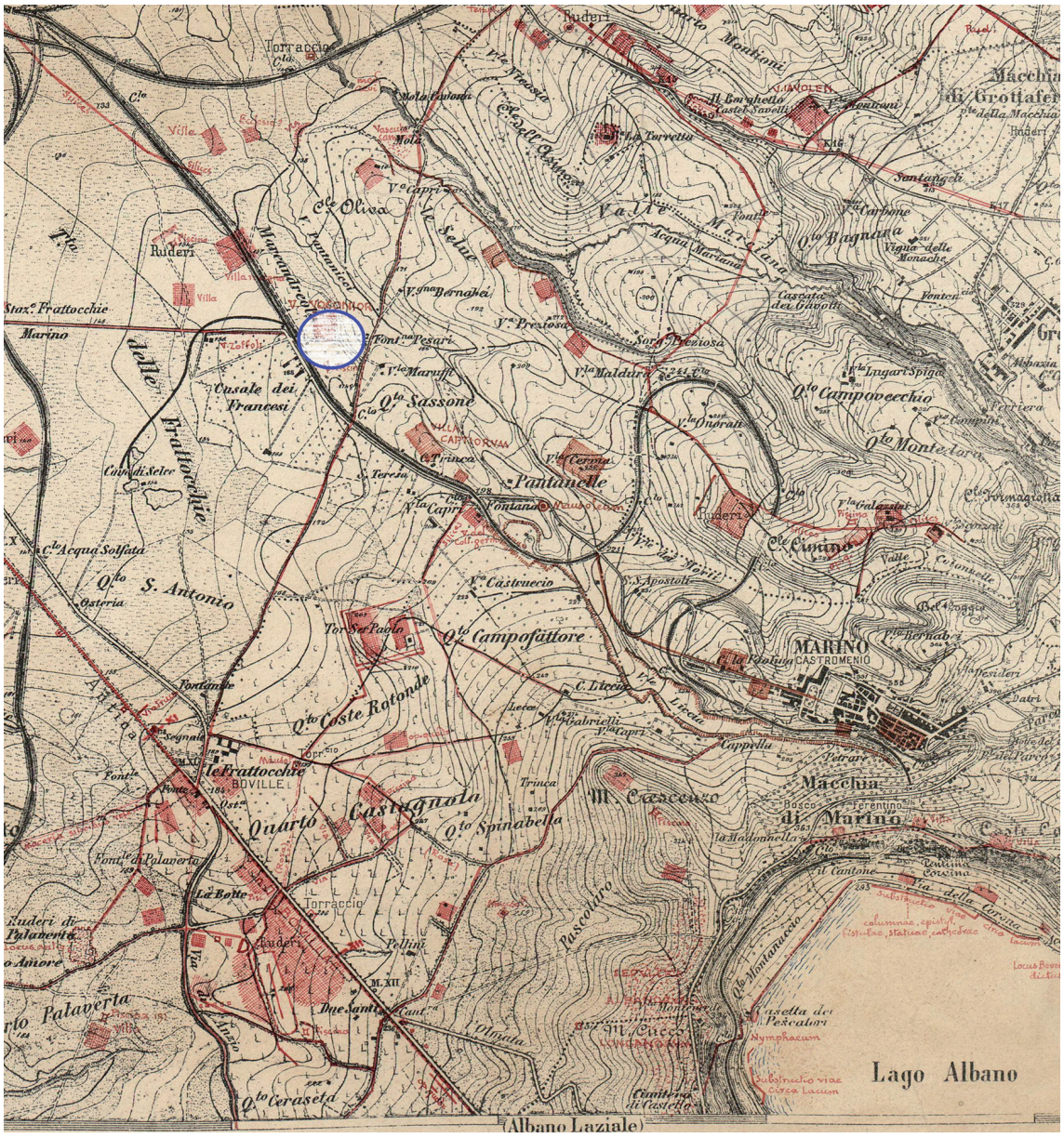


Fig. 1: Area of the villa in the Lanciani map.

of the so-called via Castrimeniense,[7] the via Cavona[8] and the secondary roads derived from them.

The villa consisted of two different parts, and, according to Lanciani, the western one was the oldest. One of the gardens gave access to a squared *vestibulum* and beyond it there were the colonnade *atrium* and some rooms of uncertain function. All of these rooms were adorned with mosaics, refined frescos and *sectilia* of coloured marbles covered both the walls and the floors.

As such as was the way in the old methodology of excavating, the aim of these excavations campaigns was to find decorative elements and statues to sell to Italian and foreign museums,[9] stopping the survey in the rooms if there was no evidence of them.

Dozens of precious statues were unearthed in the abandoned rooms of the villa; it suffices to recollect the three statues found in the *tablinum:* an athlete, a statue of Heracles and a refined statue of the Apollo Pizio (fig. 2). The Apollo is more than life-size, half-covered by a *chlamys* and has sandals on his feet. He leans against a tripod that is being climbed by a snake. The hairstyle, fixed on the nape except for two thin braids, as well as the soft shaped anatomical features give Apollo an almost female aspect. In a group of artifacts found in the western garden there was an inscription dedicated to Iside and Serapide. Both this inscription and three antefixes with the relief of a *ureus* are dated back to the II century AD and lead us to assume the presence of a private shrine in the Voconii property. There were also found several fragments of "Lastra Campana", dated back to the I and to the II century AD, although not always well carved, but with an interesting amount of reliefs motives.

After these initial discoveries, the ruins completely disappeared in the landscape, on the one hand because of the decision to refill the excavations to preserve the ruins, and on the other hand because of the progressive filling up of the "Campagna Romana".

The Modern Excavation Campaign

During the 2006, after more than a century, in an area close to the earlier described excavations, toward SW, archaeological excavations were carried out in Marcandreola locality, prior to planned building activity. These excavations brought to light more features linked to the villa, especially structures related to the *pars rustica.* The studied area is close to the part of the map where Lanciani pointed out the most recent structures: this included the thermal baths and a number of reused rooms that had probably changed the dimension, orientation and function of earlier used spaces.

The sector unearthed during the recent excavations is not well preserved, especially for the more SW part of the structures, maybe already erased in ancient time. This part (fig. 3) includes the remains of a *doliarum* with still the bottom of the vases *in situ* and the traces of the foundation walls, that describe a squared room with three pillars in the middle, supporting the roof, totally missing as well were the walls.[10] There were also

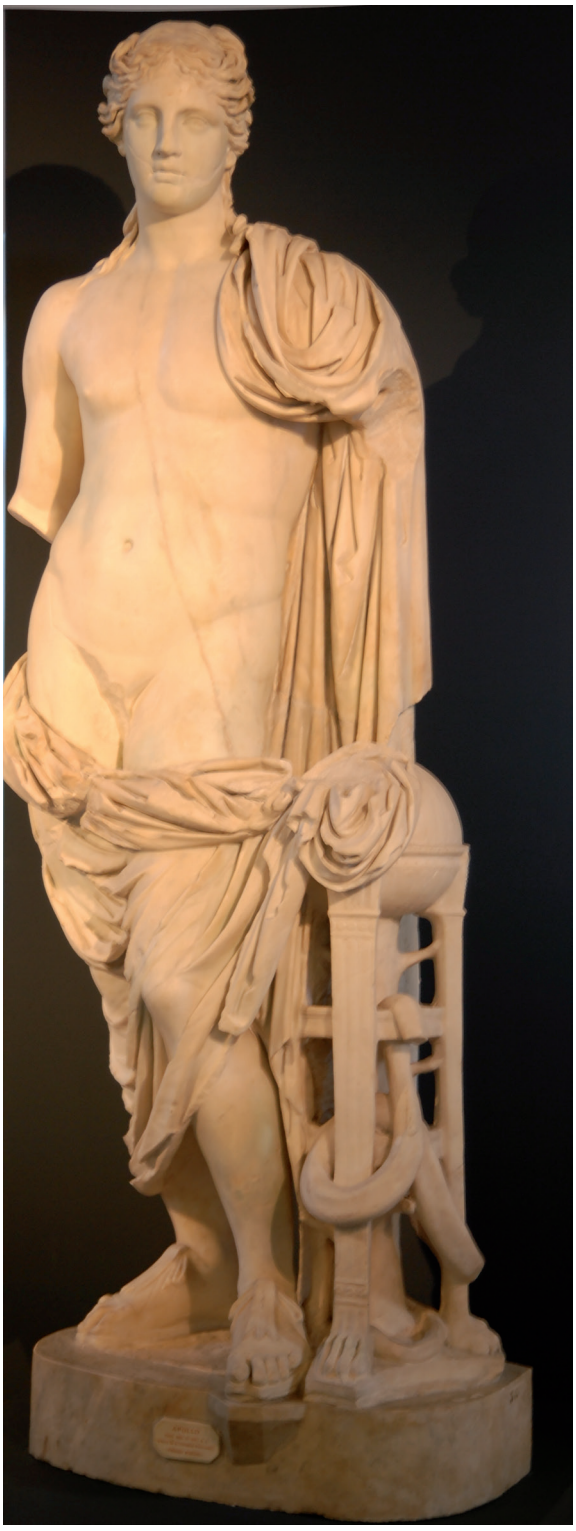


Fig. 2: Statue of Apollo Pizio.



Fig. 3: *Pars rustica* (*doliarium* and tanks).

tanks excavated in the tuff, two of them located at different levels and connected with each other by lead pipes. Both these tanks were linked to a squared cistern, restricted by a wall in a new phase of use. These structures were close to a big area with evidence of the work of a plough. Two phases of plough traces were discovered, with different orientation. The oldest phase was related to a canal, that crosses the field toward the system of tanks. Better preserved features were unearthed close to this area, on the other side of the modern road, consisting in a big cistern close to the remains of a pillar, and perhaps the relics of a *torcular.* Placed near to the *torcular* was a cocciopesto floor, with almost 30 holes on the surface, the most of them done in a second phase of use (fig. 4). Fragments of amphoras have been found inside the holes, suggesting the place where the final step of the production were stored. All around there were *scrobae,* irregular pit, squared or circular, not deep, excavated in the tuff, functional to the plantation.

The mapped structures, combined with the uncovered artefacts, which consisted mainly of amphora and dolia fragments, leads us to assume the production of wine and oil, during the I–II century AD, and probably also for the following centuries.[11] The discovery of ancient traces of ploughs regularly aligned in the field close to this area,



Fig. 4: *Pars rustica* (cistern, *torcular,* floor with holes).

of the *scrobae* and a complicated system of water distribution, corroborate the interpretation of these structures as related to agricultural production, covering all steps from plantation to the processing of the grapes and the olives.

Moreover, based on the recent analysis of the archaeological materials from the site (still ongoing), it is likely that glass production took place inside the villa. Particularly interesting are some pieces of "fritta", turquoise slabs of dense glaze. Unfortunately, these fragments come from a surface survey and it was not possible to obtain additional data during the excavation. However, the number, the dimensions and the quality of these slabs lead us to link them to some similar artefacts discovered in the 19th in the courtyard. Lanciani recorded, "a wonderful slab of glaze green as the sea with a round decoration relief 8 millimetres high",[12] and a room filled with slabs of *lapis specularis* and fragmented glaze, that are elements of windows, collected from all the rooms of the villa and stored with their own frames and nails.[13]

The production of wine and oil, attributed to the I–II centuries AD, but maybe related to a wider chronological range, was aimed at meeting the demands of the villa (the owners and the community around them) and any surplus production could be aimed at the commercial market of Rome, with which the site is connected through the cited roads network.[14]

At this moment of the study the glass production is attributed rather to the demands of the owners for the decoration of the residential *pars* of the villa than linked to a com-

mercial trade. With the progress of the studies and the results of archaeometric analysis we will have more information about the use of these kind of artefacts.

Notes

[1] Aglietti et al. 2005, 79–108; Aglietti 2010, 17–27.

[2] In that occasion three buildings came to light, one of these considered a little shrine by Lanciani. After providing the documentation, the ruins were refilled in order to preserve them.

[3] Pietro Rosa worked on his precious map from 1850 to 1870.

[4] Nowadays just few remains of the exedra are left, included in a modern house.

[5] Boccanera was involved in reserching antiquities to sell, in many sites of Lazio and Etruria.

[6] He was the director of a department of the ancient Roman ruins.

[7] Fischetti 2019, 57–76.

[8] Aglietti 2000, 127–162.

[9] A little collection of statues found in the nineteenth cent. are now exibited at the Badisches Landesmuseum in Karlsruhe, others are in the Museo Nazionale Romano, in Rome, others are unfortunatly missing. The collection placed in Germany is still indicated as from Marino instead of Ciampino. The Municipalty of Ciampino is independent from Marino just from the 1974, but at time of the discovery the villa of Q. V. Pollione was still in Marino municipality.

[10] A big amount of *cubilia* spread all over the site suggest the originally presence of *opus reticolatum* or *opus mixtum* walls. There also were big fragments of parts of the floor, made as *opus spicatum.* Few fragments of tiles, that probably came from the remains of the roof.

[11] There are evidences of the use of this villa untill the IV cent. AD.

[12] Buonocore 2001, 262.

[13] Lanciani 1884, 159.

[14] Add to the so called Castrimeniense and the Cavona also the connections with the via Appia (Manigrasso 2010, 1–11).

Image Credits

Fig. 1: BiASA (Biblioteca di Archeologia e Storia dell'Arte, in Rome). – Fig. 2: S. Aglietti – A. L. Fischetti – D. Rose (eds.), Catologue of the Exibition "Ciampino Archeologica" (Ciampino 2010). – Fig. 3, 4: by author.

References

Aglietti 2000

S. Aglietti, La strada romana ripercorsa dalla via Cavona da Ponte Lucano a Bovillae, JAT 10, 2000, 127–162.

Aglietti 2010

S. Aglietti, Gli scavi ottocenteschi, in: S. Aglietti – A. L. Fischetti – D. Rose (eds), Catalogo della Mostra, Ciampino Archeologica. L'apollo Pizio e i reperti dalla contrada Marcandreola – Ciampino 16 dicembre 2010–30 gennaio 2011 (Ciampino 2010) 17–27.

Aglietti et al. 2005

S. Aglietti – D. Rose, La villa di Quinto Voconio Pollione. Le vicende ottocentesche, in: S. Aglietti – D. Rose (eds), Tra Alba Longa e Roma. Studi sul territorio di Ciampino – Ciampino 15–16 aprile 2005 (Ciampino 2005) 79–108.

Buonocore 2001

M. Buonocore, Appunti di Topografia Romana nei Codici Lanciani della Biblioteca Apostolica Vaticana, IV (Roma 2001)

Fischetti 2019

A. L. Fischetti, La via Castrimeniense. Lo stato della ricerca, in: A. L. Fischetti – P. Attema (eds.), Alle pendici dei Colli Albani. Dinamiche insediative e cultura materiale ai confini con Roma – Groningen Archeological Studies 35 (Groningen 2019) 57–76.

Lanciani 1884

R. Lanciani, La villa Castrimeniense di Q. Voconio Pollione, BullComm 1884, 141–171.

Manigrasso 2010

R. Manigrasso, Un tratto dell'antico asse di collegamento tra le vie Appia e Castrimoeniense nel territorio di Ciampino (RM), Fasti on Line Documents and Research, 2010, 1–11.

Economy of Pottery Production: New Clues from Populonia

Martina Fusi[1]

The discovery of a missing handicraft district in Populonia used in the production of ceramics has changed the perception of the local pottery industry. In fact, the finds of pottery kilns were rare and rather random, except for the furnaces found in Vignale that produced bricks, common pottery and amphorae[2]. Two ceramic furnaces were recognized in Pescinone Basso following the excavations for the construction of a pipeline and were dated to the mid-7th century BCE.[3] Another kiln was reported at Podere S. Antonio[4] and two others along the coast between Poggio delle Granate and Cala del Pozzino.[5] Of doubtful interpretation is the furnace base discovered at the mouth of the Valgranita[6] ditch, as well as the ovens of Madonna di Fucinaia, interpreted as furnaces for the fusion of copper, although the hypothesis that they could be used for pottery production.[7]



Fig. 1: Baratti Gulf with the archaeological sites mentioned.

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The discovery of five spacers for firing ceramics, presented in this contribution, in the layers of an Etruscan house found in Baratti, allowed us to assume the presence on site of a ceramic workshop.[8]

Local production had been hypothesized for common pottery, jars with three blobs or three engraved lines under the rim,[9] and for some cups of *Atelier des Petites Estampilles*.[10] These assumptions had not been supported by the necessary evidence of finding either production indicators or by chemical analysis.

Based on this hypothesis, a study was launched to determine the local pottery production in Populonia, with special attention being paid to the Hellenistic period. The results of this investigation permitted the classification of a variety of pottery spacers found. Thanks to this study we have plausible affirmation of the existence of a local ceramic industry: typology and contextualization of the spacers allow us to hypothesize some of the different pottery classes manufactured in this area.

Populonia: New Discoveries on the Production of Ceramics

We obtained recent data on the pottery production of the Etruscan city thanks to the recent excavations carried out in the territory.

The emergency excavations following the flood which hit the Gulf of Baratti and Populonia on October 28, 2015, led us to discover a dwelling, so-called House of Seeds, perhaps related to the lower town of Populonia, or, anyhow, to living quarters close to the harbour district.[11] Four ring-shaped spacers and one bell-shaped spacer came from the excavation of the dwelling, dated between the 4th and the mid-3rd century BCE.[12]

Starting from 2012, the north-western sector of the Casone necropolis, occupied by tombs and industrial buildings, was the core of the archaeological researches. A second small group of ring spacers was found out in a layer of debris and materials dating back to the Hellenistic era and in deposit beds or land moved during the operations of recovery of the ancient iron slags carried out in the early 20th century.[13]

Lastly, a third and more substantial group of ring, bell and cylindrical-shaped spacers was recovered from the archaeological materials unearthed in Populonia, these have been stored in the warehouses of the former Soprintendenza Archeologia della Toscana.[14]

The Populonia Spacers: The Typology

The special purpose of spacers is strictly connected with the loading of the kiln. They were used to stack the pottery in columns and keep a constant gap, so as to ensure a consistent firing of the products.[15] To this end, the spacers had different shapes, according to the type of pottery to fire, and they could feature vent openings, holes or cuts,



Fig. 2: Ring-shaped spacers from the House of Seeds

made before firing. The holes, round and sometimes irregular, were made on the body of the supports, while the cuts, triangular, rectangular or semi-circular, were made on the edges.[16] Such expedients were essential to obtain a good outcome of the batch: from literary and iconographic sources, we know that accidents during the firing were rather frequent. For instance, we find a reference in the short poem "The Kiln" (*Vita Homeri Herodotea* 32) and the presence of prophylactic elements, like ithyphallic satyrs, in the depictions of scenes of ceramic firing.[17]

The typology selected for the Populonia spacers calls for a first division into groups, based on their shapes; within each group there is a variable number of types, separated according to their profile and section.

The first group includes the ring spacers, characterized by a short circular body and used to stack open-shape ceramics, with low or flared walls, like plates, cups and small cups.

- Type A: groove on the external face with rims projecting inside and flat stand (2 samples).
- Type B: groove on the external face with an enlarged upper rim projecting inside (3 samples).



Fig. 3: Bell-shaped spacer with vent devices from the House of Seeds.

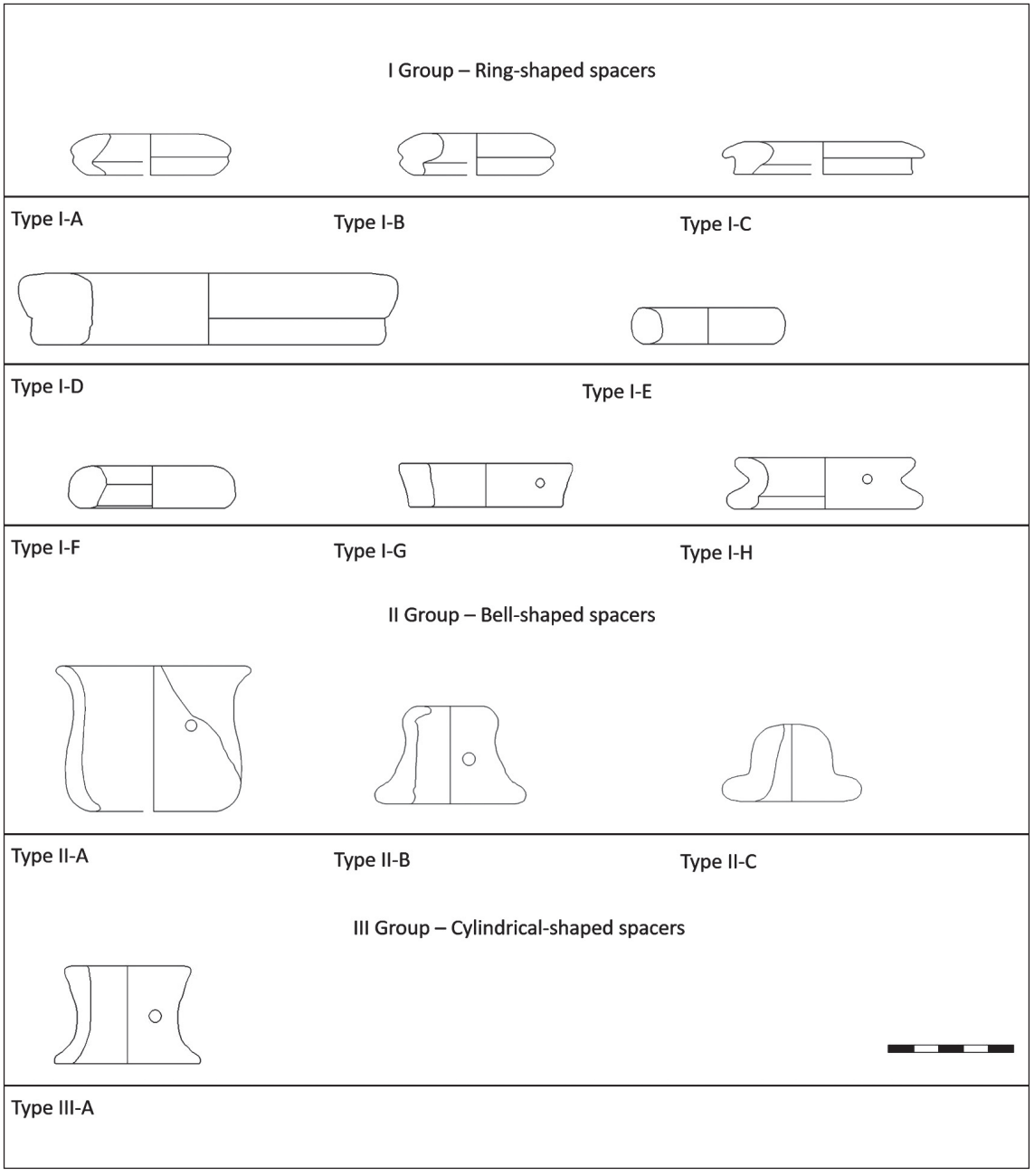


Fig. 4: Typology of Populonia spacers.

- Type C: enlarged upper rim projecting inside and splayed out on the outside; flat stand (1 sample).
- Type D: large size, with the upper rim projecting outside and straight internal face. Flat stand (1 sample).
- Type E: sub-circular section (5 samples).
- Type F: sub-circular section and oblique internal face (3 samples).
- Type G: trapezoidal section (1 sample).
- Type H: external convex profile and rims projecting outside (3 samples).

The second group includes the bell-shaped spacers, used to stack open artefacts with rather tall walls, like the *skyphoi.*

- Type A: "S" profile, with an outsplayed upper rim and a lower rim folding inside (1 sample).
- Type B: upper rim folding inside; enlarged lower rim projecting outside and flat stand (1 sample).
- Type C: slightly upper rim and enlarged lower rim projecting outside (1 sample).
- The third group includes those spacers characterized by a cylindrical or sub-cylindrical body, used to support vessels, either apodal with a convex bottom or with a tip, and stack open-shape pottery (*skyphoi*).
- Type A: Cylinder with a tapered body in the centre (1 sample).

Spacers, Ceramics and Waste: New Acquisitions and Working Assumptions

The spacers from Populonia are mainly ring-shaped, particularly attested those with a sub-circular section. Easy to shape and strong, rather small (diameter between 6 cm and 8.4 cm), they are made of purified clay spun on the lathe and can be compared with spacers attested in northern Etruria.[18] Among the rings, the type I-D is very large (diameter 15.4 cm) and has a coarse ceramic mix rich in inclusions. It was probably destined to the firing of amphorae, as it seems by the comparison with spacers coming from the Mazzanta area in Rosignano Marittimo.[19]

The excavation of the House of Seeds was crucial for the determination of Populonia local productions. The knowledge of the finding context enables us to read the archaeological data provided by the spacers, with the data provided by the materials found in combination with them.

In fact, a large amount of pottery dated between the end of the 4th century and the early 3rd century BCE. comes from the excavation: black-glazed and overpainted pottery; ceramics from the *Atelier des Petites Estampilles;* Greek-Italic amphorae; small jugs and *Genucilia* plates.[20] Among them, some fragments of *Genucilia* show a reddened paint and a burned ceramic body, typical feature of a bad firing process. The same features were also recognized on black-glazed ceramic fragments and pottery of the *Atelier des Petites Estampilles.*

Researchers also found sherds of over-fired pottery, and in particular, a bottom fragment with a ring base shows a grey-green colouring of the ceramic body, the deformation of the body and the surface scarred by tiny bubbles, signs caused by an excessive firing, either in terms of time or of acceptable temperature.

The badly-fired pottery shreds and the spacers, some of which feature vent openings, particularly suited for firing in reducing atmosphere, hence for black-glazed pottery, black figures, and red figures, allows us to assume a local production of those types of pottery. In order to clarify this issue, the spacers and some of the badly fired ceramic fragments will undergo archaeometric analyses for the characterization of the clay and determination of its origin.

In the current situation of the researches on the Populonia local production, the excavation of the House of the Seeds represents a turning point. The discovery of spacers, also a local product, the result of "craft secrets" of individual craftsmen, in a well-defined context, proves the activity of one or more workshops that the archaeological excavations did not find, although their existence is clearly confirmed by the relevant production tools.

Notes

[1] Università degli Studi di Pisa.

[2] Giorgi et al. 2009, 213–214.

[3] Fedeli – Romualdi 1997.

[4] Fedeli 1983, 418, nn. 329–330; Botarelli 2004, 229.

[5] Fedeli 1983, 393, n. 284.

[6] Isola 2006, 264–265.

[7] Sperl 1981.

[8] Baratti – Megale 2017, 58; Fusi 2017, 70–71.

[9] Shepherd 1992, 163–165.

[10] Romualdi 1992, 123.

[11] Baratti – Megale 2017, 58; Megale – Baratti 2016, 339–340.

[12] Fusi 2017, 70–71.

[13] De Tommaso et al. 2013, 475–477.

[14] Review performed by the writer. I thank Dr. Mario Iozzo (Director of the National Archaeological Museum of Florence), Dr. Giuseppina Carlotta Cianferoni (Curator of the "Etruscan Museum" section of the National Archaeological Museum of Florence), Dr. Andrea Camilli (Official Archaeologist of the Superintendence of Archeology, Fine Arts and Landscape for the Provinces of Pisa and Livorno), Dr. Miriana Ciacci and Dr. Sebastiano Soldi (responsible for warehouses of the National Archaeological Museum of Florence), Cinzia Innocenti (restorer at the Restoration Center of the former Soprintendenza Archeologia della Toscana).

[15] Cracolici 2003, 24.

[16] Cuomo Di Caprio 2007, 528; Cracolici 2003, 29.
[17] For example, *hydria* by the *Leagros Group* preserved in Munich (Staatliche Antikensammlung, Museum Antiker Kleinkunst, n. 1717; see Vidale 2002, 266–267) and *pinax* from Pentheskoufia (fragments F683+757+822+829; Vidale 2002, 83).
[18] Cherubini – Del Rio 1995.
[19] Cherubini – Del Rio 1995, 372.
[20] Megale – Baratti 2016, 339–340.

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Fig. 1–4: by author.

References

Baratti – Megale 2017
G. Baratti – C. Megale, La Casa dei semi, in: A. Camilli – G. Baratti – C. Megale (eds.), Archeologia in cantiere. I recuperi post-alluvione di Baratti e Populonia (Pisa 2017) 56–59.

Botarelli 2004
L. Botarelli, La ricognizione archeologica nella bassa Val di Cornia, in: C. Mascione – M. L. Gualandi (eds.), Materiali per Populonia 3 (Florence 2004) 223–226.

Cherubini – Del Rio 1995
L. Cherubinib – A. Del Rio, Appunti su fabbriche del territorio pisano e volterrano, AnnPisa 25, 1995, 351–388.

Cracolici 2003
V. Cracolici, I sostegni di fornace dal *kerameikos* di Metaponto (Bari 2003).

Cuomo Di Caprio 2007
N. Cuomo Di Caprio, La ceramica in archeologia 2. Antiche tecniche di lavorazione e moderni metodi di indagine (Rome 2007).

De Tommaso et al. 2013
G. De Tommaso – S. Genovesi – C. Megale, Piombino (LI). Necropoli di San Cerbone-Casone: relazione preliminare della campagna 2012, Notiziario della Soprintendenza per i Beni Archeologici della Toscana 8/2012, 2013, 475–477.

Fedeli 1983
F. Fedeli, Populonia. Storia e Territorio (Florence 1983).

Fedeli – Romualdi 1997
F. Fedeli – A. Romualdi, Una fornace etrusca dal territorio di Populonia, Rassegna di archeologia classica e postclassica 14, 1997, 205–221.

Fusi 2017

M. Fusi, I distanziatori per la cottura della ceramica, in: A. Camilli – G. Baratti – C. Megale (eds.), Archeologia in cantiere. I recuperi post-alluvione di Baratti e Populonia (Pisa 2017) 70–71.

Giorgi et al. 2009

E. Giorgi – A. Patera – E. Zanini, Indagini archeologiche al Vignale (Piombino, LI). Le campagne 2007–2008, in: F. Ghizzani Marcìa – C. Megale (eds.), Materiali per Populonia 8 (Firenze 2009) 209–220.

Isola 2006

C. Isola, Le ricognizioni archeologiche nel Golfo di Baratti. La campagna 2006, Notiziario della Soprintendenza per i Beni Archeologici della Toscana 2/2005, 2006, 264–265.

Megale – Baratti 2016

C. Megale – G. Baratti, Pendici di Poggio del Castello. Strada Baratti-Populonia. Scavo di abitato, Notiziario della Soprintendenza per i Beni Archeologici della Toscana 11/2015, 2016, 339–341.

Romualdi 1992

A. Romualdi, La ceramica a vernice nera, in: A. Romualdi (ed.), Populonia in età ellenistica. I materiali dalle necropoli. Atti del Seminario, Firenze 30 giugno 1986 (Florence 1992) 110–151.

Shepherd 1992

E. J. Shepherd, Ceramica acroma, verniciata e argentata, in: A. Romualdi (ed.), Populonia in età ellenistica. I materiali dalle necropoli. Atti del Seminario, Firenze 30 giugno 1986 (Florence 1992) 152–177.

Sperl 1981

G. Sperl, Untersuchungen zur Metallurgie der Etrusker, in: L'Etruria mineraria. Atti del XII Convegno di Studi Etruschi e Italici, Firenze, Populonia, Piombino, 16–20 giugno 1979 (Florence 1981) 29–50.

Vidale 2002

M. Vidale, L'idea di un lavoro lieve. Il lavoro artigianale nelle immagini della ceramica greca tra VI e IV secolo a.C. (Padova 2002).

Classical Food and Diet under the Microscope. Feeding Children in pre-Roman Apulia (Southern Italy): the Contribution of the Analyses of Organic Residues from Pottery

Maria Teresa Giannotta – Mariateresa Lettieri

Introduction

From the Prehistoric until Roman period, in settlements of the Mediterranean Basin small pots are found, with slender tubular spout and single handle which facilitate their use for dispensing small quantities of liquid substances.[1] In archaeological reports, these vases are called by different names with reference to shape or function.[2] Their field of utilization is debated: as a drinking vessel for children and invalids or to pour oil in the lamps, and as a pourer of liquids during the burial rites.[3] In addition, some vases with tubular spout from Gallo-Roman funerary contexts are qualified as baby bottles or breast pumps.[4] The shape has been found mainly as an object of grave furniture from Greece (Athens, Corinth, Olynthus)[5] and from southern Italy, both in Greek (Tarent and Metaponto)[6] and indigenous pre-Roman necropoleis, from 5th to 2nd century BC. Examples occur usually in child burials, but also in adult burials.[7] However, many varieties of this pot could be related to different functions or to different fields of use.

In the present study, chemical analyses were performed by Fourier Transform Infrared (FTIR) spectroscopy and Gas-Chromatography-Mass Spectroscopy (GC-MS) to investigate the presence and nature of the contents in some pots from children's tombs discovered in Manduria (fig. 1), in Messapia (southern Apulia). The analyses were aimed at understanding the use of certain vessel forms and their role in reconstructing children diet in pre-Roman southern Apulia. Messapian, grave assemblages for children food (fig. 2) and are characterized by the presence of small vases, as well as of figured and animal rattle terracottas (*tintinnabula*). Here two types of feeder, made of black-glazed pottery, from children burials dating to 3rd century BC are noted. One is a small closed vessel with base-ring, vertical handle and tubular spout. Examples from Messapian centers[8] and Greek colonies come from the published necropoleis.[9] The other type is an *askos* with base-ring, head cattle mouth, strap handle and tubular spout. From Manduria's children's grave goods, dating to 4th century BC, only small jugs made of Messapian pottery occur. Therefore, also samples taken from small jugs were analysed in order to verify the presence of organic residues.

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Fig. 1: Map of Messapia (Southern Apulia).

Archaeological Samples

The vases under investigation are shown in fig. 3 and described in table 1.

Analytical Methods

The internal surfaces of the containers were scraped with a scalpel to collect the material for the analysis.

The gathered material was finely ground, mixed with KBr, and compacted into a pellet. The KBr pellets were analysed in transmission mode, immediately after the preparation. A FT-IR ThermoNicolet Nexus spectrometer was used. The spectra were acquired in the range of 4.000–400 cm^{-1}, with a resolution of 4 cm^{-1} and 200 scans per measurement; the background spectrum was collected on KBr only. A doublet, due to the CO_2, appeared in the spectra at around 2.340 cm^{-1}, because the employed instrumentations were not purged with dry and CO_2-free air.



Fig. 2: Manduria (Ta): Tomb 1, via Fonte Pliniano: grave assemblages (3rd–2nd cent. BC).



Fig. 3: Manduria (Ta): Vases from children's grave goods (4th–3rd cent. BC).

Some samples were analyzed by GC-MS after lipid extraction with chloroform/methanol (in 2/1 ratio) to better characterize the detected residues. The applied procedures for these investigations were described in previous papers.[10]

Results

The strongest signals in the FT-IR spectra, at 1.090–1054 and 465–460 cm^{-1}, were due to silicates; a doublet at 792, and 777 cm^{-1} was indicative of quartz. These compounds mainly came from the pottery, but very weak signals above 3.600 cm^{-1} suggested the presence of small amounts of silicates from the environment.[11] In addition, bands in the range 1.413–1.420 cm^{-1} accounted for the presence of carbonates, which could be a component of the pottery, but could also originate from soil residues.

Organic compounds were found in most the analyzed vases. In particular, proteins and lipids have been found in traces into the small jug and in a greater extent in the *guttus.*

Signals at 2.962, 2.923, 2.854, and 1.737 cm^{-1} suggested the presence of organic compounds of lipid nature (fig. 4a). Bands at 1.685, 1.560–1.554 cm^{-1}, along with weak

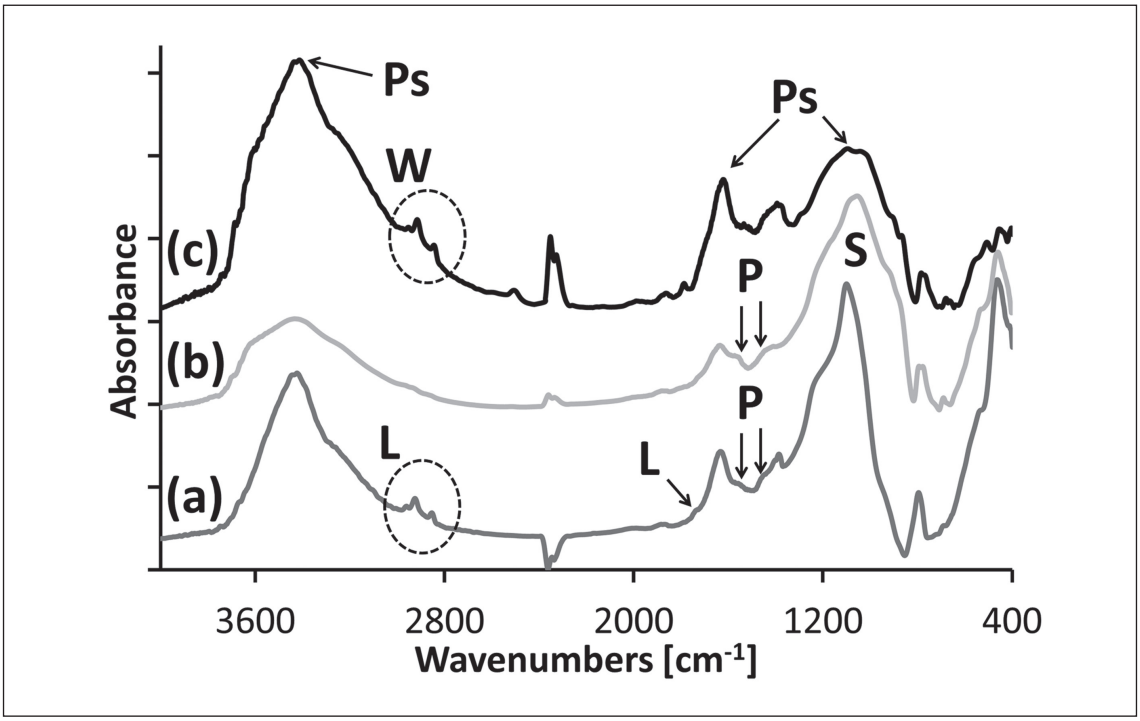


Fig. 4: FT-IR spectra of residues from (a) a feeder (sample 3), (b) a small jug (sample 5), and (c) the *askos* (sample 14). L = lipids, P = proteins, S = silicates, W = waxes, Ps = polysaccharides.

shoulder at 1.452–1.446 cm^{-1} (fig. 4a–b) are referred to as amides and form the typical pattern of proteinaceous materials.[12] Proteins easily suffer denaturation and rarely survive to decay. However, some studies report about proteinaceous compounds detected in archaeological pottery as collagen from boiled meat,[13] in containers with meal leftovers,[14] or in materials for make-up purposes.[15] The simultaneous presence of lipids and proteins let us suppose that the original content was a milk-based compound. It is to note that the absence of a clear peak at 1.745 cm^{-1} in the FT-IR spectra has been related to sheep milk.[16]

The GC-MS analysis of samples from these containers detected animal fats, with the obtained profiles suggesting a likely origin from milk. Other studies also report similar results.[17] The GC-MS technique is usually able to discriminate between milk, dairy, and other animal fats on the basis of the triacylglycerol content, the characteristic biomarkers of animal fats. Although the triacylglycerol distribution of fresh milk is very characteristic, the lipid materials after degradation become sometimes difficult to distinguish from each other.[18] For the same reason (i.e., degradation), the GC-MS results did not allow the unambiguous attribution to a particular animal species.

Different organic substances were found in the *askos*. In the FT-IR spectrum (fig. 4c), strong peaks appeared at 1.052, 1.618, and 3.321 cm^{-1}, a typical pattern of polysaccharides (i.e., sugars). Weaker but sharp peaks ascribable to waxes were observed at 2.960, 2.920, and 2.850 cm^{-1}. The presence of wax was confirmed by GC-MS, which also found *Pinaceae* resin in this sample.

Wax and polysaccharides in the same residue are highly indicative of a honey constituent.[19] On the other hand, the signal at 1.052 cm^{-1} can be attributed to fructose,[20] the most abundant sugar in honey.[21]

Conclusions

The chemical analyses of the residues have been very useful in identifying the content of the investigated pottery. In the pots from Manduria, proteins and fats have been detected in traces into the small jug and, to greater extent, into the feeders. The presence of such compounds confirms that these containers were used to give liquid or semisolid foods based on milk, probably of sheep. The two vascular forms characterize children's assemblages referring to 4th (small jug) and 3rd (feeder) centuries BC. Therefore, their use during breastfeeding and/or weaning can be supposed. However, their use to nourish the infirm cannot be excluded. The result obtained for the *askos* is particularly interesting, since traces of wax and sugars, both typical of honey, have been found. This natural food, known for its nutritional and curative properties, in the ancient world had also a strong ritual and cultural value.

The results of this research contribute to reconstruct the dietary choices for children and implement the data related to Classical food and diet in the Mediterranean basin.

Acknowledgements

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The authors are grateful to F. Notarstefano (University of Salento, Lecce) for the GC-MS analyses.

Notes

[1] Pomadère 2007; Dubois 2012.

[2] Guttus, feeder, side-spouted, thelastron, feeding bottle, vase-biberon, biberon, poppatoio, saugflasche, etc.: Pomadère 2007, 270–271; Dubois 2012, 336.

[3] Sparkes et al. 1970, 161; Carter 1998, 189. 229; Dubois 2013.

[4] Rouquet 2004.

[5] From Athens (Sparkes et al. 1970, 161–162), Corinth (Blegen et al. 1964, 139. 283, no.457.5 pl. 75) and Olynthus (Robinson 1933, 258, pl. 193).

[6] Lippolis 1994, 288–299 figg. 218–221. 327 fig. 265; Carter 1998, 229. 285–288 T.T. 203–199–111, 422 T.194, 406 T. 207.

[7] In Salento, at *Brundisium,* cfr. Cocchiaro et al. 1988, 80–81. 91–93. 119–120.

[8] From Vaste (Delli Ponti 1996, 203–205) and Soleto (Giannotta et al. 2015, 123–124).

[9] Cfr. Carter 1998, 645–655 feeder group iii F14, F5 and F9; Lippolis 1994, 265–290 fig. 199.

[10] Arthur et al. 2016, 97–118; Notarstefano et al. 2011, 465–471.

[11] Lettieri 2005, 48–54.

[12] Derrick et al. 1999, 108.

[13] Arthur et al. 2016, 97–118; Evershed et al. 1996, 429–436.

[14] Notarstefano et al. 2011, 465–471.

[15] Lettieri et al. 2017; Mai et al. 2016.

[16] Pappas et al. 2008, 1.271–1.277.

[17] Coulon 2004.

[18] Mirabaud et al. 2007, 6.182–6.192.

[19] Bliujiene et al. 2018, 144–165.

[20] Tewari et al. 2004, 3.237–3.243.

[21] Kędzierska-Matysek et al. 2018.

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References

Arthur et al. 2016
P. Arthur – M. T. Giannotta – M. Leo Imperiale – M. Lettieri – F. Notarstefano, L'analisi funzionale delle ceramiche Altomedievali nel Salento: il contributo delle indagini sui residui organici, StAnt 14, 2016, 97–118.

Blegen et al. 1964
C. W. Blegen – H. Palmer, R. S. Young 1964, The North Cemetery, Corinth 13 (Princeton 1964).

Bliujiene et al. 2018
A. Bliujienė – I. Matulaitienė – A. Garbaras – J. Šapolaitė – Ž. Ežerinskis – R. Ulozaitė – R. Bračiulienė, Dietary Aspects of the West Lithuanian People during the Late Roman and Early Migration Periods with Reference to Household and Funerary Pottery, PZ 93, 2018, 144–165.

Carter 1998
J. C. Carter, The Chora of Metapoto. The Necropolies (Austin 1998).

Cocchiaro et al. 1988
A. Cocchiaro – G. Andreassi, La necropoli di via Cappuccini a Brindisi (Fasano 1988).

Coulon 2004
G. Coulon, L'enfant en Gaule romaine (Paris 2004).

Delli Ponti 1996
G. Delli Ponti, Vaste – Poggiardo (Le). La necropoli di Fondo Aia, StAnt 9, 1996, 99–214.

Derrick et al. 1999
M. R. Derrick – D. C. Stulik – J. M. Landry, Infrared Spectroscopy in Conservation Science (Los Angeles 1999).

Dubois 2012
C. Dubois, Des objets pour les bébes? Le dépôt de mobilier dans les sépultures d'enfants en bas âge du monde grec archaïque et classique, in: A. Hermary – C. Dubois (eds.), L'enfant et la mort dans l'antiquité III. Le matériel associé aux tombes d'enfants. Actes de la table ronde internationale organisée à la Maison Méditerranéenne des Sciences de l'Homme (MMSH) d'Aix-en-Provence (20–22 janvier 2011), Bibliothèque d'Archéologie Méditerranéenne et Africaine 12 (Aix-en-Provence 2012) 329–342.

Dubois 2013
C. Dubois, L'alimentation des enfants en bas âge. Les biberons grecs, Les Dossiers d'Archéologie 365 – Mars/avril 2013, 64–67.

Evershed et al. 1996
R. P. Evershed – N. Tuross, Proteinaceous material from potsherds and associated soils, JASc 23, 1996, 429–436.

Giannotta et al. 2015
M. T. Giannotta – F. Gabellone – M. F. Stifani – L. Donadeo (eds.), Soleto ritrovata. Ricerche archeologiche e linguaggi digitali per la fruizione (Lecce 2015).

Kędzierska-Matysek et al. 2018
M. Kędzierska-Matysek – A. Matwijczuk – M. Florek – J. Barłowska – A. Wolanciuk – A. Matwijczuk – E. Chruściel – R. Walkowiak – D. Karcz – B. Gładyszewska, Application of FTIR Spectroscopy for Analysis of the Quality of Honey. Contemporary research trends in agricultural engineering, BIO Web Conf. 10, 2018, 02008.

Lettieri 2005
M. Lettieri, Infrared spectroscopic Characterization of Residues on Archaeological Pottery Through Different Spectra Acquisition Modes, Vib Spectrosc 76, 2015, 48–54.

Lettieri et al. 2017
M. Lettieri – M. T. Giannotta, Investigations by Ft-Ir Spectroscopy on Residues in Pottery Cosmetic Vases from Archaeological Sites in the Mediterranean Basin, International Journal of Experimental Spectroscopic Techniques 2, 2017, 2009.

Lippolis 1994
E. Lippolis (ed.), Catalogo del Museo Nazionale Archeologico di Taranto III,1. Taranto la necropoli: aspetti e problemi della documentazione archeologica dal VII al I sec. a.C. (Taranto 1994).

Mai et al. 2016
H. Mai – Y. Yang – I. Abuduresule – W. Li – X. Hu – C. Wang, Characterization of Cosmetic Sticks at Xiaohe Cemetery in Early Bronze Age Xinjiang, China, Sci Rep 6, 2016, 18939.

Mirabaud et al. 2007
S. Mirabaud – C. Rolando – M. Regert, Molecular Criteria for Discriminating Adipose Fat and Milk from Different Species by nanoESI MS and MS/MS of their Triacylglycerols: Application to Archaeological Remains, Anal Chem 79, 2007, 6.182–6.192.

Notarstefano et al. 2011
F. Notarstefano – M. Lettieri – G. Semeraro – L. Troisi, Food Habits and Social Identity During the Archaic Age: Chemical Analyses of Organic Residues Found on Pottery Vessels from the Messapian Settlement of San Vito dei Normanni (South-Eastern Italy). Proceedings of the 37th International Symposium on Archaeometry – Siena 13–16 May 2008 (Berlin 2011) 465–471.

Pomadère 2007
M. Pomadère, Des enfants nourris au biberon a l'Age du Bronze?, in: C. Mee – J. Renard (eds.), Cooking up the Past: Food and Culinary Practices in the Neolithic and Bronze Age Aegean (Oxford 2007) 270–309.

Pappas et al. 2008
C. S. Pappas – P. A. Tarantilis – E. Moschopoulou – G. Moatsou – I. Kandarakis – M. G. Polissiou, Identification and Differentiation of Goat and Sheep Milk Based on Diffuse Reflectance Infrared Fourier Transform Spectroscopy (DRIFTS) Using Cluster Analysis. Food Chem 106, 2008, 1.271–1.277.

Robinson 1933
D. M. Robinson, Mosaics, Vases, and Lamps of Olynthus found in 1928 and 1931, Olynthus 5 (Baltimore 1933).

Rouquet 2004
N. Rouquet, Du nouveau sur les tire-laits, L'archéologue 75, 2004, 10–11.

Sparkes et al.1970

B. A. Sparkes – L. Talcott – G. M. A. Richter, Black and Plain Pottery of the 6th, 5th and 4th Centuries B.C., Agora 12 (Princeton 1970).

Tewari et al. 2004

J. Tewari – J. Irudayaraj, Quantification of Saccharides in Multiple Floral Honeys Using Fourier Transform Infrared Microattenuated Total Reflectance Spectroscopy. J Agric Food Chem 52, 2004, 3.237–3.243.

Seleukeia Gadara (Umm Qays, Jordan) – Economic Aspects of the Building Process and the Strategic Concept of a Hellenistic Fortification

Brita Jansen

1. The Fortification

1.1 The Site

Gadara, the modern Umm Qays, is situated in the northwestern edge of Jordan, opposite the Golan Heights and overlooking Lake Tiberias, the Jordan Valley and Wadi al-Arab. After the battle of Paneion in 200 BC the former Ptolemaic settlement was taken over by the Seleucids under Antiochos III. who shortly after fortified the hilltop. The fortification can be dated by stratigraphy in the first half of the 2nd century BC.[1]

1.2 The Elements of the Fortification[2]

Only the southern flank and parts of eastern flank (fig. 1) are preserved whereas the northern and western part of the fortification was covered by the Roman extension of the settlement. The corners were marked by rectangular towers. Between these the southern flank was divided by two jogs with inserted gates, which were protected by pentagonal towers.

The gates next to the pentagonal towers and two more next to the north-eastern tower were spanned by segmental arches and could be locked with two aisled doors. In each pentagonal tower a sally part opened to the side opposite the gate. The towers were equipped with a high number of loopholes in two different sizes (fig. 2).

2. The Building Process

2.1 The Material

The building is made of a soft local limestone, which was cut immediately on the site. The material is easy to work but delicate for weathering. A harder limestone would have been available a little further outside the area, but would have generated higher costs for transport and have needed more time for processing.

The in-situ rock is available in geological layers and could easily be cut in ashlars. These had approximately homogeneous sizes[3] and could be assembled in a modular system: nearly every ashlar could be used as standing or lying stretcher or as header. In this way many ashlars could be prefabricated. Only very few ashlars had to be cut for their specific position (e. g. socle, change between two building elements, loop-holes, arches). The alignment of the ashlars, which resulted in an isodomic or pseudoisodomic masonry, was dependent on the thickness and the function of the particular section.

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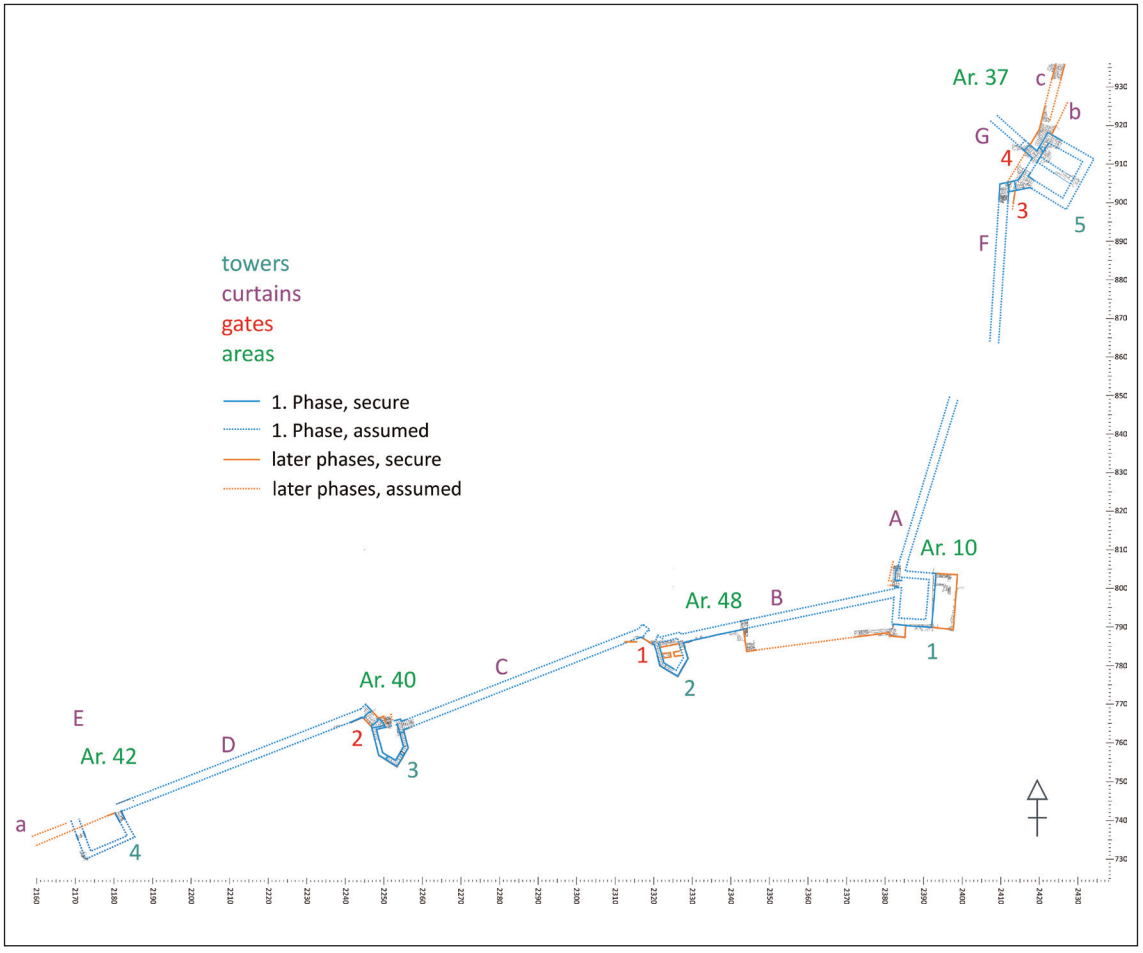


Fig. 1: Seleukeia Gadara (Umm Qays), southern and eastern flank of the hellenistic fortification.

2.2 The Assembly

Before assembly the ashlars were fitted on the sides, where an anathyrosis permitted very fine straight joints. After assembly the upper sides were cut as preparation for the next layer. They were set in a thin layer of gypsum mortar, which facilitated the setting of the ashlars and the bonding of the blocks. Several teams started simultaneously, divergences in the height of different units of the project were evened out by jogged ashlars. Every two to four layers a uniform level was established over a longer distance (fig. 3). By this it was possible to use machines like a "dikolos" to assemble the ashlars starting from the sections on higher ground level.[4] The construction of the towers was done by more specialised teams, which also were responsible for preparing the connection to the curtains.

There was no finishing work on the frontage after assembling the ashlars. The smooth exterior was the result of an effective way of cutting the stone and not following aes-



Fig. 2: Tower 3 with bricked up sally port.

thetic or representative requirements. Only the ashlars of the socle had bevelled edges what most probably followed the defensive needs.[5]

2.3 Compartment Walls as Method for Saving Material

Whereas the walls of the towers and the socles were massively made of regular ashlars, the curtains above the socle are "compartment walls". This means the façade is composed of a regular alternation of headers and stretchers. The alignment changes every layer. The headers from both sides meet in the middle of the wall. In the adjacent layers a header is inserted between the stretchers on the outside. By this, vertical internal walls are created in intervals of half of the length of an ashlar. The space in between these internal walls was filled with earth and rubble (fig. 4).

This technique of compartment walls was most probably developed in the Ptolemaic Empire and used for fortifications in Cyprus and Central Syria.[6] In these regions the building material was similar to the soft limestone in Gadara. The technique is especially suited for the requirements of fortifications, which required a particularly economic building technique because of their huge dimensions. By this, the amount of ashlars could be reduced by two for every seven ashlars and the smoothing of the ashlars could be restricted.

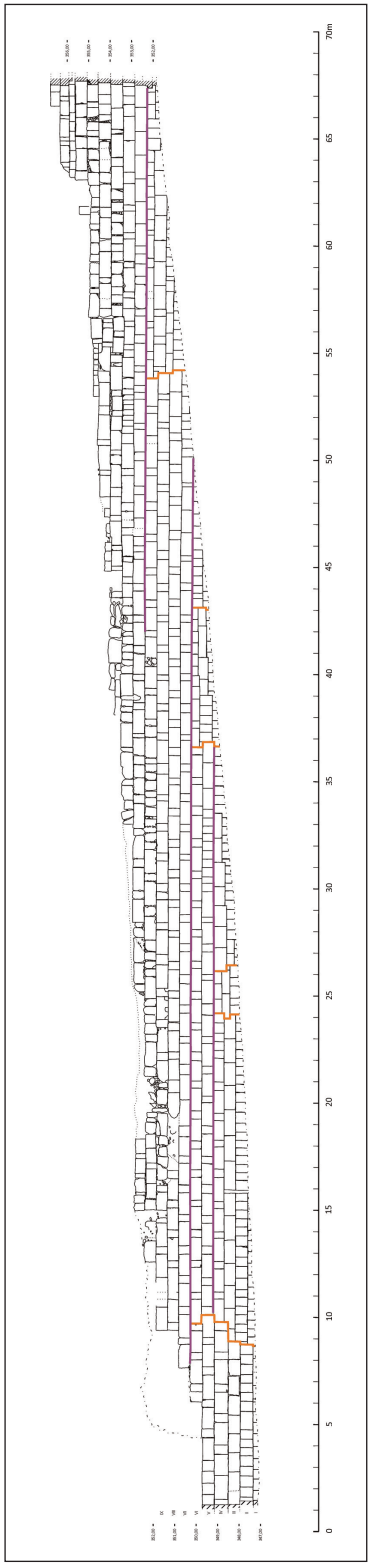


Fig. 3: Curtain C, construction joints and horizontal joints running through larger sections.



Fig. 4: Curtain C, view of a section of a compartment wall.

2.4 The Construction Time

In order to estimate the time needed by every team for a particular section of wall a group of four masons will be assumed, each of them cutting 3 to 4 ashlars daily. For a section of 13-metre curtain wall with an assumed height of 10 layers (5,5 m) 728 ashlars are needed. So every stonemason would have to process 188 ashlars, which would take about 59 days. In an analogous calculation the stonemasons would need approx. 42 days to process the stones for a pentagonal tower.

2.5 Conclusions

Like no other category of ancient buildings fortifications required an economic acquisition of building material, masonry work and assembling, due to the huge dimensions of the constructions and sometimes the time pressure, under which in case of immediate danger, the project needed to be finished.

In Gadara the following measures have been taken:

- The stones were cut directly on site what is cost effective and time saving.
- A modular system was used for the ashlar formats. In this way many ashlars could be prefabricated, which again saves time.
- Compartment masonry was used for the less endangered parts of the curtain walls.
- The ashlars have a simple shape for the predominant sections of the fortification and could thus also be manufactured by untrained workers.
- The work was divided into different sections so that parallel work could be carried out.
- The processing and smoothing of the stones took place in an economical way, so that the number of work steps was reduced.

3. The Strategic Concept

3.1 The Strategy of Active Defence

In the original planning the fortification showed many elements of an active defence: the towers situated in short distance of 56 to 67 m had many loopholes for different purposes and different types of weaponry. Whereas the loopholes in general got bigger in the 4th century BC following the development of artillery, the loopholes in Gadara were more suited for smaller artillery.

Possible artillery:

- pentagonal towers (8 × 12 m): torsion bolt shooter and small torsion stone throwers (5- or more likely 1 mina-shots), which were designed for use against people
- rectangular towers 1 and 4 (11 × 14 m; * × 13 m): torsion bolt shooters and small torsion stone throwers (5 mina-shots), which again were designed for use against people
- rectangular tower 5 (14 × 15 m): bigger torsion stone throwers (10 mina-shots), that could be used against people and catapults.

Narrow ports on the sidewalls of both pentagonal towers allowed sallies of military units in case of siege. The active strategy required a relatively high number of trained manpower. Following the calculation of McNicoll concerning the southern wall of Milet the manning of a tower required 15 and a curtain 20 persons plus a reserve of 50.[7] Assuming a total number of towers in Gadara of 11–13 there would have been needed 385–500 men for the total fortification.

3.2 Changes in the Strategic Concept

Shortly after or even during the erection of the fortification the strategic concept was changed and the sally ports were blocked. The inserted walls had loopholes. This means the defensive function of the towers persisted and archers were available at least in case of danger. But it seems that the additional openings were considered more a weak point than sallies a helpful instrument against enemies. This can be seen as a hint that necessary human resources for active defence were no longer available.

3.3 Conclusions

The strategic concept and the equipment with weaponry was not always following the "state of the art" in the poliorcetic and fortificatoric techniques but was dependent on the economic facilities of the attacking and defending forces:[8]

- Active defence might have been the only "way out" for a besieged city but required a high number of soldiers: obviously these were not available in Gadara for long term so that the sally ports were closed.
- If the attacking forces did not dispose of elaborate weaponry like siege towers but used ladders for surmounting the walls, the defensive weaponry had to be adjusted: the weaponry in Gadara was more oriented against people than against catapults.

Notes

[1] Jansen 2020, 117; Konrad 2013, 104–108. 115; Kenrick 2000.

[2] More detailed description: Hoffmann 2000, 180–210; Jansen 2016b; Jansen 2020.

[3] Sizes of the ashlars: 92–123 × 36–44 × 55–58 cm.

[4] A reconstruction of a "dikolos": Bessac 1997, fig. 8–6.

[5] Bevelled edges as a measure to prevent the levering out of stones: Bessac 1997, 31–32.

[6] Jansen 2020, 143–147.

[7] McNicoll 1997, 148.

[8] Jansen 2016a, 104.

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References

Bessac 1997
J.-C. Bessac, La construction des fortifications hellénistiques en pierre de Doura-Europos (Syrie) (Dissertation Lille 1997) (Microfiche).

Hoffmann 2000
A. Hoffmann (under cooperation with C. Bührig), Die Stadtmauern der hellenistisch-römischen Dekapolisstadt Gadara, AA 2000, 175–233.

Jansen 2016a
B. Jansen, Defensive Funktionen, in: Müth et al. 2016, 101–125.

Jansen 2016b
B. Jansen, Gadara, in: Müth et al. 2016, 273–277.

Jansen 2020
B. Jansen, Die hellenistische Befestigung von Seleukeia Gadara (Umm Qays) (Rahden/Westf. 2020).

Kenrick 2000
Ph. Kenrick, Fine Wares from the City Wall Section at Beit Nawashi (Area XLII), AA 2000, 235–262.

Konrad 2013
M. Konrad, Hellenistische und römische Feinkeramik aus Gadara: Stratifizierte Fundensembles und deren Evidenz für die Periodisierung des Platzes von der Seleukidenzeit bis zum Ersten Jüdischen Aufstand, in: A. Hoffmann – C. Bührig, Forschungen in Gadara/Umm Qays von 1987 bis 2000 (Rahden/Westf. 2013) 103–131.

McNicoll 1997
A. W. McNicoll, Revised and Supplemented by N. P. Milner, Hellenistic Fortifications from the Aegean to the Euphrates (Oxford 1997).

Müth et al. 2016
S. Müth – P. I. Schneider – M. Schnelle – P. de Staebler, Ancient Fortifications. A Compendium of Theory and Practise. Fokus Fortification Studies I (Oxford 2016).

‘Garbage Archaeology Reloaded’ – An Interdisciplinary Approach to Animal Bones as Raw Material Supplier at the Roman Site of Carnuntum (Austria)

Nisa Iduna Kirchengast

Introduction

Beside written records, garbage represents one of the most important sources of information about everyday life in the Roman era. At that time, unlike today, objects and materials were usually discarded as garbage only if it did not make any sense or was impossible to recycle them.[1] For as long as possible a large proportion of the systemic material culture often remained in an active system to be used and transformed in various ways. Not only metal, stone or glass counted as precious and recyclable raw materials but animal remains also played an important role in this context: for instance in the production of needles or combs as well as the consumption of bone marrow as a source of food. For that reason if such objects are found in the course of archaeological investigations as garbage, they are considered archaeological material which has been intentionally transformed from a systemic context[2] (i.e. recyclable raw materials) into an archaeological one (‘garbage’). Therefore garbage provides an important source of information and has a huge impact on cultural-historical informative values.[3]

Animal bones as traces of human behaviour contain an immense amount of information to be used in various ways within archaeological research. At many excavation sites they present one large group of archaeological findings. In fact, animal remains from the archaeological record provide the opportunity to reconstruct not only dietary patterns but both common and specific human-animal relationships as well as economic production processes.[4] The detailed study of animal bones in form of discarded material resulting from human activities may offer the opportunity to answer questions of their multiple functions and forces affecting single bones, resulting in a biography of the object itself.[5]

In addition to the zooarchaeological material, the knowledge of food and meat consumption in Roman times is based on various other sources such as written records[6] and figurative representations.[7] Together they offer comprehensive information for the research of livestock husbandry, the utilisation of animal remains and the preparation of meat dishes during the Roman era.

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Zooarchaeological Investigations at 'Haus 2' in the Civilian City of Carnuntum

Researchers recognised the importance of the study of animal bones as a separate part of the archaeological record relatively late. At many excavations during the 19th and the first half of the 20th century animal bones, in contrast to human remains, were not appreciated as a very important source of data. That was the reason why many of the bones were simply thrown away without any detailed description often, usually not even numbered and accounted for.[8] This situation started to change only in the second half of the 20th century. Today zooarchaeological studies are essential parts of archaeological studies and play an important role in various fields of archaeology.

This paper deals with the wide range of information offered by the zooarchaeological material on consumer behaviour and the handling of animal waste products. The systematic evaluation of a clearly defined case study is presented[9] in detail. The area of interest of this investigation[10] – discussed here briefly in the form of a preliminary report – is the ancient civilian city of Carnuntum, located at the present-day town Petronell-Carnuntum (Lower Austria). The investigation area is located in the open-air museum 'Archäologischer Park Römerstadt Carnuntum'[11] at the building unit 'Haus 2'.[12] The building complex has been almost completely excavated in the years 2003 to 2005. Five occupation phases, ranging from the late 1st century AD to the 4th century AD, have been reconstructed.[13] The area covers approximately 930 m² and is located between the insulae 'Haus 1'[14] and 'Haus 3'[15] near the former ancient city border in the south of the Roman civilian city (fig. 1). The complex has been used both economically and residentially. With emphasis on the first two centuries AD there is evidence for various economic production processes, among others there are traces of a waste disposal site as well as a production site for clay bricks.[16] For the later phases (from phase 4 in the end of the 2nd century AD onwards) it is possible to document a housing construction with traces of repeated structural reconstruction.

The zooarchaeological analysis of selected samples[17] attempts to throw light on the consumption behaviour and the use of animal remains at this Roman site located at the *limes Pannonicus.* The aim of the ongoing investigation is therefore the analysis of the handling of waste in relation to the diverse deposition processes in the area of 'Haus 2'. Based on an interdisciplinary approach, the animal bones are evaluated using established methods, mainly macroscopic and quantitative analysis.[18] Special attention is paid to slaughter practices and the handling of the resulting animal remains with regard to various economic aspects and associated production processes (fig. 2). The results of this zooarchaeological investigation are therefore analysed[19] regarding[20] theories on site formation processes.[21] The intention of this analysis is to gain a deeper insight into the economic activities in the area of 'Haus 2' by a synthesis of an archaeological feature biography and the find material composition,[22] e.g. regarding the role of primary and secondary waste.[23] To do so, the spatio-temporal archaeological data sets

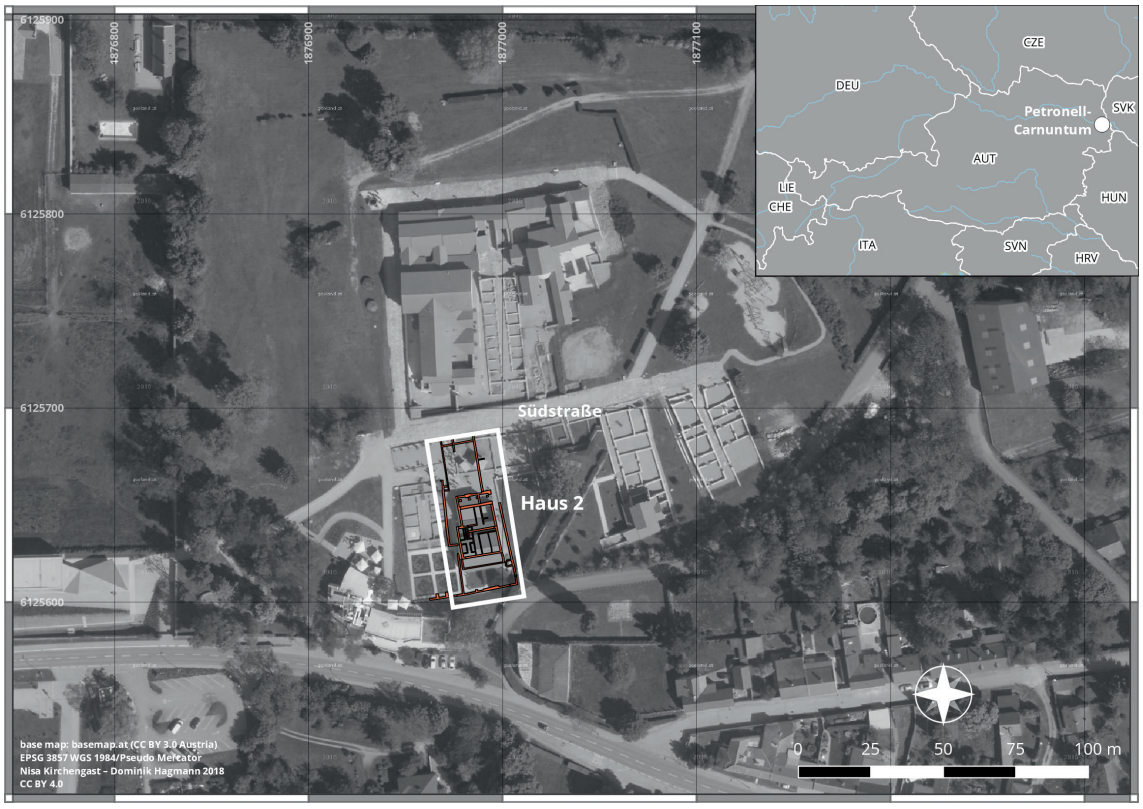


Fig. 1: Location of ‘Haus 2’ in the archaeological open air museum ‘Römerstadt Carnuntum’.



Fig. 2: Cut marks on a cattle rib of ‘Haus 2’ in Carnuntum.

related to the site are permanently combined with the zooarchaeological record using a geographic information system.

As for the material analysed so far,[24] there is a large amount of slaughterhouse waste from typical Roman farm animals, especially cattle, sheep and pigs.[25] The current results of the investigation also suggest various techniques of meat production as well as possible weightings in consumer behaviour. The use of the animals as meat suppliers is evidenced by a variety of chop and cut marks on the skeletons from which certain further processing or preparation of the meat can be inferred. The use of the bone material for further processing, which is often followed by primary food production, can also be assumed for several samples from 'Haus 2'.

This factual and contextual analysis and interpretation of the zooarchaeological material is one of the key points of the current study and makes it possible to obtain a comprehensive picture of the zooarchaeological material, especially regarding its economic functions.

Summary and Outlook

The analysis of animal remains in the archaeological context of the ancient Roman civilian city of Carnuntum is to serve as an example for a feature-orientated interpretation of the zooarchaeological material within the context of an urban settlement. The mutual statements and additional information on the taphonomic processes between the formation of animal waste and its landfill can be more accurately determined by such an analysis. It presents an attempt to find contextual answers in archaeological-historical-cultural-scientific terms, based on a comprehensive interdisciplinary approach.

Notes

[1] Thüry 2001, 3 f.

[2] See Schiffer 1972, 157.

[3] Czeika et al. 2011, 70.

[4] Benecke 1994, 11 f.

[5] See Deschler-Erb 2008; Schibler – Schmid 1989.

[6] E.g. Columella, *de re rustica* or Varro, *res rusticae.*

[7] See as an example Toynbee et al. 1983, 11–23.

[8] Peters 1998, 2 f.

[9] See already introduced in Kirchengast 2018. Another publication about this case study is currently in print.

[10] This study is carried out in course of a master's thesis (Supervisor: Univ.-Prof. Dr. Günther Schörner, Co-Supervisor: Mag. Dr. Günther Karl Kunst) at the Department of Classical Archaeology at the Uni-

versity of Vienna. Currently, the investigations are still in progress. The preliminary results have been presented as a poster at the '17. Österreichischen Archäologentag' (Salzburg, February 2018) and at the '19th International Congress of Classical Archaeology' (Cologne/Bonn, May 2018).

[11] Römerstadt Carnuntum 2018.

[12] Humer – Konecny 2004.

[13] The excavations of 'Haus 2' have been published in Baier et al. 2008a; the preliminary reports of the excavations are published in Humer – Konecny 2004; Humer et al. 2005b; Baier et al. 2006; the report on the archaeological finds of 'Haus 2' has been published in Behling et al. 2008.

[14] Humer et al. 2005a.

[15] Baier et al. 2008a.

[16] Baier 2008, 28 f.

[17] At this point I want to thank Mag. Franz Humer and Dr. Eduard Pollhammer for the opportunity to work on the find material. Likewise, I thank Dr. Andreas Konecny, Mag. Christoph Baier and Mag. Alexandra Rauchenwald very much for the ongoing support.

[18] I.a. Schmid 1972; O'Connor 2003; Driesch 1976.

[19] See LaMotta – Schiffer 1999; Marom – Bar-Oz 2013.

[20] See the methodical approach in Kunst 2002; and in Schmidig – Deschler-Erb 2015.

[21] The considerations of this investigation are based on the concepts of Michael B. Schiffer: Schiffer 1972; Schiffer 1983; Schiffer 1987.

[22] Cf. Kirchengast 2018.

[23] See Schiffer 1987, 58–64.

[24] At the time of writing this article (June 2018), around 30% of the sampled assemblage has been analysed yet.

[25] Peters 1998, 5.

Image Credits

Fig. 1: Base map: basemap.at [CC BY 3.0 Austria], Nisa Kirchengast – Dominik Hagmann 2018. CC BY 4.0 – Fig. 2: Photo: K. Klein, V. Böck 2017, CC BY 4.0.

References

Baier et al. 2006

C. Baier – F. Humer – A. Konecny, Haus II in der Zivilstadt von Carnuntum. Vorbericht über die abschließenden Untersuchungen im Jahr 2005, FÖ 2005(44), 2006, 532–534.

Baier 2008

C. Baier, Frühe Baubefunde im Areal von Haus 2 der Zivilstadt Carnuntum, in: G. Grabherr – B. Kainrath (eds.), Akten des 11. Österreichischen Archäologentages in Innsbruck. 23.–25. März 2006, IKARUS 3 (Innsbruck 2008) 27–36.

Baier – Humer 2008
C. Baier – F. Humer, Untersuchungen in Haus III der Zivilstadt Carnuntum, FÖ 2007, 46. 2008, 691–694.

Baier et al. 2008a
C. Baier – F. Humer – A. Konecny, Zivilstadt Carnuntum – Haus II. Die Grabungen im römischen Stadtviertel des Archäologischen Park Carnuntum in den Jahren 2003–2005, CarnuntumJb 2007, 2008, 177–230.

Behling et al. 2008
C.-M. Behling – D. Katzjäger – I. Müller – G. Parrer – A. Rauchenwald – S. Stökl, Zivilstadt Carnuntum. Fundbericht Haus 2, CarnuntumJb 2008, 2008, 149–286.

Benecke 1994
N. Benecke, Der Mensch und seine Haustiere. Die Geschichte einer jahrtausendealten Beziehung (Stuttgart 1994).

Czeika et al. 2011
S. Czeika – S. Jäger-Wersonig – M. Müller, Die Entsorgung von Abfall, in: K. Fischer Ausserer (Hrsg.), Entlang des Rennwegs. Die Römische Zivilsiedlung von Vindobona (Vienna 2011) 69–71.

Deschler-Erb 2008
S. Deschler-Erb, Biologische Rohstoffe und römisches Handwerk, Zeitschrift für schweizerische Archäologie und Kunstgeschichte 65(1–2), 2008, 17–22.

Driesch 1976
A. v. d. Driesch, Das Vermessen von Tierknochen aus vor- und frühgeschichtlichen Siedlungen. Aus dem Institut für Paläoanatomie, Domestikationsforschung und Geschichte der Tiermedizin der Universität München (Munich 1976).

Humer – Konecny 2004
F. Humer – A. Konecny, Haus II in der Zivilstadt von Carnuntum. Vorbericht über die Untersuchungen im Jahr 2003, FÖ 2003,42, 2004, 717–721.

Humer et al. 2005a
F. Humer – A. Konecny – D. Maschek, Zivilstadt Carnuntum – Haus I. Die Grabungen im römischen Stadtviertel des Archäologischen Parks Carnuntum in den Jahren 2001 und 2002, CarnuntumJb 2004, 2005, 89–178.

Humer et al. 2005b
F. Humer – A. Konecny, Haus II in der Zivilstadt von Carnuntum. Vorbericht über die Untersuchungen im Jahr 2004, FÖ 2004(43), 2005, 896–901.

Kirchengast 2018
N. I. Kirchengast, Fleischkonsum und Umgang mit Schlachtabfällen im Kontext ökonomischer Formationsprozesse in Carnuntum, Österreich, Forum Archaeologiae 86(3), 2018, <https://homepage.univie.ac.at/elisabeth.trinkl/forum/forum0318/86kirchengast.htm> (24. 09. 2020).

Kunst 2002
G. K. Kunst, Die Tierreste aus Mautern a. d. Donau-Favianis. Grabung Frauenhofgasse 1996, in: S. Groh – H. Sedlmeyer (eds.), Forschungen im Kastell Mautern-Favianis. Die Grabungen der Jahre 1996 und 1997, Der römische Limes in Österreich 42 (Vienna 2002) 469–544.

LaMotta – Schiffer 1999

V. M. LaMotta – M. B. Schiffer, Formation Rocesses of House Floor Assemblages, in: P. M. Allison (Hrsg.), The Archaeology of Household Activities (London, New York 1999) 19–29.

Marom – Bar-Oz 2013

N. Marom – G. Bar-Oz, Zooarchaeology and Social Identity in Bronze and Iron Ages Israel: A Research Framework, in: B. DeCupere – V. Linseele – S. Hamilton-Dyer (eds.), Archaeozoology of the Near East X. Proceedings of the Tenth International Symposium on the Archaeozoology of South-Western Asia and Adjacent Areas (Brussels, 28th – 30th June 2011), Ancient Near Eastern Studies Supplement 44 (Leuven 2013) 227–241.

O’Connor 2003

T. P. O’Connor, The Analysis of Urban Animal Bone Assemblages. A Handbook for Archaeologists, The Archaeology of York 19 (New York 2003).

Peters 1998

J. Peters, Römische Tierhaltung und Tierzucht. Eine Synthese aus archäozoologischer Untersuchung und schriftlich-bildlicher Überlieferung, Passauer Universitätsschriften zur Archäologie 5 (Rahden 1998).

Römerstadt Carnuntum 2018

Römerstadt Carnuntum, <https://www.carnuntum.at/de/carnuntum-1> (24. 09. 2020).

Schibler – Schmid 1989

J. Schibler – E. Schmid, Tierknochenfunde als Schlüssel zur Geschichte der Wirtschaft, der Ernährung, des Handwerks und des sozialen Lebens in Augusta Raurica, Augster Museumshefte 12 (August 1989).

Schiffer 1972

M. B. Schiffer, Archaeological Context and Systemic Context, American Antiquity 37(2), 1972, 156–165.

Schiffer 1983

M. B. Schiffer, Toward the Identification of Formation Processes, American Antiquity 48(4), 1983, 675–706.

Schiffer 1987

M. B. Schiffer, Formation Processes of the Archaeological Record (Salt Lake City 1987).

Schmid 1972

E. Schmid, Atlas of Animal Bones. For Prehistorians, Archaeologists and Quaternary Geologists (Amsterdam 1972) 159.

Schmidig – Deschler-Erb 2015

R. Schmidig – S. Deschler-Erb, Archäozoologische Untersuchungen zu den Parzellen 8 und 12 in den Canabae von Vindonissa, in: H. Flück – Ö. Akered – M. Bolliger – S. Deschler-Erb – S. Jeanloz – S. Kramis – S. Lo Russo – R. Schmidig (eds.), Vor den Toren von Vindonissa, Veröffentlichungen der Gesellschaft Pro Vindonissa 23 (Basel 2015) 318–355.

Thüry 2001

G. E. Thüry, Müll und Marmorsäulen: Siedlungshygiene in der römischen Antike, in: G. E. Thüry (ed.), Müll und Marmorsäulen. Siedlungshygiene in der römischen Antike, Zaberns Bildbände zur Archäologie Sonderbände der Antiken Welt (Mainz am Rhein 2001).

Toynbee et al. 1983

J. M. C. Toynbee – M. R. Alföldi – D. Misslbeck, Tierwelt der Antike, Kulturgeschichte der antiken Welt 17 (Mainz am Rhein 1983).

Work in Progress. Trade Depictions on the so-called Topographical Border of the 'Yakto Mosaic'

Patrick Kremser

Since its discovery in 1932, the so-called Yakto mosaic[1] (fig. 1) – also called 'Megalopsychia mosaic' – has been declared as "an historical and topographical monument of the first order":[2] The framing imagery frieze – the 'topographical border'[3] – adds to a series of architectural depictions a crowning layer of descriptive toponyms. At least two buildings labelled Καστα̣λία and ἡ Παλλάς on the Southern corner of the border can with no doubt be attributed to two monumentally extended antique sources near Daphne, and another building labelled τὸ ὀλυμπιακόν actually shows the Olympic stadium of Daphne.[4] Presumably, the whole border refers to actual buildings in Antioch's prominent suburb Daphne, maybe even in Antioch itself. While scholars have subsequently sought to understand the representational intent and pattern of the sequence of buildings,[5] the underlying narrative of the border becomes apparent when the mosaic is viewed as a whole: the central medallion shows the personification of generosity

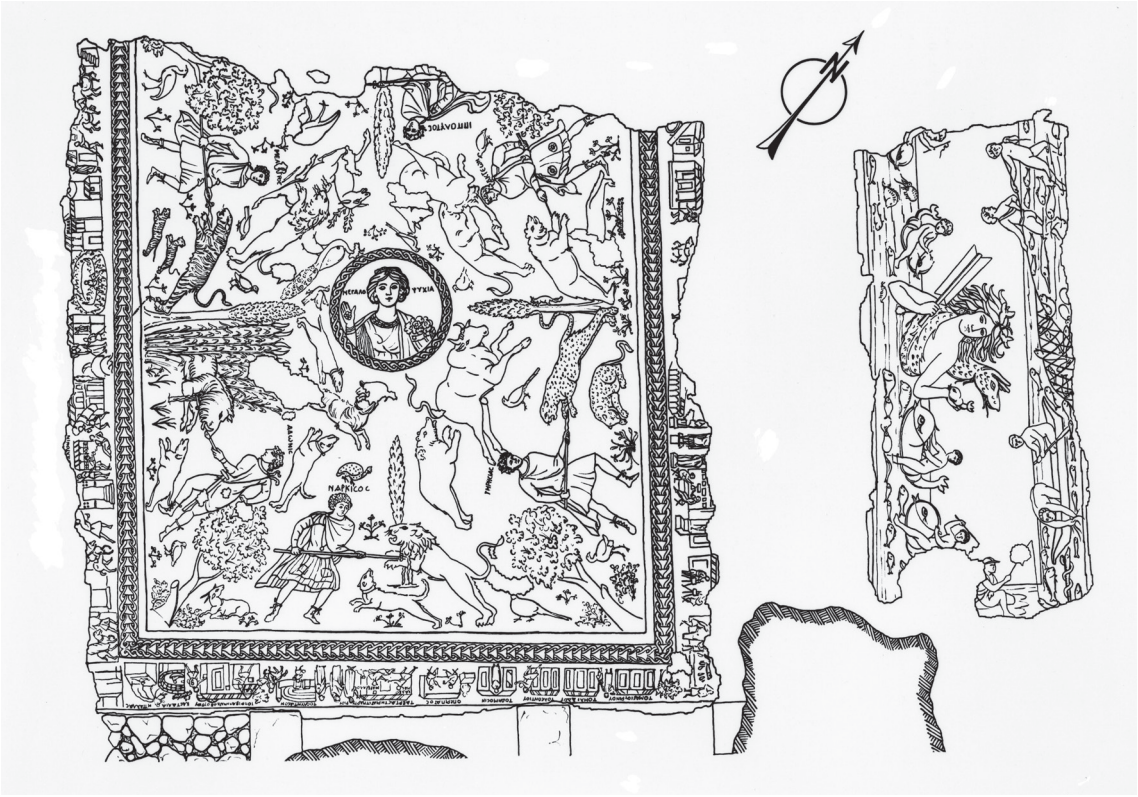


Fig. 1: Plan of Megalopsychia and Thetis mosaics. Excavated by Prost in 1932.

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(Μεγαλοψυχία), a virtue the client obviously prides himself on.[6] Accordingly, the topographical border shows and names buildings from the surrounding area in whose construction or renovation the client has rendered outstanding services, thus staging his munificence and patronage.[7]

For a long time the figural layer of the border, that is situated off the architectural depictions, remained rather untouched by these considerations. These figures have in most cases been considered to fill in the architectural scenery to provide an image of a lively city and its landscape, in which represantatives of two social classes appear, each befitting their social status.[8] However, the exemplary observation of three figural 'scenes' on the Eastern corner of the border (fig. 2–3) shows that these images and their contribution to understanding the topographical border have been underestimated.

The best discernable and therefore best recognizable image (scene 2) shows two barefooted figures dressed in short sleeveless tunics, standing on both sides of what seems to be an upright standing solid trunk. The figure on the left holds something onto the trunk, while it has its right arm raised above it. Comparing it to a funerary relief of the 2nd century AD, nowadays displayed in Dresden,[9] we can identify this person as a butcher. He is holding a piece of meat onto the chopping block, whereas the meat



Fig. 2: Raised panel of topographical border on the Mosaic of Megalopsychia. Excavated in 1932. – Right: Scenes 1 and 2.



Fig. 3: Raised panel of topographical border on the Mosaic of Megalopsychia. Excavated in 1932. – Left (tilted by 90°): Scene 3.

chopper in the raised right hand must be reconstructed. The chopping block (*caudex*) differs from the Dresden example, which provides a three-legged version, but several other examples do show this trunk-shaped type of *caudex.*[10] The activity of the right figure, holding a vessel or bucket in his hands, can also be explained by looking at the large vessel standing on the other side of the *caudex* on the Dresden and the Ostia relief. It could have been used for collecting either waste or innards.[11]

The scene on the left (scene 1) once again shows two barefooted figures in short sleeveless tunics, each one standing beside something that clearly reminds of the three-legged *caudex* from the Dresden relief, which seems to be an indispensable feature of the preparation of meat and fish.[12] The key to understanding this scene lies in identifying the sort of utensils that is being used by the workmen: it resembles small shovels or large *spatulae.*[13] Despite the divergent scientific approaches, the red *tesserae* which they treat could well show mince that is being prepared on the *caudices.*[14]

The third scene on the right brings to mind the broad series of everyday life depictions from Pompeii that show buyers and vendors behind their counters.[15] In this case, the vendor stands behind a large table, on which seven elongated objects lie, generally interpreted as fish.[16] He is dressed in a brownish sleeved tunic and reaches down to his customer on the right, holding another fish in his outstretched arms. The buyer is dressed in a short, sleeved tunic and wears high black boots. He has his right arm raised as to gesticulate or to receive the wares, whereas his left hand on his hips holds a small round object. Looking at other vendor scenes, e.g. a sarcophagus in Ancona,[17] where the left figure holds a small *marsuppium* in his right hand and thus can be identified as the customer, this small object on the topographical border could also be such a *purse,* leaving no doubt in interpreting this person as a buyer and the whole tableau as a *vending* scene.

Figural depictions are no indispensable feature within topographical friezes that show existing buildings or cities and name them by means of toponyms. In fact, prominent other 'topographical borders' do not contain such figural scenes, e.g. the mosaic pavements of the acropolis church in Ma'in[18] and the St. Stephen's church in Kastron Mefaa (Umm er-Rasas)[19] or the fragments of a textile hanging with a depiction of Daniel in the lion's den in Berlin.[20] Anyway, these three scenes on the topographical border of the Yakto mosaic provide a group of laborers and vendors, that unambiguously have to do with the production and distribution of meat and fish. Since this industry was often settled in an independently built market place – the *macellum*[21] – which formed an own topographical constant in antique and late antique cities, this group on the Yakto mosaic most likely refers to a real place in late antique Daphne or Antioch as do the architectural tableaus of Καστα̣λία and ἡ Παλλάς. After all, Malalas testifies an inner-city *macellum* in Antioch, probably constructed by Valens in the 4th century AD.[22] Of course we still lack knowledge on whether the topographichal border actually passes beyond Daphne, so these scenes do not necessarily show the Antiochean *macellum.* Nonetheless, the figural ensemble on this part of the border counterbalances the loss

of inscriptions and detailed architectural depictions and in fact can function as such a topographical hint for further examinations.[23]

Notes

[1] Antakya, Hatay Arkeoloji müzesi, Inv. 1016; ca. 7,25 × 6,75 m (Brands 2016, 258_3); find spot: Harbiye, 7 km south of Antakya, Turkey (Lassus 1934, 114; Brands 2016, 258; for Claude Prost's excavation report cf. Lassus 1934, 114–116); color photographs: Cimok 2000, 251–274; Archut – Kremser 2019, pl. 9. 15–22. – The mosaic has been dated to the mid-5th century AD by most scholars (Campbell 1934, 202; Lassus 1969, 139; Levi 1947, 323; Downey 1961, 31_{21}. 472 etc.), arguing that it refers epigraphically to Ardaburius iunior, *magister militem per Orientem* in 453–466 (cf. Martindale 1980, 135–137 s. v. Ardabur [1]). In fact, a doubtless dating still lacks reliable examinations.

[2] Campbell 1934, 202.

[3] In its actual state of preservation the border measures about 19,30 m in length (Lassus 1934, 128; Lassus 1969, 138).

[4] Lassus 1934, 129. 132; Downey 1961, 325. 649 f.; Brands 2016, 261_{11}. 268–280; Archut – Kremser 2019, 195 f. 210 f. – The mosaic's find spot Harbiye is identical with antique Daphne.

[5] Lassus 1934, 128–151; Downey 1961, 662–664; Levi 1947, 326; Lassus 1969, 140 etc.

[6] Raeck 1992, 71–75.

[7] Lassus 1969, 139 f.; Brands 2016, 265; Archut – Kremser 2019, 161. 180 f.

[8] Lassus 1934, 128. 153; Lassus 1969, 146; Levi 1947, 326; Kondoleon 2000, 115. – Deckers is the only one to attest priority to the figural layer and therefore prefers to talk of a "sociographical border" (Deckers 1988, 338).

[9] Staatliche Kunstsammlungen Dresden, Skulpturensammlung, Inv. 415, marble, 2nd quarter of the 2nd cent. AD (Zimmer 1982, 94 f. no. 2, fig. 2).

[10] E.g. a funerary relief in Ostia, Museo Ostiense, Inv. 133, marble, 2nd cent. AD (Zimmer 1982, 95 f. no. 4, fig. 4); Rome, Villa Albani, Inv. 11, marble, 2nd half of 2nd cent. AD (Zimmer 1982, 96 f. no. 5, fig. 5) etc.; see also Zimmer 1982, 18_{91}.

[11] Zimmer 1982, 18.

[12] Cf. also a funerary relief in Bologna, Museo civico, Atrium, Inv. 7, limestone, 1st cent. AD (Zimmer 1982, 93 f. no. 1, fig. 1); for fish production cf. a Siculian bell krater, Cefalù, Museo della Fondazione cultural Mandralisca, Inv. 2, 380–370 BC (Hellenkemper 1998, 186, no. 119).

[13] Cf. Levi 1947, 331; Pitarakis 2012, 402.

[14] Lassus 1934, 138.

[15] E.g. a fresco from the *tablinum* of the Casa del panettiere (VII 3, 30), Museo archeologico nazionale di Napoli, Inv. 9071 (Kraus – von Matt 1973, 180 no. 235; Coarelli 2002, 139).

[16] Lassus 1934, 137 f.; Levi 1947, 330; Lassus 1969, 143 etc. Form and colour resemble the fish in the mosaic depiction of the last supper, Ravenna, Sant'Apollinare Nuovo, *in situ,* ca. 500 AD (Dresken-Weiland 2016, 138).

[17] Ancona, Museo nazionale, marble, mid-3rdcentury AD (Zimmer 1982, 218 f. no. 177, fig. 177).

[18] *In situ,* ca. 719–720 AD (Piccirillo 1989, 229–232; Piccirillo 1993, 200 f., fig. 308–310).
[19] There are two concentric friezes *in situ,* 8th century AD (Piccirillo 1989, 285–293; Dunbabin 1999, 203 f., fig. 217). The inner stripe provides figural scenes, but must inevitably be called a Nilotic frieze, thus embellishing this topographical border of the Nile Delta (cf. Dunbabin 1999, 203).
[20] Skulpturensammlung und Museum für Byzantinische Kunst, Inv. 9658, 6th cent. AD (?) (Schrenk 2002).
[21] De Ruyt 1983.
[22] Downey 1961, 632 f. 636. 406 f.; de Ruyt 1983, 36. 265. 270 f.
[23] Cf. the latest extensive examination of the border's iconography and its potential referencing to late antique Daphne and/or Antioch: Archut – Kremser 2019.

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Fig. 1–3: Antioch Expedition Archives, Department of Art and Archaeology, Princeton University, nos. 5661. 5647. 5649 (with special thanks to Julia Gearhart, Director Visual Resources Collection).

References

Archut – Kremser 2019
S. Archut – P. Kremser, Stadt, Architektur und Figur. Anmerkungen zur topographischen Borte des Megalopsychia-Mosaiks aus Yakto. Mit einer Einführung von Gunnar Brands und Sabine Schrenk, JbAC 62, 2019, 158–218.

Brands 2016
G. Brands, Kastalia und Pallas. Zum Megalopsychia-Mosaik aus Daphne, IstMitt 66, 2016, 257–291.

Campbell 1934
W. A. Campbell, Excavations at Antioch-on-the-Orontes, AJA 38, 1934, 201–206.

Cimok 2000
F. Cimok, Antioch Mosaics. A Corpus (Istanbul 2000).

Coarelli 2002
F. Coarelli (ed.), Pompeji (Munich 2002).

Deckers 1988
J. Deckers, Tradition und Adaption. Bemerkungen zur Darstellung der christlichen Stadt, RM 95, 1988, 303–382.

Downey 1961
G. Downey, A History of Antioch in Syria. From Seleucus to the Arab Conquest (Princeton 1961).

Dresken-Weiland 2016
J. Dresken-Weiland, Die frühchristlichen Mosaiken von Ravenna. Bild und Bedeutung (Regensburg 2016).

Dunbabin 1999
K. M. D. Dunbabin, Mosaics of the Greek and Roman World (Cambridge 1999).

Hellenkemper 1998
H. Hellenkemper (ed.), Die neue Welt der Griechen. Antike Kunst aus Unteritalien und Sizilien. Ausstellungskatalog Köln (Mainz 1998).

Kondoleon 2000
C. Kondoleon, Antioch. The Lost Ancient City. Ausstellungskatalog Worcester (Princeton 2000).

Kraus – von Matt 1973
T. Kraus – L. von Matt, Pompeji und Herculaneum. Antlitz und Schicksal zweier antiker Städte (Cologne 1973).

Lassus 1934
J. Lassus, La mosaïque de Yakto, in: G. W. Elderkin (ed.), Antioch-on-the-Orontes I. The excavations of 1932 (Princeton 1934) 114–156.

Lassus 1969
J. Lassus, Antioche en 459, d'après la mosaïque de Yaqto, in: J. Balty (ed.), Apamée de Syrie. Bilan des recherché archéologiques 1965–1968. Actes du colloque tenu à Bruxelles les 29 et 30 avril 1969, Fouilles d'Apamée de Syrie, Miscellanea 6 (Brussels 1969) 137–146.

Levi 1947
D. Levi, Antioch Mosaic Pavements (Princeton 1947).

Martindale 1980
J. R. Martindale, The Prosopography of the Later Roman Empire II. A.D. 395–527 (Cambridge 1980).

Piccirillo 1989
M. Piccirillo, Chiese e mosaici di Madaba, Studium Biblicum Franciscanum, Collectio maior 34 (Jerusalem 1989).

Piccirillo 1993
M. Piccirillo, The Mosaics of Jordan, American Center of Oriental Research Publications 1 (Amman 1993).

Pitarakis 2012
B. Pitarakis, Daily Life at the Marketplace in Late Antiquity and Byzantium, in: C. Morrisson (ed.), Trade and Markets in Byzantium (Washington, D.C. 2012) 399–426.

Raeck 1992
W. Raeck, Modernisierte Mythen. Zum Umgang der Spätantike mit klassischen Bildthemen (Stuttgart 1992).

De Ruyt 1983
C. de Ruyt, Macellum. Marché alimentaire des Romains, Publications d'histoire de l'art et d'archéologie de l'Université catholique de Louvain 35 (Leuven 1983).

Schrenk 2002
S. Schrenk, Die "topographischen" Friese auf den Behangfragmenten mit Danielszene und Petrusszene in Berlin, in: M. Hutter – W. Klein – U. Vollmer (eds.), Hairesis. Festschrift Karl Hoheisel, JbAC Erg.-Bd. 34 (Münster 2002) 72–83.

Zimmer 1982
G. Zimmer, Römische Berufsdarstellungen, AF 12 (Berlin 1982).

Anaxyrides in Greek Art

Paulina Kucharska-Budzik

The paper aims at presenting an issue of west-Iranian trousers called *anaxyrides* and their representations in Greek art. The period between the 6th century BC and the 4th century BC is being analysed.

Anaxyrides were worn by Medes, Persians, Armenians, Scythians and Cappadocians and also by mythical Amazons and Arimasps. We base our knowledge about those Iranian trousers on literary records and Achaemenid and Greco-Persian iconographical sources.

Anaxyrides were most probably made either of leather or of colourful fabric. It depended on their function, a particular context of their usage and maybe personal preferences of their users.[1] There are depictions of plain, tight trousers pulled on feet, tied round joints and insteps by leather thongs, or worn with shoes.[2] Lack of folds on many renditions does not necessarily mean that leather was used to produce them because folds could be painted and decoration simply might not have survived. Looser type of trousers with many folds can be seen on various other representations. Significant examples of Iranian trousers' depictions come from Achaemenid art in "Court Style". The Apadana reliefs from Persepolis show a procession of 23 delegations of the subject peoples of the Achaemenid Empire bringing gifts to the Great King. Those tribute-bearers are dressed in their national costumes.[3] It can be seen that various types of trousers are worn by Medes, Persians, Armenians, Scythians, Cappadocians, but also by Arachosians, Bactrians, Sogdians and a few more nations. Generally speaking, it was an item of clothing used by Iranian peoples inhabiting the territory of the Achaemenid Empire and the Eurasian Steppe, and by neighbouring peoples.[4] Other examples of representations of *anaxyrides* were found among the artefacts from the Oxus Treasure[5] (fig. 1). *Anaxyrides* were also represented on many Greco-Persian works of art.[6] Additionally, we have some Scythian iconographical sources, which provide information about the costume of Scythians.[7]

In the west, in the Classical period Greek aristocracy often incorporated items of Oriental dress into their own costume. Nevertheless, *anaxyrides* were rejected in the Greek and Macedonian world. Even Alexander the Great who adopted many elements of the Iranian costume did not use *anaxyrides.* It can be explained by the fact that *anaxyrides* belonged to a different system of dress.[8] Moreover, Iranians were treated by Greeks as exotic, foreign, inferior and feminine and consequently *anaxyrides* could not be adopted by them. And yet, *anaxyrides* were depicted in Greek art of this period on various objects.

Greek artists knew about Iranian trousers. Sources of their knowledge might be of various kinds. In 580s BC Greeks encountered Medes in the course of the war between Lydia and the Median army. In the following years Greeks confronted Iranians due to

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Fig. 1: The Oxus Treasure, figure in Median costume, 5th–4th century BC.

the conquest of Ionian cities by the Persians, the Greco-Persian wars and the campaign of Alexander the Great.[9] Besides, Greek mercenaries worked for Persians. Greek secretaries, doctors, artists and craftsmen were also employed in the East.[10] Some of them could provide Greek artists with knowledge about the Oriental clothing, not to mention the literary references.[11]

Research has shown that changes, which occurred in depicting *anaxyrides,* are rather chronological and as such are analysed below.

Figures in full Scythian-like costume, including trousers, appeared in Greek art in 530s BC. This image stems from contacts with the Median and later the Achaemenid army. Both armies incorporated contingents of various ethnic origin and some of them were surely prototypes for the Scythian-like costume.[12] This image of "Scythian" archer was popular between 530s/520s BC and 490s BC. In this period his costume did not have ethnic sense but indicated the function of archer, the mythical character of a depicted person or the status of characters who wore it. Figures dressed in the Scythian-like costume were mainly non-hoplite companions or helpers of main heroes.[13] Nonetheless, such images reveal Greek attitudes towards the east. Greeks generally treated the easterners as exotic, remote and even inferior. Since Amazons were regarded as Oriental figures they were also described as exotic and mythical. They began to be depicted in Scythian-like costume roughly at the same time, although their dress was often a mixture of Oriental and Greek elements emphasising their mythical aspect.[14] In eastern Greek art, however, figures in the Oriental attire were not neutral but depicted as enemies because of direct confrontations with Medes and Persians.[15]

The Scythian-like costume definitively resembles Iranian prototypes but it is not identical with real Scythian attire. It is rendered in a schematic way and artists often merged trousers and a caftan to form a grotesque close-fitting garment.[16]

A visible change in depicting *anaxyrides* occurred around 490s BC so in the time of Greco-Persian wars. As a result of them, the hostility towards Iranians appeared among Greeks. Consequently, neutral Scythian-like archers were replaced by Iranian figures with clear ethnic associations.[17] Portrayals of single eastern warriors or representations of duels and multi-figured struggles between Greeks and Iranians were executed (fig. 2). Compositions depicting confrontations with Amazons continued to be popular and images of Arimasps began to gain popularity in 4th century BC.[18]

Not only the attitude towards barbarians changed but also the style of representing the Iranian costume. The clothing is depicted with a greater degree of precision and realism.[19] Trousers are no longer so artificially tight and generally images seem to be closer to their prototypes. We can notice, however, that *anaxyrides* of Amazons are rendered as very tight more often than in the case of male Iranian warriors. The realism noticeable in depictions of figures in the Iranian costume undoubtedly resulted from contacts with Iranians at close quarters during the Greco-Persian wars. Later on, especially during the conquest of Alexander the Great the knowledge of the eastern world grew rapidly. This evidently influenced the way *anaxyrides* were depicted. Splendid



Fig. 2: Attic amphora, 480–470 BC.

renditions of *anaxyrides* can be seen on the Alexander Mosaic from Pompeii and on friezes from the Alexander Sarcophagus from Sidon.[20]

Nonetheless, two points need to be stressed here. First of all, there existed certain artistic conventions that changed in time. Secondly, techniques of rendering clothing were evaluated in art. In red-figure vase painting, since 530s BC, drapery was gradually rendered in a more precise, detailed and elegant way. All this influenced changes in the way *anaxyrides* were depicted which coincided with artistic phases in Greek art. Thus, information acquired by artists about the original Iranian attire was not the only factor influencing the rendition of trousers.[21]

Apart from colour, trousers were richly decorated with patterns. Those patterns were not confined to specific types of figures with *anaxyrides* and were also used for depicting Greek figures. Patterns underwent stylistic changes in Greek art and artistic conventions also played a role. Overall, geometric patterns were widely used. We can see trousers decorated with horizontal zigzags most often. Diamond-grid with dots, already known in the early Classical period, is also visible on *anaxyrides.* Checker-pattern was used from the middle of the 5th century BC and its popularity grew towards the end of the century. Other patterns used for depicting *anaxyrides* included: diamonds, leopard dots, vertical stripes presumably along seams, bands of zigzags and dots and a few more variations of the mentioned decorations.[22] Folds, however, were usually not marked in vase painting.

The described patterns, however, were not strictly based on reality but were often the outcome of artistic canons, preferences and imagination.

Concluding, thorough analysis has shown that it is not possible to ascribe different types of *anaxyrides* to specific ethnic or social groups because figures in Iranian trousers were images of general easterners in Greek art. *Anaxyrides* symbolised everything that was foreign and different. Furthermore, modifications are chronological and connected with historical context and social-political situation within which depictions of Oriental *anaxyrides* were produced and which influenced attitudes towards Iranians. Additionally, images were rendered according to certain artistic canons, specific and characteristic for different periods and regions of production. Apart from those conventions, artists had their own artistic styles and preferences. Depictions of *anaxyrides* in Greek art, thus, are the mixture of reality, changing associations, artistic canons and artists' imagination.

Notes

[1] Hdt. 1.71.2.

[2] Schmidt 1953, pl.135; Kubala 2006, 147.

[3] Miller 1997, 280, fig. 65; Boardman 1988, 40; Gershevitch 1985, 822 f.

[4] Calmeyer 1978, 80; Gershevitch 1968, 822 f.; Sekunda 1992, 13; Olbrycht 2004, 283.

[5] Curtis 2012.
[6] Seyer 1996; Shabhazi 1975, 146 f.; Jenkins 2006, 179; Boardman 2001.
[7] Gleba 2008, 18–23; Rolle 1989.
[8] Miller 1997, 185; Barthes 1967.
[9] Jaczynowska 1999; Ivantchik 2006, 235. 244 f.; 247.
[10] Miller 1997, 100–103.
[11] Hdt. 1.135, 7.62.1, 1.71.2; Xen. Kyr. 8.1.40, 8.3.13 f; idem, Anab. 1.5.8; Miller 1997, 185.
[12] Ivantchik 2006, 233. 235. 244–246; Gleba 2008, 14 f.; Shapiro 1983, 110 f.
[13] Shapiro 1983, 111; Ivantchik 2006, 206. 214 f. 225. 230–233. 240 f. 246; Vos 1963, 40–51. 56–60; Raeck 1981.
[14] Shapiro 1983, 110–112; Gleba 2008, 15; Bothmer 1957.
[15] Ivantchik 2006, 246.
[16] Ivantchik 2006, 248; Raeck 1981.
[17] Raeck 1981, 214; Vos 1963, 44 f.; Miller 1989, 327; idem, 1997, 153–187; Gleba 2008, 16.
[18] Boardman 2001a, 237.
[19] Ivantchik 2006, 245–247.
[20] Bernoulli 1905; Moreno 2001; Graeve 1970; Calcani 1989.
[21] Gleba 2008, 17; Boardman 1999; idem, 2001a.
[22] Miller 1997, 179; Boardman 2001a.

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Fig. 1: Image by Author. – Fig. 2: 2000–2013, The Metropolitan Museum of Art New York.

References

Barthes 1967
R. Barthes, Système de la mode (Paris 1967).
Bernoulli 1905
J. J. Bernoulli, Die erhaltenen Darstellungen Alexanders des Großen (Munich 1905).
Boardman 1988
J. Boardman, The Cambridge Ancient History: Plates to (Cambridge 1988).
Boardman 1999
J. Boardman, Sztuka grecka (Wydawnictwo VIA 1999).
Boardman 2001
J. Boardman, Greek Gems and Finger Rings, Early Bronze to Late Classical (Thames & Hudson 2001).
Boardman 2001a
J. Boardman, The History of Greek Vases (London 2001).

von Bothmer 1957
D. von Bothmer, Amazons in Greek Art (Oxford 1957).
Calcani 1989
G. Calcani, Cavalieri di bronzo: La torma di Alessandro Opera di Lisippo (Rome 1989).
Calmayer 1978
P. Calmayer, Das Grabrelief von Ravansar, AMI N.F. 11, 1978, 73–85.
Cohen 2010
A.Cohen, Art in the Era of Alexander the Great, Paradigms of Manhood and their Cultural Traditions (Cambridge 2010).
Curtis 2012
J. Curtis, The Oxus Treasure (London 2012).
Gleba 2008
M. Gleba, You are What You Wear: Scythian Costume as Identity, in: M. Gleba – Ch. Munkholt – M.-L. Nosch (eds.), Dressing the Past (Oxford 2008) 13–28.
von Graeve 1970
V. von Graeve, Der Alexandersarkophag und seine Werkstatt (Berlin 1970).
Ivantchik 2006
A. Ivantchik, Scythian' Archers on Archaic Attic Vases: Problems of Interpretation, Ancient Civilizations from Scythia to Siberia 12, 2006, 197–271.
Jaczynowska 1999
M. Jaczynowska, Historia Starożytna (Warszawa 1999).
Jenkins 2006
I. Jenkins, Greek Architecture and Its Sculpture (Harvard 2006).
Kubala 2006
A.Kubala, Wpływy Greckie i Perskie w Sztuce Anatolii, w okresie od poł.VI w. p.n.e. do końca IV w. p.n.e. (Kraków 2006).
Miller 1989
M. C. Miller, The Ependytes in Classical Athens, Hesperia 58, no. 3, 1989, 313–329.
Miller 1997
M. C. Miller, Athens and Persia In The Fifth century BC (Cambridge 1997).
Moreno 2001
P. Moreno, Apelles. The Alexander Mosaic (Milan 2001).
Olbrycht 2004
M. J. Olbrycht, Aleksander Wielki i świat irański (Rzeszów 2004).
Raeck 1981
W. Raeck, Zum Barbarenbild in der Kunst Athens im 6. und 5. Jahrhundert v. Chr. (Bonn 1981).
Rolle 1989
R. Rolle, The World of Scythians (Berkeley, California 1989).
Schmidt 1953
E. F. Schmidt, Persepolis I: Structures, Reliefs, Inscriptions (Chicago 1953).

Sekunda 1992

N. Sekunda, The Persian Army 560–330 BC (London 1992).

Seyer 1996

M. Seyer, Ein Jagdrelief aus Limyra, in: F. Blakolmer – K. R. Krierer – F. Krinzinger – A. Landskron-Dinstl – H. D. Szemethy – K. Zhuber-Okrog (eds.), Fremde Zeiten, Festschrift für J. Borchhardt zum 60ten Geburtstag am 25. Februar 1996, Vol. 1 (Vienna 1996) 111–112.

Shahbazi 1975

A. S. Shahbazi, The Irano-Lycian Monuments (Tehran 1975).

Shapiro 1983

H. A. Shapiro, Amazons, Thracians, and Scythians, Greek Roman and Byzantine Studies 24, 1983, 105–115.

Vos 1963

M. F. Vos, Scythian Archers in Archaic Attic Vase-Painting (Groningen 1963).

Organization of Space in the Countryside of Attica: a New Potters' Workshop in the Ancient Deme of Aixonides Alai

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Introduction

The archaeological site of Aghios Nikolaos Pallon in the area of Voula (Attica) comes under the auspices of the Greek Ministry of Culture-Ephorate of Antiquities of Piraeus and Islands. Since 2011 systematic excavation has brought to light substantial antiquities that cast light on our understanding of life in the coastal demes of Attica. Ongoing research testifies the site's use from the Classical period up to Byzantine times. The site falls within the geographical boundaries of the ancient deme of Aixonides Alai.[1] The earliest remains on the site are a burial enclosure and an ancient road of the 4th century BC. In Late Antiquity operated a ceramic workshop comprising three kilns and a spacious residential area. Finally, during the Byzantine period two small churches were erected on top of the Classical enclosure and the workshop. Both belong to the type of basilica. Various ancient marble elements have been used for their construction (fig. 1).[2]

The place name "Aghios Nikolaos Pallon" (meaning in english Saint Nicholas of Pallon) is preserved mainly through oral testimonies. No written sources exist to offer evidence of the name's actual origins. The same place name appears on Kaupert and Curtius Attica Maps,[3] while a similar name, "Paloi", is known on the island of Nisyros. In terms of etymology, it may originate from the rephrasing of the word "παρ' αλών", that means "by the sea", or even from the Latin word "palus", which means the post used to tie the ships on a pier. Both interpretations are directly related to the proximity of the site to the sea.

The Ceramic Workshop

Following a rather popular practice of Late Antiquity, in Late Roman times a ceramic workshop is established at the area once occupied by the burial enclosure of the 4th century BC. Two kilns (1 and 2) are built within the boundaries of the abandoned enclosure, while the north wall of the enclosure is used as Kiln's 3 south wall. This reorganization of space is a common phenomenon throughout Greece. Similar establishments of ceramic workshops in areas formerly used as burial grounds or domestic activities have been excavated in Kotzia Square, in the area of Acharnian Gates in Athens[4], in Chalkida[5], Pella[6] and Sindos[7]. A similar example is the burial enclosure revealed during the excavation of the "EVANGELISMOS" Station of the Athens Metropolitan Railway.[8]

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Fig. 1: Aerial photo of the site

The largest kiln (Kiln 1) is almost square in ground plan (2,50 m × 2,40 m) (fig. 2). It is classified to the first subtype (IIa) of two-story, updraft rectangular kilns with central pillar.[9] The subterranean combustion chamber is dug in the natural bedrock, its perimetric walls are mainly coarse- clay and mud made, enforced with brick and tile fragments. The floor is simply plastered over with clay mortar. The support is placed centrally and is made of a combination of broken sherds, tiles and mortar. From this pillar spring two arches which rest on the side walls. This system supports the overlying, partially preserved, perforated clay floor (eschara), which is made out of coarse clay with a greenish color. The ventholes (d. 0.10 m) are arranged in rows. The vaulted upper chamber is not preserved. The praefurnium (stocking channel) has the form of a narrow brick-built vaulted corridor, projecting out of the east side of the kiln.

This type of kiln became popular in the Roman period, as revealed by the excavation at the Kotzia Square in Athens with its twenty-seven rectangular kilns.[10] Another kiln of this type has been found in the 4th century AD ceramic workshop excavated in the



Fig. 2: Kiln 1

area of the Piraean Gate of Athens[11]. Rectangular kilns remained in use during the Late Roman and Early Christian periods and were abandoned in the late Early Christian times.

Kiln 2 (1,30 m × 1,60 m) is classified to the first subtype (Ia) of two-story, updraft circular or elliptical kilns with central pillar (fig. 3).[12] The firing chamber was mainly underground in an elliptical pit with sides reinforced with bricks or mud-bricks and coated within with thick layer of watery clay or mud, 'cemented' during the firing of the kiln. The floor is simply plastered over with clay mortar. The non-preserved perforated clay floor (eschara) was overlaid on two brick-built arches, rest on a simple pillar roughly at the center of the combustion chamber. The entire supporting system is made of bricks and mortar. Three preserved pipelines enabled the circulation of the air. The praefurnium (stocking channel) is opened at the east side of the kiln and has the form of a narrow brick-built corridor.

This type of kiln is the most popular, not only in Greece, but in all Mediterranean potting cultures. Its construction and morphology were evolved during the Late Roman period. However, during the Early Christian period the number of known examples de-



Fig. 3: Kiln 2

creases. In the complex of Kotzia Square, out of the 27 furnaces only 2 are of a circular plan.[13]

Kiln 3 is almost square in ground plan (2,50 m × 2,50 m). Its entrance is at the east side.[14] It is not yet excavated but some of its pipelines are visible, as well as traces of fire and layers of ashes.

Excavation inside the combustion chambers of the kilns revealed sherds of Late Roman and Early Christian periods, as well as teardrops, intact lamps, and part from the disc of a lamp bearing a cross. Based on their construction and findings, the kilns date to the 4th–6th century AD.[15] So far there is no indication for the specialization of the production, but the different types of the kilns possibly served alternative productions.[16] The spacious dimensions of the rectangular kiln 1 support the hypothesis that it was used for the production of building materials, like roof tiles and plinths. On the contrary, the smaller in size elliptical kiln 2 could have been used for the production of vases.

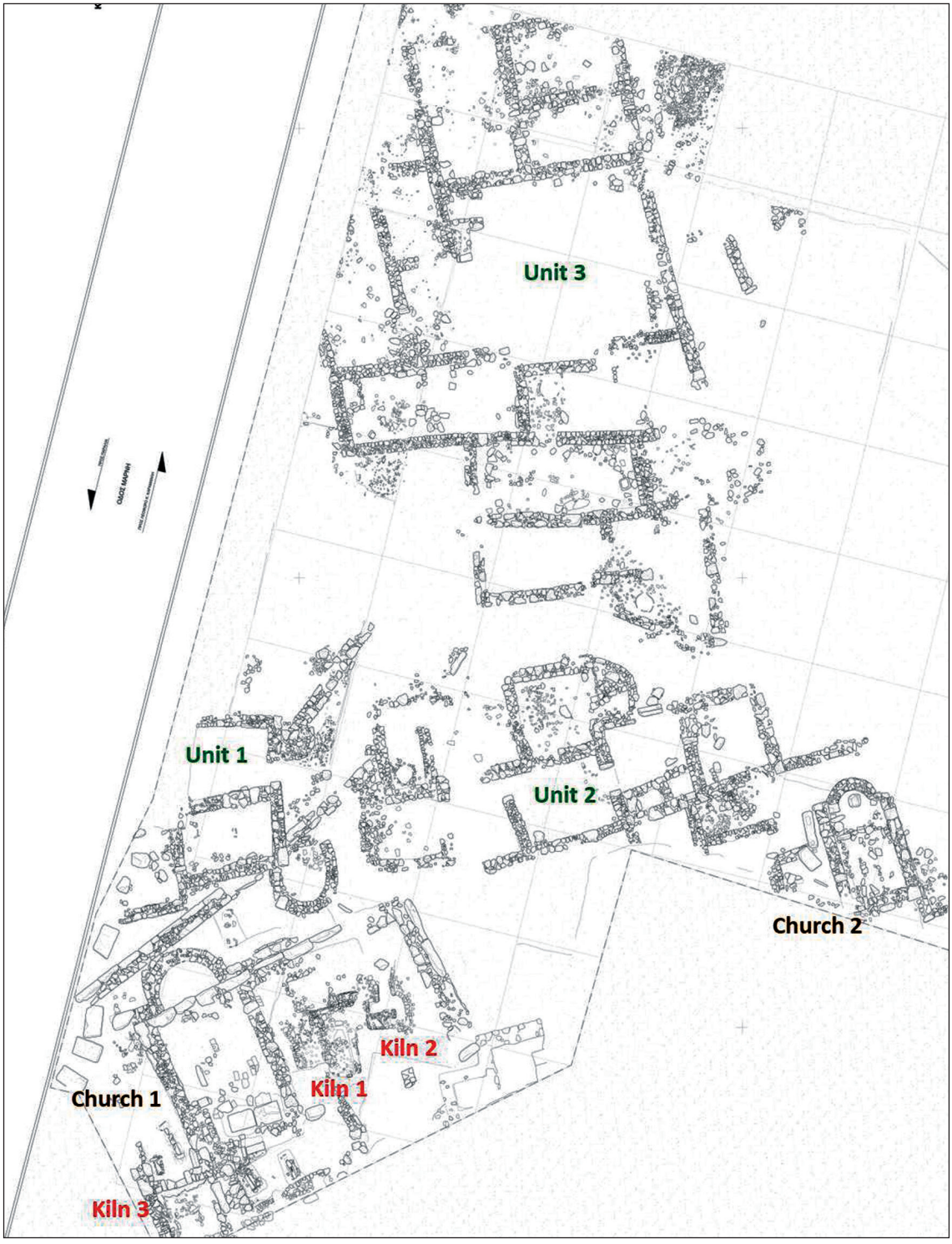


Fig. 4: Plan of the building complex

East of the kilns lies an extensive, partially excavated, building complex extending to more than 1200 m². It consists of at least twenty rooms, which are organized into three smaller units (1–3) (fig. 4). Unit 3 is the largest one, comprising of twelve rooms set around a central square courtyard.[17]

The walls of the rooms are built of medium-sized local stones, connected with soil. Clearly the builders have tried to form straight wall faces and a solid masonry. In all units, the rooms communicate with each other through doors. The complex has been built on top of layers dated to the classical period. Some of its walls rest on top of strong classical walls, while in some cases building material of the classical period has been re-used in the later walls, mainly as door-jambs and corner-stones. In some of the rooms storage pithoi have been found in situ.

Plain pottery was abundant at the site. Excavation revealed sherds from food-preparation and storage vessels, mainly amphoras, combed pottery, sherds bearing shallow grooves, beehive fragments, kiln teardrops, slags, iron and copper pieces. Both in the rooms of the complex and in the free spaces destruction layers were excavated comprising roof tiles and stones.

Following the date of the finds, the building complex should have operated at least by the 6th century AD. The type and the date of the finds from the complex suggest that it dates to the same period as the kilns and that it served as the residential area of the craftsmen.

Conclusions

The discovery of the ceramic workshop at Aghios Nikolaos Pallon points straight to the existence of an organized potters quarter in the area or at least to the operation of a sinlge – but large – pottery workshop.[18] The site meets the basic criteria for the establishment of a ceramic workshop: proximity to clay resources, availability of water and a favorable location vis-à-vis transport and trade routes.[19] Its close proximity to one of the most crowed ancient roads that led from Athens to Sounion (the so-called Astike Odos)[20] and its immediacy to the sea should have favored the supply and distribution of products, as well as the development of trade with areas, but Attica. The rich water sources of the area in antiquity are implied by the modern name of the wider area that the sites belongs, "Pigadakia" that in Greek means wells, as well as by presence of reeds in the area of the archaeological site.

The discovery and ongoing excavation of the workshop complex at Aghios Nikolaos Pallon has significantly enriched our knowledge about the organization and the economy in a suburban area of Attica during Late Antiquity, since it is the first pottery workshop of that time known so far in the wider area of south Attica.

Notes

[1] Andreou 1996; Giamalidi – Ntaifa 2013.
[2] Lygouri et al. 2015; Lygouri et al. forthcoming.
[3] Curtius – Kaupert 1895–1903, no. VIII.
[4] Karagiorga 1988; Zachariadou-Kyriakou 1988; Zachariadou 2006.
[5] Sampson 1987.
[6] Lilimpaki Akamati 1993.
[7] Despoini 1982.
[8] Lygouri 1995, 30–32.
[9] Raptis 2001, 167–169; Hasaki 2002, 168–169.
[10] Zachariadou 2006, 316–317.
[11] Lygouri 1985.
[12] Raptis 2001, 159–164; Hasaki 2002, 154–155.
[13] Zachariadou 2006, 317.
[14] For square kilns see Raptis 2001, 165–168.
[15] Hasaki-Raptis 2016 with a catalogue of Roman and Late Antiquity kilns in Greece.
[16] Hasaki-Raptis 2016, 210–215.
[17] Lygouri et al. forthcoming.
[18] Hasaki-Raptis 2016, 214–215.
[19] Hasaki 2002, 259–264.
[20] Kaza Papageorgiou 2009.

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Fig. 1: Photo taken by G.Asvestas. Archive of the Ephorate of Antiquities of Piraeus and Islands. – Fig. 2: Photo taken by G.Asvestas. Archive of the Ephorate of Antiquities of Piraeus and Islands. – Fig. 3: Photo taken by G.Asvestas. Archive of the Ephorate of Antiquities of Piraeus and Islands. – Fig. 4: Architect G. Orestides.

References

Andreou 1994
I. Andreou, Ο δήμος των Αιξωνίδων Αλών, in: W. D. E. Coulson – O. Palagia – T. L. Shear Jr. – H. A. Shapiro – F. J. Frost (eds.), The Archaeology of Athens and Attica under the Democracy, Oxbow Monograph 37 (London 1994) 191–209.

Baziotopoulou Valavani 1994

E. Baziotopoulou Valavani, Ανασκαφές σε αθηναϊκά κεραμεικά εργαστήρια αρχαϊκών και κλασικών χρόνων, in: W. D. E. Coulson – O. Palagia – T. L. Shear Jr. – H. A. Shapiro – F. J. Frost (eds.), The Archaeology of Athens and Attica under the Democracy, Oxbow Monograph 37 (London 1994) 45–54.

Curtius – Kaupert 1895–1903

E. Curtius – A. J. Kaupert, Karten von Attika (Berlin 1895–1903).

Despoíni 1982

Aik. Despoíni, Κεραμεικοί κλίβανοι Σίνδου, AEph 1982, 61–84.

Giamalidi – Ntaifa 2013

M. Giamalidi – K. Ntaifa, Νέα στοιχεία στην τοπογραφία του αρχαίου δήμου των Αλών Αιξωνίδων από την περιοχή της Βούλας, in: Πρακτικά ΙΔ΄ Επιστημονικής Συνάντησης Εταιρείας Μελετών ΝΑ Αττικής, Καλύβια Θορικού Αττικής 6–9 Οκτωβρίου 2011 (Athens 2013) 113–126.

Hasaki 2002

E. Hasaki, Ceramic Kilns in Ancient Greece: Technology and Organization of Ceramic Workshops (Ph.D. Diss University of Cincinnati 2002).

Hasaki – Raptis 2016

E. Hasaki – K. T. Raptis, Roman and Byzantine Ceramic Kilns in Greece (1st–15th c. CE), in: M. Bonifay – G. Cacciaguerra – N. Caloi – N. Cucuzza (eds.), Archeologia delle produzioni ceramiche nel mondo antico. Spazi, prodotti, strumenti e tecniche, Atti del Convegno, Genova, 1–2 dicembre 2014 (Genova 2016) 209–229.

Karagiorga 1988

Th. Karagiorga, Δημόσια έργα και ανασκαφές στην Αθήνα τα τελευταία πέντε χρόνια, HOROS 6, 87–108.

Kaza Papageorgiou 2009

K. Kaza Papageorgiou, Αστική και λοιπές οδοί δυτικά του Υμηττού, in: M. Korres (ed), Αττικής Οδοί. Αρχαίοι δρόμοι της Αττικής (Athens 2009) 198–204.

Lilimpaki Akamati 1993

M. Lilimpaki Akamati, Νέο εργαστήριο κεραμεικής και κοροπλαστικής στην Πέλλα, AErgoMak 7 (Thessaloniki 1993) 171–182.

Lygouri 1985

E. Lygouri, Ανασκαφική έρευνα παρά την Πειραϊκή πύλη, AAA 18, 1985, 137–142.

Lygouri 1995

E. Lygouri, Ανασκαφές Μητροπολητικού Σιδηροδρόμου Αθηνών, ADelt 50 B' 1, 1995, 29–32.

Lygouri et al. 2015

E. Lygouri – A. Anagnostopoulou – M. Giamalidi – A. Syrogianni – K. Ntaifa – I. Louretzatou, Η συστηματική ανασκαφή στη θέση Άγιος Νικόλαος Πάλλων. Πρώτα συμπεράσματα, in: Πρακτικά ΙΕ΄ Επιστημονικής Συνάντησης Εταιρείας Μελετών ΝΑ Αττικής, Καλύβια Θορικού 17–20 Οκτωβρίου 2013 (Athens 2015) 123–134.

Lygouri et al. forthcoming

E. Lygouri – A. Anagnostopoulou – M. Giamalidi – K. Ntaifa – I. Louretzatou, Η συστηματική ανασκαφή στη θέση Άγιος Νικόλαος Πάλλων, in: Πρακτικά ΙΣΤ΄ Επιστημονικής Συνάντησης ΝΑ Αττικής (forthcoming).

Raptis 2001

K. T. Raptis, Παλαιοχριστιανικά και βυζαντινά εργαστήρια της Ελλάδας. Θέματα Παραγωγικής Τεχνολογίας (MA Thesis Aristotle University Thessaloniki 2001).

Sampson 1987

A. Sampson, Ένα κεραμικό εργαστήριο στη Χαλκίδα της Ρωμαιοκρατίας, AnthrAchron 2, 1987, 73–131.

Zachariadou – Kyriakou 1988

O. Zachariadou – D. Kyriakou, Γ' ΕΠΚΑ. Ανασκαφικές εργασίες, ADelt 43 Β' 1, 1988, 22–29.

Zachariadou 2006

Z. Zachariadou, Κεραμικά εργαστήρια έξω από τις Αχαρνικές Πύλες, in: N. Stampolides (ed.), Γενέθλιον (Athens 2006) 315–323.

Evoluzione della relazione città-campagna in epoca romana: il caso di Parma (Italia) come suggerito dagli scavi di via del Conservatorio

Anna Rita Marchi – Michele Matteazzi – Ilaria Serchia[1]

Introduzione

La peculiare relazione tra la colonia romana di Parma e il suo *ager* è ben evidenziata dalla documentazione storica fin dal tempo della sua fondazione, avvenuta secondo la tradizione nel 183 a. C. nel punto in cui la *via Aemilia,* strada consolare tracciata nel 187 a. C., attraversava il torrente Parma (fig. 1). La creazione della nuova colonia, *gemina* di quella di *Mutina* (Modena), venne molto probabilmente motivata dalla volontà romana di controllare l'accesso alle valli del Parma e del Baganza, allora insediate da popolazioni liguri ancora non completamente pacificate e in questo sostituendo un precedente stanziamento celtico, collocato nella zona dell'Oltretorrente cittadino[2] e un ancor precedente insediamento Etrusco-padano, del quale si è rinvenuta traccia proprio nei recenti

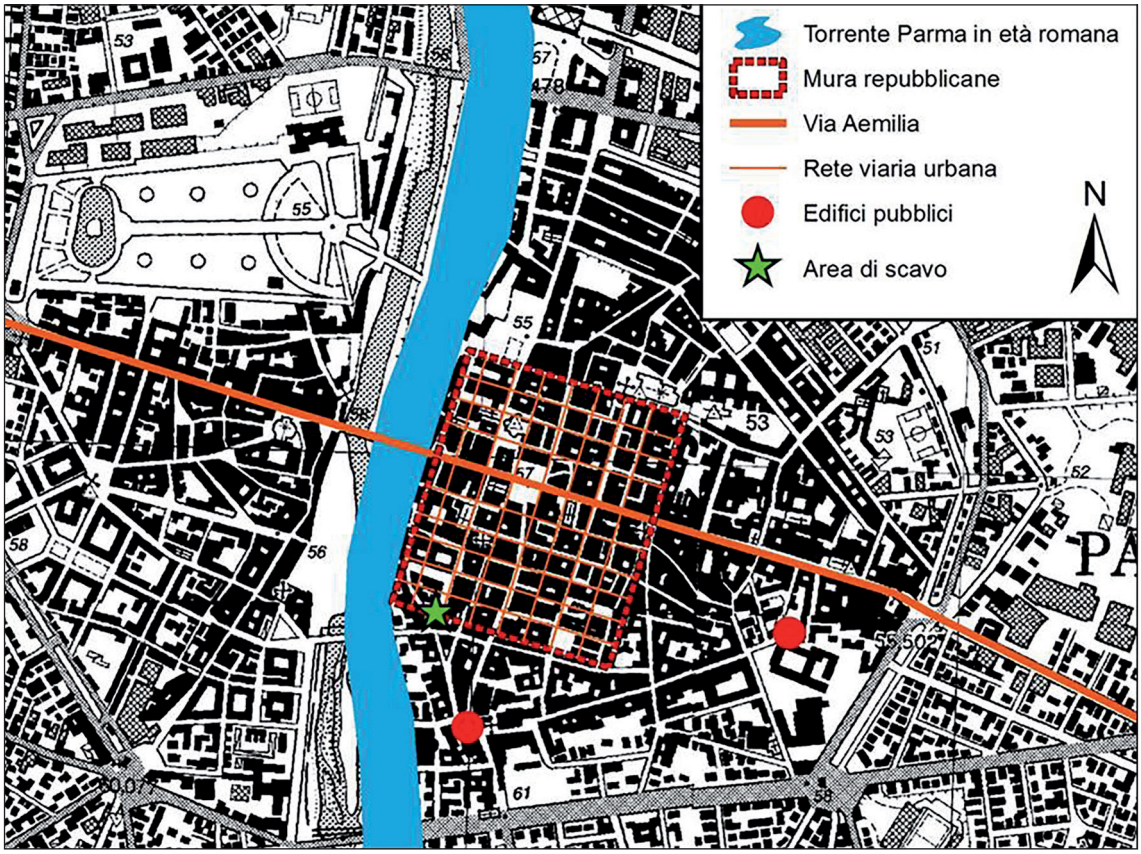


Fig. 1: Ricostruzione della colonia romana di Parma sulla via Emilia in età Repubblicana.

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scavi in via del Conservatorio. Le fonti riportano la notizia che da Parma partì infatti, nel 176 a.C., l'offensiva del proconsole Gaio Claudio contro i Liguri.[3]

In questa primissima fase, data la natura prettamente militare della fondazione coloniale, dovette crearsi una separazione piuttosto netta tra l'area urbana della colonia, circondata da possenti mura in mattoni,[4] e il territorio *extra urbem.* All'esterno della città, accanto alle terre assegnate ai nuovi 2.000 coloni, è ragionevole pensare ci fossero anche ampie aree riservate ai *compascua,* ovvero terre comuni della *civitas* sfruttate per pascolo e lignatico, oltre ad aree abitate e interamente gestite da popolazioni indigene. Infatti è impensabile che lotti di terreno di 8 iugeri[5] potessero bastare per la produzione dei beni necessari al mantenimento di un'intera famiglia.[6]

L'epoca repubblicana

Durante le recenti indagini archeologiche in via del Conservatorio (2005–2016), è stato documentato parte del perimetro meridionale delle mura in mattoni di epoca repubblicana, realizzate entro la prima metà del II sec. a.C., e molto probabilmente, l'evidenza di una porta urbica, la cui esistenza è suggerita dalla forma stessa delle mura che si allargano a formare una sorta di contrafforte in corrispondenza del passaggio di un asse stradale riconoscibile come un *cardo* urbano[7] (fig. 2). Questo, d'altra parte, sembrerebbe configurarsi come una direttrice viaria extra urbana che, in uscita dalla città, avrebbe ben potuto risalire il corso del torrente Parma fino a raggiungere il centro di *Luna* (Luni) e, deviando verso la valle dell'Enza, anche quello di *Luca* (Lucca).[8]

Piuttosto interessante ci sembra sottolineare la ben documentata presenza, presso il lato interno della presunta porta, di due sepolture infantili contenenti i resti di tre individui di età compresa tra 0 e 6 mesi e di una fossa al cui interno si sono recuperate alcune costole di maiale e i resti incompleti di almeno due cani. Le tombe e la fossa potrebbero quindi aver formato parte di un rituale di fondazione strettamente connesso alla delimitazione del perimetro urbano (*pomerium?*) e, in particolare, alla sacra definizione di uno degli accessi alla città (fig. 3).

Riti di fondazione con la deposizione di individui, animali e oggetti sono ampiamente documentati presso diverse popolazioni dell'Italia antica e traggono origine da tempi arcaici in ambito orientale.[9]

Queste deposizioni possono avere connotazioni diverse ma in alcuni casi appaiono direttamente connesse a rituali di fondazione di edifici di diversa natura, in particolare di cinte murarie, in altri direttamente all'interno delle fosse di fondazione, e di porte, ponti, templi. A Parma il sacrificio di due cani è stato già documentato nell'area sacra dove poi sorgerà il *Capitolium,*[10] mentre in ambito italico sono noti diversi depositi rituali di fondazione legati a mura e porte urbane[11].

Non è inoltre da escludere la possibile esistenza di un qualche tipo di acquartieramento militare al tempo della fondazione della colonia; spingono in questa direzione



Fig. 2: Tratto delle mura repubblicane di Parma rinvenute nello scavo di via del Conservatorio.

l'evidenza di palizzate e fondazioni murarie in ciottoli fluviali, costruite con evidenti funzioni difensive. D'altronde è certo invece che, tra II e I sec. a.C. in quest'area, interna alle mura cittadine, sia sorto un distretto artigianale, caratterizzato dalla presenza di almeno due fornaci per ceramica, una bottega dotata di tornio e altre strutture accessorie. Affiancata alla produzione ceramica era anche la lavorazione di strumenti in osso, in particolare strumenti per la scrittura, stili. La presenza di un tale distretto non sembra essere casuale, in quanto la prossimità dell'antico corso del torrente Parma e di un asse stradale di collegamento tra la città e la compagna avrebbe certamente favorito produzione, vendita e commercio di prodotti finiti.



Fig. 3: Sepoltura infantile bisoma rinvenuta a ridosso delle mura repubblicane di Parma nello scavo di via del Conservatorio.

L'età imperiale

L'alto valore commerciale e la forte apertura verso l'esterno di questo settore della città, potrebbe aver spinto, al tempo della *rifondazione augustea* della colonia,[12] alla riqualificazione dell'intera area, attraverso la dismissione delle installazioni artigianali e la trasformazione del quartiere in zona per lo più residenziale. Per questo le mura urbiche vennero abbattute e furono edificate almeno due *domus* porticate affacciate sulla strada, la quale venne completamente ripavimentata con l'impiego di ciottoli fluviali sbozzati in forma poligonale e trattenuti tra due *crepidines* formate da mattoni sesquipedali sistemati di taglio. È chiaro che in questa fase le mura repubblicane, avendo cessato la loro originaria e principale funzione difensiva, erano divenute un elemento di disturbo e sentite come un reale ostacolo da eliminare per garantire una più utile e proficua relazione della *civitas* con il proprio *ager.*

Questa situazione continua ancora in epoca medio imperiale (III sec. d.C.), quando l'area subisce una nuova sistemazione, con l'accorpamento delle due *domus* in un'unica grande proprietà, la ridefinizione del precedente impianto fognario[13] e la completa ripavimentazione dell'asse stradale. L'originale vocazione commerciale dell'area sembra poi ritornare prepotentemente tra IV e V sec. d.C. con l'impianto di officine per la lavorazione di manufatti in osso e, soprattutto, di grandi magazzini – la cui edificazione venne celebrata attraverso la deposizione rituale di una falce di ferro, due bicchieri di vetro e una mattone rotto all'interno di una fossa[14] – che sembrerebbero essere stati utilizzati, in base alla grande quantità di anfore rinvenute, soprattutto per lo stoccaggio di olio e *garum* principalmente provenienti dall'Africa.

La Tarda Antichità

Un forte cambiamento avvenne nel VI secolo d.C. con la costruzione di nuove mura urbane, che restrinsero il perimetro cittadino e riproposero l'antica divisione tra area urbana ed extraurbana (fig. 4). A differenza dell'epoca repubblicana, tuttavia, in questo caso oltre ad una funzione propriamente difensiva, le mura sembrano costituire una sorta di limite invalicabile, simbolo di una differente percezione della relazione città-campagna, legata al cambiamento delle condizioni politiche, economiche e sociali. Le mura si mostrano infatti ora come un forte separatore tra lo spazio *intra moenia* e il mondo *extra urbem,* ovvero tra ciò che appartiene alla *civitas* e ciò che non lo è, tra il mondo dei vivi e quello dei non-vivi, tanto da non sorprendere che l'intera area, ora anche lambita dal nuovo alveo del torrente Parma[15], venga principalmente adibita a un uso funerario che perdura almeno fino all' altomedioevo.[16]



Fig. 4: Tratto delle mura tardoantiche di Parma, dallo scavo di via del Conservatorio.

Note

[1] A. R. Marchi, *Soprintendenza Archeologia Belle Arti e Paesaggio per le province di Parma e Piacenza;* M. Matteazzi, *Istituto Catalano di Archeologia Classica (Tarragona, Spagna);* I. Serchia, *collaboratrice Soprintendenza Archeologia Belle Arti e Paesaggio per le province di Parma e Piacenza.*

[2] Vitali 2009, 156.

[3] Livio, 41, 17

[4] Nel caso delle mura repubblicane di Parma le dimensioni dei mattoni sembrerebbero essere state formulate sul piede samio (34,9 cm) e più precisamente con una larghezza corrispondente a un piede e una lunghezza di un piede e mezzo, secondo una modulazione che diverrà caratteristica del mattone sesquipedale in uso in età tardorepubblicana e imperiale, elaborato però in base al piede attico.

[5] Livio 39, 55, 6–8.

[6] Tozzi 1974, 44–60; Catarsi 2009, 379–390.

[7] Marchi – Serchia 2019.

[8] Dall'Aglio 2009, 555–601.

[9] Eliade 1990, 33 con bibliografia di riferimento.

[10] Marini Calvani 2012, 38–39.

[11] A *Opitergium,* (Malnati et al. 1998, 443–464); presso la porta c. d. Mugonia a Roma (Carandini – Carafa 2000); presso la porta Marina delle mura di *Paestum* (Robert 1993, 119–140); presso le mura di *Ariminum* (Giusberti 1990, 119–130); sotto la porta-approdo di *Altinum* (Tirelli 2004, 851–852); presso una porta, probabilmente delle mura urbane, di *Saena Julia* (Baldinotti 2007, 22–26).

[12] Vera 2009, 242–243.

[13] Marchi – Matteazzi – Serchia 2018.

[14] Marchi-Serchia 2018, 91–93.

[15] Marchi-Serchia cfr. infra.

[16] Marchi-Serchia 2017, 79–88.

Bibliografia

Baldinotti 2007

S. Baldinotti, Oltre la soglia smarrimento e conquista. Culti e depositi votivi alle porte nel mondo italico. (Tesi di Laurea in archeologia Università di Roma 2007) 22–26.

Carandini – Carafa 2000

A. Carandini – P. Carafa (eds.), Palatium e Sacra via I, in Bollettino di Archeologia (Roma 2000) 31–33.

Catarsi 2009

M. Catarsi 2009, Storia di Parma. Il contributo dell'archeologia, in: D. Vera (ed.), Storia di Parma, II, Parma romana (Parma 2009) 367–499.

Dall'Aglio 1990
P. L. Dall'Aglio, Parma e il suo territorio (Sala Baganza 1990).
Dall'Aglio 2009
P. L. Dall'Aglio, Il territorio di Parma in età romana, in: D. Vera (ed.), Storia di Parma, II, Parma romana (Parma 2009) 555–601.
Eliade 1990
M. Eliade, I riti del costruire (Milano 1990).
Giusberti 1990
G. Giusberti, I resti sacrificali delle mura di *Ariminum,* Études celtiques 27, 1990, 119–130.
López Paz 1994
L. López Paz, La ciudad romana ideal, 1, El territorio (Santiago de Compostela 1994).
Malnati et al. 1998
L. Malnati – M. Tirelli – P. Croce Da Villa, Nuovi dati sulla Via Postumia in Veneto, in G. Sena Chiesa, E. Arslan (a cura di), Optima Via, Opitergium. Atti del Convegno Internazionale di Studi, Postumia: storia e archeologia di una grande strada romana alle radici dell'Europa, Cremona 13–15 giugno 1996, (Cremona 1998) 443–464.
Marchi – Serchia 2017
A. R. Marchi – I. Serchia, Il sepolcreto tardoantico con tracce di celebrazione del pasto funebre dallo scavo di via del Conservatorio a Parma, in: Temporis signa: archeologia della tarda antichità e del Medioevo 11, CISAM (Spoleto 2017) 79–88.
Marchi – Serchia 2018
A. R. Marchi – I. Serchia, La stipe votiva di Parma, via del Conservatorio, in: S. Gelichi – C. Cavallari – M. Medica (eds.), Medioevo svelato. Storie dell'Emilia Romagna attraverso l'archeologia (Cremona 2018) 91–93.
Marchi – Serchia 2019
A. R. Marchi – I. Serchia, Parma, via del Conservatorio, la scoperta e lo scavo di un tratto delle mura di difesa di II secolo a. C., in: J. Bonetto – E. Bukowiecki – R. Volpe (eds.), Alle origini del laterizio romano – Nascita e diffusione del mattone cotto nel Mediterraneo tra IV e I sec. a. C., Convegno Internazionale (Padova, 26–28 aprile 2016) (Roma 2019) 383–393.
Marchi – Matteazzi – Serchia 2018
A. R. Marchi, M. Matteazzi, I. Serchia, Il sistema di smaltimento delle acque a Parma in epoca romana: nuovi dati dallo scavo di via del Conservatorio, in: M. Buora – S. Magnani (eds.), I sistemi di smaltimento delle acque nel mondo antico, Antichità Alto Adriatiche 87 (Trieste 2018) 225–237.
Marini Calvani 2012
M. Marini Calvani, Un'area sacra (Fasi VI, VIII), in: M. Marini Calvani (ed.), Ventidue secoli a Parma. Lo scavo sotto la sede centrale della Cassa di Risparmio in piazza Garibaldi, BARIntSer 2046 (Oxford 2012) 42–43.
Robert 1993
R. Robert, Rites de protection et de défense. A propos des osemments d'un chien decouverts aux pied du rempart de *Paestum,* Annali di Archeologia e Storia Antica (Napoli 1993) 119–140.

Tirelli 2004

M. Tirelli, La porta approdo di *Altinum* e i rituali pubblici di fondazione: tradizione veneta e ideologia romana a confronto, in: M. Fano Santi (ed.), Studi di archeologia in onore di Gustavo Traversari II, Archaeologica 141 (Roma 2004) 849–863.

Tozzi 1974

P. Tozzi, Per uno studio diacronico delle antiche divisioni agrarie romane: Parma, in: P. Tozzi, Saggi di topografia storica (Firenze 1974) 44–60.

Vera 2009

D. Vera, Parma imperiale. Storia di una città dell'Italia settentrionale romana da Augusto a Giustiniano, in: D. Vera (ed.), Storia di Parma, II, Parma romana (Parma 2009) 219–307.

Vitali 2009

D. Vitali, Celti e Liguri nel territorio di Parma, in: D. Vera (ed.), Storia di Parma, II, Parma romana (Parma 2009) 147–179.

Change of the Function of the City Insula during the Late Roman Period: The Case of the Late Roman Insula from Maloutena District in Nea Paphos (Cyprus)[1]

Julia Mikocka

Introduction

The late Roman insula (fig. 1) is situated on the so-called Maloutena Plateau in the southwestern part of the ancient city Nea Paphos.[2] Surveys show that the oldest structures in this part of the town date to the late Classical period.[3] It is possible that during



Fig. 1: View on the North-Eastern House and the House of Aion.

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the Hellenistic period the residential insula existed there. The reconstructions of the Villa of Theseus in the end of the 3rd century and in the 4th century AD and expansion of the building to the east required the construction of the new street on the north-south axis.[4] The construction of this street, in the 4th century AD, has created the late Roman insula. Not long after the erection of the street the House of Aion was built. The North-eastern House was built roughly at the same time or not long after.

Research

It is assumed that the northeastern part of the late Roman insula served as a residential complex. The building located in the southern part is the so-called House of Aion, named because of the great mosaic in the main room with a representation of the Greek god of the time, Aion.[5] Other panels portray Leda and the Swan, Hermes and a young Dionysus, Cassiopeia, Apollo and Marsyas, and Dionysius with a thiasos. The building was called "house" during excavations in 1980s. Initially its location in the residential part of the ancient city indicated to this interpretation. But architectural plan, decorations and specific elements suggest that it could have served public functions.

The *triclinium* in the so-called House of Aion was not typical for a private residence. *Triclinium-vestibul* complex was accessible directly from the one of the main streets in the ancient city, called B,[6] which ran from the west to east, and led from the residential district to the Paphos harbor (fig. 2). This part of the House of Aion was adorned with a monumental facade towards the main gateway.[7] The room with paintings of extraordinary quality, representing Apollo and the Muses, was excavated. The floor of this room and of an adjacent long corridor could be made of wooden beams with an empty space beneath the floor (fig. 3). This is not typical for the architecture of this region. In the eastern end of this corridor, above the preserved cistern vault, was the threshold to the vestibule. At the threshold, on the side of the corridor, a goat skeleton was found. Perhaps this area was used for rituals.

In the area of the late Roman insula unusual features, not seen before in other buildings from the area of Nea Paphos, were indicated. The plan of these two buildings did not correspond to the typical layout and plan of a house known from other examples from Nea Paphos.[8] The divisions in this insula run along the urban area, rather than across it. This issue is interesting in the context of location the House of Aion in a representative part of the city and in the immediate vicinity of the Villa of Theseus, the largest residential building in Cyprus, where 100 rooms were found. It is assumed that this building served some official function. Of particular importance is the fact that at the time when the House of Aion still functioned, the quarter in which the late Roman insula was located had already been abandoned.

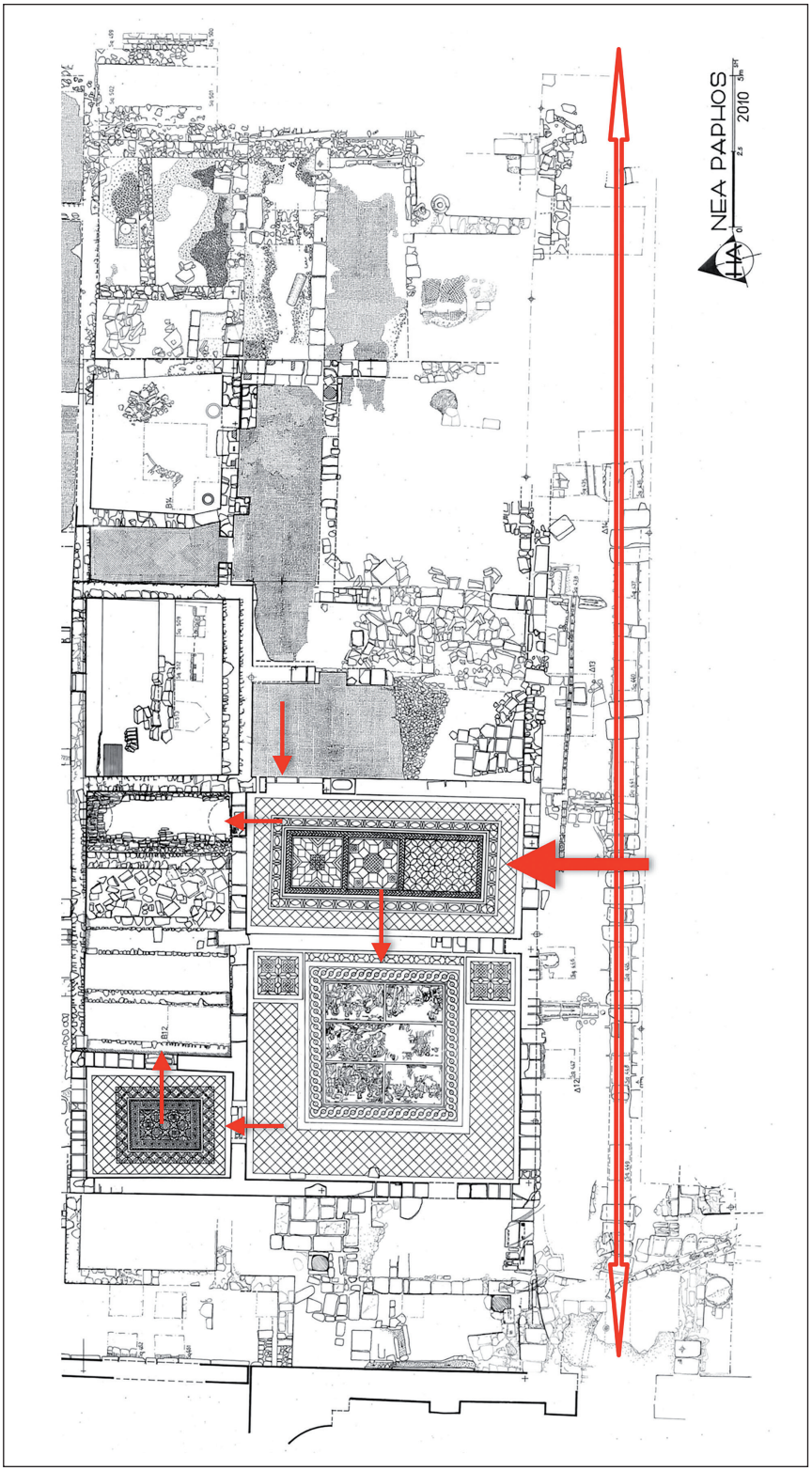


Fig. 2: Plan of the House of Aion with marked W–E street and communication inside the building.



Fig. 3: Room with paintings representing Apollo and the Muses and with benches supporting wooden floor in the House of Aion.

Conclusions

The late Roman insula was erected in the district, which functioned as residential part of Nea Paphos during Hellenistic and Roman periods. Previously, in this part of the city several houses existed. In the 4th century AD, when the late Roman insula was erected, in this district only the Villa of Theseus functioned (fig. 4). Other residences, such as the so-called Hellenistic House, the House of Orpheus and the House of Dionysus were destroyed and could be abandoned. The southern part of the insula was of a semi-public character. The so-called House of Aion could be interpreted as seat or meeting place of religious-philosophic community. It is difficult to determine the final habitation period of this area, although the latest fragments of the pottery date to the 6th and 7th centuries AD.

During the 4th century AD the character of the residential district in Nea Paphos was changed. Most of the residences were destroyed and probably abandoned. Citizens had to gather in other parts of cities. The public and representative functions of the other buildings from the city were concentrated in the Villa of Theseus, which was located close to the city harbor. From the second part of the 5th century AD the Villa of Theseus gradually falls into ruins. Of particular importance is the fact that at the time when the buildings in late Roman insula still functioned even the Villa of Theseus had already been abandoned.

The late Roman insula indicates that in the late Roman period public, sacral and religious buildings developed in the city. The mostly abandoned residential area communicated with the harbor. It seems that the inhabitants gathered more around the city port and in building of semi-public, religious character.



Fig. 4: The late Roman insula and the Villa of Theseus.

Notes

[1] My research has been funded by the National Science Center (Cracow, Poland), grant Prelude 10 (2015/19/N/HS3/00907): Late Roman insula from Maloutena district in Nea Paphos (Cyprus) in light of recent documentation studies.

[2] Medeksza 1992, 82.

[3] Green 2010, 116.

[4] Daszewski 1997; Medeksza 1992, 5–8. 36–37. 42–45. 64–65. 69.

[5] Olszewski 2013, 207–239; Olszewski 1990/1991, 444–463; Daszewski 1985.

[6] Meyza 2010, 229–238.

[7] Brzozowska-Jawornicka 2016, 160–164.

[8] Daszewski 1998, 129.

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Bibliography

Brzozowska-Jawornicka 2016
A. Brzozowska-Jawornicka, Reconstruction of a Façade of the House of Aion, Nea Paphos, Cyprus, Studies in Ancient Art and Civilization 20 (Kraków 2016) 151–172.

Daszewski 1985
W. A. Daszewski, Dionysos der Erlöser. Griechische Mythen im spätantiken Cypern, in: G. Grimm (ed.), Trierer Beiträge zur Altertumskunde 2 (Mainz am Rhein 1985).

Daszewski 1997
W. A. Daszewski, La Mosaïque de Thésée: Études sur les mosaïques avec représentations du labyrinthe de Thésée et du Minotaure (Varsovie 1997).

Daszewski 1998
W. A. Daszewski, Nea Paphos: Excavations 1997, in: M. Gawlikowski – W. A. Daszewski (eds.), Polish Archaeology in the Mediterranean 9, Reports 1997 (Warsaw 1998) 119–129.

Green 2010
J. R. Green, The Theatre of Paphos and Theatre of Alexandria some First Thoughts, in: R. Macleod (ed.), The Library of Alexandria, Centre of Learning in Ancient World (London 2010) 115–126.

Medeksza 1992
S. Medeksza, Willa Tezeusza w Nea Pafos. Rezydencja antyczna (Wrocław 1992).

Meyza 2010
H. Meyza, Archaeology of Architectural Remains – a Case of Paphos (Archeologia reliktów architektury – przypadek Pafos), in: J. Kościuk (ed.), Non solum villae. Księga jubileuszowa ofiarowana profesorowi Stanisławowi Medekszy (Wrocław 2010) 229–238.

Olszewski 1990/1991
M. T. Olszewski, L'allégorie, les mystères dionysiaques et la mosaïque de la Maison d'Aiôn de Nea Paphos à Chypre, Bulletin de l'Association Internationale pour l'Étude de la Mosaïque Antique 13, 1990/1991, 444–463.

Olszewski 2013
M. T. Olszewski, The Iconographic Programme of the Cyprus Mosaic from the House of Aion Reinterpreted as an Anti-Christian Polemic, in: Vitoldo Dobrowolski (ed.), Et in Arcadia ego. Studia memoriae Professoris Thomae Mikocki dicata (Varsoviae 2013) 207–239.

Phoenician and Punic Malaka: Centrality or Periphery

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The study of Phoenician and Punic urbanism is strongly limited by the optimum settlement pattern developed by Phoenician settlers and the following reuse of space in a virtually uninterrupted way throughout consecutive historical phases. As a result, there are only a few studies that have allowed us to know exhaustively the full extent of these ancient colonial settlements and their urban evolution over time. Without purporting to be exhaustive, the best-preserved Phoenician urbanism are the ones of Carteia (San Roque, Cádiz, Spain)[2], Doña Blanca's Castle – Las Cumbres (Puerto de Santa María, Cádiz, Spain)[3], Kerkouane (Nabeul, Tunisia)[4], Lixus (Larache, Morocco)[5], Motya (Marsala, Sicily, Italy)[6] and Nora (Pula, Cagliari, Sardinia, Italy)[7]. The classical sources are not especially expressive in this regard and only twice directly allude to the size of a Phoenician-Punic population. In the first case, for example, there is a certain debate between Strabo and Livy about Carthage's wall perimeter: while the geographer of Amasia[8] establishes that the city was set on a land of 360 perimeter stadiums (more than 60 km) which was walled, the Paduan historian reduces its size to 23 miles (just over 34 km),[9] although there is a possibility that the information could come from to two different chronological moments. The homonymous city founded by the Barcids in Iberia is also the object of this type of calculations by Polybius[10] who stated that the city was 20 stadiums long (about 3.5 km) by 10 stadia wide (approximately 1.75 km), numbers that match approximately to the archaeological remains. We should also to enlarge this category with the studies that have been done on the urban planning of the Libyan (Tunisia)[11] and the Iberian[12] Cartagena (Murcia, Spain) *Qart Hadasht,* and as we will briefly see now Malaka (Malaga, Spain) from, mainly, the different archaeological excavations developed in the urban landscape of the modern cities.

In the present case, the uninterrupted occupation only allows us to obtain a very fragmented image of Malaka's urban evolution during the Phoenician and Punic phases of the settlement.[13] Although the rescue excavations developed in the subsoil of the current city of Malaga are relatively profuse, Phoenician-Punic levels can often not be reached or studied due to economic or legislative constraints. However, there are more and more sites where these phases have been discovered and studied, which allows us now to understand the urban development of this city, although, as is usually the case, the appearance of new questions on its particular urban distribution enriches at the same time that complicates its study.

Although the Phoenician presence in Malaga's Bay can be safely go back to the 9th century BC, as the archaeological intervention in La Rebanadilla clearly shows,[14] it would not be until the 6th century BC when the old Phoenician colony acquired its citizen entity,[15] clearly distributed now in the vicinity of the Guadalmedina river and the Alcazaba hill in the center of the current city of Malaga. This city-state configuration

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had a clear echo not only in its urban configuration but in the territory where it can be appreciated an exploitation of the territory in an orderly manner by means of small settlements, warehouses, pottery workshops devoted to the amphora production and, even enclaves created to the control the territory and its agricultural production (fig. 1).[16] As in other Phoenician colonial sites, Malaka's urbanization process was linked to religiosity, as can be shown by the importance of the sanctuary or religious emporium located in Císter Street, prior to the creation of Malaka's urban layout in this sector of the city.[17]

After this initial urban Phoenician phase, from the 6th century BC onwards, a new urban boost took place in this Phoenician site. Once again, this urban rearrangement was organized by the displacement of the main temple of the city to the surroundings of the Alcazaba neighborhood because it was a main topographic element in the urban landscape.[18]

This evolutionary trend would continue until the 3rd century BC, when the arrival of the Carthaginian commanders to the Iberian Peninsula and, especially, the beginning of the warlike conflict against Rome that they brought, led to important economic, political and social changes in the socio-economic evolution of the Phoenician cities of Iberia.[19] In Malaga this phenomenon is clearly reflected in the hinterland where the number of rural settlements grew reaching a number never seen before, which also caused a change in the rural exploitation pattern now characterized by the exploitation of higher areas too.[20]

As in most cities that have continued to be inhabited to this day, it is common to find changes in the configuration of their urban topography (fig. 2). Indeed, archaeological proofs have allowed to show an urban evolution between the Phoenician phase and the later Punic and Roman ones. The city fortifications were adjusted to this urban evolution and were renewed to remain effective to the poliorcetics advance of the moment.[21] Of course, these changes on the organization of Malaka's urban fabric, came together with important changes in land use. For instance, some cemeteries are deconsecrated to be able to use the terrain of those formerly important funerary spaces of the city with new profane purposes.[22] But even so, the limited space offered by the coast of Malaga seemed insufficient for those who lived there, and the Phoenician colony was forced to expand itself, probably beyond the city limits defined by the walls, creating artisanal and residential neighborhoods outside the walls.[23]

Despite all these features shared with the rest of the ancient Phoenician colonies, *Malaka* was not a normal Western Phoenician city. Its great economic importance, at the level of the main Phoenician trade ports of *Iberia* and the Balearic Islands such as *Gadir, Iboshim* and *Baria,* is undisputable if we consider the distribution of Malaga's productions in regional and local markets and, above all, at least from the 5th century BC on, into the supra-regional markets. A good example of this would be the location of salted-fish amphoras from Malaga in Corinth.[24] This economic power was associated, as happens in the cases of *Baria* and *Iboshim,* to a particular religiosity that dissociates it

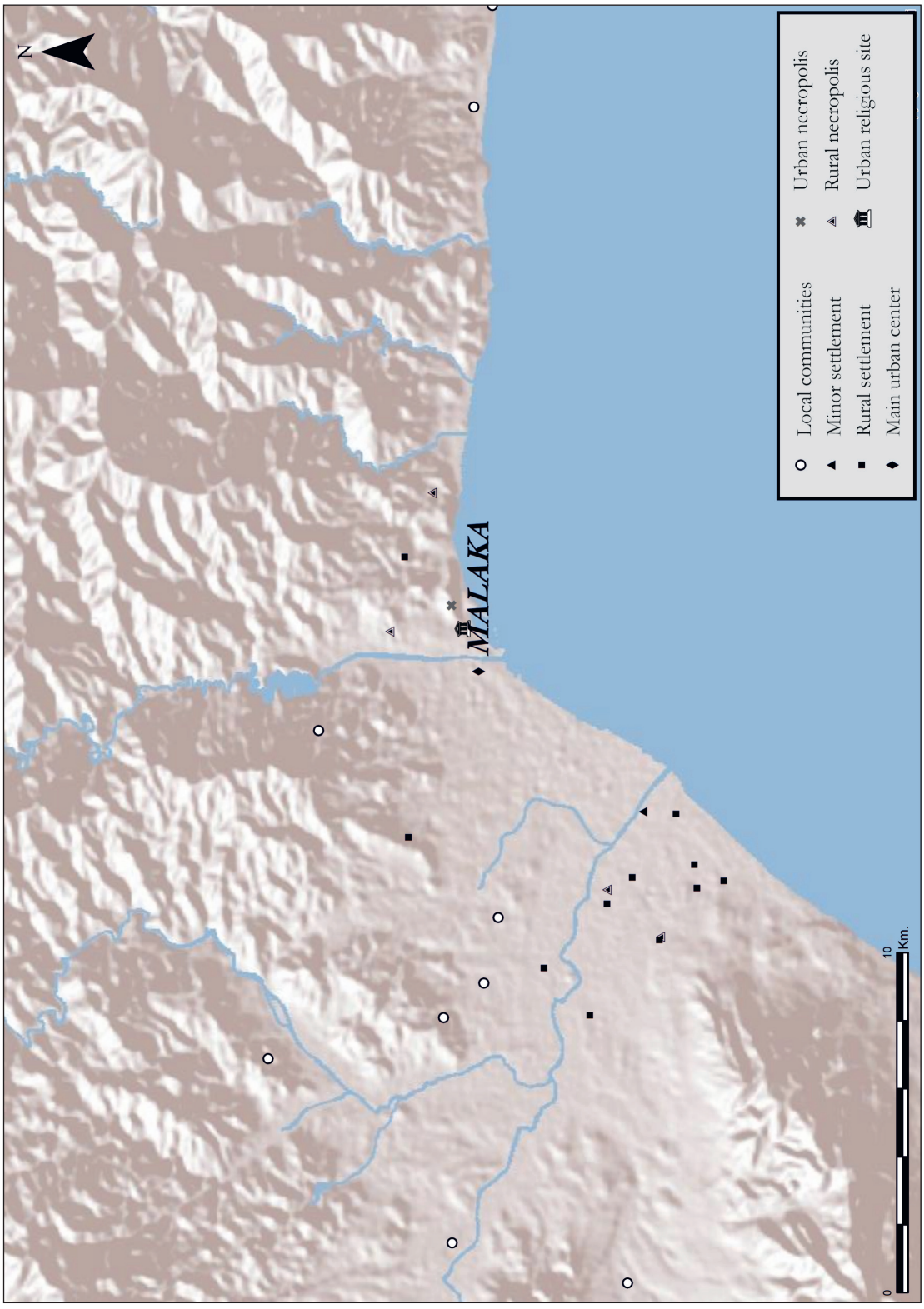


Fig. 1: The bay of Malaga in Phoenician-punic period: urban centres and local and autochthonous periphery

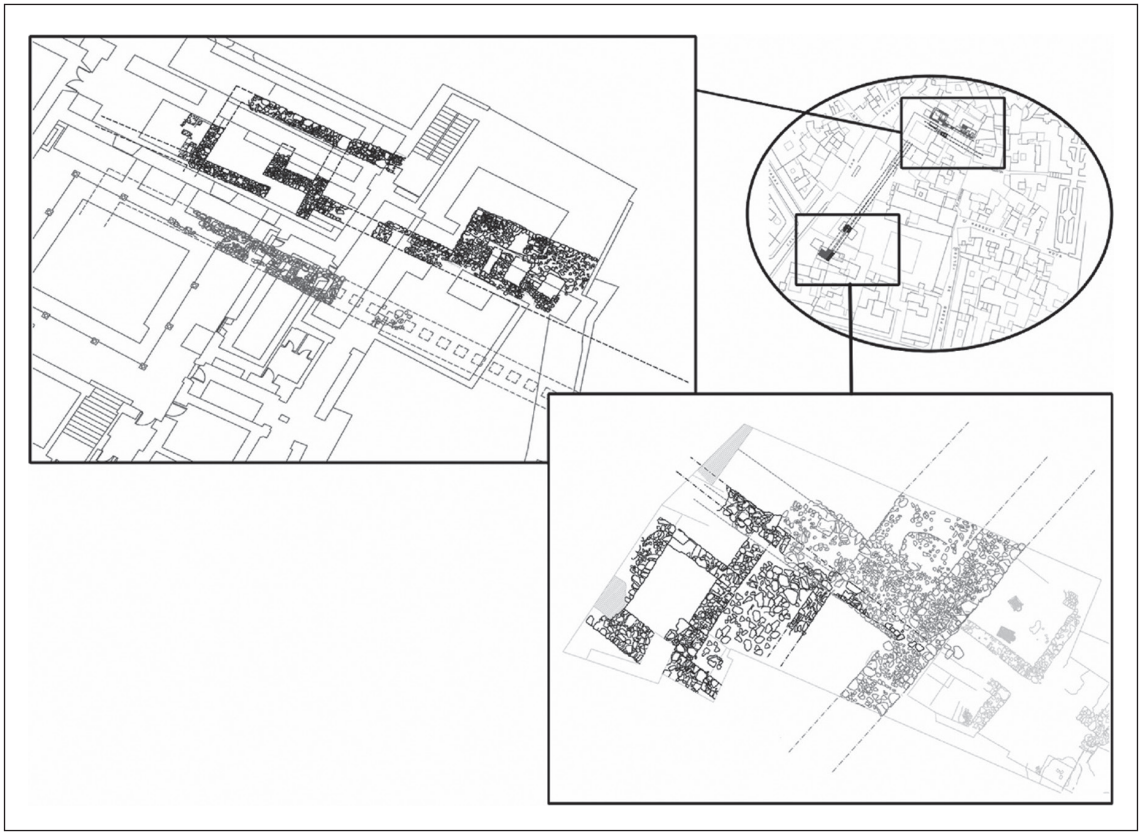


Fig. 2: Malaka's city walls dated to the 6th and 5th centuries

from the majority of Phoenician colonies dominated by the gods *Melqart* and *Ashtart,*[25] granting it a unique religious identity in *Iberia.* Indeed, Malaka's mint activity, which seems to begin during or immediately after the Second Punic War, shows on the obverse of some coins a divinity that we have identified with Baal Shamash, Phoenician god of the Sun, whose closest parallels take us to cities Phoenicians from North Africa.[26]

However, the most striking feature of the Phoenician-Punic city of *Malaka* is its unusual urban configuration. In fact, the analysis of the archaeological remains recovered in the Malaga subsoil has allowed to locate direct evidences of the Phoenician and Punic population in an area that covers almost 100 hectares. Although it is too early to completely rule out the possibility of the city reaching these dimensions in its later Punic urban phases,[27] the comparison with the dimensions of the Phoenician-Punic sites mentioned in the introduction,[28] leads us to be skeptical about this and to look for other interpretative possibilities to explain this urban phenomenon.

The location of the necropolis seems to point out from the first moment to the existence of a dispersed or multi-core city, whose main center would be located between the Alcazaba hill and the Guadalmedina river. Indeed, as can be clearly seen in fig. 3, Malaka's necropolis are located in an almost equidistant way, bounding each neighbor-

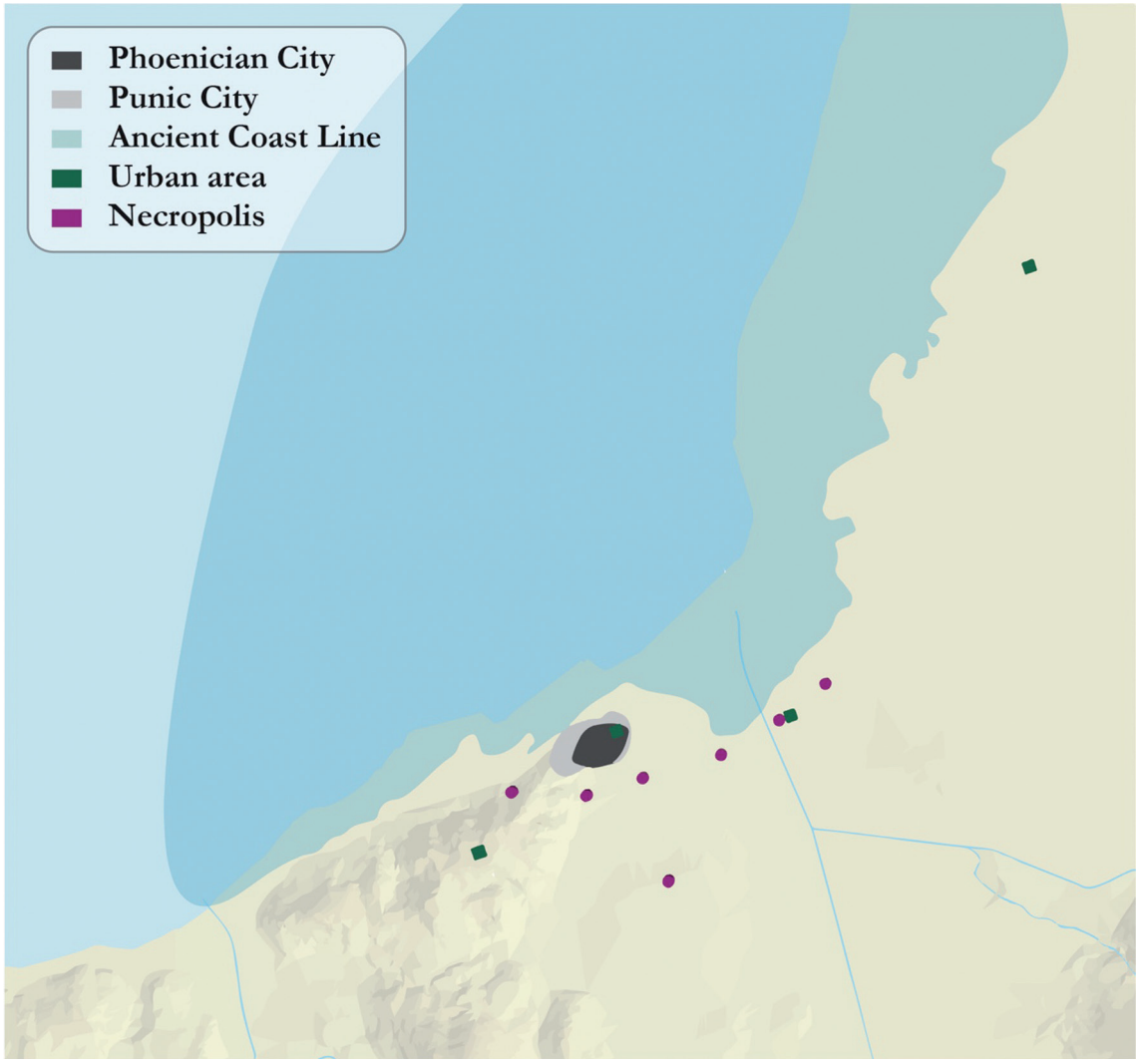


Fig. 3: The expansion of the Phoenician-Punic city: a longitudinal city pattern

hood or district in its northern limit. Although not all were coeval, their distribution does not follow a chronological pattern and, at least one of them, was deconsecrated to become a space for urban use. To compound the situation, we found a sparse group of burials in the Alcazaba or Tiro-Zamorano areas, creating a funerary space for the Punic aristocracy, as far as the scarce but luxurious tombs and their sumptuous grave goods point out.[29]

Perhaps we can relate this unusual urban configuration with the succinct Strabo's description of Malaka in Augustus' time,[30] for which we know that the old Phoenician colony had an urban distribution that separated it from the Greek-Latin urban canons. If our interpretative model is correct, the city would have had a main district and several outskirts separated from it, giving the image of a discontinuous city or a city with a

center and several peripheries. The choice of these secondary districts or suburbs would answer to both productive or housing needs and, especially, to the existence of intermediate areas unfit for occupation, as on the other hand show the geoarchaeological studies still in progress.

Notes

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[2] Roldán Gómez et al. 2006.

[3] Ruiz Mata – Pérez 1995.

[4] Fantar 1984–1986.

[5] Habibi – Aranegui Gascó 2005.

[6] Ciasca 1992, 79–84.

[7] Oggiano 2009, 417–432.

[8] Strabo XVIII, 3, 14.

[9] Titus Livy *Epit.* LXI.

[10] Pol. X, 10, 1.

[11] Fumadó Ortega 2013.

[12] Noguera Celdrán – Madrid Balanza 2014, 13–60.

[13] Investigations that are part of the research project of the Government of Spain (HAR2015-68669-P): Before the Columns. Punic Malaka and its projection in the Iberian SE and Mar de Alborán.

[14] Sánchez Sánchez-Moreno et al. 2012.

[15] Mora Serrano – López Castro 2002, 183, 185.

[16] Recio 1993/1994, 102–103; Martín Córdoba et al. 2008, 146.

[17] Arancibia Román – Escalante Aguilar 2006, 336–338; Arancibia Román – Mora Serrano 2018, 321–326.

[18] López Castro – Mora Serrano 2002, 190–191.

[19] Martínez Hahnmüller 2016, 107.

[20] Recio 1993/1994, 106–107; Pardo Barrionuevo 2015, 96–97.

[21] Arancibia Román – Escalante Aguilar 2006, 338. 342. 347–353.

[22] It is the Late-Punic necropolis of Beatas Franquelo street (Arancibia Román – Mora Serrano 2017, 358. 360), which at the sight of recent studies must be interpreted as associated to another artisanal and commercial district of the city (Mateo – Mayorga 2017, 118–119), whose central location explains the subsequent reoccupation of the space by a factory during the High Roman Empire.

[23] Arancibia Román – Mora Serrano 2011, 183.

[24] Sáez Romero 2018, 21.

[25] Mora Serrano 2014/2015, 134–136. 140.

[26] Mora Serrano 2014/2015, 133–136.

[27] In this regard it should be noted that the African *Qart Hadasht* would reach in the 3rd century BC the 120 inhabited ha (Fumadó Ortega 2013, 347), while the Iberian homonym city would not be far from the 100 ha.

[28] Thus, for instance, the island of San Pantaleo where Motya is located has an area of 45 ha that was protected by a wall of 2.5 km (Ciasca 1992, 83), Carteia archaeological site occupies around 27 ha (Roldán et al. 2006, 13), Nora peninsula does not exceed 20 ha, the Phoenician habitation zone of Lixus does not exceed 12 ha (Aranegui Gascó 2004, 176), the group formed by the settlement of Castillo de Doña Blanca and the neighboring district of Las Cumbres would not exceed 10 ha (Ruiz Mata 1999, 305 and Ruiz Mata – Niveau de Villedary y Mariñas 1999, 124) and, finally, the small settlement of Kerkouane would not exceed 7 ha (Fantar 2000, 72).

[29] Cf. Note 20.

[30] III, 4, 3.

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Fig. 1: map by Víctor Martínez Hahnmüller and Carmen A. Pardo Barrionuevo. – Fig. 2: Taller de Investigaciones Arqueológicas – Fig. 3: drawing by Víctor Martínez Hahnmüller and Carmen A. Pardo Barrionuevo.

References

Arancibia Román – Escalante Aguilar 2006
A. Arancibia Román – M. M. Escalante Aguilar, La Málaga fenicio-púnica a la luz de los últimos hallazgos, Mainake 28, 2016, 333–360.

Arancibia Román – Mora Serrano 2011
A. Arancibia Román – B. Mora Serrano, Malaka, de enclave colonial en las puertas del Estrecho a polis fenicia occidental en el sur de Iberia, in: J. C. Domínguez Pérez (ed.), Gadir y el Círculo del Estrecho revisados: propuestas de la arqueología desde un enfoque social (Cádiz 2011) 175–186.

Arancibia Román – Mora Serrano 2017
A. Arancibia Román – B. Mora Serrano, La etapa neopúnica en Malaca (Málaga): La aportación de las necrópolis, in: M. Guirguis (ed.), From the Mediterranean to the Atlantic: People, Goods and Ideas between East and West, Folia Phoenicia 1 (Pisa 2017) 357–360.

Arancibia Román – Mora Serrano 2018
A. Arancibia Román – B. Mora Serrano, Malaka before the Polis: a Colonial Emporium of the 7th C. BC Inheritor of the Archaic Phoenician Settlement on the Guadalhorce River Mouth, in: M. Botto (ed.), De Huelva a Malaka. Los Fenicios en Andalucía a la luz de los descubrimientos más recientes (Roma 2018) 321–339.

Aranegui Gascó 2004
C. Aranegui Gascó, Lixus (Larache, Marruecos), Bienes Culturales 3, 2004, 171–181.

Arteaga 2001
O. Arteaga, La polis malacitana. Una aproximación desde la economía política, las relaciones interétnicas y la política económica referida al intercambio comercial, in: F. Wulff Alonso – G. Cruz Andreotti – C. Martínez Maza (eds.), Comercio y comerciantes en la Historia Antigua de Málaga (siglo VIII a. C. – año 711 d. C.) (Málaga 2001) 203–275.

Campo – Mora Serrano 1995
M. Campo – B. Mora Serrano, Las monedas de Malaca (Madrid 1995).

Ciasca 1992
A. Ciasca, Mozia in Sicilia: un esempio di cinta urbana in area coloniale fenicia, in: Lixus: actes du colloque organisé par l'Institut des sciences de l'archéologie et du patrimoine de Rabat avec le concours de l'Ecole française de Rome: Larache, 8–11 novembre 1989, CEFR 166 (Roma 1992) 79–84.

Corrales – Corrales 2012
P. Corrales – M. Corrales, Malaca: De los textos literarios a la evidencia arqueológica, in: J. Beltrán Fortes – O. Rodríguez Gutiérrez (eds.), Hispaniae urbes. Investigaciones arqueológicas en ciudades históricas (Sevilla 2012) 363–402.

Domínguez Monedero 2006
A. Domínguez Monedero, Fenicios y griegos en el sur de la Península Ibérica en época arcaica, de Onoba a Mainake, Mainake 28, 2006, 49–78.

Fantar 1984–1986
M. Fantar, Kerkouane: Cité Punique du Cap Bon (Tunisie) (Tunis 1984–1986).

Fumadó Ortega 2013
I. Fumadó Ortega, Cartago fenicio-púnica. Arqueología de la forma urbana (Sevilla 2013).

Gran-Aymerich 1986
J. M. J. Gran-Aymerich, Málaga fenicia y púnica, in: M. E. Aubet (ed.), Los fenicios en la Península Ibérica I (Sabadell 1986) 127–147.

Gran-Aymerich 1991
J. M. J. Gran-Aymeric, Malaga phénicienne et punique. Recherches franco-espagnoles 1981–1988 (Paris 1991) 57–92.

Habibi – Aranegui Gascó 2005
M. Habibi – C. Aranegui Gascó, Lixus-2 Ladera sur: memoria de las excavaciones arqueológicas realizadas en la ladera sur de Lixus (Larache) por el equipo Marroquí-Español entre 2000 y 2003 (Valencia 2005).

López Castro – Mora Serrano 2002
J. L. López Castro – B. Mora Serrano, Malaka y las ciudades fenicias en el occidente mediterráneo. Siglos VI a.C. – I d.C., Mainake 24, 2002, 181–214.

Martín Córdoba et al. 2008
E. Martín Córdoba – A. Recio Ruiz – J. D. Ramírez Sánchez – A. Moreno Aragüez, Neue phönizische fundorte an der küste von Vélez-Málaga (Prov. Málaga), MM 49, 2008, 145–187.

Martín Ruiz 2010
J. A. Martín Ruiz, El urbanismo en la colonia fenicia de Malaca, Byrsa 17/18, 2010, 73–90.

Martínez Hahnmüller 2016
V. Martínez Hahnmüller, Comercio en tiempos de guerra: la distribución anfórica cartaginesa durante el periodo bárquida, Spal 25, 2016, 83–111.

Mateo – Mayorga 2017
D. Mateo Corredor – J. F. Mayorga Mayorga, Comercio anfórico tardorrepublicano en Malaca: las importaciones de calle Beatas-esquina Ramón Franquelo (Málaga, España), Lucentum 49, 2017, 103–122.

Mora Serrano 2014/2015
B. Mora Serrano, Altares y monedas: topografía religiosa y continuidad de cultos fenicios en Malaka (Málaga), Byrsa. Scritti sull'antico Oriente Mediterraneo 25/26, 2014/2015, 131–147.

Mora Serrano – Arancibia Román 2010
B. Mora Serrano – A. Arancibia Román, La bahía de Málaga en los períodos púnico y romano-republicano: viejos problemas y nuevos datos, Mainake 32, 2010, 813–836.

Noguera Celdrán – Madrid Balanza 2015
J. M. Noguera Celdrán – M. J. Madrid Balanza, Carthago Nova: fases e hitos de monumentalización urbana y arquitectónica (siglos III a.C.–III d.C.), Espacio Tiempo y Forma 7, 2015, 13–60.

Oggiano 2009
I. Oggiano, La città di Nora. Spazio urbano e territorio, in: S. Helas – D. Marzoli (eds.), Phönizisches und punisches Städtewesen. Akten der internationalen Tagung in Rom vom 21. bis 23. Februar 2007, IA13 (Mainz 2009) 417–432.

Pardo Barrionuevo 2015
C. A. Pardo Barrionuevo, Economía y sociedad rural fenicia en el Mediterráneo Occidental (Sevilla 2015).

Recio 1993/1994
A. Recio Ruiz, A., Prospecciones arqueológicas: un modo de aproximación al conocimiento de los procesos de interacción indígenas-fenicios en el valle del Guadalhorce (Málaga), Mainake 15/16, 1993/1994, 85–104.

Roldán Gómez et al. 2006
L. Roldán Gómez – M. Bendala Galán – J. Blánquez Pérez – S. Martínez Lillo, Estudio histórico-arqueológico de la ciudad de Carteia, vol. I (Sevilla 2006).

Ruiz Mata 1999
D. Ruiz Mata, La fundación de Gadir y el Castillo de Doña Blanca: contrastación textual y arqueológica, Complutum 10, 1999, 279–317.

Ruiz Mata – Niveau de Villedary y Mariñas 1999
D. Ruiz Mata – A. M. Niveau de Villedary y Mariñas, La zona industrial de Las Cumbres y la cerámica del s. III a.n.e. (Castillo de Doña Blanca-El Puerto de Santa María, Cádiz), in: XXIV Congreso Nacional de Arqueología, vol. III (Murcia 1999) 125–131.

Ruiz Mata – Pérez 1995
D. Ruiz Mata – C. Pérez, El poblado fenicio del Castillo de Doña Blanca (El Puerto de Santa María, Cádiz) (Puerto de Santa María 1995).

Sáez Romero 2018

A. M. Sáez Romero, Apuntes sobre las dinámicas comerciales de *Gadir* entre los siglos VI y III a.C., Gerión 36/1, 2018, 11–40.

Sánchez Sánchez-Moreno et al. 2012

V. M. Sánchez Sánchez Moreno – L. Galindo San José – M. Juzgado Navarrro – M. Dumas Peñuelas, El asentamiento fenicio de La Rebanadilla a finales del siglo IX a.C. in: E. García Alfonso (ed.), Diez años de arqueología fenicia en la Provincia de Málaga (2001–2010) (Sevilla 2012) 67–85.

Suárez et al. 2007

J. Suárez – M. M. Escalante – M. I. Cisneros – J. Mayorga – L. E. Fernández, Territorio y urbanismo fenicio-púnico en la Bahía de Málaga, siglos VIII–V a.C., in: J. L. López Castro (ed.), Las ciudades fenicio-púnicas en el Mediterráneo Occidental (Almería 2015) 209–232.

La toponymie maghrébine antique et les ressources

Adel Njim[1]

Résumé

La toponymie antique du Maghreb reflète l'environnement sous tous ses aspects à la fois naturels, anthropiques et onomastiques. Ainsi, nous allons présenter deux catégories de toponymes : les géonymes et les personnymes. Cette question est très vaste et dépasse ce cadre. Donc, nous n'allons exposer qu'un aperçu sélectif de ce dossier.

Abstract

The ancient toponymy of the Maghreb reflects the environment in all its aspects at once natural, anthropic and onomastic. Thus, we will present two categories of place names : geonyms and personalities. This question is very broad and goes beyond this framework. So, we are going to expose only a selective overview of this file.

Les données toponymiques constituent un outil privilégié pour lire le paysage et identifier ses ressources. Les études de la toponymie maghrébine sont de plus en plus prisées. Dans ce cadre scientifique nous avons pensé apporter une touche particulière qui essaye de concilier les soucis d'un historien et ceux d'un géographe. Ainsi, lors de ce colloque pertinent notre communication aura pour objet de présenter une ébauche inédite d'une synthèse de la toponymie du Maghreb. Malgré la grande superficie de cet espace, nous allons essayer de présenter une approche thématique des noms lieux maghrébins. Une observation de la toponymie au Maghreb ; Algérie,[2] Tunisie,[3] Maroc[4] et Libye[5] nous autorise à dire que ces données ont l'avantage de refléter l'environnement sous tous ses aspects à la fois naturels et anthropiques.

Nous avons pu définir trois grands axes à cette thématique. D'abord, les toponymes géographiques. Ensuite, les toponymes urbains. Enfin, les personnymes. Il ne s'agit pas de présenter un catalogue exhaustif mais un instrument de lecture unifié afin d'harmoniser la recherche sur cette question.

Dans cette note, nous allons présenter deux catégories de toponymes : les géonymes et les personnymes.

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I. Les géonymes

1. L'espace maritime

Une mer prend le nom de la zone qu'elle borde ; mer d'Afrique ;[6] mer Syrtique ; mer Kerkennensis. Les caps se substituent aux mers. Le nom Cap Afrique désigne Mahdia.[7] Ruspina (Monastir) :[8] Rus (cap) et Penna (île). Ras Ed Drek au Cap Bon signifie le cap de l'épouvante.[9] Le Promontoire Pulcaire le Cap Bon actuel :[10] un lieu prospère. Skikda portait le nom de Rusicade : Ras Kd (cap de la cruche).[11]

2. L'espace insulaire

La Galite[12] est l'altération de Zalata (la roche). Une île est qualifiée selon sa taille. Parmi les îles de l'archipel de Kerkenna une île s'appelle Gattaya.[13] Une altération de Hassaya (petit caillou). Une île est nommée selon sa couleur. Ibiza en Espagne[14] est l'altération de Abyadh Hassa (roche blanche). Les îles Kerkenna désignent des monuments défensifs[15] l'altération de Sakhr Hissn : murailles en pierre.

3. L'espace terrestre

Les noms de lieux de Rmell terre sablonneuse sont très fréquents à Mahdia et aux îles Kerkenna. Le terme de Stara (terre rocheuse) existe au Sahel tunisien. Au sud tunisien Kebili est une altération du terme arabe Jebel (la montagne). En Algérie le toponyme des Aurès vient du nom de Waera Hassa : immenses roches.[16] Au Maroc le Mont Toubkal qui serait l'altération de montagne du Toub Akehal (à la roche noire). L'actuel Djel Cheanbi en Tunisie serait une altération de Jebel el Hassa el Abyadh (montagne à la roche blanche). Les monts Ouesslet à l'Ouest de Kairouan signifient les montagnes des maisons en pierre. Le Jbel Haddada dans la même zone signifie la montagne aux fortifications désignant le Limes.

4. L'eau

Le nom de Zama en Tunisie signifie l'eau abondante.[17] Mahdia se nommait Gummi[18] qui signifie ; l'eau abondante. Kairouan est nommée Gamonia ; une région riche en eau.[19] Timgad signifie une abondance en eau.[20] Larache au Maroc est Loukos en Grec altération de Hlou Ghit (eau potable).[21] La Bagrada antique signifie l'eau coulante.[22] Biskra en Algérie signifie l'eau courante. Guelma l'antique Calama a le même sens. Ammaedara[23] est un synonyme. Madaure en Algérie est un même toponyme.[24] Sullectum signife l'eau coulante.[25] Korba au Cap Bon l'antique Curubis l'eau chaude.[26] Des noms de sources d'eau sont associés à des animaux comme Aïn el Bgar (sources des vaches), Aïn el Atrouss (source du bouc), Aïn el Kebch (source du mouton).

II. Les personnymes

1. Les divinités

Le personnage d'Hercule a donné son nom au détroit marquant la sortie de la Méditerranée nommé les colonnes d'Hercule.[27] Le nom d'Heraklion est porté par une ville du Sahel tunisien l'actuelle Hergla.

Le nom d'Appolonia dans la Grande Syrte[28] est en rapport avec Appolon. De multiples villes maghrébines antiques avaient porté le nom d'Aphrodisium comme Mahdia au Sahel tunisien.

2. Les ethnonymes

Les noms d'Afrique, de Lybie, de Numidie et de Maurétanie sont à l'origine des noms de tribus. Des villes étaient à l'origine des noms de tribus. En Algérie la tribu des Misicini qui ont peuplé la ville actuelle de Biska. En Tunisie le peuple des Npzih a donné son nom à la ville de Nefzawa. L'ethnie des Mskw a peuplé la ville de Msaken et la tribu des Mktrm a qualifié la cité de Mactar.[29]

3. Les personnages politiques

Plusieurs cités portent les noms de personnalités politiques. La ville algérienne de Caesarea l'actuelle Cherchel.[30] La ville de Sidi el Hani entre Sousse et Kairouan s'appelait Vicus Augusti (cité d'Auguste). La ville de Kairouan en Tunisie s'appelait Jubaltiana : ville du roi numide Juba. La ville algérienne de Cirta avait pris le nom de l'empereur byzantin Constantin.[31]

4. Les patronymes

De multiples patronymes sont l'altération de toponymes antiques. Sidi Bou Saïd aux environs de Tunis est une déformation du toponyme de Borj Hassa Atty c'est-à-dire Grande fortification en pierre. Le marabout de Sidi Masseoud à l'entrée de Mahdia reflète le terme arabe de Ma Houdh c'est-à-dire des installations hydrauliques. Le nom du village tunisien de Sidi Amara le Saint patron de la ville de Korbous au Cap Bon est l'altération du terme eau chaude dont le nom antique d'Aquae Clidae Carpitanae est un témoignage.

Cette communication est une partie d'un projet sur la thermalisation de la toponymie maghrébine qui appelle à l'implication de multiples spécialistes de différentes périodes historiques. Ce travail a tenté de voir la toponymie maghrébine antique à travers l'angle du pragmatisme qui animait les Anciens et leur souci des ressources. Nous avons tenté de dépasser la question des interprétations grecques et latines des toponymes maghrébins souvent récurrentes dans la littérature scientifique européenne est reprises sans trop de critiques par les chercheurs des pays du Maghreb.

Notes

[1] Maître assistant en histoire et archéologie antiques à la Faculté des Lettres et Sciences Humaines.
[2] Lancel – Algérie 1992 a, 15–17.
[3] Lancel – Lipinski 1992 g, 474–476.
[4] Ponsich 1992 b, 273–275.
[5] Lipinski 1992 a, 259–260.
[6] Arnaud 2005, 150 et figure.
[7] Lancel 1992 a, 269.
[8] Lancel – Lipinski 1992 f, 380.
[9] Lancel – Lipinski 1992 e, 369–370.
[10] Lancel – Lipnski 1992 c, 88–89.
[11] Lipinski 1992 c, 379.
[12] Chelbi 2011, 80.
[13] Lancel – Lipinski 1992 d, 245.
[14] Fernandez 1992, 222–226.
[15] Lancel – Lipinski 1992 d, 245.
[16] Ballais 1989, 1066.
[17] Lancel – Lipinski 1992 h, 500.
[18] Lancel 1992 a, 269.
[19] Ben Abbès 2004, 474.
[20] Lipinski 1992 d, 455.
[21] Ponsich 1992 a, 264.
[22] Gascou 1981, 18.
[23] Laronde 2001, 200.
[24] Lipinski 1992 b, 267.
[25] Lancel 1992 b, 385.
[26] Lancel – Lipinski 1992 c, 88.
[27] Rouillard 1992, 190.
[28] Laronde 2001, 206–207.
[29] Ghaki 2004, 88.
[30] Lancel – Lipinski c, 104–105.
[31] Berthier 1992, 117–118.

Références

Arnaud 2005
P. Arnaud 2005, Les routes de la navigation antique Itinéraires en Méditerranée (Paris 2005).
Ballais 1989
Encyclopédie Berbère 10 (1989) 1066–1095 s. v. Aurès (J.-L. Ballais).

Ben Abbès 2004
M. Ben Abbès, L'Afrique byzantine face à la conquête arabe (Diss. Université Paris X 2004).
Berthier 1992
Dictionnaire de la civilisation phénicienne et punique (1992) 117–188 s. v. Constantine (A. Berthier).
Chelbi 2011
F. Chelbi, La Galite (Galata) système de surveillance de communication et de défense à l'époque punique, in A. Ferjaoui, La Carthage punique diffusion et permanence de sa culture en Afrique antique (Tunis 2011) 77–109.
Fernandez 1992
Dictionnaire de la civilisation phénicienne et punique (1992) 222–226 s. v. Ibiza (J. H. Fernandez).
Ghaki 2004
M. Ghaki, Ethnonymes l'apport de l'épigraphie libyco-punique, in : R. Daghfous (éd.), La tribu dans le monde arabo-islamique : l'état de la question et nouvelles perspectives, Actes d'un colloque, Revue tunisienne des sciences sociales 127 (Tunis 2004) 83–91.
Gascou 1981
J. Gascou, Le nom de l'Oued Medjerda dans l'antiquité romaine, AntAfr 17, 1981, 15–19.
Lancel 1992 a
Dictionnaire de la civilisation phénicienne et punique (1992) 269 s. v. Mahdia (S. Lancel).
Lancel 1992 b
Dictionnaire de la civilisation phénicienne et punique (1992) 385 s. v. Ras Salakta (S. Lancel).
Lancel – Lipinski 1992 a
Dictionnaire de la civilisation phénicienne et punique (1992) 15–17 s. v. Algérie (S. Lancel – E. Lipinski).
Lancel – Lipinski 1992 b
Dictionnaire de la civilisation phénicienne et punique (1992) 88–89 s. v. Cap Bon (S. Lancel – E. Lipinski).
Lancel – Lipinski 1992 c
Dictionnaire de la civilisation phénicienne et punique (1992) 104–105 s. v. Cherchel (S. Lancel – E. Lipinski).
Lancel – Lipinski 1992 d
Dictionnaire de la civilisation phénicienne et punique (1992) 245 s. v. Kerkenna (s. S. Lancel – E. Lipinski).
Lancel – Lipinski 1992 e
Dictionnaire de la civilisation phénicienne et punique (1992) 369–370 s. v. Ras Ed Drek (S. Lancel – E. Lipinski).
Lancel – Lipinski 1992 f
Dictionnaire de la civilisation phénicienne et punique (1992) 380 s. v. Ruspina (S. Lancel – E. Lipinski).
Lancel – Lipinski 1992 g
Dictionnaire de la civilisation phénicienne et punique (1992) 474–476 s. v. Tunisie (S. Lancel – E. Lipinski).

Lancel – Lipinski 1992 h
Dictionnaire de la civilisation phénicienne et punique (1992) 500 s. v. Zama (S. Lancel – E. Lipinski).
Laronde 2001
A. Laronde, L'Afrique antique histoire et monuments (Paris 2001).
Lipinski 1992 a
Dictionnaire de la civilisation phénicienne et punique (1992) 259–260 s. v. Libye (E. Lipinski).
Lipinski 1992 b
Dictionnaire de la civilisation phénicienne et punique (1992) 267 s. v. Madaure (E. Lipinski).
Lipinski 1992 c
Dictionnaire de la civilisation phénicienne et punique (1992) 379 s. v. Rusicade (E. Lipinski).
Lipinski 1992 d
Dictionnaire de la civilisation phénicienne et punique (1992) 455 s. v. Timgad (E. Lipinski).
Ponsich 1992 a
Dictionnaire de la civilisation phénicienne et punique (1992) 264 s. v. Lixus (M. Ponsich).
Ponsich 1992 b
Dictionnaire de la civilisation phénicienne et punique (1992) 273–275 s. v. Maroc (M. Ponsich).
Rouillard 1992
Dictionnaire de la civilisation phénicienne et punique (1992) 190 s. v. Gibraltar (P. Rouillard).

El asentamiento tardo-republicano del Campet de la Sal (Cardona, Barcelona) y su relación con la explotación de la sal

Ainhoa Pancorbo Picó – Albert Martín Menéndez

El asentamiento que aquí presentamos se sitúa a escasos metros del valle salado de Cardona, considerado la explotación de sal gema más antigua de Europa. Se trata de un conjunto arquitectónico con un mínimo de tres edificaciones (fig. 1) que podrían ser más por extenderse las estructuras más allá de la zona excavada. El primer edificio se compone de nueve ámbitos (B a J) que envuelven, por los lados norte, este y oeste, un corredor central con el extremo cruzado en diagonal por una cloaca excavada en el terreno que, más adelante, se adosa a la fachada occidental de los ámbitos que dan al corredor, previamente a su salida al exterior. El acceso a este edificio se practicaría desde el sur, que es donde situaríamos el eje viario que conduce a la mina de sal, a partir del cual se articulan todas las construcciones en sentido noreste a suroeste.

Destacan los ámbitos del lado occidental del corredor, B, C y D por ser donde se ha podido registrar una mayor secuencia estratigráfica. Así, el nivel de circulación del ámbito D, de tierra batida, está definido por la existencia de un hogar central, mientras que el nivel de uso de D se ubica a una cota superior, lo que nos indica la presencia de fuertes desniveles, salvados por muros de contención que, en el caso del muro de separación entre C y D fue recrecido durante el segundo cuarto del siglo I a. C. En cuanto al corredor central (F) presenta evidencias de un pavimento de losas de piedra, que podría llevar a interpretar esta parte de la *domus* como un patio no cubierto.

En el lado este de la *domus* se sitúan dos grupos constructivos más. El primero (K–O), alineado con las estructuras descritas, forma un conjunto constructivo similar al que hemos visto hasta ahora mientras que el segundo (P–R) se superpone al anterior, lo que nos apunta una cronología posterior, que será tratada con más detalle en otra ocasión.

El ámbito A

En el extremo occidental de la *domus* 1 se encuentra, adosado, el ámbito A, con una amplia entrada de acceso directo a la vía mencionada en su esquina sudeste. Este ámbito reviste especial importancia no solo por sus mayores dimensiones, sino porque su construcción está asociada a un depósito de un conjunto de materiales muy significativo, tanto desde el punto de vista cronológico como de cultura material. Fue depositado al construirse el muro sur del ámbito, tiene una datación de 90/80 a. C. y se compone de dos cuencos y una jarrita bicónica de cerámica gris ibérica, una Lamb. 4 y una Lamb. 10 de barniz negro de Cales, un fondo de Lamb. 1, también de Cales recortado a modo de tapadera, tres *stili* y una tapa de cajita portasellos de hueso, catorce tabas, una ficha circu-

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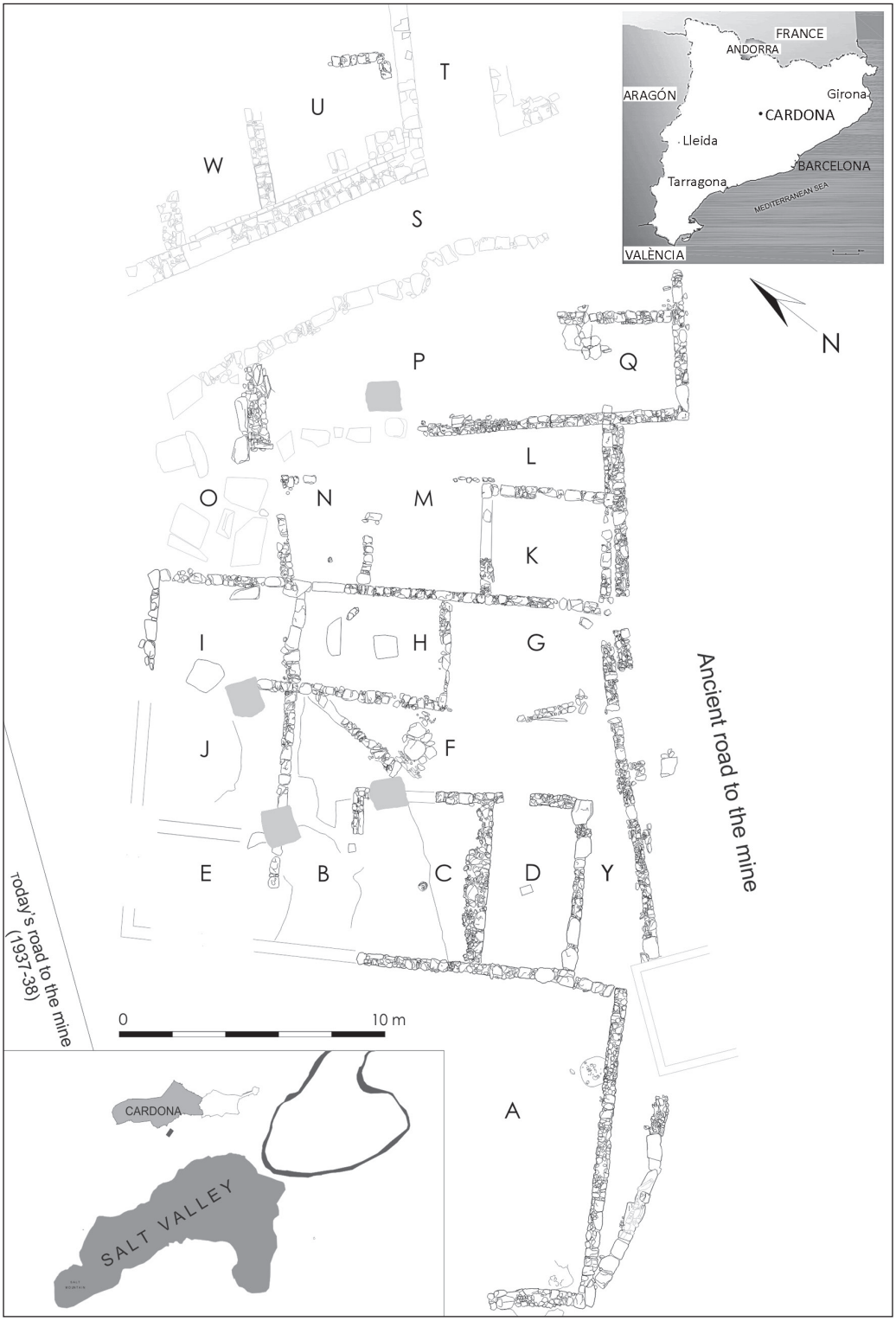


Fig. 1: Planta del asentamiento del Campet de la Sal.

lar de mármol, dos fusayolas, parte del asa de bronce de un colador, una placa de hierro rectangular, dos unidades de *Laiesken* y un denario de *Bolskan*. (fig. 2) Se trata de materiales habituales para los contextos que tratamos, pero el hecho de encontrar algunos de los elementos no cerámicos en el mismo ámbito, nos da pie a elucubrar sobre los motivos de su depósito y sobre la funcionalidad del espacio donde se encuentran

Por un lado, los tres *stili* y la tapa mencionada son elementos de escritura que se pueden asociar al sistema de registro de la administración romana, ya que se admite que se utilizarían junto a tablillas de madera de una o más piezas, rellenas de cera, en las cuales se escribiría con los *stili* para luego sellar el texto con la cápsula mencionada, que contendría un sello de autentificación,[1] aunque también podrían usarse como la garantía de cierre de productos de valor, como es el caso de bolsas con monedas.[2] En cuanto a la cápsula, aunque no se prodigan tanto como los *stili,* encontramos paralelos cercanos con una cronología similar.[3]

Por otro lado, el asa de bronce del colador no es habitual en la península ibérica, encontrándose documentados hasta la fecha solamente dos ejemplares en Empúries, correspondientes como en nuestro caso a la pieza superior donde se apoyaría el pulgar.[4] Se trata de una forma que pertenece a la vajilla tardo-republicana en bronce, con un arco cronológico que se sitúa entre finales del siglo II a. C. hasta época de Tiberio.

En tercer lugar, hallamos las catorce tabas y la ficha de mármol, elementos de juego o entretenimiento habituales para el periodo romano, con un paralelo cercano para la ficha de mármol en Empúries, con una cronología precisa.[5]

Por último, a parte de las tres monedas mencionadas, hay que tener en cuenta que otras siete se encontraron en el mismo ámbito y por lo tanto gran parte del numerario del yacimiento se concentra en ese mismo espacio. A todo esto, hay que añadir que la mayor parte de las monedas, siete, del yacimiento corresponden a la ceca de Laiesken mientras que el resto es de cecas distintas (Kese, Iltirkesken y Ausesken), porcentaje que nos sugiere alejar esta ceca de Barcelona[6] o del Maresme[7] y proponer una nueva ubicación, más cercana a Cardona.[8]

Así pues, la coincidencia en el mismo ámbito de elementos de escritura, de registro, de juego, así como las piezas correspondientes a la vajilla de bronce y el numerario mencionado nos permite diferenciar este espacio del resto de los del asentamiento, donde cabe pensar en la presencia de una unidad administrativa, quizás vinculada al ejército para la época que tratamos y ocupada directamente en la gestión y registro de la sal.

Los materiales

Respecto al conjunto de material cerámico que podemos atribuir al período de vida de este asentamiento, presenta la cerámica hecha a torno de tradición ibérica como material de uso más habitual. No obstante, este material está acompañado de morteros (tipos 8d y 8e), cazuelas (tipos 6c y 6d) y tapaderas de cerámica común itálica, así como de

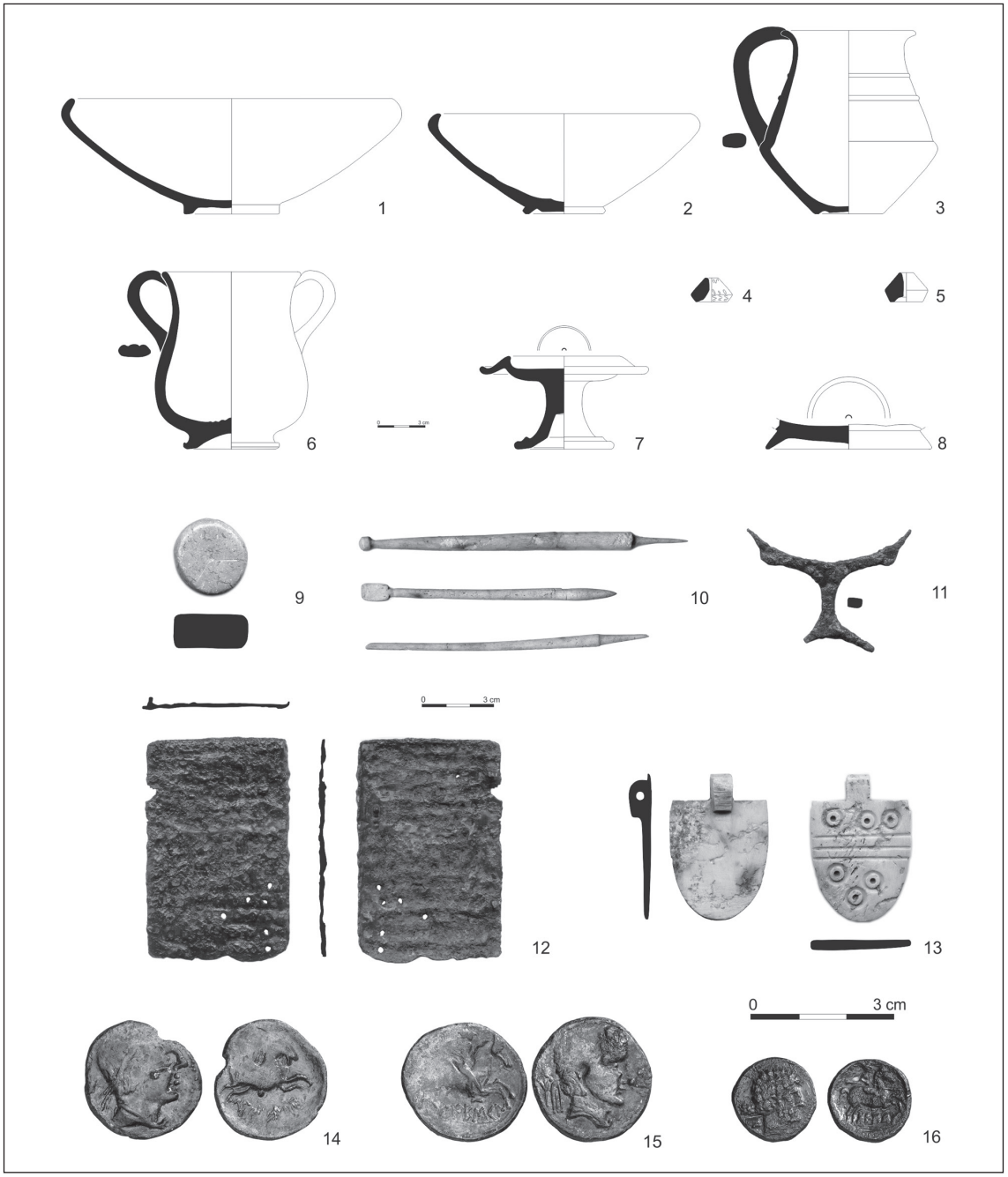


Fig. 2: Material del depósito fundacional del ámbito A. 1–2: Gris ibérica, 3: Jarrita bicónica gris ibérica, 4–5: Fusayolas, 6–7: Barnices negros de Cales Lamb. 10 y Lamb. 4, 8: Barniz negro de Cales Lamb. 1 recortado a modo de tapadera, 9: Ficha de juego en mármol, 10: Estiletes de hueso, 11: Parte de una asa de colador de bronce tipo Idria, 12: Placa de hierro rectangular, 13: Tapa de caja portasellos en hueso, 14–15: Unidades de Laiesken, 16: Denario de Bolskan.

producciones locales hechas a torno de material culinario, que además de ollas, también elaboran cazuelas de inspiración itálica, para la cocción de alimentos.

Respecto a la vajilla de mesa, destaca la presencia de la Campaniense A, con las formas Lamb. 27Ba, Lamb.27 a–b, Lamb. 36, Lamb. 6, Lamb. 5 y Lamb. 33B, y sobre todo el barniz negro de producción Calena, donde se registra todo el repertorio conocido de las formas correspondientes a las variantes media y tardía de la producción, siendo las piezas más abundantes, Las Lamb. 5, Lamb. 1 y en menor medida la F4753.

Las ánforas de importación son en su mayor parte de procedencia itálica, particularmente las procedentes del sector de Pompeya-Sorrento y se trata de envases vinarios de los tipos Dressel 1A y 1C, acompañados de algunas producciones de la costa adriática, como son las ánforas ovoides de Brindes (Apani/Giancola 5B). El segundo grupo en importancia cuantitativa son las procedentes de la costa norteafricana, correspondientes al tipo Tripolitana 1 antigua. Finalmente, encontramos algunas piezas procedentes del sur de la península ibérica de las formas T–9.1.1.1, T–7.4.3.3, contados fragmentos de ánforas de procedencia ebusitana y un ejemplar de ánfora del Egeo.

En lo que se refiere al momento de abandono, los estratos presentan un mobiliario muy similar al detallado hasta el momento (fig. 3, 1 y 4–9), pero ya nos aparecen algunas otras piezas que nos indican una cronología algo más reciente, como ánforas de origen bético del tipo Dressel 7/11, Dressel 12 (fig. 3, 2–3), y LC 67/Ovoide 1, acompañadas de los primeros fragmentos de ánforas tarraconenses. Para la vajilla de mesa, las producciones de Cales tardías son ahora mayoritarias, con la novedad de la pátera Lamb. 7 (fig. 2, 10). Las acompañan las cerámicas grises de pasta micácea barnizadas en negro y las producciones aretinas de barniz negro Lamb. 5, todo ello sin la presencia de la Terra Sigillata itálica de barniz rojo, lo que nos permite establecer la cronología de este conjunto en torno del 50–30 a. C.

Conclusiones

Este asentamiento de época tardo-republicana reviste pues de especial importancia ya que su existencia debería asociarse al proceso de control del territorio de la Catalunya Interior en los primeros momentos de la romanización, así como al evidente interés que pudiera tener para el estado romano la presencia de la ya entonces sobradamente conocida mina de sal. Así, cabe suponer la presencia sobre el terreno de una unidad administrativa ligada a la extracción de la sal y a su comercialización, al pie de la vía que conduce a la mina de sal. Abarca un periodo cronológico comprendido entre el 130–120 a. C.[9] hasta el 50–30 a. C., con una ocupación posterior de buena parte del sector oriental durante el siglo I d. C. que podría tener continuidad hasta finales de este siglo o inicios del siguiente.

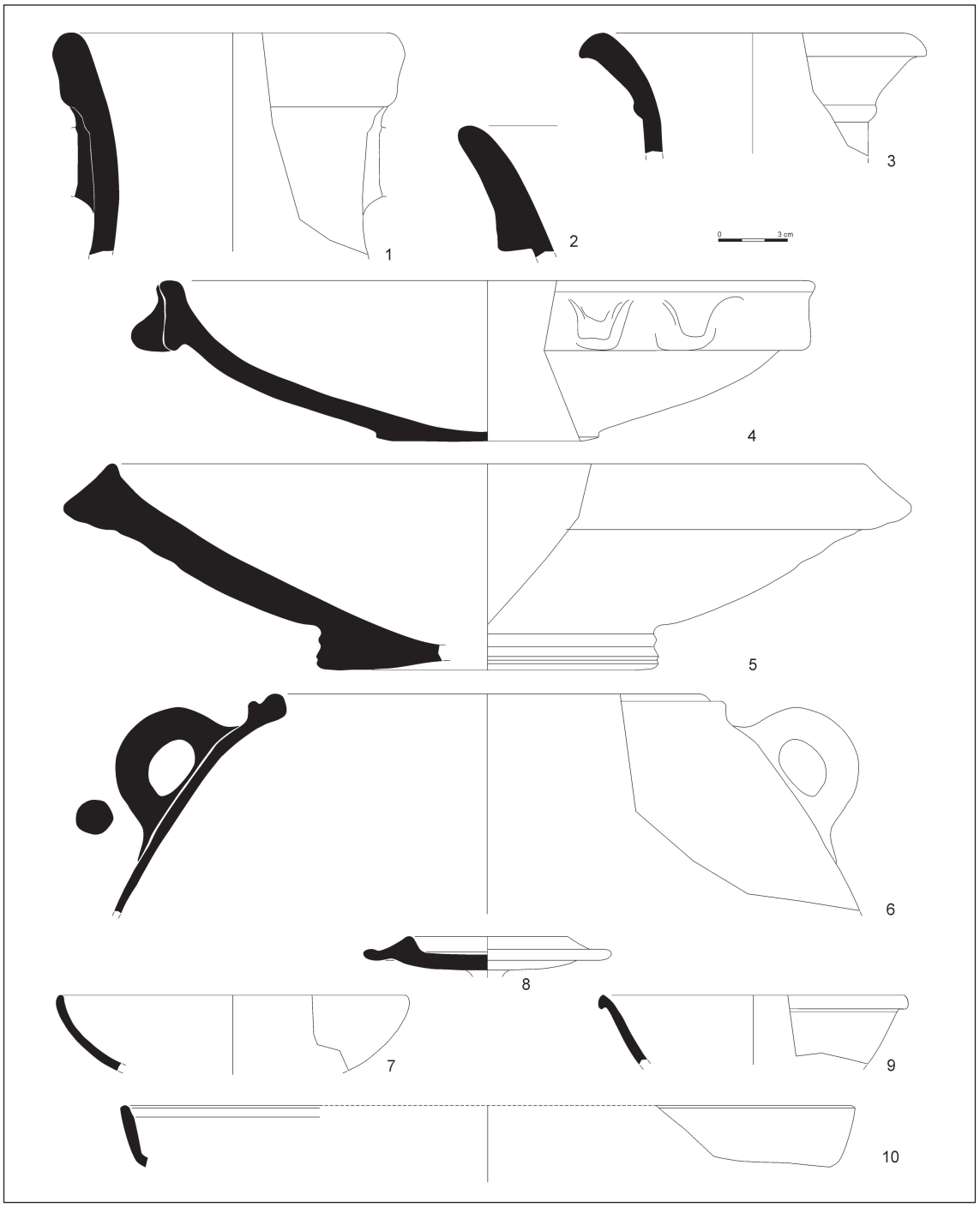


Fig. 3: Material del final de la fase tardo-republicana. 1: Ánfora africana Tripolina antigua, 2–3: Ánforas béticas Dr. 12 y Dr. 7/11, 4–5: Morteros itálicos 8 f/Emporiae 36.2 y 8b, 6: Vasija de almacenaje común ibérica, 7: Campaniense A Lamb. 27a–b, 8–9: Barniz negro de Cales Lamb. 4 y Lamb. 8, 10: Barniz negro del norte de Italia, Lamb.7.

Note

[1] Duran et al. 2008, 124–125.
[2] Furger et al. 2009; Alonso 2013.
[3] A destacar un ejemplar completo en el Camp de les Lloses (Tona), también en un mismo espacio junto a un estilete.
[4] Ejemplares estudiados en Guillaumet 1991 y revisados por Eduard Ble en su tesis Doctoral, presentada en 2015 y para la cual no halló ningún ejemplar nuevo.
[5] Agradecemos la información de J. Tremoleda, sobre un conjunto del 71 a. C., con 12 piezas de juego pequeñas que acompañaban una pieza más grande como la que nos ocupa.
[6] Asensio et al. 2009, 82.
[7] Sinner 2013, 179.
[8] Berdún et al. c. s.
[9] Entre el material más antiguo recuperado se cuentan unos escasos fragmentos de ánforas greco-itálicas, páteras y cuencos de la Campaniense A, y de algunas formas de barniz negro de Cales en sus variantes antigua y media.

Índice de figuras

All figures by authors.

Bibliografia

Alonso 2013
J. Alonso, Cápsulas de sellos en Hispania romana. Aproximación a una primera clasificación formal, Sautuola XVIII (Santander 2013) 213–226.

Asensio et al. 2009
D. Asensio – X. Cela – C. Miró – M. T. Miró – E. Revilla, El nucli ibèric de Montjuïc. Les sitges de Magòria o de Port. Barcelona, Quarhis 5, 2009, 15–85.

Berdún et al. 2018
M. Berdún – A. Martin – A. Pancorbo, Estudio Numismático del yacimiento del "Campet de la Sal" (Cardona, Bages), XVI Congreso Internacional de numismática (Barcelona 2018) (c. s.).

Ble 2015
E. Ble, Guerra y conflicto en el nordeste de Hispania durante el período romano republicano (218–245 a. C.). La presencia del ejército romano a partir de sus evidencias arqueológicas metálicas. Tesis Doctoral (Barcelona 2015).

Duran et al. 2008
M. Duran – I. Mestres – J. Principal (eds.), Les col·leccions de l'exposició permanent del Camp de les Lloses (Tona 2008).

Duran et al. 2014/2015

M. Duran – I. Mestres – C. Padrós – J. Principal, El Camp de les Lloses, un exemple d'implantació militar al territorio d'època romanorepublicana. Tona. Barcelona, Tribuna d'arqueologia, 2014/2015, 11–45.

Furger et al. 2009

A. R. Furger – M. Wartmann – E. Riha, Die römischen Siegelkapseln aus Augusta Raurica, Forschungen in Augst 44 (Augst 2009).

Guillaumet 1991

J. P. Guillaumet, Les passoires, in: M. Feugère – C. Rolley (eds.), La Vaisselle Tardo-Républicaine en bronze, Actes de la table-ronde CNRS – Lattes 26–28 april 1990 (Dijon 1991) 89–96.

Sinner 2013

A. G. Sinner, La difusión de las emisiones ibéricas layetanas, Saguntum 45, 2013, 171–192.

The Diet of Classical Athletes and the Opinions of Ancient Writers, Philosophers, and Doctors Concerning It

Kleanthi Pateraki

Introduction

The aim of the poster presentation is to scientifically highlight an issue that has so far almost been undetected or little researched: the nutrition of the athletes during the Classical era, era of great prosperity for the four Great Panhellenic Sports and Music (performing arts) Games (that is the Olympic Games, held in the Sanctuary of Zeus at Olympia, the Pythian Games, held in the Sanctuary of Apollo at Delphi, the Isthmian Games, held in the Sanctuary of Poseidon at Isthmia and the Nemean Games, held in the Sanctuary of Zeus at Nemea). The views (positive and negative) of ancient philosophers (e.g. Plato, Aristotle), writers (i.e. Euripides) and even doctors (Hippocrates, Galen) on the diet and generally on the lifestyle of ancient athletes will be examined here.

Information about the athletes' nutrition

The evidence we have regarding the nutrition of athletes is written, found in ancient literate sources from Classical to Roman times. The iconography of sports is plentiful, depicting many representations of athletes in action, but there is a lack of illustrations of e.g. crowned young people consuming food.

In the early years of sports, from the 8th to the 5th century BC, there was a preference for dried figs.[1] Also soft (fresh) cheese, barley bread, unleavened loaves of non-sifted wheat were consumed.[2]

The Classical era marked a new phase in the dietary habits of athletes: the consumption of vegetable carbohydrates was replaced by meat, thus the consumption of animal protein, especially before the race. This diet was conducive to improvement of performance, acceleration of recovery from injuries and intense workouts.

As Pausanias refers, the first who had this pioneering idea was himself an athlete, Dromeus from Stymphalus of Arcadia, who was twice Olympic champion – probably during the 74th and 75th Olympiad (484 and 480 BC) – in a foot-race called "dolichos dromos".[3] According to other authors this habit was first introduced by a gymnast named Pythagoras[4] or by the Samian philosopher of the 6th century BC Pythagoras,[5] who recommended a meat diet to the athlete Eurymenes of Samos.[6]

After this, the athletes preferred the meat of goats,[7] oxen, bulls, and deer.[8] However, all these kinds of meat were expensive, so it was practically impossible to be consumed frequently.[9]

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The diet of Classical athletes also included olive oil and wine, which was mixed with water.

Other natural substances, which increased the strength and durability of athletes, were herbs and some types of mushrooms. Honey, consumed by athletes in 400 BC, provided them with energy.[10]

The viewpoints of ancient writers, philosophers and physicians

The special diet of athletes with the preference for protein is interpreted by some ancient writers as eclectic without elements of exaggeration. There are others who criticize this diet, considering it to be extreme and compulsive, as this extravagance is displayed in the training of the athletes and their unilateral involvement in sports, which distances them from the implementation of the principle "a healthy mind in a healthy body".

Plato considers the diet of martial athletes "dormant" and inappropriate for health. He remarks that athletes sleep throughout their lives and if they break their diet they get crucially sick.[11]

Aristotle argues that "health is a virtue of the body".[12]

Flavius Philostratus in his work Gymnastics (ch. 43–51) compares the diet favored by athletes of "older times" with that of his contemporary athletes, with whom doctors were lenient, recommending white bread made from ground meal sprinkled with poppy seeds, pork, copious quantities of fish and other "fancy food", in effect turning athletes into "gluttons with insatiable stomachs". He criticizes saying that the older athletes were great, while those of his time not so good.[13] He believes that the diet of the first athletes was natural and their way of living simple and points out that they did not fall ill, they could participate in war, they took part in many Olympiads and old age caught up with them much later in life.[14]

Athenaeus presents in his work *Deipnosophists* various stories about the extreme diets that distinguished athletes. He names specific athletes who teetered on the brink of overeating. He does not consider the fact that these athletes were greedy, because anyone involved in gymnastics was also taught to eat a lot. Two examples of athletes he mentions are the following: Milo from Croton in southern Italy, a very famous wrestler of the 6th–5th century BC, ate 20 "mnes" (pounds) of meat, 20 "mnes" (pounds) of bread and drank three wine "hoes" (pints). When he was in Olympia he loaded on his shoulders a four-year-old bull and carried it to the Stadium of Olympia. Under the astonishment of the spectators, he butchered and ate it by himself in a day.[15] The wrestler Damippos was called "Thunderbolt" not only because of his prowess, but also because of his insatiable need to devour anything set on the table before others had had any chance of enjoying a meal![16]

Hippocrates recommends that one's diet, and therefore the athlete's, should be determined by age, time of year, weather conditions and temperament of the individual.[17] He

defines a measure of food and similar exercise, suggesting a code of healthy living and the need to preserve the measure, which can lead to a timely avoidance of unpleasant diseases.[18]

Galen notes that the diet of athletes, especially of wrestlers, leads to obesity through its exaggeration. He argues that athletes are obliged to eat necessarily, thus they are compelled to follow a diet,[19] that is why their life is worse than that of pigs, since the latter do not need to eat by force. He writes: "Even those who wrestle are led to obesity rather than to the practice of virtue. Many of them are so fat that they breathe with difficulty."[20] "Such people are not appropriate to become generals in war or administrators of royal or political matters."[21] The physician blames athletes because they live recklessly laboring and filling themselves up like Coroebus of Elis,[22] their physical beauty being distorted because of the demands of their trainers and their excessive stoutness,[23] so that they neither take pleasure of their own body because of excess body toil and compulsive eating, from which they suffer.[24]

Notes

[1] Thermou 2017, 52.

[2] Swaddling 1984, 47.

[3] Paus., VI, 7, 10.

[4] Swaddling 1984, 47.

[5] D. L., VIII, 12.

[6] Dalby 2003, 38 s. v. Athletes; Grandjean 1997, 875S; Grivetti – Applegate 1997, 862S.

[7] Ath., IX, 402c, where he refers to the unbeaten athlete Cleitomachus from Carthage who used to eat only the meat of goat.

[8] Swaddling 1984, 47.

[9] Swaddling 1984, 47.

[10] Papagelopoulos et al. 2004, 1226.

[11] Pl., R. III, 404A.

[12] Arist., Ph. I, V, 10.

[13] Jüthner 1909, 168, par. 43, 3–9.

[14] Jüthner 1909, 168, 170, par. 43,17–26; Grivetti – Applegate 1997, 862S f.

[15] Ath., X, 412e–f; Simopoulos 1989, 924.

[16] Ath., X, 416f–417a.

[17] Joly – Byl 2003, 124, ch. A,2, 18–25.

[18] Joly – Byl 2003, 124, ch. A,2, 33–43.

[19] Kühn 1964, 37, ch. 14,5.

[20] Kühn 1965, 905, l. 12–14.

[21] Kühn 1964, 905, l. 14–16.

[22] Kühn 1964, 28, ch. 11,18–20.

[23] Kühn 1964, 32, ch. 12,5–16.
[24] Kühn 1964, 37, ch. 14,1–7.

References

Dalby 2003
A. Dalby, Food in the Ancient World from A to Z (London 2003).
Grandjean 1997
A. C. Grandjean, Diet of Elite Athletes: Has the Discipline of Sports Nutrition Made an Impact?, Journal of Nutrition 127, 1997, 874S–877S.
Grivetti – Applegate 1997
L. E. Grivetti – E. A. Applegate, From Olympia to Atlanta: A Cultural-Historical Perspective on Diet and Athletic Training, Journal of Nutrition 127, 1997, 860S–868S.
Joly – Byl 2003
R. Joly – S. Byl, Hippocrate du regime. Corpus Medicorum Graecorum, I 2, 4 (Berlin 2003).
Jüthner 1909
J. Jüthner, Philostratos, Über Gymnastik (Leipzig 1909).
Kühn 1964
C. G. Kühn, Claudii Galeni Opera Omnia. Tomus I, Galeni Paraphrastae Menodoti Adhortatio ad artes addiscendas (Hildesheim 1964).
Kühn 1965
C. G. Kühn, Claudii Galeni Opera Omnia. Tomus V, Galeni de Parvae Pilae Exercitio (Hildesheim 1965).
Miller 2004
St. G. Miller, Ancient Greek Athletics (New Haven 2004).
Papagelopoulos et al. 2004
P. J. Papagelopoulos – P. N. Soucacos – A. F. Mavrogenis, Doping in Ancient and Modern Olympic Games, Orthopedics 27(12), 2004, 1226, 1231.
Simopoulos 1989
A. P. Simopoulos, Opening Address. Nutrition and fitness from the first Olympiad in 776 BC to 393 AD and the Concept of Positive Health, American Journal of Clinic Nutrition 49, 1989, 921–926.
Swaddling 1984
J. Swaddling, The Ancient Olympic Games (Austin 1984; Repr. Austin 2008).
Thermou 2017
M. Thermou, Sta mageireia tōn archeōn (Athens 2017).

Production Spaces and Commercial Spaces in Hispanorroman City of *Italica* (Seville, Spain): Economic Topography of the City[1]

Yolanda Peña Cervantes* – Clara Tello Martín**

The city of *Italica* is well known in research for being the cradle of two of the Hispanic emperors, Trajan and Hadrian. This city, located in the meadows of the Guadalquivir river and 11 km from where Seville currently lies, was configured as an important urban centre of the *Baetica* Province. Although Apiano dates its foundation in 206 AD, we know of the existence of indigenous *Turdetani* remains on the site of what will later be the *Colonia Aelia Augusta Italicensium* (Pellicer Catalán 1999, 191–192). It was in Hadrian the Emperor's time when this title of *Colonia* was granted to the city. At this moment, its extension takes place with the creation of a residential district, directly propelled by the Emperor, that is known by the name of *Nova Urbs.* This extension presents an orthogonal layout with an extension of circa 40 hectares, gathering a total of 48 *insulae* (Rodríguez Hidalgo, Keay, Jordan *et al.* 1999, 93). This new city, which joined the old layout of the preexisting city (*Vetus Urbs*), seems to suffer from uneven development. Apparently, the northern zone would be abandoned soon, with population concentrated south of the extension during the late period (Hidalgo Prieto 2003, 122).

The *Nova Urbs* was born directly driven by the Emperor as an element of dynastic exaltation. In this new residential area, the aristocracy closest to the Emperor played an essential role as an agent of their own construction process. The new city was born, therefore, as an eminently residential space linked to the elites near Hadrian. However, this didn't imply, as we shall see below, the lack of an intense economic vocation in the city.

In this way, almost all the excavated domestic units show spaces related to the economic life of the city. In total, it is possible to see 40 commercial enclaves in the planned urban expansion in Hadrian the Emperor's time. Unfortunately, the early date of excavation of these spaces, together with the traditional lack of interest of the ancient historiography for the non-monumental archaeological realities, make us have limited information about them. In most cases we even lack of the description of these environments, which have also been deeply affected by the intense restorations developed over time in *Italica.* This determines our impossibility, in most cases, to define the economic nature of these *tabernae.*

In the plan of the *Casa de la Exedra,* 9 business facilities have been documented but with no apparent connection to it; 7 of them on the main facade of the house, open therefore to the *Maximus Cardo,* and two more on its southern flank, open to the North *Decumano* III. These are installations with a single room, with dimensions ranging from 28–35 m², with the exception of the spaces CA4, apparently an installation formed by the union of two base modules, and CA9, with dimensions of 122.5 m². All facilities have

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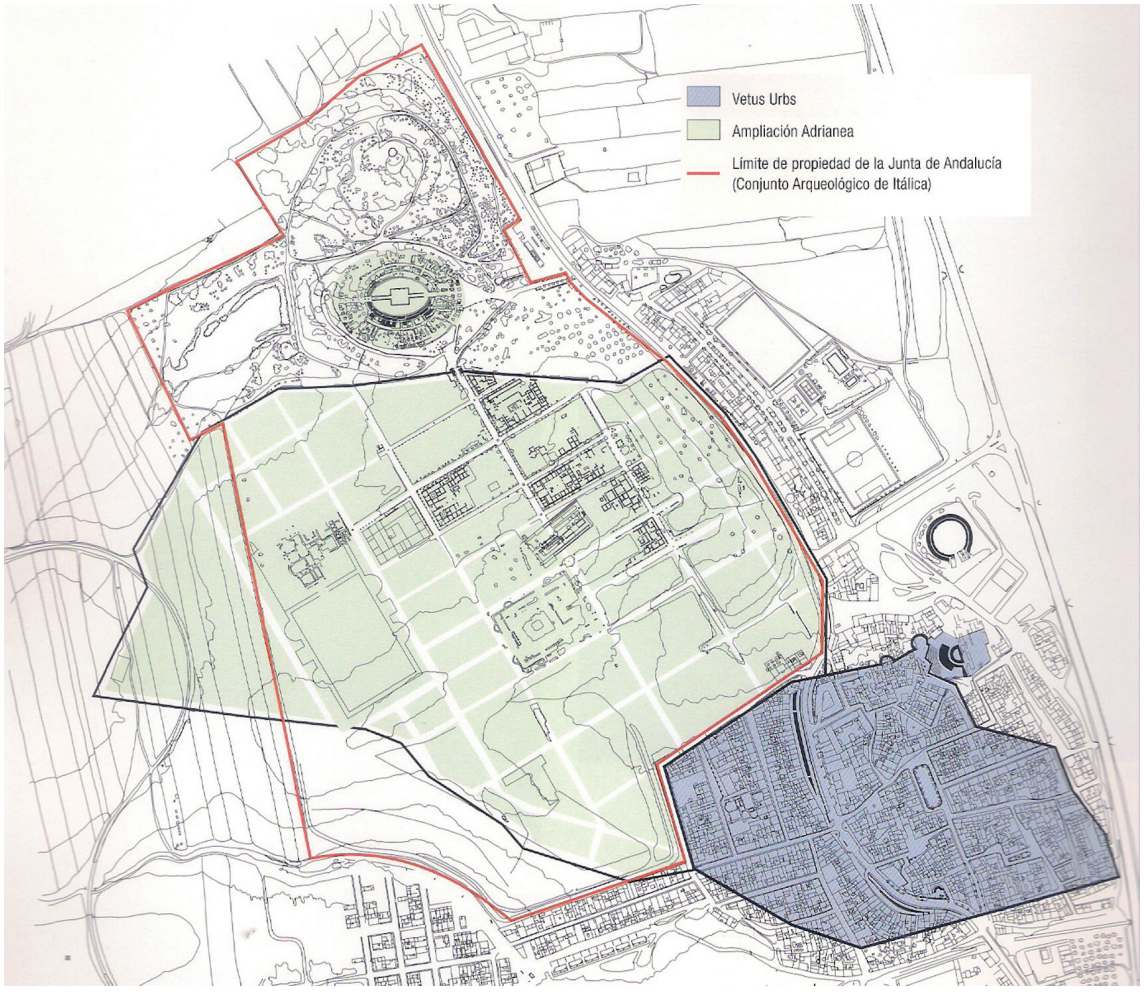


Fig. 1: General plan of the *Vetus* and the *Nova Urbs,* indicating the layout of the Hadrian and late walls of *Italica.*

a single access, except for CA4, which has two. We do not have written or graphic information about the moment of excavation of these environments and we barely have structural evidence which allows their functional interpretation.

In the case of the *Casa de Los Pájaros,* this *domus* presents on its plan 5 artisanal or commercial installations without connection to the residential spaces, together with a staircase that apparently would give access to a second floor developed on these rooms. Four of these *tabernae* open to the *Maximus Cardo,* located on the facade of the house, and the other lead us to the North *Decumano* II. The environments which are present in the West part of the lobby have a module of circa 24 m², with a double module installation (CP3). On the other hand, the spaces located in the eastern flank are smaller, barely 12 m². All of them present a unique environment, with only one access to the street.



Fig. 2: Domestic spaces in *Italica* with indication of their productive/commercial zones.

Only in the CP3 space do we have structural data that allow us to make a functional interpretation.

In this space, of 42.4 m², located next to the access to the *domus,* the remains of a furnace are located on its back. This structure is quite restored, without having graphic documentation prior to this restoration.

It is an oval furnace with direct heating, in which the combustion chamber seems to be located at a height with the circulation space of the room. This combustion structure has a dome as a cover which is made of brick with 1.80 by 2 m of internal diameter and 2.80 m of facade by 1.10 m of furnace mouth. The dimensions of this oven and its operation by direct heating allow us to interpret this environment as a possible *pristinum,* in which, given its dimensions and morphology, only the baking of the bread would take place, with the cereal being milled in another area. Despite this interpretation, we believe it is necessary to point out the absence of over-elevation of the cooking chamber that facilitates the work of the *pistorius.* In the case of the *Casa de los Pájaros* oven, baking takes place practically at ground level, a more common element of domestic ovens rather than industrial bakeries.

In the *Casa del Patio Rodio* we only located a possible commercial space open to the East *Cardo* I, without clear evidence of its connection with the street. This room has

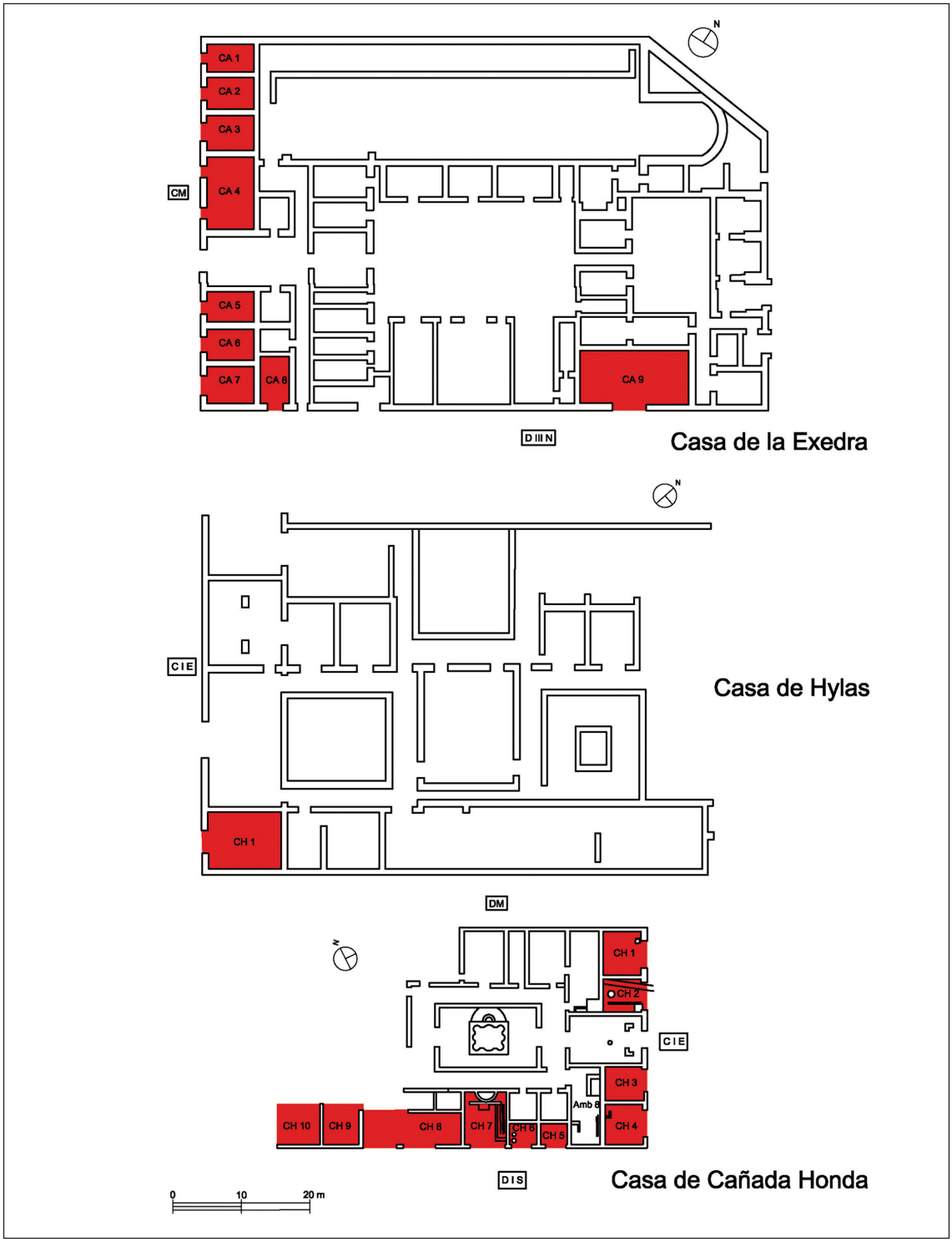


Fig. 3: Planimetry of the *Casa de la Exedra, Casa de Hylas* and *Casa de la Cañada Honda,* with indication of its commercial and productive spaces.

an area of 40.73 m² and lacks structural or furniture elements that allow its functional interpretation.

At the southern end of the house, several buckets have been interpreted as the remains of a *fullonica*[2] without evidence of its connection with the exterior and without the structural data preserved being conclusive. In the published plan, a single tank with dimensions of 2.5 by 4.6 is collected, equipped with three access steps. This deposit is located in the central area of a rear space, which is accessed from the peristyle through a narrow corridor.

In the case of the *Casa de Hylas,* we have a practical absence of productive or commercial spaces, but we must emphasize that the excavation of the perimeter zones of the *insula,* located in the *Maximus Decumano,* has not been addressed. In this way, we have located a single possible commercial space open to the East *Cardo* I, without clear evidence of its connection to the street. It is a room, with an area of 87.46 m² which does not present structural elements that allow its functional interpretation.

Also, in the case of the *Casa del Emparrado* we do not know an essential part of its economic activity due to its partial excavation. We do not have its southern angle either which can be found at the intersection of the North *Decumano* I and the East *Cardo* I, for which we lack data on the economic activity that would develop on the eastern facade open to the *Maximus Decumano.* The four artisanal or commercial spaces have been located, with an extension comprised between 34 and 44 m², located in the main facade of the *domus* open to the East *Cardo* I. The CE 1 establishment is the only one equipped with a back room or warehouse, a space at a lower level which is accessed through three access steps. In this establishment we detect in the plan some structural elements that for now we have not been able to identify.

In the CE3 field, a support structure appears that has been linked to a restoration establishment, interpreted as *thermopolium*[3]. Two of these areas have been related to a bone shop and a shoe store[4] due to the abundant presence of materials and tools made of bone and ivory.

The *insula* of the *Casa del Planetario* is the one which presents the greatest commercial/craft dedication of those excavated so far, since the productive/commercial spaces occupy the three fronts of the house open to the street. The commercial space reserved on the eastern and western sides of the house presents practically similar dimensions, configuring two bays of circa 5.3 m wide. In the front that gives access to the *domus* a wider bay of 6.75 m is configured.

In the western area of the *insula,* open to North *Decumano* III, we find two large areas (CPl 1 and CPl 2), of which we do not know if they had internal compartments given the limited volume of information available. They consist of spaces of 87.75 and 104.88 m², equipped with two accesses to the street each one of them. On the other hand, the eastern facade of the house, which is open to North *Decumano* II, appears completely occupied by commercial establishments, presenting five rooms open to the street. Four

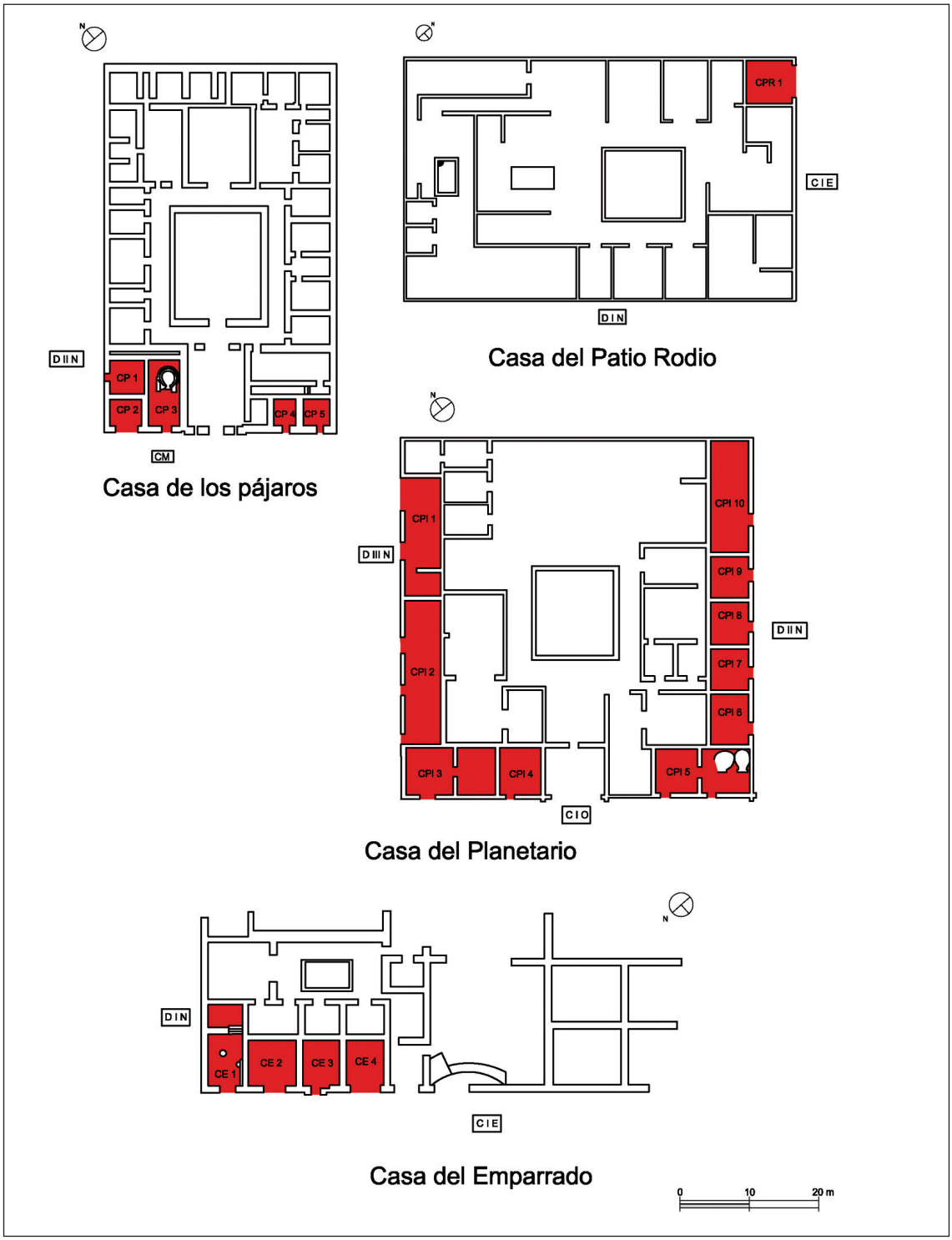


Fig. 4: *Casa de los Pájaros, Casa del Patio Rodio,* Casa del Planetario and *Casa del Emparrado* with an indication of its commercial and productive spaces.

of these areas exhibit more or less homogeneous measures with surfaces slightly above 30 m², while the northernmost area doubles this module, reaching 87.5 m².

To the south, open to West *Cardo* I, we find three commercial units: the first one with two rooms, as well as the one located in the SE corner of the block. These facilities, with two spaces, have *opus latericium* pavements.

We can only define with certainty the functionality of CPl 5, located at the junction of West *Cardo* with North *Decumano*. It is a *pristinum* as evidenced by the presence of two direct heating ovens with attached oval cooking chambers. This establishment presents two connected environments, both apparently open to the street. The pavement of both rooms shows bricks alternated with *tegulae* (Conde 1987: 279), which may indicate successive resurfacing.

The furnaces are built in brick and are located in the NE corner of the eastern room. Today they are completely masked after their reconstruction, although we have been able to access their original plan. These combustion structures have an oval shape with dimensions of 2.8 by 2.6 and 2.1 by 2.8 m respectively. The opening of both annexed structures appears open to the street and have an opening of 1.3 and 1.5 m respectively. The alignment of the mouths of the two kilns, as well as the boundary of the pavement, seem to suggest an angular exterior development, similar to the one that has been reconstructed.

In this case the dimensions of the *pristinum,* much higher than the *Casa de los Pájaros* one, does not rule out the grinding of the cereal within the same establishment, as it is usual in other urban bakeries. The presence of a room prior to the baking room can be interpreted as a space destined to the grinding of the cereal, as it happens in abundant examples of the Pompeian area and of Ostia Antica. The dimensions of the room and the footprint of its paving seem to suggest the use of a human traction mill, known as biconical *Morgantina* type.

In the *Casa de la Cañada Honda* we found the presence of four commercial/artisan establishments open to the East *Cardo* I, along with six others open to the South *Decumano* I. These *tabernae* were totally or partially excavated by José María Luzón, which interprets them as workshops of bone, glass, marble and terracotta, without in many cases the argumentation and documentation provided allow us to corroborate this functional interpretation. These facilities will be intervened again within our project, using a modern methodology of excavation and the implementation of biochemical and carpological analysis to try to unravel its functionality.

The installations located on the western flank of the house (on the front of the house's access and open to the East *Cardo* I) have dimensions ranging from 26 to 34 m², with wide access openings, which allow to rebuild sliding doors of planks. In the field CH1 we find remains of a hydraulic structure, while in the zone CH2 we can see the construction of a counter in a space equipped with a small furnace. Also, a combustion structure, possibly linked to the work of glass, has been located in the CH4 area.

On the other hand, on the southern side of the *insula,* 6 commercial installations are detected, endowed with a single environment but with very variable dimensions. We found small *tabernae,* as well the CH5 with 11.61 m², next to large spaces, like the CH8 with more than 66 m². It is worth highlighting the CH7 productive area equipped with a counter and a hearth, which uses the blind spaces left by the construction of the apse of the *nymphaeum* of the *domus* as warehouses. The finding of a combustion structure, only partially excavated, in the CH9 field is also noteworthy.

Along with these rooms open to the street, there is a space, with no apparent connection to the outside, and access from the *ambulacrum* of the peristyle that seems to have a productive functionality. In this room, which will also be excavated within the incoming months, we have detected up to three construction phases, all marked by the appearance of hydraulic deposits and pavements of *opus testaceum.*

Conclusions

In spite of the fact that the expansion of the city of *Italica* which occurred in the Hadrian period shows noticeable residential purpose, spaces for production and commercial use are common. In this way, practically all of the excavated domestic units present spaces linked to the economic life of the city.

The lack of structural elements and the early date of excavations prevent us, in many cases as we have seen, from determining the functionality of the commercial and productive spaces of *Italica.* We can establish with certainty the existence of at least two *pristina* and we hope that the intervention that we are currently carrying out in the "Casa de la Cañada Honda" allows us to specify the functionality of the economic spaces of this *domus.*

The excavation of the domestic structures has focused on the *insulae* located immediately to the East of the *Maximus Cardo,* with the exception of the "Casa del Planetario". This data determines our possibilities for analysing the artisanal and commercial topography of the *Nova Urbs.* We can anticipate, however, a great commercial activity in the *Maximus Cardo,* something which we have not been able to find in the one defined as *Maximus Decumano.* Also, we can locate an important commercial axis in the South *Decumano* I, and an intense concentration of artisanal activity is as well detected in the block defined by the "Casa del Planetario", located in the surroundings of the Major Baths. If we analyse the location of industries in relation to the N-S or E-W axes, we find a slight commercial advantage for the *decumani* of the city.

To sum up we believe it is interesting to highlight the absence of connection between commercial and productive establishments with purely residential spaces. The connection between both environments is common in urban areas, interpreting this fact as a result of the direct or indirect exploitation of these productive enclaves by the owner of the house. The lack of this connection in the *Nova Urbs* of *Italica* could imply an evi-

dent lack of management, at least direct, of these establishments by the owners of these spectacular *domus.*

The fact of being an imperial project supported by the elites close to Hadrian the Emperor, determines a social position of the homogeneous *possesores,* for whom the exploitation of the commercial environments of their *domus* does not seem to constitute a relevant economic activity. In this way, these spaces do not appear connected to residential environments, and indirect management of them can be inferred through leasing.

Notes

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[1] As part of the Project "Espacio público, espacio privado y espacio de servicio en Villa Adriana (Tívoli, Roma) e Itálica (Santiponce, Sevilla). La conformación de los modelos adrianeos y su difusión (I+D HAR2015-67810-P).

[2] Caballos – Marín – Rodríguez Hidalgo 1999, 82.

[3] Conde 1987, 323.

[4] Gil and Pérez 2005, 150.

Image Credits

Fig. 1: Rodríguez Hidalgo 1997, 110. – Fig. 2–4: By the authors.

References

Conde León 1987

E. Conde León, La arquitectura doméstica de Itálica (Diss. Universidad de Sevilla 1987).

Gil de los Reyes – Pérez Paz

M. S. Gil de los Reyes – A. Pérez Paz, Itálica. Guía oficial del Conjunto Arqueológico, Sevilla 2005.

González Parrilla 2005

J. M. González Parrilla, Francisco Collantes de Terán Delorme y las excavaciones en Itálica entre 1935 y 1955, Habis 36, 2005, 333–347.

Hidalgo Prieto 2003

R. Hidalgo Prieto, En torno a la imagen urbana de Itálica, Romula 2, 2003, 89–126.

Jiménez Sancho 2016

A. Jiménez Sancho, Acerca del abandono y expolio de la "Casa de la Cañada Honda" de Itálica. La excavación de la mitad occidental del peristilo, Romula 15, 2016, 169–184.

Luzón Nogué 1975

J. M. Luzón Nogué, La Itálica de Adriano (Sevilla 1989).

Luzón Nogué 1999

J. M. Luzón Nogué, Sevilla la vieja: un paseo histórico por la ruinas de Itálica (Sevilla 1999).

Mañas Romero 2011

I. Mañas Romero, Mosaicos romanos de Itálica II (Madrid 2011).

Parladé Heredia 1926

A. Parladé Heredia, Excavaciones en Itálica. Memoria de las excavaciones practicadas en 1924–1925, Junta Superior de Excavaciones y Antigüedades 81, 11 (Madrid 1926).

Pellicer Catalán 1999

M. Pellicer Catalán, Panorama de la arqueología de Itálica, Real Academia de Bellas Artes de Santa Isabel de Hungría 13, 1999, 175–202.

Rodríguez Hidalgo et. al. 1999

J. M. Rodríguez Hidalgo – S. Keay – D. Jordan, La Itálica de Adriano. Resultados de las prospecciones arqueológicas de 1991 y 1993, Archivo español de Arqueología 72, 1999, 73–97.

Analyzing Age at Death from Roman Epitaph Inscriptions

Peter Pflaumer

Introduction

Thousands of inscriptions from epitaphs of the Roman Empire that record the age at death of the individual have been collected.[1] The life expectancy at age x is calculated as the ratio of the sum of total years lived to the total number of individuals of that age. It has long been thought that this number reflects the life expectancy of Roman men and women. However, since Durand's (1959) and Hopkins's (1966) work it has been known that these epigraphic samples are not representative of the mortality in the Roman Empire, even if one assumes a stationary population. Infant mortality is always underestimated, and old age mortality is generally underestimated. Epitaphs of elderly deceased individuals are sometimes evidence of a remarkable longevity. Even in the middle age groups of, say, 10 to 60 years, the tombstone inscriptions do not, in general, give an accurate record of mortality.[2] Other sources of error and bias are mentioned by Clauss (1973), who offers the most detailed demonstration, or Parkin[3]: age rounding by multiples of five, gender bias, as men are more likely than women to have an epitaph with an age inscription, which is reflected by a high sex ratio, and a serious class bias – not all classes are represented, because inscribed tombstones were not cheap. Burn (1953) states that tombstones with ages were found primarily in the middle-class and lower middle-class urban population, whereas members of the upper classes generally did not give ages on tombstones.[4] The distributions of age at death in the castrum Mogontiacum, a military camp, precursor to the German city of Mainz is very different from the shape of the distribution in Rome, because of the high proportion of soldiers (88%) in the age information.[5]

In this presentation Roman funerary data of European and African provinces of the Roman Empire is re-examined. Detailed analyses, results, statistics, and figures can be found in Pflaumer (2018).

European Provinces of the Roman Empire

The inscriptions amount to 24,854 (15,173 males, 9,681 females), and were collected by the Hungarian scholar Szilágyi (1961, 1962, 1963). The data comes from 48 cities and provinces of the European part of the Roman Empire between the first and the seventh centuries. Minor addition errors in Szilágyi's data were corrected. The age at death distributions were smoothed, because the dominance of ages that are multiples of five hides the essential shape of the distributions. The smoothing function was the Gompertz distribution,[6] which was fitted to the corresponding survivor functions by non-linear least squares. As a result, we can represent the age at death distributions by a two-parameter

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function. It can be seen that the survivor functions can be well represented by survivor functions of the Gompertz distribution. Age at death distributions are analyzed and categorized. We have distributions that are skewed to the left, symmetrical distributions, and distributions that are skewed to the right. The mean age at death ranges between 21 and 47. The shapes of the distributions are determined by the two parameters of the Gompertz distribution. We can identify three groups or clusters of similar parameters. We get distributions for males with a very high proportion of military persons (slightly negative skew; mean age at death: 34,5 years), distributions with a medium proportion of military persons (slightly positive skew; mean age at death: 36,8 years), and distributions with mostly civilians (positive skew; mean age at death: 29 years). The mean age at death of the distributions of the females ranges between 22,5 and 26,4 years. All these distributions show a positive skew.

African Provinces of the Roman Empire

The inscriptions amount to 18,056 (10,410 males, 7,646 females), and were collected by the Hungarian scholar Szilágyi (1965, 1966, 1967). The data collection comes from 31 cities and provinces of the African part of the Roman Empire between the first and the seventh centuries. Minor addition errors in Szilágyi's data were corrected. The age at death distributions were smoothed, because the dominance of ages that are multiples of five hides the essential shape of the distributions. The smoothing function was the Gompertz distribution,[7] which was fitted to the corresponding survivor functions by non-linear least squares. As a result, we can represent the age at death distributions by a two-parameter function. Age at death distributions are analyzed and categorized. In Africa, the distributions of age at death have higher means and variances than those in Europe. "Roman North Africa is altogether different. Although the African epitaphs underrepresent youth and old age mortality, they show credible mortality rates for males and females in the middle age classes. Unlike in Europe, African epitaphs almost invariably give decedents' age at death".[8] It was customary in Rome to record the age at death of young decedents, but the age of elderly decedents was not recorded so often.[9] These differences in the practice of commemoration are one reason for the much higher mean ages of death in the African provinces. The distributions and their parameters depend on the three factors: Mortality, commemorative processes, and growth rate of the population. Using the Gompertz distribution, we find that the general mortality parameter is much lower in Africa than in the European provinces. Thus, the higher mean in the distributions reflects a higher life expectancy in the African provinces, without contesting the influence of commemorative processes. The reasons are speculative: better climatic conditions, fewer pandemic diseases, or fewer famines. The skewed distribution of Carthage indicates an influence of the population growth rate due to migration, which could also be observed in other populous cities, e.g., Rome.[10]

Roman Mortality and Epitaph Data

The survivor functions are compared with that of the Suessmilch life table, which represents mortality in the eighteenth century.[11] Johann Peter Suessmilch (1707–1767), one of the founding fathers of demography in Germany, published a life table with a life expectation at birth of about 29 years. The comparison with the force of mortality function of the different epitaph clusters shows that the epigraphic sample is not representative of the mortality in the Roman Empire. Infant mortality is always underestimated, but old age mortality is also underestimated. Epitaphs of elderly deceased individuals sometimes describe a remarkable longevity. We observe age rounding by multiples of five, and a gender bias, as men are more likely than women to have an epitaph with an age inscription, and this is reflected in a high sex ratio. We can summarize our findings and, of course, those of Hopkins with a concise quote from Scheidel[12]: "The resultant statistics merely reveal the average death [or more general the mortality pattern] of those individuals who happened to be commemorated in stone: far from generating demographically representative samples of actual populations, commemorative practices were shaped by a variety of factors such as geographical provenance, class, religion, language, gender and, most crucially, age. Because of these manifold distortions, age distributions derived from epigraphic samples do not normally match any demographically creditable pattern, except very occasionally by chance."

Conclusion

Typical patterns of death density functions calculated from Roman epitaph data are shown in Figure 1, and compared with the death distribution of the historical Suessmilch life table from the 18th century. The comparison shows that we cannot use the epitaph data to calculate demographic parameters, such as life expectancy or death probability, of the Roman population. Nevertheless, the data are not worthless. They can be used to show and to explain the differences in the burial and commemorative processes. For example, the considerable preponderance of boys points to the high value attached to male offspring in a male-oriented society.[13] "The ages reflect something of the structure of these societies, and attitudes towards age and the life course. They reflect the way, in which different age groups are judged differently, and the interplay between age and gender".[14]

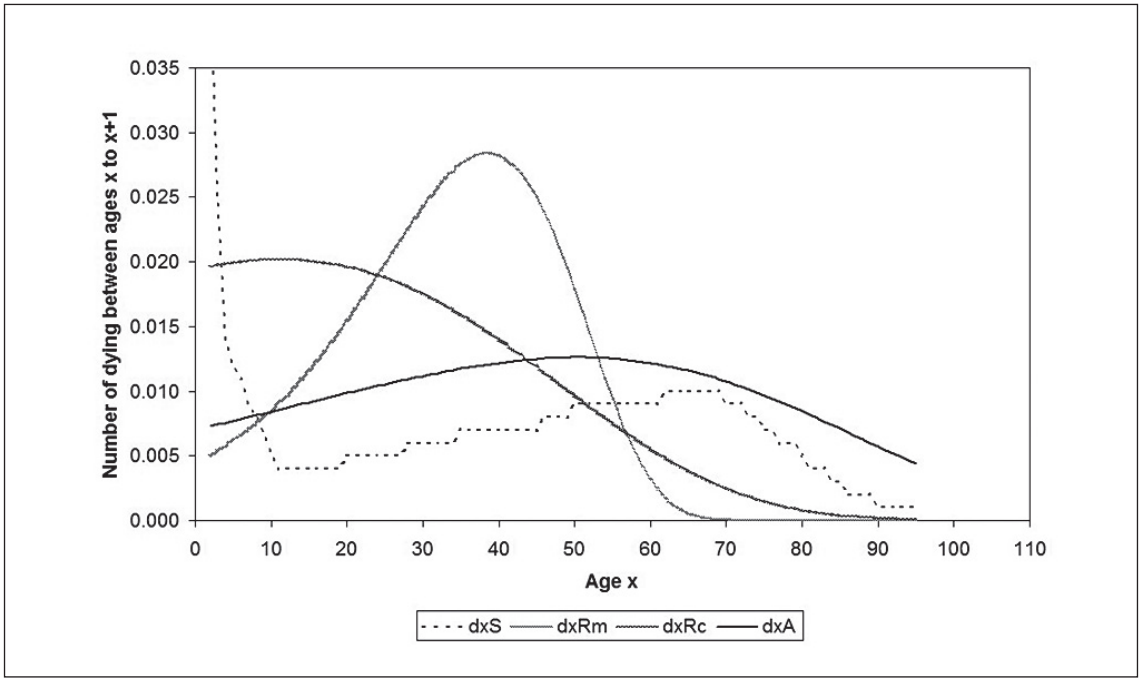


Fig. 1: Typical smoothed death density functions (males and females) calculated from Roman epitaph data compared with the histogram of deaths from Suessmilch's life table (dxS: Suessmilch; dxRm: European Provinces (military); dxRc: European Provinces (non military); dxA: African Provinces).

Notes

[1] E.g. Beloch 1886; Harkness 1896; Macdonnell 1913; Russell 1958; Szilágyi 1961; 1962; 1963; 1965; 1966; 1967.

[2] Parkin 1992, 7.

[3] Parkin 1992, 6–18.

[4] Burn 1953, 7.

[5] See Clauss 1973, 399.

[6] See, e.g. Pollard 1991.

[7] See, e.g. Pollard 1991.

[8] Frier 2000, 791.

[9] Parkin 1992, 9.

[10] See Durand 1959.

[11] Suessmilch 1775.

[12] Scheidel 2007, 8.

[13] Laes 2007, 33.

[14] See Revell 2005, 46.

Image Credits

Fig. 1: Table by J. P. Suessmilch.

References

Beloch 1886
K. J. Beloch, Die Bevölkerung der griechisch-römischen Welt (Leipzig 1886).

Burn 1953
A. R. Burn, Hic breve vivitur, Past and Present 4, 2–31.

Clauss 1973
M. Clauss, Probleme der Lebensalterstatistiken aufgrund römischer Grabinschriften, Chiron 3, 395–417.

Durand 1959
J. D. Durand, Mortality Estimates from Roman Tombstone Inscriptions, The American Journal of Sociology 65, 365–373.

Harkness 1896
A. G. Harkness, Age at Marriage and Age at Death in the Roman Empire, Transactions of the American Philological Association 27, 35–72.

Hopkins 1966
K. Hopkins, On the Probable Age Structure of the Roman Population, Population Studies 20, 245–264.

Laes 2007
C. Laes, Inscriptions from Rome and the History of Childhood, in: M. Harlow – R. Laurence (eds.), Age and Ageing in the Roman Empire, JRA Suppl. 65 (Portsmouth 2007) 25–37.

Macdonnell 1913
W. R. Macdonnell, On the Expectation of Life in Ancient Rome, In the Provinces of Hispania and Lusitania and Africa, Biometrika 9, 366–380.

Parkin 1992
T. G. Parkin, Demography and Roman Society (Baltimore 1992).

Pflaumer 2018
P. Pflaumer, Demographic Applications of the Gompertz Distribution: Quantitative Analyses with Special References to Ulpian's Table and Epitaph Inscriptions (Kempten 2018).

Pollard 1991
J. H. Pollard, Fun with Gompertz, Genus 47 (1–2), 1–20.

Revell 2005
L. Revell, The Roman Life Course: A View from the Inscriptions, European Journal of Archaeology 8, 43–63.

Russel 1958
J. C. Russell, Late Ancient and Medieval Population, Transactions of the American Philosophical Society, New Ser. 48, Part 3, 24–30.

Scheidel 2007
W. Scheidel, Epigraphy and Demography: Birth, Marriage, Family and Death (Princeton 2007).

Suessmilch 1775
J. P. Suessmilch, Die göttliche Ordnung in den Veränderungen des menschlichen Geschlechts, aus der Geburt, dem Tode, und der Fortpflanzung erwiesen [4](Berlin 1775).

Szilágyi 1961
J. Szilágyi, Beiträge zur Statistik der Sterblichkeit in den westeuropäischen Provinzen des römischen Imperiums, ActaArchHung 13, 1961, 125–155.

Szilágyi 1962
J. Szilágyi, Beiträge zur Statistik der Sterblichkeit in der illyrischen Provinzgruppe und in Norditalien (Gallia Padana), ActaArchHung 14, 1962, 297–339.

Szilágyi 1963
J. Szilágyi, Die Sterblichkeit in den Städten Mittel- und Süditaliens sowie Hispanien (in der römischen Kaiserzeit), ActaArchHung 15, 1963, 129–224.

Szilágyi 1965
J. Szilágyi, Die Sterblichkeit in den nordafrikanischen Provinzen I, ActaArchHung 17, 1965, 309–334.

Szilágyi 1966
J. Szilágyi, Die Sterblichkeit in den nordafrikanischen Provinzen II, ActaArchHung 18, 1966, 235–277.

Szilágyi 1967
J. Szilágyi, Die Sterblichkeit in den nordafrikanischen Provinzen III, ActaArchHung 19, 1967, 25–59.

The López Mullor LXVII in *Augusta Emerita* (Spain) High-Imperial Digs: Production in Thin-Walled and in Common Pottery

Verónica del Río Canedo – Begoña Fernández Rojo

Abstract

Through this article, we aim to expose the results obtained in the research carried out on the LXVII form of López Mullor, documented among the material repertoire coming from several interventions of high Imperial chronology of *Augusta Emerita* (Badajoz, Spain). For this, we have studied the productive capacity of some potteries and their connection with landfills, focusing on the production of thin-walled pottery, both traditional own forms addressed by Mayet, and imitations made in this type of pasta in that city. But we wanted to emphasize the problems arising around the origin of this previously mentioned ceramic manufacture, entering into the dilemma as to whether its origin is local, or on the contrary, its production center is located in another geographic point of the *Lusitania,* although its dispersion reached the capital and its surroundings.

Searching the Origin of the López Mullor LXVII Form in Mérida: Initial Approaches

In terms of consumption and production of pottery products in this city, several periods are can usually be established.[1] A first phase Julio-Claudian in which Baetic and Italics imports dominate, until the final establishment of the pottery fabric that will feed the city in later periods.[2] This way, *Augusta Emerita* became an important producer of fine walls, lamps and ceramics, which will be self-sufficient. The trade of these productions has been verified along the entire southwestern strip of *Hispania,* demonstrating an incipient commercial capacity. The archaeological excavations carried out in the city have brought to light three possible sources producing this type.[3] The constancy in the production and consumption of these thin walled seems to indicate that we are facing a homogeneous and uniform production.[4]

Our main objective is to respond to the problems arising from the origin of the López Mullor LXVII, entering into the dilemma as to whether its origin is local, or if its production center is located in another geographical location, although its dispersion reach all of *Lusitania.* The approach with which we have approached this topic is statistical, making a selective sampling to corroborate the presence and frequency of this typology in diverse deposits.

Although the typology object of study was focused until now on thin-walled pottery, we have found that this form was made in common Roman potteries with some as-

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siduity, reaching to reach some of these specimens a considerable size. These data could help us to support the hypothesis of possible own production given the recurrence of this form in various pastes.

López Mullor LXVII Form

Alberto López Mullor refers to it as "ovoid goblets or with marked shoulders and flat bottom. Swab edge, although it may also appear exudated. The decoration consists of a frieze of squares of small size obtained by the technique of the wheel on the fresh mud of the piece (fig. 1). This ornamentation exists only in the lower two thirds of the wall, since under the edge appears a smooth fringe".[5]

Its production was fixed in the second half of the first century AD, being especially abundant in the Claudian-Vespasian period, although the exact place of production is unknown, pointing as alternatives the area of Elvas, in Portugal, for the large number of specimens found or the city of *Augusta Emerita,* where its presence is also notorious.[6] Rodríguez Martín agrees with this possible place of origin.[7] In some archaeological sites in the north of *Hispania,* they have been located in earlier layers.[8]

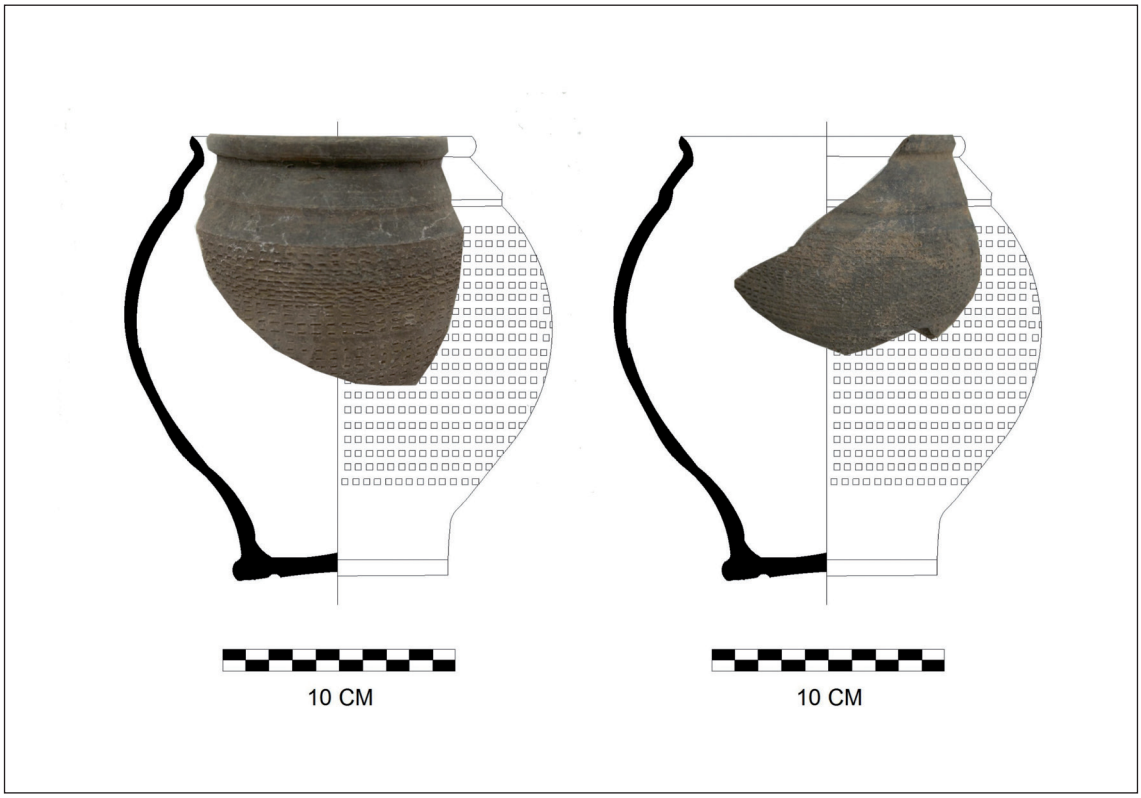


Fig. 1: LXVII form of López Mullor.

High Imperial Archeological Sites Analyzed in Mérida

There are several archaeological excavations with a chronology located between the 1st and 2nd centuries AD, where we have found this form, attending to two types of context: ceramic dumps and burial pits.

Num. Intervention	Description
Constantino	Weir inserted inside a potter's space next to it. A large volume of ceramic pieces was located, many of them defective. The production was focused on common potteries, thin-walled, lamps and construction material.[9] Its activity was developed between the 1st and 2nd centuries AD. LM LXVII: Large number of fragments, both in thin walls and in common potteries (which reach large size dimensions). In thin-walled they represent 6% on a sample of more than 1,000 pieces (fig. 2)
Concejo 19	Ceramic workshop with four ovens, two of which were dedicated to the production of thin walled. Its operation has been dated from the second half of the first century until the second century AD.[10] LM LXVII: 6 pieces of very small dimensions made in thin walled (fig. 4).
8067	Intervention where the *Puticuli* is located, formed by an empty space of quarry that becomes a dumping ground for all kinds of materials whose chronology ranges from the second half of the 1st century to the 2nd century AD. At the same time that it was used as a garbage dump, individuals were deposited in it, some directly thrown away and others with funerary intent.[11] LM LXVII: Documentation of edges, bases and amorphous both in thin walled and in common ceramics (large size) (fig. 3).
78	Peri-urban area very close to the river where two ceramic workshops have been located with abundant quantity of rescued material, whose typology is varied.[12] LM LXVII: Fragments in common potteries: 4 amorphous pieces and a base (fig. 4).
8035A/8035B	Interventions carried out in a large plot where an industrial workshop of common potteries appeared. The defective parts of each furnace were located inside their boilers. The recovered fragments of TS, amphorae, skylights and thin walled without defects have been considered as "intrusions".[13] LM LXVII: In spite of the multiplicity of typologies and forms, there is no record of the ceramics object of study in any type of pasta.

Num. Intervention	Description
8054	Ceramic industrial use with the appearance of a pool. The recovered potteries present a very varied typology. Its chronology has been dated between Vespasiano and the beginning of the period of Tito.[14] LM LXVII: No fragment of this form has been documented.
1002	Urban archaeological intervention in domestic use with various reuses from the time to the Andalusian era. LM LXVII: Several fragments of the LM leaves have been documented. Very fragmentary state of the ceramic set. A few amorphous edges have been preserved with the characteristic of a wheel decoration and made in thin-walled reducing pastes (fig. 4)
8010	Funeral area around the *Via Caesaraugusta.*[15] Fine walls in graves excavated at geological level. Pit A6 contained remains of an incineration with its funerary deposit composed of fine walled ceramics (second half of the first century AD). LM LXVII: several fragments have been located. LXVII in EUs 49 and 51. Edge fragments made of common pottery paste with thin walls (fig. 4).

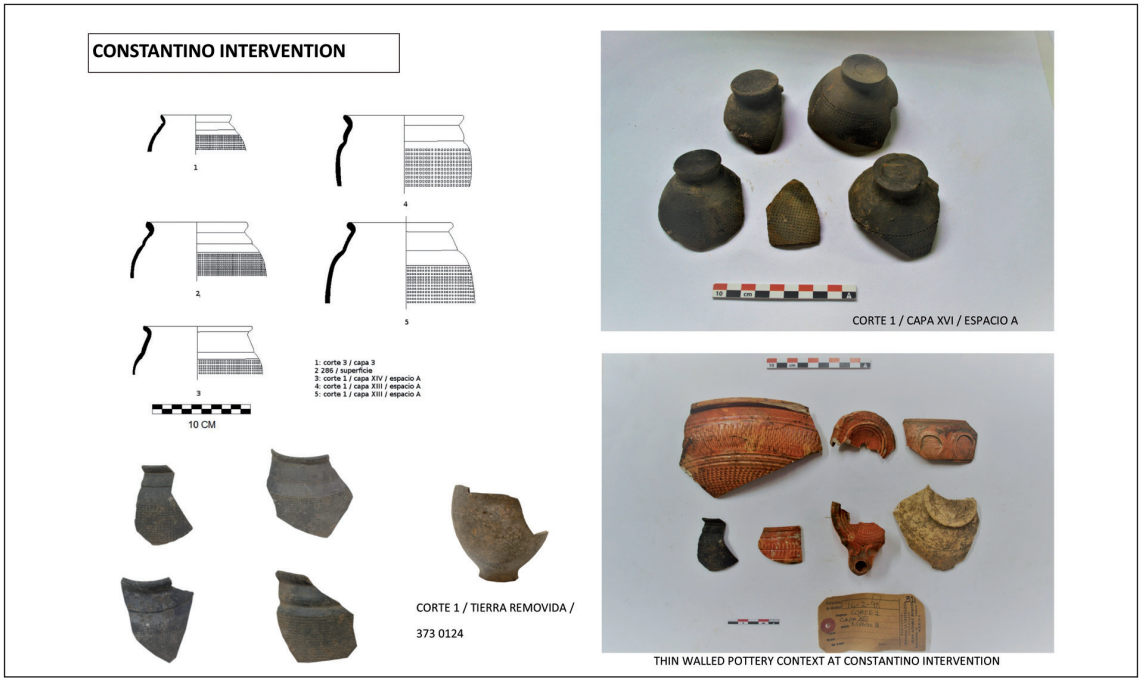


Fig. 2: Thin walled pottery and common pottery of LXVII form at Constantino St. intervention. LXVII form and his EU context.



Fig. 3: Thin walled pottery and common pottery of LXVII form at Solar de Artilleria (nº 8067) intervention. LXVII form and his EU context.

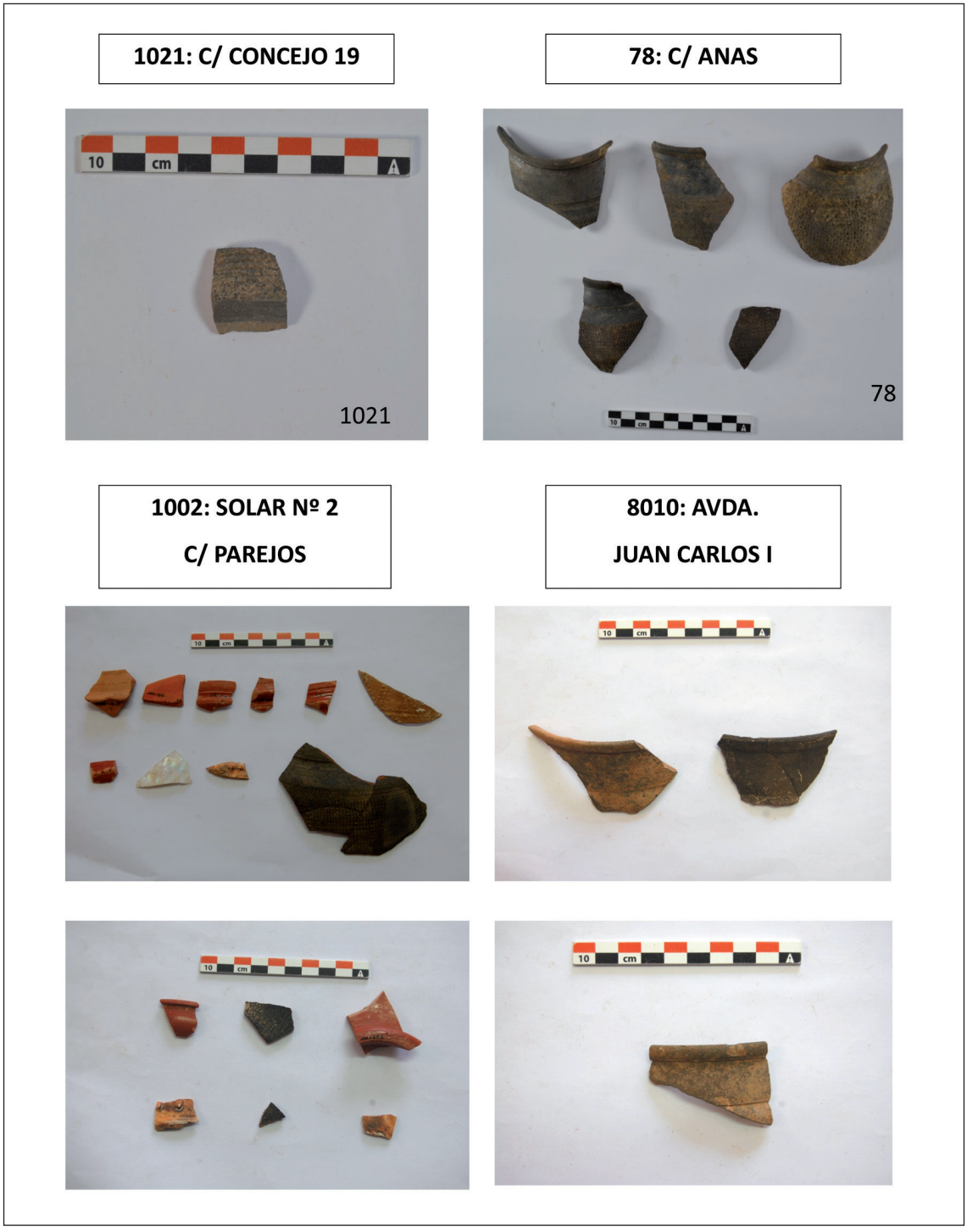


Fig. 4: Thin walled pottery and common pottery of LXVII form and his EU context at Concejo St. 29 intervention (nº 1021); Anas intervention (nº 78); Parejos St. intervention (1002) and Juan Carlos I Av. intervention (nº 8010).

Final Contributions

This study has taken into account a large number of interventions that respond to two archaeological contexts clearly differentiated by their functionality: dumps, funerary and domestic contexts. After its analysis, there are several conclusions that we have been able to reach with these samples.

First of all, it is striking that it has not been possible to document the presence of this form in all the thin-walled landfills studied. In spite of moving in the same chronological framework, sharing stratigraphy with the moment of production of thin walled we can observe an unequal production. Although its presence is recurrent in the Constantino St. and in the lot of the *Puticuli,* in Concejo Street is merely testimonial.

Although the starting point of the present study was focused on the production of the López Mullor LXVII made in thin walled, we have verified the extensive manufacture of this same form in common ceramics, already collected by Alvarado González and Molano Brías,[16] whose pastes are thicker and coarser and whose specimens manage to reach proportions of considerable diameter. This reiteration and taste for the shape under study, we consider that it can be a fact that helps to consolidate and justify the idea of its possible production in the city of Mérida.

Notes

[1] Bustamante 2012, 407.

[2] Bustamante 2012, 407.

[3] Alvarado et al.1995, 281; Barrientos 2007; Bustamante 2011a, 22.

[4] Rodríguez 1996c, 203.

[5] López Mullor 1990, 439–440.

[6] López Mullor 1990, 440.

[7] Rodríguez 1996b, 155; Martín et al. 2008, 385.

[8] Rodríguez 1996a & 1996b; Martín et al. 2008, 387.

[9] Bustamante 2012, 409.

[10] Bustamante 2011, 168.

[11] Márquez et al. 2005, 541–543.

[12] Méndez et al. 2004, 317.

[13] Méndez et al. 2004, 314.

[14] Fernández 1994, 145; Márquez et al. 2005, 540.

[15] Sánchez 2004.

[16] Alvarado et al. 1995.

Image Credits

Fig. 1: by López Mullor. – Fig. 2: Constantino St. intervention. – Fig. 3: Solar de Artilleria (nº 8067) intervention. – Fig. 4: Concejo St. 29 intervention (nº 1021); Anas intervention (nº 78); Parejos St. intervention (1002) and Juan Carlos I Av. intervention (nº 8010).

References

Alvarado et al. 1995

M. Alvarado Gonzalo – J. Molano Brías, Aportaciones al conocimiento de las cerámicas comunes altoimperiales en Augusta Emerita: el vertedero de la calle Constantino; in: X. Aquilué – M. Roca (eds.), Cerámica común romana d'época alto-imperial a la Península Ibérica. Estat de la qüestió, Monografías Emporitanes VIII (Barcelona 1995) 281–297.

Barrientos 2007

T. Barrientos Vera, Una figilina emeritense extramuros del siglo I d.C. y la ocupación funeraria del espacio en épocas bajoimperial y andalusí. Intervención arqueológica realizada en el solar nº 19 de la calle Concejo (Mérida), Mérida. Excavaciones Arqueológicas 2004, Memoria 10, 2007, 371–409.

Bustamante 2011a

M. Bustamante Álvarez, La cerámica romana en Augusta Emerita en la época altoimperial. Entre el consumo y la exportación (Mérida 2011).

Bustamante 2011b

M. Bustamante Álvarez, Nuevas consideraciones cronológicas en torno a la producción de paredes finas emeritenses, Zephyrus LXVII, 2011, 161–170.

Bustamante 2012

M. Bustamante Álvarez, Las cerámicas comunes altoimperiales de Augusta Emerita, in: D. Bernal Casasola – A. Ribera i Lacomba (eds.), Cerámicas romanas hispanorromanas II. Producciones regionales (Universidad de Cádiz 2012) 407–433.

López Mullor 1990

A. López Mullor, Las cerámicas romanas de paredes finas en Cataluña (Zaragoza 1990).

Martín Hernández 2008

E. Martín Hernández – G. Rodríguez Martín, Paredes Finas de Lusitania y del cuadrante noroccidental, in: D. Bernal Casasola – A. Ribera i Lacomba (eds.), Cerámicas Hispanorromanas. Un Estado de la Cuestión, XXVI Congreso Internacional de la Asociación Rei Cretariae Romanae Fautores (Cádiz 2008) 385–406.

Rodríguez Martín 1996 a

F. G. Rodríguez Martín, Materiales de un alfar emeritense: paredes finas, lucernas, sigillatas y terracotas, *CE 11, 1996, MNAR.

Rodríguez Martín 1996 b

F. G. Rodríguez Martín, La cerámica de paredes finas en los talleres emeritenses, Melanges de la Casa Velázquez, Tome 32(1), 1996, 139–179.

Nuovi dati sul c. d. «Edificio degli *Augustales*» di Centuripe (Sicilia)[1]

Salvatore Rizza – Giacomo Biondi

Il c. d. «Edificio degli *Augustales*» di Centuripe è un complesso architettonico articolato in almeno tre fasi costruttive di età imperiale (fig. 1). La prima (150–200 d. C. ca.) comprende i resti di un grande portico orientato in senso N-S comunicante con un vano pavimentato in *opus sectile* (figg. 1,2 e 2) e, lungo il lato est, uno spazio aperto pavimentato con lastre calcaree (figg. 1,3 e 2a). Nella seconda fase (200–225 d. C. ca.), un edificio su podio internamente rivestito di marmo (fig. 1,5) fu inserito sotto il portico obliterando il passaggio con il vano adiacente e, contemporaneamente, più a sud, fu edificato un ambiente con pavimento a mosaico (figg. 1,6 e 3). A una terza fase (III–IV secolo d. C.) furono attribuiti piccoli interventi, tra i quali, dei muretti divisori all'interno dell'aula con pavimento in *opus sectile* (fig. 1,2).

Il monumento fu messo in luce nel 1951[2] in una zona già profondamente sconvolta da scavi clandestini, dai quali proviene la maggior parte delle epigrafi e delle statue in marmo rinvenute in zona. Le une e le altre furono associate, *tout court,* alle antiche strutture, ma di quasi nessuno di tali reperti si conosce l'esatta posizione stratigrafica.

La stessa denominazione «Edificio degli *Augustales*» è legata al rinvenimento di una lapide composta da due frammenti (uno dei quali di provenienza clandestina[3]) con dedica ai Lari (o al Genio) di Augusto da parte di un quadrumviro augustale.[4] Sebbene non ci fossero elementi comprovanti che l'epigrafe si trovasse originariamente all'interno del complesso, si suppose che uno degli ambienti messi in luce dovesse essere la sede

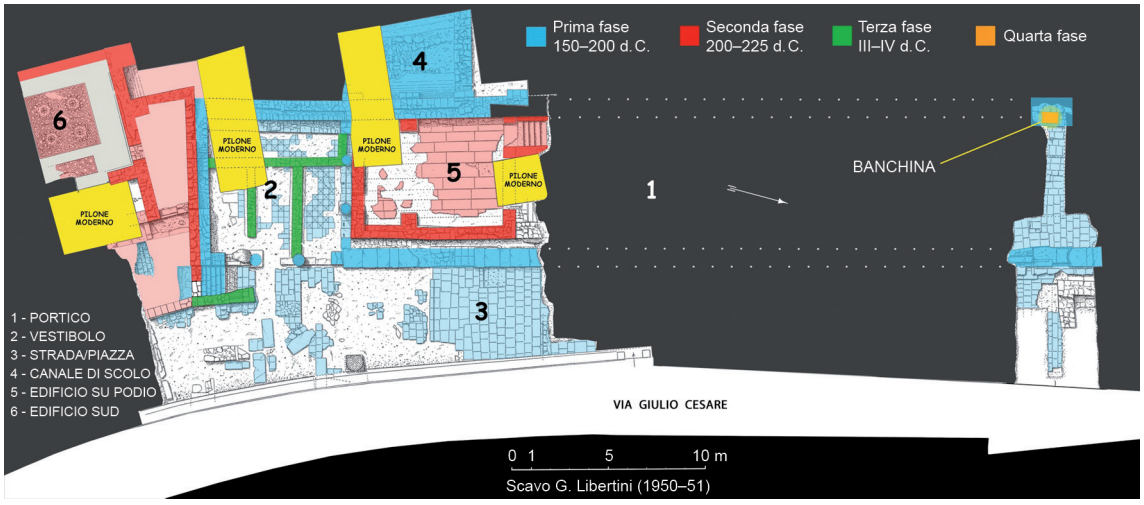


Fig. 1: Planimetria generale con evidenziazione delle tre fasi costruttive e degli elementi fondamentali del complesso architettonico.

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Fig. 2: Prima fase costruttiva. a) L'ambiente con pavimento in *opus sectile* ed il portico visti da sud-est; b) Veduta dell'interno da sud.



Fig. 3: Seconda fase costruttiva. a) L'edificio a sud del portico; b) L'ambiente con il pavimento in mosaico visto da nord-est.

del collegio degli *Augustales*[5] e che nei pressi, come in altre città romane,[6] potesse sorgere il foro. Si è, in seguito, ipotizzato che il complesso stesso potesse essere parte del foro.[7] Da allora, in bibliografia, l'ultima ipotesi, avanzata con prudenza e non provata, è diventata certezza.[8] Ora, l'esame della documentazione di scavo inedita, conservata nell'Archivio Rizza,[9] assieme ad una revisione critica della letteratura sul monumento permettono una valutazione più oggettiva.

Documentazione di una fase post imperiale

Un elemento di transenna o pluteo (fig.1), di un tipo in uso negli edifici di culto cristiani e decorato secondo uno schema molto diffuso tra l'età tardo antica e alto medievale,[10] riprodotto in alcune foto dell'Archivio Rizza, corrisponde a una lastra marmorea sommariamente descritta nella relazione di scavo, reimpiegata nella seduta di una sorta di banchina addossata al muro interno del portico.[11] Tale lastra, pertanto, è la prova che il complesso continuò ad essere utilizzato anche in età post imperiale, verosimilmente fino ad età medievale, come altri monumenti romani di Centuripe. Lo stesso Libertini, per la presenza di altri marmi di reimpiego in prossimità della «banchina», allude a «rimaneggiamenti avvenuti in tempi bassi».[12] È probabile che anche i rimaneggiamenti di terza fase siano più tardi del III–IV secolo d. C.

Statue ed epigrafi facevano parte del complesso?

L'esatto punto di rinvenimento di una testa marmorea sulla sommità di uno dei citati muretti divisori di terza fase, indicato in una lettera del 13/3/1951 dell'assistente di scavo A. Giucastro a G. Rizza e confermato dalla relazione di scavo,[13] fa nascere il sospetto che sculture e iscrizioni non si trovassero originariamente all'interno degli ambienti del complesso, ma che vi fossero arrivati dopo l'abbandono e il conseguente interro dei singoli vani. Anche il torso di una statua loricata fu scoperto nel 1926 in corrispondenza dell'aula con pavimento in *opus sectile* (fig. 1,2), ma a «circa m 1,30 dal suolo […] tra uno strato di terra bruciata».[14]

La registrazione delle quote di rinvenimento di frammenti scultorei ed epigrafici in rapporto a quella dei piani pavimentali, nei giornali di scavo del 1950–1951, dà conferma al sospetto.

Al torso loricato sono stati assegnati altri pezzi,[15] tra cui un piede destro, rinvenuto (16/11/1950) in corrispondenza dell'edificio su podio di seconda fase (fig. 1,5) a m 0,85/0,95 dal pavimento marmoreo dello stesso ambiente. Il ginocchio sinistro fu trovato in corrispondenza dell'ambiente con pavimento in *opus sectile,* ma «a m 0,30» dal livello di un «rozzo suolo in calcinaccio» (17/3/1951), di cui non si parla nella relazione di scavo e che copriva il più nobile pavimento antico. È evidente, pertanto, che i frammenti scultorei appartenenti alla statua loricata si trovavano in uno strato di interro successivo all'abbandono delle strutture avvenuto dopo che queste avevano subito sostanziali modifiche.

Uno splendido ritratto di Ottaviano Augusto (fig. 4) e di altri due membri della famiglia Giulio-Claudia furono trovati, in scavi non ufficiali, in corrispondenza di uno dei piccoli vani creati dai muretti di partizione di terza fase ricavati all'interno del vano pavimentato in *opus sectile.*[16] Le teste ritratto, come ipotizzò già G. Libertini, dovettero essere gettate lì «in bassi tempi»[17] ed è possibile che appartenessero a statue originaria-

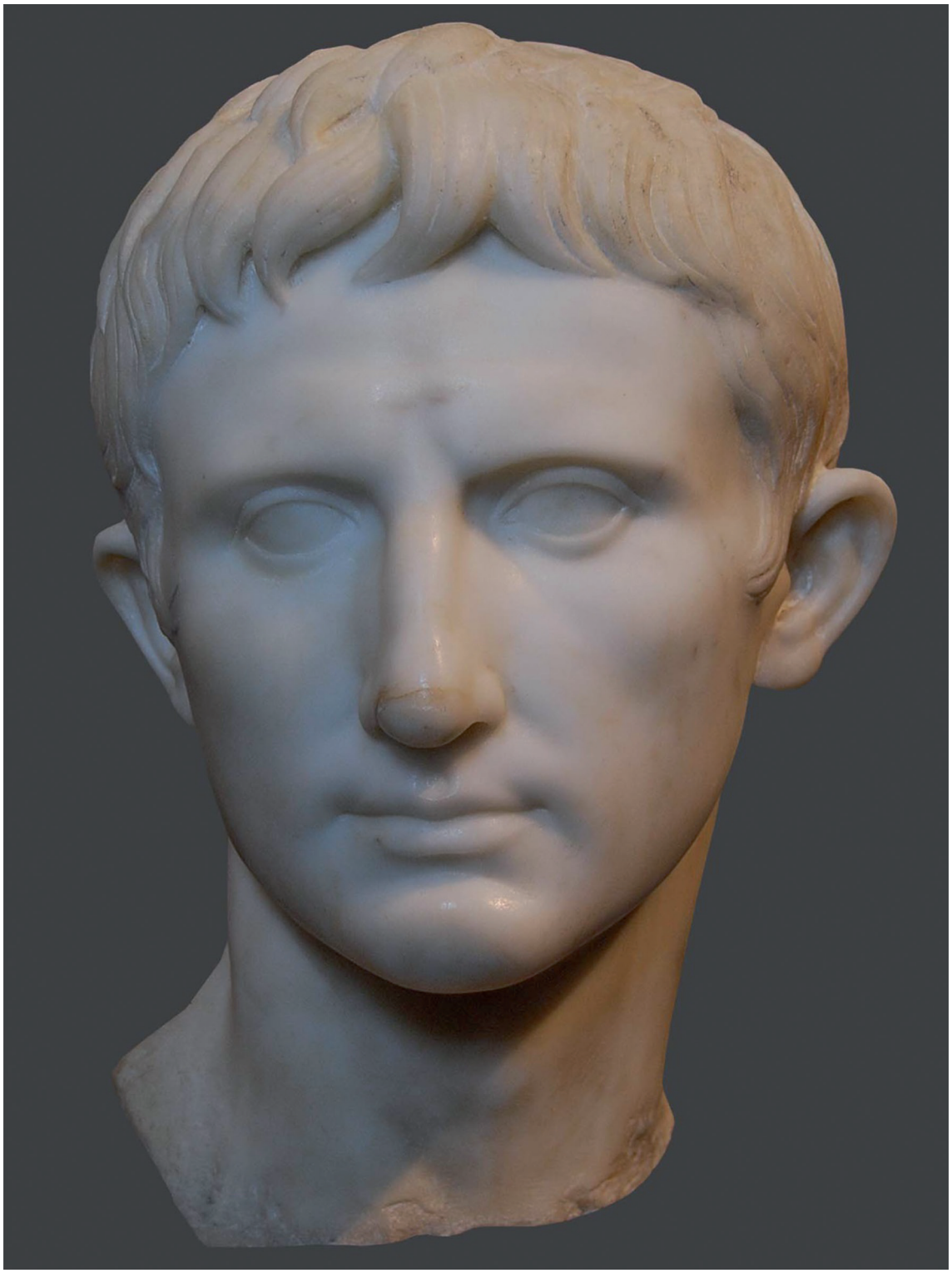


Fig. 4: Museo P. Orsi di Siracusa. Ritratto di Ottaviano Augusto.

mente collocate altrove. Né c'è alcuna certezza, come si è accennato, che i due spezzoni di cui si compone la citata dedica del quadrumviro augustale si trovassero originariamente all'interno del complesso. Non è detto, in definitiva, che la sede degli *Augustales* vada necessariamente identificata con uno dei vani messi in luce negli anni Cinquanta.

Il frammento di un volto maschile rinvenuto durante gli scavi del 1950 in corrispondenza dell'edificio su podio di seconda fase è stato assegnato a una statua di togato[18] trovata, assieme a due altre statue femminili, in scavi clandestini condotti per cunicoli qualche decennio prima.[19] Da quanto risulta dalla documentazione di scavo, però, il frammento di volto fu rinvenuto prima di giungere al livello della limitrofa strada moderna (19/11/1950), attualmente più elevata di circa m 1,00 rispetto al pavimento marmoreo del citato ambiente. La statua maschile a cui apparteneva il frammento, pertanto, anche in questo caso, doveva giacere in uno strato di interro successivo all'abbandono del vano e non può essere messa in connessione con l'edificio. Lo stesso vale per due epigrafi con dediche di Sosio Prisco (il console del 149 d. C.) allo zio e alla nonna paterni trovate in frammenti negli stessi scavi clandestini degli anni Venti.[20] Un frammento che integra la prima, infatti, fu localizzato nello scavo del 1950 a m 0,44 al di sopra del pavimento di età imperiale (20/11/1950). Oltre a ciò, dato che il dedicante (Sosio Prisco) morì nel 180 d. C.,[21] entrambe le dediche sono sicuramente anteriori alla costruzione dell'edificio su podio di seconda fase, datato al primo quarto del III secolo d. C.

L'equivoco del rinvenimento di un grosso ciclo statuario

G. Libertini ipotizzò che le statue e le iscrizioni appena citate si trovassero originariamente all'interno dell'ambiente in corrispondenza del quale furono rinvenute (fig. 1,5) e che fossero installate su presunti plinti,[22] che in realtà sono la parte inferiore di pilastri addossati alle pareti.[23] Ad un fraintendimento di W. Eck delle parole del primo editore – il quale non asserì che fu trovata una serie di statue marmoree ancora poggianti su plinti con le relative iscrizioni, come interpretò lo studioso tedesco, ma ne ipotizzò l'esistenza prima che lo scavo del 1950–1951 mettesse in luce tutto l'ambiente – risale l'idea, errata, della scoperta di un grosso ciclo di sculture e iscrizioni trovate *in situ,* sulle loro basi iscritte. Queste, secondo W. Eck, sarebbero rimaste ingiustificatamente (ma qualora fossero esistite) in gran parte inedite o non adeguatamente pubblicate, al punto da non poterne stabilire neanche l'entità numerica.[24] L'equivoco che le statue dello zio e della nonna di Sosio Prisco furono innalzate all'interno di un «grösseren statuarischen Zyklus» e la successiva ipotesi, infondata, che queste si trovassero originariamente all'interno dell'edificio pubblico di età imperiale sono state alla base di successivi studi.

Conclusioni

Allo stato attuale degli studi e delle nostre conoscenze, del c. d. «Edificio degli *Augustales*», si può asserire con certezza:

1. che apparteneva ad un complesso di destinazione pubblica, ma non c'è alcuna prova che corrispondesse al foro o che uno degli ambienti avesse la funzione di sede dei sacerdoti *Augustales,*
2. che fu utilizzato almeno fino a età tardo antica – alto medievale,
3. che risulta rafforzata l'ipotesi di W. Eck secondo la quale le dediche di Sosio Prisco furono concepite all'interno di una *memoria* privata e non su suolo pubblico.

Note

[1] Saggi di restituzione 3D e ricerca archivistica di S. Rizza; testo di G. Biondi.

[2] Libertini 1953.

[3] Libertini 1926, 43–44.

[4] Libertini 1953, 364, fig. 13.

[5] Libertini 1953, 364–367. Per il ruolo di tali collegi nelle città romane, e a Centuripe, si veda Duthoy 1978, 1266.

[6] Cfr. Fishwick 1991, 615.

[7] Wilson 1990, 113.

[8] Patané 2011.

[9] L'archivio personale del compianto Prof. Giovanni Rizza, che partecipò allo scavo.

[10] Cfr. Agnello 1962, 108–110, fig. 116; Trapani 1999, 105–106, fig. 12.

[11] Libertini 1953, 367, fig. 14.

[12] Libertini 1953, 367–368.

[13] Libertini 1953, 358.

[14] Griffo 1949, 26.

[15] Patané 2011, 54–55, figg. 53–54.

[16] Griffo 1949, 23–24.

[17] Libertini 1953, 367.

[18] Patané 2011, 49–51, figg. 39 e 42.

[19] Libertini 1950, 2.

[20] Eck 1996, 114–118; per il numero di dediche (due e non tre), si veda Biondi 2012.

[21] *PIR* VI, n. 656.

[22] Libertini 1926, 41–42.

[23] Wilson 1990, 112–113; Patané 2011, 37.

[24] Eck 1996, 114.

Crediti

Fig. 1–3: Elaborazioni di S. Rizza – Fig. 4: Foto di E. Castiglione.

Bibliografia

Agnello 1962
G. Agnello, Le arti figurative della Sicilia bizantina (Palermo 1962).

Biondi 2012
G. Biondi, Recensione a R. P. A. Patané, Impero di Roma e passato troiano nella società del II secolo. Il punto di vista di una famiglia di Centuripe (Roma 2011) Bryn Mawr Classical Review, 2012, 10.59.

Duthoy 1978
R. Duthoy, Les Augustales, ANRW II.16.2 (Berlin 1978) 1254–1309.

Eck 1996
W. Eck, Senatorische Familien der Kaiserzeit in der Provinz Sizilien, ZPE 113, 1996, 109–128.

Fishwick 1991
D. Fishwick, The Imperial Cult in the Latin West (Leida 1991).

Griffo 1949
P. Griffo, Nuova testa di Augusto e altre scoperte di epoca romana fatte a Centuripe (Agrigento 1949).

Libertini 1926
G. Libertini, Centuripe (Catania 1926).

Libertini 1950
G. Libertini, Recensione a P. Griffo, Nuova testa di Augusto e altre scoperte di epoca romana fatte a Centuripe (Agrigento 1949) SicGymn N. S. III(1), 1950, 1–3.

Libertini 1953
G. Libertini, Centuripe. Nuove indagini sulle costruzioni presso il Mulino Barbagallo. Campagna di scavo 1950–1951, NSc 8(7), 1953, 353–368.

Patané 2011
R. P. A. Patané, Impero di Roma e passato troiano nella società del II secolo. Il punto di vista di una famiglia di Centuripe (Roma 2011).

Trapani 1999
F. Trapani, Il complesso Cristiano *extra moenia* di via Dottor Consoli a Catania, ArchStorSicOr XCV, I-I, 1999, 77–124.

Wilson 1990
R. J. A. Wilson, Sicily Under the Roman Empire (Warminster 1990).

Observaciones sobre los retratos imperiales de *Tarraco* en base a aspectos técnicos

Julio C. Ruiz[1]

Introducción

De Tarragona[2] proceden quince retratos que representan a diversos miembros de las familias imperiales julio-claudia y ulpio-aelia.[3] Actualmente se están revisando los materiales lapídeos utilizados para su elaboración.[4] La necesidad de una valoración y una puesta al día sobre el estudio de este conjunto ha llevado a plantear un reexamen cuyo objetivo es aportar un nuevo análisis global, retomando cuestiones sobre cronologías, tipologías retratísticas y estatuarias, aspectos técnicos y en particular sus contextos originales.[5]

En esta sede el propósito es, por un lado, actualizar la información sobre los talleres de origen de estas cabezas-retrato; por otro, analizar sus técnicas de elaboración, a partir de algunos indicios de diferentes procesos de trabajo detectables en ciertos ejemplares. Asimismo, se ha atendido a la cuestión sobre la producción de retratos imperiales en la ciudad para satisfacer las necesidades locales y su recepción desde talleres foráneos para la misma finalidad.

Retratos imperiales y talleres: breves consideraciones

La carencia de mármoles blancos en el entorno de *Tarraco* obligó a las *officinae* a requerir materiales importados, dificultándonos establecer talleres a partir del criterio de la materia prima.[6] Asimismo, el relativo escaso número y la distribución a lo largo de varios siglos de la escultura exenta de *Tarraco,*[7] en general, tampoco facilitan atribuir diversas obras a un taller determinado.[8] Pese a ello, la destacable calidad de algunas estatuas, comparables con obras realizadas en la península itálica – incluso en la propia Roma – y en el Mediterráneo oriental, permite considerarlas con ciertas garantías como piezas importadas. I. Rodà ha atendido a este último hecho, incluyendo algunas reflexiones sobre retratos imperiales tarraconenses.[9]

La mayoría de los retratos imperiales de Tarragona han sido considerados de producción local. Así, se han producido tentativas de adscribir varios a una misma *officina,* realizando diversas agrupaciones de ejemplares. En la época julio-claudia se han individualizado varios talleres: a inicios de época tiberiana, dos príncipes julio-claudios[10] (figs. 1a y 2a); también durante el reinado de Tiberio, sendos retratos de Augusto[11] y Livia[12] (fig. 2b–c); en época caligulea, de Nerón César (fig. 1b) y Tiberio[13] (fig. 2d). El estado de conservación de otras tres cabezas – identificados posiblemente con Augusto[14] (fig. 1c), Claudio[15] y de nuevo Claudio pero reelaborado a partir de Calígula[16] – no ha permitido

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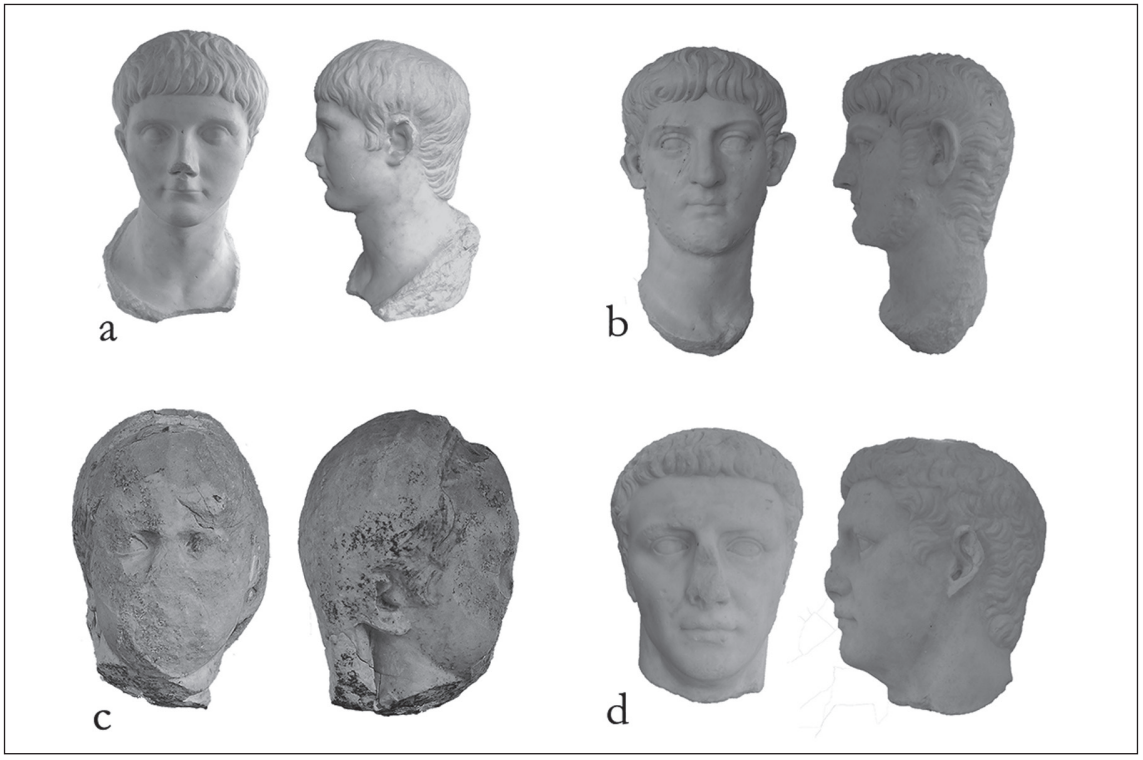


Fig. 1: Retratos imperiales julio-claudios labrados a partir de un único bloque de mármol. A Germánico – b Nerón César – c Augusto – d Claudio

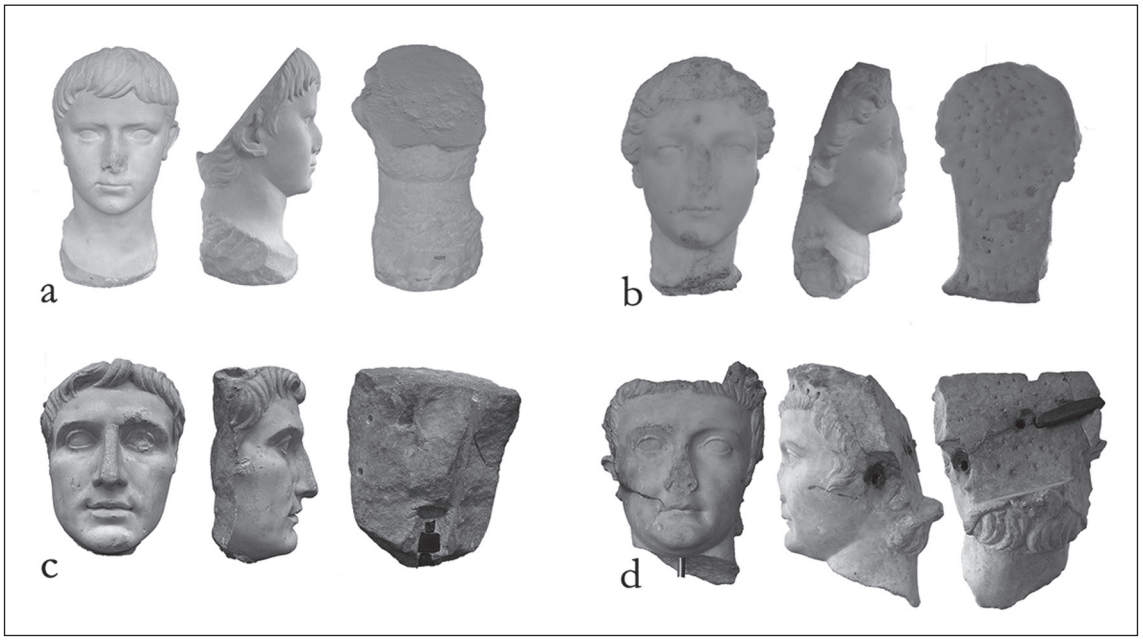


Fig. 2: Retratos imperiales de época julio-claudia manufacturados a partir de dos o más piezas marmóreas. a Cayo César (?) – b Livia – c Augusto – d Tiberio

una valoración. En cambio, ha sido señalada reiteradamente la elevada calidad estilística del retrato también de Claudio de la *schola* del *collegium fabrum*[17] (fig. 1d), permitiendo proponer que se trata de una obra importada.

En el siglo II se datan las cabezas de Trajano[18], Adriano[19], Marco Aurelio[20] y Lucio Vero[21] (fig. 3), junto al busto acéfalo probablemente de Adriano[22] (fig. 4). Una efigie considerada otrora como imagen de Trajano[23] corresponde más bien a un retrato privado,[24]

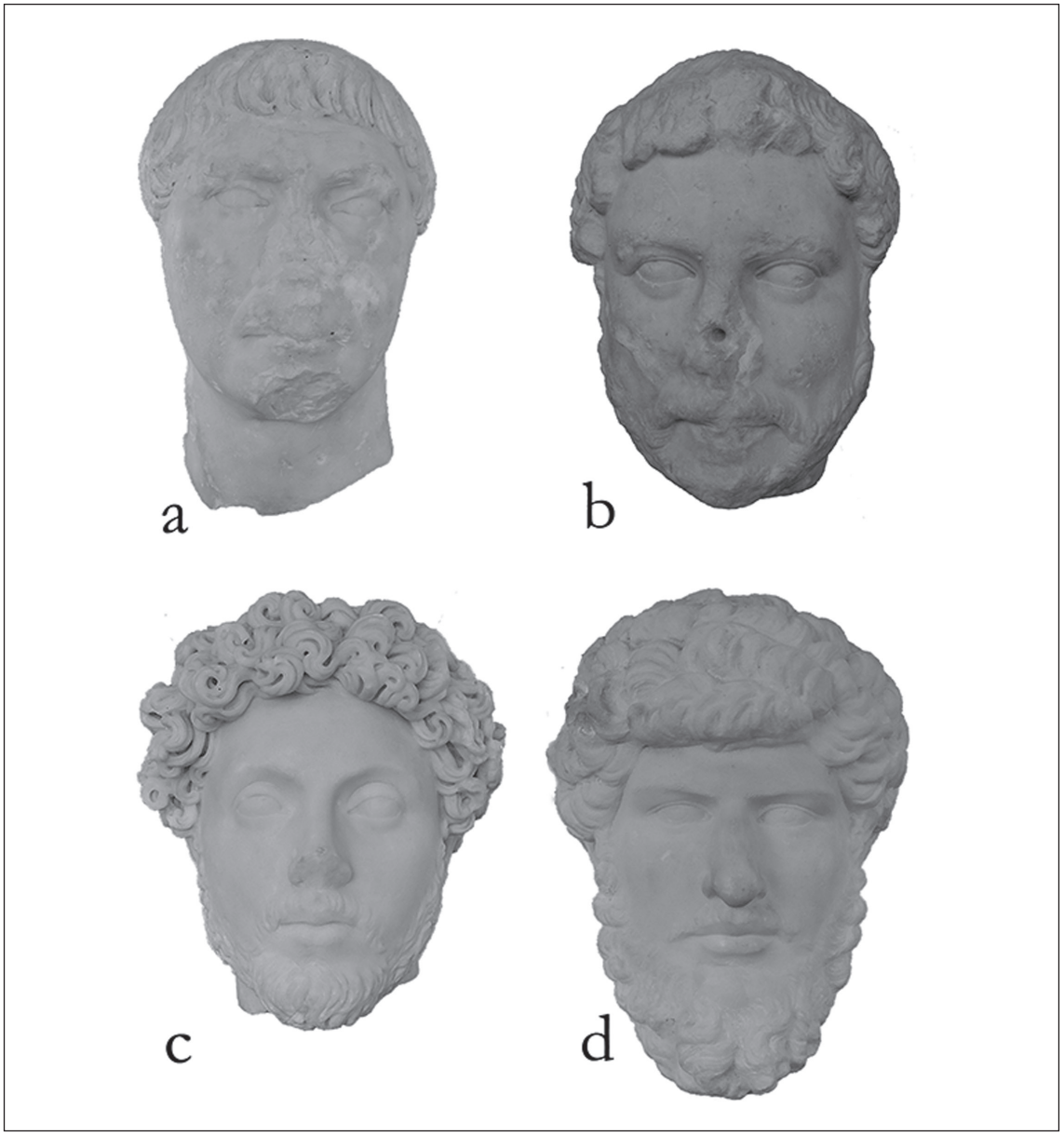


Fig. 3: Cabezas-retrato imperiales del siglo II. a Trajano – b Adriano – c Marco Aurelio – d Lucio Vero



Fig. 4: Busto-retrato de Adriano (?)

en tanto que una cabeza femenina anteriormente interpretada como un retrato en pequeño formato de Faustina la Menor[25] parece convenir más bien a la plástica ideal. Generalmente se ha atribuido la producción de los cinco retratos imperiales citados a talleres locales, principalmente debido a la consideración de que para su elaboración fueron importados bloques en bruto de mármol de Luni-Carrara.[26] Para valorar este extremo habrá que esperar a los resultados de las analíticas actualmente en preparación.[27] Por otra parte, existe una gran probabilidad de que el retrato de Marco Aurelio (fig. 3c) sea pieza importada.

Algunos aspectos técnicos

Ni las características iconográficas y estilísticas, ni las técnicas de elaboración de los retratos imperiales tarraconenses se diferencian de las habituales para la estatuaria romana de la cuenca mediterránea.[28] Así, todos ellos formaron parte de estatuas elaboradas no en un único bloque de mármol, sino en varias piezas, cada una de ellas labrada por separado. Esto se constata debido a la circunstancia de que las cabezas eran trabajadas

aparte y después introducidas en los torsos correspondientes, mostrando por debajo del cuello un apéndice trabajado de manera tosca.[29] Varios torsos que presentan huecos entre los hombros para esta finalidad han sido vinculados, de hecho, a efigies que representaron con gran probabilidad a soberanos y miembros de familias imperiales,[30] pero no ha sido posible por el momento atribuir ninguna cabeza a alguno de ellos. A pesar de todo lo indicado, entre los retratos imperiales tan sólo el retrato de Nerón César conserva todavía completamente por debajo del cuello el habitual apéndice para esta finalidad (fig. 1b). Puede suponerse que el mismo sistema fue utilizado para el resto de los ejemplares.[31] Sólo el busto probablemente de Adriano (fig. 4) estaba labrado en una única pieza.

Un recurso técnico muy particular es la elaboración de las cabezas a partir de varias piezas (fig. 2). Las cabezas de Livia y un príncipe julio-claudio estaban elaboradas a partir de dos partes distintas.[32] No muestran orificios ni huellas para pernos, pero sí golpes de puntero en las superficies de acoplo[33] (fig. 2a–b). Los retratos de Augusto y Tiberio[34] fueron trabajados a partir de más de dos piezas, ejecutadas por separado, y acopladas después mediante adhesivos orgánicos y tacos de hierro de considerables dimensiones (fig. 2 c–d). La manera de trabajar estas cabezas representa una peculiaridad en la escultura tarraconense, habiéndose constatado únicamente para estas cuatro efigies de la familia imperial.

Consideraciones finales

La mayor parte de los retratos imperiales de *Tarraco* debieron ser elaborados en *officinae* establecidas en la ciudad, por parte de artesanos que demuestran una variada capacidad en el trabajo del mármol. Con todo, la extraordinaria calidad de piezas como las cabezas de Claudio y Marco Aurelio apunta a un origen foráneo.

Harto complicado resulta distinguir pistas de las fases de trabajo, o elementos característicos del modo de trabajar de una *officina* determinada. Las técnicas para la elaboración del conjunto de retratos aquí presentado no difieren de aquéllas que son habituales para la escultura romana, si bien se documentan algunas particularidades que pudieran vincularse a una manera de trabajar característica de los artesanos locales. El recurso técnico ya mencionado a propósito de las cabezas elaboradas en varias piezas, más que una manera de trabajar, parece ser el resultado de un condicionante mayor, como pudiera ser el tamaño de los bloques de mármol disponibles.

La producción y la demanda de esculturas en *Tarraco,* como capital provincial, debió ejercer un gran impacto económico. No obstante, falta información vital documentada en otras ciudades. Por ejemplo, están ausentes las firmas de artesanos o "escuelas" señalando sus trabajos. Sin embargo, esperamos que el análisis de los aspectos relacionados con los talleres, las técnicas y los modos de producción contribuya a arrojar más luz en cuanto al papel económico de la escultura romana en esta ciudad.

Notas

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[2] Deseo expresar mi agradecimiento a los responsables del Museu Nacional Arqueològic de Tarragona y del Museu Marés de Barcelona por las facilidades concedidas para el estudio de los retratos aquí estudiados, y al permiso para tomar las fotografías aquí presentadas. Asimismo agradezco a I. Rodà (UAB-ICAC) la atenta lectura del manuscrito junto a sus sugerencias y observaciones. Por último, deseo expresar mi gratitud a E. M. Koppel debido a su inconmensurable generosidad y su aliento para continuar con el estudio de las esculturas romanas de *Tarraco*.

[3] Síntesis sobre el retrato imperial en Hispania: Garriguet 2008.

[4] En colaboración con Anna Gutiérrez Garcia-M. (UAB/ICAC), Pilar Lapuente (UniZar) e Isabel Rodà (UAB/ICAC).

[5] Para una versión ampliada de este trabajo: Ruiz 2018a.

[6] Como ya ha sido señalado: Koppel 2002, 54.

[7] Sobre la escultura exenta de *Tarraco* véase Koppel 1985; ead. 2004.

[8] Koppel 1985, 142; ead. 2002, 51.

[9] Cf. Rodà 1990, esp. 302.

[10] Koppel 1985, 13–14 n.os 1. 2 láms. 1. 2; Rose 1997, 134 n.os 63.1 y 63.2; Boschung 2002, 91 n.os 27.1 y 27.2; Garriguet 2006, 162–163 y 165–162; Mar et al. 2010, 190; Ruiz 2018b, 107–108 n.os 6. 7 figs. 5. 6.

[11] Koppel 2010, con la bibliografía anterior.

[12] Koppel 1985, 90–91 n.º 122 lám. 52,1–4; Winkes 1995, 178–179 n.º 101; Bartman 1999, 168–169 n.º 51; Garriguet 2006, 158.

[13] Koppel 2000; Garriguet 2006, 163. Para el retrato de Tiberio véase también Hertel 2013, 173 n.º 78 lám. 78.

[14] Koppel 1985, 32 n.º 44 lám. 12,1–2.

[15] Koppel 1985, 92 n.º 123 lám. 53,1–2.

[16] Koppel 1985, 80–81 n.º 105 lám. 40,4–7; Ojeda 2010, 267–268 n.º 5; 271–272 fig. 6a–d; 276–277; Ruiz 2016. Cf. asimismo Aranda – Ruiz 2019, 92–93; Ruiz – Aranda (en prensa).

[17] Koppel 1985, 52 n.º 75 lám. 24,1–4; ead. 1988, 13–14 n.º 1 láms. 1–4; Garriguet 2006, 158.

[18] Koppel 1985, 92–93 n.º 124 lám. 53,3–6; Ojeda 2010, 268 n.º 7; 271 fig. 5a–b.

[19] Koppel 1985, 94–95 n.º 126 lám. 55,1–4; Evers 1994, 186 n.º 137; Garriguet 2006, 179 lám. XVII, 1–2.

[20] Koppel 1985, 33–34 n.º 46 lám. 13,1–4; Jucker 1995, 32 nt. 5; Fittschen 1999, 26 n.º B 35; Garriguet 2006, 173–174 lám. XIII, 1–2.

[21] Koppel 1985, 34–35 n.º 47 lám. 14,1–4; Garriguet 2006, 173–174 lám. XIX, 1–2.

[22] Koppel 1985, 52–53 n.º 76 lám. 25,1–2; ead. 1988, 14–16 n.º 2 lám. 5.

[23] Koppel 1985, 93–94 n.º 125 lám. 54.

[24] Ojeda 2010, 268 n.º 5; 272–273.

[25] Koppel 1985, 15 n.º 3 lám. 3.

[26] Koppel 1985, 53; Rodà 1990, 301.

[27] Cf. nt. 3.

[28] Al respecto véase esp. Koppel 2002.

[29] Koppel 2002, 57.

[30] Véase esp. Garriguet 2001, 51–57 n.os 71–79 láms. XXI–XXIII.

[31] La hipótesis de E. M. Koppel (2002, 57), acerca de que las cabezas de Adriano, Marco Aurelio y Lucio Vero pudieran haber formado parte de bustos, sin que en origen hubieran contado con los apéndices mencionados, es difícilmente demostrable debido al estado de conservación de dichos ejemplares.

[32] Véase Koppel 2002, 57–58.

[33] Cf. Garriguet 2006, 153.

[34] Ya E. M. Koppel (2002, 58–60) llamó la atención sobre el retrato de Tiberio al respecto de su manera de ser trabajado.

Bibliografía

Aranda – Ruiz (en prensa)

R. Aranda – J. C. Ruiz, El fenómeno de la reutilización en la necrópolis paleocristiana de Tarragona, in: J. López (ed.), Tarraco Biennal. Actes 4t Congrés Internacional d'Arqueologia i Món Antic. VII Reunió d'Arqueologia Cristiana Hispànica. El cristianisme en l'Antiguitat Tardana: Noves perspectives (Tarragona 2019) 91–97.

Bartman 1999

E. Bartman, Portraits of Livia. Imaging the imperial woman in Augustan Rome (Cambridge 1999).

Boschung 2002

D. Boschung, *Gens Augusta.* Untersuchungen zu Zusammensetzung, Aufsgellung und Bedeutung der Statuengruppen des iulisch-claudischen Kaiserhauses (Mainz am Rhein 2002).

Evers 1994

C. Evers, Les portraits d'Hadrien. Typologie et ateliers (Bruselas 1994).

Fittschen 1999

K. Fittschen, Prinzenbildnisse antoninischer Zeit (Mainz am Rhein 1999).

Garriguet 2001

J. A. Garriguet, La imagen del poder imperial en Hispania. Tipos estatuarios, Corpus Signorum Imperii Romani II 1 (Murcia 2001).

Garriguet 2006

J. A. Garriguet, ¿Provincial o foráneo? Consideraciones sobre la producción y recepción de retratos imperiales en Hispania, in: D. Vaquerizo – J. F. Murillo (eds.), El concepto de lo provincial en el mundo antiguo. Homenaje a la Prof. Pilar León II (Córdoba 2006) 143–194.

Garriguet 2008

J. A. Garriguet, Retratos imperiales de Hispania, in: J. M. Noguera – E. Conde (eds.), Escultura Romana en Hispania, V. Actas de la reunión internacional celebrada en Murcia del 9 al 11 de noviembre de 2005 (Murcia 2008) 115–147.

Hertel 2013

D. Hertel, Die Bildnisse des Tiberius, Das Römische Herrscherbild I 3 (Wiesbaden 2013).

Jucker 1995
I. Jucker, Skulpturen der Antiken-Sammlung Ennetwies (Mainz am Rhein 1995).
Koppel 1985
E. M. Koppel, Die römischen Skulpturen von Tarraco, MF 15 (Berlín 1985).
Koppel 1988
E. M. Koppel, La *schola* del *collegium fabrum* de *Tarraco* y su decoración escultórica (Bellaterra 1988).
Koppel 2000
E. M. Koppel, Retratos de Tiberio y Nero Caesar en Tarragona, in: P. León – T. Nogales (eds.), Actas de la III Reunión sobre Escultura romana en Hispania (Córdoba, 1997) (Madrid 2000) 81–91.
Koppel 2002
E. M. Koppel, Técnicas escultóricas romanas: Tarraco, en: T. Nogales (ed.), Materiales y técnicas escultóricas en Augusta Emerita y otras ciudades de Hispania, Cuadernos Emeritenses 20 (Mérida 2002) 49–70.
Koppel 2004
E. M. Koppel, La escultura, in: X. Dupré (ed.), Las capitales provinciales de Hispania, 3. Tarragona, Colonia Iulia Urbs Triumphalis Tarraco, Ciudades romanas de Hispania 3 (Roma 2004) 111–122.
Koppel 2009
E. M. Koppel, Los retratos funerarios en piedra de los talleres locales en *Tarraco,* in: V. Gaggadis-Robin – A. Hermary – M. Reddé – Cl. Sintes (eds.), Les ateliers de sculpture régionaux: techniques, styles et iconographie. Actes du X Colloque International sur l'Art Provincial Romain. Arles et Aix-en-Provence, 21–23 mai 2007 (Aix-Marsella-Arles 2009) 505–511.
Koppel 2010
E. M. Koppel, Retrat d'August, in: A. Aguilera et al., Fons del Museu Frederic Marès, 5. Catàleg d'escultura i col·lecions del món antic (Barcelona 2010) 61–62 n.º 3.
Mar et al. 2010
R. Mar – J. Ruiz de Arbulo – D. Vivó – J. Á. Domingo – M. Lamuà, La *scaenae frons* del teatro de *Tarraco.* Una propuesta de restitución, in: S. F. Ramallo – N. Röring (eds.), La *scaenae frons* en la arquitectura teatral romana. Actes del Symposium Internacional celebrado en Cartagena los días 12 al 14 de marzo de 2009 en el Museo del Teatro Romano (Murcia 2010) 173–201.
Ojeda 2010
D. Ojeda, Las representaciones estatuarias y los retratos de Trajano en *Hispania:* una revisión, AEspA, 83, 2010, 267–280.
Rodà 1990
I. Rodà, La escultura romana importada en Hispania Citerior, en: Le commerce maritime romain en Méditerrannée occidental: colloque International tenu à Barcelone du 16 au 18 mai 1988 = El comercio marítimo romano en el Mediterráneo occidenta (Barcelona 1990) 291–312.
Rose 1997
Ch. B. Rose, Dynastic commemoration and imperial portraiture in the Julio-Claudian period (Cambridge 1997).

Ruiz 2016

J. C. Ruiz, Nuevo enfoque sobre el retrato imperial procedente de la necrópolis paleocristiana de Tarragona, Faventia 38, 2016, 107–115.

Ruiz 2018a

J. C. Ruiz, Los retratos imperiales de *Tarraco:* notas sobre talleres y técnicas de producción, Espacio, Tiempo y Forma, Serie I, Prehistoria y Arqueología 11, 2018, 75–100.

Ruiz 2018b

J. C. Ruiz, La temprana importación de mármoles blancos en *Tarraco,* Pyrenae 49.1, 2018, 99–131.

Ruiz – Aranda (en prensa)

J. C. Ruiz – R. Aranda, La reutilización de elementos ornamentales y epigráficos de ámbitos públicos altoimperiales en la necrópolis paleocristiana de Tarragona, in: 19th International Congress of Classical Archaeology. Cologne/Bonn, 22–26 May 2018 (en prensa).

Winkes 1995

Livia, Octavia, Iulia. Porträts und Darstellungen (Louvain-la-Neuve 1995).

The Shops of Pergamon – Terraced *Ergastēria* as Economic Spaces

Julian Gabriel Schneider

The Hellenistic kingdom of Pergamon is world famous for its monumental architecture both within and beyond the royal residency, but little research has been conducted on economic aspects of the urban development of the *polis.* This study focuses on the smallest commercial units of Pergamene architecture – the *ergastēria* – dating from the 2nd century BC until the early Imperial Times (fig. 1).

Presence of *ergastēria* can be considered solid evidence for at least a partial economic function of a building analogue to the well-known and extensively studied Roman *tabernae.*[1] The definition of the Greek term ἐργαστήριον[2] – literally 'a place where work is done' – falls within the broad spectrum of various commercial activities, such as craft production of all kinds, storage, the sale of goods and miscellaneous services.[3] Such shops and workshops appear in linear arrangements as part of larger building complexes like *stoai,* but also as single architectural units affiliated with commercial activity.[4]

Pergamon presents a challenging case-study: Due to the long continuity of settlement as well as the lack of detailed archaeological records of the earliest excavations, a precise interpretation of the function of such architectural units is hardly ever possible. This study, therefore, focuses on more basic identification criteria such as the architectural configuration, the location and accessibility to roads, squares or terraces. The Greek term *ergastērion* thus suitably corresponds with the ubiquity and the multifunctionality of such economic micro-spaces and serves to label these units – at least on a typological level – wherever a precise function cannot be identified. This inquiry mainly regards *where* the *ergastēria* are located, to what broader building complex they belong, and *how* their development can be connected to the urban history.[5]

Evidence of *Ergastēria* in Pergamon

Presumably in the 2nd century BC[6], a monumental square was created by building massive foundations for the Upper Agora, which enclosed the temple of Zeus Soter on its southern and eastern sides.[7] Thirty-one rooms over two floors were incorporated into the terrace walls (fig. 2). Most of these units consisted of a back and a front room and were accessible through a small terrace surrounding the entire complex. An inscription preserving a royal letter[8], which is conventionally attributed to the reign of Attalos I. on the basis of the letter shapes and contextual arguments, defines the earnings of a priest of Zeus.[9] Among others, these specifically include revenues from *ergastēria,* which were to be leased by the allotted priest and handed over to the successor in good condition.

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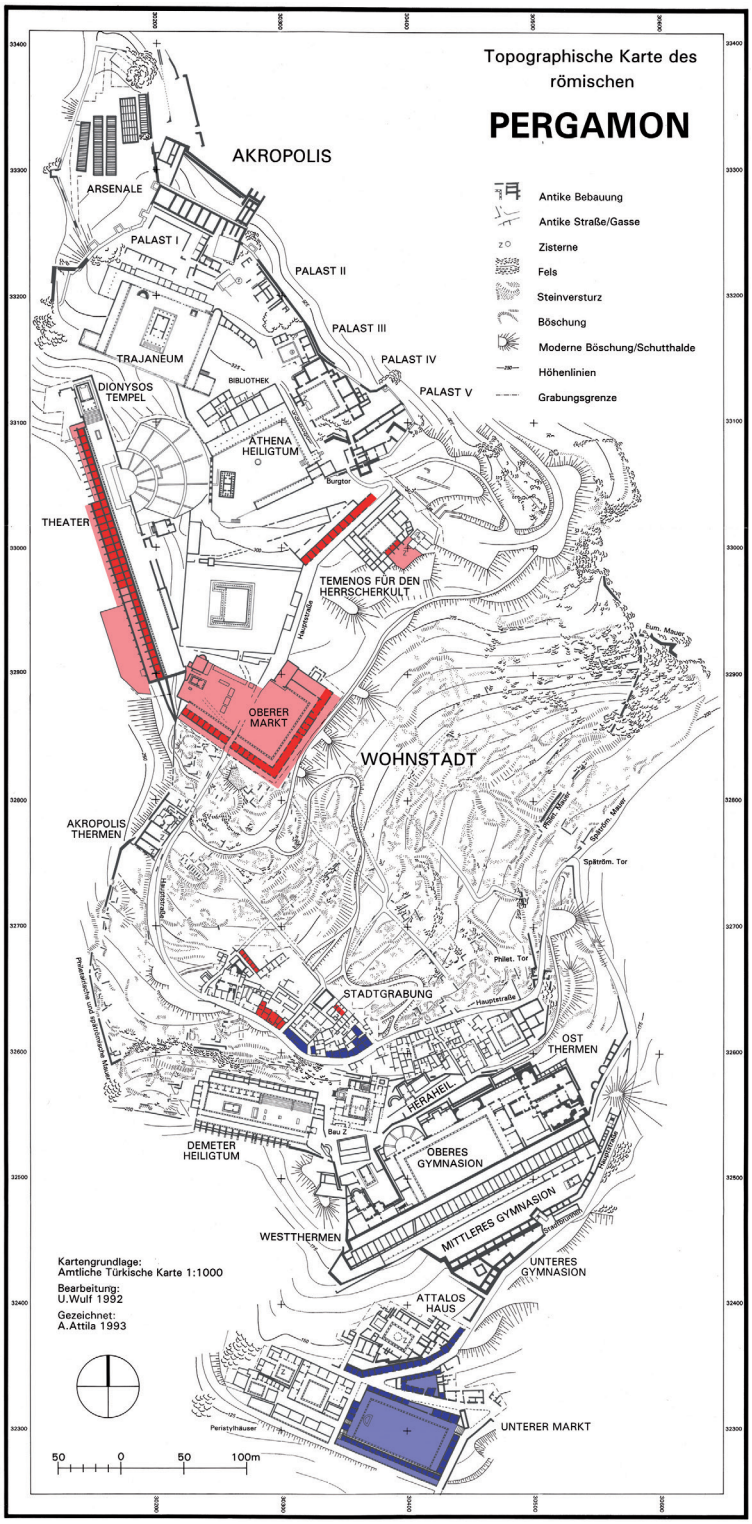


Fig. 1: The city of Pergamon and its *ergastēria* of the 2nd (red) and 1st (blue) cent. BC/AD.

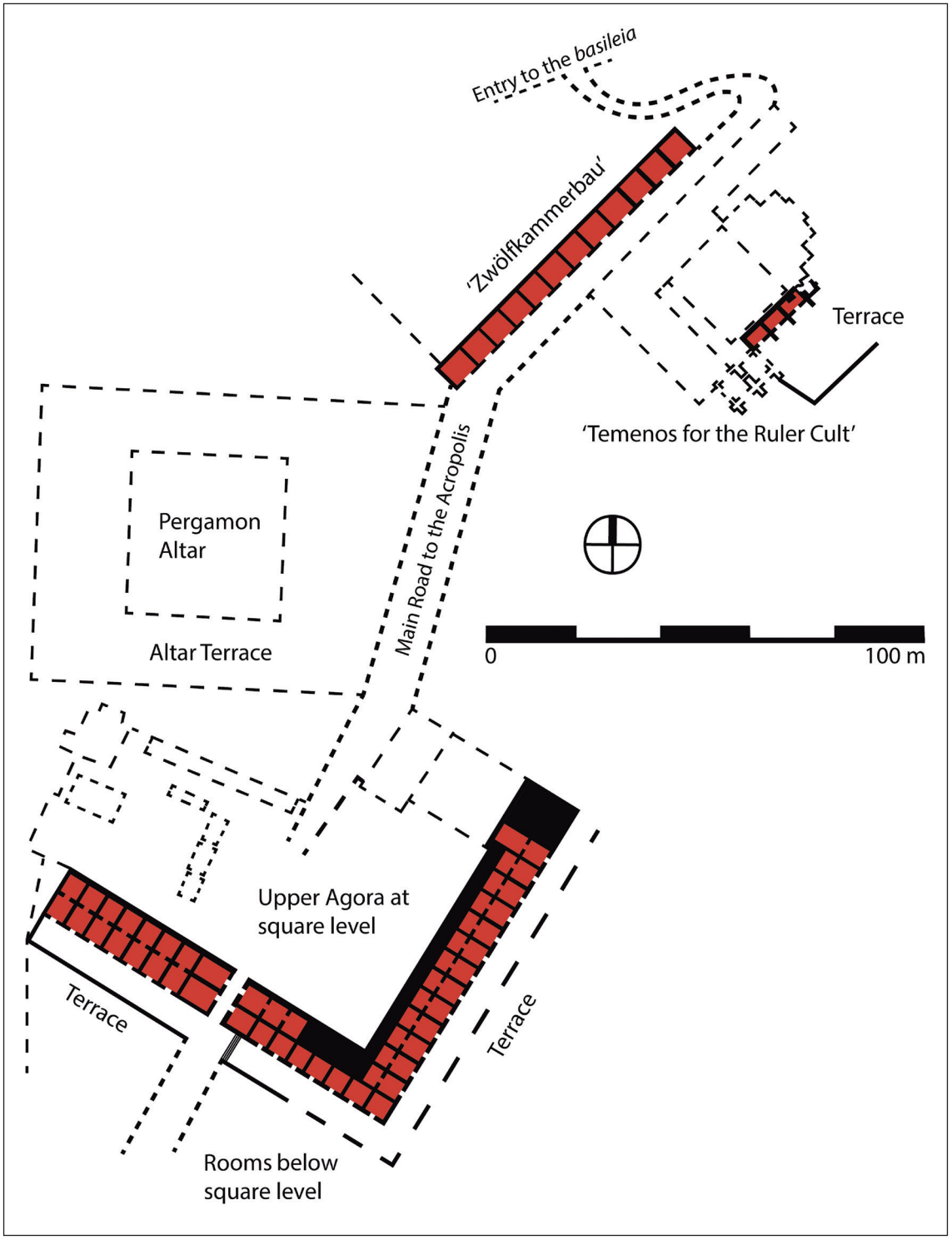


Fig. 2: The *ergastēria* in the area of the Upper Agora, the 'Zwölfkammerbau' and the 'Temenos for the Ruler Cult' (2nd cent. BC).

Louis Robert perhaps rightly wondered if the surviving rooms in the substructions of the Upper Agora should not to be associated with the inscription's content, but the chronological development – as presented by K. Rheidt's re-investigation – does not support a direct connection.[10] At least in principle, the leasing of workshops to finance a priestly office should not be excluded for the 2nd century B.C., which then would have served a dual purpose: they provided a sustainable source of revenue as well as being essential substructures for the square. On courtyard level, the conventionally accepted reconstruction displays another set of twenty-eight rooms, but the complete devastation of the superstructure does not provide conclusive evidence for this hypothesis.[11]

The twelve uniform rooms of the 'Zwölfkammerbau' line the western side of the main road before the entrance to the *basileia* (fig. 2) and were presumably built concurrently with the Upper Agora's monumental building phase of the 2nd century BC.[12] The rooms' functions must have been largely commercial, as suggested by the prominent location at Pergamon's main road. About concurrently or little earlier[13], the 'Temenos for the Ruler Cult' was greatly extended and included three rooms in the foundations of the court's southeastern wing, connecting to a terrace;[14] also these rooms probably served economic purposes (storage?).

The Theatre Terrace – Pergamon's longest terrace – demanded a highly complex, staggered construction to overcome the hill's steep incline, and formed the nucleus of numerous *ergastēria* of which several are still exceptionnally well-preserved today.[15] Two series of paratactic rooms were part of a monumental building phase which took place between the end of the 3rd to the middle of the 2nd century BC (fig. 3)[16]: The main

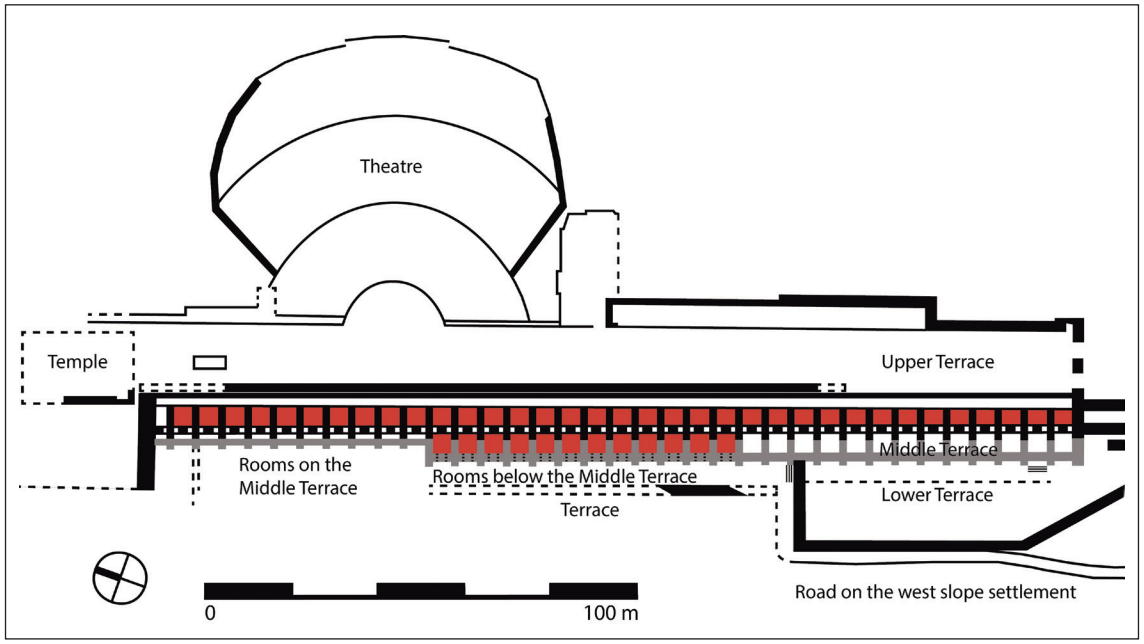


Fig. 3: The *ergastēria* in the substructures of the Theatre Terrace (2nd cent. BC).

group of thirty-five rooms within the sustaining walls, contained a door (1.0 × 2.25 m) and a window (1.55 × 1.57 m) and faced the so-called Middle Terrace.[17] Similarly, a second group of twelve rooms was situated inside this terrace at the foot of the slope: these consisted of two floors and their entrances faced a small terrace close to the road network on the west slope settlement.[18] The so-called Lower Terrace, built at an intermediate level between the Middle Terrace and the narrow path leading to the shops, used stairs to connect the various platforms.[19]

The earliest evidence of *ergastēria* in the area of the Upper City dates back to the first half of the 2nd century BC. Although their scarce remains merely allow hypothetical reconstruction, a consistent pattern of at least twenty-nine paratactic rooms oriented towards the major roads may be observed.[20] In the 1st century BC, the entire Upper City underwent fundamental change: various buildings – including many *ergastēria* – were reshaped after a period of decay (fig. 4).[21] The better state of preservation of the Upper City enables a more precise identification in several cases ranging from the 2nd to the 1st century BC: one room in the foundations of the so-called 'Gebäude mit dem Podiensaal' had a counter, ideal for selling goods to passersby on the street[22]; another exhibited installations for a fireplace.[23] On the southeastern corner of the main road, several *pithoi* were installed under a small portico to facilitate the sale of liquids or other goods.[24]

The building complex of the Lower Agora consisted of a central square, a wrap-around porticus and various *ergastēria* (fig. 5).[25] They were situated on all three different levels of the complex's terrace architecture: at least six on the second floor of

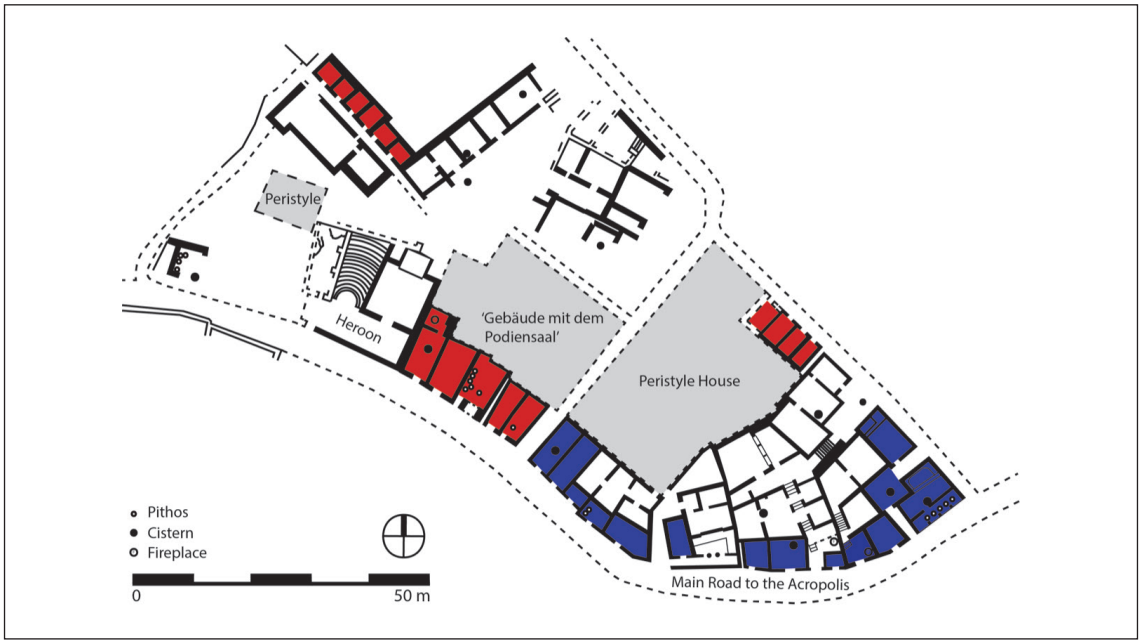


Fig. 4: The *ergastēria* in the Upper City area built in the 2nd (red) and 1st (blue) cent. BC.

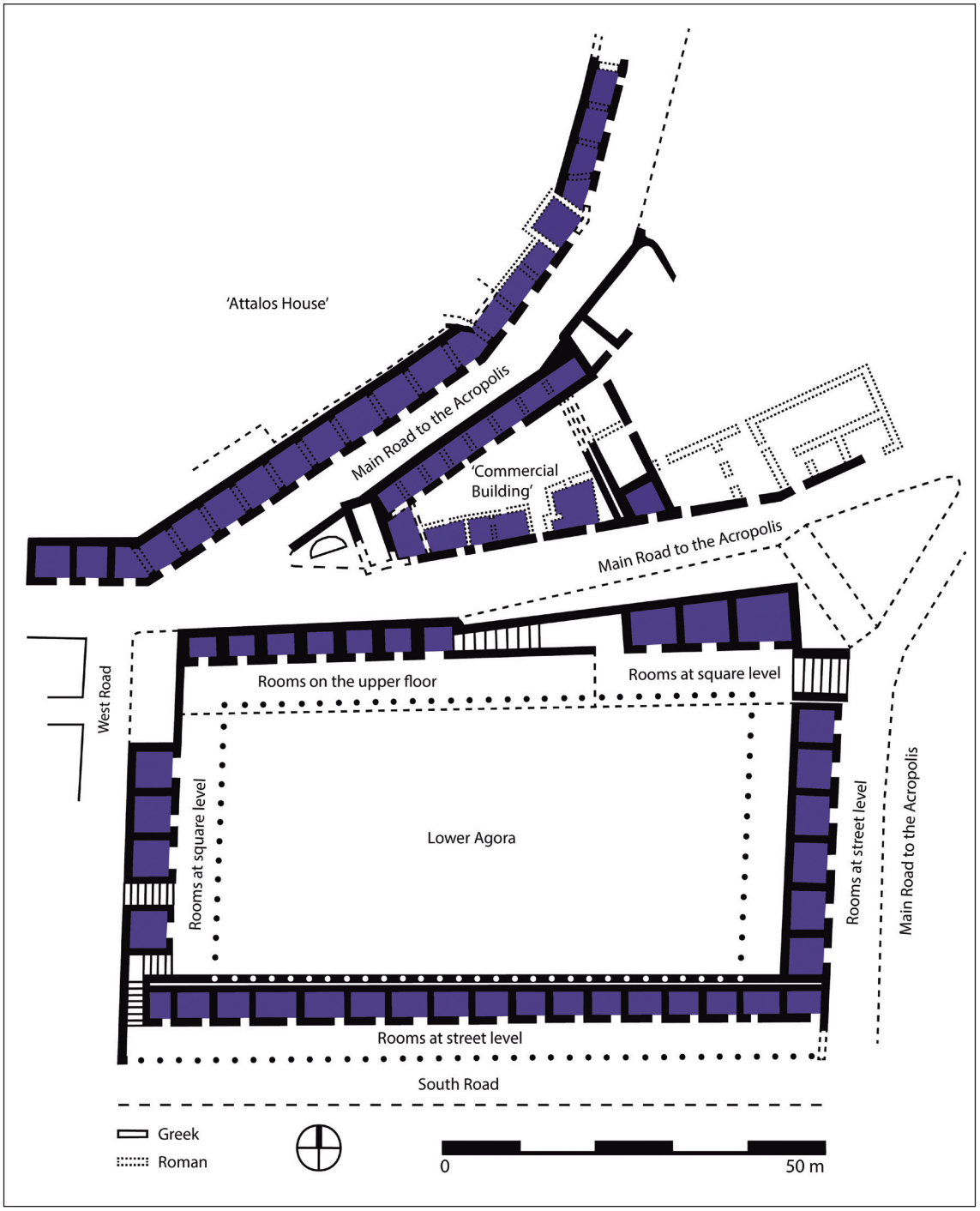


Fig. 5: The *ergastēria* of the Lower Agora and its surroundings (late 1st cent. BC, early 1st cent. AD).

the northern *stoa,* four on the western and three on the northeastern side at courtyard-level. Six counterparts in the east wing, as well as the upper floors in the south *stoa,* remain uncertain reconstructions.[26] Below courtyard-level, the southern and eastern retaining wall was bordered by twenty-three rooms that all faced the surrounding roads and formed a solid foundation for the upper structure. New investigations suggest that the presumed 'Eumenian' date of the main construction phase needs to be revised to the early Imperial period (end of 1st century BC or beginning of the 1st century AD).[27]

The area north of the Lower Agora exhibits an arrangement of *ergastēria* that clearly adapts to the winding main road. The architectural intertwining of the area suggests that these structures were built concurrently with the Lower Agora and thus likely date to the 1st century BC as well.[28] The massive terracing wall for the 'Attalos House' encompassed a row of at least twenty-one rooms in front of Pergamon's most important traffic route (fig. 5). Across the road, the triangular building is usually identified as a commercial complex, since its fourteen *ergastēria* faced mainly inward onto the triangular courtyard.[29]

Chronology and Development of the *Ergastēria* in Pergamon

The chronological statistics and the spatial distribution of the preserved *ergastēria* show that the number of 122 units from the 2nd century BC[30] rose to 194 by the turn of the eras[31], when the Lower City underwent fundamental change and became a new economic hotspot in the area of the Lower Agora. The *ergastēria* of Pergamon thus illustrate – both in number, urban distribution and chronology – the development of the urban economic spaces from Hellenistic times until the beginning of the 1st century AD.[32]

The majority of the rooms – at least 109[33] out of 194 – appears in the foundations of large-scale buildings and thus form essential parts of the genuine Pergamene terrace architecture.[34] Consequently, economic aspects seem to have been taken into account in various major royal building projects, because *ergastēria* not only served as essential substructures, but also created long-lasting sources of revenue for the building contractor. Thus, this phenomenon is perhaps best described as sustainable project planning wherein commercial functions were considered in the planning process and integrated into the later management of such buildings.

The main road at Pergamon offered a unique economic hotspot, since *ergastēria* are found on every part of its route, turning this important traffic system[35] into a lively bazaar.[36] Where a direct access to the Pergamene road network was lacking, terraces themselves enabled access to the shops and storerooms.

This analysis demonstrates that commercial functions of Pergamene architecture were not limited to the two *agorai,* but can be found in various buildings – mostly large

scale – whose primary function was not necessarily related to commerce. Thus, the initiators of such building projects were fully aware of profitable sub-purposes regarding the essential terrace architecture, eventually leading to a sustainable development of the city's economic spaces.

Notes

* This article presents a short summary of the results of my B.A. thesis (University of Zurich 2015). I owe special thanks for critical and fruitful discussions on this subject to B. Emme, F. Pirson, U. Wulf-Rheidt †, M. Trümper, Ch. Reusser, Ch. Leypold, M. Flohr and R. di Cesare. All epigraphic abbreviations follow the AIEGL conventions (<https://aiegl.org/grepiabbr.html> last checked on 7. 12. 2021).

[1] See most recently Holleran 2012, 99–158; Holleran 2017.

[2] Liddell – Scott – Jones 1996, 682 s. v. ἐργαστήριον. On the etymology see Chantraine 1970, 365 s. v. ἔργον; Beekes 2010, 450 s. v. ἔργον.

[3] Karvonis 2007, 41 f. 47. The term appears frequently in epigraphic sources and is discussed by Ph. Gauthier in *I.Sardes Suppl.* II pp. 101–106 and Hellmann 1994, 137 (*SEG* XLIV 1772; *BE* 1995, 438 no. 58); on Delos see Hellmann 1992, 138–140 (*SEG* XLII 735; *BE* 1993, 467 f. no. 54); on Attica see Stanley 1990, 1–13 (*SEG* XL 175).

[4] Karvonis 2008, 61–68 (*SEG* LVIII 798). Particularly well established in Greek cities was the combination of *stoai* with rooms behind the collonades, which were either called *oikoi/oikemata* or – revealing their commercial purpose – *ergastēria* (see Cannistraci 2011, 362–375 [*SEG* LXI 1692]; *BE* 2014, 398 f. Nr. 10)).

[5] Similar mappings and brief discussions of economic spaces in Pergamon were published by Karvonis 2008, 75 f. with fig. 9 and Pirson 2012, 194 fig. 5. A more extensive study on Pergamon's economy is currently being conducted by Sandra Völkel (DAI Istanbul). Following these previous attempts, I exclude the rooms surrounding the courtyard on the west and east side of the sanctuary of Demeter (nos. 4. 7. 8. 9. 31–33, see Bohtz 1981, 32–34. 37 f. 58; pl. 43 "Baustufe 4"), being referred to as "the *stoai* and the *oikoi*" in the dedicatory inscription on the propylon (Hepding 1910, 439–442 no. 24 l. 2; Cannistraci 2011, 365). The ambiguous terminology (compare the explicit term *ergastēria* in *I.Pergamon* I 40 l. 7, *infra* n. 8), their seclusive location and the primarily religious function of the building complex do not directly point to economic activity; they thus rather served primary purposes of the sanctuary ("heilige Gemächer" according to Bohtz 1981, 33. 58). Börker 1983, 14 with n. 43 identifies them "zweifellos" as banquet rooms (followed by Leypold 2008, 119–122 no. 30). A comparable, non-commercial function can be assumed for the rooms nos. 11–17 in the "Untere Nord-Stoa", dating to the times of Philetairos (Bohtz 1981, 34 f. 57 f.; pl. 42 "Baustufe 3").

[6] Rheidt 1992, 268 f. argues for a construction under the reign of Eumenes II. as already Lauter 1970, 96 on the basis of the masonry. This conventionally accepted date, however, has not yet been verified by archaeological findings and reflects the content of the famous passage by Strab. 13,4,2 (= 624C): κατεσκεύασε δ' οὗτος τὴν πόλιν καὶ τὸ Νικηφόριον ἄλσει κατεφύτευσε, καὶ ἀναθήματα καὶ βιβλιοθήκας καὶ τὴν ἐπὶ τοσόνδε κατοικίαν τοῦ Περγάμου τὴν νῦν οὖσαν ἐκεῖνος προσεφιλοκάλησε. "It was him (i.e. Eumenes II.) who also built up the city, and he planted the Nikephorion with a sacred grove, and out of

love for splendour he added dedications (i.e. buildings?) and libraries and today's wide extension of the settlement of Pergamon.".

[7] Schrammen 1906, 93–107; pl. 22–34; Lauter 1970, 88 f. no. 2; Rheidt 1992, 263–269. 279–282; Köse 2005, 141 f.; Bielfeldt 2010, 168–179; Mathys 2012, 261–264; Radt 2016, 89–93; Laufer 2021, 159–163 (with a useful summary of the controversally discussed development of the area as Temenos and Agora). The thirty-one units did perhaps not solely serve as storerooms (as believed by Lauter 1970, 95: "Die dunklen Gelasse im Untergeschoß des Marktbaus von Pergamon mit ihrer einen Türe können den Kaufleuten höchstens als Warenlager gedient haben"), but rather as proper shops on an attractive point of sale on Pergamon's most significant road. Due to the descent of the slope, at least the rooms on the far west consisted of two floors (see Schrammen 1906, 93, the cross-section on pl. 26, and the front view on pl. 31). For justified criticism of the conventional interpretation of the Upper Agora as 'State Market' compared to the Lower Agora as 'Commercial Market' (e.g. by Coulton 1976, 176; Wulf 1994, 142 and others) see Hoffmann 2008, 38 n. 20; Bielfeldt 2010, 168 f.; Mathys 2012, 264. 268. The presumably strict distinction reflects rather the economic theory of the ideal *polis* developed by Aristot. pol. 7, 1331 a 32–b 3 than the commercial reality of hellenistic Pergamon, as the revised chronology of the Lower Agora suggests (see *infra* n. 27).

[8] *I.Pergamon* I 40 ll. 1–14 [ὁ δ' ἀεὶ λ]αχὼν φορείτω | [χ]λαμύδα λευκὴν καὶ σ[τέ]|φανον ἐλάας μετὰ ταιν[ι]|δίου φοινικιοῦ καὶ λαμβα|νέτω τῶν θυομένων γέ|ρα τὸ δέρμα καὶ κωλέαν | καὶ τῶν ἐργαστηρίων ὧν | ἀνατέθηκα τὴν πρόσο|δον· μισθούτω δ' ἀεὶ ὁ λα|χών, ἐπεσκευασμένα | δὲ παραδιδότω ὁ ἐξι|ὼν ἢ ἀποτινέτω τὸ γε|νόμ[ε]νον εἰς τὴν ἐπι|[σ]κευὴν δαπάνημα. "The allotted (priest) shall wear a white chlamys and an olive crown with a purple ribbon, and he shall receive from the sacrificed animals as perquisite the skin and thighbone and of the workshops, which I (i.e. Attalos I.?) dedicated (to the god), the revenues. The holder (of the priesthood) shall always lease them, and when leaving the office he shall hand them over in well-repaired state or he shall pay the resulting costs for the repair." (cf. *Syll.*[3] 1018; Welles, *RC* 24; *LSAM* 11; Pleket 1970, 73; *I.Sardes Suppl.* II p. 106; Bielfeldt 2010, 175 f. with fig. 28). The *ergastēria* were thus considered as continuous sources of revenue and cross-financed the priesthood. For a comparable case in Miletus see *I.Didyma* 479 Z. 9–14, where the revenues from the shops of the famous *stoa* of Antiochos financed construction work at the Didymeion (Meier 2012, 382–387; for other examples, see Ph. Gauthier in *I.Sardes Suppl.* II pp. 101–106).

[9] The lack of the preface is particularly regretful. Max Fränkel collected the arguments for a date in the reign of Attalos I., "ohne dass freilich eine frühere Entstehungszeit ausgeschlossen wäre" (*I.Pergamon* I p. 37). At any rate, the description of the priest's dress (ll. 1–4) makes an identification of the diety (l. 19) with Zeus is fairly certain and Ohlemutz 1940, 65–79, provided firm grounds for this interpretation.

[10] Robert 1984, 496–499 (SEG XXXIV 1250) with a useful survey of the previous interpretations of the passage (supported by Ph. Gauthier, *I.Sardes Suppl.* II p. 106). The connection between the *ergastēria* (ll. 7–14) and the archaeological remains is an attractive hypothesis and would support the economic function of the thirty-one rooms in the subsctruction as leased workshops. Also the provision to keep the *ergastēria* in good condition would match the context, as these workshops formed significant substructions for the porticus on the square-level. However, Rheidt 1992, 257 (followed by Bielfeldt 2010, 175 f.) ascribes the inscription's content to a building phase in the 3rd century B.C. when remains of *ergastēria* are completely lacking in the archaeological record. At any rate, the epigraphic evidence makes it clear that commercial activities must have existed in this earlier phase.

[11] Coulton 1976, 68. 274 fig. 102 and Rheidt 1992, 263 f. with fig. 9 adopt the vague statement and hypothetical reconstruction by Schrammen 1906, 105 with tab. 32. More cautiously remains Lauter 1970, 89. These fully reconstructed rooms are excluded here until further evidence is produced.

[12] Rheidt 1992, 261–263. 267 with the discussion of a rather on an obscure 'market building' west of the 'Zwölfkammerbau' (supported by Mathys 2012, 261 f.; Laufer 2021, 161–163 who introduces the term "Big Agora" for the area between the Upper Agora and the "Zwölfkammerbau"; *contra* Bielfeldt 2010, 1729.

[13] Boehringer – Krauss 1937, 74–81; Wensler 1989; Schwarzer 1999, 274 f.; Emme 2013, 189–196.

[14] Boehringer – Krauss 1937, 44–46.

[15] Bohn 1896, 26–34; with pl. 15–23; Lauter 1970, 89 no. 2a; Köse 2005, 141; Helm-Rommel 2009, 42–46 with pl. 32–37. 95–99. 102–106. 145.

[16] Helm-Rommel 2009, 73–82. 87–90. 255–263 with pl. 103. 145.

[17] Helm-Rommel 2009, 79 f. 257–259; Radt 2016, 262 fig. 205; Klinkott 1991, 131 f. Due to the location and position, Lauter 1970, 95 decidedly stressed that "die Räume unter der Theaterterrasse natürlich sowieso keine Läden aufnahmen" but certainly are to be interpreted as storerooms. This is perhaps true for the twelve two-storey rooms located below the Middle Terrace (Helm-Rommel 2009, 80). As for the thirty-five rooms facing the Middle Terrace, the wide window on the right of each door rather points to commercial shops (already Helm-Rommel 2009, 259).

[18] Helm-Rommel 2009, 89 f. 259 with pl. 35, 1. 97. 103; Pirson 2017, 76–82.

[19] Helm-Rommel 2009, 4. 43. 263 f.

[20] Wulf 1999, 197–199 fig. 79; Schwarzer 2008, 30–41. 44–53. 80; Radt 1977, 305 f. (on the so-called 'Magazingasse'); Filgis – Radt 1986, 55 with pl. 58. 59. 80 a.

[21] Wulf 1999, 199–203 with fig. 80; Schwarzer 2008, 88 f.

[22] Schwarzer 2008, 38 f. 52. 54 with fig. 10; compare the windows of the Theatre Terrace (*supra* n. 17).

[23] Schwarzer 2008, 30–36.

[24] Wulf 1999, 136 f. 142–145 with fig. 70.

[25] Dörpfeld 1902, 16–26 with pl. 2; Dörpfeld 1904, 114–116 with pl. 7; Köse 2005, 142; Emme 2013, 165–171; Mathys 2012, 259–261; Radt 2016, 87–89; Laufer 2021, 163. First results of the re-investigation by B. Emme and A. Öztürk † are published in preliminary reports (Pirson 2014, 122–131; Pirson 2015, 115–126; Pirson 2016, 147–156; Pirson 2018, 118–127).

[26] Emme 2013, 169 f. with pl. 91 following Coulton 1976, 68. 273 with fig. 101.

[27] B. Emme – A. Öztürk in Pirson 2015, 118 f.; Pirson 2016, 149–151, and B. Emme in Pirson 2018, 121 (for earlier attempts see Pirson 2008, 102–104). Detailed results can be expected from the announced monographic publication. A late date was already assumed by Pinkwart – Stammnitz 1984, 76. For the impact on the urban development see Pirson 2017, 82 f.

[28] On this area of the city see Dörpfeld 1902, 35 f.; Dörpfeld 1904, 120 f. with pl. 7; Dörpfeld 1907, 188 f. with pl. 14; Salzmann 1991, 440–444; Mathys 2012, 259–261; Pirson 2017, 82 f.

[29] Dörpfeld 1907, 163–166 with pl. 14; Radt 2016, 86.

[30] Upper Agora (31), 'Zwölfkammerbau' (12), 'Temenos for the Ruler Cult' (3), Theater Terrace (47), Upper City (29).

[31] *supra* n. 30 plus Lower Agora (37) and the adjacent area in the north (35).

[32] On the urban development after 133 BC, see Pirson 2017, 89–96.

[33] Upper Agora (31), 'Temenos for the Ruler Cult' (3), Theater Terrace (47), Upper City (5 in the foundations of the 'Gebäude mit dem Podiensaal'), Lower Agora (23 in the southern and eastern foundations).
[34] Klinkott 1991, 131–136 and most recently Laufer 2021, 137–144. 265. The architecture of terraced, multi-storey stoai and market buildings was identified as being a typical Pergamene phenomenon and fundamentally studied by Lauter 1970, 86–101 ('Marktgebäude'). His collection of examples from Asia Minor is further completed by Köse 2005, 139–160 ('Pergamene-style market-buildings'), Cavalier 2012, 241–255 ('portique à sous-sol dossé') and Laufer 2021, 63–70. 165–169 ('Terrassenhalle'). At Pergamon, main emphasis was apparently put on the efficient use of highly limited space, e.g. on steep slopes, where firm ground was rare.
[35] Hoffmann 2008, 35–41; Pirson 2017, 75–86; most recently Laufer 2021, 151–155.
[36] Radt 2016, 87; Pirson 2012, 195. A comparable picture is developed by Aischin. Tim. 124 who describes "these *ergastēria* along the roads" in Athens (τούτων τῶν ἐπὶ ταῖς ὁδοῖς ἐργαστηρίων).

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Fig. 1: By author based on Wulf 1999, pl. 24. – Fig. 2: By author based on Boehringer – Krauss 1937, pl. 72; Schrammen 1906, 96; pl. 1. 21. 22. 24. 32; Rheidt 1992, 264 fig. 9; 281 fig. 15 d. – Fig. 3: By author based on Helm-Rommel 2009, pl. 146; Pirson 2015, 94 fig. 5. – Fig. 4: By author based on Filgis – Radt 1986, pl. 58; Wulf 1999, 200 fig. 80; Schwarzer 2008, 46 fig. 5. – Fig. 5: By author based on Dörpfeld 1902, pl. 2; Dörpfeld 1904, pl. 7; Dörpfeld 1907, pl. 14.

References

Beekes 2010
R. Beekes, An Etymological Dictionnary of Greek I, Leiden Indo-European Etymological Dictionary Series 10/1 (Leiden 2010).

Bielfeldt 2010
R. Bielfeldt, Wo nur sind die Bürger von Pergamon? Eine Phänomenologie bürgerlicher Unscheinbarkeit im städtischen Raum der Königsresidenz, IstMitt 60, 2010, 117–201.

Boehringer – Krauss 1937
E. Boehringer – F. Krauss, Das Temenos für den Herrscherkult. 'Prinzessinnen Palais', AvP 9 (Berlin 1937).

Bohn 1896
R. Bohn, Die Theater-Terrasse, AvP 4 (Berlin 1896).

Bohtz 1981
C. H. Bohtz, Das Demeter-Heiligtum, AvP 13 (Berlin 1981).

Börker 1983
Ch. Börker, Festbankett und griechische Architektur, XeniaKonst 4 (Konstanz 1983).

Cannistraci 2011
O. S. Cannistraci, Problemi di definizione. Il caso delle stoai [bitte kursiv setzen, JGS] con *oikoi/ oikemata* e *stoai* con *ergasteria,* ASAA 89, 2011, 359–378.

Cavalier 2012
L. Cavalier, Portiques en bordure des agoras d'Asie Mineure à l'époque hellénistique et à l'époque impériale, in: Dies. – R. Descat – J. de Courtils (eds.), Basiliques et agoras en Grèce et d'Asie Mineure. Colloque à Bordeaux le 7 Avril 2007 et à l'institut d'Études Anatoliennes (Istanbul) le 26 Mars 2010 (Bordeaux 2012) 241–256.

Chantraine 1970
P. Chantraine, Dictionnaire étymologique de la langue grecque. Histoire des mots II, E – K (Paris 1970).

Coulton 1976
J. J. Coulton, The Architectural Development of the Greek Stoa (Oxford 1976).

Dörpfeld 1902
W. Dörpfeld, Die Arbeiten zu Pergamon 1900–1901 in Pergamon. Die Bauwerke, AM 27, 1902, 10–43.

Dörpfeld 1904
W. Dörpfeld, Die Arbeiten zu Pergamon 1902–1903. Die Bauwerke, AM 29, 1904, 114–151.

Dörpfeld 1907
W. Dörpfeld, Die Arbeiten zu Pergamon 1904–1905. Die Bauwerke, AM 32, 1907, 163–240.

Emme 2013
B. Emme, Peristyl und Polis. Entwicklung und Funktion öffentlicher griechischer Hofanlagen (Berlin 2013).

Filgis – Radt 1986
M. N. Filgis – W. Radt, Das Heroon, AvP 15, 1 (Berlin 1986).

Fränkel 1890
M. Fränkel, Die Inschriften von Pergamon, AvP 8, 1 (Berlin 1890).

Hellmann 1992
M.-C. Hellmann, Recherches sur le vocabulaire de l'architecture grecque d'après les inscriptions de Délos, BEFAR 278 (Athen 1992).

Hellmann 1994
M.-C. Hellmann, La maison grecque. Les sources épigraphiques, Topoi 4, 1994, 131–146.

Helm-Rommel 2009
I. Helm-Rommel, Das Theater am Burgberg von Pergamon (Diss. Technische Universität Karlsruhe 2009) <http://digbib.ubka.uni-karlsruhe.de/volltexte/1000012598> (08. 12. 2020).

Hepding 1910
H. Hepding, Die Arbeiten zu Pergamon 1908–1909 II. Die Inschriften, AM 35, 1910, 401–493.

Hoffmann 2008
A. Hoffmann, Wege der Kommunikation in kleinasiatischen Städten, in: D. Mertens (ed.), Stadtverkehr in der antiken Welt. Internationales Kolloquium zur 175-Jahrfeier des Deutschen Archäologischen Instituts Rom, Palilia 18 (Wiesbaden 2008) 35–57.

Holleran 2012
C. Holleran, Shopping in Ancient Rome. The Retail Trade in the Late Republic and the Principate (Oxford 2012).

Holleran 2017
C. Holleran, Finding Commerce: The *Taberna* and the Identification of Roman Commercial Space, BSR 85, 2017, 143–170.

Karvonis 2007
P. Karvonis, Le vocabulaire des installations commerciales en Grèce aux époques classique et hellénistique, in: J. Andreau – V. Chankowski (eds.), Vocabulaire et expression de l'économie dans le monde antique (Bordeaux 2007) 35–49.

Karvonis 2008
P. Karvonis, Typologie et évolution des installations commerciales dans les villes grecques du VI^{e} siècle av. J.-C. et de l'époque hellénistique, REA 110, 2008, 57–81.

Klinkott 1991
M. Klinkott, Hellenistische Stützmauerkonstruktionen in Pergamon, in: A. Hoffmann – E.-L. Schwandner – W. Hoepfner – G. Brands (eds.), Bautechnik der Antike. Internationales Kolloquium in Berlin vom 15.–17. Februar 1990 veranstaltet vom Architekturreferat des DAI in Zusammenarbeit mit dem Seminar für Klassische Archäologie der Freien Universität Berlin, DiskAB 5 (Mainz a. Rhein 1991) 131–136.

Köse 2005
V. Köse, The Origin and Development of Market-Buildings in Hellenistic and Roman Asia Minor, in: S. Mitchell – C. Katsari (eds.), Patterns in the Economy of Roman Asia Minor. Colloquium Exeter July 2002 (Swansea 2005) 139–166.

Laufer 2021
E. Laufer, Architektur unter den Attaliden. Pergamon und die Städte zwischen herrscherlichem Bauengagement und Lokaltradition, PF 19 (Wiesbaden 2021)

Lauter 1970
H. Lauter, Die hellenistische Agora von Aspendos, BJb 170, 1970, 77–101.

Leypold 2008
Ch. Leypold, Bankettgebäude in griechischen Heiligtümern (Wiesbaden 2008).

Liddel et al. 1996
H. G. Liddell – R. Scott – H. S. Jones, A Greek-English Lexikon. With a Revised Supplement 9 (Oxford 1996).

Mathys 2012
M. Mathys, The Agorai of Pergamon. Urban Space and Civic Stage, in: L. Cavalier – R. Descat – J. de Courtils (eds.), Basiliques et agoras en Grèce et d'Asie Mineure. Colloque à Bordeaux le 7 Avril 2007 et à l'institut d'Études Anatoliennes (Istanbul) le 26 Mars 2010 (Bordeaux 2012) 257–271.

Meyer 2012
L. Meier, Die Finanzierung öffentlicher Bauten in der hellenistischen Polis (Berlin 2012).

Ohlemutz 1968
E. Ohlemutz, Die Kulte und Heiligtümer der Götter in Pergamon (Würzburg 1940).

Pinkwart – Stamnitz 1984
D. Pinkwart – W. Stammnitz, Die Peristylhäuser westlich der Unteren Agora, AvP 14 (Berlin 1984).
Pirson 2008
F. Pirson, Pergamon – Bericht über die Arbeiten in der Kampagne 2007, AA 2008/2, 83–155.
Pirson 2012
F. Pirson, Hierarchisierung des Raumes? Überlegungen zur räumlichen Organisation und deren Wahrnehmung im hellenistischen Pergamon und seinem Umland, in: F. Pirson (ed.), Manifestation von Macht und Hierarchien in Stadtraum und Landschaft, BYZAS 13 (Istanbul 2012) 187–232.
Pirson 2015
F. Pirson, Pergamon – Bericht über die Arbeiten in der Kampagne 2014, AA 2015/2, 89–179.
Pirson 2016
F. Pirson, Pergamon – Bericht über die Arbeiten in der Kampagne 2015, AA 2016/2, 135–223.
Pirson 2018
F. Pirson. Pergamon – Bericht über die Arbeiten in der Kampagne 2017, AA 2018/2, 109–192.
Pirson 2017
F. Pirson, Die Siedlungsgeschichte Pergamons – Überblick und kritische Revision. Mit einem Appendix von Anneke Keweloh-Kaletta, IstMitt 67, 2017, 43–130.
Pleket 1970
H. W. Pleket, Nine Greek Inscriptions from the Casyter-Valley in Lydia. A Republication, Talanta 2, 1970, 55–88.
Radt 1977
W. Radt, Pergamon. Vorbericht über die Kampagne 1976, AA 1977, 297–319.
Radt 2016
W. Radt, Pergamon. Geschichte und Bauten einer antiken Metropole ³(Darmstadt 2016).
Rheidt 1992
K. Rheidt, Die Obere Agora. Zur Entwicklung des hellenistischen Stadtzentrums in Pergamon, IstMitt 42, 1992, 235–285.
Robert 1984
L. Robert, Documents d'Asie Mineure, BCH 108, 1984, 457–532.
Salzmann 1991
D. Salzmann, Mosaiken und Pavimente in Pergamon. Vorbericht der Kampagnen 1989 und 1990, AA 1991, 433–456.
Schrammen 1906
J. Schrammen, Der große Altar. Der Obere Markt, AvP 3, 1 (Berlin 1906).
Schwarzer 1999
H. Schwarzer, Untersuchungen zum hellenistischen Herrscherkult in Pergamon, IstMitt 49, 1999, 249–300.
Schwarzer 2008
H. Schwarzer, Das Gebäude mit dem Podiensaal in der Stadtgrabung von Pergamon. Studien zu sakralen Banketträumen mit Liegepodien in der Antike, AvP 15, 4 (Berlin 2008).

Stanley 1990
Ph. V. Stanley, The Value of Ergasteria in Attica. A Reexamination, MBAH 9/1, 1990, 1–13.
Wensler 1989
A. F. Wensler, Zur Datierung des Temenos für den Herrscherkult in Pergamon, AA 1989, 33–42.
Wulf 1994
U. Wulf, Der Stadtplan von Pergamon. Zu Entwicklung und Stadtstruktur von der Neugründung unter Philetairos bis in spätantike Zeit, IstMitt 44, 1994, 135–175.
Wulf 1999
U. Wulf, Die hellenistischen und römischen Wohnhäuser von Pergamon. Unter besonderer Berücksichtigung der Anlagen zwischen der Mittel- und der Ostgasse, AvP 15, 3 (Berlin 1999).

Archaic Roof-Tiles from Apollonia Pontica

Daniela Stoyanova

The aim of the paper is to present the main types of pan and cover tiles, eaves tiles, and antefixes that were part of the roofs of the uncovered temples and other structures from the late Archaic and early Classical periods from the island of Saint Kirik (fig. 1.1), where the *temenos* of Apollonia Pontica (present-day Sozopol, Bulgaria) was located.[1]

Pan and Eaves Tiles

Type 1. Corinthian pan tile consisting of tile backer and raised side borders, the latter with pronounced triangular profile (fig. 1.2). There is no rib at the upper end and no beveled lower end. All surfaces are equally well treated. The type is illustrated with few fragments from an Archaic dwelling to the west of the Archaic temple and from the layer beneath the foundations of the early Classical temple. The type resembles for example Type F.Ia from Istros,[2] but no exact parallels of the side borders' profiles have been found so far. The type is combined with an eaves tile with gutter, with the same profile of the raised borders. One fragment has entirely preserved length of 66 cm and the width could be reconstructed to 61 cm based on an eaves tile with gutter (fig. 1.3). The presence of mounting holes in the eaves tiles indicate that the antefixes that covered them also had mounting holes for fastening and an additional slab was mounted in the front side of the eaves tile. At present, the type could be dated broadly to the middle and the second half of the 6th century BC.

Type 2. Corinthian pan tile, consisting of tile backer, raised side borders, with or without rib at the upper end, and beveled lower end (fig. 1.4, 2.1). The latter was shaped by means of an undercut, 0,5–0,7 cm deep and 6–6,5 cm wide, and by beveling the corners of the lower base. All surfaces are well treated. Numerous fragments are documented in the area of the Archaic and early Classical temples. One tile of this type from a sunken structure lined with roof tiles has a completely preserved length of 67 cm. The type has exact parallels in the pan tiles of the Archaic Panionion (about 560 BC). The profile of the side borders is identical, as well as the upper rib and especially the undercut of the pan to shape the beveled lower end.[3] Similar are the pan tiles from Station Dynameis/Ostbau in Didyma (530/525 BC), however with less distinct undercut.[4] The reconstructed length of the tiles from the Archaic Panionion is 57,3 cm – and 54–55 cm from Station Dynameis/Ostbau. The width is respectively 61,5 and 47–48 cm. The roof-tile from Saint Kirik is of the greatest length, corresponding to that of Type 1, which fact allows to suggest that it had also a similar width, i.e. 60–61 cm. In the Archaic Panionion, the pan tiles are covered with Corinthian type cover tiles, and at Station Dynameis/Ostbau the cover tiles are of eastern Greek (mixed) type, corresponding to **Type 2 cover tiles** from Saint

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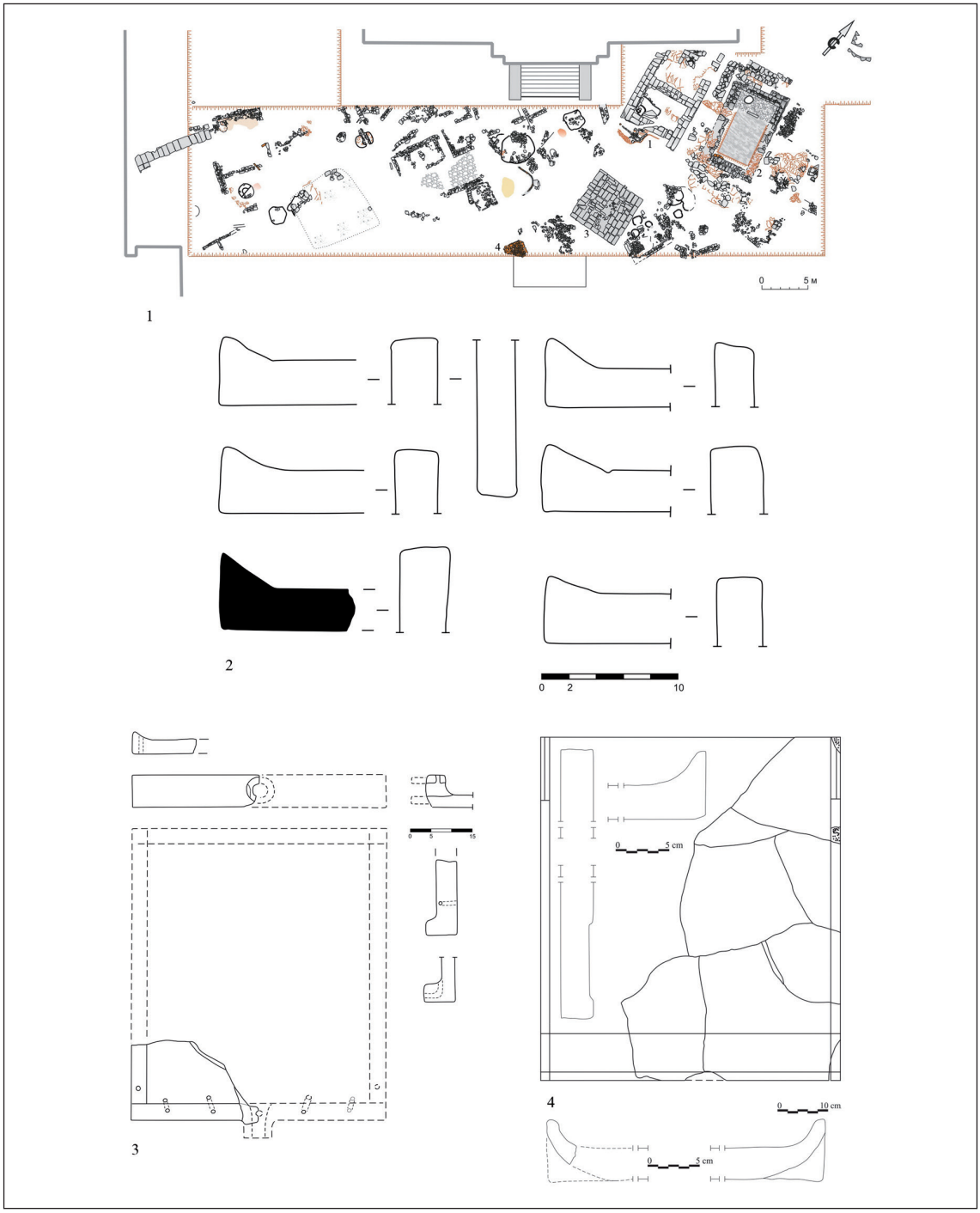


Fig. 1: 1.1. Plan of the excavated Archaic and Early Classical structures on the island of St. Kirik: 1: Archaic temple; 2. Early Classical temple; 3. Archaic altar; 4. Sunken structure lined with roof-tiles. – 1.2: Pan tiles, Type 1. – Fig. 1.3: Eaves tile with water spout. – 1.4: Pan tile, Type 2.

Kirik. At both sites, the pan tiles are combined with eaves tiles with guilloche, and the antefixes are decorated with lion heads at the former and with Gorgons at the latter. On the island of Saint Kirik, eaves tiles' fragments with guilloche and antefixes with gorgon and guilloche were discovered in the area of the two temples (fig. 2.2). Based on the stylistic analysis of the antefixes with gorgons, the pan tiles are dated to the last quarter of the 6th century BC (see below).[5]

Type 3. The presence of numerous Corinthian type eaves tiles consisting of tile backer, two raised side borders beveled at the lower end for mounting an antefix, rectangular fields on the upper surface of the tile backer along almost the entire length of the raised side borders, rib in the upper end and beveled lower end (fig. 2.3), indicate the existence of corresponding Corinthian type pan tiles with two raised side borders with cut out lower ends, beveled flange and rib in the upper end. At this stage of the study of the roof tiles from Saint Kirik, it is difficult to distinguish the fragments of such pan tiles due to their close resemblance to the Corinthian type pan tiles from the late Classical and early Hellenistic period that could be related to reconstructions of the roof of the early Classical temple. The evidence of the eaves tile should be revealing enough of the characteristics of the pan tiles.

The two rectangular raised fields on the upper base begin from the line of the cutting of the raised side borders and end at 8,5 cm from the upper end of the tile. Together with the front taenia, these features clearly define the tiles as eaves tiles. The profile of the side borders is almost rectangular. All surfaces are well treated. Such roof tiles were found in the area of the early Classical temple. Similar eaves tiles, with cut out raised borders at the lower end of the tile and a raised field along almost the entire length of the borders, are known from Larisa on Hermos[6] and the Samian Heraion.[7] In both cases, the eaves tile is combined with antefixes with Corinthian type cover tile, but the construction allows also using Laconian cover tile. At present, it is impossible to positively identify the presence of Archaic Corinthian type cover tiles on the island of Saint Kirik. The discovered fragments most probably belong to late Classical/early Hellenistic tiles. Unequivocal evidence of the use of Corinthian cover tiles is provided only by the antefixes with gorgon and guilloche. Therefore, one cannot exclude the possibility the above-discussed Corinthian pan and eaves tiles to have been combined with Laconian cover tiles and antefixes. The presence of similar eaves tiles in Larisa and the Samian Heraion, dated broadly to the middle and the second half of the 6th century BC, suggests that they should belong to the late Archaic and early Classical phase of monumental architecture in the temenos. They may have been part of the roof of the early Classical temple.

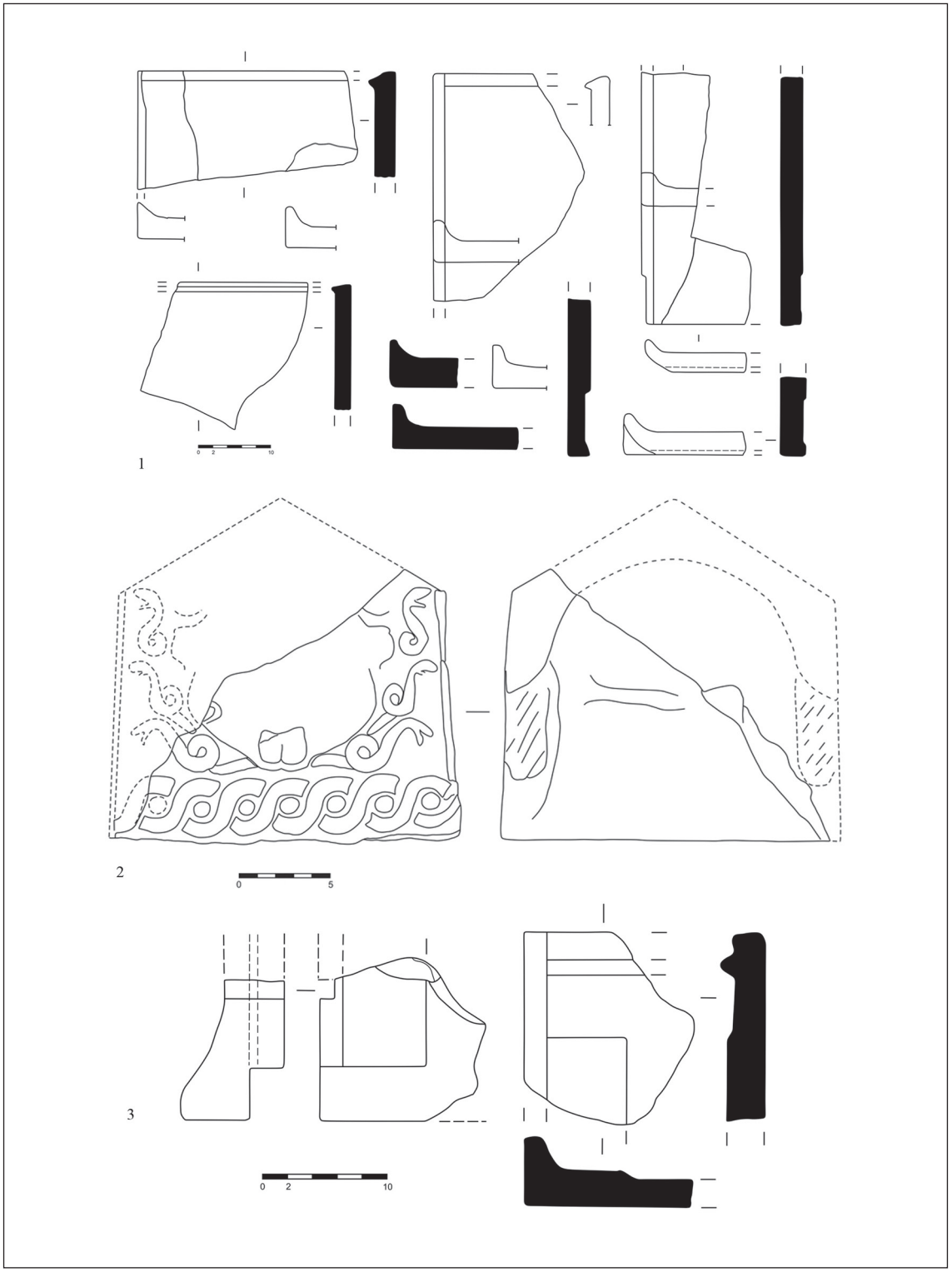


Fig. 2: 2.1: Pan tiles, Type 2 – 2.2: Antefix with gorgon. – 2.3: Eaves tiles, Type 3.

Cover Tiles and Antefixes

Type 1. Laconian type cover tile, with short board at the front end for clutching at the one in front of it (fig. 3.1). Probably, the back end was not given a specific shape, but the diameter was slightly smaller to fit in the next one. The inner and outer surfaces are very well treated. The type is attested with few fragments and no complete specimens, but most probably, the length was equal to that of the pan tile – 66 cm. External width 18 cm, internal 16 cm. Height 12 cm. They have been discovered in the area of the two temples. The type is broadly similar to Type D. I–II from Istros.[8] Most probably, this type of cover tiles is related to the **pan tiles of Type 1**, dated to the middle and the second half of the 6th century BC. The cover tile of the palmette antefix with seven-leaf palmette has an identical cross-section and is of the same date[9] (fig. 4).

Type 2. The type consists of two vertical lateral sides and an arched upper side (fig. 3.2). At the back of the cover tile, the thickness of the upper part diminishes in order to shape a groove for mounting the next tile. The construction is a combination between Corinthian and Laconian type of cover tile, for which reason it is defined as mixed or East Greek type.[10] Height 8,5 cm. External width 14,4 cm. This type of cover tile is combined with **pan tiles of Type 2** from Saint Kirik, as well as with the eaves tiles with guilloche and the antefixes with gorgon and guilloche. The length of the cover tile could be reconstructed based on the length of the pan tiles of Type 2–67 cm. The length of the intact examples of cover tiles from Station Dynameis/Ostbau from Dydima is equal to that of the pan tiles, 54–55 cm[11]. The largest number of fragments of this type was found in the

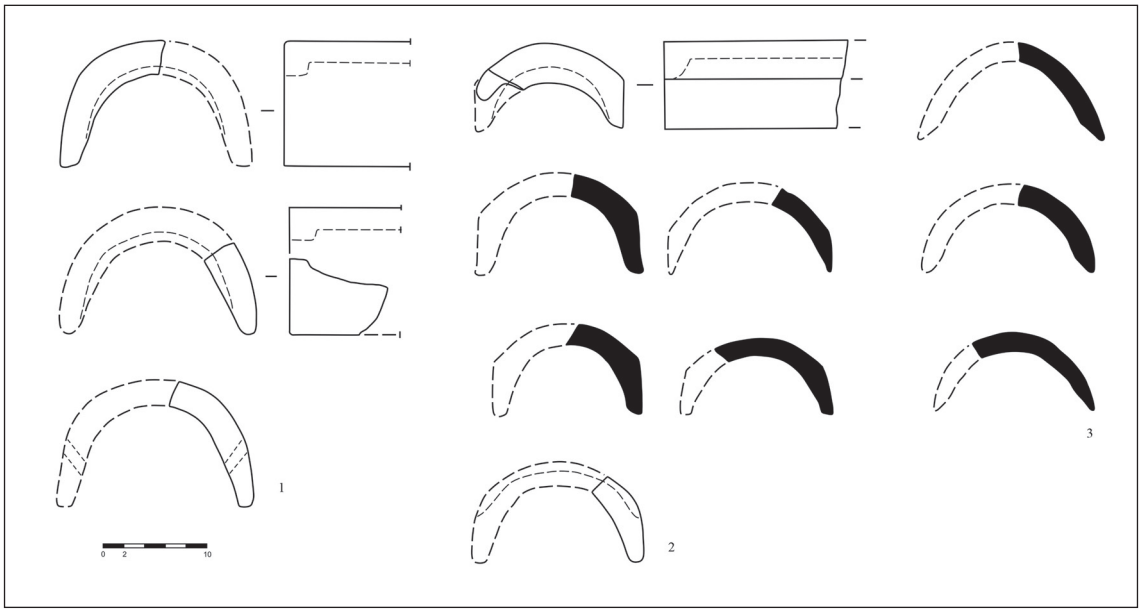


Fig. 3: 3.1: Cover tiles, Type 1. – 3.2: Cover tiles, Type 2. – 3.3: Cover tiles, Type 3.



Fig. 4: Palmette antefix.

area of the two temples. The type has parallels in Didyma, Miletos, and Istros.[12] Based on the stylistic analysis of the antefixes with gorgon, the parallels, and the stratigraphic evidence,[13] this roof should be dated to the last quarter of the 6th century BC and belongs to the Archaic temple. Another argument for relating this roof to the temple is the presence of a geison block that was discovered in the temple and is made of the same material (Muschelkalk) as the temple's foundations. Such blocks were normally used in monumental buildings with pan and cover tiles of the discussed types, along with eaves tiles with guilloche and antefixes with guilloche (the Archaic Panionion, Station Dynameis/Ostbau, Kalabaktepe).[14]

Type 3. Laconian type cover tile, attested with numerous fragments from the area of the two temples, without intact specimens (fig. 3.3). There is no evidence of how the front and back end were shaped. It differs from **Type 1** mainly in the shape of the lateral edges. While the edge of Type 1 is massive and almost flat, here it is beveled on the inside. The inner and outer surfaces are well smoothed. External diameter 18 cm, internal 17 cm, height 9,5 cm. The lack of sufficient data about its construction impedes identifying good parallels. There is no positive evidence of the respective type of pan tiles. The general chronology of the type could be set in the second half of the 6th and the first quarter of the 5th century BC.

Conclusion

The available evidence allow for an almost complete reconstruction of the elements of roofs that have exact parallels in Miletos and Didyma in term of types and decoration – a testimony to the active exchange in the period and the transportation of bulky goods between metropolis and colony. The presence of various types of pan and cover tiles and of architectural terracottas indicate the use of various standards, as well as different phases within the Archaic and early Classical period. Particularly valuable is the new evidence about the frieze with warriors from the temenos of Apollonia Pontica, the recent analysis of which indicated the presence of another building/roof in the traditions of western Asia Minor, dated to about 500 BC.[15] The new evidence about Archaic roof tiles and architectural terracotta from Apollonia Pontica add considerably to our knowledge about their use and distribution in the Greek colonies on the western coast of the Black Sea.

Notes

[1] Panayotova et al. 2014; Panayotova et al. 2021. The present study discusses the preliminary results of the project Archaic roof tiles and architectural terracottas from Apollonia Pontica, funded by the Scientific

Research Fund of Sofia University St. Kliment Ohridski (Contract 80-10-116 from April 24, 2018). Authors of the figures: Fig. 1.1 by Atanas Kamenarov; 1.2–4 by Daniela Stoyanova, Mila Chacheva, Margarit Damyanov, and Petar Minkov.

[2] Zimmermann 1990, 226, Fig. 2, Pl. 28b; Zimmermann 1992, Abb. 2–3.

[3] Busching 2013, 36 Taf. 28. 32–35. 37.

[4] Schneider 1996, 57–70 Taf. 34, Abb. 35–47.

[5] Panayotova et al. 2014, fig. 2.4–5; Panayotova et al. 2021, 607.

[6] Åkerström 1966, Abb. 12.

[7] Ohnesorg 2009, Abb. 16.

[8] Zimmermann 1990, 227 Fig. 3, Pl. 29 a (b–c); Zimmermann 1992, Abb. 4.

[9] Stoyanova et al. 2019, 167, fig. 7, 9.

[10] Zimmermann 2007, 635 Taf. 82.1–2.

[11] Schneider 1996, 70–91.

[12] Schneider 1996, 70–91 Abb. 48–66; Zimmermann 2007, Taf. 82.1–2.

[13] See Panayotova et al. 2021, 607–610.

[14] Busching 2013, 11–27, Taf. 4–5, 8, 9.1, 18.

[15] Panayotova et al. 2021.

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See endnote 1, about the authors of the figures.

References

Åkerström 1966

Å. Åkerström, Die architektonischen Terrakotten Kleinasiens (Lund 1966).

Busching 2013

A. Busching, Das Dach des archaischen Panionion: Dachstuhl und Dachhaut, in: H. Lohmann – G. Kalaitzoglou – G. Lüdorf (eds.), Das Dach des archaischen Panionion, Forschungen in der Mykale III, 2, (Bonn 2013) 1–121.

Ohnesorg 2009

A. Ohnesorg, Die Dachterrakotten aus dem Heraion von Samos, AM 2009, 124, 19–167.

Panayotova et al. 2014

K. Panayotova – M. Damyanov – D. Stoyanova – T. Bogdanova, Apollonia Pontica: The Archaic Temenos and Settlement on the Island of St. Kirik, in: J. M. Alvarez – T. Nogales – I. Roda (eds.), Centre and Periphery in the Ancient World. Proceedings of the XVIIIth International Congress of Classical Archaeology, Vol. I. (Merida 2014) 595–598.

Panayotova et al. 2021

K. Panayotova – D. Stoyanova – M. Damyanov, Late Archaic Relief Plaques with Warriors from Apollonia Pontica, in: G. Tsetskladze - A. Avram - J. F. Hargrave, (eds.), The Greeks and Romans in the Black Sea and the Importance of the Pontic Region for the Graeco-Roman World (7th century BC–5th century AD): 20 Years On (1997–2017). Proceedings of the Sixth International Congress on Black Sea Antiquities, Constanţa – 18–22 September 2017. Dedicated to Prof. Sir John Boardman to celebrate his exceptional achievements and his 90th birthday (Oxford 2021) 598–611.

Schneider 1996

P. Schneider, Der Baubefund, in: K. Tuchelt (ed.), Ein Kultbezirk an der Heiligen Straße von Milet nach Didyma. Didyma III.1 (Mainz am Rhein 1996) 1–115.

Stoyanova et al. 2019

D. Stoyanova – M. Damyanov. The Palmette Antefixes in the Black Sea Area: New Evidence from Apollonia Pontica, in: H. Kaba – G. Kan Şahin – B. M. Akarsu – O. Bozoğlan (eds.) International Symposium on Sinope and Black Sea Archaelogy "Ancient Sinope and the Black Sea", Proceedings Book, 13–15 October 2017, Sinop, Türkiye (Sinop 2019) 195–206.

Zimmermann 1990

K. Zimmermann, Archaische Dachterrakotten aus Histria, in: First International Conference on Archaic Greek Architectural Terracottas, Hesperia 59, 1990, 223–233.

Zimmermann 1992

K. Zimmermann, Zu den Dachterrakotten griechischer Zeit aus Histria, in: P. Alexandrescu – W. Schuller (eds.), Xenia Histria. Eine Griechenstadt an der rumänischen Schwarzmeerküste (Konstanz 1992) 155–177.

Zimmermann 2007

K. Zimmermann, Frühe Dachterrakotten aus Milet und dem Pontosgebiet, in: J. Cobet – V. Von Graeve – W.-D. Niemeier – K. Zimmermann (eds.), Frühes Ionien. Eine Bestandsaufnahme, Panionion-Symposion, Güzelçamli, 26. September–1. Oktober 1999 (Mainz am Rhein 2007) 631–636.

Kantharoi of Vysochino Type – Chronology, Manufacture and Distribution of a Specific Type of 1st Century AD Northern Pontic Silverware*

Mikhail Treister

Abstract

The *kantharoi* with biconical body, with the upper part decorated with friezes of *cyma* and *cyma reversa* and the lower strigil-shaped part, with wish-bone handles ending with balls in their upper part and with leaves as lower attachments are attributed to the type Vysochino after the find of a set of 4 such vessels in the cache of the second half of the 1st century AD Sarmatian burial in a barrow-mound 28 of the group Vysochino-VII in the Lower Don region. These *kantharoi* have a rather compact area of distribution, with the concentration in eastern Crimea and the Lower Don area, though their finds originate also from the Mountain Crimea and the Kuban area. Recent finds of such *kantharoi* in the destruction layer of the fortified site of Artezian in the Bosporan Kingdom with a Greek dotted donative inscription on the bottom of one of them allow to settle the terminus *ante quem* for their manufacture – 46/47 AD and to suggest the possibility of their production in the workshop of the Bosporan Kingdom. Therefore, I cannot accept the viewpoint of S. Künzl that the goblets of Vysochino type were manufactured in one of the workshops in the provinces Bithynia, Cappadocia or Pontus. It is noteworthy that the *kanhraroi* discussed show more compact area of distribution than the related group of silver *karchesia* with a similar decoration of the body and execution of the handles, the finds of which originate from western Ukraine, in Olbia, southwestern Crimea and the Kuban basin.

These *kantharoi* are attributed to the type Vysochino[1] after the find of a set of 4 such vessels in the cache of the Sarmatian burial in a burial mound no. 28 of the group Vysochino-VII in the Lower Don region (fig. 2).[2] The *kantharoi* of the Vysochino type have biconical body on a low foot-ring. The upper part of the body is decorated with applied gilt strips with embossed friezes of *cyma* and *cyma reversa* and the lower part is strigil-shaped. The cast wish-bone handles ending with balls in their upper part and with leaves as lower attachments. In the center, the handle is decorated with a ball with two relief rims at the bottom and one – at the top.

Besides the finds from the Lower Don basin, one of which originates from burial mound no. 2 of Verblyuzhka necropolis near Tuzluki (fig. 1, 2),[3] there is known one find in the Kuban basin (Burial-mound no. 15 near Tiflisskaya[4]), whereas three handles of the type typical for the *kantharoi* of this series were found in the excavations of the sanctuary at Gurzuf Pass in the Crimean Mountains[5] (fig. 1(1)). Noteworthy are also the finds from the South-Eastern part of the Bosporan Kingdom. A fragmented cup origi-

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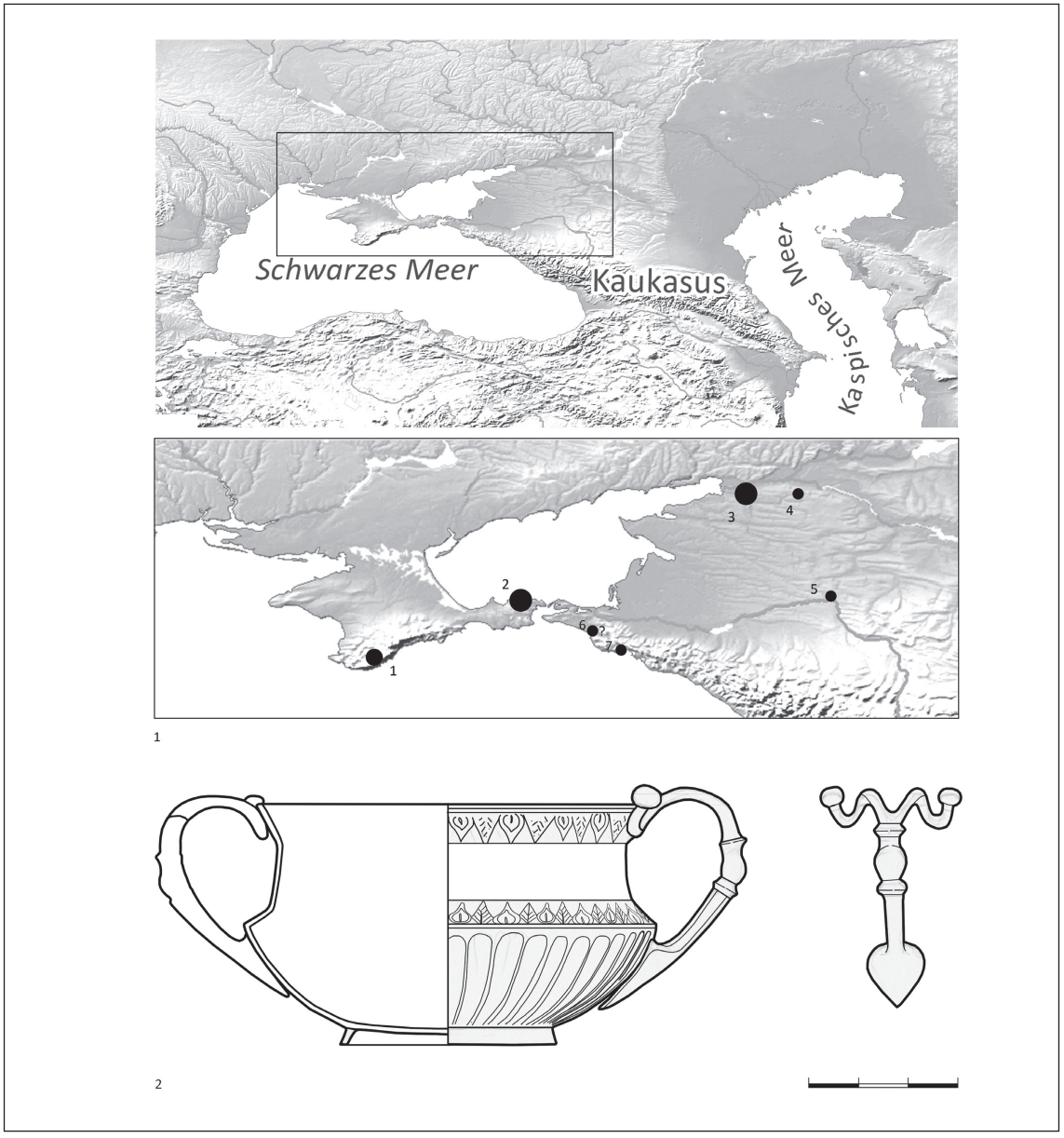


Fig. 1: 1(1): distribution map of the *kantharoi* of Vysochino type: 1 – Gurzuf Pass, 2 – Artezian, 3 – Vysochino-VII; 4 – Tuzluki (Verblyuzhka), 5 – Tiflisskaya, 6 – Gorgippia (?), 7 – Mykhako. 2 – cantharus from Tuzluki (Verblyuzhka). Burial-mound no. 2/1979. Burial no. 1. Rostov-on-Don, Regional local lore museum, inv.-no. 21048.



Fig. 2: Vysochino-VII. Burial-mound no. 28/1982. Cache no. 2. 1 – silver *kantharoi;* 2–7 – silver *kantharos* no. 19532/174a. General views and details. Azov, Historical-archaeological and paleontological museum-reserve, inv.-no. 19532/174a–d.

nates from the warrior's burial no. 12/1978 of the necropolis of Myskhako (fig. 3). Most probably to the same type belonged also the vessel from sarcophagus I of the tomb II/1975 of Gorgippia necropolis, which is known only after the description and the schematic drawing.[6]

A. Popa originally attributed to the *kantharoi* of this series also the handles of two fragmented silver vessels from Kolokolin in western Ukraine (Lviv region),[7] although in the later publication he did not excluded that it could rather have been a *karchesion,* like the finds from the burial in Olbia looted in 1891[8] and from the tomb no. 735/1999 of the Ust'-Alma necropolis,[9] and his latter suggestion rather corresponds to the truth, to my mind, given the dimensions, proportions and details of decoration of the handles. In the burial mound "Ostryi" in the Kuban basin[10] a pair of silver handles of the type, decorating the *karchesia,* was also found. The cup from from Ust'-Alma necropolis is plain, the vessels from Olbia, making a pair, varying both in size and details of ornamentation, are decorated with friezes of *cyma reversa* and beading, resembling the ornamentation of the *kantharoi* of the type Vysochino.

Fragments of at least two such *kantharoi,* including separate bodies and handles (figs. 4, 5)[11] were found in 2013 in the destruction layer of the fortified site of Artezian in eastern Crimea, which was destroyed during the Roman-Bosporan War of 45–49 AD, the numismatic material giving the exact date of fire – 46/47 AD.[12] On the bottom of one of them a Greek dotted inscription in two-line Greek around the circle was cleaned in

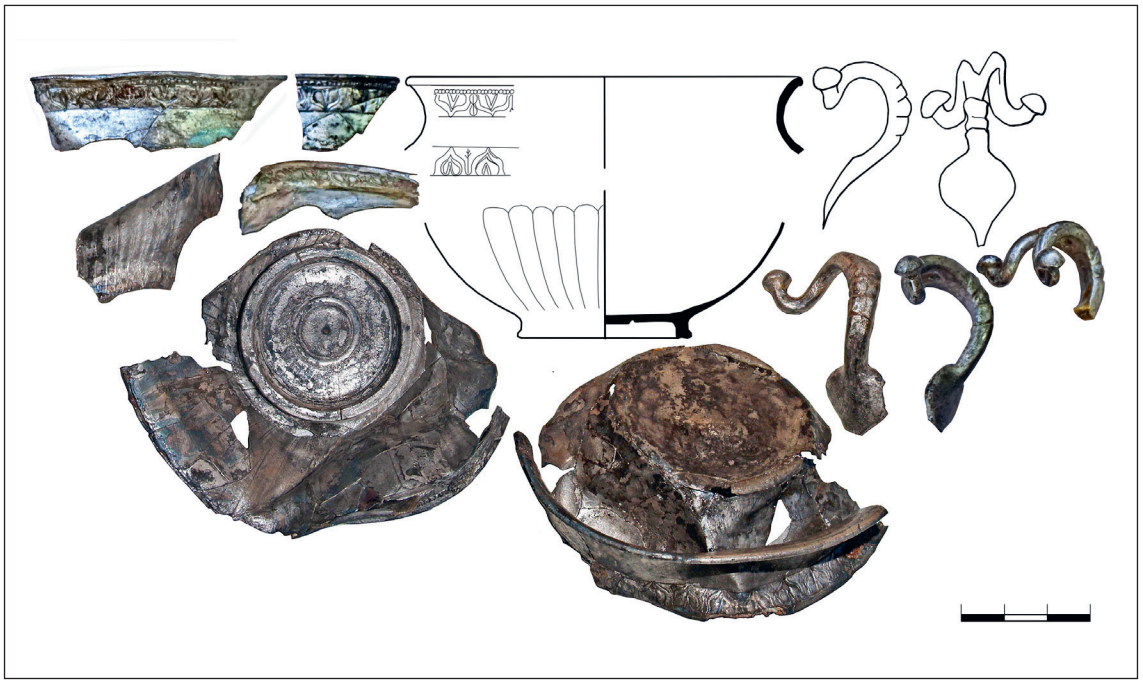


Fig. 3: Myskhako. Burial no. 12/1978. Fragmented silver *kantharos.* Novorossijsk, State Historical museum-reserve, inv.-no. 4317/108.



Fig. 4: Silver *kantharos* with the inscription on the bottom from the room no. 4 of the early citadel of Artezian fortified site. Kerch, Eastern Crimean historical-cultural museum-reserve, inv.-no. KP-185606, KM-8567.



Fig. 5: Handles of silver *kantharoi* from the room no. 4 of the early citadel of Artezian fortified site. Kerch, Eastern Crimean historical-cultural museum-reserve, inv.-nos. KP-185529, KM-8570; NVF-13358–13360.

the process of restoration (fig. 4(1–2)).[13] A. V. Belousov suggested the following reconstruction and reading of the text

Δ[ῖ]ος Καλ̣[ο]καίρου τοῖς ἐνδ(ε)ία(ι)
ἐν τοῖς Ἀπολλωνίου

As for the personal names in the text, the name Δῖος (LGPN iv 106) occurs in the Bosporus quite often, beginning from the 5th century BC (CIRB 911, 1056), in the 1st century BC (CIRB 394, 564, SEG 27: 436), as well as in the first centuries AD (CIRB 1259, 1262, 1277). The name Καλόκαιρος is not attested in the Northern Black Sea coast, but it occurs, for example, in Macedonia and Thrace (LGPN iv 185), but the name Ἀπολλώνιος is popular throughout the Greek oikumene, including northern Pontus (LGPN iv 37–39). The text of the inscription, from which it follows that a certain Dios, the son of Kalokairos, sacrifices this silver *kantharos* to people in need, from the house of an Apollonius, evidently testifies to the donative nature of the inscription.

The exact context of the finds of handles in the sanctuary at the Gurzuf Pass was published only recently: although the majority of finds belong to the period of the sanctuary's heyday, from the late 1st century BC to the mid-1st century AD, these handles are attributed by the publisher to the period of the second half of the 1st – mid-2nd century AD.[14] The cache in the burial mound no. 28 of the group Vysochino-VII is dated to the third quarter of the 1 century AD.[15] The finds from Artezian site testify that the vessels of the type discussed appeared before 46/47 AD. Important for the dating of the vessels is the find from the necropolis of Myskhako in a warrior's burial together with a bronze coin of the Bosporan queen Gepaypyris, dated to 37–38 AD.

The absence of the finds of *kantharoi* of this type discussed in other regions gives grounds for considering them as products of one of the northern Pontic centers,[16] possibly located in the Bosporan Kingdom, which is indirectly confirmed by a series of finds of such vessels at the Artesian fortified site.[17] Therefore, I cannot accept the viewpoint of S. Künzl that the goblets of Vysochino type were manufactured in one of the workshops in the provinces Bithynia, Cappadocia or Pontus.[18] It is noteworthy that the *kantharoi* discussed show more compact area of distribution – in eastern Crimea, in the South-Eastern part of the Asian Bosporus and in the Lower Don basin (fig. 1(1)), than the related group of silver *karchesia* with a similar decoration of the body and execution of the handles, the finds of which originate from western Ukraine, in Olbia, southwestern Crimea and the Kuban basin.

Notes

* This paper is prepared in frames of the project sponsored by the German Science Foundation (DFG) and Russian Foundation for Humanities (RGNF), entitled "Formen und Wege der kulturellen Interaktion der Nomaden des asiatischen Sarmatiens – Importobjekte in sarmatischen Fundkontexten des 2. Jh. v. Chr. – 3. Jh. n. Chr." (FL-334/15-1).

[1] Treister 2007, 17–18 Karte 2. On the maps of the distribution of such vessels, published by A. Popa (2004, 498 fig. 4; 2014, 94, 107 fig. 9), not marked are the handles of vessels from the Gurzuf Pass and, for understandable reasons, the vessels from Artesian. At the same time, it is erroneously indicated as a place of find a burial in Kosika, in which such a handle was never found (on the basis of an erroneous comparison (Dvornichenko et al. 1993, 151). In reality this object has nothing to do with the *kantharoi* of the Vysochino series. My 2007 publication, which considers such *kantharoi* and the related *karchesia* (Treister 2007, 18–19, Map 2), also remained unknown to A. Popa.

[2] Treister 2007, 17–18; Mordvintseva – Treister 2007, 22 nos. A45.1–4 (with bibliography) pl. 25; Leoben – Seipel 2009, 247 no. 100a–d.

[3] Treister 2007, 17–18; Mordvintseva – Treister 2007, 91 no. A280.1 (with bibliography).

[4] Treister 2007, 17–18; Mordvintseva – Treister 2007, 90 no. A276.1 (with bibliography); Marčenko – Limberis 2008, 349 no. 48.1 pl. 76, *1.*

[5] Treister 2007, 17–18; Mordvintseva – Treister 2007, 27 no. A66.1 (with bibliography); Novichenkova 2015, 90 fig. 176, 1–3; 92.

[6] Myskhako: Dmitriev et al. 2020, 42 fig. 37, 44 no. 12; Malyshev 2020, 154. – Gorgippia: Treister 2007, 17–18; Mordvintseva – Treister 2007, 23 no. A51.1 (with bibliography).

[7] Śmiszko 1935, 156 no. 8; 162 no. 8, pl. XLIII, 1–5; Popa 2004, 493 fig. 2, 1–5; 496–498; cf. Popa 2014, 92–95 figs. 2; 5.

[8] Treister 2007, 18; Mordvintseva – Treister 2007, 128 no. B28.1–2 (with bibliography) pl. 54.

[9] Treister 2007, 18; Mordvintseva – Treister 2007, 96 no. A301.1 (with bibliography) pl. 43.

[10] Treister 2007, 18; Mordvintseva – Treister 2007, 58 no. A166.1 (with bibliography) pl. 34.

[11] Belousov et al. 2017, 31–32 figs. 2–3.

[12] Abramzon et al. 2012, 207–278; Vinokurov 2014, 98–105; Belousov et al. 2017, 31–33 fig. 1(1).

[13] Belousov et al. 2017, 33–34 fig. 2. Most recently the inscription attracted attention of other scholars, suggesting either the correctness of the general interpretation of the inscription, although with some changes (Yailenko 2020, 216–217 no. 36 fig. 4), or an absolutely different reading and interpretation (Shelov-Kovedyaev 2021, 411–414 no. 12, figs. 1–2).

[14] Novichenkova 2015, 120–121 fig. 220, *5.*

[15] Mordvintseva – Treister 2007, vol. 2, 22 no. A45.

[16] Treister 2007, 18.

[17] Belousov et al. 2017, 31–38.

[18] Künzl 2000, 71.

Image Credits

Fig. 1(1): map, M. Treister (2017); 2 – drawing, N. E. Bespalaya (2015). – Fig. 2(2): photograph, V. I. Terebenin; 2–7 – photographs, M. Treister (2015). – Fig. 3: photographs and drawings, A. A. Malyshev – Fig. 4(1): photograph, Kerch, eastern Crimean historical-cultural museum-reserve (2014), 2 – drawing A. V. Belousov, 3–6 – photographs, N. I. Vinokurov (2013). – Fig. 5: Photographs, M. Treister (2014).

References

Abramzon et al. 2012

M. G. Abramzon – M. Treister – N. I. Vinokurov, Two Hoards of Coins and Jewelry Items from the Time of the Roman-Bosporan War (45–49 AD) from at Artezian Site, AncCivScytSib 18(2), 2012, 207–278.

Belousov et al. 2017

A. V. Belousov – N. I. Vinokurov – M. Yu. Treister, Серебряные канфары из слоя пожара 46/47 г. времени боспоро-римской войны на городище Артезиан в Крымском Приазовье, in: D. A. Kostromicvhev (ed.), Античные реликвии Херсонеса: открытия, находки, теории. Материалы международной научной конференции, Севастополь, 10–12 октября 2017 года (Sevastopol 2017) 31–38.

Dmitriev et al. 2020

A. V. Dmitriev – A. A. Malyshev – M. B. Mednikova – N. A. Onayko – E. K. Stolyarova, Описание археологических комплексов. Каталог, in: A. A. Malyshev (ed.), Мысхакский некрополь. Раскопки 1978–1979 гг. (Moscow 2020) 10–122.

Dvornichenko et al. 1993

V. V. Dvornichenko – G. A. Fedorov-Davydov, Сарматское погребение скептуха I в. н.э. у с. Косика Астраханской области, VDI 3, 1993, 141–179.

Künzl 2000

S. Künzl, Quellen zur Typologie des römischen Tafelsilbers, Sborník Národního muzea v Praze, řada A – Historie 54.1–4, 2000, 71–86.

Leoben – Seipel 2009

C. Leoben – W. Seipel (eds.), Das Gold der Steppe. Fürstenschätze jenseits des Alexanderreichs (Vienna 2009).

Malyshev 2020

A. A. Malyshev, Погребальный инвентарь Мысхакского некрополя, in: A. A. Malyshev (ed.), Мысхакский некрополь. Раскопки 1978–1979 гг. (Moscow 2020) 143–172.

Marčenko – Limberis 2008

I. I. Marčenko – N. J. Limberis, Römische Importe in sarmatischen und maiotischen Denkmälern des Kubangebietes, in: A. Simonenko – I. I. Marčenko – N. J. Limberis (eds.), Römische Importe in sarmatischen und maiotischen Gräbern, Archäologie in Eurasien 25 (Mainz 2008) 267–400.

Mordvintseva – Treister 2007
V. I. Mordvintseva – M. Yu. Treister, Toreutik und Schmuck im nördlichen Schwarzmeergebiet, 2. Jh. v. Chr. – 2. Jh. n. Chr. Bd. 2 (Simferopol – Bonn 2007).

Novichenkova 2015
N. G. Novichenkova, Горный Крым II в. до н.э. – II в. н.э. По материалам раскопок святилища Гурзуфское Седло (Simferopol 2015).

Popa 2004
A. Popa, Einige Bemerkungen zum frühkaiserzeitlichen Prunkgrab von Kolokolin in der heutigen Ukraine, Germania 82(2), 2004, 491–508.

Popa 2014
A. Popa, Despre vasele de argint din hinterlandul provincilor romane Dacia şi Moesia Inferior, Acta Musei Tutovensis IX–X, 2014, 92–107.

Shelov-Kovedyaev 2021
F. V. Shelov-Kovedyaev, De titulis Bosporanis et viciniis IV. Древности Боспора 26, 411–431.

Śmiszko 1935
M. Śmiszko, Stanowisko wczesnorzymskie w Kołokolinie, pow. Rohatyński, Wiadomości, Archeologiczne 13, 1935, 155–164.

Treister 2007
M. Yu. Treister, Toreutik und Schmuck des nördlichen Schwarzmeergebietes vom 2. Jh. v. Chr. bis zum 2. Jh. n. Chr. (hellenistische Tradition), in: V. I. Mordvintseva – M. Yu. Treister (eds.), Toreutik und Schmuck im nördlichen Schwarzmeergebiet. 2. Jh. v. Chr. – 2. Jh. n. Chr. Bd. 1 (Simferopol 2007) 147–197.

Vinokurov 2014
N. I. Vinokurov, Раскопки помещения 10 (2009, 2011, 2013 гг.) ранней цитадели городища Артезиан, Таврические студии. Исторические науки 6 (Simferopol 2014) 98–105.

Yailenko 2020
V. P. Yailenko, Критический обзор отечественной эпиграфической хроники 2018 г. Проблемы истории, филологии, культуры (2), 207–224.

Abbreviations

CIRB	Corpus inscriptionum Regni Bosporani/Корпус боспорских надписей (Moscow 1965)
LGPN IV	P. M. Fraser – E. Matthews, A Lexicon of Greek Personal Names. IV. Macedonia, Thrace, Northern Regions of the Black Sea (Oxford 2005)

The Burnaz Harbor, Tax Exempt, and the Economic Boom in the Eastern Mediterranean

Füsun Tülek

Archaeological surveys document an economic boom and an increase in settlements in East Plain Cilicia as of the fourth century AD. Ruins of numerous ex novo settlements, small-sized villages, and farmsteads with olive groves decorate the valleys and hilltops of the East Plain Cilicia, which yield olive and wine presses. Plain Cilicia was already known for its peculiar wine. The number of olive presses dated to the Late Antique Period by the archaeological surveys exceeds the wine installations.[1] Olive oil production stimulated the economic boom in East Plain Cilicia, and olive oil was the main commodity dispatched from harbor towns to the Mediterranean market. Landlords and the church in rural areas and governors in the plain controlled the production of olive oil, and harbor towns ran the trade. Supply and demand worked well, and the economic boom enabled even the small harbors such as Burnaz to participate in interregional maritime trade. In the time of such an economic boom, ex novo foundation of the Deli Halil settlement, situated high on a volcano and overlooking the Sea at the northeastern tip of the Gulf of Iskenderun to control the maritime trade at the ancient harbor of Burnaz, appears as a deliberate enterprise of the closest metropolis Epiphaneia. The present study aims to examine the foundation of the ancient settlement of Deli Halil concerning the late antique economic boom of the region, the tax-exempt granted due to the natural catastrophes, and the rise of maritime trade at small harbors, such as Burnaz.

The River Pyramus-Ceyhan and its tributaries irrigate East Plain Cilicia meandering through the flat land as a massive body of water; the river flows to the Mediterranean Sea by the ancient town of Mopsuhestia-Misis. Inhabitants of the plain enjoy a mild Mediterranean climate with a fertile land of deep alluvial deposits suitable for tilling the soil to cultivate grains and a green pasture suitable for husbandry. In the past vineyards, olive groves, and orchards decorated the first hills of the Amanus and Taurus mountains ranges. The river with its tributaries functioned as smooth venues for estuarine transport to dispatch commodities swiftly to the regional and interregional Mediterranean market via maritime trade. Karaçay stream, as one of the tributaries of the River Pyramus at the southeastern part of the plain running from the Amanus mountains to the west, has an early Holocene branch forking to the south flows through a basalt canyon in the north-south direction, through the Kısık Pass, as the shortest and the most convenient venue to proceed to the Mediterranean Sea by the Burnaz harbor (fig. 1).

Plain Cilicia is geologically an earthquake zone; particularly the western skirts of the Amanus Mountain Range, the coastal Issos Plain, and the northeastern part of the Cilicia Plain are on big fault lines where catastrophic earthquakes took place in the past.

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Fig. 1: View of the site of the Burnaz Roman harbor.

The region suffered several earthquakes on a magnitude scale, of which mostly epicenter was Antioch. Catastrophic earthquakes and tsunami devastated the region from the first half of the first century to the sixth century AD, one of which the epicenter was Anazarbos metropolis, the capital of Cilicia Secunda in 521 AD. The rural settlements of Plain Cilicia increased the production of olive oil as the main commodity between the two historical earthquakes at the time of emperors Theodosius I and Justinianus, fourth and sixth centuries.[2] The towns were quick to heal the wounds of their inhabitants receiving aid for relief after the earthquakes. As the demand kept on rising, eastern and northeastern corners of Plain Cilicia became one of the major olive oil suppliers of the Late Antique Eastern Mediterranean market. The economy boosted as of the middle of the fourth century AD.

After catastrophic natural disasters rulers used to organize and coordinate to rebuild the town with the help of local elites. It was the task of a town administrator to heal wounds and restore infrastructure. The piety of the local elites was also a great help to restore structures of the monastic complexes. Emperors also took initiatives to relieve the pain of people. Euergetism, which symbolized the power and presence of the empire, was a Roman imperial response to the earthquakes manifested in several forms. After the 115 AD earthquake, Antioch received financial support as leverage to rebuild the infrastructure and houses, evidently archaeological excavations at Antioch well-documented earthquake layers providing a terminus post quem and ante quem for the settlement history.[3] The earliest surviving floor mosaics and structures of Antioch are dated between the years after the first and before the last catastrophic earthquakes; that is to say, the uncovered structures have been dated after the second quarter of the second century AD and before the second half of the sixth century AD earthquakes. The emperors not only financed disaster reliefs and oversaw restoring and rebuilding programs, if in need also remitted taxes of earthquake-hit regions for a certain period. The tax exemption was another act of euergetism of the empire witnessed in the late fourth century as a policy of the Theodosian era, recorded in Codex Theodosius. Provinces of

the Orient were granted tax remission for forty years, which covered general tax accounts to the decurions, the private and patrimonial taxpayers, and the taxpayers of the divine imperial household, for every right subject to State service.[4] The remission of all taxes provides a reasonable explanation for one of the causes of the economic boom and increase in the number of settlements based on the agricultural economy, which had a surplus of the olive oil production dated to the late antique period in Cilicia Secunda.

The Deli Halil settlement measured ± 80 ha in size and 1-mile distant from the ancient city of Epiphaneia that is ten times larger in scale than the new building program. Foundation of a town on higher slopes of a volcano, which looks over the Burnaz harbor, (fig. 2), as a sizable and well-organized settlement with its olive oil presses and depots in exceeding numbers, seems an enterprise of the only metropolis of the Issos Plain, the city of Epiphaneia. Two earthquakes defined the beginning and end of the Deli Halil settlement as a short-lived town from the early fifth to the last quarter of the sixth century dated based on pottery and amphorae finds. Foundation of a town one-tenth size of its metropolis and situated 1-mile close looks a new district to the metropolis was built deliberately, for a specific purpose. Building a new district required the acquisition of new land and high-budget construction works. An ambitious project, as such, must have been taken on more solid grounds than disaster relief. The Imperial initiative could only achieve such budgeted enterprise, and an act of emphyteusis could only be a manifestation of imperial euergetism.

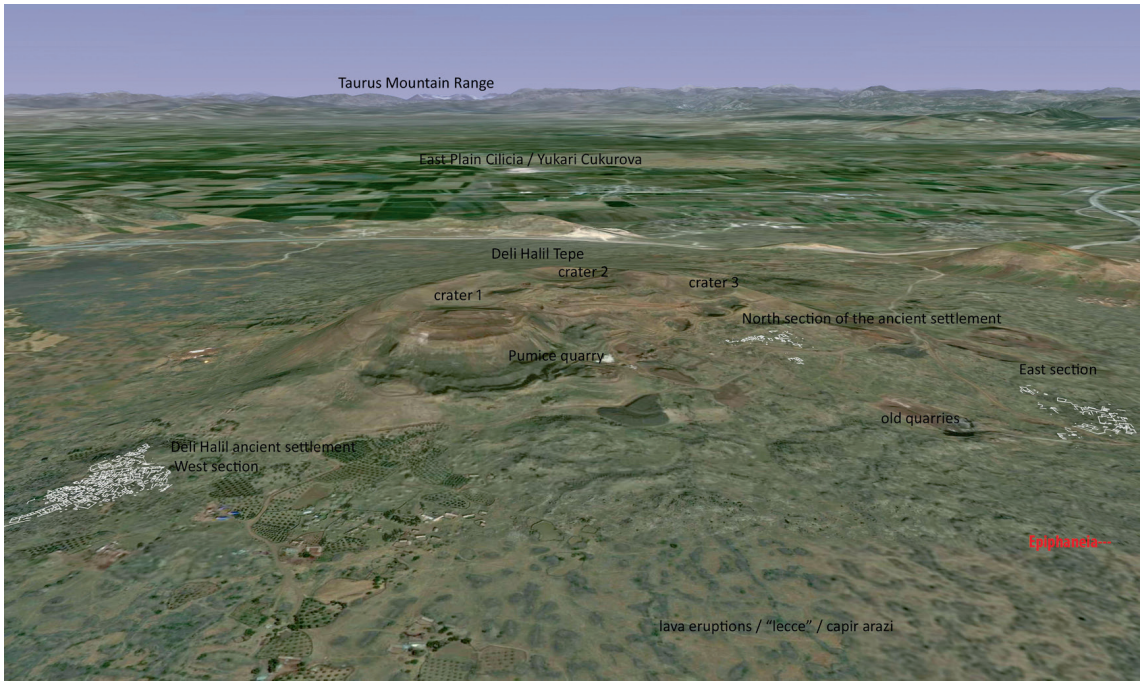


Fig. 2: Landscape of the Deli Halil ancient settlement on the Deli Halil volcano.

Besides tax-exemption the municipality needed practice of emphyteutic law to be applied to land of the temple of the Deli Halil settlement, which decorates a strategic hilltop having a panoramic view of both most of the quarters of the newly founded town and the entire Issos Plain, the Gulf of Iskenderun, and the Burnaz harbor. A perpetual emphyteusis lease must have been issued to the city of Epiphaneia to cultivate the arid land of the Deli Halil volcano by planting it with olives[5]. An emphyteusis lease was an act of Roman civil law that 'parcels of land of municipalities which are enclosed within the wall of the municipality, or which adjoin the space within and without the walls, or those parcels of real estate which belonged to temples, but which were sought on a petition by different persons…shall remain in the possession of the decurions, the members of the brotherhoods, and the guilds…'.[6]. The basalt land of Deli Halil volcano, owned by its temple, must have fallen out of use and become arid land close to the municipality of Epiphaneia. The strategic southern slope of the volcano overlooks the Gulf of Iskenderun and the harbors along the coast. It is the most convenient site to watch over the activities on the maritime route and the trade at the Burnaz harbor. Besides, basalt depots are the best storages to keep goods at a steady temperature until exported via interregional Mediterranean trade. The metropolis Epiphaneia must have needed a new district to produce olive oil and store the commodity in circular basalt depots as a warehouse from where the annual product could be dispatched to the Burnaz harbor to sell in the market via maritime trade (figs. 3, 4). Thus, the amelioration of the land of the Deli Halil settlement and assigning a new function to the site must be due to the emphyteutic lease, which facilitated the economic boom of the macrogeographic area.

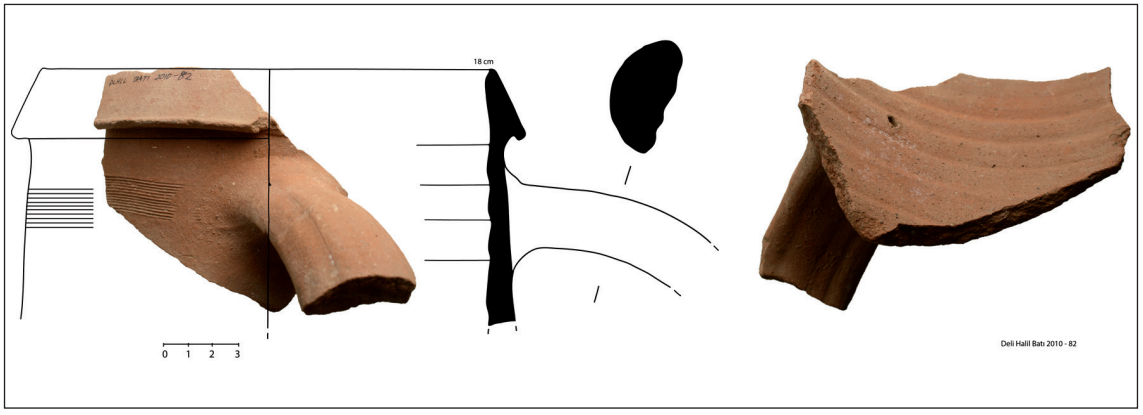


Fig. 3: North African Transport amphorae found at the west section of the Deli Halil Settlement (Keay type 62).

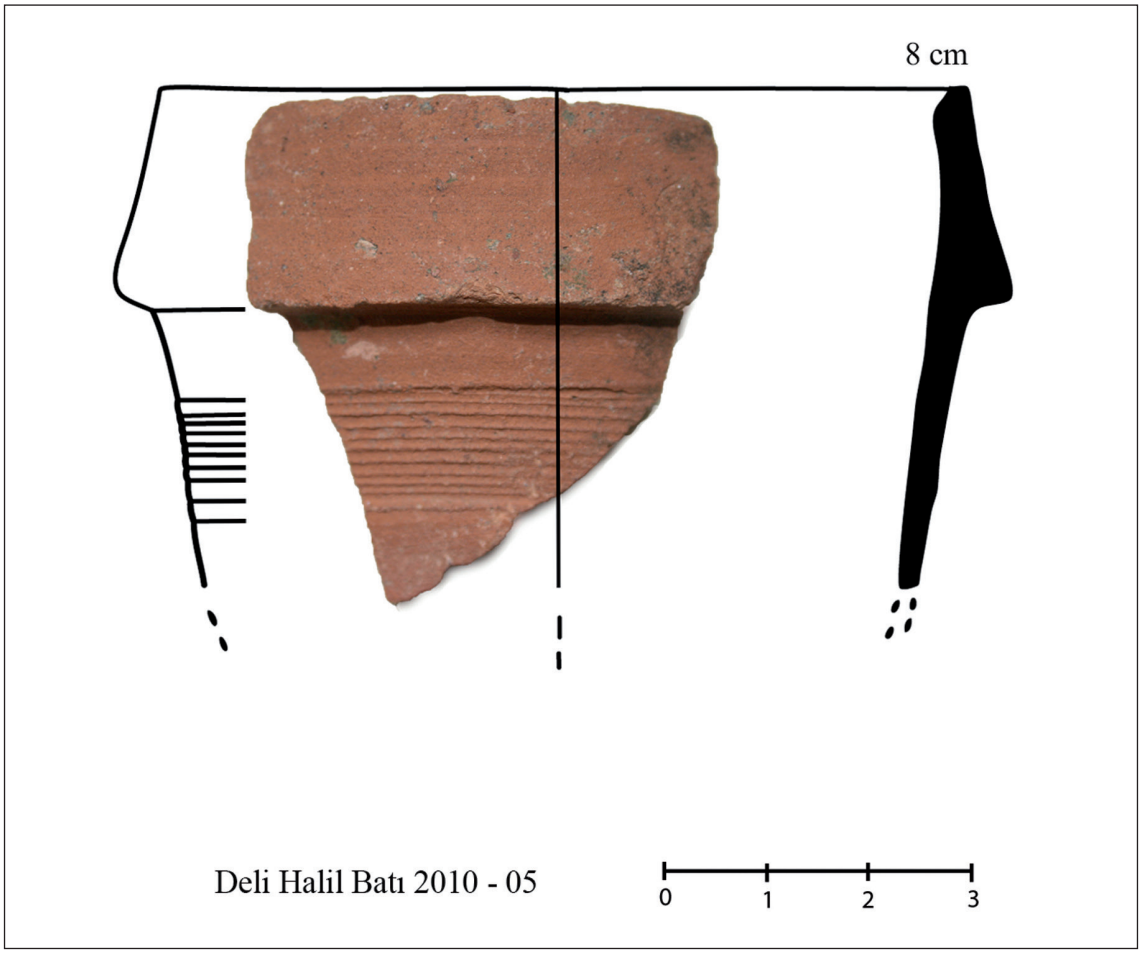


Fig. 4: North Africa spatheion found found at the west Section of the Deli Halil Settlement.

Notes

[1] Seton-Williams 1951; Çambel 1986; Hellenkemper 1986; Özgen – Gates 1993; Tobin 2004; Lehmann et al. 2006; Tülek 2009; Tülek 2014.
[2] Theophanes Conf. AM 6017; Mango – Scott 1997, 262.
[3] Dio Cassius 24. 25. 407.
[4] Codex Theodosius XI.28.09.
[5] Bury 2011, 57.
[6] Codex Theodosius X.3.5.

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Fig. 1, 2: Foto by F. Tülek. – Fig. 3, 4: Osmaniye Archaeology Survey team.

References

Dio Cassius
E. Cary (trans.), Roman History Vol. 8 Loeb Classical Library (1925).
Theodosius Codex
C. Pharr (trans.), The Theodosian Code and Novels and the Sirmondian Constitutions (New York 1952).
Bury 2001
J. B. Bury, History of the Later Roman Empire: From the Death of Theodosius I to the Death of Justinian Vol. 1. (New York 2001).
Çambel 1989
H. Çambel, Eine Villa Rustica in den südlichen Ausläufern des Antitaurus am Fuße des Domuztepe, in: N. Başgelen – M. Lugal (eds.), Festschrift für Jale İnan (İstanbul 1989).
Hellenkemper 1986,
H. Hellenkemper, Neue Forschungen in Kilikien, DenkschrWien 186 (Vienna 1986).
Lehmann et al. 2006
G. Lehmannn – A. E. Killebrew – M. H. Gates – B. Halpern, The Mopsos Project: The 2004 Season of Archaeological Survey in the Bay of İskenderun, Eastern Cilicia, AST 23(2), 2006, 79–88.
Mango – Scott 1997
C. Mango – R. Scott (trans.), The Chronicle of Theophanes Confessor. Byzantine and Near Eastern History (Oxford 1997).
Özgen – Gates 1993
İ. Özgen – M. H. Gates, Report on the Bilkent University Archaeological Survey in Cilicia and the Northern Hatay: August 1991, AST 10 1993, 387–393.

Seton-Williams 1954

M. V. Seton-Williams, Cilician Survey, AnSt 4, 1954, 121–174.

Tobin 2004

J. Tobin, Black Cilicia: A Study of the Plain of Issus during the Roman and Late Roman Periods (Oxford 2004).

Tülek 2009

F. Tülek, Osmaniye Arkeolojik Kültür Varlıkları Envanteri Çalışması (2007–2008), TÜBA-KED 7, 2009, 7–23.

Tülek 2014

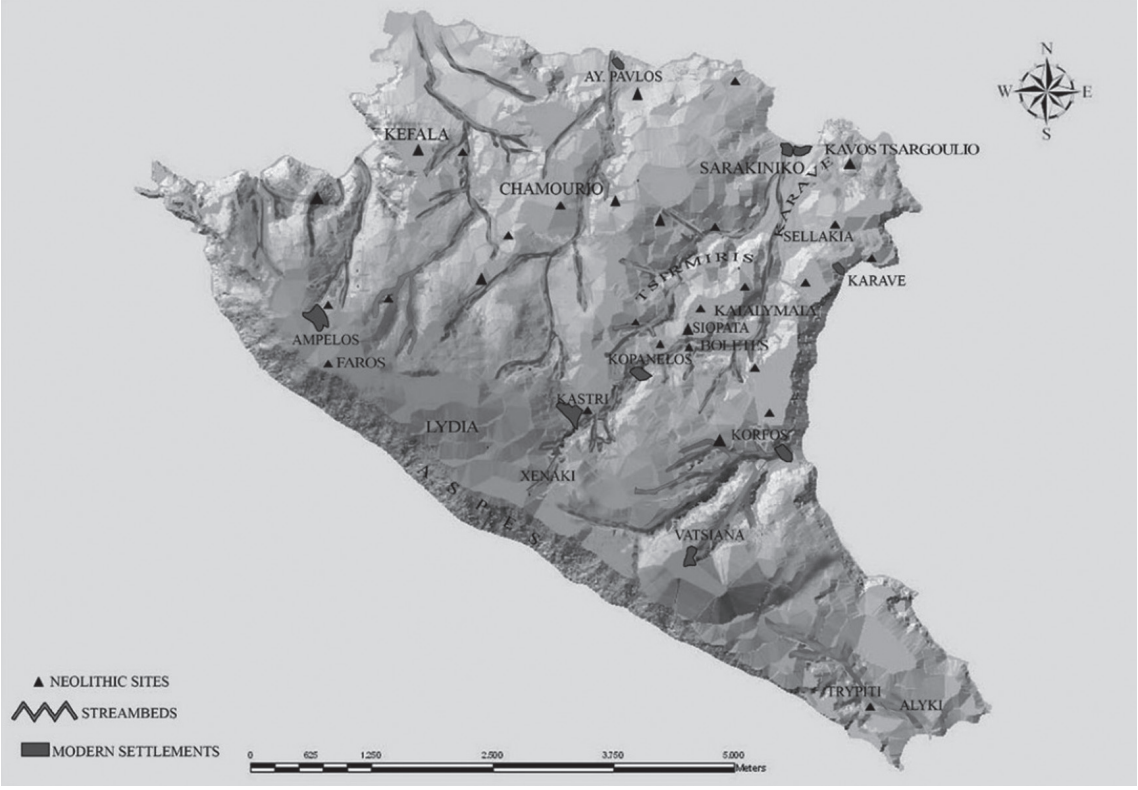
F. Tülek, Interaction of the Deli Halil Settlement with the Settlements in Issos Plain, in: A. Özfırat – Ç. Uygun (eds.), The Proceedings of The International Symposium On The Archaeology of Hatay and Its Vicinity Through The Ages (Hatay 2014) 191–210.

Natural Resources and Cultural Interactions in the Neolithic and Early Bronze Age Mediterranean. A Tentative Response from the Island of Gavdos[1]

Paraskevi Vlachou – Antonis Vratsalis-Pantelaios

Amidst Harsh yet Long Travelled Sea Routes…

…Gavdos, the southernmost frontier of Europe towards Africa, is the largest and most remote of the islands surrounding Crete. The island's landscape is composed of sand dunes along the coastline, hilly stripes of arable land among dried streambeds, and steep cliffs on its western edge (the Aspes). Its geological structure involves quaternary deposits, volcanic-alluvial metamorphic rocks (notably green schists, quartz, mica, phlysch, flints), while 2/3 of the island are covered by Neogene alluvial deposits.[2] The local ecosystem comprises junipers, pines, shrubs and herbs while the island's climate nowadays is rather dry, with limited annual rainfall.[3] Thinly populated today this seemingly restraint and geographically marginal sea bound *topos,* hosted human activity since the Palaeolithic and Mesolithic times[4] while since the Neolithic, Gavdos presents



Map 1: The distribution of Neolithic sites on Gavdos.

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steady occupation. The earlier economic activity on the island can be mainly traced through archaeological and palaeo-environmental data, however, this work attempts to review aspects of Gavdos' economic activity from the Neolithic and EBA, focusing on five categories of historically deployed natural resources: the juniper trees, salt, minerals, agriculture and animal herding. Our study integrates archaeological and historical data as the Hellenistic Gorty's treaty, 18th–20th century travelers' reports and possible references to Gavdos from the Bronze Age Linear Scripts.[5]

Natural Resources in the Island of "Calypso"

Cedars Forest

Cedars are native in the Mediterranean Basin. In Gavdos, the Juniperus Phoenecea and Juniperus Oxycedrus, sub. sp. Macrocarpa are characteristic of the island's micro-insular environment (especially in the areas of Kedres and Sarakiniko) (fig. 1). Cedar wood has been broadly used and exchanged during the 2nd millennium,[6] due to its manifold utility in carpentry, house and ship building. Moreover, in Gorty's treaty, dated to the 3rd century BC, cedar fruits from Gavdos are documented as prominent products, exported to Crete and favored for exploitation.[7] The indications for the systematic human presence in areas adjacent to the cedar forests since the Neolithic, such as pottery finds



Fig. 1: Juniperus Phoenecea, Juniperus Oxycedrus, sub. sp. Macrocarpa.

and grinding tools, that belong to Bronze Age and even earlier assemblages, could imply various possible treatments of the by-products of this resource.

Salt

Salt is a valuable mineral, essential for life, due to its high nutritional value for humans and animals, and for its numerous potential uses. Apart from saltiness that is one of the basic human tastes, salt has been involved in crafts (pottery, metallurgy, dying, painting) and in a plethora of religious and ritual practices. Its considerable properties were diachronically utilized across the Mediterranean,[8] and archaeologically documented since the Neolithic.[9] Salt collecting is a process that leaves hardly any archaeological remains. However, considering Gavdos, salt exploitation is also documented in the Gortys' treaty. In the present day, salt is still exploited by the habitants that harvest it from the natural rock cavities on the coastal zone of both Gavdos and Gavdopoula and from the salt pan at Trypiti (fig. 2). Thus, LN-EM pottery assemblages – small pithoi and pithoids, basins, amphoroid jars and ladles – from the sites of Sarakiniko and Trypiti, could possibly attest to relevant activities, such as salt processing, short-term storing and transporting, during prehistory.



Fig. 2: Salt pan in Tripiti.

Copper Minerals

Malachite is one of the most commonly used minerals in early metallurgy.[10] In Gavdos, metamorphic rocks, malachite and iron surface deposits are visible in the Kavos-Karaves region (fig. 3).[11] Although limited, they were known[12] and reportedly exploited in the early 20th century.[13] The coastal surface deposits of Gavdos fit well within the preferred FN/EBA exploitation patterns, as they are easily located and could be extracted, smelted[14] and transported by boat elsewhere for further processing.[15] Kavos, the island's major Neolithic site, lies in the vicinity of mineral deposits and the Lavrion ancient mining gallery. So far, no indications for smelting have been identified in Gavdos. However smashed malachite rocks and two pieces of an EM clay crucible preserving copper residues from Gavdopoula, could serve as indications of metal processing in this island complex.[16] Furthermore copper minerals are related to practices that could pre-date metallurgy. Mc Geehan-Liritzis, referring to mainland Greece, argues that "the metamorphic rock formations (where the copper minerals appear)…correlate with good agricultural soils…sought by Neolithic farmers", while in Pre-Dynastic Egypt, malachite and azurite were used, as cosmetics and pigments.[17]



Fig. 3: Pile of smashed malachite rocks; rock with mineral oxidation.

Cultivation

In Gavdos, dry-crop cultivation is favored at present, while dense ancient terraces all over the island indicate an important land exploitation in the past (fig. 4). Local crops (especially barley) are mentioned as exceptional in Venetian sources up to the late 19th century.[18] Indeed barley cultivation in Gavdos, is possibly documented in the LBA Linear B tablet from Knossos. Most Gavdiot Neolithic sites occur in the vicinity of cultivated areas, close to modern farm houses (*metochia*) and their threshing floors. Vines and olives, the two core Mediterranean cultivations, are reported by travelers of the Venetian times, and underlined by the numerous rock-cut wine presses and stone weights found during the archaeological survey (e.g. at Siopata, Kopanelos, Chamourio). Additional evidence for prehistoric agricultural exploitation is provided by various and abundant grinding tools, and a rich array of transportation vases, that suggest systematic processing, storing and transporting of solid and liquid local products.



Fig. 4: Cultivation terrains at Vatsiana.

Animal Herding

The introduction of domesticated animals in Gavdos most likely dates to the Neolithic. Today, a considerable number of goats and sheep are kept on the island (fig. 1) in order to meet the needs of meat year-round. In Crete, 18th and 20th century sources mention animal herding.[19] For the Bronze Age, animal husbandry is indicated by the numerous bones found within stratified contexts, from the excavated site at Katalymata. Moreover, a great number of prehistoric loom weights and spindle whorls, found during the survey all over the island, put an important emphasis on wool weaving.[20]

Un-Centrality and Interaction

In Gavdos an interesting economic exploitation of local natural resources (juniper trees, minerals, arable land and Mediterranean poly-culture, animal herding) dates back to Prehistoric times (possibly already from the MN onwards). This presence of natural resources along with extended fertile alluvial soils must have provided a backdrop that favored a varied patterns and exploitation. Easily accessible surface minerals, and especially malachite deposits, could have made Gavdos a convenient source for metals, since the late 4th millennium BC. Similarly, the olive and vine cultivation, possibly from the Bronze Age onwards, shows that the island's agricultural potentials were positively identified since the Neolithic. Local communities must have shaped their own exploitation forms but also both adopted and were adapted to a resourceful Mediterranean economic landscape, developing strategies towards a long-term occupation of the island. Indeed, Gavdos's material culture shows typical Neolithic features and is involved in the wider cultural networks of the time. For example, wishbone, horned handles and carinated bowls, that are well represented in Kavos ware, shards of cheese-pots and combed/scored pottery, along with tools of Melian obsidian, are all of a Cretan, Aegean and of a wider Eastern Mediterranean distribution in the FN/EBA.[21]

Accordingly, the un-centrality/marginality of the small and remote Gavdos and its dependency from neighboring Crete, does not seem to result from any economic dearth or isolation effect. Instead, it appears as the outcome of exploitation tactics dependent on wider production and economic needs of the time.

A more thorough study of these forms of exploitation and interactions could eventually help us understand how, unlike the other isles that surround Crete,[22] Gavdos managed to remain inhabited throughout its long historical course, although more than once on the verge of abandonment.

List of Abbreviations

MN Middle Neolithic
FN Final Neolithic
EBA Early Bronze Age
MM Middle Minoan
LM Late Minoan

Notes

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[2] Αλεξόπουλος 1999.
[3] Delipetrou et al. 2015.
[4] Kopaka – Matzanas 2009.
[5] Kopaka 2002.
[6] For Egypt see Vinson 2009, 3–8; Asouti 2003b, for MBA Akrotiri see Asouti 2003a.
[7] Kopaka 2002, 197–199; Kopaka 2005.
[8] Robb – Farr 2005.
[9] For MM-LM Crete see Kopaka 2011.
[10] E.g Catapotis – Bassiakos 2007, 69.
[11] Kopaka 2005; Kopaka – Theou 2015.
[12] Mosso 1910, 227.
[13] Battye et al. 1913, 87; Kopaka – Theou 2015, 42.
[14] McGeehan et al. 1983, 148.
[15] See Mosso 1910, 227 and Catapotis – Bassiakos 2007, 72 for Chryssokamino.
[16] Kopaka – Theou 2015, 41.
[17] Gale et al. 1981, 178.
[18] Kopaka 2002; Λαμπρινάκη 1890.
[19] Kopaka 2002, 206.
[20] Lazar, Kopaka 2020.
[21] See e.g. Coleman 1977.
[22] Chalikias 2013.

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References

Αλεξόπουλος 1999

Α. Αλεξόπουλος, 1999, Περί των γεωλογικών και υδρογεωλογικών συνθηκών και συνθηκών ύδρευσης της νήσου Γαύδου, Υφιστάμενη κατάσταση και προοπτικές. Πρακτικά του 5ου Πανελληνίου Γεωγραφικού Συνεδρίου. Ειδική Έκδοση της Ελληνικής Γεωγραφικής Εταιρείας σελ. 38–48.

Asouti 2003a

E. Asouti, Wood Charcoal from Santorini (Thera): New Evidence for Climate, Vegetation and Timber Imports in the Aegean Bronze Age, Antiquity 77.297, 2003, 471–484.

Asouti 2003b

E. Asouti, Woodland Vegetation and Fuel Exploitation at the Prehistoric Campsite of Pınarbaşı, South-Central Anatolia, Turkey: The Evidence from the Wood Charcoal Macro-Remains, JASc 30(9), 2003, 1185–1201.

Battye et al. 1913

T. Battye – A. B. Rochford – D. M. A. Bate, Camping in Crete (Witherby 1913).

Betancourt 2006

P. P. Betancourt, The Chrysokamino Metallurgy Workshop and its Territory, ASCSA 2006, 36.

Bottema et. al 2003

S. Bottema – K. Kopaka – A. Alexopoulos, The Late-Holocene Vegetation History of Gavdos (Crete) in Relation to Long-Distance Pollen Dispersal: The Trypiti Pollen Diagram, in: S. Tonkov (ed.), Aspects of Palynology and Palaeo-Ecology, Festschrift in Honour of E. Bozilova – S. Moscow, 2003, 199–212.

Catapotis – Bassiakos 2007

M. Catapotis – Y. Bassiakos, Copper Smelting at the Early Minoan Site of Chrysokamino on Crete, in: P. M. Day – R. C. P. Doonan (eds.), Metallurgy in the Bronze Age Aegean (Oxford 2007) 68–83.

Chalikias 2013

K. Chalikias, Living on the Margin: Chryssi Island and the Settlement Patterns of the Ierapetra Area (Crete), BAR International Series 2549, 2013, 6–7.

Coleman 1977

J. E. Coleman, Kephala: A Late Neolithic Settlement and Cemetery, ASCSA Vol. 1, 1977.

Delipetrou et al. 2015

P. Delipetrou – D. Ghosn – G. Kazakis – P. Nyktas – E. Remoundou – I. N. Vogiatzakis, Vegetation Dynamics of Coastal Dunes with Juniperus spp. in Crete, Gavdos and Chryssi Islands (Greece), Ecologia Mediterranea 41, 2015, 2.

Di Fraia – Vianello 2011

T. di Fraia – A. Vianello, Salt Production and Consumption in Prehistory: Toward a Complex Systems View, in: A. Vianello (ed.), Exotica in the Prehistoric Mediterranean (Oxford 2011) 26–32.

Gale et al. 1981

N. H. Gale – Z. A. Stos-Gale. Cycladic Lead and Silver Metallurgy. BSA 76, 1981, 169–224.

Kopaka 2002

Κ. Κόπακα, Από τη ζωή μιας προϊστορικής (;) λέξης: ka-u-da και τα προϊόντα της γης της Γαύδου, ΣΗΜΑ, Τιμητικός τόμος για τον Μενέλαο Παρλαμά (Ηράκλειο 2002) 1–43.

Kopaka 2004

K. Kopaka, Emporoi on the Mediterranean Fringe: Trading for a Living on the Small Islands of Crete, in: R. Laffineur – E. Greco (eds.), EMPORIA. Aegeans in the Central and Eastern Mediterranean, Proceedings of the 10th International Aegean Conference/10 Rencontreégéenne internationale, Athens, Italian School of Archaeology, Aegaeum 25, 2004, 91–102.

Kopaka 2005

K. Kopaka, Emporoi on the Mediterranean Fringe: Trading for a Living on the Small Islands of Crete, in: R. Laffineur – E. Greco (eds.), Emporia: Aegeans in the Central and Eastern Mediterranean, Universite de Liege, Histoire de ll'art et archeologie de la Grece antique (University of Texas at Austin, Program in Aegean Scripts and Prehistory 2005) 14–18.

Kopaka 2011

K. Kopaka, On Caves and Households in Bronze Age Crete:" Της Ουρανιάς το Φρούδι" Cave at Zakros, Hesperia Supplements 44, 2011, 273–284.

Kopaka – Matzanas 2009

K. Kopaka – C. Matzanas, Palaeolithic Industries from the Island of Gavdos, Near Neighbour to Crete in Greece, Antiquity 83.321, 2009.

Kopaka – Theou 2015

Κ. Κόπακα – Ε. Θέου, Νεολιθικά από τη Γαύδο, in: Π. Καραναστάση – Α. Τσιγκουνάκη – Χ. Τσιγωνάκη (eds.), Αρχαιολογικό Έργο Κρήτης 3, Πρακτικά της 3ης Συνάντησης, Ρέθυμνο 5–8, Δεκεμβρίου 2013, Β΄, Ρέθυμνο 2015, 31–48.

Kopaka – Theou 2018

K. Kopaka – E. Theou, Gavdos, or Living in the Southernmost Aegean in the Neolithic Cultural Horizon, in: S. Diez – F. Mavridis – Z. Tankosic – T. Takaoglou (eds.), Communities in Transition-Monographs of the Danish Institute at Athens, 2018, Vol. 20, 441–455.

Λαμπρινάκη 1890

Ε. Σ. Λαμπρινάκη, Γεωγραφία της Κρήτης, Ρέθυμνο 1890, 5455,198–201.

Lazar, Kopaka 2020

Δ. Λαζάρ – Κ. Κόπακα, Υφαντικά βάρη και σφονδύλια από τη νήσο Γαύδο, στο Π. Καραναστάση – Α., Τζιγκουνάκη – Χ. Τσιγωνάκη (επιμ.), Αρχαιολογικό έργο Κρήτης 4, Πρακτικά της 4ης Συνάντησης, Ρέθυμνο 24–27 Νοεμβρίου 2016, Α΄, 691–703.

Mc Geehan-Liritzis 1983

V. Mc Geehan-Liritzis, The Relationship between Metalwork, Copper Sources and the Evidence for Settlement in the Greek Late Neolithic and Early Bronze Age, OxfJA 2(2), 1983, 147–180.

Mellaart 1966
J. Mellaart, The Chalcolithic and Early Bronze Ages in the Near East and Anatolia (Beirut 1966).
Momigliano 2007
N. Momigliano, Knossos Pottery Handbook: Neolithic and Bronze Age (Minoan) Vol. 14, British School of Athens, 2007.
Mosso 1910
A. Mosso, Escursioni nel Mediterraneo e gli scavi di Creta Vol. 1 (Treves 1910) 227.
Nowicki 2008
K. Nowicki, The Final Neolithic (Late Chalcolithic) to Early Bronze Age Transition in Crete and the Southeast Aegean Islands: Changes in Settlement Patterns and Pottery, in: V. Isaakidou – P. Tomkins (eds.), Escaping the Labyrinth: The Cretan Neolithic in Context (Sheffield 2008).
Özdoğan 2000
M. Özdoğan, An Overview from Anatolia and Prospects for Future Research, Publications de l'Institut Français d'Études Anatoliennes 11(1), 2000, 497–501.
Rackham 1972
O. Rackham, The Vegetation of the Myrtos Region, in: P. Warren (ed.), Myrtos: An Early Bronze Age Settlement in Crete, BSA Suppl. 7, 1972.
Renfrew 1972
C. Renfrew, The Emergence of Civilization: The Cyclades and the Aegean in the Third Millennium BC (London 1972).
Robb – Farr 2005
J. E. Robb – R. H. Farr, Substances in Motion: Neolithic Mediterranean 'Trade', The Archaeology of Mediterranean Prehistory 1, 2005, 24–46.
Sherratt 1983
A. Sherratt, The Secondary Exploitation of Animals in the Old World, WorldA 15,1983, 90–104.
Tasic 2000
N. Tasic, Salt use in the Early and Middle Neolithic of the Balkan Peninsula. BAR International Series, 854, 2000, 35–40.
Thompson 1958
F. C. Thompson, The Early Metallurgy of Copper and Bronze, Man 18,1958, 1–7.
Vinson 2009
S. Vinson, Seafaring, in: E. Frood – W. Wendrich (eds.), UCLA Encyclopedia of Egyptology 1(1), 2009.
Watrous 1992
L. V. Watrous, Kommos III: The Late Bronze Age Pottery (Princeton 1992).
Wiener 2013
M. H. Wiener, Minding the Gap: Gaps, Destructions and Migrations in the Early Bronze Age Aegean. Causes and Consequences, AJA 117, 2013, 581–592.

Session 11 | Methodology
Session 12 | Varia
Poster Session

Economic aspects permeate all areas of public and private life in ancient societies, whether in urban development, religion, art, housing, or in death. Research on ancient economies has long played a significant role in ancient history. Increasingly in the last decades, awareness has grown in archaeology that the material culture of ancient societies offers excellent opportunities for studying the structure, performance, and dynamics of ancient economic systems and economic processes. Therefore, the main objective of this congress was to understand economy as a central element of classical societies and to analyse its interaction with ecological, political, social, religious, and cultural backgrounds. The theme of the congress was addressed to all disciplines that deal with Greco-Roman civilization and their neighbouring cultures from the Aegean Bronze Age to the end of Late Antiquity.
In this collective volume, single contributions from sessions 11 and 12 deal with digital topics such as computational approaches and 3D documentation in archaeology and building research. On the other hand, the studies include topics on ancient sculptures and sanctuaries as well as the rituals associated with them.
Furthermore, the numerous transcribed posters which have been presented and discussed during the congress week in the context of a poster session are published in this volume.

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