

5

Un viaje entre el Oriente  
y el Occidente del  
Mediterráneo

A Journey between East  
and West in the  
Mediterranean

SEBASTIÁN CELESTINO PÉREZ  
ESTHER RODRÍGUEZ GONZÁLEZ  
(Eds.)

Volumen I







**MYTRA**

monografías y trabajos  
de arqueología

# 5

Un viaje entre el Oriente y el Occidente del Mediterráneo

A Journey between East and West in the Mediterranean

Actas/Proceedings

**IX** Congreso Internacional de Estudios Fenicios y Púnicos  
International Congress of Phoenician and Punic Studies

Volumen I

Mérida, 2020

*Un viaje entre el Oriente y el Occidente del Mediterráneo / A Journey between East and West in the Mediterranean*

Editores: Sebastián Celestino Pérez y Esther Rodríguez González

Ayudantes de edición: Sonia Carbonel Pastor y Benjamín Cutillas Victoria

Año: 2020

Colección: MYTRA, Monografías y Trabajos de Arqueología. Instituto de Arqueología, Mérida (CSIC-Junta de Extremadura). Número 5.

Páginas: 484 + ilustraciones.

D.L.: BA-480-2020

I.S.B.N.: 978-84-09-11361-3

Vol. 1: 978-84-09-13340-6

Vol. 2: 978-84-09-23033-4

Vol. 3: 978-84-09-23034-1

Vol. 4: 978-84-09-23035-8

Citar como:

Celestino Pérez, S.; Rodríguez González, E. (Eds.) 2020: Un viaje entre el Oriente y el Occidente del Mediterráneo. Actas del IX Congreso Internacional de Estudios Fenicios y Púnicos, *Mytra* 5, Mérida.

Esta publicación se ha beneficiado de las siguientes ayudas para su financiación:

Proyecto de Investigación I+D+i: “Construyendo Tarteso: Análisis constructivo, espacial y territorial de un modelo arquitectónico en el valle medio del Guadiana” (HAR2015-63788-P).

Secretaría General de Ciencia, Tecnología, Innovación y Universidad.



© Instituto de Arqueología, Mérida (CSIC-Junta de Extremadura).

© Sebastián Celestino Pérez y Esther Rodríguez González (eds.) y de cada texto, su autor.

---

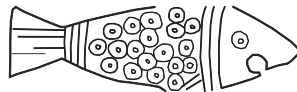
Maquetación, composición e impresión:

IMPRESA Y MATERIAL DE OFICINA EMERITA, S. L. Mérida (Spain)

Sebastián Celestino Pérez  
Esther Rodríguez González  
(Eds.)

Un viaje entre el Oriente y el Occidente del Mediterráneo  
A Journey between East and West in the Mediterranean

**IX CONGRESO INTERNACIONAL DE ESTUDIOS FENICIOS Y PÚNICOS**  
**INTERNATIONAL CONGRESS OF PHOENICIAN AND PUNIC STUDIES**



**22 - 26 DE OCTUBRE DE 2018**

**MÉRIDA 2018**  
**(EXTREMADURA, ESPAÑA)**

 **instituto  
arqueología  
mérida**



**MYTRA**  
monografías y trabajos  
de arqueología

**MYTRA**  
MEMORIAS Y TRABAJOS DE ARQUEOLOGÍA

**COMITÉ EDITORIAL**

**Dirección:**

Sebastián Celestino Pérez y Pedro Mateos Cruz (IAM, CSIC-Junta de Extremadura).

**Secretaría:**

Carlos J. Morán Sánchez (IAM, CSIC-Junta de Extremadura)

**Vocales:**

Juan Pedro Bellón Ruíz (Universidad de Jaén)  
Javier Bermejo Meléndez (Universidad de Huelva)  
Luis Berrocal Rangel (Universidad Autónoma de Madrid)  
Jesús García Sánchez (IAM, CSIC-Junta de Extremadura)  
Francisco Gracia Alonso (Universidad de Barcelona)  
Victorino Mayoral Herrera (IAM, CSIC-Junta de Extremadura)  
Almudena Orejas Saco del Valle (Centro de Ciencias Humanas y Sociales-CSIC)  
César Parceró Oubiña (Instituto de Ciencias del Patrimonio-CSIC)  
Luis Gethsemaní Pérez Aguilar (IAM, CSIC-Junta de Extremadura)  
Antonio Pizzo (Escuela Española de Historia y Arqueología, Roma -CSIC)  
Esther Rodríguez González (IAM, CSIC-Junta de Extremadura)  
Oliva Rodríguez Gutierrez (Universidad de Sevilla)  
Trinidad Tortosa Rocamora (IAM, CSIC-Junta de Extremadura)  
Mar Zarzalejos Prieto (Universidad Nacional de Educación a Distancia)

**COMITÉ CIENTÍFICO**

Pablo Arias (Universidad de Cantabria)  
María Carme Belarte (Institut Català d'Arqueologia Clàssica)  
Massimo Botto (Istituto di Studi sul Mediterraneo Antico)  
Stefano Camporeale (Università di Siena)  
Teresa Chapa (Universidad Complutense de Madrid)  
Alexandra Chavarría (Università di Padova)  
Jordi Cortadella (Universitat Autònoma de Barcelona)  
Sophie Gilotte (Centre National de la Recherche Scientifique)  
Sonia Gutierrez (Universidad de Alicante)  
Alberto Lorrío (Universidad de Alicante)  
Dirce Marzoli (DAI, Instituto Arqueológico Alemán-Madrid)  
Gloria Mora (Universidad Autónoma de Madrid)  
Ignacio Pavón (Universidad de Extremadura)  
Sebastián Ramallo (Universidad de Murcia)  
Elisa da Sousa (Universidade de Lisboa)  
Xavier Terradas (Institución Milá y Fontanals-CSIC)  
Frank Vermeulen (Ghent University)

# ÍNDICE GENERAL

## VOLUMEN I

### *Presentación*

Sebastián Celestino Pérez, Esther Rodríguez González.....	31
---	----

### CONFERENCIA INAUGURAL

#### *Phoenicians and Punic in the Mediterranean and Beyond: New theoretical and methodological challenges*

Ana Margarida Arruda.....	39
---------------------------	----

### HISTORIOGRAFÍA

#### *Reificar o no reificar? Fenicios, Tartesios, y el problema de las identidades sin voz*

Carolina López-Ruiz.....	51
--------------------------	----

#### *Tartesso na primeira História de Portugal de Fernando Oliveira (C. 1580)*

Pedro Albuquerque, José Eduardo Franco.....	57
---	----

#### *Los fenicios vistos por los Asirios*

J. Elayi.....	67
---------------	----

#### *Les barcides des confins de la cyrenaique aux frontieres de la petite syrte*

Adel Njim.....	77
----------------	----

#### *La influencia orientalizante en la Necrópolis de Tútugi (Galera, Granada). Una relectura de la documentación original de Juan Cabré Aguiló*

Gabriela Polak, Jorge Del Reguero González.....	85
---	----

### NUMISMÁTICA

#### *De la moneda al sello alfarero. Análisis comparativo de dos fenómenos simultáneos en Gadir*

Alicia Arévalo, Elena Moreno.....	101
-----------------------------------	-----

#### *La monetización púnica en Cerdeña: emisiones, cronologías y distribución*

Gianluca Mandatori.....	121
-------------------------	-----

<i>Divinidades masculinas en la moneda púnica de Scilia: Análisis y estudio de su iconografía</i> José Miguel Puebla Morón.....	129
--	-----

## **RELIGIÓN E ICONOGRAFÍA**

<i>El santuario púnico-ebusitano de Na Galera: Últimos hallazgos y nuevas interpretaciones</i> Ramón Martín Gordón, Elena Diana Balboa Lagunero.....	137
---	-----

<i>I sacrifici animali nel mondo fenicio e punico: Caratteri e specificità</i> Bruno D'Andrea.....	149
---	-----

<i>Los colores de Belcebú</i> José Luis Escacena Carrasco.....	167
---	-----

<i>Comida decorada: Un análisis iconográfico, simbólico y contextual de los sellos de arcilla en el Mediterráneo occidental</i> Meritxell Ferrer, Mireia López-Bertran.....	181
--	-----

<i>Altars con forma de piel de toro, asherim y masseboth: Tríada de elementos religiosos de tradición cananea en la península ibérica</i> Álvaro Gómez Peña.....	193
---	-----

<i>La cueva de es Culleram (Ibiza). Un santuario singular en el Mediterráneo púnico</i> María Cruz Marín Ceballos, María Belén-Deamos, Ana María Jiménez Flores.....	207
---	-----

<i>Gli dei al buio. Un riesame di Grotta Regina</i> Adriano Orsingher.....	223
---	-----

<i>Un santuario tardopúnico en Mijas (Málaga)</i> María Dolores Simón-Vallejo, Juan José de la Rubia de Gracia, María Belén-Deamos, Eduardo Ferrer-Albelda.....	239
---	-----

<i>Coroplastia contestana. Figuras de terracota en la Ileta dels Banyets (El Campello, Alicante)</i> Enric Verdú Parra.....	253
--	-----

<i>The ideology of the tophet. Some ethno-anthropological remarks</i> Paolo Xella.....	271
---	-----

## **EPIGRAFÍA**

<i>Liberti nel mondo fenicio e punico</i> Maria Giulia Amadasi Guzzo.....	283
--	-----

<i>La « mise en pierre » des inscriptions pheniciennes dans un milieu hellenistique : Travail de scribes et de lapicides</i> Jimmy Daccache.....	293
---	-----

<i>Una lamina d'oro iscritta dal Tofet di Sulci (S. Antioco, Sardegna)</i> Valentina Melchiorri, Paolo Xella.....	305
--	-----

<i>La stele et le fragment pheniciens de Nora en Sardaigne et Tarsis</i> Émile Puech.....	317
--	-----

<i>Per un corpus dei marchi di cava punici e neopunici nell'edilizia della Tunisia. Prime note</i> Francesco Tomasello, Mounir Fantar, Rossana De Simone, Carla Del Vais, Gilberto Montali, Faouzzi Ghazzi.....	327
---	-----

## FUENTES

<i>“Vesci corporibus humanis docendo”. Su Annibale e l'antropofagia</i> Giuseppe Minunno.....	337
--	-----

## ARQUITECTURA Y URBANISMO

<i>Os Fornos do Convento de Corpus Christi (Lisboa, Portugal)</i> Ana Sofia Antunes, José Miguel Oliveira, Cláudia Rodrigues Manso.....	349
<i>Formes et transformations de l'espace sacré du Temple de Mlkashtart a Oumm el Amed – Naqoura</i> Hassan Ramez Badaw.....	361
<i>El área urbana fenicio-púnica del sector norte de Útica</i> Imed Ben Jerbania, José Luis López Castro, Amparo Sánchez Moreno, Ahmed Ferjaoui, Iván Fumadó Ortega, Bartolomé Mora Serrano, Luis Alberto Ruiz Cabrero, Faouzzi Abidi.....	369
<i>Nueva Gadeira: Proyecto general de investigación arqueológica y puesta en valor del yacimiento fenicio-púnico de el Cerro del Castillo, Chiclana (Cádiz)</i> Paloma Bueno Serrano, Juan Antonio De La Mata, Elisa Sánchez Marín.....	381
<i>Los templos fenicio-púnicos del sector norte de Útica</i> Eduardo Ferrer Albelda, José Luis López Castro, Imed Ben Jerbania, Carmen Ana Pardo Barrionuevo, Ahmed Ferjaoui, Victoria Peña Romo, Walid Khalfali.....	393
<i>Cerro Macareno (La Rinconada, Sevilla): Nuevas investigaciones en un yacimiento paradigmático del Guadalquivir protohistórico</i> Francisco José García Fernández, Pedro A. Albuquerque, Livia Guillén Rodríguez.....	407
<i>Los modelos arquitectónicos y urbanos de tipo púnico-helenísticos en yacimientos indígenas: la ciudad ibérica del Castellet de Banyoles (Tivissa, Tarragona) y su papel geoestratégico durante la segunda guerra romano-cartaginesa</i> Rafel Jornet Niella, David Montanero Vico.....	423
<i>Demolishing Casemate walls: Pasos hacia una primera clasificación tipológica de las murallas de la Edad del Hierro IIA-IIB en Fenicia y el norte de Israel</i> David Montanero Vico.....	443
<i>Colonias fenicias, casas y la “casa” como institución</i> Marisa Ruiz-Gálvez Priego.....	461
<i>La complejidad urbanística de Tejada la Vieja (Escacena del Campo, Huelva) a partir de las últimas intervenciones</i> Clara Toscano Pérez, Juan M. Campos Carrasco.....	471

## VOLUMEN II

### TERRITORIO Y TOPOGRAFÍA

<i>Relaciones entre indígenas y fenicios en el curso inferior del Ebro. La primera fase de ocupación del asentamiento protohistórico de L'Assut (Tivenys, Baix Ebre, Tarragona) y su integración en el territorio</i>	
Jordi Diloli Fons, Ramon Ferré Anguix, Jordi Vila Llorach, Ivan Cots Serret, Laura Bricio Segura, Marc Prades Painous, David Bea Castaño.....	507
<i>Peña Negra (Crevillent, Alicante): La ciudad orientalizante de Herna y su territorio</i>	
Alberto J. Lorrio Alvarado, Sara Pernas García, Mariano Torres Ortiz, Julio Trelis Martí, Pablo Camacho Rodríguez, Laura Castillo Vizcaino.....	521
<i>Les Peuples de La Mer ont-ils eu une influence sur la plus ancienne rade de Tyr ?</i>	
Ibrahim Noureddine.....	541
<i>La fase I de la Gessera (Caseres, Terra Alta, Tarragona). Una residencia aristocrática de la Primera Edad del Hierro</i>	
Marc Prades Painous, Jordi Diloli Fons, Ivan Cots Serret, Jordi Vilà Llorach.....	551
<i>La vigilancia de la costa entre Ibiza y el litoral alicantino durante el período Bárquida</i>	
Feliciana Sala-Sellés, Fernando Prados-Martínez, Jesús Moratalla-Jávega, Victor Cañavate-Castejón, Juan Luis Martínez-Boix, Pascual Perdiguero-Asensi, Pedro Ramón-Baraza.....	567
<i>Estrategias territoriales en las comunidades indígenas localizadas entre la Bahía de Málaga y la axarquía ante el proyecto colonial fenicio entre los siglos IX-VII a.C.</i>	
José Suárez Padilla, Emilio Martín Córdoba.....	577
<b>HÁBITAT Y VIDA COTIDIANA</b>	
<i>Nuovi dati sulla Palermo Antica alla luce dei recenti scavi</i>	
Carla Aleo Nero, Stefano Vassallo.....	599
<i>Los fenicios en el sureste sardo: nuevas excavaciones en el asentamiento de Cuccureddus (Villasimius)</i>	
Michele Guirguis.....	609
<i>Macine granarie da Tharros: Note preliminari per la caratterizzazione funzionale degli spazi abitativi punico-romani</i>	
Melania Marano.....	625
<i>Nuraghe S'Urachi (San Vero Milis, Sardegna): continuità e trasformazioni nel corso dell'età punica e romana repubblicana</i>	
Andrea Roppa, Jeremy M. Hayne, Emanuele Madrigali, Alfonso Stiglitz, Carlo Tronchetti, Peter Van Dommelen.....	635
<i>Risorse e pratiche nel Sulcis di età punica: i dati di Pani Loriga</i>	
Emanuele Madrigali, Livia Tirabassi.....	645

<i>Vida cotidiana en la periferia púnica: hábitat y grupos domésticos en la Mallorca y Menorca postalayóticas (VI-II A.N.E.)</i>	
Octavio Torres Gomariz.....	659

## **ECONOMÍA Y COMERCIO**

<i>Los restos de gallo (Gallus gallus) como bioindicador de presencia foránea. El paraje de Can Roqueta en el noreste de la península ibérica y su relación con el comercio fenicio</i>	
Silvia Albizuri Canadell, F. Javier López-Cachero, Ricard Marlasca, Noemí Terrats Jiménez, Almudena García, Tona Majó, Xavier Carlús, Mònica Oliva Poveda, Alba Rodríguez, Antoni Palomo .....	675
<i>La explotación de recursos agropecuarios en la Ibiza púnica. Estado actual de la cuestión</i>	
Benjamí Costa Ribas, Glenda Graziani Echávarri.....	689
<i>La comercialización de productos turdetanos en la fachada atlántica peninsular durante la II Edad del Hierro (siglos V-II a.C.)</i>	
Francisco José García Fernández.....	705
<i>Carthage et la Péninsule Ibérique dans leurs rapports avec le monde étrusque : entre Orient et Occident</i>	
Jean Gran-Aymerich.....	729
<i>Andar per Emporia a Cartagine? Sulla lamella oracolare dodonea DVC 1363A</i>	
Maria Intrieri .....	739
<i>La circolazione delle anfore puniche nell'area laziale e nell'etruria meridionale</i>	
Alessandro Maria Jaia, Danilo De Dominicis.....	751
<i>Les relations entre le cercle du détroit et le monde romain (206-44 Av. J.-C.): un cadre interprétatif à nuancer ?</i>	
Max Luaces.....	763
<i>Tel Regev, an industrial and agricultural producer for the Late Bronze anchorage of Tell Abu Hawam</i>	
José M. Martín García, Carolina Aznar Sánchez, Ester López Rosendo, Pamela Carrillo Pineda, Michal Artzy.....	777
<i>Le reti commerciali di Mozia. Una proposta di ricostruzione attraverso l'analisi della documentazione edita</i>	
Andrea Perugini.....	785
<i>De fenicios a púnicos en la Bahía de Mazarrón: el registro de las ánforas t-11 en el promontorio costero de Punta de Los Gavilanes</i>	
María Milagrosa Ros Sala, Benjamín Cutillas Victoria .....	801
<i>Atunes púnicos y vinos egeos en una taberna de la Grecia clásica. Resultados iniciales del Corinth Punic Amphora Building Project</i>	
Antonio M. Sáez Romero, Tatiana Theodoropoulou, Ricardo Belizón Aragón.....	817

<i>Los Almadenes (Hellín, Albacete) o la meta de un sistema productivo y comercial del siglo VI a.C. a través del río Segura</i>	
Feliciana Sala-Sellés, Javier López Precioso, Rocio Noval Clemente, Victor Cañavate Castejón, Ismael Carratalá Ibáñez, Sara Fernández Molina, Pascual Perdiguero Asensi, Patricia Rosell Garrido.....	837

## **ARQUEOMETRÍA, GEOARQUEOLOGÍA, PALEOAMBIENTE**

<i>Caracterización tecnológica y procedencia del metal de las barras-lingote de Peña Negra (Crevillent, Alicante)</i>	
Alberto J. Lorrio Alvarado, Ignacio Montero Ruiz, Sara Pernas García, Mariano Torres Ortiz, Julio Trelis Martí, José Luis Simón García, Fernando Simón Oliver .....	851
<i>Analytical contribution to the understanding of metallurgical activities in central Morocco in the pre-roman period</i>	
Chiara Lucarelli, Fiammetta Susanna, Tilde De Caro, Daniela Ferro .....	869
<i>Scavi e ricerche geoarcheologiche e paleoambientali nell'area del Porto di Tharros (Laguna di Mistras, Cabras)</i>	
Carla Del Vais, Vincenzo Pascucci, Giovanni De Falco, Ignazio Sanna, Giuseppe Pisanu, Maria Mureddu, Alfredo Carannante, Salvatore Chilardi.....	879
<i>Medio ambiente y acción antrópica en las costas almerienses durante el I milenio a.C. a partir de la antracología</i>	
María Oliva Rodríguez-Ariza.....	889

## **PROYECTOS DE INVESTIGACIÓN**

<i>Why is the domain of phoenician-punic studies still so fragmented? A plea for the creation of an International Organization for Phoenician and Punic Studies</i>	
Roald F. Docter .....	903
<i>Les symboles de Tanit a Thubursicum Numidarum</i>	
Mansouri Farida.....	911
<i>The TCM Project studies and reflections on (phoenician) "identity"</i>	
Giuseppe Garbati.....	917
<i>Reflexiones desde el proyecto Giribaile sobre la presencia púnica y cartaginesa en el alto Guadalquivir</i>	
Luis María Gutiérrez Soler, Antonio Jesús Ortiz Villarejo, María Alejo Armijo .....	925
<i>Il Progetto internazionale "ARS" "Archaeological Research in Sardinia". Nuove ricerche archeologiche al Tofet Di Sulci</i>	
Valentina Melchiorri, Thomas Schäfer .....	935
<i>Antes de las Columnas. Málaga en época púnica y su proyección en el SE ibérico y mar de Alborán</i>	
Bartolomé Mora Serrano, Ana Arancibia Román .....	949
<i>The TCM Project. Interculturality and "mediterranean-centric" perspective</i>	
Tatiana Pedrazzi.....	961

<i>Entre Cartago y Roma. Son Catlar y el impacto púnico en Menorca</i> Fernando Prados Martínez, Helena Jiménez Vialás, M <sup>a</sup> José León Moll, Joan C. De Nicolás Mascaró, Andrés M. Adroher Auroux, Octavio Torres Gomariz.....	969
--	-----

### VOLUMEN III

#### MUNDO FUNERARIO

<i>Ceramica fenicia di Sardegna le urne d'impasto del Tofet di Sulky scavi 1956 e 1968-1969</i> Piero Bartoloni.....	1003
<i>Un nuevo conjunto de enterramientos de la necrópolis púnica de Gadir.</i> <i>Excavaciones en el solar de Avenida de Andalucía 1-3 en Cádiz</i> Ricardo Belizón Aragón, Antonio M. Sáez Romero, M. Luisa de la Bandera Romero.....	1013
<i>Phoenician trade in the Nile Valley: the contribution of some luxury items from Sudan</i> Luisa Bonadies.....	1035
<i>La necropoli fenicia e punica di Nora (Sardegna, Italia): nuovi dati dagli scavi 2014-2018</i> Jacopo Bonetto, Eliana Bridi, Filippo Carraro, Simone Dilaria, Alessandro Mazzariol.....	1047
<i>Sepulture atipiche nella necropoli punica di Solunto</i> Alba Maria Gabriella Calascibetta.....	1065
<i>Culti comunitari, devozione privata e pietas funeraria a Tharros – Capo San Marco in età punica:</i> <i>dati dalla ricerca sul campo e nuove linee di intervento</i> Anna Chiara Fariselli.....	1093
<i>Instrumenta domestica metallici e rituali funerari nel Mediterraneo centrale fenicio e punico</i> Giulia Congiu.....	1103
<i>New perspectives on the Early Iron Age necropolis of Olival do Senhor dos Mártires</i> <i>(Alcácer do Sal, Portugal)</i> Francisco B. Gomes.....	1111
<i>Avance al estudio de la necrópolis fenicia de la “Casa-Cuartel de la Guardia Civil”/San Severiano</i> <i>Nº 10 (Cádiz, España). Primeros datos espaciales y arqueométricos</i> Ana M <sup>a</sup> Niveau De Villedary y Mariñas, Natalia López Sánchez, M <sup>a</sup> Milagros Macías López, Pablo Sicre González, Francisco J. Blanco Jiménez, Isaac Legupín Tubío, Juan V. Fernández De La Gala, Yolanda Carrión Marco, Guillem Pérez Jordá, Ricard Marlasca Martín, Marcos A. Martelo Fernández.....	1123
<i>Nouvelles fouilles dans le sanctuaire de Ba’l Hamon a Carthage</i> Imed Ben Jerbania, Ahmed Ferjaoui, Victoria Peña, Taoufik Redissi, Kaouhter Jendoubi, Nesrine Maddahi, Walid Khalfalli.....	1141
<i>Nuove tombe dalla necropoli punica di Villamar (Sardegna). Alcuni aspetti del rituale funerario</i> Elisa Pompianu.....	1157
<i>Le Tombe puniche della necropoli di Pill’e Matta, Quartucciu (Ca)</i> Donatella Salvi.....	1173

<i>Le tombe a Pozzo del Lotto 7 nella necropoli di Tuvixeddu, a Cagliari</i> Donatella Salvi .....	1183
<i>Códigos funerarios: sobre los rituales funerarios a través de la incidencia de la vajilla para aceites perfumados en los ajuares de la necrópolis de Motya</i> Gabriella Sciortino .....	1193
<i>Nuovi dati dalla necropoli arcaica di Mozia (Campagne 2013-2017)</i> Paola Sconzo .....	1205
<i>La necropoli punica di Tuvixeddu (Cagliari): recupero di contesti funerari indagati nel novecento attraverso la ricerca d'archivio, lo studio dei corredi funerari e l'analisi spaziale</i> Pietro Francesco Serreli, Carla Del Vais, Giovanna Pietra .....	1219

## **CULTURA MATERIAL**

<i>L'apport des épaves de Marsala à la connaissance de la galère punique</i> Ouiza Ait Amara .....	1229
<i>El olivo y la producción de aceite en la península ibérica durante el primer milenio a.n.e. El caso fenicio-púnico y el estudio particular de las prensas ebusitanas</i> Isabel Bonora Andujar .....	1245
<i>La toréutica orientalizante en la península ibérica e Ibiza: los smiting god</i> Yolanda Díaz Alonso .....	1261
<i>I motivi antropomorfi nella pittura vascolare di Tharros in età punica: note su alcuni esempi dalla collina di Su Murru Mannu</i> Stefano Floris .....	1273
<i>Cerámicas grises orientalizantes en el santuario rupestre de Gorham's Cave, Gibraltar</i> José M <sup>a</sup> Gutiérrez-López, Antonio M. Sáez-Romero, M <sup>a</sup> Cristina Reinoso-Del-Río, Francisco Giles-Pacheco, Clive Finlayson, Geraldine Finlayson .....	1285
<i>La Cerámica de Cartago en el Museo Nacional en Poznań</i> Michał Krueger, Inga Głuszek .....	1299
<i>La necrópolis de les Casetes (Villajoyosa, Alicante). Un material fenicio inédito: los huevos de avestruz</i> Diego Ruiz Alcalde, M <sup>a</sup> José Velázquez Pascual, Hélène Le Meaux .....	1307
<i>La primera ocupación fenicia de Utica</i> José Luis López Castro, Imed Ben Jerbania, Alfredo Mederos Martín, Ahmed Ferjaoui, Víctor Martínez Hahn Müller, Kaouther Jendoubi .....	1315
<i>Un escarabeo de metabasalto verde con reparación antigua procedente de Ibiza</i> Jordi H. Fernández, María José López-Grande, Francisca Velázquez, Benjamí Costa, Ana Mezquida Orti .....	1327
<i>Tel Regev y el comercio fenicio en el período persa</i> Ester López Rosendo, Carolina Aznar Sánchez, José María Martín García, Pamela Carrillo Pineda, Michal Artzy .....	1337

<i>Gli scarabei del Museo archeologico Ferruccio Barreca di Sant'Antioco</i> Sara Muscuso.....	1347
<i>La producción cerámica fenicia en oriente y occidente. Algunos aspectos a reconsiderar</i> Francisco J. Núñez.....	1365
<i>Economia, produção e comércio na Quinta do Almaraz (Almada, Portugal) durante o 1º milénio a.n.e. – balanço e perspectivas de investigação</i> Ana Olaio.....	1375
<i>Proposta di classificazione integrata per la produzione ceramica sardo fenicia del ferro II (625-560 a. C. ca.)</i> Carla Perra.....	1389
<i>Nota sobre una escultura púnica de piedra inédita procedente de Ibiza</i> Joan Ramon Torres.....	1407
<i>Tras las huellas de Himilcón: materiales púnicos y tardopúnicos en las Rías Baixas gallegas</i> Rafael María Rodríguez Martínez, Diego Piay Augusto, María Luisa Castro Lorenzo, Francesca Verde.....	1413
<i>The bronze bowl of Berzocana and its connection to the East Mediterranean</i> Carlos Zorea.....	1427

## **NUEVAS METODOLOGÍAS**

<i>Scrittura su Argilla e Ceramica 2.0. Un database per il corpus delle iscrizioni fenicio-puniche</i> Paola Cavaliere, Danila Piacentini.....	1443
<i>Fragments de Tartesos. Reconstrucción de un puzzle arqueológico</i> María José Merchán García, Emiliano Pérez Hernández, Santiago Salamanca Miño, Pilar Merchán García, Esther Rodríguez González, Sebastián Celestino Pérez.....	1449
<i>La puesta en valor de la estratigrafía arqueológica en favor de la patrimonialización de la cultura fenicio púnica en España</i> Ana Seisdedos Ribera.....	1461

## **VOLUMEN IV**

### **CONTACTOS Y RELACIONES**

<i>Santa Olaia – a centre of phoenician influence in River Mondego (Portugal). Assessment and expectations</i> Sara O. Almeida, Raquel Vilaça.....	1495
<i>La navigation maritime et fluviale en Mediterranee occidentale : le cas du Maroc entre le VIII siecle av. J.-C. et l'ier siecle ap. J.-C.</i> Mohamed El Mhassani.....	1505

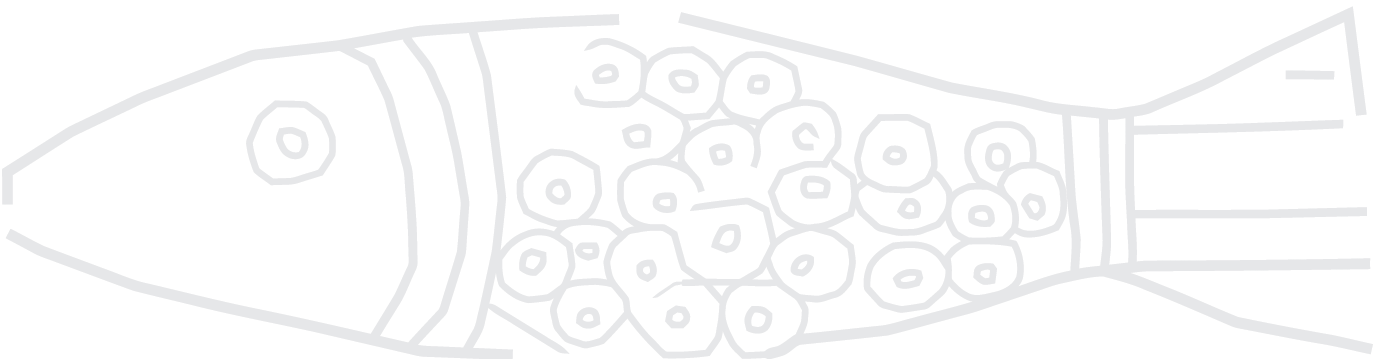
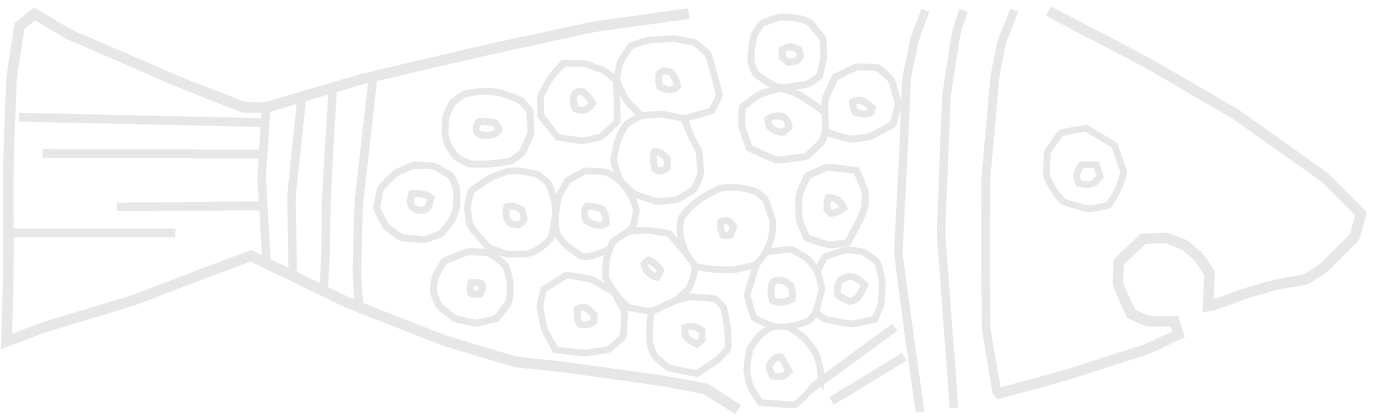
<i>La presencia fenicio-púnica en los confines de Iberia</i>	
Francisco José García Fernández, Eduardo Ferrer Albelda, Javier Rodríguez-Corral, Antonio M. Sáez Romero, Josefa Castiñeira Rey.....	1513
<i>Cultura materiale e interazioni coloniali nella Penisola Iberica tra VIII e VI sec. a.c.</i>	
Sara Giardino.....	1531
<i>The impasto ware development in the phoenician and punic world. The recognition of the production groups between east and west</i>	
Cecilia Guastella.....	1543
<i>Reflexions sur la presence phenicienne a Chypre</i>	
Christina Ioannou.....	1553
<i>El período orientalizante en el Valle del Río Guadalete (Cádiz)</i>	
Ester López Rosendo.....	1561
<i>Melqart, Tiro y los fenicios de la hispania romana: la construcción de una identidad situada</i>	
Francisco Machuca Prieto.....	1581
<i>Los Castillejos de Alcorrín (Manilva, Málaga): la envergadura de una empresa autóctona en la esfera de la colonización fenicia en las proximidades del Estrecho de Gibraltar</i>	
Dirce Marzoli, José Suárez Padilla, César León Martín.....	1591
<i>O impacto da colonização fenícia no estuário do Tejo: o caso de Lisboa/Almaraz</i>	
Elisa De Sousa.....	1603
<i>Fenici, punici e sicelioti nella Sicilia occidentale tra contatti, relazioni e conflitti: storiografia e registro archeologico</i>	
Francesca Spatafora.....	1615
<i>Progetto S'Urachi: incontri culturali intorno a un nuraghe di età fenicio-punica</i>	
Peter Van Dommelen, Damià Ramis, Andrea Roppa, Alfonso Stiglitz.....	1627
<b>POSTERS</b>	
<i>Archaeometric analysis on phoenician and punic amphorae from Pani Loriga (south-western Sardinia, Italy)</i>	
Virginia Avogaro, Lara Maritan.....	1639
<i>Hallazgo de una máscara púnica y un relieve androcéfalo en el mundo ibérico septentrional. Estudio arqueométrico, contexto e interpretación</i>	
Jaume Buxeda I Garrigós, Marisol Madrid I Fernández, Eva Miguel Gascón, David Asensio I Vilaró, Rafel Jornet I Niella, Dani López Reyes, Jordi Morer de Llorens.....	1647
<i>La iconografía marítima en las monedas fenicias orientales</i>	
Agustín Campos de la Guía.....	1659
<i>Il popolamento del Mediterraneo Antico</i>	
Alfredo Coppa, Michela Lucci, Sihem Roudesli-Chebbi, Francesco La Pastina.....	1665

<i>Pozzi e sistemi di canalizzazione a Mozia: i nuovi dati provenienti dall'edificio J.</i> Martina Di Giannantonio.....	1671
<i>La adopción del torno en las producciones indígenas del s. VIII-VII a.c. en el sudeste de la península ibérica vista a través de los vasos de 'paredes finas'</i> Alberto Dorado Alejos, Fernando Molina González .....	1677
<i>Cippi, stele e segnacoli funerari della necropoli arcaica di Mozia</i> Giacchino Falsone, Caterina Ferro .....	1685
<i>Las monedas fenicio-púnicas en Extremadura</i> José Miguel González Bornay .....	1693
<i>Un amuleto egiptizante en forma de mono procedente de los fondos del Museo de Cáceres</i> José Miguel González Bornay, Esther Rodríguez González .....	1699
<i>New evidence for local continuity and phoenician influence in the ceramic assemblage from Iron Age Su Padrigheddu (west-central Sardinia)</i> Linda R. Gosner, Jeremy Hayne, Emanuele Madrigali, Jessica Nowlin.....	1705
<i>La Necropoli di Monte Sirai come laboratorio bio-archeometrico: nuove datazioni al 14c e analisi del DNA antico</i> Michele Guirguis, Giampaolo Piga, Rosana Pla Orquín .....	1715
<i>Nuragici e fenici nella Sardegna meridionale: il caso di Cuccuru Nuraxi a Settimo San Pietro (Sardegna)</i> Maria Adele Ibba, Gianfranca Salis, Alfonso Stiglitz .....	1725
<i>Infraestructuras portuarias y zonas de atraque natural en el contexto de Toscanos y el paleoestuario del Bajo Vélez (Málaga, España) a través de SIG</i> Jaime Márquez Morant.....	1733
<i>Pautas de asentamiento de la expansión colonial fenicia</i> Eduardo Martínez Andújar .....	1741
<i>Influencias culturales fenicio-púnicas en la religión de las culturas protohistóricas Canarias ¿Un posible caso de Molk?</i> Ruth Medina Hernández.....	1747
<i>S. Antioco (Sardinia, Italy). "Sulci: Progetto Tofet". First remarks on archaeometrical analyses of pottery (2015-2017)</i> Valentina Melchiorri, Stefano Naitza, Silvana Grillo.....	1753
<i>Il popolamento di Tharros in età fenicia e punica. Analisi antropologiche preliminari dalla necropoli meridionale di Capo San Marco (Penisola del Sinis - Or)</i> Francesca Meli, Anna Chiara Fariselli, Luca Sineo.....	1761
<i>Motivos orientales en ambientes locales: la flor de loto en las cerámicas pintadas San Pedro II de Alarcos</i> Pedro Miguel Naranjo .....	1769

<i>Elementi lignei dall'area del Porto di Tharros (Laguna di Mistras, Cabras)</i>	
Maria Mureddu, Francesco Solinas, Carla Del Vais.....	1777
<i>La relación entre el hábitat urbano y los santuarios de Gadir (Cádiz, España).</i>	
<i>Una propuesta de análisis de visibilidad mediante SIGs</i>	
Natalia López Sánchez, Ana M <sup>a</sup> Niveau De Villedary y Mariñas, Pablo Sicre González, Juan Ignacio Gómez González.....	1785
<i>Singularidades de uma matriz comum: arquitectura e urbanismo orientalizante na Quinta do Almaraz (Almada, Portugal)</i>	
Ana Olaio, Fernando Robles Henriques, Telmo António.....	1795
<i>Immagini in contesto: Riflessioni sulle stele di Sulky e di Monte Sirai (Sardegna - Italia)</i>	
Rosana Pla Orquín.....	1805
<i>Interacción fenicia y púnica en el sector central del sureste ibérico: aportaciones desde el proyecto Arqueotopos III</i>	
Sebastián F. Ramallo Asensio, María Milagrosa Ros Sala, Benjamín Cutillas Victoria, Felipe Cerezo Andreo.....	1813
<i>Un askos de producción mediterránea en el confín del mundo</i>	
Rafael María Rodríguez Martínez, Diego Piay Augusto, María Luisa Castro Lorenzo, Francesca Verde.....	1821
<i>El olor del festín: perfumes y aromas litúrgicos en espacios domésticos y funerarios del NE de la península ibérica</i>	
Samuel Sardà Seuma.....	1829
<i>Child inhumations on the island of Motya. New evidence from the archaic cemetery</i>	
Gabriele Lauria, Paola Sconzo, Gioacchino Falsone, Luca Sineo.....	1837
<i>Paesaggi funerari tra età punica e romana nella Sardegna centro-occidentale: il caso della necropoli di Punta Zinnigas (San Vero Milis, OR)</i>	
Maura Vargiu.....	1843
<i>El cinabrio en la protohistoria hispana. Algunos indicios para la apertura de una vía de investigación</i>	
Mar Zarzalejos Prieto, Patricia Hevia Gómez, Germán Esteban Borrajo.....	1851
<b>TALLER DOCTORAL</b>	
<i>Necrópolis de hipogeos en las islas Baleares (ss. VI-II a.n.e): ¿origen local o fruto de una interacción con grupos fenicio-púnicos?</i>	
Sonia Carbonell Pastor.....	1863
<i>Alfarerías y producción cerámica durante el Bronce Final y la Primera Edad del Hierro en el sector central del sureste ibérico</i>	
Benjamín Cutillas Victoria.....	1871

<i>Tel Shiqmona: a forgotten phoenician site on the Carmel coast</i> Golan Shalvi.....	1885
<i>La producción de ánforas en el ambiente púnico de La Illeta dels Banyents</i> <i>(El Campello, Alicante). Un breve avance</i> Pascual Perdiguero.....	1893
<i>Il sistema idrico urbano di Solunto fra IV E I secolo a.C.</i> Polizzi Giovanni.....	1903
<i>Infancia y prácticas funerarias en la necrópolis del Puig des Molins, Ibiza (ss. VII-II a.C.)</i> Aurora Rivera-Hernández.....	1921
<i>La posible influencia fenicia en la residencia fortificada de la Primera Edad del Hierro</i> <i>de Sant Jaume (Alcanar, Tarragona) a partir del estudio de las estructuras de combustión</i> Carme Saorin .....	1935
<i>Territorio ed economia del Marocco pre-romano: studio di archeologia del paesaggio e</i> <i>delle risorse nella regione di Meknès</i> Di Fiammetta Susanna.....	1943





**CONFERENCIA INAUGURAL**



## PHOENICIANS AND PUNIC IN THE MEDITERRANEAN AND BEYOND: NEW THEORETICAL AND METHODOLOGICAL CHALLENGES

ANA MARGARIDA ARRUDA<sup>1</sup>

### PRELIMINARY REMARKS

This text largely consists of my opening lecture at the IX International Congress of Phoenician and Punic Studies, delivered at Mérida on 22 October 2018. I essentially focused on methodological and theoretical issues, and the new challenges they raise to our work, leaving aside the balance of the last four years I made at the time and the formal words required by the occasion. I must however deeply thank the Secretary-General of this Congress, Doctor Sebastian Celestino Pérez, for accepting the challenge of organising this event proposed by the International Scientific Committee on Phoenician and Punic Studies. I also thank him for the way he welcomed all of us to Mérida and extend this gratefulness to his entire team, particularly to Esther Rodríguez González. I am also grateful for their invitation to deliver the Opening Lecture of this important meeting, which I gladly accepted with honour and pleasure – despite my initial hesitation, due to the responsibility of such task.

I also wish to express in writing how much we felt the absence of Paolo Bernardini and Paco Toscano, two dear friends who have recently departed. Their kindness, cordiality and generosity, as well as the quality of their work, make them irreplaceable. I very dearly recall professors Don José María Blázquez and Don Manuel Pellicer, frequently present at all “our” Congresses and true masters for many of us. The work they left is a legacy that we must care for and convey to the coming generations.

### THE THIRD SCIENTIFIC REVOLUTION

The so-called Third Scientific Revolution, born at the Massachusetts Institute of Technology in the early 2010s, more precisely in 2011, in the framework of a meeting organised by the American Association for the Advancement of Science (AAAS), eventually impacted on all sciences – Archaeology naturally included, as Kristian Kristiansen and Stephen Larsson already evidenced in 2014 (Kristiansen *et alii* 2014).

This new scientific paradigm, viewed by many as a return to the Newtonian canon (Beishler 2009), basically relies on the notion of convergence. It aims to radically change the rules of knowledge and the way

---

<sup>1</sup> Uniarq - Centro de arqueologia da Universidade de Lisboa. a.m.arruda@letras.ulisboa.pt.

we approach it. The said convergence, as proposed in the famous 2011 “report” issued after the MIT meeting, signed by 12 researches led by MIT Professor and Nobel Prize winner Phillip A. Sharp, involves the merge of life sciences with physics and engineering (<http://www.aplu.org/projects-and-initiatives/research-science-and-technology/hibar/resources/MITwhitepaper.pdf>). The new interdisciplinarity among different areas of knowledge proposed by these authors can only succeed if based on a true discipline integration, rather than a mere collaboration among different disciplines. New working methodologies incorporating technologies traditionally used only by some sciences should be applied by all of them, so that knowledge can become global and universal. All scientific research can therefore capitalize on the knowledge of different areas, from informatics to microbiology. Different disciplinary approaches, so far segregated, must be duly integrated. Technological processes must also be merged, in order to create new opportunities for the advancement of science, as stated in the 2011 “manifesto.”

Convergence only marginally encompassed the so-called social sciences, especially because it was initially designed to solve problems of the so-called life sciences – namely in the areas of medicine and biology. Increasingly accurate genetical knowledge, provided by the development of microbiology, yielded obvious benefits to mankind at large in terms of health care – but also regarding climate, food, and even energy issues.

As it often happens, however, the new paradigm was adopted by other fields of knowledge, namely Psychology, Sociology and History. And Archaeology did not obviously remain outside this new paradigm.

In the specific case of Phoenician and Punic studies, the Third Scientific Revolution has had increasingly significant repercussions, adding new methodologies to laboratory and field research and deeply impacting on our work’s theoretical frameworks.

## PHOENICIANS AND PUNIC BY LAND AND BY SEA: MOBILITY

As we know, human mobility and migrations are timeless universal phenomena, and they currently rank at the top of the agenda for the worst possible reasons. They happened in the distant past, beginning with the hominization process itself, but also during Pre-History, Pre-Classic and Classic Antiquity, as well as in the 20<sup>th</sup> century. At the time I am writing, the Mediterranean is being crossed by thousands of migrants. The mindset and behaviour of most European government agencies in the face of such reality make me feel so ashamed that I feel the obligation of deeply regretting them in this paper<sup>2</sup>.

Reasons of different nature explain such population displacements – mostly, but not exclusively, by sea, i.e. political and social instability, population growth, farming and food shortages, opening of markets and demand for raw-materials, among others.

Few data enable us to approach such phenomena in Pre-Classic Antiquity, given the scarcity of literary sources. Although literary texts – more specifically the Old Testament for the Ancient Middle East, the Egyptian literary texts and the Assyrian Annales inform us of such migrations, archaeological materials (pottery, metal, glass), architecture (funerary and household), construction techniques, worship, rituals, deities, and epigraphy have been crucial to assess the presence of exogenous populations in certain places.

---

<sup>2</sup> According to UNHCR, it is estimated that 5 million Syrians have left their country in 2015. The EU response, with the exception of Greece, was the so-called “pact of shame”, which closed Greece’s maritime border with Turkey.

The presence of Phoenicians and Punic ranged from the East to the Atlantic, as Archaeology has shown for a long time. But Third Scientific Revolution has allowed to approach the question of mobility with other methodologies than strictly archaeological ones, namely focusing on the anthropological remains collected from different Phoenician and Punic necropolises in the Eastern and Central Mediterranean.

Tests to ancient DNA recovered from human skeletons in Carthage (Tunisia) and Monte Sirai (Sardinia), combined with DNA of human remains from the Teatro Cómico in Cadiz (Spain), yielded highly significant data to our discipline. These data received widespread media coverage worldwide.

In his mitochondrial genome, Ariche, a young Carthaginian buried in the late 6<sup>th</sup> century BCE at the hill of Byrsa, in Carthage, possessed a very particular haplogroup, U5B2c1, a specific subtype from a typically European haplogroup (Matisso-Smith *et alii* 2016). On the other hand, considering the sequence of the mitochondrial genome of 47 present-day Lebanese, who include elements of the U5 haplogroup, it was found that none of them belonged to the U5B2c1 subtype. On the contrary, this haplogroup is currently frequent in Western Europe and the United States of America, and the specific branch of the young man from Byrsa was detected in individuals of Central Portugal.

Other data were obtained making the same type of tests on human remains from the necropolis of Monte Sirai, on the Western coast of Sardinia. These were carefully compared with the results from the remains found in four different Lebanese archaeological sites (BEY 197, BEY 198, SAIFI 477, Tell Fadous-Kfarabida) (Matisso-Smith *et alii* 2018), as well as the mitochondrial DNA sequence of 87 present-day Lebanese and 21 ancient (pre-Phoenician) DNA samples from Sardinia, and 200 present-day samples (Olivieri *et alii* 2011).

Results bear witness to the presence of (possibly pre-Phoenician) DNA in some skeletons of the Monte Sirai necropolis, more precisely belonging to the H haplogroup (subgroups H1 and H3 - H+16311, H1e1a6, H1bn, H3 and H5d), but the K1a2d and U5b1i1 haplogroups, identified as Mesolithic a few years ago, are not present (Matisso-Smith *et alii* 2018). It should be noted that, according to the DNA data obtained for present-day Sardinian populations, the H haplogroup still exists in the island today, particularly in the hinterland (Olivieri *et alii* 2011). It is also present in the ancient Lebanese samples, namely through subgroups H and H34. Nevertheless, although the Sardinian and Lebanese samples do not share the great majority of their haplotypes, authors insist that the H haplogroup sequences are very close, separated only by slight mutations.

On the other hand, the presence of the W haplogroup (more specifically W5) found in a young woman is relevant, since this group apparently developed around the Caspian Sea from the LGM but is currently documented in Central-Northern Europe and the British Isles, as well as in the Berber populations of Morocco. Relationship with the Phoenician world was established through the Tin Route (Matisso-Smith *et alii* 2018).

More importantly, the N1b1a5 haplogroup was detected in a child buried in Monte Sirai, which the authors of the study linked to the Phoenician presence, as this haplogroup exists among present-day populations of Northern Africa (Tunisia and Morocco) and Sicily (Matisso-Smith *et alii* 2018).

According to the authors responsible for the study, DNA tests made to skeletons from Monte Sirai demonstrated the introduction of Phoenician and Punic populations in the island through female mobility, proved by the presence of the N1b1a5, W5 and, possibly, X2b haplogroups.

The same types of tests were performed in 21 individuals from Cádiz, eight of them from the excavations at the Teatro Cómico (Gomes *et alii* 2014; Calero *et alii* 2015). Nuclear genetic material appropriate for testing was collected in only 13 individuals; all these skeletons were picked at the important Phoenician nucleus of Cádiz (Botto 2014).

Results from the most ancient individual, 1ATC, revealed a DNA that can be integrated into the HVOa and U1a haplogroups. It has not been possible to ascertain if it belonged to one or another maternal lineage. Today, both are very well documented, mainly, but not exclusively, in the Middle East, and in the “Mediterranean areas of historical Phoenician influence,” as labelled by the authors (Calero *et alii* 2015). This evidence points to a Phoenician origin: of first or second generation.

As regards the 2Atc remains, the young adult who became known as Valentin, data point at a highly probable integration into the K and H groups – the first prevailing in the Middle East, and the second in Western Europe. His maternal lineage (K or H) could not be clearly established, but in this case that is not particularly relevant.

DNA data from the Teatro Cómico of Cádiz are highly important, mainly because they are directly associated with archaeological contexts corresponding to one of the oldest Phoenician occupations in Iberia, well documented by its remains (Botto 2014). Even though present-day DNA data were used, they should be taken in account, albeit with due caution. Be that as it may, DNA results just help to confirm what the archaeological data and classical sources had already revealed beyond doubt, i.e. Cádiz is the ancient Gadir and Eastern Phoenicians settled there.

I wish by no means to diminish the extraordinary importance of this type of tests, which, in recent years, were introduced in our scientific practice. Their interest and relevance are undeniable.

Their relevance is proved by the fact that DNA testing of anthropological remains from the original regions of the Phoenicians and territories colonized by Phoenician migrants strongly evidenced the great human mobility in the Mediterranean basin, at least from the mid-first millennium BCE onwards. This fact was clearly suggested by archaeological data and is now confirmed by “white coat sciences,” so it could and should be considered by European politicians of recent years. Facing a mobility phenomenon of the same scale, although for different reasons and grounds, they did not always act the right way, on the contrary. Since History in general, and particularly Antiquity, have often been used to justify the present, let them now be used, for more appropriate reasons, by the political agents – who should also recall identical situations of an opposite trend.

But these highly important DNA tests should be considered with caution. First, data bases still are considerably small, and the most complete ones are about present-day populations, whose mobility is obviously much higher than ancient ones. Moreover, they also result from other major population displacements occurred from Roman Times until today, including Europe’s occupation of Northern Africa and the Middle East in the 19<sup>th</sup> and 20<sup>th</sup> centuries. As I have shown in the previous pages, the results from the paleogenetic studies on Cádiz, Sardinia, Carthage and Lebanon were almost exclusively compared with those of present-day populations – which determined, for example, the genetic closeness between the young Carthaginian Ariche and an individual that currently lives in Central Portugal.

On the other hand, the extraction methods are relatively recent and may be improved and modified, generating different data. The non-critical and overly enthusiastic support to the results of

this type of tests is, in my opinion, somehow worrying – as expressed by our colleagues from the laboratory of Forensic Genetics and Populations Genetics of the Complutense University of Madrid, in their report on Cádiz: “...se deberá tener una extremada precaución a la hora de extrapolar estos datos a las poblaciones antiguas, siendo exclusivamente orientativas, ya que no se sabe si estas frecuencias representan fenómenos históricos de movimientos poblacionales, efectos “bottleneck” o efectos “fundador” (Gomes *et alii* 2014).

Tests already performed for Pre-History and Proto-History deserve our attention and should continue with a view to setting up a wide-spectrum data base. At the same time, however, such data base should be duly calibrated in chronological terms. Only this way, by mapping the various Modern-day groups, can we evolve towards a more realistic interpretation of Pre-Classical colonisations and migrations. Until then, however, we must act wisely to prevent such data from leading to extravagant interpretations – which sometimes do not adequately consider archaeological research.

Let us remember, by the way, the recent case of a genetic study made by David Reich at Harvard University. Even before its publication on *New Scientist* it was divulged by the media, and it concluded that there would have been “a collective massacre of male Iberian inhabitants around 2,500 BCE” during the Bronze Age. This was apparently because it had been proved that the masculine genome, Y, was completely replaced in the territory of Spain and Portugal. This data meant that “...newly arrived men in the Iberian Peninsula had preferential access to local women...” (<https://terraeantiquae.com/m/blogpost?id=2043782%3ABlogPost%3A447050&maxDate=2018-10-07T14%3A08%3A51.573Z>). Violent conquest would have been achieved by populations from the Caucasus, namely the Yamna, with a quick and widespread impact.

This study, which significantly impacted on the international media, was strongly rebuked by Iberian archaeologists, who drafted and published a “Manifiesto” stating the following: “...la utilización de términos como ‘invasión’, ‘conquista’ o ‘borrar del mapa’ no solo está completamente fuera de contexto en el conocimiento que actualmente se tiene de este periodo prehistórico, sino que es injustificada a la luz de las evidencias empíricas existentes ... es la arqueología la que proporciona los datos y las garantías de calidad contextual para que, mediante la interdisciplinariedad, los datos arqueogenéticos resulten significativos y relevantes, y es mediante su integración con los datos arqueológicos como los datos arqueogenéticos adquieren una relevancia que por sí solos no tienen”. (<https://www.tercerainformacion.es/articulo/cultura/2018/10/06/respuesta-de-91-arqueologos-a-el-pais-y-otros-medios-sobre-la-inconsistencia-de-la-noticia-una-invasion-borro-del-mapa-a-los-hombres-de-la-peninsula>).

Coming back to the young man from Byrsa and the individuals buried at Monte Sirai, in the territory of present-day Lebanon and Cádiz, perhaps we should state that overrating genetic identity is, in my opinion, a clear step back in our studies – also in theoretical terms. Cultural identity cannot be discarded. I am sure that Ariche has much closer cultural affinities with any inhabitant from Monte Sirai or Beyruth of the first millennium BCE than with a present-day resident of Central Portugal, even though they share this mitochondrial haplogroup, and Ariche shares no common genetic markers with the folks from Sardinia and Cádiz.

These tests are, I must insist, extremely important and should be developed and extended to other archaeological settings. But they cannot restrict our thought nor be accepted without reservations – so more so that, probably in a foreseeable future, they will be subject to methodological changes, like the C14 tests.

Another driver that is currently valued in archaeology in general, and particularly Phoenician-Punic archaeology, is directly related to the aforementioned issues. It also concerns anthropological remains, but from a different perspective. Bioarchaeological tests of strontium isotopes – recently complemented by tests to oxygen isotopes, from human bones or the soils in which they were buried, and possibly associated fauna remains- have yielded important data concerning human diet and the geographical provenance of individuals, thus allowing to study patterns of residential mobility. But the mobility perceived from such tests can only be related to short displacements, such as a few dozen kilometres, and cannot help to identify the massive transfer of large populations.

## BEYOND IMPORTS: USE AND “ABUSE” OF POTTERY AND OTHER MATERIALS

Physical-chemical tests to ceramics are not a novelty from recent years. Studies on their inorganic elements have deserved our attention for quite a long time. Organic elements, however, need new approaches, directly interfering with the contents of vessels, and have recently become as important as the study of their manufacturing regions, revealed by the chemical and physical properties of the ceramic body.

Again, I would like to highlight that these tests, whose importance I do not want to diminish, entail difficulties of interpretation, and we must refrain from excessively trusting their results. Imported pottery, more specifically amphorae, were mostly used to carry food supplies. But once they reached their destinations and their content was totally consumed, they could have been used to store other products, although always food-related; this may lead to erroneous interpretations. Moreover, we also know that amphorae and other containers could have had multifunctional characteristics, indistinctly carrying different types of food. Such fact, as duly observed in the amphorae-like containers of the Guadalquivir Valley from the “Turdetan” time (Moreno Megías 2017), must be remembered at all times when assessing the results of inorganic elements present in pottery.

Let us now approach other materials from a different angle, for example, the case of lead isotope tests performed on silver artefacts from sites in the Middle East (Dor, ‘Akko, ‘Ein Hofez, Eshtemoa), which revealed very early trade contacts (early ninth century BCE) between the East and the Atlantic (Eshel *et alii* 2019), fact already well known through morphologies and typologies of archaeological materials, concretely ceramics (González de Canales *et alii* 2004; 2006; 2008), even if the chronology of Plaza de Las Monjas (Huelva) as so as the Palestinian ones could be problematic. But it’s important to highlight that the conclusions obtained with the lead isotope tests were possible because metallurgical activity has been the object of highly-developed analytic studies, both in Iberia and other regions – namely Central Mediterranean (Sardinia), most of which only yielded hard evidence, which did not allow a relevant debate about their respective historical context. The work mentioned here takes a step further and provides a well-succeeded historical interpretation.

## QUANTIFICATION AND BIG DATA: THE RETURN TO PROCESSUALISM

Laboratory research on pottery, but also on metal, glass and remains (faunistic, carpological and palynological), has contributed to create highly complete and exhaustive databases on materials and archaeological sites. The so-called Big Data, which can be considered a hot topic of present-day archaeological studies, generally of open access, significantly changed archaeology’s scientific paradigm over the last two decades – in terms of data volume, high-speed of access and variety.

A fine example of such paradigm is the C14 database, implemented by *RadioCarbon*, which we all frequently use (Kristiansen 2014). Many data bases have been created by museums, and special reference should be made to the Egyptian scarab data base developed by Eric Gubel and Vanessa Boschloos in the context of the Royal Museums of Art and History, in Brussels, and also *Hesperia*, created a few years ago by Javier de Hoz (whom I pay my heartfelt sincere tribute) for paleo-Hispanic languages (<http://hesperia.ucm.es/noticias.php>).

For the benefit of the present topic, I must also mention the use of paleo-environmental analyses for interpreting the historical and cultural dimension of ancient landscapes (mainly proto-historical) by our colleagues of Catalonia, for example, following the work developed for other non-Mediterranean geographies. Resorting to morphological tests of the soil, combined with faunistic, palynological and carpological research, 3D-modelling and photo-interpretation technologies (Orengo and Petrie 2018), its goal was to incorporate data from NE Iberia into the geographical data bases of GIS systems (Palet *et alii* 2017).

Measuring and counting are apparently the bases of the new paradigm established by the Third Scientific Revolution; Arts in general, and particularly Archaeology, did not want to be pushed aside. Hard and tough positivism, harder and tougher than in the 1960s and 1970s, make us return to an archaeology with a processual profile, which paradoxically despises small-scale studies, so dearly loved by New Archaeology.

In my opinion, however, data provided by the convergence proposed by the Third Scientific Revolution must be regarded with caution. Let us not forget that, in the 1950s, archaeologists were so dazzled with C14 that they viewed it as a panacea. At that time, we completely ignored calibration curves and Bayesian testing, two methods that significantly changed the absolute chronological framework we use. Even today, radiometric dates can present issues regarding chronologies of the late second millennium/early first millennium BCE. Such issues are not only related with the ocean reservoir effects, or the 1<sup>st</sup> millennium BCE disaster, but also with the dates attributed to Palestine, with a subsequent impact on the Mediterranean.

## CONCLUDING REMARKS

The return to processual archaeology that occurred when the archaeological community joined the Third Scientific Revolution, is first and foremost a hard blow to the studies influenced by post-processualism. These studies, strongly present in our discipline, always criticized what they called the de-humanisation of the past, which, in their view, resulted from quantification methods and a focus on laboratorial tests. Material culture and lab tests are now gaining momentum, pushing post-modern agendas away from the limelight.

Other theories such as post-humanism, already used in research at least regarding the Roman Time, have not yet impacted on Phoenician-Punic studies, and therefore I shall not discuss them in detail. Deemed esoteric by Professor Kristian Kristiansen, they propose the absence of any distinction between humans, non-human animals, and even artefacts, suggesting the adoption of a common agenda for all. They criticize the anthropocentric vision of the world in general, and particularly archaeology, and their ontological perspective is markedly influenced by Bruno Latour, one of the founders of the Actor Network Theory (ANT). Reconciling post-humanists and archaeologists that have joined the Third Scientific Revolution appears to be impossible; for the first, the Cartesian subject-object dualism is a mere illusion, and the agendas of non-human entities have the same importance of human agendas.

But we are apparently evolving towards a new paradigm, in which quantification, Big Data and large-scale tests – e.g. DNA and strontium-isotopes, that enable discussion on issues abhorred by post-processualism, such as mobility, comparative analyses and migrations, are at the core of today's debate.

Perhaps a more holistic approach, taking in account not only micro-scale and context tests but also long duration and human displacement (which seemingly did exist in the past, just like they exist today) can be adopted over the coming years. It seems to me obvious that DNA tests and strontium-isotope tests, both focusing on issues such as migrations and mobility, need an appropriate framework that can only be provided by context analysis.

## BIBLIOGRAPHY

- BEISHLER, J. 2009: *The Third Scientific Revolution. A challenge to the fundamental basis of Science and Culture*.
- BOTTO, M. (ed.) 2014: *Los Fenicios en la Bahía de Cádiz: nuevas investigaciones*, Collezione di Studi Fenici, 46, Pisa – Roma.
- BURGERS, G.J.; KLUIVING, S.; HERMANS, R. 2016: *Multi-, inter- and transdisciplinary research in Landscape Archaeology*, Amsterdam.
- CALERO, M.; GENER, J.; PAJUELO, J. M.; NAVARRO, M. A.; TORRES, M.; PALOMO, S.; GOMES, C.; ARROYO, E.; WAGNER, C., 2015: “Study of mitochondrial DNA for ancient individuals (VIII B.C. to IV AD) found in Gadir (Cádiz), indicates the possible existence of maternal lineages early Phoenicians and subsequent probable interbreeding with native European population”, *Journal of paleopathology*, 25.
- ESHEL, T.; EREL, Y.; YAHALOM-MACK, N.; TIROSH, O.; GILBOA, A. 2019: “Lead isotopes in silver reveal earliest Phoenician quest for metals in the west Mediterranean”. *PNAS*, 116/13: 6007-6012. <https://doi.org/10.1073/pnas.1817951116>
- GOMES, C.; DIEZ, S.P.; ARROYO PARDO, E. 2014: *Estudio del origen biogeográfico a partir do ADN mitocondrial de dieciséis individuos procedentes de Cádiz, España*. Informe genético técnico. Laboratório de genética forense e genética de poblaciones. <http://cefyp.blogspot.com/search?q=ADN>
- GONZÁLEZ DE CANALES, F.; SERRANO, L.; LLOMPART, J. 2004: *El emporio fenicio precolonial de Huelva, ca. 900-770 a. C.*, Madrid.
- GONZÁLEZ DE CANALES, F.; SERRANO, L.; LLOMPART, J. 2006a: “The pre-colonial Phoenician emporium of Huelva, ca. 900-770 a. C.”, *BABesch*, 81: 13-29.
- GONZÁLEZ DE CANALES, F.; SERRANO, L.; LLOMPART, J. 2008: “The emporium of Huelva and Phoenician chronology”, in Sagona C. (ed.), *Beyond the homeland: markers in Phoenician chronology*, *Ancient Near Eastern Studies, Supplement*, 28: 631-655.
- KEITH, M.L.; ANDERSON, G.M., 1963: “Radiocarbon Dating: Fictitious Results with Mollusk Shells”, *Science*, 141: 634-637.
- KRISTIANSEN, K.; CHILTON, E.; GONZÁLEZ-RUIBAL, A.; HUVILLA, I.; LARSON, S.; NIKLASSON, E. 2014: “Towards a new paradigm? The Third Science Revolution and its Possible Consequences in Archaeology”, *Current Swedish Archaeology*, 22: 11-71.
- LARSSON, S. 2014: “The third science revolution and its possible consequences in archaeology a personal reflection. In Towards a new paradigm? The Third Science Revolution and its Possible Consequences in Archaeology”, *Current Swedish Archaeology*, 22: 53-56.
- MATISOO-SMITH, E. A.; GOSLING, A. L.; BOOCOCK, J.; KARDAILSKY, O.; KURUMILIAN, Y.; ROUDESLI-CHEBBI, S. 2016: “A European Mitochondrial Haplotype Identified in Ancient Phoenician Remains from Carthage, North Africa”, *PLoS ONE*, 11/5: 1-16. <https://doi.org/10.1371/journal.pone.0155046>

- MATISOO-SMITH, E. A.; GOSLING, A. L.; PLATT, D.; KARDAILSKY, O.; PROST, S.; CAMERON-CHRISTIE, S. 2018: "Ancient mitogenomes of Phoenicians from Sardinia and Lebanon: A story of settlement, integration, and female mobility", *PLoS ONE*, 13/1: 1-19. <https://doi.org/10.1371/journal.pone.0190169>
- MORENO MEGÍAS, V. 2017: *Del campo a la ciudad: Producción y comercialización de recipientes anfóricos en el Bajo Guadalquivir durante la II Edad del Hierro*, PhD dissertation, Universida de Sevilla.
- OLIVIERI, A.; SIDORE, C.; ACHILLI, A.; ANGIUS, A.; POSTH, C.; FURTWÄNGLER, A. 2017: "Mitogenome Diversity in Sardinians: a Genetic Window onto an Island's Past", *Molecular Biology and Evolution*, 34: 1230–1239.
- PALET MARTÍNEZ, J.M.; GARCIA MOLSOSA, A.; ORENGO ROMEU, H.A.; POLONIO ALAMINO, T. 2017: "Els espais altimontans pirenaics orientals a l'Antiguitat: 10 anys d'estudis en arqueologia del paisatge del GIAP-ICAC", *Treballs d'Arqueologia*, 21: 77-97.

El presente volumen recoge parte de las contribuciones presentadas durante el IX Congreso Internacional de Estudios Fenicios y Púnicos que tuvo lugar en Mérida entre los días 22 y 26 de octubre de 2018. Este encuentro, reúne cada cuatro años a los mayores especialistas en el conocimiento de las Culturas Fenicia y Púnica. Estos cuatro volúmenes recopilan parte de las novedades históricas y arqueológicas que fueron presentadas durante las jornadas. Los libros se estructuran en 15 áreas temáticas, además de los posters presentados y los trabajos correspondientes al Taller Doctoral.

This volume contains some of the contributions presented at the 9<sup>th</sup> International Congress of Phoenician and Punic Studies that took place in Mérida (Spain) between the 22-26 October 2018.

This international scientific meeting is held every four years to bring together experts in Phoenician and Punic culture. These four volumes compile part of the new historical and archaeological data that was presented at the congress. The books are structured into 15 thematic sections and posters and papers derived from the Doctoral Workshop are also included.