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# Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

**- Ιούλιος 2022 -**

**All human actions have one or more of these  
seven causes: chance, nature, compulsions, habit,  
reason, passion, desire.**

*(Aristotle, 'The Art of Rhetoric')*

## Newsletter of the Hellenic Society of Archaeometry

**- July 2022 -**

**Nr. 256**

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## **ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS**

### **WORKSHOP "YOUNG RESEARCHERS IN ARCHAEOLOGY", 5-6 OF SEPTEMBER**

Dear colleagues,

the abstract submission and registration for the 5th edition of the workshop "Young Researchers in Archaeology" (5-6 of September) is now open. Abstracts can be submitted until July, 3rd. Participation is free!

Due to the strong interest in the workshop from outside Europe last year, the workshop will be completely online this year and care will be taken to provide presenters and participants from different timezones the best experience possible. In addition, pre-recorded tutorials by well-known experts will be part of the workshop programme as a response on the huge demand of the online participants for such tutorials.

Please find further information on the workshop homepage:

[www.yrarchaeology.weebly.com](http://www.yrarchaeology.weebly.com)

We are looking forward to the contributions of the early stage researchers among you and your groups.

Best regards,

Thomas

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**10<sup>TH</sup> INTERNATIONAL CONFERENCE ON  
THE BEGINNINGS OF THE USE OF METALS  
AND ALLOYS (BUMA X) - “DIVERSITY AND  
CONNECTION OF METALLURGY ACROSS  
ASIA AND BEYOND”, FACULTY OF  
ARCHAEOLOGY, SILPAKORN UNIVERSITY,  
PRINCESS MAHA CHAKRI SIRINDHORN  
ANTHROPOLOGY CENTRE, AND FINE ARTS  
DEPARTMENT, THAILAND, 6-8 JULY 2022**

Dear All,

We would like to bring your attention to the upcoming the 10<sup>th</sup> International Conference on the Beginnings of the Use of Metals and Alloys (BUMA X) - “Diversity and Connection of Metallurgy across Asia and Beyond”, hosted by the Faculty of Archaeology, Silpakorn University, Princess Maha Chakri Sirindhorn Anthropology Centre, and Fine Arts Department, Thailand.

The virtual conference will take place between Wednesday, 6 July 2022 and Friday, 8 July 2022, from 10.00-18.00 (GMT+7, Bangkok).

The three-day conference will be comprised of four main sessions (and three keynote presentations, see below)

**1) Connecting the dots: metallurgy, societies, connection, and diversity within Asian continent (archaeometallurgy of various Asian regions: from Near East to Indo-Pacific regions)**

This session covers various sub-topics: Mines, mining, ores, and extraction/ Copper and Bronze Technology / Ferrous Technology / Gold, Silver, and Brass / Technical ceramics / Innovation and adaptation / Documentary evidence, ethnography, and metals

**2) Beyond Asia: metallurgical connection and diversity on a global scale**

**3) Human and environmental impacts of metallurgy in past societies**

**4) New or advanced analytical techniques in archaeometallurgy**

We are also honoured to announce our three keynote speakers for our upcoming conference.

**The making of Southeast Asian archaeometallurgy (6 July)**

Prof Vincent Pigott, Consulting scholar in the Asian Section of Penn Museum, USA

**The Production, Consumption and Flow of Copper-Based Metals in Bronze and Iron Age Mongolia (7 July)**

Assist Prof Thomas Fenn, Department of Anthropology, The University of Oklahoma, USA

**Interaction and localisation: new insights into early metallurgy in China (8 July)**

Prof Chen Kunlong, Institute for Cultural Heritage and History of Science & Technology, University of Science and Technology Beijing

To join the conference (on three different channels: the SAC website and its Youtube and Facebook), please register on the following link:

<https://forms.office.com/r/B7DkaBEFBX>.

For more information, please visit our official website:

<https://www.sac.or.th/interconference/bumaxbangkok2022/index.html>

Looking forward to seeing you online

With best wishes,

Pi Venunan

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**ภีร์ เวนุนันท์**

อาจารย์ประจำภาควิชา  
ภาควิชาโบราณคดี คณะโบราณคดี มหาวิทยาลัยศิลปากร  
๓๑ ถนนหน้าพระลาน แขวงพระบรมมหาราชวัง  
เขตพระนคร กรุงเทพมหานคร ๑๐๒๐๐  
โทรศัพท์ ๐ ๒๒๒๑ ๗๗๗๗  
โทรสาร ๐ ๒๒๒๖ ๕๓๕๕

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<https://www.facebook.com/Department-of-Archaeology-SU-1473619919548138/>

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## **10<sup>TH</sup> WORKSHOP AND MEETING OF THE USERS' GROUP FOR MASS SPECTROMETRY AND CHROMATOGRAPHY (MASC)**

### **Submission deadline extended!**

The 10th Workshop and Meeting of the Users' Group for Mass Spectrometry and Chromatography (MaSC) will take place in Bordeaux, France, from Monday 26th – to Friday 30 September 2022.

### **Workshop, 26-28 September 2022:**

*Proteomics for cultural heritage and large data set analysis and treatment.*

The three-day workshop will take place at the University of Bordeaux – Proteome Platform. It will provide multidisciplinary training in advanced mass spectrometry techniques applied to protein characterization in artistic, archaeological and paleontological objects. The practical hands-on workshop will be limited to 20 participants due to laboratory space constraints. Those wishing to attend are requested to submit a detailed CV and short paragraph describing their experience with proteomics and how they would benefit from the workshop, which should be included alongside the registration form and sent to [MaSCUB2022@gmail.com](mailto:MaSCUB2022@gmail.com) before **30 June 2022**. Notification of acceptance will be given by **7 July 2022**. The registration fee for the workshop is 350 Euros.

### **Meeting, 29-30 September 2022:**

The meeting will be held at the Grand Theatre of Bordeaux (Opera). It will comprise discussions and presentations on novel applications of chromatographic and mass spectrometric techniques to the study of art and cultural objects. Presentations of studies related to the workshop themes are encouraged, but contributions on a broad range of topics are welcome. We hope to create an informal atmosphere for the exchange of ideas, and discussions of work in progress are welcomed. During these two days, pioneering researchers will present their most recent developments and achievements in the cultural heritage mass spectrometry field, including technical and computational developments and applications.

Those interested in presenting a paper or poster should submit an abstract of up to 200 words to [MaSCUB2022@gmail.com](mailto:MaSCUB2022@gmail.com) before **30 June 2022**. Notification of acceptance will be given by **7 July 2022**. The registration fee for the meeting is 170 Euros for those who register before **30 July 2022** or 250 Euros after this deadline. The registration fee for students is 100 Euros.

Details of the workshop and meeting and the registration form can be found on the MaSC website, [mascgroup.org/workshops-meetings/...](http://mascgroup.org/workshops-meetings/...). Questions can be addressed to the local organizer, Dr. Francesca Galluzzi, Dr. Aleksandra Popowich or Prof. Caroline Tokarski, and the MaSC committee at [MaSCUB2022@gmail.com](mailto:MaSCUB2022@gmail.com).

On behalf of the local organization committee

Caroline Tokarski  
Francesca Galluzzi  
Aleksandra Popowich  
Klaas Jan van den Berg,

The coordinating committee of MaSC

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**7<sup>TH</sup> ARCH RNT SYMPOSIUM,**  
**ARCHAEOLOGICAL RESEARCH AND NEW**  
**TECHNOLOGIES, 6 – 8 OCTOBER, 2022,**  
**CALL FOR ABSTRACTS**

**Deadline : July 31, 2022**

The Symposium focuses on the use of New Technologies in the Archaeological Research (*Archaeometry, Engineering, Computing and Digital Technologies*) notably with the presentation of interdisciplinary approaches, special case studies and research on archaeological material and collections.

The Symposium will operate in hybrid mode but live attendance is strongly encouraged!

Sessions:

**Material Studies, Environment and Digital Cultural Heritage**

**ABSTRACTS** must be submitted electronically by **July 31**, using the template given on the web page: [www.laboratoryarchaeometry.gr/7th-arch\\_rnt](http://www.laboratoryarchaeometry.gr/7th-arch_rnt)

**SUBMISSIONS** will be reviewed by the members of the Scientific Committee. Presentations will be given either as oral or poster communications depending on the reviewers' decision, based on quality and originality.

All presentations will be eligible for publication in a **Special Issue** of the **Journal of Archaeological Science: Reports**.

**Chair**

Nikolaos Zacharias

**Scientific Committee**

S. Boyatzis, Y. Facorellis, E. Gliozzo, J. Henderson, I. Iliopoulos, I. Kakoulli, I. Karapanagiotis, A. Karydas, V. Kilikoglou, I. Liritzis, D. Möncke, A. Moropoulou, A. Sarris, G. Tsokas, A. Voett

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**Secretariat**

V. Valantou

**Registration\* Student: 50€**

**Regular: 100€**

# **1<sup>ST</sup> GREEK SUMMER SCHOOL** **SYNCHROTRON RADIATION PROPERTIES** **& APPLICATIONS, 5-8/9, 2022,** **THESSALONIKI**

## **SCOPE**

We are pleased to announce the 1<sup>st</sup> Summer School within the framework of Greece's participation in the ESRF (European Synchrotron Radiation Facility) hosted by Aristotle University of Thessaloniki. Aiming to establish a tradition, this event will provide the necessary background on the production and properties of synchrotron radiation as well as on its applications for the study of matter (e.g. diffraction & scattering, spectroscopies, imaging, etc). Case studies will unravel the diverse and multidisciplinary character of synchrotron radiation. The Summer School is addressed to Greek and foreign post-graduate and PhD students, to post-doctoral researchers and fellows involved in industrial R&D.

## **VENUE**

CIRI-BuildingA  
Center of Interdisciplinary  
Research and Innovation

## **PROGRAM**

The program consists of hourlong lectures and afternoon Lab courses where the participants will have the opportunity to handle real experimental data and practice on data evaluation and visualization (infographics). The tutors are experts in the field of Synchrotron Radiation. Bring your laptop to work on real experimental data during the afternoon lab courses.

Depending on Covid restrictions, this event may run in a hybrid mode with on-site and remote (zoom) participation.

## **REGISTRATION FEES**

**150 €** senior scientists  
**100€** students (B.Sc., M.Sc., Ph.D.)  
(they cover teaching material,  
lab courses, coffee & lunch breaks)

## **Local Organizing committee**

**Aristotle Univ. of Thessaloniki**  
Prof. Maria Katsikini, Chair  
Prof. Eleni C. Paloura, Vice Chair  
Prof. Makis Angelakeris, Treasurer  
Dr. F. Pinakidou, Conference Secretary  
Prof. Yiannis Arvanitidis, Member

## **Advisory Committee**

Dr. Andreas-GermanosKarydas, NCSR“Demokritos”  
Dr. Alexandros Lappas, FORTH  
Prof. Irene Margiolaki, Univ. of Patras  
Dr. Evangelia Moschopoulou, NCSR “Demokritos”  
Dr. ThanosPapazoglou, ESRF  
Prof. TheoharisStamatatos, Univ. of Patras

#### **INFORMATION**

**url:** [xafslab.physics.auth.gr/srss22.html](http://xafslab.physics.auth.gr/srss22.html)

**e-mail:** [srss22@physics.auth.gr](mailto:srss22@physics.auth.gr)

**tel:** +30 2310 998179

#### **Under the auspices**

Aristotle University of Thessaloniki  
Faculty of Sciences  
School of Physics

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# **9<sup>TH</sup> BIENNIAL EUROPEAN- MEDITERRANEAN (EUROMED- 2022) CONFERENCE, 31<sup>ST</sup> OCTOBER – 4<sup>TH</sup> NOVEMBER 2022, CYPRUS, CALL FOR PAPERS**

The newly established UNESCO and European Research Area (ERA) Chairs on Digital Heritage are announcing the International EuroMed 2022 conference dedicated on Digital Cultural Heritage Documentation, Preservation and Protection

This unique conference is in cooperation with several EU projects and in collaboration with the prestigious publisher Springer-Nature to celebrate the 2.000.000 downloads of our publications.

[www.euromed2022.eu](http://www.euromed2022.eu)

Sixteen years of European – Mediterranean Conferences on Digital Heritage Documentation, Preservation and Protection (EuroMed): 2006 - 2022

In cooperation with:

The EU Research Infrastructures: DARIAH-EU ([MailScanner has detected a possible fraud attempt from "hfc-cyprus.eu" claiming to be www.dariah.eu](mailto:fraud@dariah.eu)) European Research Infrastructure on e-Humanities and Art, CLARIN-ERIC ([www.clarin.eu](http://www.clarin.eu)) European Research Infrastructure for Language Resources and Technology, the H2020 MSCA ITN CHANGE project (<https://change-itn.eu/>), the H2020 Impactour project (<https://www.impactour.eu/>), the EU OPHERA project (<https://ophera.beniculturali.it/en/1/home>), the EU Photoconsortium (<https://www.photoconsortium.net/>), the CARARE Consortium (<https://www.carare.eu/>) and the Michael-Plus Association (<http://www.michael-culture.eu/>).

**Paper submission deadline: 31<sup>st</sup> July, 2022 (24:00 London UK time)**

The 9<sup>th</sup> biennial European-Mediterranean (EuroMed-2022) conference is co-organised by the UNESCO and the EU ERA Chairs on Digital Cultural Heritage. It brings together multidisciplinary researchers, policy makers, professionals, fellows, practitioners and stakeholders to explore some of the more pressing issues concerning Cultural Heritage today. In particular, the main goal of the conference is to focus on interdisciplinary and multi-disciplinary research on tangible and intangible Cultural Heritage, using cutting edge technologies for the protection, restoration, preservation, massive digitalization, documentation and presentation of the Cultural Heritage contents. At the same time, the event is intended to cover topics of research ready for exploitation, demonstrating the acceptability of new sustainable approaches and new technologies by the user community, owners, managers and conservators of our cultural patrimony.

Topics and themes:

Researchers and practitioners willing to participate to the EUROMED 2022 conference are invited to submit papers on original works addressing the following subjects and research themes:

- I. DIGITAL HERITAGE DOCUMENTATION, PRESERVATION, USE AND RE-Use
- II. PROTECTION, RESTORATION AND PRESERVATION OF TANGIBLE AND INTANGIBLE CULTURAL HERITAGE

More detail information regarding the themes can be found under the [Call for Participation](#).

#### Submission of Papers:

Submissions for the event are completely electronic through the on-line submission website available at <https://euromed2022.eu/paper-submission/>

The conference accepts only original, unpublished work written in English which will be blind-reviewed and published [by the prestigious SPRINGER-NATURE in LNCS](#).

We are soliciting two types of contributions:

1. PROJECT Research papers: they present new innovative research developments and results. They will feature a full-length oral presentation and will be published in a high-quality proceedings volume. Each submitted paper must not exceed 12 pages in total.
2. SHORT papers /Posters: they present preliminary ideas and works-in-progress. These papers will have a short oral presentation and will be also available as posters during the entire time of the event online. Each short paper must not exceed 8 pages in total.

Marinos Ioannides, CY; Eleanor FINK, USA; Isto HUVILA, SE; Andreas MAIER, DE;  
Costas PAPADOPOULOS, NL  
Chairs EuroMed2022

#### Με Εκτίμηση

ΕΚ ΜΕΡΟΥΣ ΤΩΝ ΔΙΟΡΓΑΝΩΤΩΝ ΦΟΡΕΩΝ

ΤΕΧΝΟΛΟΓΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΚΥΠΡΟΥ  
ΠΑΝΕΠΙΣΤΗΜΙΟ ΔΥΤΙΚΗΣ ΑΤΤΙΚΗΣ  
ΔΙΚΤΥΟ "ΠΕΡΡΑΙΒΙΑ"

Πανελλήνια Συνέδρια  
Ψηφιοποίησης Πολιτιστικής Κληρονομιάς  
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*Pan-Hellenic Conferences on Digital Cultural Heritage- EuroMed*  
*Πολιτισμός, Παιδεία, Έρευνα, Καινοτομία, Ψηφιακές Τεχνολογίες, Τουρισμός*  
<https://www.facebook.com/EuroMedDCH/>  
<http://www.euromed-dch.eu>

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EuroMed

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E-Mail: [euromed.greece@gmail.com](mailto:euromed.greece@gmail.com)

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**3<sup>RD</sup> CONFERENCE ON THE USE OF XRF  
IMAGING IN CONSERVATION, ART AND  
ARCHAEOLOGY, MA-XRF SCANNING IN  
CONSERVATION, ART AND ARCHAEOLOGY  
2022, 26-27 SEPTEMBER, DELFT, THE  
NETHERLANDS**

Dear colleagues,

This is the last reminder for the upcoming extended deadline for the MA-XRF conference on 3rd of July.

The conference will take in Delft on the 26<sup>th</sup> and 27<sup>th</sup> of September in Delft in the Netherlands and be followed by two days of workshops.

Invited speakers for the MA-XRF conference are:

- Laurence de Viguerie – Laboratory for Molecular and Structural Archaeology, CNRS & Sorbonne University, Paris.
- Claudia Caliri – Istituto di Scienze del Patrimonio Culturale – Consiglio Nazionale delle Ricerche (ISPC-CNR), Catania & Istituto Nazionale di Fisica Nucleare Laboratori Nazionali del Sud (INFN-LNS), Catania.
- Rob Erdmann – University of Amsterdam & Rijksmuseum Amsterdam.
- Marc Walton – M+ Museum, Hong Kong.

You can find all information on the conference [website](#) and submit the abstract on [EasyChair](#).

The list of speakers for the Reflectance Imaging Workshop can be found on the conference website.

Looking forward to see you in September 26th to 29th in the Netherlands,

Matthias Alfeld for the organising committee.

\*\*\*\*\*

Matthias Alfeld  
Assistant Professor for X-rays in Art and Archaeology  
TU Delft - 3mE - Materials Science and Engineering  
Mekelweg 2, Building 34, Office H-4-180  
2628CD Delft  
Nederland

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Save the date: MA-XRF 2022 conference in Delft: 26.+27.09.2022: <https://ma-xrf.tudelft.nl/>

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**ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ –**  
**JOB VACANCIES/FELLOWSHIPS**

**THE FITCH LABORATORY OF THE BRITISH**  
**SCHOOL AT ATHENS (BSA), WILLIAMS**  
**FELLOWSHIP IN CERAMIC PETROLOGY**

3-YEAR FIXED TERM APPOINTMENT

The Fitch Laboratory of the British School at Athens (BSA) invites applications for the post of Williams Fellow in ceramic petrology.

The Fellow will join a leading team of ceramic analysis experts and other archaeological scientists at the Fitch, as well as the vibrant BSA community and an extended network of international collaborators, to pursue research on archaeological ceramics following or adding to the Fitch Laboratory's research agenda. The latter combines the use of scientific methods with social anthropological approaches and experimentation, having a strong archaeological focus as well as a multi-scalar landscape perspective.

Beyond their own project, the post holder will be expected to participate in ongoing laboratory projects or contribute to the development of new ones. The appointee is expected to contribute to the BSA's teaching programme (including the Fitch's taught courses) and undertake supervision of interns and postgraduate students. The Williams Fellow, as laboratory staff, will coordinate the use and maintenance of the laboratory facilities for ceramic petrology (e.g. microscopes, reference collections), participate in regular staff meetings and contribute to outreach activities.

Starting date: 01/10/2022, or as soon as possibly thereafter.

The appointee must have a relevant PhD (in Archaeology or Archaeological Science), or have submitted the thesis. The fellowship is for three years. The post is based in Athens, Greece, and the gross salary will be in the range of 25,000-27,500€ per annum, plus private health insurance, while additional funding will be provided for analytical costs/research & conference travel.

Closing date for receipt of applications (and references): 1 July 2022.

Further details on the fellowship available here. Applications should be submitted via this link by Friday 1 July 2022.

For further details on the British School at Athens and the Fitch Laboratory.

For informal enquiries on the post and the application process, please contact the Laboratory Director, Dr Evangelia Kiriati (e.kiriati@bsa.ac.uk).

The BSA actively supports equality, diversity and inclusion and encourages applications from all sections of society.

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## ***ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS***

# **TRACKING THE NEOLITHIC IN THE NEAR EAST. LITHIC PERSPECTIVES ON ITS ORIGINS, DEVELOPMENT AND DISPERSALS** **EDITED BY YOSHIHIRO NISHIAKI, OSAMU MAEDA & MAKOTO ARIMURA | 2022**

Paperback ISBN: 9789464260809 | Hardback ISBN: 9789464260816 |  
Imprint: Sidestone Press | Format: 210x280mm | ca. 600 pp. |  
Language: English | 211 illus. (bw) | 109 illus. (fc)

This book combines the latest studies of Near Eastern Neolithic lithics by leading international archaeologists to develop their analytical potential and advance our understanding of the world oldest farming societies of the Near East in human history.

This volume presents the proceedings of the 9th International Conference of the Pre-Pottery Neolithic Chipped and Ground Stone Industries of the Near East, hosted at the University of Tokyo, Japan, from November 12 to 16, 2019 (PPN9-Tokyo).

A unique point of the volume, while referring to the origins and development as in the proceedings of the previous conferences, is a greater emphasis on regional perspectives to evaluate the Near Eastern Neolithic. The current research indicates that the earliest farming societies of the Near East developed in interaction with neighbouring hunter-gatherer societies, that either coexisted with them for long periods or soon assimilated to the Near Eastern farmers. Understanding these contrasting processes would shed new light on identifying the Neolithisation practices of the “core” regions in the Near East itself. A similar attempt was made at the PPN2-Warsaw in 1995, but the present volume provides the most up-to-date discoveries and perspectives after a quarter century.

The 39 papers in this volume include contributions on the Iranian Zagros, the Caucasus, and Central Asia, a region whose Neolithic archaeological records are far less well understood but that we believe will enrich our understanding of the first farming societies of the Near East.

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**Please visit the site: <https://www.sidestone.com/books/tracking-the-neolithic-in-the-near-east> [To purchase, go there for range]**

# **6000 BC. TRANSFORMATION AND CHANGE** **IN THE NEAR EAST AND EUROPE EDITED** **BY PETER F. BIEHL**

University of California, Santa Cruz, Eva Rosenstock, Rheinische Friedrich-Wilhelms-Universität Bonn Cambridge University Press  
ISBN: 9781107042957  
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Hardback

This is the first book to present a comprehensive, up to date overview of archaeological and environmental data from the eastern Mediterranean world around 6000 BC. It brings together the research of an international team of scholars who have excavated at key Neolithic and Chalcolithic sites in Syria, Anatolia, Greece, and the Balkans.

Collectively, their essays conceptualize and enable a deeper understanding of times of transition and changes in the archaeological record. Overcoming the terminological and chronological differences between the Near East and Europe, the volume expands from studies of individual societies into regional views and diachronic analyses. It enables researchers to compare archaeological data and analysis from across the region, and offers a new understanding of the importance of this archaeological story to broader, high-impact questions pertinent to climate and culture change.

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**Please visit the site:**

<https://www.cambridge.org/us/academic/subjects/archaeology/prehistory/6000-bc-transformation-and-change-near-east-and-europe>

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## **EΙΔΗΣΕΙΣ - NEWS RELEASE**

# **ARCHAEOLOGISTS MADE OLIVE OIL WITH AN ANCIENT EGYPTIAN RECIPE - YOU CAN'T GO WRONG WITH A CLASSIC, BY TOBIAS CARROLL**

Olive oil holds a rarefied spot in the food world — rich-tasting yet healthy, and able to be used in a wide variety of dishes and cuisines.

It's also something with plenty of history on its side — which is to say that people have been making use of olive oil for, literally, thousands of years. And if you're looking for evidence of that, you can find it on wall paintings dating back to ancient Egypt, which illustrate the techniques used to make said oil many years ago.

But why stop there? If beer can be brewed according to an ancient Egyptian recipe, why not take a similar approach to olive oil? That's what Emlyn Dodd, the Assistant Director of Archaeology for the British School at Rome, documented in a recent article for *The Conversation*.

Dodd writes that “[l]arge proportions of Greek, Roman and presumably Phoenician agricultural texts are devoted to the production of oil” — and set out to try some of those methods out in the present day. Among them was the torsion method, which was documented between 4,500 and 4,600 years ago.

Making olive oil using this method is relatively simple. First, crush olives and place them inside a permeable bag. The next step, Dodd writes, involves “inserting sticks at either end of the bag before twisting them in opposite directions.” Dodd tried a number of different approaches with this, and observed that “anchoring one end and twisting the other” gave the best results. Not all of the resulting liquid separated, but those that did resulted in “a delicious olive oil.” Not a bad result from a recipe dating back to the days when pharaohs walked the earth.

Please visit the site: [https://www.insidehook.com/daily\\_brief/food-and-drink/olive-oil-recipe-ancient-egypt](https://www.insidehook.com/daily_brief/food-and-drink/olive-oil-recipe-ancient-egypt) [Go there for pix]

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## **ANCIENT TOMBS POINT TO RICH FAMILIES FROM WEALTHY CYPRIOT COMMUNITY, BY JEAN CHRISTOU**

Swedish archaeologists in cooperation with the antiquities department have excavated two burial tombs at the site of Dromolaxia-Vyzakia that they believe belonged to two rich families judging by the nature of the finds, they said on Friday.

This large Late Bronze Age city, which flourished between 1630 and 1150 BC, is situated along the shores of the Larnaca Salt Lake near the mosque of Hala Sultan Tekke.

Both tombs contained material from the outgoing 15th and the 14th centuries BC, which chronologically corresponds to the Late Cypriot IIA-B period, the Late Helladic IIIA1-2 and the famous Egyptian 18th Dynasty. One of the tombs was partly affected by farming activities. The tombs were fenced off in 2017 for excavation, which is now completed.

They were both family tombs with numerous interred individuals, and had been cut into clay-rich soil. The study of the skeletal remains is not yet finalised. Therefore, the estimation of the number of individuals, their gender and age at death have to await further investigations.

“New-born, infants and young and ‘old’ adults were found associated with numerous burial gifts,” an announcement from the antiquities department said, adding that ‘old’ should be understood in the context of the fact that individuals at the time rarely lived beyond 40. “The average lifespan was quite low in this period,” it added.

Dominating among tomb gifts was pottery, mainly ceramic vessels of high quality which were produced on Cyprus but also numerous imports.

The most common imports arrived from the Aegean, the Mycenaean and Minoan cultural spheres, the department said. There are also imports from Anatolia, the Levant and Egypt. “From the latter arrived exquisite vessels of alabaster and scarabs,” it added.

“It is worthwhile noticing, that one of the alabaster vessels of Egyptian origin imitates Cypriot pottery, the so-called Base-ring I ware, which became very popular in Egypt during the reign of pharaoh Thutmose III in the 15th century BC.”

Some of the scarabs have inscription with hieroglyphs, which will be deciphered, the announcement said.

There are also several objects of ivory which immediately were submitted to the conservators of the department of antiquities, in order to preserve and conserve the extremely brittle material.

“The nature of the finds points to a wealthy Cypriot society which had established contacts with cultures all over the Mediterranean and beyond,” the announcement said.

“The wealth of the inhabitants of Dromolaxia-Vyzakia was based on the production and export of copper, and far-reaching trade. This is substantiated by tons of copper slag and ore which was refined in intra-urban workshops.”

The excavations at the harbour city were carried out in May and June this year by a team headed by Professor Peter Fischer from the University of Gothenburg, Sweden. Parallel with these excavations, another group of the Swedish team, supervised by Dr Teresa Bürge processed the finds from previous excavations kept at the storerooms of the archaeological museum in Larnaca.

The Swedish team was assisted by Professors Kirsi Lorentz and Sorin Hermon and PhD students from the Cyprus Institute. The teams of the Cyprus Institute provided expertise for the excavation and recording of the human remains, and 2D and 3D presentations of objects and find contexts in addition to material analyses.

**Please visit the site: <https://cyprus-mail.com/2022/06/10/ancient-tombs-point-to-rich-families-from-wealthy-cypriot-community/>**

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## **MISSING LINK TO FIRST WRITTEN ALPHABET DISCOVERED ON ANCIENT POTTERY, BY PATRICIA CLAU**

Early writing found on a 3,500-year-old pottery shard in Israel may represent the “missing link” in the development of the first alphabet, according to researchers who published their findings recently in Smithsonian magazine.

The inscription, which has been under study since it was first unearthed in 2018, makes researchers think that it means that a standardized script—essential in any true alphabet—arrived in Canaan earlier than previously thought.

Pottery shard showing early alphabetic language found at Tel Lachish, Israel. Credit: Austrian Archaeological Institute of the Austrian Academy of Sciences

The letters used resemble Egyptian hieroglyphs, but they are not true hieroglyphs.

The letters are now believed to be the very oldest writing ever recorded in the ancient land of Israel, forming the basis of writing systems that developed later in time.

A report from the Jerusalem Post states that archaeologists unearthed the fragment as part of excavations that were undertaken at Tel Lachish in south-central Israel in 2018. The Tel Lachish archaeological site was once home to a large Canaanite city.

They were able to date the pottery shard using radiocarbon dating of grains of barley found alongside it, pinpointing its origin back to 1450 B.C., when the area was a center of Canaanite society. The archaeologists published their findings in the journal *Antiquity*.

Only six letters on two lines, the writing was inscribed millennia ago on the soft surface of a clay pot. Haggai Misgav, an epigraphist at the Hebrew University of Jerusalem, who was a co-author of the study, told interviewers from Haaretz that she believes that the first three letters spell out the word “ebed,” meaning “slave” or “servant.”

Oddly, the inscription was most likely part of a person’s name. According to archaeologists, a popular naming convention in ancient times combined “servant” with the name of a local god to show the person’s devotion to that deity.

The second line on the shard is believed to be the word “nophet,” meaning “nectar” or “honey.”

Missing link may connect Egyptian alphabetic inscriptions to later Canaanite writing

Because the text is short and incomplete, researchers have not yet definitively determined what the inscription says. At this time, it is also unknown whether the writing was meant to be read from left to right or right to left.

The researchers believe that the script represents a “missing link” connecting alphabetic inscriptions already discovered in Egypt and the Sinai peninsula with later writing originating from Canaan.

The writing employs an early version of the alphabet in which letters resemble the Egyptian hieroglyphs from which they evolved.

The new discovery appears to disprove a previous hypothesis which held that the alphabet only came to Canaan after Egypt came to rule the area.

Felix Höflmayer, the lead author and an archaeologist from the Austrian Academy of Sciences, told interviewers from the Jerusalem Post that “In the Late Bronze Age, between 1550 and 1200 B.C., the region was under the Egyptian empire.”

He further stated that: “The Egyptians imposed their administrative system and their own writing and many experts thought that the early alphabet might have been introduced in this context[,] but now we can see that it was already in use at least by the 15th century B.C., when there was not such a large-scale Egyptian domination.”

Because of its abundant water sources and fertile earth, early Canaanites flocked to the Tel Lachish area, and a large city flourished there for much of ancient history, according to information from the Jewish Virtual Library.

The Canaanites established a fortified citadel there in approximately 2000 B.C. After a fire destroyed the city sometime around the end of the 12th century B.C., the area was rebuilt as an Israelite fortress-city which was part of the Kingdom of Judah.

Unfortunately, Tel Lachish was destroyed once again in an Assyrian attack in the year 701 B.C. Known to have been an important site since time immemorial, archaeologists have been digging there since the 1930s.

Benjamin Sass, an archaeologist at Tel Aviv University who was not involved in the excavation and subsequent study of the shard, told interviewers that dating the barley discovered alongside the pottery fragment may not have pointed to an accurate date for the inscription itself since the grain might have been harvested after the vessel was created.

“The data published so far makes [the team’s timeline] a possibility...but by no means a certainty,” he notes in an article in Live Science.

Researchers already know for certain that the writing used by Canaanites eventually split into the alphabet that ancient Israelites utilized to write the Hebrew Bible and another version of an alphabet used by Phoenicians.

After the collapse of the Bronze Age in around 1200 BC, alphabetic writing advanced and developed further since the major powers around the Mediterranean collapsed, spurring small city-states to increasingly use their own, local languages.

According to Lydia Wilson, who had written on the development of early languages in an earlier article in Smithsonian, variations of the alphabet that were used in Canaan

therefore spread from what is now Turkey all the way to Spain—eventually giving birth to the Latin alphabet used in western languages today.

Höflmayer told the Jerusalem Post “All alphabets have somewhat evolved from hieroglyphs, the Phoenician one, the Hebrew one, the Greek one, the Latin one and so on.”

“Now we know that the alphabet was not brought to the Levant by Egyptian rule. Although we cannot really explain yet how it happened,” Höflmayer added, “we can say that it was much earlier and under different social circumstances.”

**Please visit the site: <https://greekreporter.com/2022/06/06/pottery-shard-may-show-missing-link-to-first-written-alphabet/> [Go there for pix and brief video]**

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## **A NEW MONEY ECONOMY AT THE DAWN OF THE IRON AGE, BY ELON HEYMANS**

Money attracts not only people, but also stories. For example, among his many digressions, the Greek historian Herodotus recounts the story of the Athenian Alkmeon. Alkmeon had assisted the Lydians upon their visit to the oracle in Delphi and, as a token of his gratitude, king Kroisos invited him to the palace in Sardis and told him to take as much gold as he could bear.

Dressed in a wide gown and wearing large boots, he immediately jumped onto a heap of gold dust (presumably that from the nearby Paktolos river) and loaded his boots and the folds of his garment with as much as he could carry, even sprinkling it over his hair and stuffing it in his mouth. Herodotus amusingly details how he stumbled out of the treasury, stuffed and swollen, ‘looking like anything but a human being’, a sight that caused Kroisos to burst out in laughter (Hdt. 6.125).

While offered as an explanation of how the powerful Alkmeonid family (which included Kleisthenes and Perikles) acquired its wealth, the story of Alkmeon clearly also makes fun of it. Alkmeon’s greed could hardly be satisfied. Taking home a great deal of gold was not enough, he wanted to physically surround himself with, even immerse himself in it. It brings to mind Scrooge McDuck, the cartoon figure characteristically reluctant to spend any of his money, out of fear that he should no longer have enough to swim around in it.

These are not just fabulous stories. They might appear ridiculous, but in fact mock some of our more fundamental attitudes towards money and wealth: we cannot get enough of it, and we like to cover or dress ourselves with it. Think of how wealth or the suggestion of it can be incorporated in our physical appearance through certain luxury brands of handbags, fancy cars, or the type of ostentatious display of gold known as bling-bling.

In fact, objects of wealth have functioned in many cultures throughout history to adorn the body, rather than to be hoarded. Such objects, whether feathers, beads, bangles, shells or cloth – often referred to as primitive currencies – are invested with social significance and prestige, forming the basis of their value. This poses somewhat of a paradox, because if you use wealth to dress or adorn yourself, there will be a natural limit to what the human body can bear; and only once wealth is no longer displayed – effectively taking it out of circulation – can it be hoarded, allowing one to give in to the desire to have more and more of it.

This paradox is visible in the emergence of silver money in the Iron Age Levant. Certainly, societies of the Ancient Near East long used precious metal, in particular silver, as a form of money. Silver is referred to as a unit of value in administrative records, and hoards containing cut and broken pieces of silver (so-called hacksilber) are known from around the middle of the third millennium BCE.

However, by the end of the Late Bronze Age evidence for the use of hacksilber in the Levant increases in the form of a series of hoards, for example from Ugarit, Tell Basta,



Megiddo and Beth Shean, indicating the growing importance of silver as a form of money.

Interestingly, most of the objects in these hoards are (fragments of) jewellery or vessels – manufactured objects that had functioned as prestige items in contexts of social interaction. In the Late Bronze Age political and social discourse, as we know from texts, such objects had been visible expressions of wealth that were kept in circulation, rather than being hidden and hoarded.

Map showing location of Bronze and Iron Age silver hoards. After Tzilla Eshel, Naama Yahalom-Mack, Sarel Shalev, Ofir Tirosh, Yigal Erel and Ayelet Gilboa, Four Iron Age Silver Hoards from Southern Phoenicia: From Bundles to Hacksilber, *Bulletin of the American Schools of Oriental Research* 379 (May 2018), Figure 1. Silver objects from a hoard from Ugarit, dating to the time of its destruction in the early twelfth century BCE (after Schaeffer 1932, pl. 16.1, courtesy of Ifpo).

Objects from a silver hoard from Megiddo, dating to the middle of the tenth century BCE (Courtesy of the Oriental Institute of the University of Chicago).

A silver hoard from Tel Arad, found inside a cooking pot and dated around the middle of the eighth century BCE (Courtesy of the Institute of Archaeology, Tel Aviv University; photo by Sasha Flit).

But during the transition from the Late Bronze Age to the Iron Age and the ensuing Iron I period (ca. 1200–950 BCE), it appears that these prestige objects were increasingly cut and broken down for use in making payments. Especially by the end of the Iron I, the high level of fragmentation in the hoards suggests that silver was circulating intensively, being used for small-scale transactions with a high degree of accuracy. Under what circumstances did this change in the use and value of silver occur? And how did this give way to the emergence of money in the Iron Age Mediterranean – a phenomenon that would leave its mark on history?

Trade networks in the Late Bronze Age functioned so long as merchants were able to travel safely between destinations. While bandits posing a threat to the safe passage of travellers and the murder of merchants en route are topics of concern reflected already in the Amarna letters, it is clear that by the twelfth century BCE increased insecurity was affecting international trade and diplomacy. Ample evidence for this is known from Ugarit in the form of settlements of liability and compensation payments for the murder of travelling merchants. Such documents indicate that responsibility for safeguarding trade routes ultimately lay with ruling authorities, and it is therefore no surprise that the increasing pressure on central powers, due to soaring commodity prices, raids, rising social unrest, or (likely) a combination of such factors, posed a further threat to the system.

In the southern Levant, the gradually weakening rule of the Egyptians of the 20th dynasty and their retreat by the late twelfth century left important trade routes exposed. This process went hand in hand with a faltering of the supply in (luxury) goods, undermining the power basis of local elites, and thereby placing further pressure on trade networks. Where the supply of commodities through trade had previously been based on longstanding credit relations, the new circumstances made people resort to the use of silver in carrying out transactions.



Precious metal had obvious advantages: being portable and easy to hoard, it became a form of insurance in the face of instable trade relations and the falling supply in key trading commodities, such as copper and grain. People thus turned to prestige objects they had in their possession, cutting them up at will for use within a new regime of value.

This provided a stimulus for the spread of money within the economy, and in the centuries to follow silver continued to function as a form of money. Interestingly, from the end of the tenth century onwards, hoards (such as those from Dor, Akko and Arad) contain less fragments of manufactured objects, but more ingots, suggesting the use of silver money had become well established and new sources of silver were now entering the system.

The historical implications of the emergence of money at the dawn of the Iron Age are far reaching, but one observation deserves to be emphasized in light of the above. Rather than the spread in the use of money being indicative of a growing and expanding economy, the opposite appears to be the case here: as the international trade networks of the Late Bronze Age world suffered disintegration, people opted to liquidate the precious metal items they had, thereby giving rise to a new money economy. While this doesn't mean that, historically, a prestige/display economy and a money economy are mutually exclusive, it does offer an insight into the tension between these two.

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Elon Heymans is a lecturer in ancient history at the University of Amsterdam and the author of *The Origins of Money in the Iron Age Mediterranean World*

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**Please visit the site: <https://www.asor.org/onetoday/2022/06/new-money-iron-age>  
[Go there for pix, map]**



# **WHY DID PEOPLE START EATING EGYPTIAN MUMMIES? BY MARCUS HARMES**

Mummies were a prescribed medicine in Europe for 500 years.

Why did people think cannibalism was good for their health? The answer offers a glimpse into the zaniest crannies of European history, at a time when Europeans were obsessed with Egyptian mummies.

Driven first by the belief that ground-up and tinctured human remains could cure anything from bubonic plague to a headache, and then by the macabre ideas Victorian people had about after-dinner entertainment, the bandaged corpses of ancient Egyptians were the subject of fascination from the Middle Ages to the 19th century.

## **Mummy mania**

Faith that mummies could cure illness drove people for centuries to ingest something that tasted awful.

Mumia, the product created from mummified bodies, was a medicinal substance consumed for centuries by rich and poor, available in apothecaries' shops, and created from the remains of mummies brought from Egyptian tombs back to Europe.

By the 12th century apothecaries were using ground up mummies for their otherworldly medicinal properties. Mummies were a prescribed medicine for the next 500 years.

In a world without antibiotics, physicians prescribed ground up skulls, bones and flesh to treat illnesses from headaches(opens in new tab) to reducing swelling(opens in new tab) or curing the plague.

Not everyone was convinced. Guy de la Fontaine, a royal doctor, doubted mumia was a useful medicine and saw forged mummies made from dead peasants in Alexandria in 1564. He realised people could be conned. They were not always consuming genuine ancient mummies.

But the forgeries illustrate an important point: there was constant demand for dead flesh to be used in medicine and the supply of real Egyptian mummies could not meet this.

Apothecaries and herbalists were still dispensing mummy medicines into the 18th century.

## **Mummy's medicine**

Not all doctors thought dry, old mummies made the best medicine. Some doctors believed(opens in new tab) that fresh meat and blood had a vitality the long-dead lacked.

The claim that fresh was best convinced even the noblest of nobles.

England's King Charles II (opens in new tab) took medication made from human skulls after suffering a seizure, and, until 1909, physicians commonly used human skulls to treat neurological conditions.

For the royal and social elite, eating mummies seemed a royally appropriate medicine (opens in new tab), as doctors claimed *mumia* was made from pharaohs. Royalty ate royalty.

### **Dinner, drinks, and a show**

By the 19th century, people were no longer consuming mummies to cure illness but Victorians were hosting “unwrapping parties” where Egyptian corpses would be unwrapped for entertainment at private parties.

Napoleon's first expedition into Egypt in 1798 piqued European curiosity and allowed 19th century travellers to Egypt to bring whole mummies back to Europe (opens in new tab) bought off the street in Egypt.

Victorians held private parties dedicated to unwrapping the remains of ancient Egyptian mummies.

Early unwrapping events had at least a veneer of medical respectability. In 1834 the surgeon Thomas Pettigrew unwrapped a mummy at the Royal College of Surgeons. In his time, autopsies and operations took place in public and this unwrapping was just another public medical event.

Soon, even the pretence of medical research was lost. By now mummies were no longer medicinal but thrilling. A dinner host who could entertain an audience while unwrapping was rich enough to own an actual mummy.

The thrill of seeing dried flesh and bones appearing as bandages came off meant people flocked to these unwrappings, whether in a private home or the theatre of a learned society. Strong drink meant audiences were loud and appreciative.

### **The mummy's curse**

Mummy unwrapping parties ended as the 20th century began. The macabre thrills seemed in bad taste and the inevitable destruction (opens in new tab) of archaeological remains seemed regrettable.

Then the discovery of Tutankhamen's tomb fuelled a craze (opens in new tab) that shaped art deco (opens in new tab) design in everything from the motifs of doors in the Chrysler Building to the shape of clocks designed by Cartier. The sudden death in 1923 of Lord Carnarvon, sponsor of the Tutankhamen expedition, was from natural causes but soon attributed to a new superstition — “the mummy's curse.”

### **Modern mummies**

In 2016 Egyptologist John J. Johnston hosted the first public unwrapping (opens in new tab) of a mummy since 1908. Part art, part science, and part show, Johnston created an immersive recreation of what it was like to be present at a Victorian unwrapping.

It was as tasteless as possible, with everything from the Bangles’ Walk Like an Egyptian playing on loud speaker to the plying of attendees with straight gin.

The mummy was only an actor wrapped in bandages but the event was a heady sensory mix. The fact it took place at St Bart’s Hospital in London was a modern reminder that mummies cross many realms of experience from the medical to the macabre.

Today, the black market of antiquity smuggling – including mummies – is worth about US\$3 billion (opens in new tab).

No serious archaeologist would unwrap a mummy and no physician suggest eating one. But the lure of the mummy remains strong. They are still for sale, still exploited, and still a commodity.

This article was originally published on The Conversation. You can see the original version here.

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Marcus Harmes is professor in Pathways Education at the University of Southern Queensland in Australia. Marcus' work revolves around religion and politics in a variety of settings from the English Civil Wars to speculative fiction set in the far future. [...]

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**Please visit the site: <https://www.livescience.com/eating-egyptian-mummies> [Go there for pix] and link**

## **WHAT IT'S LIKE TO SCUBA DIVE UNDER PYRAMIDS, BY NICHOLE SOBECKI**

The pyramids in Egypt are more famous, but the ones in Sudan hide royal burial sites that archaeologists can explore—as long as they don't mind swimming.

Archaeologist Pearce Paul Creasman prepares to enter a flooded tomb in the necropolis of Nuri, in Sudan.

I could feel myself suffocating. Each step down the bedrock passageway brought me closer to what I'd long imagined: the pool of khaki water, the flooded tunnel it hid, and the moment I'd have to enter that darkness. The crumbling grandeur of a pyramid loomed above.

Here, at the ancient necropolis of Nuri in Sudan's northern desert, Kushite royals were laid to rest millennia ago in a series of underground burial chambers beneath mighty pyramids. Now the chambers were flooded with groundwater leaching from the nearby Nile.

Archaeologist Pearce Paul Creasman, funded in part by a National Geographic Society grant, was leading a team that would be the first to attempt underwater archaeology below a pyramid. Initially, I'd been calm, even excited, about going along to photograph this ambitious and risky effort, in 2020. But as I walked deeper underground, my heart raced, and I could barely breathe.

The sun breaks the horizon across a view of the Nuri royal cemetery. Its most commanding feature is an arc of some 20 pyramids that appear strung together like gems on a necklace.

I'd known this existential anxiety before. Nine years ago, from crouching in a drainage pipe in Libya as belt-fed machine guns peppered the ground above. Seven years ago, under attack by Al Shabab terrorists in a shopping mall in Nairobi as pop music eerily played on. Four years ago, on a lawless beach in Somalia. Here, there was no outward enemy but something in my own mind screaming at me, Do not descend.

Creasman and dive master Justin Schneider saw my concern. "Give me a moment," I said. Holding tightly to my camera, a weight belt slung across my chest, I bit into my regulator and sank cross-legged below the waterline. Breathe. Just breathe.

Surfacing, I nodded to my companions: I was ready. We descended, funneling ourselves through a narrow chute and down into the disorienting blackness.

Creasman uses innovative underwater archaeology techniques to save parts of Nuri's history that otherwise would have been lost once Nile waters submerged parts of the necropolis.

Every culture of the world has death traditions, to ease the passage of loved ones into the next life and soothe those left behind in this one. This 2,300-year-old tomb was the

resting place of Nastasen, a king who led Kush for roughly two decades. Before him, several of the Kushite kings, known as Black pharaohs, became so powerful that they ruled all of Nubia and Egypt. Nastasen was the last of them to be buried at Nuri before threats from rivals forced the Kush to move their capital south. They left behind extraordinary temples, pyramids—and their interred pharaohs.

Workers clear rubble off the 2,300-year-old pyramid that marks the tomb of Nastasen, who ruled Kush for roughly two decades and was the last king buried at the Nuri site.

Excavating Nuri, with its treasures hidden underwater, was an especially formidable challenge. A century ago, Harvard Egyptologist George Reisner visited Nuri to explore, among others, the burial chamber of King Taharqa, who ruled all of Egypt in the seventh century B.C. and even earned a mention in the Old Testament for rallying his troops to defend Jerusalem.

Many of the other Nuri tombs, though, were left unexplored. The waters have since risen higher, influenced by climate change, the growing agricultural needs of the area, and the modern dams that are transforming the Nile.

Since Creasman's work began, Sudan has experienced a coup, a global pandemic, record-setting floods, and a 2019 revolution. When protesters toppled the 30-year dictatorship of Omar al Bashir—whose government tried to erase Sudan's pre-Islamic history—they chanted the names of Nubian royals: "My grandfather is Taharqa, my grandmother is a kandaka (queen)!" Bashir is now facing charges at the International Criminal Court. Protesters in the streets denounce the military that grabbed power and sabotaged the country's democratic transition. History long submerged has begun to surface.

Archaeologist Gretchen Emma Zoeller excavates a burial site of an adult female in Nuri, an ancient necropolis that spans more than 170 acres of desert near the east bank of the Nile River in northern Sudan.

I swam through a dark channel into the tomb's chambers. Clouds of sediment obstructed all visibility, and despite the small space, it was shockingly easy to get lost and find yourself swimming in circles.

A hand connected with mine, and we emerged into the second chamber, where the collapsed ceiling resulted in a welcome air pocket. By flashlight, work began.

Traditional dirt-excavation skills were useless here, so Creasman's team had to develop new techniques—often on the fly—to uncover the secrets of this overlooked kingdom. Underwater archaeology is now a specialized field, but in its early days, the skills and tools were adapted from shipwreck salvagers and rarely had been used in such tight confines.

No room for bulky scuba tanks either, obviously. We breathed instead through sunshine yellow hoses that ran back the way we entered, connecting us to the air above. The risk of a cave-in couldn't be absolutely eliminated, but the entrance was reinforced with 50 linear feet of steel beams, and risk was just not talked about much. Team members looked for anything of interest—gold leaf, figurines, pottery—and noted their findings

with waterproof boards and markers. A thin cord ran from the third and final burial chamber to the world above, our guide through the darkness.

The work acquired a rhythm. Creasman would descend into the final chamber, which held what might have been Nastasen’s unopened sarcophagus. A few minutes later, he’d return with a filled bucket; it would be carried outside to team members who’d examine and sort its contents.

About an hour into this routine, Creasman surfaced in the second chamber, took a breath, and called out, “Shabti!” He tenderly lifted the funerary figurine for us to see. Gazing at it in his palm, I realized my breath had slowed to normal and my mind had cleared. The carved man was broken down the middle but retained his dignified, dutiful expression. He looked ready to fulfill his destiny. Thousands of years ago—a span so long I can’t really fathom it—the figures were believed to revive in order to serve their masters in the afterlife. Now here I was, in the underworld with them. My fear washed away, and awe flooded in.

In my line of work I’ve had a few opportunities like this: to experience an ancient marvel as most people never will and to photograph it for the world to see. I focused on the glistening-wet shabti; the camera shutter blinked, making the ephemeral permanent.

Helmets worn by Creasman and Schneider lay out to dry in the hot sun after a day of scuba diving in royal burial sites.

Nastasen had rested here in darkness for two millennia, kept company by hundreds of tiny caretakers. Soon I’d return to the world aboveground, with its impossibly blue skies. But not yet. First, I shot frame after frame, freezing this place in time and willing myself to remember those things beyond my ability to capture.

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Nichole Sobecki is a photographer, filmmaker, and National Geographic Explorer based in Nairobi, Kenya. Learn more about the National Geographic Society’s support of Explorers at [natgeo.com/impact](https://natgeo.com/impact).

This story appears in the July 2022 issue of National Geographic magazine

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Please visit the site: <https://www.nationalgeographic.com/history/article/what-its-like-to-scuba-dive-under-pyramids> [Go there for pix]

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## **PLAGUE: ANCIENT TEETH REVEAL WHERE BLACK DEATH BEGAN, RESEARCHERS SAY, BY MALU CURSINO**

Researchers believe they have discovered the origins of the Black Death, more than 600 years after it killed tens of millions in Europe, Asia and north Africa.

The mid-14th Century health catastrophe is one of the most significant disease episodes in human history. But despite years of research, scientists had been unable to pinpoint where the bubonic plague began.

Now analysis suggests it was in Kyrgyzstan, central Asia, in the 1330s.

A research team from the University of Stirling in Scotland and Germany's Max Planck Institute and University of Tübingen analysed ancient DNA samples from the teeth of skeletons in cemeteries near Lake Issyk Kul, in Kyrgyzstan. They chose the area after noting a significant spike in burials there in 1338 and 1339.

Dr Maria Spyrou, a researcher at the University of Tübingen, said the team sequenced DNA from seven skeletons.

They analysed the teeth because, according to Dr Spyrou, they contain many blood vessels and give researchers "high chances of detecting blood-borne pathogens that may have caused the deaths of the individuals".

The research team were able to find the plague bacterium, *Yersinia pestis*, in three of them.

### **Black Death 'spread by humans not rats'**

Dr Philip Slavin, a historian at the University of Stirling, said of the discovery: "Our study puts to rest one of the biggest and most fascinating questions in history and determines when and where the single most notorious and infamous killer of humans began."

The research does have some limitations - including the small sample size.

Dr Michael Knapp from the University of Otago in New Zealand, who was not involved in the work, praised it as "really valuable", but noted: "Data from far more individuals, times and regions... would really help clarify what the data presented here really means."

The researchers' work was published in the journal *Nature*, titled "The source of the Black Death in fourteenth-century central Eurasia".

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**What is bubonic plague?**



Plague is a potentially lethal infectious disease that is caused by bacteria called *Yersinia pestis* that live in some animals - mainly rodents - and their fleas.

Bubonic plague is the most common form of the disease that people can get. The name comes from the symptoms it causes - painful, swollen lymph nodes or 'buboes' in the groin or armpit.

From 2010 to 2015, there were 3,248 cases reported worldwide, including 584 deaths.

Historically, it has also been called the Black Death, in reference to the gangrenous blackening and death of body parts, such as the fingers and toes, that can happen with the illness.

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Please visit the site: <https://www.bbc.co.uk/news/world-asia-61820604>

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## **RAPID CHANGE OF CLIMATE DID NOT CAUSE THE FALL OF THE AKKADIAN EMPIRE, BY ARKADIUSZ SOŁTYSIAK**

A recent issue of *Antiquity* published a paper presenting results of biochemical analyses of human bones from a few sites situated in north-eastern Syria. It showed on this basis that in the 22nd century BCE, when the Akkadian Empire was declining, there was no change in the local economy which could be a response to a long-term drought, and even if there was a temporary climate change, the local human societies survived it in a good condition.

Although the climate was much more stable over the last ten thousand years than during previous glaciations, there were a few periods of warming or cooling lasting a few centuries in this more recent epoch, when precipitation in the Near East became less predictable. One of such periods was dated to approx. 4260-3970 BP, and its beginning coincided with the fall of the Old Kingdom in Egypt and fall of the Akkadian Empire in Mesopotamia. This led some archaeologists to advance a theory that a change of climate caused a rapid economic crisis in both regions.

### **Volcanic eruption?**

Nearly thirty years ago the archaeologist Harvey Weiss and geologist Marie-Agnès Courty detected a layer of volcanic sediment at the site of Tell Leilan. The sediment was dated to the initial phase of the abandonment period that lasted for a few centuries, between approx. 2200 and 1900 BCE. Their paper published in *Science* in 1993, depicted a scenario according to which the whole Mesopotamia was suddenly abandoned in 23rd century BCE as a result of climate disaster generated by a volcanic eruption and re-populated only in the early 2nd millennium BCE. This was proposed as a direct cause of the fall of the Akkadian Empire.

Some sites were abandoned at roughly the same time, and at Nagar (modern site of Tell Brak), which was a regional administrative centre of the Akkadian state, archaeologists discovered evidence for an intentional and systematic abandonment of the site: one of the temples was ritually closed and filled with clean sand. However, the hypothesis advocated by Weiss and Courty was soon criticized by other archaeologists who conducted research in this region. They indicated that while some places were indeed abandoned and the settlement network was modified to a certain extent, life continued without noticeable disturbance, and even if the local population size decreased, this decrease was not so dramatic as to suggest depopulation of the whole region.

### **...or perhaps a meteorite?**

A few years later the hypothesis of the climate change due to volcanic eruption was abandoned, mainly because the volcanoes known in the area were not active at that time. Apart from that, observations of modern eruptions indicate that volcanoes can influence the climate significantly, but this influence is always short-lived, and would rather not lead to a break in settlement activity for three centuries.

Courty stated in 1990s that a drastic drying of the climate might have ensued as a consequence of a big meteorite hitting the ground in the area, and the crater at Umm al-Binni situated among the marshes of southern Mesopotamia might be the potential trace of its impact.

Nevertheless, it was just a speculation, not supported with any research of the feature located in this challenging area, inaccessible due to a difficult political situation in Iraq. On the other hand, Weiss focussed on collecting environmental data supporting the hypothesis of a rapid regional change of climate as well as on establishing a more precise chronology of the period when the site of Tell Leilan was abandoned.

### **Absence of evidence for depopulation...**

During the two decades between the war in the Persian Gulf (1991) and the civil war in Syria (2011) most archaeologists researching Mesopotamia moved their missions to north-eastern Syria, which was politically more stable than Iraq. As a result, our knowledge regarding this region dramatically increased and it soon turned out that the fact that Tell Leilan was abandoned was rather an exception than a rule, and that in the period when, according to Weiss, this area was completely depopulated, many towns and cities (including Tell Arbid, explored by Polish missions from the University of Warsaw and Adam Mickiewicz University in Poznań) functioned quite well. Neither archaeobotanical nor archaeozoological data suggested a rapid change in economy induced by climate change, but just the opposite – some of them indicated that in that period Mesopotamia was watered better than in the preceding time.

### **...and for economic crisis**

While the hypothesis of a total depopulation of northern Mesopotamia as a result of a rapid climate change was disproved, there were still some arguments suggesting an economic crisis in the century after the fall of the Akkadian Empire. It was a time of raids by mountain peoples (Guteans, Lullubi, Hurrians), when potentially the role of pastoral economy might have risen at the expense of farming, the latter being more risky in the unstable socio-political environment.

Fortunately, the last few decades brought development of biochemical research methods that make it possible to answer the question whether the decline of the Akkadian Empire was connected with an economic crisis. Human and animal remains unearthed by archaeologists often contain collagen residues. This protein is one of the two main components of bone tissue and dentin. Analysis of proportions between the stable isotopes of carbon and nitrogen in collagen helps to reconstruct the diet, and in this way contributes to the identification of the economy in different societies. Reduced availability of water (e.g., resulting from a long-term drought) leads to an increase in the proportion of the heavier isotopes of both elements, and this effect might further be strengthened by a higher share of animal products in the diet.

The Antiquity article is a comprehensive study of the proportions of carbon and nitrogen isotopes in bones and teeth of inhabitants of three sites in northern Mesopotamia: Tell Brak, Tell Barri and Tell Arbid. These sites were occupied in the 3rd and 2nd millennia BCE and, as a consequence, it was possible to compare isotope data from the time

preceding the fall of the Akkadian Empire, from the period of the supposed crisis, as well as the first half of the 2nd millennium, when according to historical sources, Mesopotamia was divided into a few quite prosperous Semitic and Hurrian states.

The results are conclusive: while it is possible to detect minor differences between the sites, possibly resulting from their hierarchy (Tell Brak was the state capital at that time, Tell Arbid was a more peripheral town), no significant time trends have been identified.

Therefore, it turns out that the economy of this region was quite stable despite the political and social disturbances reported in written sources. It was also stable during the three centuries of a global climate change, which not only was not dramatic enough to cause depopulation of the whole region, but it even did not cause major changes in regional economies. Local societies managed the crisis associated with the fall of the Akkadian Empire very well, and the crisis was more of political than economic nature, at least in northern Mesopotamia.

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Please visit the site: <https://www.asor.org/onetoday/2022/06/climate-fall-akkadian-empire> [Go there for maps and figs]



## **DROUGHTS IN THE SIXTH CENTURY PAVED THE WAY FOR ISLAM**

Extreme dry conditions contributed to the decline of the ancient South Arabian kingdom of Himyar.

Combined with political unrest and war, the droughts left behind a region in disarray, thereby creating the conditions on the Arabian peninsula that made possible the spread of the newly emerging religion of Islam.

On the plateaus of Yemen, traces of the Himyarite Kingdom can still be found today: terraced fields and dams formed part of a particularly sophisticated irrigation system, transforming the semi-desert into fertile fields. Himyar was an established part of South Arabia for several centuries.

However, despite its former strength, during the sixth century AD the kingdom entered into a period of crisis, which culminated in its conquest by the neighboring kingdom of Aksum (now Ethiopia). A previously overlooked factor, namely extreme drought, may have been decisive in contributing to the upheavals in ancient Arabia from which Islam emerged during the seventh century. These findings were recently reported by researchers led by Professor Dominik Fleitmann in the journal *Science*.

### **Petrified water acts as climate record**

Fleitmann's team analyzed the layers of a stalagmite from the Al Hoota Cave in present-day Oman. The stalagmite's growth rate and the chemical composition of its layers (see box) are directly related to how much precipitation falls above the cave. As a result, the shape and isotopic composition of the deposited layers of a stalagmite represent a valuable record of historical climate.

“Even with the naked eye you can see from the stalagmite that there must have been a very dry period lasting several decades,” says Fleitmann. When less water drips onto the stalagmite, less of it runs down the sides. The stone grows with a smaller diameter than in years with a higher drip rate.

Isotopic analysis of the stalagmites layers allows researchers to draw conclusions about annual rainfall amounts. For example, they discovered not only that less rain fell over a longer period, but that there must have been an extreme drought. Based on the radioactive decay of uranium, the researchers were able to date this dry period to the early sixth century AD, albeit only with an accuracy of 30 years.

Detective work in the case of Himyar's demise “Whether there was a direct temporal correlation between this drought and the decline of the Himyarite Kingdom, or whether it actually didn't begin until afterwards – that was not possible to determine conclusively from this data alone,” explains Fleitmann. He therefore analyzed further climate reconstructions from the region and combed through historical sources, collaborating with historians to narrow down the time of the extreme drought, which lasted several years.

“It was a bit like a murder case: we have a dead kingdom and are looking for the culprit. Step by step, the evidence brought us closer to the answer,” says the researcher. Helpful sources included, for example, data about the water level of the Dead Sea and historical documents describing a drought of several years in the region and dating to AD 520, which do indeed connect the extreme drought with the crisis in the Himyarite Kingdom.

“Water is absolutely the most important resource. It is clear that a decrease in rainfall and especially several years of extreme drought could destabilize a vulnerable semi-desert kingdom,” says Fleitmann.

Furthermore, the irrigation systems required constant maintenance and repairs, which could only be achieved with tens of thousands of well-organized workers. The population of Himyar, stricken by water scarcity, was presumably no longer able to ensure this laborious maintenance, aggravating the situation further.

Political unrest in its own territory and a war between its northern neighbors, the Byzantine and Sasanian Empires, spilling over into Himyar, further weakened the kingdom. When its western neighbor of Aksum finally invaded Himyar and conquered the realm, the formerly powerful state definitively lost significance.

### **Turning points in history**

“When we think of extreme weather events, we often think only of a short period afterwards, limited to a few years,” Fleitmann says. The fact that changes in the climate can lead to states being destabilized, thereby changing the course of history, is often disregarded. “The population was experiencing great hardship as a result of starvation and war. This meant Islam met with fertile ground: people were searching for new hope, something that could bring people together again as a society. The new religion offered this.”

That does not mean to say the drought directly brought about the emergence of Islam, emphasizes the researcher. “However, it was an important factor in the context of the upheavals in the Arabian world of the sixth century.”

In tropical and sub-tropical regions, there is a connection (correlation) between the amount of precipitation and its isotopic composition, also known as the “amount effect”. The more it rains, the more the ratio between the lighter and heavier oxygen isotopes,  $^{16}\text{O}$  and  $^{18}\text{O}$ , shifts in favor of the lighter  $^{16}\text{O}$  in the precipitation.

These changes are recorded in the stalagmite from Oman, as it is formed from dripping rainwater. Based on isotopic measurements of the stalagmite’s limestone layers, it is possible to determine the exact ratio of  $^{16}\text{O}$  and  $^{18}\text{O}$  and, in combination with uranium dating, to reconstruct how much it rained at what point in time.

**Please visit the site: <https://www.heritagedaily.com/2022/06/droughts-in-the-sixth-century-paved-the-way-for-islam/143889> [Go there for pix]**

## **NEW ARCHAEOLOGICAL DISCOVERY IN KING KHUFU’S REIGN, BY AHMED GOMAA**

An Egyptian-German archaeological mission working in Matariya discovered granite stone blocks from the era of King Khufu in the Temple of the Sun, in addition to other rare artifacts.

On June 13, the Egyptian Ministry of Tourism and Antiquities announced the discovery of granite stone blocks from the era of King Khufu in the Temple of the Sun, in addition to foundations from the temple’s courtyard, dating back to the New Kingdom.

The discovery happened during excavations by the Egyptian-German archaeological mission on the western side of the open museum at the obelisk of King Senusret I in the Matariya area, east of Cairo.

The discovery is "the first time that antiquities from King Khufu’s reign are discovered in this area," the Secretary-General of the Supreme Council of Antiquities Mustafa Waziri said in a June 13 statement "Those stone blocks may have been parts of an unknown building or may have been moved from the Giza pyramids area to be used as building materials during the Ramesside era, a period in which the use of stones from historically older buildings was common."

Ayman Ashmawy, head of the Egyptian Antiquities Sector at the Supreme Council of Antiquities and head of the Egyptian mission that made the discovery, told Al-Monitor, "This discovery reflects the importance of the Matariya area, which is the most important place in ancient Egypt.

The Temple of the Sun had a great historical and religious importance for all kings throughout Egyptian history, and we can say that we found antiquities that are rare to find elsewhere."

The mission "succeeded in uncovering many archaeological layers dating back to the Naqada III period, with layers of pottery rubble, which indicate the presence of religious activity in this site," he said.

"The mission also found a piece of granite belonging to King Pepi I of the Old Kingdom from the period of building the pyramids, with reliefs of the falcon of Horus."

Another finding, he said, was "several statues in the form of a headless Sphinx. Most importantly, we found a small piece bearing Sphinx statues placed in a unique way, along with a 3D deer, representing an offering."

Ashmawy stressed, "This discovery is particularly significant because it shows the extended and large presence of the Egyptian kings and their dedications to the Temple of the Sun. When we found King Khufu’s cartouche (a rock plaque bearing the king’s name), it was a great addition that indicates the kings’ interest in the temple because sun worship was the main religion in ancient Egypt in general."

According to the Egyptian Ministry of Antiquities, the base of a statue of King Amasis (Ahmose II) was also discovered, in addition to many altars on which sacrifices were



made, and many parts of statues in the form of the Sphinx, which are considered evidence of the royal presence in the temple.

The head of the mission's German team, Dietrich Rau, said in a statement on June 13, "The mission also succeeded in discovering parts of sarcophagi and altars from the eras of kings Amenemhat IV, Sobekhotep IV, Ay, Seti I, Osorkon I, Takelot I, and Psamtik I, in addition to a quartz sculptural model in the form of the Sphinx belonging to King Amenhotep II and the base of a huge statue of a monkey made of pink granite."

Ahmed Badran, professor of archeology and ancient Egyptian civilization at Cairo University, told Al-Monitor, "King Khufu's fame in ancient Egyptian history goes back to his Great Pyramid in the Giza Pyramids area." The 146-meter monument was one of the seven wonders of the ancient world and registered on the World Heritage List.

Badran explained, "The Egyptian-German mission has been working in the Matariya area for about six years, and has made many archaeological discoveries, among which was the huge statue of King Psamtik I of the 26th Dynasty (in 2017), which was transferred to the Grand Egyptian Museum next to the pyramids. Then 4,500 artifacts belonging to King Psamtik were discovered later on (in 2018)."

The recent discovery is important, he said, because "it bears the name of one of the most important kings in ancient Egypt, as the granite stone pieces bear cartouches in the name of King Khufu, and it is more likely that these stones are the remains of a maqsura (small building) built by King Khufu for Ra, the oldest solar deity in the ancient capital."

Badran stressed, "This discovery sheds more light on one of the oldest capitals in ancient Egypt called the City of the Sun, and the presence of a great temple there."

Meanwhile, Ashmawy noted, "The Egyptian-German mission is still continuing its work to complete its excavations to uncover more artifacts, and to carry out documentation work for this latest discovery."

**Please visit the site: <https://www.al-monitor.com/originals/2022/06/new-archaeological-discovery-king-khufus-reign> [Go there for pix]**

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## **ARCHAEOLOGISTS FIND ANCIENT CITY FROM HELLENISTIC PERIOD**

Archaeologists have found an ancient city from the Hellenistic Period that may be the lost city of Bassania in Albania.

Bassania was an Illyrian city that came under Roman control during the Illyrian Wars. The location of Bassania has previously been suggested to be near the village of Pedhanë in the Lezhë County, or the village of Bushat in the Shkodër County. Bassania was described by the Roman historian Livius (59 BC – AD 17) in the context of the struggle of the Roman army with the last king of the Illyrians, Gentios.

The site was first discovered in 2018, when researchers from the University of Warsaw identified cyclopean defensive walls and two stone structures previously thought to be natural rock formations on a hill near Shkodra, revealed to be a gatehouse and two bastions.

The settlement is situated between two important ancient centres in the area of former Illyria (now Albania) – the Illyrian capital of Shkoder and the Greek city of Lissos.

As part of a new study by the South-Eastern Europe Research Centre of the University of Warsaw, the team applied geophysical surveys on the hill revealing a settlement that covers around 20 hectares. This led archaeologists to focus excavations of two large buildings, one measuring 240 metres<sup>2</sup> and the other 70 metres<sup>2</sup> that date from the Hellenistic Period.

Fragments of pottery within the buildings has established that the site was first inhabited from as early as 2,000 BC, whilst pieces of amphorae imported from Italy have been dated to the 3rd and 2nd century BC during the primary occupation level.

Prof. Piotr Dyczek reported in PAP that the structures show no evidence of a violent end by destruction or burning. Instead, the settlement was abandoned and fell to ruin due to natural erosion and robbing of stone through quarrying over the centuries for building material.

Please visit the site: <https://www.heritagedaily.com/2022/06/archaeologists-find-ancient-city-from-hellenistic-period/143914>

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## **WHEN THE PAST IS PLUNDERED,** **EVERYONE PAYS THE PRICE,** **BY JONATHAN GORNALL**

The human story belongs to all of us, but the artifacts and remains that articulate that story belong only where they were created

In the Enuma Elish, the Babylonian creation myth found inscribed on seven clay tablets from the 7th century BCE and excavated at Nineveh in the 19th century, Eridu, in southern Mesopotamia, is named as the world's first city.

Despite 8,000 years of occupation, today there is precious little to see at the ancient site, isolated on the fringes of Iraq's southern desert some 35 kilometers southwest of Nasiriyah.

What does remain, however, is extremely precious – including the handful of stones and pottery shards taken from the site by a British tourist who was jailed for the offense this month by a Baghdad court.

Predictably enough, there was uproar in the British media when Jim Fitton, 66, a retired geologist, was sentenced to 15 years in prison.

To date, more than 347,000 people have signed an online petition calling for the British government to intervene in Fitton's case.

It can't, of course, and nor should it. Iraq is a sovereign state with its own laws. Fitton claimed ignorance of the law protecting Iraq's archeological treasures, but ignorance has never been a legal defense the world over.

Fitton had faced a maximum penalty of death – a deterrent that owes its existence to decades of looting of Iraq's ancient treasures – but the court clearly took the view that his offense was not as egregious as the scandalous, industrial-scale stripping of the country's ancient treasures in the wake of the US military's 2003 invasion.

Iraq isn't the only country in the region with heritage that has fallen prey to war and social upheaval. In 2017, the Metropolitan Museum of Art in New York City spent US\$4 million on a 2,000-year-old golden sarcophagus from Egypt. Two years later, it was forced to repatriate the coffin after it emerged that it had been looted during the 2011 Egyptian revolution.

In short, Fitton should have known better. A geologist by profession and an amateur archeologist by inclination, he had been on an archeology tour in Iraq when he decided to pocket the artifacts – an act that surely would have been unthinkable had he been touring an ancient site in Europe.

His casual attitude to the sanctity of Iraq's ancient heritage is an echo of the imperial arrogance that saw so many of the treasures of the Middle East and elsewhere looted during the 19th century by wealthy "gentlemen archeologists" from Britain.

The vaults and display cases of the British Museum in London, for example, are stuffed with artifacts that by rights belong to the states from whose territory they were taken by entitled adventurers.

In 2019, the British government made a great show of returning to Baghdad a recently looted 3,000-year-old cuneiform boundary stone, saluting Iraq's rich culture and history, which was "at the core of its contemporary national identity."

However, of the British Museum's vast collection of 170,000 treasures from Mesopotamia, dug up and shipped out by British archeologists authorized solely by imperial entitlement, there was no mention. These pieces, as the museum is always at pains to stress, were "acquired," a term far less pejorative than "looted."

At Eridu, only traces of a once great civilization remain. Gone are the life-giving tributaries of the Euphrates that flowed around the seven mounds that formed the heart of the city. On the largest of these stood the oldest temple in southern Mesopotamia.

But while the palaces and temples have disappeared, the clues are there if one knows where – and how – to find them.

A few jumbled stones, clearly worked by human hands, and a fragment of what appears to be an ancient wall, caught seemingly in the slow-motion act of sliding back under the sands, is all that remains of the former mighty ziggurat, built 4,000 years ago from mud and baked bricks.

A depression in the ground, an echo of a lavish palace, built 5,000 years ago.

Frequently, it is the fragments of pottery found at such sites that offer the only clues to their origins and timeline.

Much of Eridu was discovered and mapped in the 1940s and 1950s by two of Iraq's most distinguished archeologists, Fuad Safar and Sayyid Mohammad Ali Mustafa. They were able to compare shards found at Eridu with those from other Mesopotamian sites, which helped to establish trading links and refined understanding of the chronology of the development of civilization.

At Eridu, these fragments also served as time stamps, helping the archeologists to identify the existence of several temples, built one on top of the other over hundreds of years. Whether legal or not, picking up and pocketing such evidence is clearly wrong.

It is, perhaps, unfair that Jim Fitton should pay the price as a proxy for the looters of empire who came before him, and the criminal gangs who followed in more recent times. He will appeal and, in this, one wishes him well. After all, as his family has pointed out, 15 years in prison will almost certainly amount to a life sentence.

But the lesson of this case is one that should be taken on board by every museum director in every museum throughout the world that continues, without justification, to hoard treasures stolen at a time when, to most Europeans, the people of the Middle East simply didn't count.

The human story belongs to all of us. But the artifacts and remains that articulate that story belong only where they were created. To spirit them away out of self-interest is not only to rob a country of its heritage, but also to deprive everyone of potentially vital chapters in the great, common story of humankind.

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Jonathan Gornall is a British journalist, formerly with The Times, who has lived and worked in the Middle East and is now based in the UK.

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Please visit the site: <https://asiatimes.com/2022/06/when-the-past-is-plundered-everyone-pays-the-price/> [Go there for pix and embedded linx]



## **DIVERS RECOVERED GIANT HEAD OF HERCULES FROM ANTIKYTHERA SHIPWRECK IN GREECE, BY JENNIFER OUELLETTE**

Over several expeditions, divers have recovered statues, jewelry, and human remains.

The so-called Antikythera mechanism, recovered from the wreckage of an ancient cargo ship off the coast of Antikythera Island in Greece, might be the world's oldest analog computer. The mystery surrounding its purpose and origin continues to fascinate scientists and enthusiasts alike to this day. But it's not the only treasure salvaged from that Antikythera wreck. An ongoing underwater archaeological project most recently recovered a large marble head of a bearded male figure believed to be part of a statue of Hercules. Divers also recovered a marble plinth with the lower legs of another statue, two human teeth, and several pieces of the cargo ship's equipment.

As we've previously reported, in 1900, a Greek sponge diver named Elias Stadiatis discovered the wreck, which was apparently surrounded by rotting corpses on the sea floor. The captain, Dimitrios Kondos, didn't believe Elias at first and thought the nitrogen in his breathing mix had affected the diver's senses. So Kondos dove down to the site himself, emerging with an arm from a bronze statue.

### **Researchers home in on possible “day zero” for Antikythera mechanism**

Kondos and his crew had recovered all kinds of artifacts from the shipwreck by mid-1901, including 36 marble sculptures (representing Hercules, Ulysses, Diomedes, Hermes, and Apollo, among others); a bronze statue dubbed "The Philosopher" (circa 340 BCE); a bronze lyre; pieces of glasswork; and three marble horse statues. Along with the Antikythera mechanism, these precious artifacts are now housed in the National Archaeological Museum of Athens.

The salvage work ended that summer, however, after one diver died and two others were paralyzed from decompression sickness. No further attempt was made to excavate the treasures of the Antikythera wreck until famed explorer Jacques-Yves Cousteau visited the site in 1953.

Twenty-three years later, Cousteau returned and worked with archaeologists to recover nearly 300 more artifacts. They dredged a section of the wreck to reveal artifacts previously hidden from view.

These included hull planks, ceramic jars, bronze and silver coins, jewelry, and more marble and bronze statues. Cousteau's 1976 expedition also recovered scattered human bones from at least four different people.

The wreck was left alone again for nearly 40 years until a Woods Hole Oceanographic Institute (WHOI) marine archaeologist named Brendan Foley (now at Lund University in Sweden) got permission from the Greek government in 2012 to undertake a complete

diving survey of the wreck site. As a bonus, they found a second ancient shipwreck just a few hundred meters south of the Antikythera wreck.

Foley's team used mixed-gas closed-circuit rebreather technology for their survey, which gave divers over half an hour of time underwater each day—much longer than prior expeditions. Furthermore, the Exosuit—described as "Iron Man for underwater science"—allowed divers to descend to 1,000 feet (over 300 meters) and remain underwater for several hours, with no need to decompress as they returned to the surface.

Since then, the Return to Antikythera project has recovered numerous additional items, and the team believes there could be hundreds more buried beneath the sediment. For instance, the 2014–2016 fieldwork yielded wood from the hull or decks, parts of two lead anchors, bronze nails and spikes, bronze spears from statues, glass bowls, ceramic decanters, a gold ring, and several "puzzling bronze objects." The highlight was an ancient weapon known as a "dolphin": a lead bulb with an iron spike on its tip that could be dropped through the deck and hull of an enemy vessel.

### **Scientists solve another piece of the puzzling Antikythera mechanism**

The divers also recovered parts of a human skeleton in 2016: a partial skull with three teeth, two arm bones, several ribs, and two femurs, all from a single individual. Because the bones were surrounded by iron objects that had corroded during their time in the ocean, all the bones were stained an amber red from iron oxide. Even more parts of bronze and marble statues were recovered during the 2017 excavation, along with a red marble sarcophagus lid, a large section of hull planking, and even more human remains. All of these will be closely examined to learn more about the wreck itself and the unfortunate people on board.

The 2022 expedition managed to relocate several natural sea-floor boulders (each weighing about 8.5 tons) that had been partially covering the wreck, allowing divers to explore new parts of the ship.

The marble head they recovered most likely belongs to a headless statue, dubbed "Herakles of Antikythera," retrieved by the sponge divers back in 1900. The marble plinth is being cleaned and restored; it was covered in various marine deposits. The objects will be analyzed with X-rays, among other techniques, while the teeth will undergo genetic and isotopic analysis.

The exact location where each artifact was found has been carefully documented and will be added to the 3D model of the site currently being developed. The team also collected sediment samples for micro-analysis in hopes of learning more about the dimensions of the wreck. The Return to Antikythera project will continue its work, and perhaps one day it will unearth more pieces of the original Antikythera mechanism—or something even more amazing.

**Please visit the site: <https://arstechnica.com/science/2022/06/the-antikythera-shipwreck-in-greece-continues-to-yield-priceless-treasures/> [Go there for pix and caps]**

## **ONE OF THE OLDEST KNOWN MOSQUES IN THE WORLD UNCOVERED IN NEGEV BEDOUIN CITY RAHAT, BY AMANDA BORSCHEL-DAN**

New discovery joins a second very early mosque dated to the 7<sup>th</sup> century, when Islam was just beginning to spread in the Holy Land

A team of Israeli archaeologists has identified and excavated what is one of the oldest known mosques in the world.

The small 7th-century CE prayer hall was uncovered during salvage excavations ahead of the construction of new neighborhoods in the Negev Bedouin city of Rahat. It is located some two kilometers from another 7th-century rural mosque that was excavated in 2019.

“What is unique in our mosque is the proliferation of 7<sup>th</sup>-century ceramics on the site, making it one of the earliest mosques in the world,” said archaeologist Dr. Elena Kogan-Zehavi, one of the Israel Antiquities Authority excavation co-directors.

Islam was founded in circa 610 CE. Although the Arab conquest of the Holy Land took place in 636, Islam only became the majority religion in the 9th century. This pair of small rural mosques are key in painting a picture of Islam’s spread at the end of the Byzantine era, the start of early Islam in the Holy Land, said Kogan-Zehavi.

Both prayer halls have been identified as mosques due to their structural elements: a square room and a wall facing the direction of Mecca (qibla), the holy city of Islam. Additionally, in the newly found mosque, a half-circle shaped niche is located along the center of the wall pointing southwards (mihrab).

Significantly, said Kogan-Zehavi, while the previous mosque was emptied of artifacts, the second held a multitude of ceramics that clearly are typographically dated to the 7th-8th centuries.

She said the researchers are starting to put together “a very interesting picture” of the transition from settlement dominated by Byzantine Christianity — including monasteries and significant building structures — to the settlement of a semi-nomadic people with a different, less-permanent building tradition.

What the scholars are seeing is that “Islam came very, very early in the northern Negev and began to live alongside the Christian settlement,” said Kogan-Zehavi.

Aside from the mosque, the archaeologists uncovered a Byzantine-era farmhouse that they said apparently housed Christian farmers. It included a fortified tower and rooms with strong walls surrounding a courtyard.

Additionally, “on a nearby hilltop, we found estates constructed in a completely different manner; these were built about a hundred years later, in the late seventh to ninth centuries



– the Early Islamic period. The estate buildings, apparently built by Muslims, were constructed with lines of rooms next to large, open courtyards. Many of the clay-lined ovens revealed in the rooms and courtyards were probably used for cooking food. The walls of these buildings were relatively thin and apparently supported mudbrick walls that have not survived,” said IAA co-directors Oren Shmueli, Kogan-Zehavi and Dr. Noe Michael David in a press release.

The “new” mosque was built later in the settlement on Byzantine remains, said Kogan-Zehavi, and in fact was the final building constructed in the settlement. Its construction raises many questions, including: Did the same community of Christians become Muslim? Or was the settlement repopulated by semi-nomadic tradesmen who may have brought the new religion with them from the Arabian Peninsula?

It’s probably a mixture of the two, said Kogan-Zehavi.

“All the questions are seen in the open there on the site. It’s now our job to try to piece together the information to understand what happened,” she said.

Within five kilometers (three miles) of the mosque, she said, there have been excavations of contemporary monasteries that were abandoned in the 7th-8th century. There is no destruction layer, she said.

At the same time, the sprouting of early Islam farmsteads has become visible.

“We can’t know whether we’re talking about just a population of local nomads who came out of the desert, or maybe Christians who took on Islam. The picture is not black and white,” she said. “Are these farmers who believed in Jesus, but moved over to Mohammad?”

A ceramic artifact discovered in the site of the early mosque in Rahat, dated to the Early Islamic period. (Yasmin Orbach, Israel Antiquities Authority)

Later, she said, there is a chronological gap in all the sites in the region from the 9th century on. “There isn’t continued settlement and there must have been a catastrophe that we haven’t identified,” she said. People go back to big cities and there is a change of focus of settlement that in many cases lasts until the 19th or 20th century.

The nomadic populations brought Islam to the world, said Kogan-Zehavi, although most of the earliest mosques are dated at least 100 years later and found more from the 8th century. In Israel, other early mosques have been found in the Har Hanegev region, also in the south.

An interesting puzzle in the case of both Rahat mosques is that they were built somewhat far from some of the settlements they presumably served, leading the researchers to question the role of the prayer hall in everyday life. With no lack of space in the open Negev, its placement is likely significant.

A Bedouin community living next to the biggest landfill in Israel, near the city of Rahat in southern Israel, August 10, 2016 (Yaniv Nadav/Flash90)



“We don’t yet know the connection between the worshiper and the mosque. Maybe it was only in use on Fridays?” wonders Kogan-Zehavi.

This idea of populations in transition is, in many ways, the same trend that is seen in Rahat today. Rahat, the largest permanent Bedouin settlement in the world, was recognized by the State of Israel as a city in 1994.

The residents of Rahat are eager to preserve the two mosques, said Kogan-Zehavi, as the IAA continues to excavate ahead of new neighborhoods initiated by the Authority for Development and Settlement of the Bedouin in the Negev.

“History always repeats itself. The Rahat Bedouin left a nomadic life, settled in cities, and are trying to create a bit of a different life in their permanent settlement. The same thing happened 1,200 years ago,” she said.

**Please visit the site: <https://www.timesofisrael.com/one-of-the-oldest-mosques-in-the-world-uncovered-in-negev-bedouin-city-rahats/>**

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## **TEETH FROM ROYAL CATTLE HERDS OF UR SHED LIGHT ON ANCIENT LIFE – STUDY, BY MAYA ZANGER-NADIS**

The study provided groundbreaking insights into the economy, health and diet of ancient Mesopotamia during a period of urbanization as cities and states began to crop up across the region.

A new study out of the University of Saskatchewan (USask) sheds new light on life in the city of Ur, an ancient Sumerian city located in modern-day southern Iraq. Specifically, the study - published in the journal PLOS One - examined cattle tooth enamel and compared the chemical reality to the written descriptions of ancient Mesopotamian agricultural life.

“We haven’t done anything like this with cutting-edge archeological sciences in Mesopotamia previously.”

Dr. Tina Greenfield, lead researcher

The dental samples came from Sir Leonard Woolley's early 20th-century archeological excavations at Ur. They resided in the purgatory of the British Museum's storage facilities until the 2010s. Dr. Tina Greenfield, the lead researcher on this project, first got permission to examine the remains in 2014 - nearly a century after their initial discovery.

“It is always interesting to see how people living in one of the world’s earliest cities managed their animals, both during their lives and in their death,” said Greenfield.

The cattle remains examined were originally buried as part of funeral rituals at the royal graves in Ur, which can be dated as far back as 2900 BCE. This is to say, these cattle were not used for the usual dairy or farming purposes - they were sacrificed and buried with nobles.

Cattle remains were also found in non-noble graves in the later third millennium BCE, but not an entire animal; just selected body parts.

This indicates that there was some kind of hierarchical scale, rather than a binary determiner of whether or not an individual can be buried with cattle.

Researchers examined Strontium, Oxygen and Carbon isotopic variation to glean even more information about the cattle themselves: where they ate and drank, where they migrated or were herded.

“We haven’t done anything like this with cutting-edge archeological sciences in Mesopotamia previously,” Greenfield said.

It was determined that the animals were likely herded close to Ur, although at least one of the oxen in the sample had come from far away.

"Nature's Morphine", Could Help Against Joint Pain & Arthritis Sponsored by Healing Equilibrium

Overall, the study provided groundbreaking insights into the economy, health and diet of ancient Mesopotamia during a period of urbanization as cities and states began to crop up across the region.

The research was funded by the Social Sciences Research Council of Canada; The Newton Trust Research Grant (University of Cambridge); the Cambridge Humanities Research Grant Scheme; and the University of Pennsylvania Museum of Archeology and Anthropology.

**Please visit the site: <https://www.jpost.com/archaeology/article-710318>**

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## **NEW DAM COULD DROWN ANCIENT IRAQI CITY OF ASHUR, BY HADANI DITMARS**

Having survived Islamic State, Assyrian capital is under threat once again

Just two short months ago, the reopening of Ashur was celebrated by local Iraqis singing and dancing in traditional regalia. Many had fled their homes after the onslaught of Islamic State (Isis). The festivities recalled the spring processions that took place in the city thousands of years ago, with modern-day Assyrians, as well as other citizens of Iraq's multicultural society, passing through the Tabira Gate. But just as Ashur experiences a rebirth, it now faces another existential threat.

The ancient city of Ashur was built on the banks of the Tigris River—in what is now Iraq—more than 5,000 years ago. Ashur was once the powerbase of the Assyrian empire, encompassing Mesopotamia, Anatolia and some of what is now Egypt, Turkey, Israel, Jordan, Lebanon and Syria. The city was believed to be the physical manifestation of the eponymous and all-powerful god who, modern scholars say, is represented in Assyrian iconography as an armed warrior in a winged sun. Today, Ashur's temple still stands, a crumbling ziggurat rising 85ft above the Tigris. It was once more than twice the height, covered in iron and lead and studded with crystals.

The city has faced destruction twice: by Babylonian forces 600 years before the birth of Jesus Christ and in 2015, at the hands of Isis. At the centre of the city stands the Tabira Gate, a monument comprised of three arches that serves as the historic symbol of the city, says Tobin Hartnell, the director of the Center for Archaeology and Cultural Heritage at The American University of Iraq, Sulaimani (AUIS). “The Tabira Gate is the unique gateway between the main sanctuary of the gods in the ina libbi (the heart of the city) and the gardens of Ishtar (the bit akītu), the goddess of war and fertility,” he says.

In May 2015, Isis released a video showing its fighters attempting to turn the gateway to rubble. They succeeded in damaging 70%; more of the original structure has since fallen prey to water erosion. In 2021, Hartnell secured an emergency grant of \$72,000 from the International Alliance for the Protection of Heritage in Conflict Areas, which prevented the imminent collapse of the Tabira Gate during the wet Iraqi winter of 2020. The restoration was carried out in co-ordination with the Iraqi State Board of Antiquities and Heritage and the Ministry of Culture, and ensured the gate's outer arch, which sustained the most damage during the Isis attack, was stabilised. But the structure remains weak and, without further attention, could still fall.

An emergency project saved the Tabira Gate from complete collapse during the wet winter of 2020 by stabilising the structure's outer arch. AUIS Center for Archaeology and Cultural Heritage

“We are focused on the urgent task of restoring the larger middle arch of the triple-arch gateway before the entire archway collapses,” Hartnell says.

Hartnell's emergency restoration work meant the gate and the wider city joyously reopened to visitors on 1 April, the Assyrian new year celebration day. But, today, its future remains in the balance.

Around 25 miles away lies the planned site of the Makhoul Dam, first proposed by Saddam Hussein's Ba'athist regime in 2002. In 2003, Ashur was designated a Unesco World Heritage site—just as the US-led coalition invaded.

As war raged over the coming decades, the construction of the dam was forgotten. But persistent droughts brought on by climate change have blighted Iraq in recent years. With the ebbing Tigris and Euphrates rivers a threat to the country's water supply, the dam is back on the political agenda.

In April 2021, construction work on the dam began again. Already, excavators can be seen laying the foundations for the main reservoir.

Local families refer to 'the curse of Makhoul Dam', says Sarah Zaaimi, a researcher with the Iraqi NGO Liwan. "Everyone is anxiously waiting for the formation of the new cabinet in Iraq," Zaaimi says. "We are waiting to see whether the new minister will still want to go ahead with the project."

As plans stand, the creation of the dam threatens to flood the city of Ashur—a biblical torrent of rising river water that could drown more than 200 heritage sites in the heartland of Assyrian civilisation. Up to 250,000 people could also be displaced, according to Liwan. Khalil Aljbory, a researcher in archaeology at Tikrit University, has long studied the sociological effects of the dam on the local region. "The impact of the dam's construction has not been sufficiently studied, and to date there have been no social or environmental impact surveys carried out," Aljbory says in a Liwan statement. "As someone who has been displaced myself by previous conflicts, I fear that the construction of the dam may cause a second wave of displacement in the region."

Now, Aljbory, Zaaimi and other heritage professionals are negotiating with the Iraqi government to ensure that construction does not wantonly destroy the region's ancient monuments, as well as the lives of those who live close by. But all is not necessarily lost, says Hartnell. In fact, the dam presents local conservationists with an opportunity. "If Iraqi experts and the international community combine their efforts, then the dam's construction may spearhead a new era of cultural heritage preservation in Iraq," he says. Embracing technology, Hartnell suggests, may be the best initial approach: "The urgency of the task requires new technology to document this heritage at scale—and in record time—before it is lost under the water."

Hartnell is currently working on the installation of a new digital monitoring system that is able to determine stability levels in vulnerable structures, while the team also plan to systematically document Isis's crimes against Iraqi heritage before the evidence disappears.

This month, AUIS will begin a joint survey with Iraq's Ministry of Environment and the United Nations Development Programme to document the cultural heritage of the Central Tigris River Valley and other areas affected by the Makhoul dam. "We will discuss critical issues at the intersection of heritage and sustainable development," Hartnell says.

Top of the agenda is the creation of a temporary structure, due to begin construction this month. “But we don’t believe a temporary solution will help,” Hartnell says. “In fact, it might make things worse.”

**Please visit the site: <https://www.theartnewspaper.com/2022/06/20/new-dam-could-drown-ancient-iraqi-city-of-ashur> [Go there for pix]**

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## **BURIAL GIFTS DISCOVERY AT INFANT'S GRAVE A FIRST AT ANCIENT GREEK CITY,** **BY ALEXI FRIEDMAN**

Ruins at the ancient Greek city of Kelenderis site in Turkey, where archeologists just found burial gifts at a child's grave. Credit: Klaus-Peter Simon CC-BY-SA 3.0 Wikipedia Commons

Archeologists at the ancient Greek city of Kelenderis on the Turkish coast have, for the first time,

discovered burial gifts, including glass bracelets, at a child's grave along with a furnace for tile production.

The skeleton of the boy had four solid glass bracelets on his arm, and the find included other gifts, clothes, and a wooden coffin, the Hurriyet Daily News in Turkey reported.

The excavation site in the Mersin district about 100 kilometers north of Cyprus dates back 2,800 and has been ongoing since 1987.

While about 150 tombs have been discovered around the site's Odeon, none had burial gifts, head of the excavations team Mahmut Aydın said, according to the report. Partly because the burial is different from others, Carbon 14 analysis will provide details about when the child died. The burial site was thought to be in use around the Middle Ages.

### **Burial Gifts Include Ceramic Piece**

Along with the bracelets, there was an inscription on a ceramic piece and a cup. Remains of babies were found around the child's grave; Aydın said it was a children's burial location.

The discovery of the commercial furnace, which dates back 1,300 years, is believed to have been used to produce tiles and another discovery first for the team. Aydın said they knew there was an oven at the location but couldn't find it until now. Last year, they discovered a number of roof tiles dating back to the 7th century. The team may find more inside the furnace once it is emptied, he noted.

Ruins at the Kelenderis date back to Roman times and even later, with the location including the remains of thermal baths, fortification walls, cisterns, and an agora.

A few years after excavation began at the site, a large mosaic from the 5th to 6th centuries was uncovered, according to the website [tuerkei-antik](http://tuerkei-antik.com). The mosaic depicts the port of Kelenderis.

Last fall, an archaeological discovery in Turkey unearthed dozens of terracotta figurines depicting ancient Greek gods, men, women, and animals. The artifacts, over 2,000 years old, were found in the ancient Greek town of Myra, now called Demre, in Turkey. Some

of the figurines incredibly still had paint on them and others had inscriptions, providing archaeologists with a view of life in the region in the 1st and 2nd centuries BC.

**Please visit the site: <https://greekreporter.com/2022/06/25/burial-gifts-discovery-infants-grave-first-ancient-greek-city/> [Go there for pix]**

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## **'ALAS FOR ME, I AM DEAD': GRECO- ROMAN TOMB IN JORDAN OFFERS CLUES ABOUT LIFE IN CAPITOLIAS, BY KHALED YACOUB OWEIS**

A tomb discovered by a bulldozer may show how the Aramaic population dealt with Greek and Roman overlords

Six years ago, a bulldozer was digging foundations for sewage pipes near the Jordanian city of Irbid when it burst into an ancient tomb.

The site turned out to be one of the most important archaeological finds in recent times in Hauran, a plain at the crossroads of the ancient world, stretching from the north of modern day Jordan to the outskirts of Damascus.

Enough details survived, mainly from a red mural on one wall of the tomb, to discern 64 Greek and Aramaic inscriptions written above figures depicting workers and other people.

Many were builders of Capitolias, one of a group of cities called the Decapolis League. Pliny the Elder wrote about it in Natural History, his epic work, almost two millennia ago.

The 10 or so Greek cities were founded or expanded as part of Rome's drive to establish vassal states that would act as an eastern buffer in the aftermath of its conquest of Palestine in 63AD.

“Alas for me. I am dead”, a phrase on the wall reads next to a figure of a man apparently falling from the city wall of Capitolias.

“Thick, stupid,” reads another inscription above a scene of two men facing each other.

Other scenes show masons, quarries, architects, labourers and methods for transporting and moving construction material, according to a summary of a study by the Institut Francais du Proche-Orient (Ifpo).

The inscriptions, as well as other frescoes in the tomb, depict daily life and hint as to how the local Aramaic population dealt with Greek and Roman overlords, and the Gods invoked in the construction of Capitolias, the study says.

Opposite the entrance, which leads to a 38 square-metre main room, is a large basalt sarcophagus. No one knows who the tomb was for. Additional bodies were placed in it for hundreds of years, although it could have originally been built for someone who was influential in the city's construction.

The National was let into the tomb as part of a tour organised by Jordan's Department of Antiquities for French diplomats and personnel from Ifpo, one of several western

organisations working with the department to preserve and study the site through a US-funded project.

Among them is the American Centre of Oriental Research and the Italian Istituto Superiore per la Conservazione ed il Restauro, which has been involved for years in rescuing Qusayr Amra, an Umayyad era gem in Jordan's eastern desert.

The two-chamber tomb is accessible only by ladder because its main entrance is buried under the terrain. It is situated next to a government school in Beit Ras, a suburb of Irbid, Jordan's second city.

There are no plans to open the tomb to the public anytime soon, and most of Capitolias remains unexcavated. But there are many other archaeological sites nearby, such as the ruins of Gadara, another member of the Decapolis League with views of the Golan Heights and the Sea of Galilee.

The Dar Al Saraya Museum in Irbid, the provincial capital, has artefacts spanning the 16,000 year history of the region. They are housed in the old saray building, Irbid's seat of rule during the Ottoman era.

An easy-going mood prevails in the region, partly because of its commercial and societal links to a more cosmopolitan Syria.

Ziad Ghnimat, director of antiquities in the Irbid governorate, was constantly smiling throughout the tour of Bayt Ras tomb, proud of his home city of Irbid and its history.

He pointed out the ruins of a 5,000-seat theatre, unearthed in Bayt Ras in the 1990s, obscured from view by humble concrete houses and an olive grove.

He said beneath the modern construction sits possibly a site as expansive as Jerash, the best preserved city of the Decapolis, or Gadara.

But they do not have Capitolias's tomb.

“It is rare that we find depictions detailing the construction of an ancient city, let alone one belonging to Decapolis”, Mr Ghnimat said.

“In that aspect the tomb is unique.”

**Please visit the site: <https://www.thenationalnews.com/weekend/2022/06/24/alas-for-me-i-am-dead-greco-roman-tomb-in-jordan-offers-clues-about-life-in-capitolias/>  
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