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Κάνιγγος 27, 106 82 Αθήνα
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**ΟΙΚΗΤΙΚΟ
ΣΥΜΒΟΥΛΙΟ:**

Μ. Καπαρού (πρόεδρος),
Α. Οικονόμου (αντιπρόεδρος),
Ε. Κουλουμπή (γενική
γραμματέας),
Μ. Παπαγεωργίου (ταμίας),
Ε. Φιλιππάκη (μέλος),
Ι. Μπασιάκος (μέλος),
Γ. Φακορέλλης (μέλος)

Πληροφορίες:

Γ. Φακορέλλης (σύνταξη,
επιλογή ύλης)
E-mail: yfacorel@uniwa.gr

Scientific Association, Year
of Establishment 1982,
Headquarters: Kaniggos 27,
106 82 Athens (Association
of Greek Chemists)
<http://archaeometry.org.gr>

BOARD:

Μ. Kaparou (president),
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Υ. Facorellis (member)

Information:

Υ. Facorellis (editor)
E-mail: yfacorel@uniwa.gr

Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

- Μάιος 2023 -

“Talk sense to a fool and he calls you foolish.”
(Euripides, The Bacchae)

Newsletter of the Hellenic Society of Archaeometry

- May 2023 -

Nr. 266

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ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS
WORLD OF IRON AT 10 CONFERENCE,
NOVEMBER 2023, BIEA NAIROBI, CALL FOR
ABSTRACTS NOW OPEN

Dear all,

We are happy to inform you that the call for abstracts for the **World of Iron at 10** conference, to be held at the BIEA in Nairobi in November 2023, is now live at <https://biea.ac.uk/the-world-of-iron-at-10/>

The Abstract Submission Form can be found at <https://biea.ac.uk/forms/>

Deadline for abstract submission is 5th May 2023.

We encourage research on iron from any period (ancient to modern), and from anywhere in the world.

We look forward to receiving your abstracts!

Please reach out to us at iron@biea.ac.uk with any questions.

With best wishes from Jane and Thilo, on behalf of the Scientific Committee.

SECOND LATIN AMERICAN RADIOCARBON CONFERENCE (CLARA2), SEPTEMBER 4 TO 8, 2023, MEXICO CITY, MEXICO

Dear All,

We are pleased to announce the upcoming CLARa2 Conference, taking place in the vibrant city of Mexico City, Mexico, from September 4 to 8, 2023. Conveniently located in the heart of downtown, the conference aims to bring together the international and Latin American radiocarbon communities to exchange ideas and address various challenges and applications of the radiocarbon technique from multiple perspectives.

The conference program will feature a mix of invited lectures, and oral and poster presentations, allowing attendees to participate in discussion. In addition, the conference proceedings will be published in a special issue of Radiocarbon.

In addition to the rich academic program, you will also enjoy the many cultural and historical attractions that Mexico City offers. We are confident that your time spent at the CLARa2 Conference will be a truly memorable experience.

You can visit the website for the list of sessions:

<https://clara2.fisica.unam.mx/en/sessions>

You can now send the abstract on the following page:

<https://clara2.fisica.unam.mx/en/abstract>

Important dates:

February 2023: Sessions announced, abstract submission opens.

14 May 2023: Abstracts submission deadline.

22 May 2023: Registration will open.

June 2023: Decision Letters sent, and Early Bird Registration.

4 September: Conference starts.

Registration type	Price USD (until 30 June)	Price USD (after 30 June)
Full	\$400.00	\$450.00
Student*	\$200.00	\$240.00
Companion	\$200.00	\$240.00

* Fees are essential to make possible the meeting, however non-student participants may apply for the student rate in case of necessity We hope you will be able to join us and that we will meet again in person.

The organizer committee.

Please visit the site: <https://clara2.fisica.unam.mx/en/home>

14TH INTERNATIONAL CONFERENCE
“METHODS OF ABSOLUTE CHRONOLOGY”,
17-19TH MAY, 2023, GLIWICE. POLAND,
2ND CIRCULAR

Dear Colleagues,

We are excited to welcome you in Gliwice soon!

We have decided to slightly extend the deadline for abstract submission until 23.04.2023.

We would like to take this opportunity to share information about our committees:

The Organising committee

Co-chairmen

Piotr Moska

Grzegorz Adamiec

Secretary

Marzena Kłusek

Members

Maksymilian Jędrzejowski

Grzegorz Kazanowski

Fatima Pawełczyk

Grzegorz Poręba

Jarosław Sikorski

Agnieszka Szymak

Alicja Ustrzycka

Andrzej Wojtalak

Scientific committee

Peter Barta, Czech Academy of Sciences, Řež, Czech Republic

Andrzej Bluszcz, Silesian University of Technology, Gliwice, Poland

R.K. Borówka, University of Szczecin, Poland

Achim Brauer, GFZ, Potsdam, Germany

Jan-Pieter Buylaert, DTU, Roskilde, Denmark

Alicja Chruścińska, Nicolaus Copernicus University, Toruń, Poland

Markus Fuchs, Justus Liebig University, Giessen, Germany

Irka Hajdas, ETH, Zürich

Christine Hatte, Silesian University of Technology, Gliwice, Poland

Zdzisław Jary, University of Wrocław, Poland

Maria Łanczont, Maria Curie-Skłodowska University, Lublin, Poland

Lenka Lisa, Czech Academy of Sciences, Prague, Czech Republic

Edyta Łokas, Institute of Nuclear Physics, Kraków, Poland

Ireneusz Malik, University of Silesia, Poland

Adam Michczyński, Silesian University of Technology, Gliwice, Poland

Piotr Moska, Silesian University of Technology, Gliwice, Poland

Natalia Piotrowska, Silesian University of Technology, Gliwice, Poland
Andrzej Rakowski, Silesian University of Technology, Gliwice, Poland
Denis Roussau, Silesian University of Technology, Gliwice, Poland
Alida Timar-Gabor, Environmental Radioactivity and Nuclear Dating Centre, Cluj-Napoca, Romania
Wojciech Tylmann, University of Gdańsk, Poland
Andrzej Wiśniewski, University of Wrocław, Poland
Barbara Woronko, University of Warsaw, Poland
Wojciech Wysota, Nicolaus Copernicus University, Toruń, Poland

With best regards

Piotr Moska
Grzegorz Adamiec

Information from the first circular:

The Gliwice Absolute Dating Methods Centre, Institute of Physics – Centre for Science and Education at the Silesian University of Technology would like to invite you to take part in the 14th International Conference “Methods of Absolute Chronology”, which will be held from 17th to 19th May 2023 in Gliwice, Poland.

We are striving at providing a platform of exchange in the area of quaternary dating methods and their applications. We are looking forward to receiving submissions that will cover a range of subjects to foster an exchange of ideas.

The conference scientific programme includes plenary and poster sessions. The working language of the conference is English. Any questions related to the conference can be directed to the e-mail address: mach2023@polsl.pl.

CONTRIBUTIONS

Please register and submit your abstract on the website (<https://mach2023.polsl.pl/>), and indicate preferred session and presentation form (oral/poster). In case of a large number of oral presentations, some contributions may be moved to poster sessions upon the decision of the Scientific Committee. The posters should be in A1 format (594 x 841 mm) in portrait orientation.

The accepted presentations will be published in the open-access journal “[Geochronometria](#)”, following the regular reviewing schedule. We have secured funding to waive a fee for selected manuscripts.

AREAS COVERED

Depending on the scope of received abstracts the following list may be updated by the Scientific Committee:

Terrestrial archives Applications in geosciences
Advances in luminescence dating Diet/stable isotopes
Geoarchaeology Advances in radiocarbon dating
Mortars Applications in archaeology

Anthropocene/anthropogenic impact Bio-components/biofuel

COSTS

Conference fee

Professional 800 PLN (ca. 170€)

Student 500 PLN (ca. 128€)

Accompanying person 500 PLN (ca. 128€)

The fee covers admission to conference sessions, book of abstracts, coffee breaks, lunches, ice-breaker dinner (17 May), gala dinner (18 May), and a conference kit.

The fee should be paid in advance in PLN (Polish zloty currency) by a bank transfer to the following account:

ING Bank Śląski S.A.

ul. Sokolska 34, 40-086 Katowice

Oddział Gliwice

ul. Zwycięstwa 52, 44-100 Gliwice, Poland

BIC/SWIFT Code: INGBPLPW, Account No: PL 60 1050 1230 1000 0002 0211 3056

When making your bank transfers please quote clearly your name and that it is conference fee payment for 14th Conference MACH2023.

VENUE

Gliwice is a town in Upper Silesia (southern Poland), located in the Silesian Highlands near Katowice (30 km) and not far (50 km) to the Katowice-Pyrzowice airport.

The conference will be held at the Education and Congress Centre which is located on the campus of Silesian University of Technology, Konarskiego 18B, Gliwice.

ACCOMMODATION

The recommended accommodation choices in Gliwice are listed below.

Hotels:

1) **** Diament Plaza Gliwice Hotel, 1.0 km, 12 min walk

2) *** Diament Economy, 1.0 km, 12 min walk

3) *** Silvia Gold, 1.2 km, 16 min walk

4) *** Hotel Mikulski, 1.7 km, 22 min walk

5) *** Hotel Malinowski Economy, 2.0 km, 28 min walk

You can also find some budget accommodation options on [Booking.com](https://www.booking.com)

TRAVEL

The nearest airports are Katowice-Pyrzowice (KTW), ca. 50 km from Gliwice and Kraków-Balice (KRK), ca. 90 km from Gliwice.

IMPORTANT DATES

Registration starts: **19 December 2022**

Submission of abstracts and registration: **23 April 2023**

Abstract acceptance: **23 April 2023**

Payment: **7 May 2023**

Third circular: **8 May 2023**

Conference: **17-19 May 2023**

Submission of manuscripts: **30 June 2023**

11TH INTERNATIONAL CONFERENCE ON THE APPLICATION OF RAMAN SPECTROSCOPY IN ART AND ARCHAEOLOGY (RAA2023) - REGISTRATION AND PAYMENT

Dear Raman Enthusiasts!

The official registration and payment for the Raman spectroscopy training school and the 11th International Conference on the Application of Raman Spectroscopy in Art and Archaeology (RAA2023) will be available on Monday 1 May 2023.

The link can be found under the dedicated tab [Registration and payment | RAA 2023 \(ugent.be\)](#).

IMPORTANT DAYS

Early Registration and Payment: 1 May-18 June 2023

Late Registration and Payment: 19 June-20 August 2023

Registration Deadline for Presenting Author(s): 2 July 2023*

** The author(s) presenting the abstracts must register and pay the registration fee by (the latest) 2nd July 2023. Only after the successful registration and payment of the fee the abstracts can be included in the RAA2023 conference programme and as a consequence in the RAA2023 book of abstracts.*

For any questions regarding the registration and payment procedure, contact the organizing committee by email to raa2023@ugent.be.

On behalf of the organizing committee of the 11th International Conference on the Application of Raman Spectroscopy in Art and Archaeology (RAA2023).

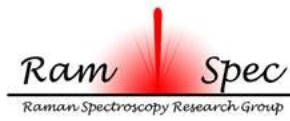
The Chairs of RAA2023

Dr. Anastasia Rousaki, Ghent University, Ghent, Belgium

&

Dr. Eleni Kouloumpi, The National Gallery-Alexandros Soutzos Museum, Athens, Greece

 2023 - International Conference on the Application of Raman Spectroscopy in Art and Archaeology



**CONFERENCE “CYPRUS AND THE
ANATOLIAN SOUTH COAST FROM THE
LATE BRONZE TO THE EARLY IRON AGE:
DYNAMICS OF INTERACTION IN A PERIOD
OF TRANSFORMATION”, 6-8 MAY 2023,
INSTITUTE OF ARCHAEOLOGICAL
SCIENCES (IAW), UNIVERSITY OF BERN,
SWITZERLAND - PROGRAMME**

The conference “Cyprus and the Anatolian South Coast from the Late Bronze to the Early Iron Age: Dynamics of Interaction in a Period of Transformation” organised by Teresa Bürge, Ekin Kozal and Mirko Novák will take place at the Institute of Archaeological Sciences (IAW), University of Bern, Switzerland from 6-8 May 2023.

Programme:

Saturday, 6 May 2023

08:30–09:00 Registration

09:00–09:10 Teresa Bürge (Bern/Vienna/Gothenburg), Ekin Kozal (Çanakkale/Bern), Mirko Novák (Bern): Welcome and introduction: Cyprus and the Southern coast of Anatolia – state of research, problems and prospects

09:10–09:50 Peter M. Fischer (Gothenburg): Hala Sultan Tekke, Cyprus in the 12th century BCE: the final years of a remarkable city

09:50–10:30 Teresa Bürge (Bern/Vienna/Gothenburg): The 12th century BCE pottery repertoire from Hala Sultan Tekke

10:30–10:50 Coffee

10:50–11:30 Sabine Fourrier (Lyon): The Late Bronze Age – Early Iron Age settlement at Kition-Bamboula: new insights from recent excavations

11:30–12:10 Anna Georgiadou (Nicosia), Artemis Georgiou (Nicosia): Transitions and transformations in the pottery record from the Late Bronze Age – Early Iron Age settlement of Kition-Bamboula

12:00–14:00 Lunch

14:00–14:40 Maria Iacovou (Nicosia): Ancient Paphos from Late Cypriot IIIA to the early Cypro-Geometric period. Settlement structure and ceramic industry transformations (12th to 10th c. BC)

14:40–15:20 Anna Satraki (Nicosia): Approaching Idalion and its territory at the transition from the Late Bronze to the Early Iron Age: challenges and prospects

15:20–16:00 Coffee

16:00–16:40 Eric Jean (Çorum): The place of Yumuktepe in the exchange network between Cyprus and Cilicia at the end of the Late Bronze Age

16:40–17:20 Remzi Yağcı (Izmir): Cypriot-Cilician relations during the Late Bronze Age: the case of Soli

17:20–18:00 Break/discussion

18:00–19:00 Keynote lecture: Marie-Henriette Gates (Ankara): Connecting Cyprus and Cilicia in the Bronze and Iron Ages: an interactive challenge

Sunday, 7 May 2023

09:00–09:40 Gunnar Lehmann (Be'er Sheva): Kinet Höyük, an Early Iron Age harbor in Cilicia

09:40–10:20 Fabrizio Bättscher (Bern), Joëlle Heim (Bern), Silvana Hunger (Bern): Sirkeli Höyük – building, living and producing

10:20–11:00 Hannah Mönninghoff (Bern): Same same but different? The Cypriote style pottery takeover at Sirkeli Höyük

11:00–11:30 Coffee

11:30–12:10 Aslı Özyar (Istanbul): The settlement of Tarsus-Gözlükule during the transition from the Late Bronze to the Iron Age

12:10–12:50 Elif Ünlü (Istanbul): Tarsus-Gözlükule: Late Bronze and Early Iron Age periods based on pottery analysis

12:50–14:30 Lunch

14:30–15:10 Deniz Yaşın (Bern), Ekin Kozal (Çanakkale/Bern): Tepebağ Höyük in the Late Bronze Age: local and Cypriot pottery

15:10–15:50 Ekin Kozal (Çanakkale/Bern): The Final Bronze Age at Kilise Tepe through the lens of the pottery from the Stele Building

15:50–16:20 Coffee

16:20–17:00 Paula Waiman-Barak (Tel Aviv): Tracing ancient trade networks: provenance studies of Cypriot pottery from the Late Bronze to the Iron Age in Cyprus and the Levant

17:00–17:40 Vasiliki Kassianidou (Nicosia): The connections between Cyprus and the Anatolian South Coast in the Bronze Age and Early Iron Age relating to metal production and trade

17:40–18:20 Ümit Güder (Prague/Düsseldorf): Early iron production and smithing in Cilicia: an overview

18:20–18:45 End of day discussion

Monday, 8 May 2023

09:00–09:40 Mirko Novák (Bern): Hiyawa/Kawa – Neo-Hittite formations and structures in Cilicia

09:40–10:20 Christian Körner (Bern): A look beyond the Late Bronze Age horizon: the Cypriot kingdoms and the Near Eastern empires from the 8th to the 4th centuries BC

10:20–11:00 Annick Payne (Bern): Speak slowly and clearly, I only know Luwian

11:00–11:30 Coffee

11:30–12:30 Final discussion, summary, proceedings, future activities

For further information, see <http://sgoa.ch/de/event/cyprus-and-the-anatolian-soth-coast-from-the-late-bronze-to-the-early-iron-age/> and <https://www.iaw.unibe.ch/>

The conference will be live-streamed on zoom. To receive a link please contact teresa.buerge@unibe.ch no later than 5 May.

30TH BIENNIAL IIC CONGRESS 2024, **HOSTED IN PERSON AND ONLINE, LIMA,** **PERU, CALL FOR PROPOSALS**

The International Institute for Conservation of Historic and Artistic Works (IIC) and the Research Center for Heritage Conservation at the Universidad de Ingenieria & Tecnologia (UTECH) in Lima, are pleased to issue a call for proposals for the 30th biennial IIC Congress 2024 to be hosted in person and online in Lima, Peru, with hybrid Regional Live Hubs in Argentina, Brazil and Uruguay.

Building on the success of the IIC 2022 Wellington Congress, we are delighted to announce that the Congress in 2024 will take a similar hybrid format, promoting a more sustainable and climate-friendly event. By offering the Congress in a hybrid form IIC aims to make this event as accessible and inclusive as possible, extending our global reach from Africa to Asia-Pacific, as well as offering the opportunity for in-person events, networking and experience of the unique culture and heritage that Peru has to offer.

The Congress theme is *Sustainable solutions for conservation: new strategies for new times.*

Deadline for Submissions: 31 May 2023 (midnight BST)

For more information on the theme and how to apply please see our website: [Call for Proposals, IIC Lima Congress 2024 | International Institute for Conservation of Historic and Artistic Works \(iiconservation.org\)](https://www.iiconservation.org/call-for-proposals-iic-lima-congress-2024)

Ellie Sweetnam
International Institute for Conservation of Historic and Artistic Works
London

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

**PHD STUDENTSHIP OPPORTUNITY: ART,
SOFT MATTER AND SANS: COMBINING
OPTICAL COHERENCE TOMOGRAPHY AND
SCATTERING METHODS FOR ART
CONSERVATION APPLICATIONS**

Applications for "Art, soft matter and SANS: Combining Optical Coherence Tomography and Scattering Methods for Art Conservation Applications" are open!

In this project, you will develop a non-invasive imaging system for the characterisation of layered structures in combination with neutron scattering techniques at the ISIS Neutron and Muon Source. In collaboration with the National Gallery, London and Tate, you will apply this powerful new imaging system to help solve pressing challenges in painting conservation. The PhD will provide an opportunity to learn and improve OCT techniques and neutron scattering techniques and will involve research work both at Nottingham Trent University, and the ISIS Neutron and Muon Source, at the Harwell campus in Oxfordshire, as well as interacting with the partner organisations.

Deadline: May 22nd 2023

For full details see: www.ntu.ac.uk/research/find-a-phd-opportunity/projects/...

Catherine Higgitt
Principal Scientist
National Gallery
London

catherine.higgitt@ng-london.org.uk

FULL-TIME OR PART-TIME POSITION **CERAMIC PETROGRAPHY, UNIVERSITY OF** **CYPRUS**

The ERC Starting Grant project 'ComPAS' of the Archaeological Research Unit, University of Cyprus, announces one full-time or part-time position (depending on the candidate's availability):

Special Scientist - Research (Ceramic petrography): (up to) 140 hours/month

The selected candidate will work towards specific tasks of the project, including:

the macroscopic characterisation and documentation of ceramic fabrics of imported Levantine, Egyptian and Aegean transport amphorae from Cypriot contexts of the Late Bronze Age and Early Iron Age the mineralogical, technological and microstructural characterisation of ceramic thin sections data processing, and contribution to data integration discussions for the determination of the identified ceramic fabrics' morpho-functional qualities and provenance the dissemination of research results in academic meetings and publications subject to the selected applicant's analytical skills, the elemental characterisation of selected ceramic samples with the use of a hhXRF analyser

The research programme ComPAS, acronym for "Commercial Patterns Across the Sea: The interdisciplinary study of Maritime Transport Containers from Cyprus and the elucidation of Mediterranean connectivity during the Late Bronze Age-Early Iron Age" is funded by the European Union in the frame of the ERC (European Research Council) Starting Grants (GA no. 947749).

The project is hosted at the Archaeological Research Unit of the University of Cyprus and it is coordinated by its Principal Investigator, Assistant Research Professor, Dr Artemis Georgiou. The project's overall objective is to provide new insights on the interregional commercial strategies and intercultural connectivity that characterised ancient communities of the eastern Mediterranean during the Late Bronze Age (ca. 1650-1100 BC) and Early Iron Age (ca. 1100-750 BC), through the interdisciplinary study of imported Maritime Transport Containers deposited in Cypriot contexts. For more information about ComPAS, please visit the project's website: www.ucy.ac.cy/compas

QUALIFICATIONS

The candidate is expected to be a highly motivated individual with proven capability to work in a demanding, multi-disciplinary research environment, eager to be actively engaged in the demanding activities of this large-scale, European-funded research project and collaborate efficiently with the Principal Investigator and the other researchers of ComPAS.

Minimum requirements include:

Degree in archaeology, or archaeological sciences, or geology Masters in archaeology, or archaeological sciences, or geology and related fields Good knowledge of ceramic petrography for the compositional and technological characterisation of archaeological ceramics Excellent knowledge of the English language both verbal and written Excellent communication and interpersonal skills

Optional, but will be considered as an advantage, any of the following:

PhD in archaeology, or archaeological sciences, or geology and related fields Experience with hhXRF analysis for the elemental characterisation of archaeological ceramics Experience with Scanning Electron Microscopy Ability to produce thin sections of the material that will be studied Knowledge and proven experience with interdisciplinary studies of Late Bronze Age ceramics from the eastern Mediterranean

DUTIES AND RESPONSIBILITIES

We are looking for an engaged individual with experience in ceramic petrography, and other related methods of material characterisation for the interdisciplinary study of ancient ceramics. The successful candidate will collaborate with the Principal Investigator and other team members for the macroscopic characterisation, and petrographic, elemental, microstructural assessment of selected ceramic assemblages of imported vessels found in archaeological contexts of Cyprus, in relation to the project's specific and general aims. Furthermore, the successful candidate is expected to present the results of their research in academic publications and gatherings.

EMPLOYMENT TERMS

The position is on a contractual basis for two consecutive years, subject to renewal in the first year (based on performance and availability of funding). The successful candidate is expected to begin employment as soon as possible.

Interested candidates should submit by Friday, 28th April 2023 the following items in PDF format, via e-mail to compas@ucy.ac.cy:

Cover letter (no more than 3 pages long, indicating earliest possible starting date) A detailed curriculum vitae Copies of transcripts of BSc/MSc/PhD degree(s) The names and contact details of at least two referees, from whom references may be requested If available, any relevant publications

For more information, interested individuals may contact us at compas@ucy.ac.cy

At least the three most competitive candidates that satisfy the required qualifications will be interviewed by a 3-member committee. All candidates shall be informed of the result of their application by the relevant entity after the completion of the recruitment process.

The University of Cyprus shall collect and process the applicants' personal data according to the provisions of the General Regulation on Personal Data 2016/679 (EU). The University of Cyprus (UCY) is committed to promoting inclusivity, diversity, and equality, as well as the elimination of all forms of discrimination in order to provide a fair, safe, and pleasant environment for the entire university community, where students

and staff members will feel supported both in their professional and personal development, within and beyond their multiple identities. To this end, UCY seeks to create the necessary conditions that will encourage and respect diversity, and ensure dignity both in the workplace and society at large. Moreover, UCY has adopted specific policies to promote equal opportunities, as well as respect and understanding of diversity, while it is committed to promoting and maintaining a working, teaching, and learning environment, free from any form of discrimination, whether direct or indirect.

**POST-DOCTORAL FELLOWSHIP, THE
INSTITUT FRANÇAIS D'ARCHÉOLOGIE
ORIENTALE (IFAO) AND THE POLISH
CENTRE OF MEDITERRANEAN
ARCHAEOLOGY, UNIVERSITY OF WARSAW
(PCMA UW), CAIRO**

The Institut Français d'Archéologie Orientale (IFAO) and the Polish Centre of Mediterranean Archaeology, University of Warsaw (PCMA UW) are calling for applications for a 16-months Post-Doctoral Fellowship in Cairo. It is the fifth call for the joint IFAO–PCMA Fellowship program.

The Post-Doctoral Fellow will be tasked with organizing an international Seminar/Workshop on a subject of his or her choice which must be related with Ancient or Medieval Northeastern Africa (Egypt and/or Nubia).

The conference will take place in Cairo in the Spring of 2024. The fellow will also be charged with the preparation of conference proceedings for publication. The fellow is expected to stay in Cairo during the fellowship and divide his or her time, equally, between the PCMA UW Research Centre in Cairo and the IFAO.

The applicant must hold a doctoral degree (PhD) in a discipline related to the study of Ancient or Medieval Northeastern Africa and/or the Near East for a maximum of 7 years. The Fellowship is open for applicants of all nationalities.

The fellowship begins 1st September 2023 and lasts 16 months. For details, see the Call for applications:

https://pcma.uw.edu.pl/wp-content/uploads/2023/03/PCMA-Ifao-fellowship_2023-24.pdf

Deadline for applications is 31st May 2023.

This information can also be found here:

<https://pcma.uw.edu.pl/en/2023/03/29/call-for-applications-ifao-pcma-post-doctoral-fellowship-2023-24/>

IRMS LABORATORY TECHNICIAN **POSITION AT 14CHRONO CENTRE, N.** **IRELAND**

The 14CHRONO Centre in the School of Natural and Built Environment, Queen's University Belfast, is currently seeking to appoint an exceptional candidate to the post of IRMS Laboratory Technician. The successful candidate will operate and maintain an Elemental Analyser – Isotope Ratio Mass Spectrometer (EA-IRMS) to provide stable isotope results and assist with radiocarbon and isotopic sample processing.

The successful candidate must have and your CV/Cover letter (or application form) should clearly demonstrate you have:

- NVQ 3, 2 A Levels, ONC/OND, City and Guilds level 3 or equivalents in a relevant subject
- 2 years' work experience with stable isotope analysis (IRMS)
- Analytical and problem-solving skills required for diagnosing and troubleshooting technical equipment
- Experience with basic statistical analyses and understanding of and interpreting statistical data

Please note the above are not an exhaustive list.

Duration: **Permanent**

Hours: **Full-time**

Salary: **£26,642 - £30,619 per annum**

Key Dates

Closing Date: **01/05/2023**

Anticipated Interview Date: **15/05/2023**

Further Information

Informal enquiries may be directed to: Michelle Thompson - M.M.Thompson@qub.ac.uk

Information about the School can be found at: <https://www.qub.ac.uk/schools/NBE/>

At Queen's our people are at the heart of everything we do. As a staff member you will become part of a vibrant organisational culture, which will provide you with the opportunity to achieve your full potential and enhance your career through a continuous focus on learning and development.

We offer an excellent employment package that includes:

- Great terms & conditions
- Pension schemes
- Flexible working by enabling you to design your working week in collaboration with your manager through a blend of remote and office working
- Family-friendly initiatives
- Career development opportunities
- Support for health & mental wellbeing

- Generous holiday entitlement of 8 weeks a year (made up of 23 days annual leave, 10 closure days and 9 bank holidays)

Further information on our attractive package can be found at:

<https://www.qub.ac.uk/directorates/HumanResources/pay-reward-and-benefits/>

Queen's University is committed to promoting equality of opportunity to all. We have created an inclusive culture by establishing staff networks such as iRise (Race) and PRISM (LGBTQ+) which help us progress equality.

We also subscribe to Equality Charter Marks such as the Diversity Charter Mark NI in addition to Athena Swan. For further information on our commitment to Equality, Diversity and Inclusion, please visit:

www.qub.ac.uk/diversity; www.qub.ac.uk/sites/QueensGenderInitiative/ and www.qub.ac.uk/sites/StaffGateway/StaffNetworks/

For further information about the role including the essential and desirable criteria please visit www.qub.ac.uk/jobs.

POST-DOCTORAL FELLOWSHIP **OPPORTUNITY, DEPARTMENT OF** **ANTHROPOLOGY AT MCMASTER** **UNIVERSITY**

Applications are invited for a two-year Post-Doctoral Fellowship (PDF) in the Department of Anthropology at McMaster University. The fellow should have a PhD in Anthropology with a focus on archaeological science (with a preference to paleoethnobotany). The ideal candidate will have interest in collaborating on research into Indigenous foodways in the Great Lakes Region and be keen to create intellectual synergies with current faculty members. There will be extensive opportunities to network with project co-investigators, collaborators, and department members.

The PDF is expected to pursue an active research agenda and will have access to McMaster's labs including the Laboratory for Interdisciplinary Research of Archaeological Ceramics (LIRAC) and McMaster Paleoethnobotanical Research Facility (MPERF). The successful candidate will be required to teach one in-person undergraduate course in archaeological science (with preference to a paleoethnobotanical methods course) that will be determined by departmental need each academic year. The fellow will also be expected to mentor both undergraduate and graduate students and take an active part in departmental life, including presenting their research at departmental colloquia, seminar, and other events. To learn more about the Department of Anthropology at McMaster, visit: <https://anthropology.socsci.mcmaster.ca/>

ANNUAL SALARY:

- \$60,000 CAD per year + benefits. This position is included within the Canadian Union of Public Employees (“CUPE”) Local 3906 Unit 3, representing Post-Doctoral Fellows.
- The appointment may include teaching up to 6-units of University degree credit courses.

START DATE: To be determined; no later than September 1, 2023

QUALIFICATIONS:

- Completion of a PhD program in Anthropology or a related discipline within the five years (not including parental leaves, etc) preceding the initial appointment start date.
- An excellent academic record including a beginning record of publications, conference presentations and a research agenda aligned with the position.

APPLICATION DEADLINE: Tuesday, May 16, 2023.

TO APPLY: Applications for the position should be submitted to the portal on the McMaster [Career Opportunities](#) website and must include the following:

- a cover letter that includes a detailed statement of background in archaeological science and experience in teaching relevant methodologies
- a one-page statement that outlines a research plan in alignment with the position
- CV
- A writing sample (peer-reviewed publication preferred, or a thesis chapter)

For more information, please contact Professor Andrew Roddick, Chair of the Department of Anthropology at: anthchair@mcmaster.ca

All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority; only short-listed applicants will be contacted for interviews and names of references.

Employment Equity Statement

McMaster University is located on the traditional territories of the Haudenosaunee and Mississauga Nations and within the lands protected by the “Dish With One Spoon” wampum agreement.

The diversity of our workforce is at the core of our innovation and creativity and strengthens our research and teaching excellence. In keeping with its Statement on Building an Inclusive Community with a Shared Purpose, McMaster University strives to embody the values of respect, collaboration and diversity, and has a strong commitment to employment equity.

The University seeks qualified candidates who share our commitment to equity and inclusion, who will contribute to the diversification of ideas and perspectives, and especially welcomes applications from indigenous (First Nations, Métis or Inuit) peoples, members of racialized communities, persons with disabilities, women, and persons who identify as 2SLGBTQ+.

As part of McMaster’s commitment, all applicants are invited to complete a confidential Applicant Diversity Survey through the online application submission process. The Survey questionnaire requests voluntary self-identification in relation to equity-seeking groups that have historically faced and continue to face barriers in employment. Please refer to the Applicant Diversity Survey - Statement of Collection for additional information.

Job applicants requiring accommodation to participate in the hiring process should contact:

Human Resources Service Centre at 905-525-9140 ext. 222-HR (22247), or
Faculty of Health Sciences HR Office at ext. 22207, or
School of Graduate Studies at ext. 23679
to communicate accommodation needs.

Vaccination Policy Statement

The University is committed to providing and maintaining healthy and safe working and learning environments for all employees, students, volunteers and visitors. The University’s Vaccination Policy-COVID-19 Requirements for Employees and Students (the “Vaccination Policy”), requires all McMaster community members, including employees, accessing a McMaster campus or facility in person to be fully vaccinated or to have received an exemption from the University for a valid human rights ground. While the Vaccination Policy is currently paused, it may resume quickly and on short notice, as informed by public health advice and direction. Should it become necessary in future to resume the Policy, all community members will need to demonstrate compliance at that time. Successful applicants in those positions that work in host

hospitals or other healthcare sites that have active vaccination mandates in place will need to comply with these and any other health and safety measures necessary as part of their appointment. The University will continue to follow the guidance of public health organizations to

Hybrid Work Language

To ensure an ongoing and vibrant University community that meets the needs of our students, staff and faculty and supports the University mission, ability to work on-site continues to be a requirement for most University positions. The University is supportive of exploring flexible work arrangements that effectively balance operational needs and employee interests.

April 13, 2023

define fully vaccinated status.

POSTDOCTORAL FELLOWSHIPS AT THE **GRONINGEN INSTITUTE OF** **ARCHAEOLOGY**

Dear colleagues,

Please pass this on to anyone you think might be interested.

The Greek Archaeology group at the Groningen Institute of Archaeology is looking to support postdoc applications (**Marie Skłodowska-Curie Actions European Postdoctoral Fellowships** and **NWO VENI Postdoctoral Grants**) that align with or complement our current research in Aegean prehistory, and especially in the prehistory of the Greek mainland, in the Hellenistic and Roman periods in the eastern Mediterranean, the study of mortuary practices in the ancient Greek world from prehistory to the Late Roman period, as well as in osteoarchaeology and isotopic studies. We are also interested in critical heritage studies, and especially in the history and current institutional framework of Greek archaeology, and the ideological use of the past in Greece.. In Groningen we work closely with our colleagues in the Ancient History Department, with the Centre for Interdisciplinary Studies on the Ancient World CRASIS, and with the Centre for Isotope Research. We also collaborate with the Archaeological Society in Athens, the Greek Archaeological Service, the Netherlands Institute in Athens and the Wiener Laboratory in the American School of Classical Studies.

More information on the Greek Archaeology research group can be found in <https://www.rug.nl/research/groningen-institute-of-archaeology/research/research-groups/greek-archaeology>

MSCA European Postdoctoral Fellowships enhance the creative and innovative potential of researchers holding a PhD who wish to acquire new skills through advanced training, international, interdisciplinary and inter-sectoral mobility. MSCA European Postdoctoral Fellowships are open to researchers wishing to reintegrate in Europe, to those who are displaced by conflict, as well as to researchers with high potential who are seeking to restart their careers in research. Fellowships will be provided to excellent researchers, undertaking international mobility either to or between EU Member States or Horizon Europe Associated Countries, as well as to non-associated Third Countries. Applications will be made jointly by the researcher and a beneficiary in the academic or non-academic sector. European Postdoctoral Fellowships are open to researchers of any nationality. The standard duration of these fellowships is between 12 and 24 months.

Full information on MSCA European Postdoctoral Fellowships can be found at: <https://marie-skłodowska-curie-actions.ec.europa.eu/calls/msca-postdoctoral-fellowships-2023>

VENI Grants allow researchers who have recently obtained their PhD to conduct independent research and develop their ideas for a period of three years. The NWO VENI programme is targeted at researchers who have recently obtained their PhD, whose qualities clearly exceed what is customary within their international peer group. They are

at the start of their scientific career and display a striking talent for scientific research. VENI applicants must have obtained their doctorate within the last three years. The 2022 VENI round is open to researchers who meet this criterion on 1 January 2022, and for applicants who obtained their doctorate between 1 January 2022 and 6 September 2022 (but there may be a possibility of an extension in some cases). Application is open to researchers from inside and outside the Netherlands.

Full information on the NWO VENI grants in the Social Sciences and Humanities can be found at: <https://www.nwo.nl/en/calls/nwo-talent-programme>

Please send:

- an updated cv with list of publications
- a short research proposal (2 pages)
- a letter of motivation (1 page) explaining why you want to carry out your research in Groningen to gia@rug.nl by 15 May 2023 at the latest.

Marie Skłodowska-Curie Actions European Postdoctoral Fellowships

Selected candidates will be provided with training to help them prepare their final application which has to be submitted by 15 September 2023.

NWO VENI Postdoctoral Grants

Selected candidates will be provided with training to help them prepare a pre-proposal which has to be submitted to NWO by 5 September 2023. The candidates who get through the NWO selection round have to submit a full proposal by 24 January 2024.

The Groningen Institute of Archaeology, University of Groningen, The Netherlands) engages in fundamental archaeological research on past human societies and their environments, from Palaeolithic hunter-gatherers to complex urban societies. Special research foci include: Arctic (ethno)archaeology and ecology; European prehistory and protohistory; Aegean prehistory; Italian prehistory and protohistory; the Graeco-Roman Mediterranean and Middle East; bioarchaeology (including zooarchaeology, archaeobotany and human osteoarchaeology), mortuary archaeology, landscape archaeology, archaeological theory, archaeological science and material culture studies.

More information on the Groningen Institute of Archaeology can be found at: <https://www.rug.nl/research/groningen-institute-of-archaeology/?lang=en>

You can also write to the Director of the Institute, Prof. Sofia Voutsaki (s.voutsaki@rug.nl).

Dr Anna Moles

Assistant Professor

Mediterranean Archaeology and Human Osteoarchaeology

Groningen Institute of Archaeology

Poststraat 6, 9712 ER Groningen, The Netherlands

a.c.moles@rug.nl

[RUG](#) | [Academia](#) | [ORCID](#)

[@annamolesosteo](#) on Twitter

[Groningen Greek Archaeology](#) on Facebook
[Groningen Human Osteoarchaeology Lab](#) on Instagram

University of Groningen
Faculty of Arts, Groningen Institute of Archaeology



RESEARCH ASSOCIATE FOR THE PROJECT **“EXC 2176 UNDERSTANDING WRITTEN** **ARTEFACTS” § 28 SUBSECTION 3 HMBHG**

Institution: Cluster of Excellence „Understanding Written Artefacts“ (manuscript research) Salary level: EGR. 13 TV-L

Start date: as soon as possible, fixed until 31.12.2025 (This is a fixed-term contract in accordance with Section 2 of the academic fixed-term labor contract act [Wissenschaftszeitvertragsgesetz, WissZeitVG]).

Application deadline: 2023-05-24

Scope of work: full-time position suitable for part-time

The core responsibility of the research associate is to pursue an independent research project that fits the overall comparative research profile of the Cluster of Excellence “Understanding Written Artefacts”, and to contribute to the collaborative research activities of the Cluster.

Responsibilities

Duties include academic services in the project named above. Research associates may also pursue independent research and further academic qualifications.

Specific Duties

The Cluster offers the exciting opportunity to contribute to research on written artefacts in an international team of researchers from across forty disciplines in the humanities, the natural sciences and computer science. Within this highly inspiring and collaborative environment, you will pursue your own research project as well as contribute to the Cluster’s research programme as a whole through your active engagement in its internal and wider research activities. Activities include participation in research field meetings, academic publications, organising scholarly events, and maintaining and developing cooperation and relevant networks, amongst others. As the successful candidate, you will become a member of the Cluster and can apply for additional funding. The Cluster features a range of facilities and supportive measures from which its researchers can benefit (see <https://www.csmc.uni-hamburg.de/written-artefacts.html>).

Pending the Cluster’s further funding beyond 31 December 2025 research associates will be able to apply for an extension of their project for up to an additional three years.

Requirements

A university degree in a relevant field.
doctorate desirable
fluent in English, written and spoken

Candidates should have a strong interest in cooperating beyond disciplinary boundaries, especially across the humanities, natural sciences and computer sciences. In particular, we are interested in projects with a focus on one of the following themes:

handwritten artefacts in the digital age written artefacts and provenance studies
conceptual approaches to written artefacts from fields such as philosophy, sociology and anthropology

Candidates must apply with a project proposal (in English) of max. 5 pages (plus bibliography), including a brief summary, literature review, a detailed project description, a schedule and a budget plan (presumed costs related to the project, such as travel costs). The proposed project must fit the overall research profile of the Cluster of Excellence “Understanding Written Artefacts” and candidates are encouraged to identify a Research Field in which they situate their project.

For further information, see <https://www.csmc.uni-hamburg.de/written-artefacts.html>.

FELLOWSHIPS: ANCIENT HERITAGE **(VENICE, UDINE AND TRIESTE** **UNIVERSITIES)**

The doctoral program in Ancient Heritage of the Universities of Venice, Udine and Trieste, is one of the largest of its kind in Italy. It offers this year (start: September/October 2023; application deadline: May 31st, 2023) 14 fully funded PhD positions:

- 10 are aimed at candidates with proposals falling into one or more of our three main areas of research - broadly speaking: Greek and Latin philology, literature and linguistics; ancient history of the Mediterranean, including Greek, Rome and the Ancient Near East, as well as epigraphy, history of religions, numismatics, etc.; pre- and proto-historic, Near Eastern, Greek, Roman, Italic, and Medieval archaeology;
- 3 belong to the ERC project “Communication in Ancient Anatolia” run by Annick Payne (Univ. of Venice);
- 1 is linked to the Italian PNRR fund, under the topic “Digital humanities and new technologies for cultural heritage”.

Prospective candidates must have obtained their first degree no more than 10 years before applying.

The admission procedure is two-step:

- first, a written exam to be taken in person in Venice in June 2023 (translation from Greek or Latin for those applying for the philology curriculum; a historical or archaeological essay for those applying for one of these areas, or for the ERC positions);
- candidates with a score of at least 24/35 in the written test will then be admitted to an oral interview (either in person or via Zoom) focusing on their research proposal and previous experience.

Both the written and the oral exams may be taken in English. The PhD program, however, is run and taught in Italian; proficiency in English is required at B2 level at least, and knowledge of one further European language is mandatory.

PhD students will have plenty of time to study; their mobility during their doctoral training is strongly encouraged (and supported); they will take part in the “doctoral weeks” organised every year by each of the three universities, as well as in a number of other activities.

All the details can be found at the following links (see esp. pp. 32 and 44 of the call):

Italian: <https://www.unive.it/pag/43333/>
English: <https://www.unive.it/pag/43334/>

For any further doubts that may arise you can write (administrative issues) to the office in charge of the admission procedure: phd.application@unive.it or (scientific issues) to the Coordinator of the doctoral program: f.pontani@unive.it.

ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS

IAMS ARCHAEOMETALLURGY SUMMER SCHOOL 2023

Registrations for the IAMS Archaeometallurgy Summer School are now open!

Please join us at the UCL Institute of Archaeology in London for two weeks of stimulating archaeometallurgy sessions sponsored by the Institute for Archaeometallurgical Studies. Leading experts will discuss a range of topics including mining, smelting, metalworking, field methods, and the analysis of metal objects. Sessions will consist of topical lectures and case studies as well as artefact handling, technical demonstrations, and museum visits. We will also take an excursion Butser Ancient Farm for a weekend of experimental archaeometallurgy. The course is intended for professionals, academics, students, and enthusiasts alike.

The summer school will run weekdays 19-30 June from 10am to 5pm. However we will also be running an optional weekend of experimental archaeometallurgy from Friday 30 June to Sunday 2 July.

Please register your interest [here](#).

A small number of bursaries will be available to students in financial need. To express an interest or request additional summer school details, please send an email to m.charlton@ucl.ac.uk with the subject line: **IAMS summer school**.

Best wishes,

Mike

HOW ROME BECAME BYZANTINUM: NEW LIGHT FROM DNA, ICE CORES, AND HARVARD'S SCIENCE OF THE HUMAN PAST, LECTURE BY PROFESSOR M. MCCORMICK

Το Εργαστήριο Αρχαιολογικών Επιστημών Malcolm H. Wiener της Αμερικανικής Σχολής Κλασικών Σπουδών σας προσκαλεί στην ομιλία του καθηγητού **Michael McCormick** (Francis Goelet Professor of Medieval History at Harvard; Chair, Science of the Human Past) με θέμα:

« **How Rome Became Byzantium: New Light from DNA, Ice Cores, and Harvard's Science of the Human Past** »

Η ομιλία θα πραγματοποιηθεί στις **4 Μαΐου 2023**, στις **19:00**, στο **Αμφιθέατρο Cotsen Hall** (Αναπήρων Πολέμου 9, 106 76, Αθήνα). Για πληροφορίες: 213-000-2400 (133), info.wienerlab@ascsa.edu.gr

Ο καθηγητής Michael McCormick κατέχει την έδρα Francis Goelet Professor of Medieval History στο Πανεπιστήμιο του Harvard, είναι Διευθυντής του Max Planck - Harvard Research Center for the Archaeoscience of the Ancient Mediterranean και πρόεδρος του Harvard's Initiative for the Science of the Human Past. Στο πλαίσιο αυτού του διεπιστημονικού σχήματος, ιστορικοί και αρχαιολόγοι σε συνεργασία με επιστήμονες και ερευνητές άλλων ειδικοτήτων εφαρμόζουν επιστημονικά εργαλεία με πρωτοποριακά αποτελέσματα στη μελέτη του ανθρώπινου παρελθόντος. Κάποια παραδείγματα των καινοτόμων ερευνητικών κατευθύνσεων αυτής της πρωτοβουλίας είναι η κατανόηση των διαχρονικών ανθρώπινων πληθυσμιακών μετακινήσεων και η εξέλιξη της ανθρώπινης υγείας μέσω της ανάλυσης DNA, η δημιουργία του ψηφιακού άτλαντα του Ρωμαϊκού και Μεσαιωνικού κόσμου και η ανάλυση πυρήνων από παγετώνες για τη διερεύνηση της σχέσης ανθρώπου-κλίματος τα τελευταία δύο χιλιάδες χρόνια.

Παρακαλούμε όπως προωθήσετε την παρούσα ενημέρωση σε όλους τους ενδιαφερόμενους και ζητούμε συγνώμη για ενδεχόμενη πολλαπλή παραλαβή του μηνύματος.

Ευχαριστούμε και περιμένουμε να σας δούμε στην ομιλία.

Με εκτίμηση

Τάκης Καρκάνας

Dr. Panagiotis (Takis) Karkanis
Director, The Malcolm H. Wiener Laboratory for Archaeological Science
54 Souidias Street

Athens, Greece GR 106 76
Telephone: (+30) 213 000 2400 X 224
Email: tkarkanas@ascsa.edu.gr
Website: <https://www.ascsa.edu.gr/>



AMERICAN SCHOOL OF
CLASSICAL STUDIES AT ATHENS

ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS

ANNOUNCEMENT OF PUBLICATION **COPPER IN ANCIENT EGYPT BEFORE** **DURING AND AFTER THE PYRAMID AGE**

Dear colleagues,

I would like to announce the publication of my much-extended PhD thesis, under the title [Copper in Ancient Egypt. Before, during and after the Pyramid Age \(c. 4000 – 1600 BC\)](#), as Volume 132 of Brill’s Culture and History of the Ancient Near East series. I have focused specifically on the periods before the New Kingdom, as they seemed rather unexplored in this regard. Abstract of the book follows, with some key points stressed below it.

The first comprehensive and up-to-date overview of what we know about the use of copper by the ancient Egyptians and Nubians, from the Predynastic through the Early Dynastic until the end of the Second Intermediate Period (c. 4000–1600 BC). The monograph presents a story, based on the analysis of available evidence, a synchronic and diachronic reconstruction of the development and changes of the chaîne opératoire of copper and copper alloy artefacts. The book argues that Egypt was not isolated from the rest of the ancient world and that popular notions of its “primitive” technology are not based on facts.

With the background mainly in Egyptology and archaeology, I have been told now and then that what I am doing is not “proper” Egyptology. But without grasping the material and archaeometallurgical aspects of copper production and use, the topic cannot be understood well. More specifically, if we do not comprehend well the chronology of the material culture, history written on this basis can be wrong. In the case of my research, this is valid especially regarding previous interpretation of metal weaponry, which I am trying to rectify for Egypt in the Eastern Mediterranean context. And there are more problems elsewhere.

In archaeology, we tend to compartmentalize artefacts into fine typological groups, yet the ancient texts list usually only the general class of artefact blade (axe, adze, etc.) and its weight, not much else. I am arguing for scaled and event-specific regularization of the artefacts, roughly following existing weighing standards of gold and doubled copper deben. Nevertheless, the span measures based on the craftsman’s body must have played a role in this system as well. That is why our ideas of precision and accuracy do not work well on ancient artefacts.

In Egyptology, we tend to base our distinctions on the lexicography of individual words, representing distinct phenomena. I argue for the reading of copper as bjA, proposed correct reading of the metalworking crucible as bDA.t, feminine form of the word bDA for a bread mould, and from this form derived title bDA.ty for metalworker. Yet, examined evidence demonstrated as well in other cases that there is a blurry division between the institutions of pr-HD and pr-Sna, both likely denoting storage and

production facilities. I.e. completely different words can denote similar or same phenomena in the past reality.

In archaeometallurgy, Egypt tends to be forgotten except for the metalworking scenes from tombs. Synthesis was missing, yet more than one thousand analyses from the periods under study were published already, again and again confirming the ubiquity of arsenical copper in ancient Egypt. And first author writing about the presence of arsenical copper herein was Martin Gsell in his PhD thesis *Eisen, Kupfer und Bronze bei den alten Ägyptern: archäologisch-metallurgische Abhandlung*, published in 1910 in Karlsruhe. There is a tradition to be followed and enriched. Ubiquity of arsenical copper induces a whole range of new questions into Egyptian archaeology that we are trying to answer together with Jiří Kmošek e.g. on the [Old Kingdom Giza metalworking material](#).

Reviews of the book are welcome, as this was a type of interdisciplinary work that tried to cross disciplinary boundaries and to identify the gaps in our knowledge. But they can be perceived differently by other specializations in respective fields. There is also so much unpublished material and research going on that in a decade or two it will be possible to write a second, updated edition of the work. Some of the ideas presented herein will be explored further in my current project, two-year post-doc at Newcastle University, under the guidance of Prof. Andrea Dolfini: [EgypToolWear: Metalwork Wear Analysis of Ancient Egyptian Tools](#).

Sincerely yours,

Martin Odler

Mgr. et Mgr. Martin Odler, Ph.D.

EPSRC / MSCA fellow
School of History, Classics and Archaeology
Armstrong Building
Queen Victoria Road
Newcastle University
Newcastle upon Tyne
NE1 7RU
United Kingdom

<https://newcastle.academia.edu/MartinOdler>

E-mail: martin.odler@gmail.com

**FIRST OSTEOLOGICAL EVIDENCE OF
SEVERED HANDS IN ANCIENT EGYPT, BY
JULIA GRESKY, MANFRED BIETAK,
EMMANUELE PETITI, CHRISTIANE
SCHEFFLER & MICHAEL SCHULTZ**

Scientific Reports volume 13, Article number: 5239 (2023)

Abstract

For the first time, the severed right hands of 12 individuals have been analysed osteologically. The hands were deposited in three pits within a courtyard in front of the throne room of a 15th Dynasty (c.1640–1530 BC) Hyksos palace at Avaris/Tell el-Dab'a in north-eastern Egypt. Although this kind of practice is known from tomb or temple inscriptions and reliefs from the New Kingdom onwards, this is the first time that physical evidence has been used to learn more about the procedure and the individuals whose hands were taken. Here, we show that the right hands belonged to at least 12 adults, 11 males, and possibly one female. It is unclear if the hands were taken from dead or living individuals. After removing any attached parts of the forearm, the hands were placed in the ground with wide-splayed fingers, mainly on their palmar sides. The osteological analysis not only supports the archaeological interpretation of this evidence but also adds more detail regarding trophy-taking practices in Ancient Egypt.

Please visit the site: <https://www.nature.com/articles/s41598-023-32165-8> [Go there for full download]

**ANCIENT DNA FROM A LOST NEGEV
HIGHLANDS DESERT GRAPE REVEALS A
LATE ANTIQUITY WINE LINEAGE, BY
PNINA COHEN, ROBERTO BACILIERI,
JAZMÍN RAMOS & MEIRAV MEIRI**

PNAS, Vol. 120, | No. 17

<https://doi.org/10.1073/pnas.2213563120>

The modern winemaking industry is heavily reliant on a limited number of European grape cultivars, which are best suited for cultivation in temperate climates. Global warming emphasizes the need for diversity in this high-impact agricultural crop. Grapevine lineages bred in hot and arid regions, often preserved over centuries, may present an alternative to the classic winemaking grape cultivars. Our study of a legacy grapevine variety from the Negev Highlands desert of southern Israel sheds light on its genetics, biological properties, and lasting impact. The modern-day close relatives of the archaeological grapes may now provide an exceptional platform for future studies on grapevine resilience to aridity.

Abstract

Recent excavations of Late Antiquity settlements in the Negev Highlands of southern Israel uncovered a society that established commercial-scale viticulture in an arid environment [D. Fuks et al., Proc. Natl. Acad. Sci. U.S.A. 117, 19780–19791 (2020)]. We applied target-enriched genome-wide sequencing and radiocarbon dating to examine grapevine pips that were excavated at three of these sites. Our analyses revealed centuries long and continuous grape cultivation in the Southern Levant. The genetically diverse pips also provided clues to ancient cultivation strategies aimed at improving agricultural productivity and ensuring food security. Applying genomic prediction analysis, a pip dated to the eighth century CE was determined to likely be from a white grape, to date the oldest to be identified. In a kinship analysis, another pip was found to be descendant from a modern Greek cultivar and was thus linked with several popular historic wines that were once traded across the Byzantine Empire. These findings shed light on historical Byzantine trading networks and on the genetic contribution of Levantine varieties to the classic Aegean landscape.

Please visit the site: <https://www.pnas.org/doi/10.1073/pnas.2213563120#executive-summary-abstract> [Go there for full download]

HANDBOOK OF ARCHAEOLOGICAL SCIENCES

Dear friends and colleagues,

I've recently published an overview chapter on archaeometallurgy in the new edition of the Handbook of Archaeological Sciences, and I thought some of you might find it useful if you teach this subject.

The chapter can be found here:

<https://onlinelibrary.wiley.com/doi/10.1002/9781119592112.ch46>

The handbook also includes chapters on mineral exploitation, lithics, ceramics, glass, pigments... many by others in this list.

If you'd like to read it but hit a paywall, email me separately and I'll send you a PDF (m.martinon-torres@arch.cam.ac.uk).

With special thanks to Erez Ben-Yosef, Siran Liu and Ana Fedrigo, who gave me permission to use their images!

Best wishes,

Marcos

Marcos Martín-Torres
Pitt-Rivers Professor of Archaeological Science
Department of Archaeology
University of Cambridge
Downing Street
Cambridge CB2 3ER
United Kingdom

E: m.martinon-torres@arch.cam.ac.uk

T: +44(0)1223760946

EΙΔΗΣΕΙΣ - NEWS RELEASE

HOW SCIENTISTS ARE DECODING WHAT THE PAST SMELLED LIKE, STORY BY KATIE HUNT, DESIGN BY IAN BERRY, CNN

Smells hover just below our conscious awareness, conjuring up emotions and memories that shape how we perceive and navigate the world.

An unexpected whiff of a long-forgotten snack or a dusty book can transport a person to years past — enabling a kind of time travel that makes hazy memories more vivid.

It's puzzling then that smell is a sense that, according to scientists, has been largely — and unfairly — ignored in most attempts to understand the past. A growing number of researchers now want to reconstruct ancient aromas and use them to learn more about how we used to live.

During the Covid-19 pandemic, many people who caught the disease temporarily lost their sense of smell, prompting a newfound appreciation of the importance of odor in their lives. New research projects are underway to understand what the past smelled like and identify what contemporary scents should be preserved for posterity.

“It's a very vital sense. Smell was also very important in the past and it was probably even more important because in the past not everything was so sanitized,” said Barbara Huber, a doctoral researcher of archaeology at the Max Planck Institute of Geoanthropology in Jena, Germany.

The challenge of finding past smells is how to capture an ephemeral phenomenon: Archaeologists typically find and study things we can touch, and these are the artifacts we encounter in museums.

Odor compounds are volatile in nature — once their source is gone, they too disappear, evaporating into the air. And most smells stem from biological materials — plants, food, human and animal bodies — that decay rapidly, Huber explained.

Despite all these challenges, Huber said a few new and powerful biomolecular approaches are helping scientists decode ancient scents.

The smell of history

The key to unraveling smells of the past is often invisible to the naked eye.

Scientists can study imperceptible biomolecular residues left on incense burners, perfume bottles, cooking pots and food storage jars using techniques like chromatography, a process for separating components in a mixture, and mass spectrometry, which can detect different compounds by calculating the weight of different molecules.

The most informative biomolecules, according to Huber, include lipids — fats, waxes and oils — that aren't soluble in water. They're often found embedded in porous ceramics, after having been used in items such as lamp fuel or scented ointments people once put on their bodies or on corpses. Lipids are also found in feces.

Huber also studies secondary metabolites, organic compounds produced by plants and left by plant-based products used in the past, including resins, scented woods, herbs, fruits and spices. The compounds can reveal the ingredients, and scent of, incense, drugs and food.

An Egyptian figure is shown smelling a lotus from the tomb of Meresankh in Giza, Egypt.

Sean Coughlin/Institute of Philosophy/Czech Academy of Sciences

Sequencing of ancient DNA and proteomics, the study of proteins found preserved in things like calcified dental plaque, have detected amino acids that signal conditions like gum disease — associated with bad breath.

But, as Huber's research illustrates, collecting these olfactory clues is often only the beginning.

Recreating smellscape

In her work, Huber has studied incense burners found in the archaeological site of Tayma, Saudi Arabia's oldest settlement that dates back 5,000 years, in order to try and reconstruct the "olfactory landscape" of the ancient oasis.

She detected secondary metabolites that revealed the use of scented resins containing frankincense, myrrh and pistachio in private buildings, graves and temples, respectively. Huber then worked with a perfumer to try and recreate the scents, revealing what these places might have smelled like thousands of years ago.

"The resins looked really similar ... but when you burn them, they have a totally different smell. So for example, the frankincense was really a rich smell — very balsamic — and you could really feel maybe this was used in order to kind of clean out the houses right to avoid an unliked smell or something like that," Huber explained.

Sean Coughlin, a researcher of ancient and medieval thought at the Czech Academy of Sciences, is attempting to recreate the perfumes Cleopatra herself might have worn, based on recipes recorded in ancient Egyptian texts and from inscriptions on temple walls.

"The problem is a simple one. Normally, when you follow a recipe, you kind of know what you're supposed to get. When you reproduce a historical recipe, you have no target," Coughlin said.

"What we're really trying to do is use organic chemistry to be able to tell us something about the process, because we think that the process was actually what would determine the range of possible scents," he added.

Participants in a science workshop led by Sean Coughlin in Prague experiment with interpreting ancient perfume recipes.

Jana Rihova/Institute of Philosophy/Czech Academy of Sciences

Coughlin likens his experiments to the testing process of the cooking show “America’s Test Kitchen.” While the results have been hit-and-miss, he said they are making progress.

For example, one perfume recipe Coughlin studied known as Mendesian indicated that ancient perfumers heated oil for 10 days and 10 nights before infusing it with woods like cinnamon and resins like myrrh.

“That was a big mystery to us,” he said. “If you’ve ever cooked oil for 10 days it stinks.” But after his team heated oil in test tubes for up to 12 days, Coughlin found that the technique accelerated the natural process of the oil going rancid, removing any smelly compounds and ultimately allowing the perfume to last longer.

“There is also a stage, after heating the oil, but before making the perfume itself, where they added mildly aromatic things like roots, wine and resins. Our hypothesis is that these not only covered up the bad smell (by adding a pleasant scent), but also absorbed the bad odor in the oil,” he explained.

Most present-day perfumes use ethanol, a type of alcohol, as a base, Coughlin said, although some delicate natural scents still require the use of oil or fat, which needs to be refined in some way.

But today’s chemists still owe a lot to these ancient perfumers, he added. They pioneered many techniques still used in modern science, such as distillation and methods of fractionating liquids.

Similarly, researchers are now taking steps to preserve currently available smells to give future generations a sense of our time and the more recent past.

An archive of smells

The Institute for Sustainable Heritage at UCL, a London university, identified the chemical recipe for old book smell — specifically capturing the scent of the library at St. Paul’s Cathedral in London prior to a renovation that started in 2018.

Visitors to the library, which until the renovation had changed little since it was built in 1709, often remarked they found the old book smell appealing.

“In the age of digitization, working with physical records is an increasingly rare practice, and therefore the opportunity to touch and smell the documents is perceived as valuable,” a 2017 study on the project noted.

Researchers used information from volatile organic compounds retrieved at the library to reproduce the historic book smell. They also put together an odor wheel — a tool used by perfumers and winemakers and a first step toward documenting and archiving smells of the past.

Cecilia Bembibre, a lecturer at the UCL Institute for Sustainable Heritage, said preserving the scent of the library was important because the smell was an integral part of its identity.

“Since the space has been undergoing important conservation work in the last few years, and the collection was removed, it is reasonable to assume the scent has gone,” said Bembibre, who’s also a participant in Odeuropa, a European research project that aims to bring historic aromas back to life. “Now the preservation kit we created...(is) now the only existing archive of a lost heritage smell.”

Please visit the site: <https://www.cnn.com/2023/03/27/world/decoding-how-the-past-smells-scn/index.html> [Go there for pix]

RESEARCHERS USE 21ST CENTURY METHODS TO RECORD 2,000 YEARS OF ANCIENT GRAFFITI IN EGYPT, BY JUDY SIEGEL-ITZKOVICH

This three-dimensional visualization will also make it possible for researchers to study the relationship between a figural graffito.

Walls in elegant cities around the world are plastered with graffiti that mars their beauty – a seemingly modern phenomenon carried out by angry (or creative) people. But it turns out that graffiti drawings – intentional marks or drawings made by scratching or engraving on a large surface like a wall in public places go back to ancient times in Egypt.

Researchers at Simon Fraser University (SFU) in Ottawa, Canada are learning more about ancient graffiti and their amazing comparisons with modern graffiti as they produce a state-of-the-art 3D recording of the Temple of Isis in Philae, Egypt. The researchers have just published their early findings in *Egyptian Archaeology* under the title “Figures that Matter: Graffiti of the Isis Temple at Philae” and have returned to Philae to promote the project.

“It's fascinating because there are similarities with today's graffiti,” says SFU geography Prof. Nick Hedley, co-investigator of the project. “The iconic architecture of ancient Egypt was built by those in positions of power and wealth, but the graffiti records the voices and activities of everybody else. The building acts like a giant sponge or notepad for generations of people from different cultures for over 2,000 years,” he said.

As an expert in spatial reality capture, Hedley leads the team's innovative visualization efforts, documenting the graffiti, architectural context and the spaces they are found in using advanced methods like photogrammetry, raking light and laser scanning. “I'm recording reality in three-dimensions, the dimensionality in which it exists,” he explained.

With hundreds, if not thousands of graffiti, some carved less than a millimeter deep on the temple's columns, walls and roof, precision is essential.

Typically, the graffiti would be recorded through a series of photographs – a step above hand-drawn documents – enabling the researchers to take pieces of the site away and continue working.

Sabrina Higgins, an SFU archaeologist and project co-investigator, noted that photographs and two-dimensional plans do not allow the field site to be viewed as a dynamic, multi-layered and evolving space. “The techniques we are applying to the project will completely change how the graffiti and the temple can be studied,” she said.

Beyond two-dimensional imaging

Hedley is moving beyond basic two-dimensional imaging to create a cutting-edge 3-D recording of the temple's whole surface. This will allow the interior and exterior of the temple and the graffiti to be viewed and studied at otherwise impossible viewpoints, from virtually anywhere without compromising on detail.

This three-dimensional visualization will also make it possible for researchers to study the relationship between a figural graffito, any graffiti that surrounds it and its location in relation to the structure of temple architecture.

While this is transformative for viewing and studying the temple and its inscriptions, Hedley points to the big-picture potential of applying spatial reality capture technology to the field of archaeology, and beyond.

“Though my primary role in this project is to help build the definitive set of digital wall plans for the Mammisi at Philae, I'm also demonstrating how emerging spatial reality capture methods can fundamentally change how we gather and produce data and transform our ability to interpret and analyze these spaces. This is a space to watch” Hedley concluded.

Please visit the site: <https://www.jpost.com/archaeology/article-736117> [Go there for pix]

JEWS COULD HAVE KEPT KOSHER, PASSOVER IN ANCIENT ROMAN ARMY, PER NEW PAPER, BY MENACHEM WECKER

The Roman military may have made dispensations on Shabbat as well.

(April 4, 2023 / JNS) Scholars have long maintained that Shabbat- and kosher-keeping Jews were poor fits for armies of the Roman Empire. But a new paper in *Jewish Quarterly Review* suggests that Jews could have served in large numbers. And not only could a Jewish soldier maintain observant practice at the time, but the Roman Empire tailored its military to accommodate a range of religious and cultural practices.

“The adage ‘An army marches on its stomach’ is traditionally attributed to either Napoleon or Frederick the Great, yet it applies to all armies, including those of the Roman Empire—whose soldiers included Jews,” Haggai Olshanetsky, a University of Basel postdoctoral fellow, wrote in the paper. (He did not respond to a query by JNS.)

The Roman military exempted Jews, who comprised an estimated 5% to 15% of the empire, from service in the later part of the first century C.E. But that appeared to be an exception, and Jews could otherwise be found among the empire’s legions.

The paper suggests that Romans were aware that Jews, Syrians and Egyptians had specific dietary restrictions, and an ostrakon (potsherd) dated 96 C.E. records a military man writing to a colleague about collecting wheat to send “to the Jews.”

“This ostrakon is the only one to describe the sending of wheat to Jews, instead of the bread already issued to them or that was supposed to be issued to them,” Olshanetsky wrote. The shard dates to a time that Josephus interpreted to parallel the Jewish month of Nissan, during which Passover occurs.

It seems likely that “Jews needed wheat because they abstained from bread and needed to make unleavened bread or other unleavened food,” according to the article.

More research is required, but if this was the case, Olshanetsky thinks it demonstrates that the Romans “acknowledged and respected the demands of some Jewish holidays and that they were even ready to execute special tasks to allow for their observance.”

‘Accustomed to the lack of meat’

In his analysis, Jewish soldiers could have otherwise kept kosher year-round. Roman soldiers cooked their own meals, and although pig remnants have been found in relevant sites, beef was the most common meat. Mutton and deer were also common, as were chicken, goose and duck—all kosher. Animals arrived alive, so Jewish soldiers could have ritually slaughtered the animals.

And the diet was largely the “Mediterranean triad” of bread, oil and wine; many in the empire were also used to mostly vegetarian eating. “Jews, like others, were accustomed to the lack of meat,” wrote Olshanetsky.

In later periods, soldiers received mutton (lamb) two-thirds of the time and pork the other third. “It presumably would have been easy for a Jewish soldier to trade his portion of pork for something else,” per the article. “Moreover, it is possible that Jewish soldiers were exempted from receiving portions of pork, and received mutton instead, throughout the campaign.”

Olshanetsky also thinks Jews and others with restrictive diets may have made their mark on Roman auxiliary units, which tended to be made up of noncitizens, like Jews and Egyptians. A decline in pork consumption began between the years between 40 C.E. and 70 C.E.

“It is possible that the Roman army enacted a new regulation allocating a smaller percentage of pork in the supply of the auxiliary compared to the amounts supplied to the legions,” he wrote. “Such a directive would allow for an easy transition in the swapping of units, each of them consisting of individuals with different religious beliefs, without changing the already organized supply lines.”

“If this was indeed the case, then it would mean that to keep a strong army, the Romans had to be cognizant and tolerant toward the needs of a very ethnically, religiously and regionally diverse fighting force, and thus they designed the logistics and supply chain of the armies accordingly,” he wrote.

Please visit the site: <https://www.jns.org/jews-could-have-kept-kosher-passover-in-ancient-roman-army-per-new-paper/>

EXPERTS REVEAL DIGITAL IMAGE OF WHAT AN EGYPTIAN MAN LOOKED LIKE ALMOST 35,000 YEARS AGO, BY DALYA AL MASRI

Brazilian experts have used digital imaging to reveal the face of an Egyptian man who lived 35,000 years ago.

Moacir Elias Santos, an archaeologist and Cícero Moraes, a 3D designer used the skeletal remains of a man found at an archaeological site in Egypt to recreate a digital image.

The image presents a detailed facial approximation of the skull of Nazlet Khater 2, the 35,000-year-old fossil that was discovered in 1980 in Egypt's Nile Valley.

Anthropological analysis later identified the skeletal remains as being of a man of African ancestry, aged between 17 to 29 years old at the time of his death. The analysis suggests he stood over five feet and three inches approximately.

"A few years ago, we were already working on a series of approximations related to human evolution, with the best-known fossil replicas," Moacir Santos, archaeologist at the Ciro Flamarion Cardoso Archaeology Museum in Ponta Grossa, Brazil told CNN. "The videos were converted into photos and were used for the elaboration of the photogrammetry of the skull, which shaped the study."

Photogrammetry is the process of extracting 3D information from photographs, which is what Santos and Moraes did after viewing the man's skeletal remains at the National Museum of Egyptian Civilization in Cairo.

Saudi Arabia unveils face of ancient Nabataean woman This process has been employed by experts to determine how humans have evolved over centuries.

In February researchers unveiled a 3D construction of an ancient Nabataean woman based on remains that were discovered in 2015 in a 2,000-year-old tomb in Hegra, an archaeological site in Saudi Arabia.

"Using the skulls of living people in addition to work carried out in the forensic field... the probability that the image resembles what NK2 looked like is significantly high," Moraes, the designer, told CNN.

Santos and Moraes hope their work will inform other archeologists' research on human evolution. They plan to show the facial reconstruction at an exhibition in the future following their study, which was published in the Brazilian journal *OrtogOnline* last month.

"The fact that this individual is over 30,000 years old makes it important for understanding human evolution," said Santos.

Moraes emphasized that while the man's jaw is stronger than that of modern humans today, "35,000 (years ago) we are almost the same."

"If a man of that time could walk down the street (today), people would not see any difference from others," he said.

Please visit the site: <https://www.cnn.com/style/article/egyptian-man-digital-image-scen/index.html> [Go there for pix]

NEW DISCOVERIES IN OLD DONGOLA. **PROTECTION FOR TUNGUL: NEW, UNIQUE** **WALL PAINTINGS DISCOVERED IN OLD** **DONGOLA, SUDAN, BY ANDRZEJ SZOTEK**

Old Dongola (Tungul in Old Nubian) was the capital of Makuria, one of the most prominent medieval African states. Research in this city, initiated by Prof. Kazimierz Michałowski, has been providing groundbreaking results practically every year. Such was the case of the last excavation season of the Starting Grant project “UMMA – Urban Metamorphosis of the community of a Medieval African capital city” financed by the European Research Council and carried out by a team led by Dr. hab. Artur Obłuski from the Polish Centre of Mediterranean Archaeology, University of Warsaw.

Archaeologists Dr. Lorenzo de Lellis and Dr. Maciej Wyżgoł unexpectedly stumbled upon an enigmatic complex of rooms made of sun-dried brick, the interiors of which were covered with figural scenes unique for Christian art. The discovery was made during the exploration of houses dating from the Funj period (16th-19th centuries CE). To the surprise of the researchers, beneath the floor of one of the houses was an opening leading to a small chamber, the walls of which were decorated with unique representations. The paintings within it showed the Mother of God, Christ, as well as a scene depicting a Nubian king, Christ, and Archangel Michael. However, this was not a typical representation of a Nubian ruler under the protection of saints or archangels. The king bows to Christ, who is seated in the clouds, and kisses his hand. The ruler is supported by Archangel Michael, whose spread wings shield both the king and Christ himself. Such a scene finds no parallels in Nubian painting. The dynamism and intimacy of the representation contrasts with the hieratic nature of the figures shown on the side walls. Neither does the figure of the Virgin Mary on the north wall of the chamber belong to the typical repertoire of depictions of Mary in Nubian art. The Mother of God, shown in a dignified pose, is dressed in dark robes. In her hands she holds a cross and a book. Christ is depicted on the opposite wall. His right hand is shown in a gesture of blessing, and in His left he holds a book, which is fragmentarily preserved.

The paintings are accompanied by inscriptions currently studied by Dr. Agata Deptuła from PCMA UW. A preliminary reading of the Greek inscriptions has led to their identification as texts of the Liturgy of the Presanctified Gifts. An inscription in Old Nubian that accompanies the main scene is extremely difficult to decipher. Thanks to a preliminary reading by Dr. Vincent van Gerven Oei, the researchers learned that it contains several mentions of a king named David and a plea to God for protection of the city. The city mentioned in the inscription is probably Dongola, and King David is likely the royal figure depicted in the scene. David was one of the last rulers of Christian Makuria, and his reign marked the beginning of the end of the kingdom. For reasons unknown, King David attacked Egypt, which retaliated by invading Nubia and, as a result, Dongola was sacked for the first time in its history. Maybe the painting was created as the Mamluk army was approaching the city or already laying siege to it?

The biggest puzzle, however, is the complex of rooms in which the paintings were found. The spaces themselves, covered with vaults and domes and made of dried brick, are quite

small. The room with the painted scene showing king David resembles a crypt, but it is 7 meters above the medieval ground level. The building is adjacent to a sacral building identified as the Great Church of Jesus, which was probably the cathedral of Dongola and the most important church of the kingdom of Makuria. Arab sources recounting King David's attack on Egypt and the capture of the port of Aidhab and Aswan, maintain that this act was instigated by the Great Church of Jesus. Did the Archbishop of Dongola, much like Pope Urban II, incite King David to launch a crusade?

Further excavations may provide answers to these and other questions about the enigmatic structure. However, the most important objective this season was to preserve the unique wall paintings. Immediately after discovery, conservators under the direction of Magdalena Skarżyńska, MA, set to work. The conservation team operated as part of a cooperation between the Polish Centre of Mediterranean Archaeology, University of Warsaw, and the Department of Conservation and Restoration of Works of Art of the Academy of Fine Arts in Warsaw. Work in such a confined space, under pressure of time and in high temperatures typical for March in Sudan was extremely demanding. The paintings were detached from the walls in some places, but the painted layer itself was remarkably well preserved. Conservators secured the wall paintings, made protective bands and putties, and filled the empty spaces between the wall and the plaster with injection fluid. We may find out whether or not the uncovered structure is a royal commemorative complex, when archaeologists from PCMA UW return to Dongola in autumn.

Please visit the site: <https://tinyurl.com/2s3tjp5x> [Go there for pix]

SCIENTISTS FINISH 200-YEAR DECRYPTION OF ANCIENT GREEK-EGYPTIAN TREATISE – STUDY, BY AARON REICH

The manuscript is believed to be a lost treatise by Ptolemy on his Meteoroscope. It was hidden within a copy of Etymologiae. Deciphering it has taken over 200 years.

Researchers have managed to decipher the manuscript of an ancient Egyptian mathematician and astronomer after over 200 years since its discovery, according to a new study.

The manuscript in question is thought to have been written by the Egyptian scholar of Greek descent Claudius Ptolemy during the first century CE and was discovered by a Roman Catholic cardinal Angelo Mai in 1819.

The findings of this study were published in the peer-reviewed academic journal Archive for History of Exact Sciences.

The effort to decipher this ancient Ptolemy manuscript was the culmination of over 200 years of work from numerous different researchers. The manuscript contained information regarding a scientific instrument known as a Meteoroscope.

Decrypting the ancient Greek writings of an astronomical marvel: Ptolmey's Meteoroscope

Claudius Ptolmey, often known simply as Ptolmey, was one of the most important scholars of his era if not the ancient world as a whole.

A representation of Claudius Ptolemy (Illustrative). (credit: Wikimedia Commons)

Born in Roman-era Alexandria in Egypt, Ptolemy wrote dozens of scientific treatises covering everything from mathematics, geography, music, astronomy, optics and cartography. Some of these works would be preserved by Muslim and Byzantine scholars throughout the Medieval era.

However, not all of his work survived over the years, having gone missing – though some would eventually be rediscovered.

That seems to have been the case here, with Cardinal Mai having eventually rediscovered what seems to be a lost Ptolmey manuscript on pieces of parchment.

But there were issues that heavily complicated efforts to decipher its context. First and foremost is the fact that someone literally wrote on top of it. Specifically, someone seems to have taken the pages of Ptolmey's manuscript and used them to copy down the manuscript of Etymologiae, an etymological encyclopedia written by Spanish bishop and theologian Isadore of Seville – a text that was extremely influential in its own right.

Ironically, one thing Etymologiae is famous for today is that it summarized many famous classical texts that would eventually become lost to time, thus being the most accurate form of preservation for these texts.

So, too, did a copy of Etymologiae seemingly save this lost Ptolmey manuscript.

Why it was written over makes some sense – recycling parchment was done in the Middle Ages as a cost-saving measure.

However, this would eventually lead to another problem: Someone – almost certainly Mai, the study argued – tried to "clean" the parchment to make Ptolmey's original writing clearer by applying a reagent to several pages. This not only didn't make the original writing clearer, but it ended up covering the parchment with dark brown stains that made reading it even more difficult.

But efforts were made over the centuries to try and decipher it all. This included making careful copies of what was legible and comparing it to other Ptolmey treatises later discovered.

Finally, modern methods such as UV fluorescence and multispectral imaging were used in recent years to get a better look at the text that had remained illegible for so long.

So what did Ptolemy write about?

The long-lost manuscript contains information about a scientific instrument known as a Meteoroscope. This was a tool used by astronomers in antiquity to study stars and distances. In particular, Ptolmey's Meteoroscope could be used for a number of applications. These included telling time by predicting the equinox or solstice and ascertaining one's latitude and the location of a planet.

Ptolmey's Meteoroscope has been written about before. One of his most well-known treatises, the cartography manuscript known simply as Geography, had mentioned it, as did other ancient works.

But what hadn't survived was detailed information about what the Meteoroscope looked like and how it worked, other than the fact that it involved nine rings.

However, that mystery might finally be solved.

According to the translated text, the Meteoroscope's nine rings had the following names and functions:

Ring bearing a suspension or "bearer": A fixed ring that was seemingly used to hang it from something Hektemoros or "six-parter": A ring fixed perpendicular to the bearer, intersecting it twice and equal in size "Horizon": This ring is fixed at the cardinal points to the bearer and the six-parter "Meridian": this is located inside the bearer and kept in place by flanges, but its orientation can be adjusted according to latitude "Revolver: This is inside the meridian ring and pivots on the points representing celestial poles "Zodiac": Equal in size to the revolver, it's fixed to it at right angles at specific points "Astrolabe": Located inside the revolver and zodiac rings, it pivots on the points representing ecliptic

poles "Upright": Located inside the astrolabe and pivoting on the points of the revolver representing celestial poles. It can represent any arbitrary meridian "All-tilter": Located inside the upright and pivoting on the points representing where the arbitrary meridian intersects with the equator, it can represent any horizon and set in any plane

Essentially, the completed Meteoroscope would look like a large series of rings located inside each other, tilting around as needed.

A reconstruction of what is thought to be a Ptolemy armillary sphere. (credit: Wikimedia Commons)

The tool's construction and usage were detailed in the manuscript, which seems to imply that the treatise was meant to help practitioners use it and to help teachers demonstrate how some conclusions are reached.

But there is still one problem with all of this:

Was it really Ptolemy who wrote it?

The researchers argue that this is the most likely case, noting the writer's very distinctive vocabulary usage that was more or less unique at the time. However, this is complicated by the fact that some crucial pages from the manuscript are missing, specifically the first and last pages. These are where one would normally find the author's name.

But if it is genuine, then it would help shed light on the scientific method of one of the ancient world's brightest and most influential minds.

Please visit the site: <https://www.jpost.com/archaeology/article-738848> [Go there for pix]

RESEARCHERS IDENTIFY THREE ROMAN CAMPS IN ARABIA

Archaeologists have identified three undiscovered Roman fortified camps across northern Arabia.

The University of Oxford school of archaeology made the discovery in a remote sensing survey, using satellite imagery.

It said it could be evidence of an "undocumented military campaign" across south east Jordan into Saudi Arabia.

Dr Michael Fradley, who led the research, said: "We are almost certain they were built by the Roman army."

In the report, published in the journal *Antiquity*, he explained his conclusion was based on the "typical playing card shape of the enclosures with opposing entrances along each side".

Dr Fradley added that the westernmost camp was significantly larger than the two camps to the east.

The research team believes they may have been part of a previously undiscovered Roman military campaign "linked to the Roman takeover of the Nabataean Kingdom in 106 AD, a civilisation centred on the world-famous city of Petra, located in Jordan".

The university's Dr Mike Bishop, an expert on Roman military, said the camps were a "spectacular new find" and an important new insight into Roman campaigning in Arabia.

"Roman forts and fortresses show how Rome held a province but temporary camps reveal how they acquired it in the first place," he explained.

Dr Fradley added that preservation of the camps was "remarkable", particularly as they may have only been used for a matter of days or weeks.

Archaeologists still need to confirm the date of the camps through investigation on the ground, the researchers said.

The camps were identified by the university's Endangered Archaeology in the Middle East and North Africa project and were later photographed by the Aerial Archaeology in Jordan project.

[Fradley, M., Wilson, A., Finlayson, B., & Bewley, R. (2023). A lost campaign? New evidence of Roman temporary camps in northern Arabia. *Antiquity*, 1-6. doi:10.15184/aqy.2023.50]

Please visit the site: <https://www.bbc.co.uk/news/uk-england-oxfordshire-65391574>
[Go there for pix]

FIGURATIVE RELIEFS FROM LOST TARTESSOS CIVILIZATION

First ever human depiction of lost Tartessos civilization uncovered in Spain The Casas del Turuñuelo site is the best-preserved building on land in the western Mediterranean to date.

Archaeologists unearthed five figurative reliefs dating to between the fifth and fourth centuries BC, during the time of the Tartessos people, while excavating at the Tartessian site of Casas del Turuñuelo in Guareña, Badajoz.

A team from the Institute of Archaeology, a joint center of the Higher Council for Scientific Research (CSIC) and the Junta de Extremadura, announced that they unearthed the reliefs on the Iberian Peninsula, including two complete female figures adorned with outstanding earrings that represent typical pieces of the Tartessian goldsmithing.

The site is known for a huge 2,500-year-old two-floor building which is still being excavated.

This new finding is particularly significant because the representations correspond to human faces, unlike the traditional practice of representing divinity through animal or plant motifs, or through betyls (sacred stones), as in the Tartessus culture.

Other fragments of reliefs have been recovered, which belong to at least three other individuals, one of which was identified as a warrior when part of the helmet was found preserved.

"The unusual thing about the new finding is that the representations correspond to human faces," spokesperson for the Spanish National Research Council, Erika Lopez said in a statement.

The discovery marks a profound paradigm shift in the interpretation of Tartessus, which has traditionally been considered an aniconic culture. The researchers emphasize both the importance of the site and the transcendence of the Tartessian culture in the Guadiana valley during its last moments.

The Construyendo Tarteso project, a State Research Agency initiative within the State Plan R+D+i of the Ministry of Science and Innovation, aims to study the Tartessian material culture through the architectural analysis of the large adobe buildings found in recent decades.

The team began excavating in 2015

The team began its first excavation campaign in 2015 at the Casas del Turuñuelo site in Altas del Guadiana and is currently engaged in its fifth campaign.

This year, the campaign is focused on the eastern sector of the site to locate the entrance of the building, which is usually oriented towards the east, and to explore the symmetry between the patio and the entrance.

The Casas del Turuñuelo site is the best-preserved building on land in the western Mediterranean to date, with two constructive floors, allowing for the study of construction techniques and architectural solutions that had not been documented in Tartessian sites before.

The site's state of preservation is remarkable, with adobe elevations up to five meters high and a massive sacrifice of animals, the largest to be documented in the western Mediterranean.

The current campaign at the Casas del Turuñuelo site offers a rare opportunity to explore the architecture, materials and cultural practices of the Tartessian people, shedding light on their material culture and social practices.

The findings of the Construyendo Tarteso project are expected to have a significant impact on our understanding of this ancient civilization.

The project has received support from the General Secretariat of Science, Technology, Innovation and University of the Junta de Extremadura, the Diputación de Badajoz, and the Palarq Foundation.

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The IAM is conducting research on various archaeological sites in the Autonomous Community of Extremadura and is involved in several other research projects throughout the region, including Mérida and ancient cities such as Botija, Contributa Iulia, and Metellinum.

The IAM's research activities are not limited to the region, extending its research to numerous sites in North Africa, Europe, and America. The discovery of the five figurative reliefs at the Casas del Turuñuelo site is an exciting development in the study of the Tartessian material culture.

"These findings further influence both the importance of the site and the importance of the Tartessian culture in the Guadiana valley during its last moments," Lopez said.

The remarkable state of preservation of the site and the discoveries made there are expected to significantly enhance our understanding of this ancient civilization. The findings are sure to be of great interest to scholars and the public alike.

Please visit the site: <https://www.jpost.com/archaeology/article-740000> [Go there for pix]

SUBMERGED NABATEAN TEMPLE FOUND - DIVERS IDENTIFY TEMPLE TO ARABIAN GOD IN ITALY, BY NATHAN STEINMEYER

A Unique Nabatean Temple

Located in Pozzuoli, near Naples, the temple was dedicated to the god Dushara, the head of the Nabatean pantheon and the patron god of the Nabatean kingdom. The Nabatean temple was identified through the discovery of two marble altars. Archaeologists had long suspected that such a temple had existed in the ancient port city of Pozzuoli (Roman Puteoli). Since the 18th century, Nabatean artifacts bearing Latin dedicatory inscriptions to Dushara have been uncovered at the archaeological site, although the precise location of the Nabatean temple had remained a mystery. Originally located in the heart of the old city, the temple was submerged around the fourth century CE as the waters of the Mediterranean began to rise. In addition to the Nabatean temple, the archaeology team also identified roads, warehouses, and administrative buildings of the ancient port.

“Ancient Puteoli reveals another of its treasures,” said Gennaro Sangiuliano, the Minister of Culture. “[This discovery] testifies to the richness and vastness of commercial, cultural, and religious exchanges in the Mediterranean basin in the ancient world.” During the first century, Puteoli was an important economic center and the largest commercial port in the Roman Mediterranean. The Nabateans, though rooted in modern Jordan and northern Saudi Arabia, had economic and trade interests that gave them a presence throughout the Mediterranean, including, as we now know, at the merchant enclave of Pozzuoli near Naples.

Please visit the site: <https://www.biblicalarchaeology.org/daily/ancient-cultures/ancient-rome/submerged-nabatean-temple-found/> [Go there for pix]
