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Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

- Σεπτέμβριος 2023 -

**Educating the mind without educating the heart is
no education at all.**
(Aristotle)

Newsletter of the Hellenic Society of Archaeometry

- September 2023 -

Nr. 270

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Hidden tunnel and rooms unearthed under 1,500-year-old church in Istanbul, by Tom Metcalfe page 64

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In northern Israel, massive 3,800-year-old monument stuns and stumps archaeologists, by Melanie Lidman page 68

Rare golden gifts — left at a sacrificial site 2,300 years ago — uncovered in Tunisia, by Aspen Pflughoeft page 72

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An ancient skull unlike any human ever seen is baffling scientists and could rewrite the story of our evolution, by Marianne Guenot **page 84**



ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS

DIGITAL ARCHAEOLOGY BERN – ANCIENT

WEST ASIA, 6–7 OCTOBER 2023,

UNIVERSITY OF BERN, SWITZERLAND

We are pleased to announce the program of the hybrid conference «Digital Archaeology Bern – Ancient West Asia» that takes place 6–7 October 2023 at the University of Bern (Switzerland). The registration for on-site and online participation is now open.

The conference brings together Archaeologists, Philologists, and Digital Humanists to present their state-of-the-art research and discuss the future of archaeological and philological studies within the broader framework of the Digital Humanities.

The conference is organised by the Department of Ancient Near Eastern Archaeology and the Digital Humanities of the University of Bern in collaboration with the Swiss Society for Ancient Near Eastern Studies (SGOA), the Bern Computational and Digital Archaeology Lab, and the Data Science Lab of the University of Bern.

PROGRAM

Please visit the conference website for the program: <https://dabawa.hypotheses.org>

REGISTRATION

Please register at

https://www.dh.unibe.ch/forschung/workshops_und_talks/digital_archaeology_bern/registration/registration_form/index_ger.html for on-site and/or online participation.

- Participation is free of charge
- Registration is mandatory
- Registered participants will receive a Zoom invitation by e-mail on 2 October 2023

Registration deadline: 30 September

CALL FOR UNCONFERENCE PANELS

On 7 October 2023, all registered participants have the chance to pitch a topic in our unconference panels. Panels should be related to the general theme of the conference. Pitches should not exceed 5 minutes and will be followed by 25 minutes of discussion. The definitive public vote on the panels is on 6 October 2023 in course of the conference.

For proposing a panel, please send an abstract (150–300 words) and information on your academic degree and affiliation to sebastian.borkowski@unibe.ch.

Submission deadline for abstracts is 30 September 2023.

ΔΙΕΘΝΗΣ ΕΠΙΣΤΗΜΟΝΙΚΗ ΗΜΕΡΙΔΑ,
HISTORY OF CULTURAL HERITAGE
CONSERVATION: FROM THE FIRST
SCIENTIFIC LABORATORIES TO THE
WORLD CONSERVATION CENTRES, 10
ΟΚΤΩΒΡΙΟΥ 2023, ΔΙΕΥΘΥΝΣΗ
ΣΥΝΤΗΡΗΣΗΣ ΑΡΧΑΪΩΝ ΚΑΙ ΝΕΩΤΕΡΩΝ
ΜΝΗΜΕΪΩΝ ΤΟΥ ΥΠΟΥΡΓΕΙΟΥ
ΠΟΛΙΤΙΣΜΟΥ ΜΕ ΤΗ ΣΥΜΜΕΤΟΧΗ ΤΟΥ
ΕΘΝΙΚΟΥ ΑΡΧΑΙΟΛΟΓΙΚΟΥ ΜΟΥΣΕΙΟΥ

Η Διεύθυνση Συντήρησης Αρχαίων και Νεωτέρων Μνημείων του Υπουργείου Πολιτισμού με τη συμμετοχή του Εθνικού Αρχαιολογικού Μουσείου διοργανώνει Διεθνή Επιστημονική Ημερίδα στις **10 Οκτωβρίου 2023** με θέμα:

History of Cultural Heritage Conservation:

From the First Scientific Laboratories to the World Conservation Centres

Η Ημερίδα διοργανώνεται με πρωτοβουλία της Δρ. Γεωργιάνας Μωραΐτου, Προϊσταμένης του Τμήματος Συντήρησης Χημικών και Φυσικών Ερευνών και Αρχαιομετρίας του Εθνικού Αρχαιολογικού Μουσείου και του Δρ. Uwe Peltz, Συντηρητή στο Prussian Cultural Heritage -Foundation National Museums in Berlin.

Θα συμμετέχουν προσκεκλημένοι εισηγητές από μουσεία, ινστιτούτα και πανεπιστήμια της Ελλάδας και του εξωτερικού. Το πρόγραμμα καθώς και χρήσιμες πληροφορίες για την παρακολούθηση της Ημερίδας θα ανακοινωθούν σύντομα.

Η εκδήλωση πραγματοποιείται στο πλαίσιο των Ευρωπαϊκών Ημερών Συντήρησης της Πολιτιστικής Κληρονομιάς 2023.

<https://www.ecco-eu.org/european-day-of-conservation-restoration/>

Ακολουθείστε μας στο <https://www.facebook.com/dsanm.culture>

IRUG15 CONFERENCE & WORKSHOP, 26 - 29 SEPTEMBER 2023, TOKYO, JAPAN

 Join us for IRUG 15 in Tokyo, Japan!

There are still a few places available for the IRUG15 International Conference and Workshop, organized by Boris Pretzel and Masahiko Tsukada on behalf of the Tokyo University of the Arts and The Tokyo National Research Institute for Cultural Properties.

 Learn from the experts

The keynote talk, covering aspects of the theory and challenges of reflectance mode infrared spectroscopy, will be given by James A. de Haseth, Emeritus Professor of Chemistry at the University of Georgia and co-author of the classic reference Fourier Transform Infrared Spectrometry. The conference also features a one-day workshop led by Marcello Picollo (Senior Researcher at IFAC-CNR), aided by Suzan De Groot (RCE, the Netherlands) and Manfred Schreiner (Akademie der Bildenden Künste, Wien). (Registration for the workshop has now, however, closed).

 **Connect with the international community**

IRUG15 is the first ever IRUG conference to be held in Asia. This is a great opportunity for you to connect with the international community of scientists, conservators, students, and educators to share your and learn from their IR and Raman spectroscopic research as applied to the world's cultural heritage.

 Expand your knowledge

Papers and posters will cover all aspects of IR and Raman spectroscopies and their application to the study of cultural heritage (see www.irug.org for details).

Don't miss this opportunity to expand your knowledge and connect with the international community at IRUG 15 in Tokyo, Japan!

Secure your place by registering today – visit www.irug.org for more information.
(Registration fees are US\$200 / US\$50 for students)

Questions? Please email us at IRUG15@ml.geidai.ac.jp

See you in Tokyo,

Boris and Masahiko!

Registration form

IRUG15 Conference and Workshop, 26 – 29 September 2023, Tokyo, Japan

Conference registration

Hosted by:

[Tokyo University of the Arts](#) (Geidai)

[Tokyo National Research Institute for Cultural Properties](#) (Tobunken)

[Infrared and Raman Users Group](#) (IRUG)

1. Personal details: Title:

Name: *

Institution/affiliation:*

Position:

Address: *

Phone:

E-mail: *

Tick this box if you are submitting / ☐ ☐
have submitted an abstract for a paper /
poster

Tick this box to **EXCLUDE** all ☐ ☐
personal details from the book of ☐ ☐
abstracts

Tick this box to restrict personal
information to just your name and
institution /affiliation

2. Fees /Payment

Registration fees are listed below. Fees will need to be paid by bank transfer or cheque (in dollars) to the IRUG bank account – details will be provided once registration forms are received. The cost structure is broken down below. If the fee is prohibitive and will keep you from attending the conference, please write to the organisers – discounts may be applied under special circumstances.

Fees:

Conference registration (early bird before 12 July 2023/ after) US\$150 / US\$200

Conference, student registration (before 12 July 2023 / after) US\$ 40 / US\$ 50

NB: Early bird rates are applicable for payments received on or before 12 July

3. Deadlines

Submission of abstract for conference 15 April 2023

Early bird registration for conference closes on 12 July 2023

Papers / posters / acceptance notification by beginning June 2023 **Please send completed forms to: IRUG15@ml.geidai.ac.jp**

4. Conference sessions

Conference sessions are scheduled to run on 26, 28, and 29th September (interspersed with the limited attendance workshop on 27 September 2023). The conference language will be English. Delegates not attending the Workshop (27 September) are invited to enjoy the delights of Tokyo on that day.

5. Venue

The conference will be held in the Tokyo National Research Institute for Cultural Properties, 13-43 Ueno Park, Taito-ku, Tokyo, 110-8713 Japan. Laboratory and workshop tours will be held at the Institute and Tokyo University of the Arts, 12-8 Ueno Park, Taito-ku, Tokyo 110-8714 Japan.

6. Submission of abstracts

Abstracts for submissions to the conference, including a title and whether the submission is intended for a poster or for an oral presentation, should be sent by email to irug15@ml.geidai.ac.jp. Abstract are preferred in Word format with figures (if included) in place in the abstract and also supplied as a separate image files. Abstracts should be limited to about 1000 words or so. Please also state whether your abstract can be included (or not) in the book of abstracts to be distributed to delegates at the conference.

7. Questions

If you have any questions on the conference or registration procedures, please send an email to the organising committee at irug15@ml.geidai.ac.jp. Some suggestions for hotels and similar information will be posted on the IRUG website in due course.

Thank you for your interest in IRUG and specifically in IRUG15.

Please send completed forms to: IRUG15@ml.geidai.ac.jp

16TH INTERNATIONAL CONFERENCE ON
MODERN TRENDS IN ACTIVATION
ANALYSIS, 5–10 MAY 2024, MERCURE BUDA
CASTLE HILL, BUDAPEST, HUNGARY

Dear Colleagues,

Every four years since 1961, the experts in activation analysis get together to exchange ideas and present their research. Can we still expect any modern trends when we speak of such a well-established technique?

Well, the method may be mature but we can still see many novelties which give boost to the field: e.g., the operation of large user-based facilities with high neutron fluxes and a variety of sophisticated equipment which could be alternative to small labs with single-purpose reactors and limited instrumentation. The revolution in computation and information technology has also changed the spectrum acquisition and evaluation. Classic NAA and other activation analysis techniques are still indispensable for non-destructive trace-element and bulk determination of many chemical elements in a variety of matrices.

After the 15th conference in Mumbai, India (November 2019), MTAA returns to Europe. It will be held in Budapest, Hungary, in 2024 May and we look forward to new ideas and modern trends.

Zsolt Révay Conference Chair

Technische Universität
München, Germany

Submission Information

Each applicant can submit and present maximum two abstracts (1 oral + 1 poster or 2 posters). Acceptance of a paper implies that at least one of the authors must attend the conference and present the paper.

Authors are advised that abstracts will not be included in the final program unless registration documents and payment in full have been received from at least one of the authors.

Important dates for abstract submission

Submission	deadline	for	oral	abstracts:	5	December	2023
Submission	deadline	for	poster	abstracts:	5	February	2024
Oral	abstract	acceptance:			25	January	2024
Poster	abstract	acceptance:			28	February	2024

Author payment deadline: 15 February 2024

Authors are invited to submit their contributions from the following fields:

- Instrumental Neutron Activation Analysis (INAA)
- Prompt Gamma Activation Analysis (PGAA)
- Fast Neutron Activation Analysis (FNAA)
- Related techniques (Charged-Particle AA, Photon-induced AA, ...)
- Radiochemical and Preconcentration Neutron Activation Analysis (RNAA, PNAA)
- k0-based activation analyses (k0-NAA)
- Neutron Depth Profiling (NDP)
- Neutron sources and their characterization
- User facilities
- Sample preparation
- Instrumentation for Activation Analysis (radiation detection, delayed neutron counting)
- Spectrometry (gamma-ray, charged particle)
- Applications of Activation Analyses
- AA facilities used by the industry, industrial applications
- QA/QC, Presentation of analytical results, Laboratory Information Management System,
- Spectrum evaluation and analysis softwares
- Comparison with other analytical techniques
- Reference materials in AA
- Machine learning and artificial intelligence in AA
- Innovative approaches for increasing the competitiveness of activation analysis

One-page abstracts should be submitted in .docx file through our online registration system using our template.

The file size may not exceed 2 MB.

Do not change the font size, the text position or any other style parameter.

Please visit the site: <https://mtaa-icaa.org/mtaa16/>

RESEARCH IN PROGRESS MEETING 2023-2 **OF THE HISTORICAL METALLURGY** **SOCIETY, ONLINE, FRIDAY, 24TH OF** **NOVEMBER**

Dear colleagues,

I cordially invite you to the Research in Progress Meeting 2023-2 of the Historical Metallurgy Society, which will take place online on Friday, 24th of November. Abstracts (up to 200 words) can be submitted until October, 1st using the form provided on the meetings' webpage <https://archaeothommy.github.io/hms-rip-meeting/>.

The meeting provides a forum for everyone working on topics related to ancient and historical metallurgical practices, the past use of metal objects, and related fields. We are keen to learn more about your ongoing or recently finished projects! The meeting aims to foster links between the different disciplines and geographical regions. Therefore, we particularly encourage submissions from early career researchers, contract archaeologists/conservators, and colleagues from outside Europe. There will be an HMS prize for the best student presentation.

Presentations can be either 6 min or 15 min long (with time for questions added). We encourage all presenters to take full advantage of the flexibility a virtual event provides and present their project in a way that suits them and their project best. Pre-recorded contributions are possible but the presenter must be present in the meeting to answer any questions. Presentations will be scheduled in a way that considers the presenters' time zones.

Participation is free of charge. Please register for the event until 20 November using the registration form on the meeting's webpage. The link to the meeting room will be displayed after the successful registration.

The programme and any updates will be announced on the meeting's webpage and circulated by mail. Please don't hesitate to contact me for any further information.

We are looking forward to seeing you in November!

Best regards,
Thomas

ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ –
JOB VACANCIES/FELLOWSHIPS

FELLOWSHIP IN CHEMICAL IMAGING OF
WORKS OF ART, ANDREW W. MELLON
FOUNDATION, THE NATIONAL GALLERY
OF ART

Please see the announcement below for a full description of a fellowship in chemical imaging of art offered at the National Gallery of Art. The advanced training fellow will work with senior imaging scientist, Dr. John Delaney. The description of eligibility and the application procedure are at the end of the announcement. Note the deadline for applications is September 22, 2023. Please feel free to share this announcement widely.

Barbara Berrie

Fellowship in Chemical Imaging of Works of Art

With an endowment from the Andrew W. Mellon Foundation, the National Gallery of Art is offering an advanced training fellowship in chemical imaging applied to the study of works of art on the macroscale. The fellow will work within the scientific research, conservation division, under the guidance of the senior imaging scientist and is expected to collaborate with National Gallery's scientists, conservators, and curators. The fellowship is for up to three calendar years, and includes a yearly stipend of \$52,000 and \$3,000 per year for research-related travel.

For US citizens, a contribution towards your participation in the National Gallery's health insurance program is included.

Non-US citizens are ineligible for health care coverage through the National Gallery's available programs and therefore must be arranged and paid for by the Fellow.

Health care coverage for fellows on nonimmigrant visas will be required to have specific types of coverage. To help offset this cost, an additional \$7,000 (also taxable, according to international agreements) will be included in the yearly stipend for non-US citizens (for a total of \$59,000 per year). Those who use an authorized method of public transportation are eligible for an employer-provided fare subsidy to apply toward monthly transit costs.

RESEARCH PROGRAM

The National Gallery is developing spectroscopic imaging cameras and software tools to help address questions of interest from conservation scientists, conservators, and curators. Much of the research involves using these methods to identify and map artists' materials at the painting surface and in sub-surface paint layers, as well as to visualize

artists' working methods. The National Gallery's chemical imaging laboratory has cameras to perform reflectance imaging spectroscopy, as well as from 400 to 2500 nm and molecular luminescence imaging spectroscopy from 400 to 1000 nm. The lab also has an in-house developed scanning X-ray fluorescence imaging spectrometer. Currently, the lab is actively researching mid-IR imaging spectroscopy with the goal to build an instrument. The lab is also testing a 1-D neural network to automatically produce maps of artist pigments from reflectance image cubes.

The chemical imaging lab utilizes a high-resolution position-controlled scanning easel and optical tables that support the imaging instruments, and well suited for the testing and development of new spectral imaging modalities. The lab also collaborates with several academic institutions and other research laboratories which are leaders in developing spectral imaging instruments and software analysis tools.

Examples of National Gallery research publications

- 1) Francesca Gabrieli, Kathryn A. Dooley, Jason G. Zeibel, James D. Howe, John K. Delaney, "Novel Collection Method For Standoff Mid-Infrared Hyperspectral Imaging To Identify and Map Materials in Polychrome Objects," *Angew Chem Int Ed Engl.* 57(25) pp. [7341-7345](#), (2018). DOI10.1002/anie.201710192
- 2) Francesca Gabrieli, Kathryn A. Dooley, Michelle Facini, John K. Delaney, "Near UV to mid-IR reflectance imaging spectroscopy of paintings on the macroscale," *Science Advances*, 23 Aug, 5(8), (2019), [doi.org/10.1126/sciadv.aaw7794](#)
- 3) Kathryn A. Dooley, Annalisa Chieli, Aldo Romani, Stijn Legrand, Costanza Miliani, Koen Janssens, John K. Delaney, "Molecular fluorescence imaging spectroscopy for mapping low concentrations of red lake pigments: Van Gogh's painting The Olive Orchard," *Angew Chem Int Ed Engl.* 2020 Apr 6;59(15):[6046-6053](#). Epub 2020 Feb 11. PMID: 31961988. [doi.org/10.1002/anie.201915490](#)
- 4) Tania Kleynhans, Catherine M. Schmidt Patterson, Kathryn A. Dooley, David W. Messinger, John K. Delaney, "An alternative approach to mapping pigments in paintings with hyperspectral reflectance image cubes using artificial intelligence," *Heritage Science*, 8, 84 (2020). [doi.org/10.1186/s40494-020-00427-7](#)

RESPONSIBILITIES OF THE FELLOW

The fellow will receive training in the use of reflectance and X-ray fluorescence imaging spectroscopy for the study of works of art (paintings and works on paper). The fellow will also have access to the National Gallery's collections and to advanced analytical instrumentation available in the scientific research department. Beside training, the fellow will participate in the design, construction, and testing of new spectral imaging instruments and analysis tools or procedures. The fellow will be expected to conduct their own research during the fellowship. In addition, the fellow will produce written reports, present research results at scientific and conservation meetings, and publish at least one paper in a scholarly scientific journal.

Eligibility

Candidates will have an advanced degree (PhD or equivalent) in one of the physical or biological sciences, applied sciences, or engineering. The degree must have been obtained within the last five years.

An interest in art conservation and/or art history is required.

Proficient English-language skills and a proven record of research and writing are required.

Applicants who are not United States citizens will be required to provide proof of health insurance coverage, which includes medical evacuation and repatriation of remains. The National Gallery does not obtain any nonimmigrant visas for a candidates to participate in the fellowship with the exception of a J-1 visa.

Candidates who will be on a nonimmigrant visa in the US during the period of the fellowship or will require a J-1 visa must state so in their application and indicate the visa type and their country of citizenship.

Application Procedure

Interested candidates must submit the following materials in English:

- Transcripts of graduate courses of academic study (unofficial copies are acceptable)
- A curriculum vitae including basic biographical information and current and permanent addresses, telephone numbers and a description of previous chemical imaging experience and internships
- A statement of interest and intent (no more than two single-spaced pages) in applying for the fellowship
- Offprints/reprints in PDF format of publications and lectures
- Three letters of recommendation from professionals familiar with the candidate's work (emailed from the recommender directly to the address below)
- A statement noting their country of citizenship; whether they will be in the US on a nonimmigrant visa, and if so, what visa; and will they require a J-1 visa.

File naming convention for submissions:

Last Name_First Name_Document type (e.g., Transcripts)_Date (Year-Month-Day)

Formal applications and supporting materials must be submitted in PDF format by email to cl@nga.gov no later than **Sept 22, 2023**.

The fellowship may begin on or after October 30, 2023.

For inquiries, please contact: **Tyrese Davis, Conservation Administrator:** cl@nga.gov

Barbara H. Berrie, PhD

Head and Senior Conservation Scientist

Scientific Research

[202.256.8985](tel:202.256.8985)

ELIZABETH A. WHITEHEAD **DISTINGUISHED SCHOLAR TWO** **POSITIONS FOR 2024-2025**

Deadline: October 31, 2023

Term: Early September 2024 to end of May 2025.

Eligibility: An established scholar working in any area related to the mission of the School who possesses a significant record of publication and teaching and is affiliated with a Cooperating Institution. Applicants should hold the rank of Associate Professor (or equivalent) or higher. Preference will be given to those who have not received recent funding from the School. Previous holders of the Whitehead may apply if the previous term was at least five years prior. Applicants should have reasonable expectation of being granted leave to take up the position should it be awarded. Successful applicants are normally given about four weeks from late December to early January to accept or decline the award. The Whitehead Scholar is considered a fulltime position, and holders may not accept other forms of employment during the tenure of the award.

Project: The Whitehead Distinguished Scholar shall pursue research on a project that uses the facilities of the School and enriches its academic program. Whitehead Scholars participate in the academic life of the School in a variety of ways, especially by working closely with Regular and Student Associate members of the School during the winter term (late November to late March) on the subject of their expertise, and by joining School trips and excursions throughout Greece. A list of past Scholars' work with members is available here on the School's website https://www.ascsa.edu.gr/uploads/general/Past_Whitehead_Offerings.pdf.

Applicants are encouraged to consult with the Mellon Professor, Brendan Burke (bburke@ascsa.edu.gr), well in advance of the October 31, 2023, deadline when planning their proposed contributions to the academic program of the School.

Compensation: Stipend of \$40,000 plus round-trip coach airfare to Athens, board at Loring Hall for the Whitehead Scholar (one-half senior rate for spouse and one-half student rate for dependents), School housing, and hotel and transportation on any or all of the field trips and excursions that comprise the Regular Academic program.

Application: On or before October 31, applicants should submit the following materials as part of the online application <https://ascsa.submittable.com/submit/115754/elizabeth-a-whitehead-distinguished-scholars-application-form>:

Brief statement of interest (1 page)

Curriculum vitae (max. 3 pages) including list of publications
Statement of current and projected research (max. 3 pages)
Proposed contribution to the academic program (max. 3 pages)
Account of the frequency and length of earlier visits to Greece
Two letters of recommendation to be submitted online by October 31. Upon submission of the online application, recommenders will be sent an automated email with instructions about how

to submit their letters of recommendation. Or, applicants may choose to send the request at any time by clicking the "Send Request Now" button on the application form.

The selection committee may conduct a short interview as part of the application process, and finalists will be notified in advance. The appointments will be announced by January 15, 2024.

Link to online posting: <https://www.ascsa.edu.gr/fellowships-and-grants/postdoctoral-and-senior-scholars#Whitehead>

The American School of Classical Studies at Athens does not discriminate on the basis of age, color, disability, gender identity or expression, genetic information, national or ethnic origin, pregnancy, race, religion, sex, or sexual orientation when considering admission to any form of membership or application for employment.

American School of Classical Studies at Athens
321 Wall Street
Princeton, NJ 08540-1515
Email: programs@ascsa.org
Website: <https://www.ascsa.edu.gr/>

Connect with the ASCSA
<http://facebook.com/ASCSAthens/>
<http://twitter.com/ASCSAthens>
<http://instagram.com/ascsatheens/>

NEH FELLOWSHIPS

Deadline: October 31, 2023

The NEH Fellowship supports postdoctoral and advanced research in all humanities fields supported by its mission and resources. Founded in 1881, the American School of Classical Studies at Athens (ASCSA) is a premier resource in Greece for American scholars in the fields of Greek language, literature, history, archaeology, philosophy, and art, from pre-Hellenic times to the present. It offers two major research libraries: the Blegen, with over 113,000 volumes dedicated to the ancient Mediterranean world; and the Gennadius, with over 146,000 volumes and archives devoted to post-classical Hellenic civilization and, more broadly, the Balkans and the eastern Mediterranean. The School also provides centers for advanced research in archaeological and related topics at the Athenian Agora and Corinth excavations, and at the Malcolm H. Wiener Laboratory for Archaeological Sciences. By agreement with the Greek government, the ASCSA is authorized to serve as liaison with the Hellenic Ministry of Culture and Sports on behalf of American students and scholars for the acquisition of permits to conduct archaeological work and to study collections.

Since its inception in 1994, the National Endowment for the Humanities (NEH) Fellowship program at the ASCSA has supported projects for over 60 scholars with distinguished research and teaching careers in the humanities.

Eligibility: Postdoctoral scholars and professionals in all fields relevant to the mission of the ASCSA who are US citizens, or foreign nationals who have lived in the US for the three years immediately preceding the application deadline. Applicants must already hold their Ph.D. or have completed all requirements, except for the actual conferral of the degree, by the application deadline.

Terms: Two to four fellows will be selected for awards of 4, 5, or 9 months duration. The monthly stipend per fellow is \$5,000 allocated from a total pool of \$90,000 per year. Applicants should indicate their preference for the length and dates of tenure of the award to coincide with the American School's academic year: 9 months, Sept. 2024-end of May 2025; 4 months, Sept. - Dec. 2024; 5 months, January to end of May 2025. School fees are waived, and the award provides lunches at Loring Hall five days per week. The NEH Fellow will pay for travel costs, housing, residence permit, and other living expenses from the stipend. Foreign travel (while holding the fellowship) must be undertaken on U.S. flag carriers, wherever such service is available. A final report is due at the end of the award period, and the ASCSA expects that copies of all publications that result from research conducted as a Fellow of the ASCSA will be contributed to the relevant library of the School. The NEH requires public acknowledgment of the projects it supports on all materials resulting from or related to the NEH award. The NEH Fellow is also requested to send one copy of all books and electronic copies of articles directly to the NEH.

NEH Fellows should use the American School of Classical Studies at Athens as their primary research base, but research may be carried out throughout Greece.

Application: Submit an application online on the ASCSA website by October 31. Link to application here.

The following items should be included in the application submitted online to the ASCSA:

Short abstract of the project (up to 300 words).

A statement of the project (up to five pages, single spaced), including desired number of months in Greece, a timetable, explicit goals, a selected bibliography, the importance of the work, the methodologies involved (where applicable), and the reasons it should occur at the ASCSA.

Current curriculum vitae. If not a US citizen, state US visa status/date of residence.

Supply names and contact information for three specialists, without any conflicts of interest, who might act as readers of the application.

Names and contact information for three recommenders who are familiar with the applicant's work and field of interest. These recommenders should be able to comment on the feasibility of the project and the applicant's ability to carry it out successfully. After the online application is submitted, the recommenders will automatically be sent instructions about how to upload a letter of recommendation. Or, applicants may choose to send the request at any time by clicking the "Send Request Now" button on the online application form. Recommendations are due by the application deadline.

The following criteria will be used by the Selection Committee when considering applications.

Are the objectives and approaches clearly stated and coherent?

Will the project result in an important and original contribution?

Are the research perspectives and methodologies appropriate?

Will the stated scope of the project be completed during tenure of the fellowship?

Does the American School provide resources that are not available at the home institution and, hence, will residency in Greece contribute substantially to the success of the project?

Do the applicant's qualifications, training and expertise in the proposed area and their past productivity give confidence that the overall project will be accomplished in a timely fashion?

The awards will be announced during February. Awardees will be expected to accept the award within two weeks of notification of funding, but no later than March 1.

Any views, findings, conclusions, or recommendations here, do not necessarily represent those of the National Endowment for the Humanities.

The American School of Classical Studies at Athens does not discriminate on the basis of race, age, sex, sexual orientation, color, religion, ethnic origin, or disability when considering admission to any form of membership or application for employment

Please visit the site: <https://www.ascsa.edu.gr/fellowships-and-grants/postdoctoral-and-senior-scholars#NEH>

4 POSTDOCS AT TEL-AVIV UNIVERSITY

The Dan David Society of Fellows aims to support outstanding postdoctoral research in the study of the past. The Society's two year postdoctoral fellowship provides generous funding for international and Israeli scholars, to pursue innovative research at the highest level while enjoying the professional mentorship of faculty members at Tel Aviv University. Candidates who have completed their PhD in any discipline involved in the study of the human past, including but not limited to history, archaeology, history of the arts, history of education, history of science, technology and medicine, physical anthropology, literature, philosophy and digital humanities are eligible to apply.

Candidates must have their PhD degree in hand no earlier than October 1, 2019 and no later than September 1, 2024 (please attach a formal statement signed by your institution indicating the prospect date of submission if you have not yet completed your degree). Applicants who were on maternity leave are entitled to add an extra year for each child born since receiving the PhD degree. The fellowship will be awarded without regard to ethnicity, religion, gender or age.

The Dan David program is committed to excellence, interdisciplinarity, diversity, and equity. Up to four fellowships will be awarded for a maximum of two years each, beginning October 1, 2024. Those accepted to the program must commit to completing a full two-year term.

Fellows will be asked to spend at least three days a week at Tel Aviv University and be active members of the university's scholarly community. They will be required to fully participate in the activities of the Dan David Society of Fellows, including a twice-monthly seminar dedicated to cutting-edge methodologies and historiographic approaches, and to present their research to the other fellows once a year. The program's academic activities will all be conducted in English. Fellows will receive an annual scholarship of \$40,000. Non-Israeli fellows will also be eligible for subsidized on-campus housing.

Applications should include the following documents in English: CV (including a list of publications and a list of research languages); a statement of research plans (max. 5 pages); summary of PhD dissertation (max. 1 page); and 2 letters of recommendation (one from all the applicant's doctoral supervisors and the other from a scholar outside the applicant's university)

The deadline for applications for the 2023/2024 academic year is December 1, 2023.

For more details: <https://en-humanities.tau.ac.il/dan-david-fellows>.

POSTDOCTORAL POSITION, INSTITUTE FOR DIGITAL CULTURAL HERITAGE

Ludwig-Maximilians-Universität München
Geschwister-Scholl-Platz 1
80539 München

We are looking for you:

Postdoctoral Position (Akademischer Rat auf Zeit) – Artificial Intelligence and Machine Learning Applications in Cultural Heritage and Archaeology (m/f/x) in Munich.

Who we are:

The Faculty for the Study of Culture invites applications for a Postdoctoral position starting in April 2024 in the newly established Institute for Digital Cultural Heritage Studies.

The Institute for Digital Cultural Heritage Studies (IDCHS) is unique within the European higher education system as it is a research and teaching unit fully dedicated to spearheading transformative research on the ancient world through technology and digital engagement with the past in ways that address 21st-century societal problems and expand digital scholarship.

Your tasks and responsibilities:

The Institute for Digital Cultural Heritage Studies seeks a specialist in Artificial Intelligence/Machine Learning (AI/ML) applications in Cultural Heritage and Archaeology who will utilize AI/ML to ask and answer questions vital to studying the human experience and improving the understanding, preservation, and sustainable use of the cultural and material legacies of the past and related collections. Scholars with an interdisciplinary background are encouraged to apply, especially those who develop AI/ML tools, methods, and workflows for analyzing 2D/3D geospatial data from cultural heritage documentation (such as LiDAR, satellite imagery, and geophysical instruments), generating AI-based visualizations and restorations of cultural heritage objects and buildings, and improving access to and enjoyment of museum collections and archives through data enrichment.

Develop interdisciplinary research in Digital Heritage.

Participate in the IDCHS' research projects and publications.

Participate in grant writing.

Teach Master's and Bachelor's courses involving AI/ML programming* and data science (teaching load is five semester hours/week).

Scientific advanced qualification (e.g., Habilitation for becoming a professor in Germany).

Manage research assistants and computer laboratories.

Perform administrative duties for the IDCHS.

*The applicant must be proficient in at least one programming language prior to submitting the application (Python preferred).

Your qualifications:

Complete university education and a Ph.D. in Computer Science, Digital Heritage, Digital Archaeology, Geomatics Engineering, or Data Science with a specialization in Artificial Intelligence/Machine Learning*.

Proficiency in written and spoken English.

Proficiency in AI/ML programming (Python preferred).

Proficiency in data science applications dealing with cultural data (preferred).

Interest in (co)-supervising master's and doctoral students.

Experience in grant writing (preferred).

* The applicant must have already received a Ph.D. in a relevant field before submitting the application.

Applicants will have a strong publication record that fits the IDCHS' innovative research agenda. The ideal candidate will have university-level teaching experience, will participate in delivering the new Master of Digital Cultural Heritage to be launched in 2024-2025 and to be taught entirely in English, and will also teach undergraduate courses (e.g., seminars and laboratory courses in English or German) for other existing curricula within and beyond the Faculty for the Study of Culture. The position involves performing administrative duties for the IDCHS. Experience with grant writing is highly desirable.

LMU Munich is an equal opportunity employer committed to excellence through diversity, and therefore explicitly encourages women to apply.

Also possible in a part-time capacity.

People with disabilities who are equally as qualified as other applicants will receive preferential treatment.

Contact:

Please submit your application comprising the documents listed below as a single PDF (up to 15 MB) via email only to jobs-research@dkes.fak12.lmu.de, no later than October 31, 2023.

For questions regarding the position, you may contact Prof. Nicola Lercari <at n.lercari@lmu.de>.

Completed applications will include:

A cover letter.

Curriculum vitae.

Research statement, including descriptions of future research plans involving AI/ML topics.

Teaching statement, including descriptions of teaching interests for courses involving AI/ML programming.

Names and contact information for three academic references.

Proof of academic degrees (e.g., diplomas, unofficial transcripts, etc.).

Up to 5 writing samples or other relevant documents (e.g., published articles, sample syllabi, grant proposals selected for funding, etc.).

Link to a Digital Portfolio (as applicable).

Full application information:

in English:

<https://job-portal.lmu.de/jobposting/b62bd187addd308d73766191412dafaf1a658e9b0>

in German:

<https://job-portal.lmu.de/jobposting/09d99f608c4da1be4c186fbb0a8db5a1c407fef00>

RESEARCH ASSISTANT/ASSOCIATE IN HERITAGE SCIENCE (FIXED TERM), MCDONALD INSTITUTE FOR ARCHAEOLOGICAL RESEARCH

Fixed-term: The funds for this post are available until 31 December 2026 in the first instance.

The McDonald Institute for Archaeological Research invites applications for a fixed-term Research Associate in Heritage Science. The post holder will work as part of the AHRC-funded project: "Small performances": investigating the typographic punches of John Baskerville (1707-75) through heritage science and practice-based research, led by Marcos Martín-Torres jointly with Co-Investigators Caroline Archer (Birmingham City University), Anne-Marie Carey (Birmingham City University) and Maciej Pawlikowski (Cambridge University Library).

This is a unique opportunity to join a leading team of archaeological and heritage scientists around the newly-refurbished Cambridge Heritage Science Hub (CHERISH). We seek a rigorous, creative and collaborative researcher who is keen to both benefit from, and contribute to, our critical mass.

The post holder is expected to work primarily at the McDonald Institute and the University Library in Cambridge but also including brief trips to Birmingham and other locations. Key responsibilities will include the advanced imaging, chemical, micromorphological and microscopic analysis of steel typographic punches in the Baskerville collection, in addition to contributions to engagement with craftspeople, typeface designers, and the broader public.

The Research Associate in Heritage Science will lead on the characterisation and analysis of the collection of around 2,750 punches in the Baskerville collection, with special emphasis on microscopic (3D digital microscopy and SEM), metallographic, and elemental analyses (by SEM-EDS). They will work closely with other team members conducting 3D scanning, photogrammetry and RTI, in addition to other forms of analysis and replication.

Appointment at Research Associate level is dependent on having a PhD (or equivalent experience). Those who have submitted but not yet received their PhD will be appointed at Research Assistant level, which will be amended to Research Associate once the PhD has been awarded.

Salary Ranges: Research Assistant £29,605 - £33,966 Research Associate: £36,024 - £44,263

The role holder is expected to possess some research experience with sufficient breadth and depth of specialist knowledge, including research methods and theoretical frameworks, to work within and enrich the research programme. The post is suitable for researchers with a background in materials science and metallurgy, archaeometallurgy,

heritage science, or related disciplines, with an interest in past technologies, advanced imaging and the characterisation of small metal objects.

We particularly welcome applications from candidates from a BAME background for this vacancy as they are currently under-represented at this level in our department.

Click the 'Apply' button below to register an account with our recruitment system (if you have not already) and apply online.

If you have any questions about this vacancy or the application process, please contact Prof Marcos Martín- Torres (m.martinon-torres@arch.cam.ac.uk).

Please quote reference JC37871 on your application and in any correspondence about this vacancy.

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

The University has a responsibility to ensure that all employees are eligible to live and work in the UK.

Further information

[JC37871: Research Assistant/Associate in Heritage Science Further Particulars](#)

[Apply online](#)

Department/Location

[McDonald Institute for Archaeological Research, Cambridge](#)

Salary

£29,605-£44,263

Reference

JC37871

Category

[Research](#)

Published

2 August 2023

Closing date

15 September 2023

PRESIDENTIAL POSTDOCTORAL FELLOWSHIP, BROWN UNIVERSITY, PROVIDENCE, RI

Open Date: Aug 04, 2023
Applications Due: Oct 15, 2023

DESCRIPTION

Brown University invites applications for its 2024-26 Presidential Postdoctoral Fellowship Program, a two-year program designed to support the development of early career scholars from diverse backgrounds who show promise as innovative scholars. The fellows' research interests must align with an existing academic program or institute at Brown University.

Successful candidates will teach one course per year as part of the appointment and will participate in activities related to the Presidential Postdoctoral Fellows Program. This postdoctoral fellowship is not renewable beyond year two.

Brown encourages all interested applicants to apply, regardless of race, national origin or gender.

QUALIFICATIONS

Scholars with a Ph.D. in the physical sciences, engineering, life sciences, humanities, or social sciences will be considered. Candidates will be considered if their dissertation is completed by July 1, 2024. We are interested in scholars who demonstrate a commitment to promoting diversity and inclusion.

APPLICATION INSTRUCTIONS

Please submit a cover letter, CV, and three confidential letters of recommendation.

The cover letter should include a description of your research and teaching interests, your work and interest in diversity and inclusion. You should also identify the academic department(s) and/or institute(s) in which you would like to work. Priority review will be given to applicants who apply by October 15, 2023.

Application Process

This institution is using Interfolio's Faculty Search to conduct this search. Applicants to this position receive a free Dossier account and can send all application materials, including confidential letters of recommendation, free of charge.

Equal Employment Opportunity Statement

As an EEO/AA employer, Brown University provides equal opportunity and prohibits

discrimination, harassment and retaliation based upon a person's race, color, religion, sex, age, national or ethnic origin, disability, veteran status, sexual orientation, gender identity, gender expression, or any other characteristic protected under applicable law, and caste, which is protected by our University policies.

ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS

ΤΕΧΝΗ: MAKING, CREATING, AND AGENCY NETWORKS IN THE ANCIENT MEDITERRANEAN WORLD LECTURE SERIES AND DISCUSSION FORUM

We kindly invite you to a lecture by
Dr Despina Ignatiadou
National Archaeological Museum

*The cross-overs between three pyrotechnologies: Pre-Roman pottery, metalware, and
glassware*

20 September 2023, 18.00
at the Netherlands Institute at Athens
11, Makri str., 117 42 Athens

Due to limited seat number please R.S.V.P. at nia@nia.gr or 210 9210760

The event will also be streamed live. For registration please visit:
<https://us06web.zoom.us/meeting/register/tZEudu6trT0qH92SM2NKU0bCljOclvKCcd-8>

Abstract

The productions of pottery, metals, glass, and faience, all share technological parameters. As they are all based on pyrotechnology it could not be otherwise than be connected and influencing each other. The typological and chronological connections among the products of those productions also follow the technological advances, i.e. the possibilities the latter create.

The technology of pottery, which appeared first, created the conditions for the evolution of all the others, initially on the technical level and later on the artistic one too. It has been suggested that the glass technology is a lateral branch of the pottery technology, while a connection between glassworking and metalworking has been suggested too.

In the workshops, the evolution of furnaces has been of key importance for the firing of products, of any material. Shared equipment often involved workshop furnishings, utensils, tools, and, particularly, molds.

Taking into account prototypes, typology and dating, we cannot overlook the fact that all three productions function in a common artistic milieu; it would therefore be impossible not to notice proximity of shapes and decoration, especially in the case of vessels and utensils. However, the three artisanal productions should not be judged equally, regarding their artistic value and the influence they exercised and received.

As a tool for viewing these influences we should use the theory of skeuomorphism, according to which the materials without intrinsic value are used to imitate expensive

materials. The archaeological findings confirm the theory and place every production at a different level of value, dissemination, and the creation of prototypes.

Making and crafting is inherent to human behaviour, and the value of the human capacity to make things is uncontested. We identify ourselves often through what we do/make, and it allows us to have some form of control over a tiny aspect of the much bigger world around us. As more of our lives become automated and digital, we see groups and individuals moving back to crafts and taking up knitting, pottery, jewelry-making, gardening and many others as hobbies. This has proven especially useful and even soothing in the difficult times (crises, pandemic) we are going through.

Making and creating are key to human existence, they are embedded in individuals, groups, socio-political and legal institutions, and in society overall. In the last decade, this aspect of ancient life, so vital to individuals and societies, has seen a huge surge in interest. Approaches to crafts and making are diverse, including historical, archaeological, economic, technical and anthropological points of view. Despite these numerous paths of investigation, several of us have felt that we often work too much each in our own (regional and chronological) niche, while we could actively learn much more from joining forces and studying crafts, their practices, resources and people together.

This new lecture-and-discussion forum – called TEXNH – aims to answer this need by focusing on crafting as a set of practices and processes, intricately interwoven with the agency that drives them. Its participants will look at humans and their interaction with the non-human agency of materials and animals through making, and will place these networks of interaction in the context of wider societies and communities. Of interest to us is to observe differences and similarities in different contexts and periods, and to try to explain both such differences and similarities. To avoid remaining in our own niche, this forum will not only bridge the traditional chronological and regional focusses but will also bring together the many disciplines that investigate making and crafting: archaeologists, classicists, historians, epigraphers, philosophers, ethnographers, anthropologists, and craftspeople themselves. In order to limit ourselves to a manageable whole, we will focus, geographically, on the broader Mediterranean, both West and East, and, chronologically, on the period between the Bronze Age and the Later Roman Empire.

Each year we aim to investigate a specific theme from various disciplinary viewpoints in order to open up our own perhaps rather fixed ideas on what crafting should look like. By focusing on specific themes rather than specific crafts or individual materials, we aim to cross-fertilize our research and think well beyond a single craft since craftwork and making practices were not self-standing nor done in isolation. As befits the aims of the forum, the theme of the first series of meetings will be cross-craft interaction.

• Our TEXNH logo is loosely inspired by: (T) paint brushes, (E) music metronome, (X) Antikythera mechanism, (N) needle work, and (H) carpenter's bench screw

AWARDS: 2, FROM THE CENTRO INTERNAZIONALE PER LA RICERCA SULLE CIVILTÀ EGEE (SARDINIA)

Centro Internazionale per la Ricerca sulle Civiltà Egee “Pierre Carlier” (CIRCE) Comune di Oristano – Fondazione Oristano – Fondazione Mont’e Prama

1.

The Lucia Vagnetti Memorial Award for research on Trade in the Mediterranean during the Bronze and Iron Age

Graduate students and researchers are invited to apply for a “Lucia Vagnetti Memorial Award” to conduct researches on Trade in the Mediterranean during the Bronze and Iron Age, at the Centro Internazionale per la Ricerca sulle Civiltà Egee “Pierre Carlier” (CIRCE), Oristano, Sardinia, for 2 months in the academic year 2023-2024.

The award, financed by the Mont'e Prama Foundation and Oristano Foundation, will provide a contribution of 2000 euros, plus travel expenses up to a total of 300 euros. The award holder will be required to submit a report on her/his research work to the Director of Centro Internazionale per la Ricerca sulle Civiltà Egee “Pierre Carlier” and to hold a Seminar at the Postgraduate School of Archaeology of the University of Sassari, which will then be published in the Center's journal "I quaderni di CIRCE".

The successful candidate will be expected to use the facilities of the CIRCE Library and Archives, which include the private libraries of Jean-Pierre Olivier, Frieda Vandenabeele, Henri and Micheline van Effenterre, Paolo Belli and Lucia Vagnetti. The combination of these collections makes the Library of the Center one of the largest libraries on Aegean archaeology with a special focus on Mediterranean civilisations and Sardinian archaeology.

Applications should include a Curriculum Vitae and a description of the proposed research programme and must be sent by e-mail to the Oristano Foundation (info@fondazioneoristano.it) and to Prof. Massimo Perna, Director of the CIRCE Centre (maxperna59@gmail.com) by 1st October 2023.

Potential applicants are encouraged to contact Prof. Massimo Perna, Director of CIRCE for further information.

2.

The Jean-Pierre Olivier Memorial Award for research on Aegean Epigraphy and Archaeology

Graduate students and researchers are invited to apply for a “Jean-Pierre Olivier Memorial Award” to conduct researches in Aegean Epigraphy and Archaeology at the Centro Internazionale per la Ricerca sulle Civiltà Egee “Pierre Carlier” (CIRCE), Oristano, Sardinia, for 2 months in the academic year 2023-2023.

The award, financed by the Mont'e Prama Foundation, will provide a contribution of 2000 euros plus travel expenses up to a total of 300 euros. The award holder will be required to submit a report on her/his research work to the Director of Centro Internazionale per la Ricerca sulle Civiltà Egee “Pierre Carlier” and to hold a Seminar at the Postgraduate School of Archaeology of the University of Sassari, which will then be published in the Center's journal "I quaderni di CIRCE".

The successful candidate will be expected to use the facilities of the CIRCE Library and Archives, which include the private libraries of Jean-Pierre Olivier, Frieda Vandenabeele, Henri and Micheline van Effenterre, Paolo Belli and Lucia Vagnetti. The combination of these collections makes the Library of the Center one of the largest libraries on Aegean archaeology with a special focus on Mediterranean civilisations and Sardinian archaeology.

Applications should include a Curriculum Vitae and a description of the proposed research programme and must be sent by e-mail to the Oristano Foundation (info@fondazioneoristano.it) and to Prof. Massimo Perna, Director of the CIRCE Centre (maxperna59@gmail.com) by 1st October 2023.

Potential applicants are encouraged to contact Prof. Massimo Perna, Director of CIRCE for further information.

ΑΝΑΚΟΙΝΩΣΗ - ΠΡΟΓΡΑΜΜΑ ΟΜΙΛΙΩΝ **ΕΜΑΕΜ ΓΙΑ ΤΟ ΕΤΟΣ 2023**

Το Δ.Σ. της ΕΜΑΕΜ βρίσκεται στην ευχάριστη θέση να ανακοινώσει την συνέχιση των Ομιλιών από έγκριτους ομιλητές, με φυσική παρουσία, οι οποίες είχαν ανασταλεί εξαιτίας των μέτρων για τον Κοροναϊό.

Το παρόν πρόγραμμα αφορά τις προγραμματισμένες Ομιλίες για το 2023. Σύντομα θα σταλεί και το πρόγραμμα Ομιλιών για το 2024.

Μια σημαντική αλλαγή είναι ο τόπος διεξαγωγής των ομιλιών της ΕΜΑΕΜ. Κατόπιν συνεννοήσεως με τον Πρόεδρο του Φιλολογικού Συλλόγου 'Παρνασσός', τον Καθηγητή κ. Κωνσταντινόπουλο, οι ομιλίες θα γίνονται στην Αίθουσα 'Παλαμάς' του Φιλολογικού Συλλόγου 'Παρνασσός', στην Πλατεία Καρύτση, στο κέντρο της Αθήνας. Η ΕΜΑΕΜ θα ήθελε να ευχαριστήσει και δημόσια τον Καθηγητή κ. Κωνσταντινόπουλο για αυτή την προσφορά.

ΠΡΟΓΡΑΜΜΑ

25/9/23: Σ. Παπαμαρινόπουλος, 'Η Ατλαντίς και οι Έλληνες'

30/10/23: Γ. Σαραντίτης, 'Η Μεθοδολογία της Μυθολογίας. Το Ομηρικό ημερολόγιο και ο αστερισμός του Ωρίωνος'

27/11/23: Π.Πρέκα-Παπαδήμα, 'Κατανομή αστερών σε αστερισμούς: Σχέση με Πυθαγόρειους αριθμούς και όρους Μουσικής Αρμονίας'

11/12/23 : Α. Αντωνάκος, 'Οι αποσιωπηθείσες φιλολογικές πηγές για την ελληνική προέλευση των γραμμάτων του Άλφαβήτου' . Παρουσίαση του βιβλίου του και βράβευση.

Οι ομιλίες θα πραγματοποιηθούν κατά την ώρα 6.30-8.30 μμ.

INTERNET SITES

RARE PHOTOS SHOW FIRST EXCAVATIONS AT SACRED GREEK ISLAND OF DELOS, BY TASOS KOKKINIDIS

Rare photographs of the excavations at the Greek Island of Delos from the 19th Century have come to light in a book by French archaeologists.

The book *Delos 1873-1913* sheds light on the challenges facing the scientists and other skilled and unskilled workers who unearthed ancient monuments and artifacts in one of most important mythological, historical, and archaeological sites in Greece.

Its claim as the birthplace of Apollo gave Delos a strong religious identity that lasted all the way until Byzantine times.

The Diadumenos, supported by two Mykonian workers, trying to shake off the numbness of a 2,000-year sleep from his “perfect limbs” uncovered in 1894.

Over the centuries, Delos was truly a cosmopolitan center with a diverse population that included people from all around the Mediterranean, but in 88 BCE, the Romans razed the island during their war with Mithridates (an ally of the Athenians who controlled the island), a calamity Delos never recovered from.

The French School of Athens (FSA) in 1873 sent archaeologist A. Lebègue to begin work on excavations on Delos.

Until the First World War, on the instigation of T. Homolle and then M. Holleaux, the emphasis was on the clearing of large areas in the Sanctuary zone and on the northern slopes of Cynthus; however, the rest of the island was not neglected.

Several years apart (1894 and 1907), two archaeological maps of the island were drawn up while a study of its physical geography was successfully completed by the geologist L. Cayeux (EAD IV).

From 1903 onwards, the excavations enjoyed annual financial support from Joseph Florimont, Duke of Loubat (1831-1927), a rich American philanthropist and foreign corresponding member of the Academy of Inscriptions and Belles-Lettres.

This major contribution to work in the field was complemented in 1920 by the creation of a Greek epigraphy fund to support the institute from which the income was used for the publication of the *Choix d'inscriptions de Délos* by F. Durrbach (1921) and the *Corpus des inscriptions de Délos*.

From the 1920s onwards, the efforts of the school's members focused on the study of monuments, batches of equipment and inscriptions discovered in the previous decades, and exploratory research concentrated more on buildings than groups of monuments.

Today, the island maintains its serenity all to itself, as no one is allowed to stay overnight on the island except for caretakers and archaeologists who continue to uncover its ancient secrets. Those who would like to explore the island and pay tribute to its magnificent history are allowed to do so, but only as part of day trips.

The Greek Island of the Gods is linked by ferry to the island of Mykonos, with the trip taking a mere 45 minutes.

Please visit the site: <https://greekreporter.com/2023/08/22/excavations-greek-island-delos/>

ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS

EARLY TYPES OF CYPRIOT BRONZE AGE

METAL INGOTS,

BY VASILIKI KASSIANIDOU

“And in Length of Days Understanding” (Job 12:12). Essays on Archaeology in the Eastern Mediterranean and Beyond in Honor of Thomas E. Levy, Erez Ben-Yosef • Ian W. N. Jones (Eds)

Abstract

It is now well known, thanks to Lead Isotope Analysis, that in the Late Bronze Age Cypriot copper was traded in the form of oxhide and discoid, plano-convex/ bun ingots. Both types were used at the same time as indicated by their presence in the Uluburun, the Cape Gelidonya and now the Antalya Kumluca shipwreck. According to ancient sources, however, Cypriot copper was traded to the East already since the nineteenth century BC: in texts dating to the Old Babylonian period and found at Mari, Babylon and Alalakh there are several mentions to copper from Alashiya, the name by which Cyprus was known to her neighbours. The texts show that metal from the island was traded all the way to Babylon. It was probably exchanged for gold, tin, silver and lead which were not locally available but are found in tombs of this period. In what form, however, was Cypriot copper traded in the earlier phases of the Bronze Age? The aim of this paper is to discuss Cypriot ingots and especially the early forms of metal ingots produced on the island.

Keywords: Cyprus · Bronze Age · Ingot · Copper · Tin · Trade · Oxhide ingot

SCIENTIFIC TRADITIONS IN THE ANCIENT MEDITERRANEAN AND THE NEAR EAST, EDITED BY SOFIE SCHIØDT, AMBER JACOB, AND KIM RYHOLT

The Institute for the Study of the Ancient World and NYU Press are pleased to announce the publication of the latest volume from ISAW Monographs,

Scientific Traditions in the Ancient Mediterranean and the Near East, edited by Sofie Schiødt, Amber Jacob, and Kim Ryholt.
ISBN 9781479823130, \$85.00

Scientific Traditions in the Ancient Mediterranean and Near East collects the select proceedings of papers delivered at two conferences held in Copenhagen and New York in 2018 and 2019, respectively, both organized by an international collaboration called Scientific Papyri from Ancient Egypt (SciPap), established in 2017 on the initiative of Kim Ryholt, director of the Papyrus Carlsberg Collection.

The contributions presented in Scientific Traditions in the Ancient Mediterranean and Near East engage with topics in medicine, astronomy, astrology, and other forms of divination, as seen from a variety of textual sources in several languages and scripts from Egypt and the Near East spanning more than a millennium, including some texts that are edited and discussed here for the first time. These include new treatises on divination, including dream interpretation, personal astrology, and Sothis divination, as well as treatises on medicine, including dermatology, gynecology, and apotropaic incantations. The contributors, which include both established and early-career scholars, were tasked with approaching their texts not only as specialists, but also from a cross-cultural perspective, and the resulting body of work reveals new and exciting evidence for the transfer of scientific knowledge across cultural borders in the ancient Mediterranean and Near East.

This book will be of interest to specialists in the history of medicine, science, divination, and magic, as well as to papyrologists, Egyptologists, and Assyriologists.

Please follow this link for the Table of Contents and contributors:

<https://isaw.nyu.edu/publications/isaw-monographs/stamne>

Sofie Schiødt is an Egyptologist specializing in pharaonic medicine, magic, and mummification. She is a postdoctoral researcher at Eberhard Karls Universität Tübingen and co-director of the international research project Scientific Papyri from Ancient Egypt in Cross-Cultural Perspective (SciPap) at the University of Copenhagen. She is currently preparing the text edition of the second-longest medical text preserved from ancient Egypt, P.Louvre-Carlsberg.

Amber Jacob is a PhD Candidate at the Institute for the Study of the Ancient World at New York University and co-director of the SciPap project. Her work centers on

Egyptian medical practice in Graeco-Roman Egypt and its cross-cultural implications. Her dissertation presents the editio princeps of an unpublished corpus of Demotic medical texts from Tebtunis.

Kim Ryholt is Professor of Egyptology at the University of Copenhagen, director of the Papyrus Carlsberg Collection, and founder and former director of the SciPap project. He specializes in ancient Egyptian history, literature, and historiography.

THREADS OF MEMORY: REVIVING THE ORNAMENT OF A DEAD CHILD AT THE NEOLITHIC VILLAGE OF BA`JA (JORDAN) HALA ALARASHI, MARION BENZ (AND SEVERAL MORE)

In 2018, a well-constructed cist-type grave was discovered at Ba`ja, a Neolithic village (7,400–6,800 BCE) in Southern Jordan. Underneath multiple grave layers, an 8-year-old child was buried in a fetal position. Over 2,500 beads were found on the chest and neck, along with a double perforated stone pendant and a delicately engraved mother-of-pearl ring discovered among the concentration of beads. The first was found behind the neck, and the second on the chest. The meticulous documentation of the bead distribution indicated that the assemblage was a composite ornament that had gradually collapsed, partly due to the burying position. Our aim was to challenge time degradation and to reimagine the initial composition in order to best explore the significance of this symbolic category of material culture, not as mere group of beads, but as an ornamental creation with further aesthetic, artisanal and socioeconomic implications. The reconstruction results exceeded our expectations as it revealed an imposing multi-row necklace of complex structure and attractive design. Through multiple lines of evidence, we suggest that the necklace was created at Ba`ja, although significant parts of beads were made from exotic shells and stones, including fossil amber, an unprecedented material never attested before for this period. The retrieval of such an ornament from life and its attribution to a young dead child highlights the significant social status of this individual. Beyond the symbolic functions related to identity, the necklace is believed to have played a key role in performing the inhumation rituals, understood as a public event gathering families, relatives, and people from other villages. In this sense, the necklace is not seen as belonging completely to the realm of death but rather to the world of the living, materializing a collective memory and shared moments of emotions and social cohesion.

Please visit the site:

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0288075> [Go there for full article] [Story & pix at <https://www.jpost.com/archaeology/article-753603>]

PETRAS, SITEIA II: A MINOAN PALATIAL SETTLEMENT IN EASTERN CRETE. LATE BRONZE AGE POTTERY FROM HOUSES I.1 AND I.2

Metaxia Tsipopoulou, Eleni Nodarou,
Prehistory monographs, 67.
Philadelphia: INSTAP Academic Press, 2021.
Pp. 526.
ISBN 9781931534321

Review by R. Angus K. Smith, Brock University. rsmith@brocku.ca

This volume is the second in an INSTAP Academic Press series of final publications of the Minoan site of Petras in east Crete. The site is located east of the modern city of Siteia and sits atop a hill with a commanding view of Siteia Bay. In 1985 work began on the excavation of what turned out to be a palatial structure and urban settlement, and excavation has continued at the site to reveal several different areas spread out over the landscape, including a Late Minoan III fortification wall, a Neolithic and Early Minoan I settlement, and a Pre- and Protopalatial cemetery. This volume presents the Late Minoan pottery from two houses in Sector I of the urban settlement to the northeast of the palatial structure: Houses I.1 and I.2. The rest of the material from these houses was published in Volume 1 of the series (Tsipopoulou 2016), but the Late Minoan pottery, because of its enormous quantity, was saved for this separate and later volume.

This volume is organized into five chapters that introduce the architectural remains (Ch. 1), cover the Neopalatial pottery (Ch. 2) and the Late Minoan II-III pottery (Ch. 3), provide a petrographic analysis (Ch. 4), and offer conclusions (Ch. 5). Two short appendices contain extra information about the cooking wares and about pottery fabrics that predate Neopalatial occupation. Three concordances link the volume's catalog numbers with numbers used in the field and the Siteia Museum, with specific site context and pot shape, and finally provide the page or page numbers where the objects are mentioned in Volume I of the series. An index and the illustrations follow, including various tables and the very important drawings and photographs of the pottery, as well as the petrographic thin sections. All in all, these supplementary materials, from appendices to the final plate, take up more than half the volume. This is as it should be, since such a field report derives much of its value from the quality and quantity of its illustrations as well as its ease of use.

Chapter 1 introduces the architectural remains and briefly describes the rooms and areas in which the pottery was found. While two "houses" are mentioned — House I.1 and I.2 — the volume is dominated by material from House I.1, which provides the bulk of the architectural and artifactual remains. Locating the described rooms and areas on the site plans was a challenge. The idiosyncratic order in which the variously named rooms, corridors, areas, courtyards, etc. are presented is indicated at the outset but does not follow alphabetical order (A, M, E, Λ, etc.) and jumps between types ("areas,"

“courtyards,” “pits,” “staircases,” etc.). At times the descriptions of room locations could have been clearer. Aside from these minor quibbles, the descriptions of contexts and architectural plans are quite readable, once one has done the work of familiarizing oneself with the layout of the site and the nomenclature. Ultimately, this chapter proves very useful for orienting oneself to the site and for providing context for the pottery in the following chapters.

Chapter 2 covers the Neopalatial pottery and makes up the bulk of the text. The organization of this section is key to the success of the volume. After a brief introduction to the chapter, the pottery fabrics are introduced both via petrography (elaborated in Ch. 4) and macroscopic analysis. The macroscopic fabric study, based in part on petrographic fabric categories and with its accompanying table and various charts, is particularly effective at conveying the scale and distribution of local and imported pottery and associated shape types. The pottery recording and cataloging system is outlined next, and then the long catalog begins. The catalog is organized by a total of 30 different shape types, and within each broad category (e.g. pithoi) a number of sub-types are described. Catalog entries are grouped within each shape category by their contexts, and individual numbers provided for each catalog entry (e.g. P2, P34, etc.) are not sequential throughout the entire chapter (or book), but do proceed from low to high within each shape category. Catalog entries include information about preservation, dimensions, shape, fabric, and any surface finish or decoration. In addition, each entry references the Siteia Museum number, stratigraphic layer, and any illustrations.

Discussion of Neopalatial chronology is largely absent from this chapter and saved for the concluding remarks in Chapter 5. As a result, it is mostly unclear from Chapter 2 which Neopalatial phases are present in the Petras material. No relative dates are provided for individual pots, and discussion of relative chronology is limited to its mention in association with comparanda for each shape type. This is an understandable analytical choice — after all, ancient pots do not come with relative chronology “labels” and are only given such with reference to comparanda. Nevertheless, the absence of more specific chronological analysis in this chapter makes some of the chronological conclusions in Chapter 5 less transparent.

Chapter 3 covers the Late Minoan II–III pottery in much the same way. There is much less pottery from this later phase of occupation, but Tsipopoulou is careful to note that “the LM II and LM III habitation, despite the scarcity and the poor state of the preserved architectural remains, was not a seasonal, insignificant one” (117). With reference to the chronology of the LM II–III pottery, Tsipopoulou lets us know that the majority of this pottery dates to LM IIIA, with some LM IIIC and very little LM II or LM IIIB (117). This is the sort of chronological specificity that is missing from Chapter 2’s coverage of the Neopalatial pottery. Unlike in the Neopalatial pottery chapter, the descriptions of each shape type do include assignations of some individual pots to specific periods.

Chapter 4 is the petrographic analysis by Eleni Nodarou. She identifies 15 different fabric groups in three broad categories: coarse metamorphic fabrics, other coarse fabrics, and fine fabrics. Coarse metamorphic fabrics are the most common and varied, with eight different fabric groups including the most common fabrics (Groups 1 and 2) comprising the majority of Neopalatial coarse wares. After descriptions of each of these fabric groups, supplemented by color photographs and with attempts to place them both regionally and chronologically, Nodarou offers a summary discussion of pottery

consumption in House I.1. She concludes that most pottery in House I.1 was locally produced, with imports coming most importantly from Palaikastro, but also from Zakros, southeastern Crete, the Mochlos-Chamaizi area, and as far west as Malia. A single sample also constitutes evidence of off-island contacts; fittingly, it came from an amphora. Since many of these petrographic samples fall outside of the Neopalatial and Postpalatial focus of this volume, Nodarou includes a diachronic perspective on pottery fabrics at Petras and how the evidence from House I.1 contributes. Finally, she provides technical petrographic descriptions of each fabric group.

Chapter 5 offers concluding remarks and focuses on the relative chronology; the distribution, function, and decoration of Neopalatial pottery in House I.1; and the use of space in House I.1. For the relative chronology, two Neopalatial phases can be recognized: MM IIIB seems to be the date of the house's construction and LM IA was found in its final phase, after which it was abandoned until the LM II–III phase. In the LM II–III period, occupation of this area shifted to the northern part of House I.1. Significantly, there is evidence for LM II pottery — a rarity in eastern Crete — although Tsipopoulou suggests it was in use at the same time as the more numerous LM IIIA1 pottery (154). The most abundant evidence for this Postpalatial phase of occupation is in LM IIIA2, with some additional material dated to early LM IIIC. The evidence from this area is part of a larger pattern of Postpalatial activity at Petras, which Tsipopoulou believes to have been a significant reoccupation that continued without a gap from the LM IB destruction (152).

Tsipopoulou also offers conclusions on the distribution of pottery shapes and the types of decorations found in House I.1. Distribution charts divide the pottery into functional categories, but in every case the majority of vessels were found in two areas: Room Λ, interpreted as a second story dining area, and the nearby Pit Θ, interpreted as a refuse area. While most of the pottery was undecorated, decorated pottery was present, with a majority being dark-on-light and monochrome painted. Of the motifs present, ripple patterns, spirals, and floral patterns each make up significant proportions. The lack of elaborately decorated vases, Tsipopoulou concludes, suggests that House I.1 was not an elite residence (153).

Finally, Tsipopoulou offers her most substantial conclusions with regard to the use of space in House I.1. This analysis goes well beyond the pottery that is the focus of this volume and incorporates earlier studies of Petras material to conclude that House I.1 was in fact a structure used for a variety of activities — wine making, textile manufacture, communal dining, and habitation — by corporate groups living in and around the area of Petras. She suggests that it was the “economic seat” of the head of one of these corporate groups, and that this head could have acted as an intermediary between the palace and the people who lived peripherally cultivating crops and tending flocks (155–156). Tsipopoulou's interpretations here are substantial and important, offering a compelling explanation for the function of House I.1 and others like it that are found within the orbit of Neopalatial Minoan palaces.

Two appendices cover Cooking Wares (Appendix A) and Early and Middle Minoan I–II Fabrics (Appendix B). These are summaries of comprehensive studies previously published by Alberti (2016) and Relaki (2016), although some new information and interpretation is also offered. Three concordances list the pottery in this volume by its

catalog number, as well as the Pre- and Protopalatial pottery and the cooking wares not included in this volume.

I suspect that the majority of people using this volume will begin by flipping through the plentiful and excellent illustrations. While the technical drawings are presented by shape type, the photographs divide the material by context. This is an interesting and useful choice, allowing the reader to understand the assemblage both in terms of the variety of forms a specific shape type can take at Petras and the variety of pottery associated with each context. My one complaint here is that the volume's organization does not make it particularly easy to go from an illustration to the relevant catalog entry — it would have been useful if Concordance A, which lists the pottery by catalog number and references relevant page numbers in Volume I of the Petras series (Tsipopoulou 2016), had also included the relevant page number or numbers in the current volume.

Figuring out how to use a volume like this inevitably involves a certain amount of puzzle-solving. What do all these numbers and abbreviations mean? How is the catalog arranged? How can I figure out where to find the catalog entry for a particular illustration? Perhaps someday an agreement will be reached about how best to publish the complexities of an archaeological site. In the meantime, Tsipopoulou is to be congratulated for arranging the presentation of the evidence in a logical and intuitive manner, including the necessary explanations and references to previous publications of the material, and providing very helpful concordances and tables so that anyone wishing to really dig into the material has a roadmap to do so. This makes it easier to engage with the material from this very important Minoan site and allows us to look forward to future volumes in its ongoing publication.

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Please visit the site : <https://bmcr.brynmawr.edu/2023/2023.08.04/>

ΕΙΔΗΣΕΙΣ - NEWS RELEASE

THE ANCIENT GREEK NOBLEWOMAN BURIED WITH HER GOLD JEWELRY, BY TASOS KOKKINIDIS

In 2018, Greek archaeologists uncovered a grave of an ancient noblewoman buried with her gold jewelry on the island of Sikinos. Her name, according to a burial inscription, was Neko (Greek: Νεκώ). It remains a mystery who exactly this woman and her social status in Sikinos society were. The island in the Cyclades is located between the islands of Ios and Folegandros.

The box-shaped grave was found untouched in the vault of the Episkopi monument, a rare burial memorial of the Roman era, which was later turned into a Byzantine church and a monastery.

Golden wristbands, rings, a long golden necklace, a female-figure, carved cameo buckle, glass and metal vases and fragments of the dead woman's clothes were found in the grave as well.

"The wealth of jewelry worn by the woman betrays that she was a prominent figure in Sikinos society," the Ministry of Culture said in an announcement on the find.

The well-preserved mausoleum on the tiny island was likely to have been constructed to shelter the grave, archaeologists said.

"We were unexpectedly lucky," Director of the Ephorate of Antiquities of Cyclades Dimitris Athanassoulis told Reuters at the time. "This is Neko's mausoleum."

"It's very rare. A monument, one of the Aegean's most impressive, has got an identity," he added. "We now have the person for whom the building was built, we have her remains, her name."

Experts thought Neko had links to the island, but it was not clear whether she was actually from Sikinos. "We are now trying to find out more about her," Athanassoulis said. "We are still at the beginning."

Despite attacks by grave robbers in ancient times and the building's various uses through the centuries, Neko's grave was found intact mainly because it was well hidden in a blind spot between two walls at the basement of the building.

Archaeologists have been digging for ages in Greece, often uncovering long-hidden treasures and reminders of how people lived, including their vanity and desire for possessions, such as jewelry, plenty of which has been discovered among the antiquities.

Recently, Greek archaeologist Polina Sapouna Ellis told The New York Times that the discovery of the remains of women still wearing their prized jewelry is what moves her most.

“I’d see corpses wearing gold jewelry, and you’d realize the importance of jewelry to them. It was like a part of the body,” she said. “Gold is precious; it’s durable. Gold is what survives.”

Please visit the site: <https://greekreporter.com/2023/08/30/grave-ancient-greek-woman-gold-jewelry-sikinos/> [Go there for pix]

BRITISH MUSEUM RECOVERS SOME OF 2,000 STOLEN ITEMS, BY SEAN SEDDON

About 2,000 treasures are thought to have been stolen from the British Museum, but recovery has begun of some of them, chairman George Osborne has said.

The ex-chancellor accepted the museum's reputation has suffered but said "it is a mess we are going to clear up".

A leading expert in looted antiquities told the BBC the number of objects lost from the museum was "mind-blowing".

A staff member the museum suspects of involvement has been sacked.

And it was announced on Friday that Hartwig Fischer, the museum's director, will step down immediately after accepting a 2021 investigation was mishandled.

The museum, one of the UK's most prestigious cultural institutions, has been under pressure since revealing earlier this month that a number of treasures were reported "missing, stolen or damaged".

The items involved dated from the 15th Century BC to the 19th Century AD and had been kept primarily for academic and research purposes.

Mr Osborne - who was appointed as chair in June 2021 - told BBC Radio 4's Today programme: "We believe we have been the victim of thefts over a long period of time and frankly more could have been done to prevent them."

Asked where the missing items were located, he said: "Some members of the antiquarian community are actively co-operating with us" and that recoveries so far were a "silver lining to a dark cloud".

He said he was confident that "honest people" would return items found to have been stolen, but acknowledged that "others may not".

Founded in 1753, the British Museum has amassed a collection of around eight million items, but as of 2019 only around 80,000 were on public display, with the rest held in storage.

Mr Osborne said that not all of the items were "properly catalogued and registered" and suggested "someone with knowledge of what is not registered has a big advantage in removing" them.

The museum is working closely with the police, Mr Osborne said, adding that a "forensic job" is under way to establish precisely what is missing. He said security at the museum needed to be improved.

"It has certainly been damaging to the British Museum's reputation, that is a statement of the obvious, and that is why I'm apologising on its behalf," Mr Osborne added.

A man has been interviewed by Metropolitan Police detectives over the missing items but no arrests have been made.

Senior figures at the museum have scrambled to address how they handled the discovery of missing items after it emerged concerns about potential thefts were first raised two years ago.

Mr Osborne said "more could have been done" after theft concerns were first raised in February 2021.

Asked why they were not taken seriously, he said he did not believe there was a "cover-up" at the top of the museum, but said it was "possible" that "groupthink" among senior staff meant they "could not believe that there was an insider" stealing treasures.

Christos Tsirogiannis, a forensic archaeologist who chairs a Unesco group dedicated to illicit antiquities trafficking, described the thefts as the worst in modern history.

He told BBC News: "It is by far the biggest theft that I know about from a museum, especially for one of this calibre.

"It's a massive amount for any museum, but this happening at the British Museum makes it even worse."

'Disaster waiting to happen'

Dr Tsirogiannis called on the museum to immediately publish a list of what is missing to help experts assist with the search.

He said: "I don't have any evidence to start checking. By not publishing a list of what is missing, they are tying the hands of experts who should be helping. I would love to help but I can't."

Mr Osborne told the BBC the museum was working very closely with the police - who were "the only people" who could put a list of stolen items on Interpol - and with the Art Loss Register, a register of stolen items.

Professor Dan Hicks, a curator at Oxford University's Pitt Rivers Museum, criticised the quality of the British Museum record keeping in the Guardian, saying "this was a disaster waiting to happen".

Mr Osborne admitted not all the objects in the British Museum's possession have been formally recorded.

He insisted it was "not unique" for a large museum to not fully catalogue its whole collection and that it "was ahead of many of the big museums in doing this work".

Dr Tsirogiannis said recording objects was the "primary responsibility of a museum". He claimed the British Museum had made "a deliberate choice to put money into glossy catalogues and events without recording their objects".

Mr Fischer, who has held the position of director since 2016, confirmed on Friday that he would leave his role once an interim replacement had been appointed.

The museum director was previously due to step down in 2024.

He also apologised for "misjudged" remarks alleging the antiques dealer who first raised concerns in 2021 had withheld information about the missing items.

Deputy director Jonathan Williams - who was involved with the 2021 investigation - will step back from his normal duties until an independent review launched by the museum concludes.

The scandal has prompted questions about the British Museum's wider role as an institution housing objects from around the world.

Please visit the site: <https://www.bbc.co.uk/news/entertainment-arts-66626619>
[Go there for brief videos] [See also
<https://www.theguardian.com/culture/2023/aug/25/british-museum-director-hartwig-fischer-steps-down-after-suspected-thefts>**]**

BLOOD-RED WALLS OF ROMAN AMPHITHEATER UNEARTHED NEAR 'ARMAGEDDON' IN ISRAEL, BY HANNAH KATE SIMON

Ground-penetrating radar is revealing the secrets of a Roman legion camp near Tel Megiddo, including the ancient camp's amphitheater for combat training.

Archaeologists in Israel have found a blood-red combat arena at Legio, a massive military base that housed Rome's "ironclad" legion in the second century.

The team found the military camp and its arena — designed not for theater entertainment but for combat training — near Megiddo, also known as Armageddon, the place where the Christian Bible foretells the battle at the end of the world will commence.

The 1,800-year-old Roman camp lies beneath the agricultural fields of Kibbutz Megiddo in Jezreel Valley. Legio was rediscovered between 1998 and 2000 through preliminary archaeological surveying. Excavations revealing the perimeter of the military base and the "principia," or headquarters, and its surrounding structures have taken place since 2010.

During excavations this summer, a team of archaeologists more thoroughly investigated the principia. This portion of the military compound includes an administrative center and religious structures. Outside the walls of the base, a cemetery and an amphitheater have been discovered, thanks in part to an innovative technology called ground-penetrating radar (GPR).

With this technique, researchers are able to noninvasively survey and study features that lie beneath the soil, including roads, courtyards and buildings, by using a machine that sends pulses of high-frequency radio waves underground. The team can then map the pulses that return, giving them a blueprint of what lies beneath the surface. During the 2023 season, the researchers — led by Eileen Ernenwein, a geoscientist at East Tennessee State University — towed a GPR system behind a vehicle. Despite the team's progress, about half of Legio remains to be charted with GPR and subsequently excavated.

The ensuing dig exposed the remnants of the structures and defined them more clearly. For instance, the amphitheater for troop combat training had the remnants of a unique decorative choice: blood-red paint adorning the stone walls.

"This kind of amphitheater — for the army, not the general public — has not been found before in the region," Matthew J. Adams, co-director of the Legio excavations and director of The Center for the Mediterranean World, a nonprofit based in Tucson, Arizona, told Live Science in an email. Two different, circular walls were exposed, indicating that the building underwent an expansion at some point.

Further, the team is "finding evidence of cultic activity within the gate [of the amphitheater], including dozens of lamps, that are, perhaps, related to the cult of Nemesis," the goddess of retribution and receiving just deserts, he said.

Overall, the military fortifications at Legio measure about 1,640 by 1,300 feet (500 by 400 meters) and housed some 5,000 soldiers from Legion II Trajana and Legion VI Ferrata. Heinz-Jürgen Beste, an engineer and Greek and Roman building researcher at the German Archaeological Institute, told Live Science in an email that the expansion of the amphitheater indicates "that there has been a great temporal continuity of a training site" that highlights the importance of a well-trained military presence in Legio. Beste was not involved in the excavations.

The principia at Legio measures nearly 330 by 200 feet (100 by 60 m), and contains not only the administrative center, but also a "sacellum" or temple. According to the Israeli newspaper Haaretz, three toes carved from ivory were discovered within the sacellum. Most likely, they belonged to a statue depicting a Roman emperor, perhaps Hadrian (ruled A.D. 117 to 138), suggesting Roman imperial cult practices — in which an emperor was deified and worshiped as a god — occurred at Legio.

The legionary cemetery, outside the walls of the base, is also a significant area of study at Legio. Adams said the team is collecting "DNA samples that will help us to better understand the ethnic makeup of the legion. Were they primarily locals? Were they from the far reaches of the empire? This is an exciting way into understanding the makeup and recruiting practices of the army."

The excavation at the legionary base in Legio is being conducted under the management of Yotam Tepper and Adams on behalf of the Jezreel Valley Regional Project and the Albright Institute in Jerusalem, with the support of the Antiquities Authority and funding of American Archaeology Abroad.

Please visit the site: <https://www.livescience.com/archaeology/blood-red-walls-of-roman-amphitheater-unearthed-near-armageddon-in-israel>

RESEARCHERS EXTRACT ANCIENT DNA FROM A 2,900-YEAR-OLD CLAY BRICK, REVEALING A TIME CAPSULE OF PLANT LIFE BY UNIVERSITY OF OXFORD

For the first time, a group of researchers have successfully extracted ancient DNA from a 2,900-year-old clay brick. Currently housed at the National Museum of Denmark, the clay brick originates from the palace of Neo-Assyrian king Ashurnasirpal II, in the ancient city of Kalhu. Known today as the North-West palace in Nimrud (modern-day northern Iraq), its construction began around 879 BCE.

The brick has a cuneiform inscription (written in the now extinct Semitic language Akkadian) stating that it is "The property of the palace of Ashurnasirpal, king of Assyria." This makes it possible to date the brick precisely to within a decade (879 BCE to 869 BCE).

During a digitalization project at the Museum in 2020, the group of researchers were able to obtain samples from the inner core of the brick—meaning that there was a low risk of DNA contamination since the brick was created. The team extracted DNA from the samples by adapting a protocol previously used for other porous materials, such as bone. The results are published in Scientific Reports.

After the extracted DNA had been sequenced, the researchers identified 34 distinct taxonomic groups of plants. The plant families with the most abundant sequences were Brassicaceae (cabbage) and Ericaceae (heather). Other represented families were Betulaceae (birch), Lauraceae (laurels), Selineae (umbellifers) and Triticeae (cultivated grasses).

With the interdisciplinary team comprising assyriologists, archaeologists, biologists, and geneticists, they were able to compare their findings with modern-day botanical records from Iraq as well as ancient Assyrian plant descriptions.

The brick would have been made primarily of mud collected near the local Tigris river, mixed with material such as chaff or straw, or animal dung. It would have been shaped in a mold before being inscribed with cuneiform script, then left in the sun to dry. The fact that the brick was never burned, but left to dry naturally, would have helped to preserve the genetic material trapped within the clay.

Dr. Sophie Lund Rasmussen (Wildlife Conservation Research Unit, Department of Biology, University of Oxford), joint first author of the paper, said, "We were absolutely thrilled to discover that ancient DNA, effectively protected from contamination inside a mass of clay, can successfully be extracted from a 2,900-year-old clay brick. This research project is a perfect example of the importance of interdisciplinary collaboration in science, as the diverse expertise included in this study provided a holistic approach to the investigation of this material and the results it yielded."

In addition to the fascinating insight this individual brick revealed, the research serves as a proof of concept and method which could be applied to many other archaeological sources of clay from different places and time periods around the world, to identify past flora and fauna. Clay materials are nearly always present in any archaeological site around the world, and their context means they can often be dated with high precision.

This study only described the plant DNA extracted, as these were the most prevalent and best-preserved specimens. However, depending on the sample, all taxa could potentially be identified, including vertebrates and invertebrates. The ability to provide accurate descriptions of ancient biodiversity would be a valuable tool to better understand and quantify present day biodiversity loss, and to gain a deeper understanding of ancient and lost civilizations.

"Because of the inscription on the brick, we can allocate the clay to a relatively specific period of time in a particular region, which means the brick serves as a biodiversity time-capsule of information regarding a single site and its surroundings. In this case, it provides researchers with a unique access to the ancient Assyrians," said Dr. Troels Arbøll, joint first author of the paper and junior research fellow at Faculty of Asian and Middle Eastern Studies, University of Oxford, when the study was conducted.

More information: Revealing the secrets of a 2900-year-old clay brick, discovering a time capsule of ancient DNA, Scientific Reports (2023). DOI: 10.1038/s41598-023-38191-w

Please visit the site: <https://phys.org/news/2023-08-ancient-dna-year-old-clay-brick.html> [Go there for pix]



NEW ARCHAEOLOGICAL DISCOVERIES ON THE ANTIKYTHERA WRECK

A team of Swiss and Greek archaeologists recently successfully completed the third season of a research program (2021-2025) on the famous wreck of Antikythera, which dates back to the first half of the 1st century BC.

The Antikythera wreck

The Antikythera wreck, discovered by chance by sponge divers in 1900 off the coast of the island of Antikythera, is the most important ancient wreck found in Greece, having yielded many ancient works of art. Some of the most prominent finds, retrieved by the sponge divers, in collaboration with the Hellenic Navy and the Ministry of Education, include the statues of the Antikythera Ephebe and the "Philosopher", as well as the famous Antikythera mechanism, considered to be the oldest analog computer in human history.

Excavations at the site didn't resume until the mid-70s, under the renowned naval officer and explorer Jacques-Yves Cousteau, at the invitation of the Greek government. A first scientific study with an archaeological approach was carried out between 2012 and 2019 by an international team under the direction of Angeliki Simosi, at the time director of the Ephorate of Underwater Antiquities.

Greek-Swiss collaboration

Since 2021, at the invitation of the Greek Ministry of Culture and Sports, the Department of Classical Archaeology of the University of Geneva (UNIGE) has assumed co-direction of the underwater research project, along with the Ephorate of Antiquities of Evia, under the auspices of the Swiss School of Archaeology in Greece (ESAG).

The project's main objective is to gain a clearer understanding of the ship, its itinerary and the current state of the wreck, with the help of state-of-the-art techniques. The ESAG is the only permanent Swiss archaeological mission outside Switzerland. As an inter-university training and research center, ESAG encourages the next generation of academics, offering students from Swiss universities the opportunity to take part in field and museum activities every year.

A second wreck revealed

In 2023, researchers have made significant progress in acquiring detailed knowledge of the site's structure, geology, the wreck itself and its precious cargo. Excavations focused on the area at the eastern edge of the wreck site, where last year parts of monumental marble statues were found after the removal of a group of large boulders. This time, the team discovered the bone remains of at least one individual, a victim of the shipwreck.

Artefacts characteristic of the Antikythera wreck, such as lead and wood from the ship's structure, fragments of marble statues, pottery, glassware and items made of copper alloy, were also unearthed. Among the marble fragments discovered, one most likely

belongs to the beard of the head of Heracles, previously discovered during the 2022 expedition. These finds confirm the cultural and artistic importance of the Antikythera wreck.

Another exciting discovery, made at a higher stratigraphic level, was that of several fragments of ceramics, indicating that another vessel, probably much smaller, suffered the same ill fate in early Byzantine times.

A five-year research program (2021-2025) This year's expedition, which took place from May 19 to June 18, 2023, is part of a five-year research program (2021-2025) coordinated by the University of Geneva under the auspices of the Swiss Archaeological School in Greece. Using cutting-edge techniques, this research has provided precious information on the history of this legendary wreck.

An international team of archaeologists, divers, engineers and physical and natural scientists, led by Dr. Angeliki G. Simosi, Head of the Ephorate of Antiquities of Piraeus and the Islands, and Professor of Archaeology Lorenz Baumer (UNIGE), is currently excavating the famous wreck. Underwater operations are supervised by the Ephorate of Underwater Antiquities, while the project is under the official patronage of H.E. the President of the Hellenic Republic, Mrs. Katerina Sakellaropoulou.

This year, previously unexplored areas were meticulously documented, enabling a more transparent and accurate understanding of this legendary vessel. This season's discoveries are essential to formulating a comprehensive vision of this historical event.

The progress of the excavations was meticulously documented using remote-controlled drones and digital recording by the divers. This data was processed daily using 3D modeling software, enabling the site to be visualized and analyzed with remarkable precision. In addition, all archaeological discoveries were rigorously documented and continuously integrated into a Geographic Information System (GIS), enabling analysis of the spatial and temporal distribution of finds.

The database for this ambitious project includes all known data on the wreck of Antikythera, dating back to the first excavations carried out in 1900-1901. This holistic approach enables an in-depth and comprehensive analysis of the site, taking into account all previously collected information.

This year's new discoveries open up exciting perspectives on the maritime history of the region, and underline the importance of continuing archaeological research in this area.

The research team

The operation was coordinated by vice admiral (ret.) Alexandros Palatianos. Field research was led by Alexandros Sotiriou, research associate at the University of Geneva, with a team comprising Orestes Manousos, Isaac Ogloblin (University of Haifa) and specialized divers. The team was completed with the participation of eight members of the underwater missions unit (specialized diving team) of the Hellenic Coast Guard.

Documentation of the archaeological finds, creation of the 3D models and updating of the GIS were entrusted to Patrizia Birchler Emery and Timothy Pönitz (UNIGE), while

the field laboratory was organized by Isaac Ogloblin (University of Haifa), with the participation of Professors Maria Louloudi and Yiannis Deligiannakis (University of Ioannina) and the support of Yanis Bitsakis (UNIGE and Nereus Research Foundation). Geologist Charalampos Fassoulas (Natural History Museum of Crete) joined the team in Antikythera to discuss geological topics related to the shipwreck site. Technical support (audiovisual documentation and underwater drones) was provided by Hublot Xplorations team members Mathias Buttet, Michel Blumenthal, Aloïs Aebischer, Guillaume Champain and Diego Carven. Architect-diver Aikaterini Tagonidou and Athena Patsourou supervised all field activities on behalf of the Hellenic Ministry of Culture and Sport's Ephorate of Underwater Antiquities.

Translated from the original article which appeared on GrèceHebdo (intro image: Underwater excavation work at the site, by GoPro Cam ©ESAG-UNIGE)

Please visit the site: <https://www.greeknewsagenda.gr/topics/culture-society/7932-new-archaeological-discoveries-on-the-antikythera-wreck> [Go there for pix]

TWO NEW FRAGMENTS OF THE FASTI OSTIENSES, A KIND OF CHRONICLE ENGRAVED ON MARBLE SLABS, HAVE BEEN FOUND IN THE OSTIA ANTICA ARCHAEOLOGICAL PARK

Two new fragments of the Fasti Ostienses have been discovered in the Ostia Antica Archaeological Park, following investigations carried out in Area B of the site, corresponding to the Forum of Porta Marina. These are a kind of chronicle engraved on marble slabs: they report valuable news about the political and monumental history of Rome and Ostia from 49 B.C. to 175 and perhaps beyond.

The details of the daily activities of the Roman emperor Hadrian, who built monuments including the Pantheon during his more than two-decade reign, it was inscribed on Fasti Ostienses, a type of calendar chronicling events involving emperors and other officials in ancient Rome which were drafted by the pontifex Volcani, the highest local religious authority.

The findings emerged from the second excavation campaign of the Ops – Ostia Post Scriptum project, curated by the Park in collaboration with the University of Catania and the Polytechnic University of Bari.

One of the two newly recovered fragments, which experts say matches perfectly with another previously found at the site, dates to AD128, during the reign of Hadrian. The inscription refers to events that took place that year, including 10 January, when Hadrian received the title *pater patriae*, or father of his country, and his wife, Sabina, that of Augusta. According to the inscription, Hadrian celebrated the occasion by offering a *congiar dedit*, or donation of money, to the people.

Subsequently, on April 10, 128 (*ante diem III Idus April* reads the inscription) the emperor left for Africa and, returning to Rome between late July and early August and before traveling to Athens, consecrated (*Consecravit*, reads the inscription) a building, certainly a temple in the Urbe. There are two possibilities: the Pantheon, or more likely the Temple of Venus and Rome. According to a very suggestive hypothesis, the consecration may have taken place on August 11, 128 A.D., or on the anniversary of Hadrian's accession to the throne in 117.

“This is an extraordinary discovery that, if on the one hand increases and complements what we know about the activity of the great emperor who was Hadrian by bringing new acquisitions on the very important building activity he conducted in Rome, on the other hand it reconfirms the immense potential of ancient Ostia for an ever deeper knowledge and popularization of our past,” said the director of the Archaeological Park of Ancient Ostia, Alessandro D’Alessio.

A fragment of the Fasti Ostienses mentions Pharasmanes II of Iberia.[1][2]
PHARASMAN[ES REX IBERORVM CVM FILIO] E ET VXORE PHR[CVI

IMP(ERATOR) ANTONINVS AVG(VSTVS) REGNVM] REDDIDI Translation:
Pharasman[es, the king of Iberia with the son] and his wife Phr[to whom the emp[eror]
Antoninus Aug[ustus], the kingdom] restored.

“Even the latest excavation campaign just completed in the Archaeological Park of Ostia gives us treasures of inestimable value and very precious documentary sources to understand the activities of the great emperor Hadrian. The discovery of two fragments of the Fasti allows us to reveal important pieces of the life of Ostia and the capital. These excavations have also brought to light the remains of various decorations and extensive portions of the mosaic floor which will soon be visible to the public, just as has already been achieved in other archaeological sites in our nation thanks to the activity put in place in these months by the Ministry of Culture”, said the Minister of Culture, Gennaro Sangiuliano.

Fragments of Fasti Ostienses were first discovered at the site in 1940 and 1941 and then again between 1969 and 1972, including one that joins the recently rediscovered fragment. The combined slab chronicles the AD126-128 period. Some of the calendar fragments, which range between AD49 and AD175, are on display at the Vatican Museums.

Ancient Ostia Archaeological Park

Please visit the site: <https://arkeonews.net/two-new-fragments-of-the-fasti-ostienses-a-kind-of-chronicle-engraved-on-marble-slabs-have-been-found-in-the-ostia-antica-archaeological-park/> [Go there for pix]

EVIDENCE OF JERUSALEM'S DESTRUCTION AT THE HANDS OF BABYLONIANS, THEN ROMANS NOW REVEALED ON MOUNT ZION

Jerusalem was destroyed twice, in 586 B.C.E. and 70 C.E. New archaeological work at Mount Zion reveals evidence of both horrors, a new theory for Nehemiah's walls, rare weights from the First Temple period – and a magical rib bone Ruth Schuster

The eastern slope of traditional Mount Zion is the scene of an archaeological conundrum. A densely layered site is visible nestling between the traffic-choked road snaking around the Old City of Jerusalem and in front of the southern Ottoman Old City wall. To the sound of constant honking, church bells, pilgrims singing and muezzin prayers, the archaeologists have been unearthing a crazy matrix of disrupted archaeological layers going back many thousands of years.

Mount Zion might be considered a stratigraphic nightmare studded as it is with enough pottery pieces and small finds to sink a trireme. “Reverse stratigraphy” with chronological layers out of order, is commonplace here. It’s enough to make any archaeologist shudder.

Oldest artifact ever found in Jerusalem, revealed The strange story of 'King Solomon's throne' found in Jerusalem Stone Kitchenware in Jewish Homes: It Began in the Second Temple Rare Jewel Found on Mt. Zion Reveals Babylonian Destruction of Jerusalem

Pottery is usually useful for dating purposes. But here, for example, Iron Age pottery from the eighth to sixth centuries B.C.E. pops up in almost all the layers through to the Ottoman era, which is spectacularly unhelpful. A Roman layer emerges superimposed above a (later) Byzantine layer, which isn't supposed to happen: they're supposed to be the other way around.

Puzzling out the intricacies on Mount Zion is an international archaeological team led by Prof. Shimon Gibson of the University of North Carolina at Charlotte with Dr. Rafi Lewis, a senior lecturer at Ashkelon Academic College and fellow at the University of Haifa. Deep pits are being dug; every small layer of sediment or change in the soil is documented. Staffers run around, taking measurements and documenting finds; labels are stuck in the sides of trenches marking all perceived changes. All extracted soil is washed in flowing water to ensure that all finds, however small, are collected.

One sure thing: They have found evidence of the destruction of the Second Temple by the Romans in the year 70 and, a couple of meters below that, the destruction of the First Temple and city by the Babylonians in 586 B.C.E. It is the first time that both destructions are documented in the same space.

In its lifetime, Jerusalem has seen much conflict. In addition to having being utterly destroyed twice, it was also besieged 23 times, attacked 52 times, and captured or recaptured 44 times, according to Prof. Eric Cline of George Washington University,

author of “Jerusalem Besieged” (2004). But this site on Mount Zion is the only place (so far) where signs of both conflagrations have been found in close proximity, in layers situated one above the other, the archaeologists say.

Among the evidence of the 586 B.C.E. attack by the Babylonians are bronze and iron arrowheads, and a piece of jewelry – probably an earring – made out of gold and silver. Nobody would just drop that and walk on; its abandonment may attest to the panic that ensued during the Babylonian attack, says Gibson.

From the Roman attack in the year 70, the team has unearthed collapsed walls with stones calcified by the intense heat of the flames when the houses were put to the torch, causing upper floors to collapse – resulting in scattered, broken frescoes.

The scenes of devastation are quite moving, Gibson says. And among the stones was a small, unique find: a rib bone inscribed with drawings and Hebrew letters. It was presumably an amulet, possibly wielded to ward off Roman invaders. If so, it clearly didn’t work.

As Haaretz arrived for the last day of the summer 2023 excavation season, the team was excavating floors from the Iron Age, from the seventh or early sixth centuries B.C.E.

Why is interpreting the story of Mount Zion in southern Jerusalem such a head-scratcher? Because in a classic tell, new settlements arose atop old ones and the lowest layer will inevitably be the earliest. At Tell Megiddo, for instance, archaeologists found orderly layers of settlements from the Early Bronze Age until the town’s destruction in the Iron Age. This is what archaeologists like.

Such neatness isn’t the case anywhere in Jerusalem, Gibson says. Pointing to a certain spot, he says: “Over there we found a late Byzantine layer which is above an early Roman layer which is above an early Byzantine layer, which is totally illogical.” It’s also an empirical fact, though, based on dating largely relying upon on coinage and pottery styles.

So, how did such stratigraphic mayhem arise?

“Urban architectural landscaping,” Gibson explains. “Today, landscaping is done with bulldozers, cutting into the ground and reshaping it. Back then, they did it by back-breaking human effort, using simple tools and shifting soil and rubble around with wagons, redepositing and moving building stones around, digging down to establish firm foundations for buildings, robbing stones from walls and cutting through earlier strata. In this chaos, an archaeologist has to uncover the layers very carefully, or chronological mistakes can occur.

“You have to understand the mechanism of a messed-up stratigraphy, with a balagan [confusion] of layers, deep cuts, robber trenches and ghost walls – otherwise you can easily lose the plot,” he says.

Also, Jerusalem has been undergoing archaeological investigation for more than 150 years. Mount Zion itself had been investigated before, including by Kathleen Kenyon

back in the 1960s and Magen Broshi in the '70s. The debris left behind by earlier digs has been another source of confusion.

“When you have this kind of complexity, it perfectly reflects the chaotic historical Jerusalem that this city has always been about. Nothing is straightforward, and we have to constantly think outside the box,” the professor sums up, based on decades of experience excavating in the city (including more than two decades at this specific site).

Asked how long this part of Mount Zion was actually inhabited, Gibson answers: at least from the Iron Age, some 3,000 years ago, until 1926.

It was? “Indeed, there was a kindergarten established just above the site by American benefactors in the '20s,” he explains – a multicultural one that was designed for Muslim, Christian and Jewish toddlers to try to understand each other and their differences.

The First Temple has never been found and neither has the Second, but there is historical evidence for both. However, excavations have been revealing what Iron Age domestic life was like.

Among the most precious finds in the Mount Zion dig of 2023 was a rare, inscribed 4-shekel weight. It is in exquisite condition except for a ding on one side. Domed in shape and made of polished pink limestone, it was unearthed by Philip Nadela, a volunteer from the Philippines who is also part of a group helping to fund the dig.

A second, whiter and slightly more time-beaten inscribed half-shekel domed weight, a beka, appeared just as the season was wrapping up.

Both were found as the team carefully uncovered the Iron Age layer at this spot for the first time, revealing the floors of the ancient structures.

Why did it take so long to reach the Iron Age layer if this spot has been dug for decades, and given that Iron Age pottery was identified in every layer from the first?

When Kenyon observed Iron Age pottery on Mount Zion back in the '60s, she assumed it had been “imported” there with soil as landfill from elsewhere, Gibson explains. Kenyon was a minimalist in terms of the extent of the Iron Age city, assuming it didn't encompass Mount Zion of today within its walls.

“Of course, Kenyon's notions are unsustainable. You would have to envisage Iron Age people from the ‘City of David’ hauling up bags of potsherds to Mount Zion simply in order to distribute them on the ground, and thus to annoy archaeologists 3,000 years later – the whole notion is quite absurd,” he says.

So Kenyon didn't look for Iron Age structures there, it seems, but mainly, the seeming snail's pace of the dig's progress over decades is due to the sheer complexity and density of its structural layers: Byzantine houses above first-century chambers that are located well below the level of the Byzantine street (a modest southern continuation of the main Cardo Maximus street that traversed Byzantine Jerusalem); in between there are layers of debris from the Herodian period. A Byzantine sandwich containing a Roman filling, which is not at all straightforward – and not at all what archaeologists like digging.

The only option is to excavate the hundreds and thousands of levels, surfaces and sediments diligently, testing everything as they go along, constantly recording and documenting.

“Sometimes, together with Gretchen Cotter, who is in charge of the dig headquarters, I’ll go through hundreds of potsherds from a given fill, to find that 99.9 percent of it is of Roman date with 0.1 percent of Byzantine date – and it’s the latter that will actually date the deposit, unless there is some evidence of later intrusive activity in the layer,” Gibson says.

Dating is facilitated by coinage, found with the help of the expedition’s top-notch metal detector, he explains.

Hence, the team was able to deduce the chronological identity of a stone street by dint of removing the covering paving stones and finding beneath them a Greek-inscribed pottery sherd and eight coins. The accompanying pottery was from the late Byzantine period – probably built at the time of Justinian in the mid-sixth century, when heavy landscaping was being carried out in the area at the time of the construction of the massive Nea Church to the north of the site, Gibson says.

While building the street, the Byzantine construction workers poured tons of fill containing Iron Age and Roman-era material before laying down the foundations of the street itself, the team posits. What a mess.

Heartbreak of an Iron Age cauldron

“The remnant [of Jews] that are left of the captivity there in the province are in great affliction and reproach; the wall of Jerusalem also is broken down, and the gates thereof are burned with fire” – Nehemiah 1:3

Nehemiah wept upon hearing that account, according to the biblical narrative. He admitted that the Jews had erred and sinned, and beseeched the deity for help, and thus, reportedly, obtained the Persian overlords’ blessing to return from exile in Shushan and to rebuild the walls of Jerusalem in the fifth century B.C.E.

The question is which walls he restored. The assumption has always been that the walls around the “City of David,” south of Temple Mount, are the ones referred to in Nehemiah.

“Based on results of the Mount Zion excavations, I would say this is incorrect,” Gibson says. Quite a lot of pottery from the time of the Achaemenids (539-332 B.C.E.) has been found on traditional Mount Zion. In fact, it would seem Nehemiah restored parts of the original Iron Age wall and gates associated with Mount Zion, not just at the City of David, the archaeologist avers.

“When the Hasmoneans came to rebuild Jerusalem in around 140 B.C.E., after the Maccabean Revolt, they undertook similar building activities as Nehemiah. They rebuilt the original Iron Age wall, with the Persian-period restorations as well. Thus, the memory of the city destroyed by the Babylonians was preserved by the Hasmoneans,” he adds.

At the core of the site, beneath levels of walls and fills of rubble, the archaeologists have identified an intact mikveh (ritual purification bath) and, behind it, a secret chamber where Jews might hide from the Romans.

Elsewhere in the site, within the Iron Age levels, the team uncovered a large, cracked ceramic cauldron. Much maneuvering ensued by the conservator to try and extract the pot intact, but it was not to be. The moment they tried to lift it out, it crumbled.

Another intriguing find that day was a divination knucklebone dating to the late Byzantine to early Islamic periods, between the sixth to 11th centuries, which co-director Lewis points out attests to the multicultural character of late antique Jerusalem – which included not just Jews, Muslims and Christians (though these are known to have dabbled in divination as well).

And wow ... what a site. At any given moment, one can stand with one foot in an Islamic period layer, the other resting on a floor from the Iron Age, your sweat dripping down on Roman remains. And if you were to bend down, you would find yourself examining an arrowhead from an ashy layer within the Muslim Fatimid moat, marking a point in time when an ungrateful young Crusader decided to rebel against his mother, the queen of Jerusalem.

Game of Crusader thrones

Actually, the archaeological finds from Mount Zion relating to Crusaders belong to two different bloody interludes, Lewis says. The first involved the conquest of Jerusalem from the Muslim Fatimids, in mid-1099, at the time of the First Crusade.

The Crusaders attacked Jerusalem from north and south. But the campaign at Mount Zion on the city's south side, led by the famed Raymond of Saint-Gilles, did not go well.

“According to the sources, he managed to build a siege tower on the summit of Mount Zion but encountered a ditch-like dry moat between him and the city,” Lewis explains. That moat had been dug through the soil and rubble at the base of the wall by the Islamic forces to keep the Crusaders at bay, he adds.

“Count Raymond offered one dinar for every three stones brought to fill up the moat, so he could bring the siege tower successfully against the southern city wall,” adds Lewis. Well, they did fill the moat and bring the siege tower to the walls, only to have the city's defenders immediately burn the thing down. However, next morning, the other barons breached the walls from Jerusalem's north and ultimately the whole city was taken.

Somehow, Raymond managed to be the first Crusader to reach the Citadel, which they referred to as the “Tower of David” (which had no association with the fabled biblical king – it was actually built by King Herod), Lewis relates. The Crusaders then went on to massacre everybody during a four-day rampage, with one exception. The people sheltering in the citadel, Jews, Muslims and Christians, survived. “Raymond negotiated with them,” Lewis says simply.

Finds from this episode include the filled-in ditch-like moat, as well as arrowheads and cross pendants – including a bronze one that the team deduced, with the assistance of Israel Police forensic experts – showed damage caused by a swinging sword.

The second episode of Crusader violence detected on Mount Zion was when King Baldwin III, ruler of the Galilee, felt hard done by.

“He was an arrogant youth,” says Lewis. The word unfilial also comes to mind. Anyway, in the mid-12th century, this king of the Galilee rebelled against his mother Melisende, the noted queen of Jerusalem.

Melisende was the daughter of Baldwin II, King of Jerusalem. In about 1129, she had been forced to marry a French nobleman, Fulk of Anjou and Maine. Upon Baldwin II’s death, Fulk and Melisende became king and queen of Jerusalem. “Their relationship was not good,” says Lewis, apparently understating the case. Yet they had two sons and, to make a convoluted story short, Melisende gained the upper hand over her scheming, envious husband and became the queen regnant, not merely a regent in the name of the next male heir, Baldwin III.

Displeased with this arrangement, the young Baldwin III ultimately eventually led an army from the Galilee to Jerusalem, squatted on Mount Zion – then outside the city walls – and besieged it for 10 days, Lewis explains. Ultimately, they came to terms and Baldwin III became king of Jerusalem, leaving behind a thick layer of ash replete with arrowheads and other evidence of fighting.

This evidence was sealed by the next debacles du jour between the Crusaders and Ayyubid forces. Among other developments, upon learning that Jerusalem had been potentially offered (on a temporary basis) to the Crusaders as part of a bigger deal, the city’s Ayyubid ruler of that time had the city walls torn down in 1219 and 1227 – so at least the devils wouldn’t get a fortified city, Lewis explains.

It is these large ashlar and voussoirs from the gate tower demolished at that time that form the upper layer of the Mount Zion excavation today, says Lewis, who has personally been working on the dig for almost 24 years, with a seven-year break for the first intifada.

In the early 13th century, this neighborhood was replaced with a fish market with a sideline in chicken eggs. “In the layers of the marketplace we excavated, there were large quantities of chicken eggshells and fish bones,” Lewis recounts. “In the 2014 season, we even found a fish hook” – not to catch the creatures, since Jerusalem has no water other than the fish-free Gihon Spring. The hook was used to hang the fish from the shop or stall beams. The market ceased functioning when the city fortifications were destroyed in 1219.

Beneath the Ayyubid marketplace is burnt ash layer from the conflict between Melisende and her son Baldwin III. Beneath that is the irregularly cut Fatimid moat that held up the Crusader conquest of Jerusalem in 1099. Further down, more houses and a street from the Byzantine and Islamic periods, and, even deeper, well-preserved barrel-vaulted chambers and burnt houses from the year 70. Then, of course, there are the houses destroyed by the Babylonians in 586 B.C.E.

And what lies beneath the First Temple destruction layer, one wonders? Could there be remains from prehistoric and proto-historic times? Only time will tell. To date, the only find from the city's very early beginnings in the Neolithic period is one solitary arrowhead, small but deadly, which could serve as a symbol of things to come in Jerusalem's bloody future.

Please visit the site: <https://tinyurl.com/45279jxw> [Go there for many pix]

HIDDEN TUNNEL AND ROOMS UNEARTHED **UNDER 1,500-YEAR-OLD CHURCH IN** **ISTANBUL, BY TOM METCALFE**

Archaeologists have excavated subterranean rooms and a tunnel under an early church in Istanbul, formerly Constantinople, the capital of the Byzantine Empire.

Archaeologists excavating beneath the ruins of an early Christian church have unearthed underground rooms and a tunnel from 1,500 years ago in the oldest part of Istanbul — once Constantinople, the capital of the Byzantine Empire.

The purpose of the hidden structures isn't completely understood, but they are probably part of the vast Church of St. Polyeuctus above them, which was built when the city was the center of Christianity, the empire's official religion.

The subterranean features consist of two large chambers connected by a tunnel and seem to have been linked to the church prothesis — the chamber beside the altar where bread and wine were prepared for the Byzantine Christian rite of the Divine Liturgy, a name still used in Eastern Orthodox churches. Parts of the underground rooms are still decorated with mosaics, stone inlays and carved marble blocks, according to archaeologists.

The underground rooms were first discovered during excavations following road construction in the 1960s. But they were covered up again, and their entrances were backfilled to preserve the rooms, according to Mahir Polat, the deputy general secretary of the Istanbul Metropolitan Municipality (IBB.)

The area, in the Saraçhane district at the center of Istanbul, had since become derelict. But the IBB started a redevelopment of the area last year as part of a project to transform the extensive ruins into a tourist attraction. In March, workers re-excavated the underground rooms and tunnel, and authorities soon plan to let the public observe the progress, Polat told Live Science in an email.

Imperial church

The Church of St. Polyeuctus was built between A.D. 524 and 527, during the reign of the emperor Justinian, according to "The Oxford Dictionary of Byzantium" (Oxford University Press, 1991). It was one of the most splendid churches in Constantinople, as well as the largest until the cathedral of Hagia Sophia (now a mosque) was completed in 537.

All that's left now are its ruins, but in its heyday the Church of St. Polyeuctus was ornately decorated and may have boasted an early dome — a design perfected in the Hagia Sophia.

Polat said the church was abandoned after it was badly damaged by an earthquake in the 11th century and finally destroyed during the sack of the city in 1204 by Crusaders, mainly from Western Europe.

According to British historian Jonathan Phillips, author of "The Fourth Crusade and the Sack of Constantinople" (Penguin Books, 2005), the Crusaders had been lured to Constantinople in support of a Byzantine Imperial faction while on their way to liberate Jerusalem. But they were left empty-handed when their favorite emperor was deposed by an uprising, and they turned instead to looting the imperial city.

Several architectural features of the church were taken and placed on buildings as far away as Barcelona and Vienna, and two of its ornately carved pillars — known as the Pilastrini Acritani, or "Pillars of Acre" — are now part of St. Mark's Basilica in Venice.

The church ruins were built over during Istanbul's Ottoman period. Polat said it was notable that the underground structures had survived so long without being greatly damaged by the region's numerous earthquakes; and this longevity suggests many Byzantine buildings had been designed to withstand them.

Ken Dark, an archaeologist at King's College London who isn't involved in the new project but has conducted excavations in Istanbul, said the ruins of St. Polyeuctus are among the best-documented in the city.

"Hopefully, re-displaying the ruins of this historically important and once-magnificent church will bring awareness of it to a much wider audience," he told Live Science in an email.

Tom Metcalfe is a freelance journalist and regular Live Science contributor who is based in London in the United Kingdom. Tom writes mainly about science, space, archaeology, the Earth and the oceans. He has also written for the BBC, NBC News, National Geographic, Scientific American, Air & Space, and many others.

Please visit the site: <https://www.livescience.com/archaeology/hidden-tunnel-and-rooms-unearthed-under-1500-year-old-church-in-istanbul>

DISCOVERY OF ISRAEL'S OLDEST GATE RESETS CLOCK ON LOCAL URBANIZATION BY CENTURIES, BY MELANIE LIDMAN

Alongside 5,500-year-old entrance to fortified city at Tel Erani, near Kiryat Gat, archaeologists find evidence of social stratified city-dwelling in Israel

Archaeologists have uncovered the oldest known gate in Israel, a 5,500-year-old imposing stone and mud-brick passageway to the ancient city of Tel Erani, the Israel Antiquities Authority announced Tuesday. The gate's discovery near the central city of Kiryat Gat has forced archaeologists to reconsider when urbanization began in the region, now saying it was likely centuries earlier than previously believed.

“This is the first time that such a large gate dating to the Early Bronze IB has been uncovered,” Emily Bischoff, the IAA's director of the excavation, said in a video about the gate. The latest excavations at Tel Erani were discovered recently during an IAA survey of the area ahead of laying a new water line to Kiryat Gat.

“What's interesting about this gate is it was built partially from mud bricks and partially from monolithic stones, and these stones are larger than me,” said Bischoff.

The ancient city of Tel Erani is one of the first examples of urbanization in Israel. Around 150 dunams (150,000 square meters or 37 acres), it was settled in the Early Bronze Period, starting around 3,300 BCE, and abandoned at the end of the Early Bronze Period, around 2,500 BCE.

At Tel Erani, archaeologists have uncovered evidence of urbanization, including public buildings, city planning such as streets and fortification walls, a possible drainage system, and “social stratification,” meaning that some people had nicer homes than others, based on their status.

Previously, experts had believed that urbanization in this area had started around 5,200 years ago, which was the age of the oldest known gate in Israel. Until the current discovery, the oldest gate to a fortified city was in Tel Arad, near Beersheba. But the dating of the Tel Erani gate pushes the evidence of the start of urbanization back by a number of centuries, to around 5,500 years ago.

“It is probable that all passersby, traders or enemies who wanted to enter the city had to pass through this impressive gate,” said Martin-David Pasternak, an IAA researcher whose area of expertise is the Bronze Age. “The gate not only defended the settlement, but also conveyed the message that one was entering an important, strong settlement that was well-organized politically, socially and economically.”

Clear evidence of social organization

Bischoff noted that the construction of the gate and fortification walls required bringing stones from quite a distance and manufacturing hundreds or thousands of mud bricks.

“This was not achieved by one or a few individuals. The fortification system is evidence of social organization that represents the beginning of urbanization,” she explained. “It’s the first time people go from living all over the region to living inside the city walls.”

Archaeologists also found a number of interesting smaller discoveries, including a complete alabaster jar, a number of juglets, and red-colored bowls. The fortification wall, which is 7 to 8 meters thick, dates to a time when Egypt was invading the area.

Tel Erani has hosted several archaeological excavations since the mid-1950s, directed by the Department of Antiquities, the Israel Antiquities Authority, Ben Gurion University of the Negev, and University of Krakow, Poland. Skeletal samples from Tel Erani helped archaeologists peer into the tartar on ancient teeth and understand what kinds of foods the ancient Canaanites ate.

The current excavations took place ahead of a new water line, which Mekorot, Israel’s National Water Carrier, hopes to start building this year to provide more water to Kiryat Gat. In particular, the new water line will serve the current and planned Intel factories, which use an enormous amount of water to produce computer chips.

Intel plans to invest \$25 billion for an additional chip manufacturing plant in Kiryat Gat, which should open in 2027. Chip manufacturing plants require massive amounts of ultra-pure water to keep the silicone wafers free from the smallest specks of debris or dust, as well as for cooling. The water line construction will start in the next few months and is expected to finish in 2024.

After the excavation concluded, the area was backfilled to protect the gate. Mud brick construction is particularly susceptible to erosion and vandalism.

Please visit the site: <https://www.timesofisrael.com/discovery-of-israels-oldest-gate-resets-clock-on-local-urbanization-by-centuries/> [Go there for pix]

IN NORTHERN ISRAEL, MASSIVE 3,800- YEAR-OLD MONUMENT STUNS AND STUMPS ARCHAEOLOGISTS, BY MELANIE LIDMAN

The size of an Olympic swimming pool, with vaulted ceilings that raise the topographical height of Tel Shimron by 5 meters, the delicate mud brick structure was likely barely used

The round knoll of Tel Shimron rises majestically some 70 meters (230 feet) above the Jezreel Valley — but that wasn't high enough for the rulers of the ancient acropolis during the Middle Bronze Age, who some 3,800 years ago built a massive monument covering nearly the entire top of the hill. Today, archaeologists are trying to figure out why.

Built with mud bricks using the most advanced architectural technology of the time, the monument raised the hill's height by an additional five meters (15 feet). The complex extends some 1,200 square meters (13,000 square feet) across the top of the hill, about the size of an Olympic swimming pool.

Archaeologists announced the ancient compound's discovery to the public on Thursday, but don't go looking for it anytime soon: The monument has been backfilled for preservation and protection and is not accessible to the public.

State of Jerusalem The Maqdasyin

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“When we started digging, we found that this area between the mud bricks was filled with gravel, which is very unusual, so we started removing the gravel,” said Prof. Daniel Master, a professor of archaeology at Wheaton College who has been excavating Tel Shimron since 2017. The current excavation is co-directed by Prof. Mario A. S. Martin of the University of Innsbruck and archaeologists from Tel Aviv University, in cooperation with the Israel Antiquities Authority and the Nature and Parks Authority.

Tel Shimron was not thoroughly excavated before 2017 and the team initially believed it was a typical tel, an archaeological mound made of layers from different time periods. But when the archaeologists started excavating, they found that the first five meters was a man-made structure.

“We kept digging down further, and it was preserved at a depth of one meter, then two meters, then three meters, then four meters,” said Master. “This structure was totally

intact, and suddenly we realized we were dealing with the foundation of a building or a superstructure that had been constructed at the top of the site.”

From Mesopotamia with love – and bricks

The recently uncovered complex consists of more than 9,000 unfired mud bricks that were stacked to create a tower and a domed passageway leading down into the city. The two-meter-long passageway is built in “corbelled” fashion, an architectural technique where layered bricks are progressively stepped inward to create a gradually narrowing roof.

The mud brick stairs and corbelled vault ceiling of the passageway at Tel Shimron, blocked by intentional gravel backfill and large boulders during the 2023 dig season in northern Israel. (courtesy Eyecon)

This is the earliest documented example of corbelled architecture in Israel, though the technique was widely used in Mesopotamia during this time period, around 3,800 years ago.

This is the era in which Mesopotamians started constructing the first mega-cities, Mari and Ur, which were home to up to 100,000 people. Since Mesopotamia consists of mostly alluvial floodplains with few large stones, locals constructed buildings and dwellings out of mud bricks. At the time, they had the most advanced brick-building techniques in the world, explained Master. The Holy Land’s rocky terrain meant residents could use stones as well as bricks, so their bricklaying technique was less advanced.

At Tel Shimron, the builders even added an artistic flair: a layer of white chalk between the bricks. Working with scientists from the Weizmann Institute, archaeologists determined the white layer was there purely for aesthetic reasons and did not serve as mortar.

Masters is still incredulous that they found intact arches at all, much less with decorations still visible, since unfired mud brick is a delicate material that rarely stands up to the ravages of time.

“You know how it is with archaeology — usually, you have these stumps of walls that raise up no more than a meter, and you just have the foundations,” said Master. “But all of a sudden, here, we’re dealing with a huge monument that has been constructed at the top of this huge city in the Middle Bronze Age, and that really surprised us in terms of conservation.”

A massive monument with an unknown purpose The monument was so well preserved because soon after it was built, it was completely filled in with gravel, which supported and protected the arches, Master explained. They determined it was barely used because the floor and the stairs of the passageways were also built of mud bricks and show very little wear and tear, meaning very few people walked on it after construction.

The monument’s purpose has stumped the archaeologists.

“Why would you put so much effort into something already 70 meters (230 feet) above valley floor, and make it 75 meters (245 feet) above the valley floor?” asked Master. “What would it mean for the landscape around and how people used the site? What are the social implications for building something so massive at the top of the site?”

At first, Master and others thought the construction may have been walls of an ancient fortified city, possibly to protect the area from conquering Egyptian armies. But every place they found a gate, it led to a dead end.

Some theorize the monument could have religious significance. At the entrance to the main passageway, archaeologists discovered a seven-spouted vessel lying in ashy debris. This type of vessel is called a “Nahariya bowl,” since a similar vessel from the same time period was discovered in Nahariya and used for religious rituals.

The complete ‘Nahariyya Bowl’ discovered at Tel Shimron in northern Israel during the 2023 dig season. (credit Christina Carper)

A similarly constructed monument is located in Syria, called the White Monument at Tel Banat, also from the Middle Bronze Age. It is believed to be one of the oldest war memorials in the world, due to the systematic placement of the dead on the mound.

A city at the crossroads

The earliest discoveries at Tel Shimron date from the Neolithic period around 9,000 years ago, but the site’s heyday was in the Middle Bronze Age, almost 4,000 years ago. This was when the city was at its largest and stretched for over 19.5 hectares (195 dunams). It was an important stop for goods and people traveling north toward Anatolia or Caucasus, or south to the port at Akko.

The city was known internationally and is mentioned in Egyptian writings from this period.

“In the Bronze Age and Iron Age, Shimron is the hub for controlling the east-west trade, everything from the Jordan Valley to Damascus to Hatzor,” said Master.

The name Shimron is mentioned three times in the Bible, specifically when the Canaanite King of Shimron joined forces with Yavin, King of Hatzor and other kings in a war against Joshua. After Joshua won the war, Shimron passed into the hands of the tribe of Zevulun.

The site was continuously inhabited through modernity, though its population rose and fell. In the 1950s, the area was used for ma’abarot or tent encampments for the wave of new immigrants to the new State of Israel, mostly from North Africa. Visitors today can still see cement platforms where tents were placed, a physical reminder of a controversial period in Israel’s history that was marked by discrimination against the Sephardic Jews who lived in subpar conditions.

Master said one of the reasons he loves excavating Tel Shimron is because the site holds discoveries from every period, from ancient times through the modern state, though the Middle Bronze Age monument has been the most substantial discovery by far.

Tel Shimron is a nature reserve and park that is open to the public, but history buffs hoping to see the monument for themselves are likely to be disappointed. It will take a number of years for archaeologists to fully excavate the monument. So far, they've excavated about 500 square meters (5,400 square feet), and there are around 700 square meters (7,500 square feet) to go.

The monument itself is unlikely to ever be opened to the public because it is so delicate. The only reason the structure survived for nearly four millennia was because it was completely filled in with gravel, and that's likely the best way to preserve it for the future, Master said.

"If you look at other Middle Bronze Age sites, they have many wonderful things, but they don't have anything like this, because it's really hard to keep it intact," he said. Ashkelon, for example, has several mud brick gates from the same period, but none of the arches survived, and the little brick that is left is carefully protected from the elements by a large roof.

"To have this kind of delicate structure preserved for 3,800 years blew our minds," said Master. "Everyone we showed it to in the archaeological community could hardly imagine what they were seeing, because it's so rare to have that level of preservation in these structures."

Please visit the site: <https://www.timesofisrael.com/in-northern-israel-massive-3800-year-old-monument-stuns-and-stumps-archaeologists/> [Go there for pix]

RARE GOLDEN GIFTS — LEFT AT A SACRIFICIAL SITE 2,300 YEARS AGO — UNCOVERED IN TUNISIA, BY ASPEN PFLUGHOEFT

Along the coast of Tunisia sit the ruins of a once-great city whose power rivaled Rome: ancient Carthage. Today, the city's sacred sacrificial site collects dust. Millennia ago, it collected gold, devotion and adoration from worshippers. Carthage was founded about 2,900 years ago by the Phoenicians, according to Britannica. It grew into a bustling trade hub and sea port with "legendary" wealth.

Like other Phoenician cities, Carthage had a tophet, "a sacred precinct ... where sacrifices and burials were made, especially of young children," according to the World History Encyclopedia. The tophet in Carthage had a "shrine area" for the sacrificial offerings and a cemetery area where the deceased were then buried.

Archaeologists excavating the sacred tophet site in Carthage, a place of child sacrifice, found gold coins left as offerings 2,300 years ago, photos show. Photo from Tunisia's Ministry of Cultural Affairs Along the coast of Tunisia sit the ruins of a once-great city whose power rivaled Rome: ancient Carthage.

Today, the city's sacred sacrificial site collects dust. Millennia ago, it collected gold, devotion and adoration from worshippers. Carthage was founded about 2,900 years ago by the Phoenicians, according to Britannica. It grew into a bustling trade hub and sea port with "legendary" wealth. Like other Phoenician cities,

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Archaeologists excavating the tophet uncovered a collection of offerings, Tunisia's Ministry of Cultural Affairs said in an Aug. 11 news release. They found five gold coins from 2,300 years ago, tombstones and several urns with the remains of animals, infants and premature babies. The rare gold coins are about an inch in size and have a design showing the face of Tanit, an ancient goddess of fertility and motherhood, the Tunisian outlet Shems FM reported. Photos show a few of the still-shiny golden treasures.

The coins were left as offerings to the tophet's main deities, the god Hammon and the goddess Tanit, by wealthy worshippers, RT reported. Photos show some of the urns and tombstones found at the ancient sacrificial site. Several urns found at the sacred site. Photo from Tunisia's Ministry of Cultural Affairs The tophet in Carthage is a massive sacrificial site and cemetery, Lonely Planet reported. Since it was rediscovered in 1921, archaeologists have uncovered "more than 20,000 urns" with the remains of children, "mostly newborn, but also children up to age four," buried at the site.

Although once contested, experts have found “‘overwhelming’ evidence that ... Carthaginian parents ritually sacrificed young children as an offering to the gods,” Oxford University said in a 2014 news release.

“Perhaps it was out of profound religious piety, or a sense that the good the sacrifice could bring the family or community as a whole outweighed the life of the child,” Josephine Quinn, the co-author of a study on the topic, told Oxford University.

“We have to remember the high level of mortality among children — it would have been sensible for parents not to get too attached to a child that might well not make its first birthday,” Quinn said. “We should not imagine that ancient people thought like us and were horrified by the same things.” Phoenician Carthage was conquered by the ancient Romans who rebuilt a Roman city on the ruins of their rival, according to Britannica. Modern-day Carthage is a suburb of Tunis, the capital of Tunisia.

Please visit the site: <https://www.miamiherald.com/news/nation-world/world/article278264603.html> [Go there for pix]

MIRACLE PLANT USED IN ANCIENT GREECE REDISCOVERED AFTER 2,000 YEARS, BY GIOVANNI PRETE

The “miracle” plant Silphium consumed by Ancient Greeks, Romans, and Egyptians, which was thought to have become extinct two thousand years ago, has recently been rediscovered in Turkey by a professor, who thinks he’s found a botanical survivor.

The plant, which the Ancient Greeks called silphion (silphium), was a golden-flowered plant. It was once the most sought-after product in the Mediterranean even before the rise of Athens and the Roman Empire.

It is believed that the plant with yellow flowers attached to a thick stalk was crushed, roasted, sauteed, and boiled for medicinal purposes, food, and even contraception. During the reign of Julius Caesar, more than a thousand pounds of the plant were stockpiled alongside gold in Rome’s imperial treasures, and silphion saplings were valued at the same price as silver.

However, just seven centuries after the adored plant was first documented growing along the coast of Cyrenaica in what is now modern day Libya, silphion disappeared from the ancient Mediterranean world.

Roman chronicler Pliny the Elder in his Natural History claims that “just one stalk has been found” of the plant in the first century A.D., “and it has been given to Emperor Nero.” This was the last documented account of the silphion.

Inspired by ancient accounts, botanical explorers throughout the Middle Ages perpetually sought the plant across three continents although in vain. Consequently, historians believed the disappearance of silphion to be the first recorded extinction of any species, plant, or animal.

Despite the plant having been perceived to be extinct for centuries and having completely disappeared from the history books, a researcher at Istanbul University, Mahmut Miski, suspects he has re-discovered the ancient plant. He believes the Ferula Drudeana that grows on Mount Hasan is the elusive ancient plant—nearly a thousand miles from where it once grew.

According to a report by National Geographic, the researcher found it has similarities with the silphion plant which line up with old botanical texts and images of the plant on Ancient Greek coins.

The researcher has noticed that both plants have the same thick branching root and yellow flowers. In addition, both have powerful medicinal purposes. Ferula Drudeana has anticancer compounds and anti-inflammatory properties much like those known to be found in silphium.

Even though *Ferula Drudeana* is found hundreds of miles from where it originated, according to Miski, it has been found in two locations in Turkey, which were once home to Ancient Greeks thousands of years ago. One of these locations is Cappadocia.

Analysis shows similar medicinal compounds as the ancient plant

Miski, who specializes in pharmacognosy, the study of medicines derived from natural sources, first encountered the modern plant he now believes to be silphion while conducting postdoctoral research. He had received a grant to collect specimens of *Ferula*, which is in the same family as carrots, fennel, and parsley, and has the reputation for yielding many novel disease-fighting compounds.

While Miski was studying the plants on Mount Hassan, he determined it had thirty secondary metabolites that have medical purposes. Among the compounds are many have cancer-fighting, contraceptive, and anti-inflammatory properties. Miski believes that future analyses of the plant will reveal the existence of dozens of yet-to-be-identified compounds of medical interest.

On Mount Hassan, Miski also encountered caretakers of the plants who informed him sheep and goats are fond of the leaves, as is mentioned in Pliny's record of the ancient silphion.

According to Pliny's records, sheep and goats would graze in pastures where silphion grew. The sheep would fall asleep after consuming it, and it caused goats to sneeze. His text reads: "The juice of this plant is called 'laser' and it is greatly in vogue for medicinal as well as other purposes, being sold at the same rate as silver. For these many years past, however, it has not been found in Cyrenaica."

Similarities with Cyrenaican coins

According to a 2021 study published in the journal *Plants* by Miski and his team, *Ferula drudeana* had similarities with the silphion as described in ancient text and depicted on Cyrenaican coins: from thick branching roots to celery-like leaves.

However, similarity in appearance wasn't the only compelling link. It is said that the first silphion appeared after a "heavy spring downpour," which, in those days, was called "black rain."

According to Miski and his team, "We find it stated by the most trustworthy among the Greek writers...that this plant made its appearance near the gardens of the Hesperides and the Greater Syrtis immediately after the earth had been soaked on...by a shower as black as pitch." This event took place seven years prior to the foundation of the city of Cyrenae.

Miski observed that when rains came to Cappadocia in April, *Ferula Drudeana* would spring from the ground, growing up to six feet in just a month.

Moreover, as ancient silphion resisted cultivation, it had to be harvested in the wild. It is said that Cyrenaic nobles entrusted its cultivation to desert nomads. Two attempts reported by Hippocrates to transplant it to mainland Greece failed. Similarly, Miski

found that *Ferula Drudeana* is difficult to transplant. He found that the only way it could be done was by using cold stratification, a process of subjecting seeds to both cold and moist conditions. By utilizing this technique, Miski and his team were able to grow *Ferula* in a greenhouse.

One of the main reasons *Ferula* had not immediately been identified as silphion is mainly because of its location. However, as Miski had discovered, the region in Turkey where Mount Hasan sits was home to ancient Greeks thousands of years ago, and these people could have easily transported the plant.

Erica Rowan, an associate professor in archaeobotany at Royal Holloway University of London, finds Miski's speculations plausible. "The ancients were very good at transporting things," Rowan points out. "There's no reason why people from Cyrenaica couldn't have brought the seeds to Cappadocia and planted them. They're similar enough with a Mediterranean climate. And this *Ferula* species does look like what's shown on the coins."

Please visit the site: <https://greekreporter.com/2023/08/13/plant-ancient-greece-rediscovered/> [Go there for pix]

DECODING THE PHARMACOLOGICAL PAST. LESSONS FROM THE RESIDUE IN AN ANCIENT EGYPTIAN JAR, BY ANDREW KOH

All over the ancient world, many very different cultures relied on an embedded and sophisticated knowledge of plants that could be used for healing or ritual, for sustenance or leisure. While their use was pervasive in antiquity, these plants, and with them the knowledge of their use, faded from memory. The distinctive transdisciplinary approach of the recently established Yale Ancient Pharmacology Program (YAPP) may provide keys to their rediscovery. This intriguing vessel in the Yale Peabody Museum's renowned Babylonian Collection offers a fascinating glimpse into this rich pharmacopeic world.

The vessel is an inscribed Egyptian alabastron: a container made from stone. It dates to circa 486–465 BCE, during the reign of Great King Xerxes I, whose Achaemenid Empire stretched from Egypt and the Balkans in the west to the Indus Valley and Central Asia in the east. Xerxes, famous for his invasion of Greece in 480, is also likely the “King Ahasuerus” who features so prominently in the biblical Book of Esther. The alabastron, made of calcite, is inscribed to Xerxes quadrilingually—in Old Persian, Elamite, Akkadian, and hieroglyphic Egyptian—and it includes an addendum in demotic (i.e., simplified) Egyptian that gives the capacity of the vessel in a Persian unit of measurement: “12 kepedj-units” or about 1,200 milliliters. Its attractive appearance and inscriptions were likely what brought it to the Yale Babylonian Collection originally, but we now have an uncommon opportunity to learn much more about it.

The history of these rare inscribed alabastra is not well known, but they are connected to elite contexts; examples have been found at the Mausoleum of Halicarnassus and a Sarmatian burial mound in what is now Russia. The scholarly consensus has been that these alabastra were produced, and at least initially inscribed, in Egypt. There is less consensus about their role in ancient societies. Speculation has ranged widely from cosmetic containers to the conveyance of private messages.

Recently, analysis by YAPP determined the original contents of the alabastron shown here. Ancient vessels are often prioritized for study due to a high degree of preservation and interesting visual features, yet their most important characteristic in antiquity—their contents—usually remains unknown. This alabastron, like many ancient vessels, preserves traces of organics that were noted in ancient pharmacopeic textual records. The records are as diverse as the Papyrus Ebers—a medical catalog produced early in the Egyptian New Kingdom—and the Anicia Juliana Codex, an early Byzantine manuscript of Dioscorides' *De Materia Medica*. Both were cross-referenced for this study.

When the organic residues in the alabastron were extracted, YAPP discovered an array of opiate biomarkers. The detailed formulas provided by ancient texts mirror the alabastron's pharmacological purpose; one particular class of opiate concoction seems to be directly associated with this type of vessel. Corroborating evidence came from similar Egyptian calcite vessels.

Some of the calcite vessels the project has previously analyzed came from a relatively modest tomb in Egypt. However, a number of those vessels, much larger in size and elaborately decorated, had been found by none other than Howard Carter in the tomb of Tutankhamun. The Tutankhamun vessels showed visible traces of a similar dark residue. This suggests a much broader horizon of shared pharmacopeic traditions across the ancient world that transcended both status and local cultural practices. We now stand at the threshold of reimagining the nature of ancient pharmacology and, ultimately, what meaning it holds for us today.

Andrew Koh, director of the Yale Ancient Pharmacology Program, was appointed Museum Scientist at Yale's Peabody Museum in 2022.

Please visit the site: <https://yalealumnimagazine.org/articles/5683-decoding-the-pharmacological-past> [Go there for pix



ANCIENT ROMAN BOAT FROM EMPIRE'S FRONTIER UNEARTHED IN SERBIAN COAL MINE, BY TOM METCALFE

Coal miners found the remains of a Roman boat that likely supplied an ancient frontier city and military headquarters.

Coal miners in Serbia have discovered the remains of a large wooden boat likely used by the Romans to supply a nearby city and military headquarters on the empire's frontier.

Archaeologists are waiting for radiocarbon dates of wood from the remains, but they think it may be from the third or fourth centuries A.D. They suggest the ancient vessel carried supplies along small rivers between the Danube River and the Roman city of Viminacium about 1 mile (1.6 kilometers) away, which was established early in the first century A.D.

The ancient wreck was unearthed in late July at the Drmno surface coal mine near Kostolac, about 30 miles (50 km) east of Belgrade.

The wooden remains were buried in a layer of silt about 25 feet (8 meters) below the surface. The mine's coal seam is reached by cutting away the topsoil with a mechanical digger, and the wreck was found on the wall of the cutting.

Archaeologists think the flat-bottomed boat once carried cargo along waterways between the Danube and the Roman city of Viminacium. (Image credit: Institute of Archaeology, Belgrade)

The miners who found it then contacted archaeologists at the nearby Viminacium archaeological park, which is operated by the Belgrade-based Institute of Archaeology.

Organic materials like wood usually rots when exposed to air, but the wooden boards and the sand above them were damp, so it seemed that moisture had helped preserve the ancient vessel, a spokesperson told the Serbian website Sve o arheologiji.

Related: Roman aqueduct and 'luxurious' burials unearthed during construction of underground parking garage in Serbia

But after it was unearthed, "the great danger was the bright sun, which threatened to dry out the ship too quickly," so the archaeologist doused the remains with water as they excavated the wreck, the spokesperson noted.

A team of archaeologists excavate the remains of the ancient boat while the coal mine's giant machines operate nearby. (Image credit: Institute of Archaeology, Belgrade)

Vital supply boat

The vessel was originally about 65 feet (20 m) long and about 12 feet (3.5 m) wide. It was flat-bottomed, like a barge, and the archaeologists think it was used to carry cargo between the Danube and Viminacium.

"It is likely that the barge was towed from the shore or driven by oars, and in suitable situations the ship could also use the wind to move, using an auxiliary sail," the archaeologists said.

The wreck is not the first ancient vessel unearthed nearby: The remains of similar boats were found in the area in 2020, indicating the region was once a navigable backwater of the nearby Danube.

Imperial frontier

Viminacium was a combined Roman settlement and military fort, and after A.D. 87 it was the capital of the Roman Empire's Upper Moesia (Moesia Superior) frontier province.

It was an important trading hub and a regional center of Roman culture. Archaeologists estimate Viminacium had a population of up to 45,000 people, making it one of the largest settlements in the Balkans at that time.

Several Roman legions were based at the fort there, and the people to the north were notoriously belligerent toward the Romans.

But the city and fort were destroyed by the Huns in 411, who ended Roman rule in much of Europe. Viminacium was rebuilt early in the sixth century by the Byzantine emperor Justinian the Great, but it was destroyed again in 582 by invading Avars from the Eurasian steppe.

Viminacium's ruins were discovered in the 19th century, and it is now one of Serbia's most important Roman sites, although it's estimated that only a small percentage of it has been excavated.

Archaeologists have unearthed tens of thousands of artifacts there, including hundreds made from silver and gold, as well as richly decorated tombs, ancient workshops, palaces, temples, streets, plazas and fortifications; Roman baths; a track for racing chariots; and an amphitheater for 12,000 people.

In 2021 the remains of at least 13 dogs were discovered in the ruins of the amphitheater, where they may have been sacrificed.

Please visit the site: <https://www.livescience.com/archaeology/romans/ancient-roman-boat-from-empires-frontier-unearthed-in-serbian-coal-mine> [Go there for pix]

ROUND-THE-CLOCK EXCAVATIONS AT CHURCH OF HOLY SEPULCHRE YIELD HISTORICAL TREASURES, BY MELANIE LIDMAN

Continued work on a two-year, \$11 million cooperative restoration project reveals fascinating details from centuries of patchwork building at one of Christianity's holiest sites

Christian pilgrims hold candles as they gather during the ceremony of the Holy Fire at Church of the Holy Sepulchre, where many Christians believe Jesus was crucified, buried and rose from the dead, in the Old City of Jerusalem, on April 23, 2022. (Olivier Fitoussi/Flash90)

Experts from Rome have wrapped up weeks of careful archaeological work in one of the most sensitive parts of the Church of the Holy Sepulchre, according to the Custodia Terrae Sanctae, which oversees Christian holy sites in Israel. Archaeologists from the Department of Antiquities of the University of Rome Sapienza excavated the area around the Holy Edicule, or main tabernacle, as part of an NIS 41 million (\$11 million), two-year renovation and archaeological excavation.

Christian tradition holds that Jesus was crucified by the Romans just outside the city's walls as they existed 2,000 years ago, and was buried in a cave tomb nearby.

Archaeologists worked around the clock for seven days and seven nights, from June 20 to 27, to excavate the area in front of the Edicule. The compressed schedule was intended to minimize disruptions to visitors, as the excavation required closing the Edicule to the public. The Edicule is built on the site of the cave where Jesus is believed to have been buried.

The most recent excavation revealed more information about the early Christian layout of the Edicule, parts of which date to the 4th century. Under one of the floor slabs, archaeologists discovered a coin hoard that included coins minted up until the time of Roman Emperor Valens (364-378).

Other interesting discoveries include a fragment of wall cladding, or the exterior of the wall, from the main Edicule, covered with graffiti from the 18th century in various languages, including Greek, Latin and Armenian.

Earlier this summer, archaeologists worked on the restoration of other parts of the basilica floor, assisted by a conservation group from Turin, Italy, and the Franciscan Faculty of Biblical Sciences and Archaeology in Jerusalem. They uncovered an ancient drainage system and explored the different masonry techniques and types of cement used.

History of a church

The Church of the Holy Sepulchre was built around the year 330 CE, after Emperor Constantine embraced Christianity and his mother, Helena, traveled to the Holy Land to identify sites linked to Jesus. She commissioned monumental churches, including the Church of the Holy Sepulchre, considered the traditional location of Christ's crucifixion and burial.

Prior to that, it was likely a pilgrimage site for early Christians. Archaeologists have also discovered Latin inscriptions on the site dating to before the church's construction, further indicating that it may have already been a site of religious significance for Christians.

But before the church was built starting in 330 CE, it was a pagan temple. The Romans persecuted the early Christian community, and Emperor Hadrian decided that the site would be ideally suited for a temple to Jupiter or Venus.

Persian invaders torched the church in 614, and it was destroyed again in 1009 by the pathological caliph al-Hakim, who persecuted Jews, Christians and even fellow Muslims. The Crusaders restored the church in the 12th century and gave the Church of the Holy Sepulchre its current appearance.

Since 1852, the site has been governed by a rigid power-sharing arrangement among the different Christian denominations known as the "status quo." A Muslim family has been entrusted with the keys to the church for at least 800 years.

Under the arrangement, the various denominations have undertaken smaller renovations of the chapels under their control, but collective action to maintain shared areas often proved elusive. A wake-up call came in 2015, when Israeli authorities briefly closed the Edicule, deeming it unsafe.

The limestone and marble structure of the Edicule needed urgent attention after years of exposure to environmental factors such as water, humidity and candle smoke.

A church that renovates together stays together The different streams of Christianity came together in 2016 to restore the Holy Edicule, the first large-scale renovation since the clean-up after an 1808 fire. In October 2016, when the restoration work was in full swing, conservationists claimed to have found the original limestone bed on which Jesus was laid to rest. The newly restored Edicule opened to the public a year later.

But as renovations tend to do, that of the Edicule highlighted the need for further repairs, including urgent work on the floor of the basilica. Like much of the church, the floor is a hodgepodge of building methods from various periods and includes stones from the Crusader era in the 12th century, recent additions from the 19th century and splotches of concrete and mortar that were part of earlier, cruder renovations.

The renovation offers an opportunity for archaeological examination as well as repairing sewage and electricity lines running beneath the church, which is nestled in the heart of Jerusalem's densely populated Old City.

The church carried out a preliminary study between 2020 and 2022 when it was largely empty due to the coronavirus pandemic. Work began on the renovations and archaeological excavations in March 2022.

The 1,200-square-meter (13,000-square-foot) floor will be repaired in phases to allow liturgical services and visits to continue. The renovation will be funded through donations and is expected to be completed in May 2024, depending on what the archaeologists find.

“The cooperation among the three communities is the most important thing,” said Rev. Francesco Patton, the head of the Catholic Franciscan order devoted to preserving Christian sites in the Holy Land, said last year when the excavations began. “It shows to the entire world that it is possible among Christians of different churches and communities to have a fraternal relationship.”

The restoration work itself seems to have helped the various churches to patch up their differences.

“Dialogue is really facilitated when you are doing something together with the others,” Patton said last year. “Working together is something that helps people to know each other and to start a process of trusting.”

Please visit the site: <https://www.timesofisrael.com/round-the-clock-excavations-at-church-of-holy-sepulchre-yield-historical-treasures/>

AN ANCIENT SKULL UNLIKE ANY HUMAN EVER SEEN IS BAFFLING SCIENTISTS AND COULD REWRITE THE STORY OF OUR EVOLUTION, BY MARIANNE GUENOT

An ancient skull found in China is like nothing scientists have ever seen. The teen's head shape doesn't fit with any of the early human relatives seen to date.

If it's an undiscovered human ancestor, it could rewrite the story of human evolution.

The mystery 300,000-year-old skull of a child about 12 or 13 years old was first uncovered in Hualongdong in East China in 2019, alongside a leg bone.

Researchers think the individual, known only as HDL 6, is a mix between modern humans and an unknown hominin that existed in China at that time, Science Alert reported Monday.

The skull has facial features that are similar to early modern humans, which scientists think began to branch away from another human ancestor known as *Homo erectus* sometime between 550,000 and 750,000 years ago.

But its limbs, skull cap, and recessed chin "seem to reflect more primitive traits," Xiujie Wu, a paleontologist from the Chinese Academy of Sciences wrote in an analysis of the bones published July 31.

These features are closer to a Denisovan's facial structure, a now-extinct branch of East Asian hominins that split from Neanderthals about 400,000 years ago.

This strange skull shape has "never been recorded in late Middle Pleistocene hominin fossil assemblages in East Asia," scientists said in a recent analysis.

It is possible that the finding could rewrite what we know of human lineages in the area. It suggests Denisovan, *Homo erectus*, and this new lineage which is "phylogenetically close" to us may have co-existed in East Asia, per Science Alert.

Human history is messier than we thought This isn't the first time human remains have shaken up the neat evolutionary path that is thought to have led to humans.

Many of us were taught that *Homo sapiens* emerged from *Homo erectus* in Sub-Saharan Africa about 200,000 years ago.

But the reality seems to be a lot more messy. Archaic *Homo sapien* fossils often carry a mixture of old facial structures and modern features so that timeline is a bit more complicated than school books would have us think.

That's the case, for instance, for remains found in Morocco in 2017 from about 300,000 years ago with Homo sapien-like features which suggested humans might have emerged much earlier than previously thought.

Recent findings of archaic human remains in Israel and Greece dating back about 200,000 years also suggested human ancestors might have left Africa a lot earlier than previously thought.

A model of a Neanderthal male in his twenties, which is on display at the Natural History Museum of London's "Britain: One Million Years of the Human Story" exhibition, September 2014. Will Oliver/PA Images/Getty

There's also paleontological and genetic evidence that suggests ancient humans interbred with the Neanderthals and Denisovans, their cousins, further complicating the bloodlines.

If proven correct, the East Asia findings could add another branch of "pre sapiens specimen," bringing more insight into the human tree of life.

Please visit the site: <https://www.businessinsider.com/ancient-skull-baffles-scientists-like-no-human-relative-seen-before-2023-8> [Go there for pix & reconstructions]