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Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

- Ιανουάριος 2023 -

**The person who has the will to undergo all labor
may win any goal.**
(Menander)

Newsletter of the Hellenic Society of Archaeometry

- January 2023 -

Nr. 262

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ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS

14TH INTERNATIONAL CONFERENCE **“METHODS OF ABSOLUTE CHRONOLOGY”,** **17TH TO 19TH MAY, 2023, GLIWICE, POLAND,** **FIRST CIRCULAR**

Dear Colleagues,

With a year’s delay due to the pandemic, we are back in physical form!

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

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

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

CONTRIBUTIONS

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

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

AREAS COVERED

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

Terrestrial archives
Advances in luminescence dating
Geoarchaeology
Mortars
Anthropocene/anthropogenic impact

Applications in geosciences
Diet/stable isotopes
Advances in radiocarbon dating
Applications in archaeology
Bio-components/biofuel

COSTS

	Conference fee
Professional	800 PLN (ca. 170€)
Student	500 PLN (ca. 128€)
Accompanying person	500 PLN (ca. 128€)

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

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

ING Bank Śląski S.A.
ul. Sokolska 34, 40-086 Katowice
Oddział Gliwice
ul. Zwycięstwa 52, 44-100 Gliwice, Poland
BIC/SWIFT Code: INGBPLPW, Account No: PL 60 1050 1230 1000 0002 0211 3056

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

VENUE

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

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

ACCOMMODATION

The recommended accommodation choices in Gliwice are listed below.

Hotels:

- 1) **** Diament Plaza Gliwice Hotel, 1.0 km, 12 min walk
- 2) *** Diament Economy, 1.0 km, 12 min walk
- 3) *** Silvia Gold, 1.2 km, 16 min walk
- 4) *** Hotel Mikulski, 1.7 km, 22 min walk
- 5) *** Hotel Malinowski Economy, 2.0 km, 28 min walk

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

TRAVEL

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

IMPORTANT DATES

Registration starts: **19 December 2022**

Submission of abstracts and registration: **11 March 2023**

Abstract acceptance: **31 March 2023**

Payment: 10 April 2023

Second circular: **31 March 2023**

Conference: **17-19 May 2023**

Submission of manuscripts: 30 June 2023

On behalf of the Local Organising Committee

Piotr Moska and Grzegorz Adamiec

I CONFERENCIA LATINOAMERICANA DE RADIOCARBONO - THE SECOND LATIN AMERICAN RADIOCARBON CONFERENCE (CLARA2), SEPTEMBER 4 - 8, 2023, TEMPLO MAYOR MUSEUM, MEXICO CITY, MEXICO

The Mexican Accelerator Mass Spectrometry Laboratory (LEMA), of the Institute of Physics, UNAM, extends an invitation to participate in the 2nd Latin American Radiocarbon Conference (CLARa2), which will be held from September 4 to 8, 2023, at the Templo Mayor Museum, in downtown Mexico City, Mexico.

The purpose of CLARa is to strengthen the scientific cooperation between the international and Latin American radiocarbon communities to address the most diverse problems and applications of the technique from different perspectives.

In its second edition, CLARa2 will be a celebration of the 10 years of LEMA. The date has been chosen on the eve of Mexico's independence celebrations. We therefore anticipate a festive and colorful atmosphere as a framework for our meeting.

Contributions:

The call for sessions for CLARa2 is open. Oral contributions and Posters can be presented in English or Spanish.

General Sessions:

Facilities in Latin America
Archaeology and Cultural Heritage
Technical Aspects of Radiocarbon Dating
Environmental Studies
Calibration and Modelling
Other Radiocarbon Applications
Cosmogenic Nuclides

For a more complete list of sessions please visit:
<https://clara2.fisica.unam.mx/en/sessions>. Any technical question related to CLARa2 should be directed to lema@fisica.unam.mx

Important dates:

December 2022: Call for sessions abstracts
February 2023: Sessions announced, abstract submission opens
May 2023: Abstracts submission closes
Early June 2023: Decision Letters sent

Important note: CLARa2 will be held in person. Due to this, we will be informing about the sanitary situation derived from Covid-19 and we will be subjected to the recommendations and sanitary protocols dictated by the authorities.

Sincerely,

CLARa2 Organizing committee

ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ –
JOB VACANCIES/FELLOWSHIPS

FELLOWSHIPS: ARCHAEOLOGICAL
AT TAU, ISRAEL

1.

Tel Aviv University's Archaeometallurgical Laboratory offers a limited number of student scholarships for participating in the upcoming excavations at Timna Valley (January 22nd - February 4th 2023; details and registration:

<https://www.tau.ac.il/~ebenyose/CTV/current/index.html>). Those who wish to apply, please write directly to Mr. Yoav Vaknin (yoav.vaknin@gmail.com) by January 1st 2023, and include your CV and a short reference letter.

2.

In addition, the lab has an open call for a fully funded position(s) in research on Early Bronze Age metallurgy (all aspects, from primary smelting to artifact analysis). It is open for graduate students (MA or PhD level) and/or postdoctoral researchers. For more details (and to apply), please write directly to Erez Ben-Yosef at ebenyose@tauex.tau.ac.il.

**POSTDOCTORAL RESEARCH ASSISTANT
(PDRA) IN RADIOCARBON DATING AND
PROJECT DATABASE MANAGEMENT -
UNIVERSITY OF OXFORD**

Applications are invited for a Postdoctoral Research Assistant (PDRA) to join the Human-Environment Relationships in pre-Columbian Amazonia (HERCA) project, to be based at the University of Oxford. The position is jointly funded by the Arts and Humanities Research Council (AHRC) and the São Paulo Research Foundation (FAPESP), and is led by Frank Mayle (Co-PI, University of Reading), Eduardo G. Neves (Co-PI, University of São Paulo) and Christopher Ramsey (Co-I University of Oxford).

The post is a full-time appointment, for a fixed term of 7 months from March 2023.

Please see further details at:

https://my.corehr.com/pls/uoxrecruit/erq_jobspec_details_form.jobspec?p_id=162416

FELLOWSHIP FOR GREEK NATIONALS TO STUDY IN TURKEY AT ARIT, COULSON CROSS FELLOWSHIP

W.D.E. COULSON & TONI M. CROSS
AEGEAN EXCHANGE PROGRAM
Deadline: March 15, 2023

W.D.E. Coulson and Toni M. Cross Aegean Exchange Program is offered for Greek Ph.D. students and scholars in any field of the humanities and social sciences, from prehistoric to modern times, to conduct research in Turkey, under the auspices of the American Research Institute in Turkey (ARIT) <https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Faritweb.org%2F&data=05%7C01%7Caegeanet%40lists.ku.edu%7C127d76e049494daa0c3608daea803071%7C3c176536afe643f5b96636feabbe3c1a%7C0%7C0%7C638080133550968176%7CUnknown%7CTWFpbGZsb3d8eyJWJoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=kDVXtHBqCXjYGr6uceX569YiX2Qf%2B%2BoYMHASUK3VFSY%3D&reserved=0> in Ankara and/or Istanbul during the academic year. The purpose of these fellowships is to provide an opportunity for Greek scholars to meet with Turkish colleagues and to pursue research in museums, archives, and library collections and at the sites and monuments of Turkey. Fellowships are funded by the U.S. Department of State Bureau of Educational and Cultural Affairs through the Council of American Overseas Research Centers, which also provides funding for Turkish graduate students and senior scholars to study in Greece, under the auspices of the American School of Classical Studies at Athens.

The ARIT library in Istanbul focuses on Ottoman and Byzantine Studies and the American Board of Missions. In Ankara the library collections focus on Mediterranean and Near Eastern Archaeology. ARIT helps visiting researchers access the many Turkish (and other) libraries, archives, museums, sites accessible to visiting researchers. ARIT also supports research in fields outside of Turkish studies when significant materials are held in institutions within the country (e.g. Ottoman Egypt, Islamic studies, World War I history, varied archaeology).

Eligibility: Greek nationals, including staff of the Ministry of Culture and Sport, doctoral candidates, and faculty members of Greek institutions of higher education.

Duration: From two weeks to two months.

Terms: Stipend of \$250 per week plus up to \$500 for travel expenses. Four to eight awards are available. ARIT, located in Istanbul and Ankara, will provide logistical support and other assistance as required, but projects are not limited to those two cities. For further information about ARIT:

<https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Faritweb.org%2F&data=05%7C01%7Caegeanet%40lists.ku.edu%7C127d76e049494daa0c3608daea803071%7C3c176536afe643f5b96636feabbe3c1a%7C0%7C0%7C638080133550968176%7CUnknown%7CTWFpbGZsb3d8eyJWJoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=kDVXtHBqCXjYGr6uceX569YiX2Qf%2B%2BoYMHASUK3VFSY%3D&reserved=0>

[I6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=kDVXtHBqCXjYGr6uceX569YiX2Qf%2B%2BoYMHASUK3VFSY%3D&reserved=0](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ascsa.edu.gr%2Ffellowships-and-grants%2Fgraduate-and-postdoctoral%23CoulsonCross&data=05%7C01%7Caegeanet%40lists.ku.edu%7C127d76e049494daa0c3608daea803071%7C3c176536afe643f5b96636feabbe3c1a%7C0%7C0%7C638080133550968176%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=GYsg6Bksnjz2s6qXtHFciL1D5Of0TEZN23fVQdZXUEo%3D&reserved=0). A final report to ASCSA and ARIT is due at the end of the award period, and ASCSA and ARIT expect that copies of all publications that result from research conducted as a Fellow of ASCSA/ARIT be contributed to the relevant library of ASCSA/ARIT.

Application: Submit “Associate Membership with Fellowship” application online. The application includes a curriculum vitae, statement of the project to be pursued during the period of grant (up to three pages, single-spaced in length), and two letters of reference from scholars in the field commenting on the value and feasibility of the project. For more information about the application, visit:

<https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ascsa.edu.gr%2Ffellowships-and-grants%2Fgraduate-and-postdoctoral%23CoulsonCross&data=05%7C01%7Caegeanet%40lists.ku.edu%7C127d76e049494daa0c3608daea803071%7C3c176536afe643f5b96636feabbe3c1a%7C0%7C0%7C638080133550968176%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=GYsg6Bksnjz2s6qXtHFciL1D5Of0TEZN23fVQdZXUEo%3D&reserved=0>.

The awards will be announced in late spring.

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.

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- [twitter.com/ASCSAthens](https://www.twitter.com/ASCSAthens)

<https://nam10.safelinks.protection.outlook.com/?url=http%3A%2F%2Ftwitter.com%2FASCSAthens&data=05%7C01%7Caegeanet%40lists.ku.edu%7C127d76e049494daa0c360>

[8daea803071%7C3c176536afe643f5b96636feabbe3c1a%7C0%7C0%7C638080133550968176%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=QZGigj5q2sNYbq59Kf231Hs4yBWnSooZIJAJuKozZ%2B0%3D&reserved=0](https://nam10.safelinks.protection.outlook.com/?url=http%3A%2F%2Finstagram.com%2Fascathens%2F&data=05%7C01%7Caegeanet%40lists.ku.edu%7C127d76e049494daa0c3608daea803071%7C3c176536afe643f5b96636feabbe3c1a%7C0%7C0%7C638080133550968176%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=QZGigj5q2sNYbq59Kf231Hs4yBWnSooZIJAJuKozZ%2B0%3D&reserved=0)

- [instagram.com/ascathens/](https://nam10.safelinks.protection.outlook.com/?url=http%3A%2F%2Finstagram.com%2Fascathens%2F&data=05%7C01%7Caegeanet%40lists.ku.edu%7C127d76e049494daa0c3608daea803071%7C3c176536afe643f5b96636feabbe3c1a%7C0%7C0%7C638080133550968176%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=JJ4qM5Rj63EkiyoX9ws36e5wRQ3qsUbQQXHNIT6M2w4%3D&reserved=0)

<https://nam10.safelinks.protection.outlook.com/?url=http%3A%2F%2Finstagram.com%2Fascathens%2F&data=05%7C01%7Caegeanet%40lists.ku.edu%7C127d76e049494daa0c3608daea803071%7C3c176536afe643f5b96636feabbe3c1a%7C0%7C0%7C638080133550968176%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=JJ4qM5Rj63EkiyoX9ws36e5wRQ3qsUbQQXHNIT6M2w4%3D&reserved=0>



ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS
FRONTIERS IN EARTH SCIENCE RESEARCH
TOPIC "TRANSDISCIPLINARY
APPROACHES TO METAL PROCUREMENT
AND EXCHANGE IN ARCHAEOLOGY"

Dear Colleagues,

Submissions are still accepted for a forthcoming Research Topic (what other journals call a Special Issue) on "Transdisciplinary Approaches to Metal Procurement and Exchange in Archaeology". The article collection will be published by *Frontiers in Earth Science* (IF: 3.661 - CiteScore: 3.2), but submissions are also welcome via *Frontiers in Environmental Archaeology*. Details on the call are available here (see also bottom of the email): <https://www.frontiersin.org/research-topics/47095/transdisciplinary-approaches-to-metal-procurement-and-exchange-in-archaeology>

Submission deadlines are as follows:

Abstract deadline: **January 13 2022**

Manuscript deadline: **March 12 2023**

As Frontiers is an Open Access Publisher, a fee will apply on acceptance of a submitted manuscript. However, a comprehensive package of fee support is available. Please check here for details: <https://www.frontiersin.org/journals/earth-science/for-authors/publishing-fees>

If you work for a Higher Education or research institution, you might want to check if your institution has an agreement in place with the publisher, which would cover your publication fee: <https://www.frontiersin.org/about/institutional-partnerships>

Please get in touch should you have any queries.

Best wishes,

Andrea Dolfini,
Peter Bray,
Kunlong Chen,
Heide W. Nørgaard &
Miljana Radivojević

Background

Provenance studies of ancient metals have long been at the forefront of interdisciplinary debate cutting across archaeology, materials analysis, and the Earth sciences. In the last decades, early contentious attempts to ground provenance in object chemistry have largely been superseded by isotopic methods, especially Lead Isotopic Analysis (LIA). Despite its widespread application, however, LIA has spurred a new wave of controversies centring on (a) whether lead isotopes fractionate during high-temperature

processes; (b) frequent overlaps in the isotopic signatures of geological sources; and (c) the mixing of metals from different geological sources in workshop practices. These controversies have led to a fractured research landscape, in which LIA, chemistry-based, and non-analytical approaches to metalwork procurement and exchange are often deployed separately, owing to alleged incompatibilities in methods and approaches. These divisions diminish our ability to work across disciplinary boundaries and to advance knowledge and understanding of the life histories of early metals.

Goals

This special issue aims to initiate a new season of theoretically oriented and science-informed studies on the life histories of ancient metals. We aim to capture multi-method, interdisciplinary, and transdisciplinary research exploring the geological origin, workshop provenance, social procurement, alloying, transformation, circulation, exchange, recycling, and re-fashioning of ferrous and non-ferrous metals from around the world, from prehistory to the birth of the industrial revolution. Any collaborative research cutting across entrenched disciplinary boundaries and employing purportedly incompatible methods is particularly welcome, and so are papers proposing new approaches and models for the study of metal procurement and exchange.

Scope

Topics encompass, but are not limited to:

- Explorations of the life histories of ancient metals through isotopic, chemical, GIS-based, network-based, morphological, and other methods of analysis, or any integration thereof.
- Characterisations of metallic histories, with special reference to sourcing, procurement, exchange, alteration, alloying, re-casting, re-forging, re-fashioning, and re-using.
- Critical appraisals of the strengths and limitations of different methods of analysis.
- Original re-evaluations of, and reflections on, disciplinary controversies and debates, including isotope fractionation in pyrotechnology, chemical and isotopic similarities in ore deposits, and changes in isotopic signature and object chemistry due to metal mixing.
- New theoretically informed narratives about the social mechanisms underpinning metal procurement, exchange, and transformation.
- Critical explorations of the concepts of origin, provenance, procurement, and exchange in archaeometallurgy.

Professor Andrea Dolfini (he/him)

[Chair of Archaeology](#)

[Convenor of Materiality, Artefacts & Technologies in Culture and History \(MATCH\)](#)

Scientific Committee Member, European Association of Archaeologists

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<http://newcastle.academia.edu/AndreaDolfini>

Download my latest Open Access papers for free:

- Caricola, I., et al. (2022). Organic residue analysis reveals the function of Bronze Age metal daggers. *Nature: Scientific Reports* 12(6101): <https://doi.org/10.1038/s41598-022-09983-3>
- Dolfini, A. (2021). Warrior graves reconsidered: metal, power and identity in Copper Age Italy, *World Archaeology* 53(5): 809-833. <https://doi.org/10.1080/00438243.2021.2013307>

Please ask me for a copy of the following paper:

Iaia, C. & Dolfini, A. (2021). A new seriation and chronology for early Italian metalwork, 4500 – 2100 BC. *Rivista di Scienze Preistoriche* 71: 1-43. DOI [10.32097/1151](https://doi.org/10.32097/1151)

EΙΔΗΣΕΙΣ - NEWS RELEASE

DISCOVERY OF ANCIENT BRONZE STATUES IN ITALY MAY REWRITE ETRUSCAN AND ROMAN HISTORY, BY SYLVIA POGGIOLI

Italian archaeologists are hailing a recent discovery as the "most exceptional" in the last half-century. They believe it could rewrite the history of the relationship between the Etruscan and Roman civilizations.

Over a period of a few weeks in September and October, a team of archaeologists unearthed two dozen bronze statues of human figures, more than 2,000 years old and perfectly preserved in the hot mud and waters of an ancient, sacred pool.

The site is the hot springs of the Tuscan town of San Casciano dei Bagni — San Casciano of the Baths, one of many picturesque hilltop towns towering over lush green valleys dotted with majestic cypress trees.

But in the third century BCE, this place had a unique attraction: the ancient Etruscans built a sanctuary at the local hot springs that later gave the town its name.

The Etruscans lived and thrived for 500 years in what today is central Italy — the regions of Tuscany, Umbria and Lazio — before the establishment of the Roman Republic in 509 BCE, after the last Etruscan king who had ruled Rome was overthrown.

Roman art and culture were highly influenced by the Etruscan civilization, which ultimately was assimilated into the Roman Empire.

The valley just below the town has 42 sources that provide one of the largest flows of thermal water in Europe, says Ludovico Salerno, a member of the local archaeological association that has participated in the excavation work.

Standing on the edge of the excavation site of the ancient spa and pointing to water gushing in from an underground canal, he says, "This source is the most powerful in San Casciano. Every day it pumps out hundreds of thousands of gallons of 105-degree water."

Starting in 2020, funded by the San Casciano dei Bagni municipality, archaeologists unearthed a large marble pool of the ancient sanctuary.

It was decorated with fountains and altars to the gods Apollo, his son Asclepius and Asclepius' daughter Hygeia — whose name is the root of the English word hygiene.

The Etruscans had adopted their religion from the Greeks and key elements of the Etruscan religion were later adopted by the Roman Senate.

When the Romans later enlarged the sanctuary and made it more opulent, historians say a frequent visitor was the Emperor Augustus.

But this site, says Salerno, was not meant for recreation.

"The pool was a sacred place, only the religious custodians could bathe there. Sick people came to the sanctuary in the hopes of being cured and would offer gifts to the gods. It was a place of suffering, and it was a place of hope."

The first finds were coins and small votive offerings representing body parts in need of healing — ears, feet, torsos, and the like.

Then, this fall, two years after the excavation began, the team of archaeologists found two dozen bronze statues, some three feet high, perfectly preserved by the mud and water at the bottom of the large pool.

They include a sleeping adolescent male — known as an ephebe — lying next to a statue of Hygeia, with a snake wrapped around her arms.

Archaeologist Emanuele Mariotti, the fieldwork manager who oversees the excavation site, says finding so many objects in their original site provides a unique historical context.

"This is not only the discovery of the statues and small and big bronze and coins and ... architecture. Everything must be in the right place with the right things around," says Mariotti. "This is the context. The context could tell us the real history and all the history about this place."

Mariotti and his colleagues believe that in antiquity, there probably was a blacksmith on site, where people seeking cures from the gods could have their votive offerings forged in bronze. And researchers found bronze depictions of internal organs — what Mariotti says amount to unique early versions of X-rays: "Something like X-ray but in bronze, a picture of the [insides of the] body in bronze."

Asked if the anatomical details are accurate, Mariotti replies, "So accurate... really scientific accurate, really."

The new discoveries also shed light on what the Italian Culture Ministry describes as a "unique multicultural and multilingual haven of peace" between Etruscans and Romans at a time when the rivals were mostly at war.

And scholars, says Mariotti, could rewrite the history of the transition from the Etruscan civilization to the Roman Empire.

"We can describe all the life, day by day here, through four or five centuries, so this is incredible," he says.

But for all the new information coming out of the San Casciano dei Bagni sanctuary, there's one big mystery: Why didn't the Christians destroy this site — or convert it into a church — as they did with so many pagan temples?

Researchers have determined that around the year 500 CE — some two centuries after Christianity had become the official religion of the Roman Empire, which by this time was waning — the sanctuary was dismantled piece by piece. The statues were laid at the bottom of the big pool, covered and sealed with columns and large slabs of marble.

It was the burial of a civilization, says Mariotti, performed with "pietas" – the Latin word for respect and family devotion.

Excavation at the sanctuary will resume in the spring. The statues — now being studied at the restoration institute of the town of Grosseto — will eventually be displayed in a new museum to be built in San Casciano dei Bagni.

Please visit the site: <https://www.npr.org/2022/12/03/1138904735/italy-ancient-bronze-statues-discovery-tuscany>

ARCHAEOLOGISTS HAVE DISCOVERED FULL-COLOR PORTRAITS OF EGYPTIAN MUMMIES IN ANCIENT PHILADELPHIA, BY BETHANY DAWSON

Archaeologists have uncovered the first full-color portraits of mummies in over a century. Researchers also uncovered a funerary building, records written on papyrus, pottery, and coffins. The finds date from the Ptolemaic period (305–30 B.C.) through to the Roman era (30 B.C.—390 A.D.).

Egyptian archaeologists have uncovered full-color portraits of mummies – the first to be found in over a century – the Egyptian government has announced.

Researchers found the two full portraits of Egyptian mummies and fragments of others at the Gerza excavation site in Fayoum, Egypt, making these artworks the first of their kind to be discovered in over 115 years.

English archaeologist Flinders Petrie was the last to find similar artwork when he discovered 146 mummy portraits at a Roman cemetery in 1911, Artnet News reports.

The findings are from a dig site located amid the ruins of the ancient city of Philadelphia, which according to the Austrian Archeological Institute, lies in the northeastern corner of Fayoum, approximately 75 miles southwest of modern-day Cairo.

The team investigating the Gerza archaeological site in Fayoum also uncovered a funerary building, records written on papyrus, pottery, and coffins dating from the Ptolemaic period, which spans from 305 B.C. to 30 B.C., through the Roman era, which lasted from 30 B.C. to 390 A.D.

The government has said these finds give fascinating insights into the social, economic, and religious conditions of the people living in Philadelphia (which meant, in ancient Greek, "City of Brotherly Love") nearly 2000 years ago.

The collection of paintings, known as the Fayoum portraits, portrays some of the wealthiest people that existed in these ancient communities. The Philadelphia settlement was home to Greeks and Egyptians over the 600-year period.

Basem Gehad, the head of the Ancient Philadelphia Excavation project, which led the latest dig, wrote in an email to Artnet News that "no one really knows the context of these portraits," but added, "Now, we can know certainly where they came from, and find more."

In addition to these finds, archaeologists also revealed a rare terracotta statue of the goddess Isis Aphrodite inside a wooden coffin, per Artnet.

Gehad told the news outlet the statue "reflects the influence of Greeks on Egyptian art as a result of [the] new community living there."

A statement from the Egyptian government explains that pharaoh Ptolemy II Philadelphus (309–246 B.C.) established Philadelphia as an agricultural village meant to secure further food resources for his empire.

Researchers have been digging at the site since 2016, according to the government.

Please visit the site: <https://www.businessinsider.com/egypt-color-portraits-mummies-discovered-ancient-philadelphia-2022-12> [Go there for pix]

WHAT FINGERPRINTS TELL US ABOUT JERUSALEM'S ANCIENT ARTISANS, BY HILLEL KUTTLER

In an unusual collaboration, archaeologists in Israel are working with police to analyze prints left on fifth- or sixth-century pottery shards

On a chilly, rainy afternoon in September 2020, two Israeli police cars and a motorcycle, their red lights flashing and sirens blaring, pulled up to an archaeological dig in Motza (or Moza), a neighborhood in the mountains west of Jerusalem.

Four police officials emerged from the vehicles and approached the excavation—but they weren't responding to a crime. They'd come to examine ancient fingerprints as part of an unconventional, ongoing collaboration between Israel's police department and the Tel Moza Expedition Project team.

Beginning in November 2019, excavations at the three-acre site uncovered traces of structures and artifacts from the early Byzantine period (the end of the fourth century to the beginning of the seventh century): a church, an olive press, a wine press and a kiln. An alcove adjacent to the kiln contained clay fragments of lamps and roof tiles, with remnants of jugs and bowls lying nearby.

"It was striking," Terem says. "There were so many, and they were so clear."

More than one-third of the 230 shards were covered in centuries-old fingerprints. Dafna Gazit and Shay Halevi / Israel Antiquities Authority

The fragments' proximity to the fifth- or sixth-century kiln led Terem and her colleagues to theorize that the fingerprints belonged to the kiln's worker (or workers), who'd made the lamps from molds. To learn more details, from how many potters worked at the site to the artisans' age and gender, the archaeologists turned to police investigators—experts on the science of fingerprints.

The outreach wasn't so far-fetched. Detectives and archaeologists share an intense inquisitiveness, a devotion to facts, attention to detail and a focus on clues found in a specific place. Police labs possess cutting-edge machinery and technology used to analyze fingerprints. Yet the Israeli teams say their collaboration is the first of its kind to date.

"As an archaeologist looking at the lamp, I saw only fingerprints. I didn't see any more than that," Terem says. "I wanted to know more about the people of the past. The police could help me understand more and draw more conclusions about life in Motza in Byzantine times."

The archaeologists' dig preceded the construction of a highway overpass. Archaeological oversight, and sometimes excavation, is mandatory at many building sites in Israel, a country that juggles the present and past, where construction cranes are ubiquitous and

the land's history is cherished. The Motza project was part of a far larger excavation begun in 2017, with notable finds including a town populated by demobilized Roman soldiers who'd conquered Israel in the year 135. Other discoveries dated back to the Neolithic period.

Ido Hefetz was surprised to be summoned to Motza from police headquarters in Jerusalem, where he's a fingerprint examiner in the forensics division. One of the lab's four experts in this field, Hefetz specializes in prints left at crime scenes and testifies at up to 15 trials annually.

He'd never been personally approached by the IAA before, but the agencies have collaborated over the years. In an ongoing project, the antiquities authority is combing a 1948 Arab-Israeli War battle site involving 35 Israeli fatalities near Beit Shemesh. In 2007, the IAA investigated a World War I-era weapons cache buried under an abandoned police station in the coastal city of Jaffa.

Israel isn't the first country where fingerprints found during archaeological research have elicited curiosity and spurred questions about who left them behind.

In 2019, an analysis of fingerprints on vessel fragments unearthed in the southwestern United States concluded that both men and women produced pottery in a 10th- and 11th-century Puebloan community. Going back much further in time, a 2020 analysis of fingerprints found on 7,000-year-old Spanish cave paintings revealed that a man in his mid-30s and a girl as young as 10 years old were likely among the artists.

John Kantner, an archaeologist at the University of North Florida who led the Pueblo project, first learned of fingerprint analysis' applications in archaeology when one of his students, a former police officer, wrote his thesis on the topic nearly two decades ago.

"It opened up a whole world for me," Kantner says.

Though archaeologists have been studying fingerprints since at least the 1930s, Francisco Martínez-Sevilla, a historian at the University of Alcalá in Spain who co-wrote the cave painting study, says the technique has only "become more common in the past ten years."

"People now know the potential of this methodology," he adds, highlighting the technique's ability to determine someone's sex and age. The greater the ridge density in a fingerprint, the more likely it belongs to a woman; less density indicates the person was male. As individuals grow older, the distance between the ridges in their fingerprints increases.

Julie Hruby, a classicist at Dartmouth College who has studied ancient fingerprints, sees the value of employing forensics (defined broadly as using scientific methods or expertise to investigate crimes or examine evidence) to examine antiquities.

"I would advocate for cross-training between archaeology and forensic science," Hruby adds. "Often, we are asking the same questions for different reasons. For example, archaeologists might wonder about how [pottery] workshops function, and training in fingerprint analysis can answer that question."

For the Pueblo study, Kantner and his colleagues used a powerful stereomicroscope attached to a calibrated digital camera. They photographed the most complete, clearest prints on each shard of pottery, then used software to measure the distance between the prints' ridges.

The Pueblo analysis identified “a strong bimodal pattern in the total data set,” suggesting that “males and females were nearly equally involved in pottery production,” says Kantner.

At Motza, Hefetz began by determining which fingerprints were useful, meaning complete or partial ones that could be pieced together like a puzzle. He then homed in on the prints' ridges and valleys, making matches to combine partials into a whole.

The indispensable tool of Hefetz's trade is the Automated Fingerprint Identification System, or AFIS, a biometric authentication database that produces swift results. AFIS compares fingerprints through a process known as minutiae matching. First, the examiner checks whether prints' ridges contain sufficient minutiae, or specific patterns like spurs, bridges and crossovers. If enough are present, the system generates similar matches; if not, the fingerprint is excluded as a match.

Several days after Hefetz assessed the fingerprints, Terem and her team visited his office bearing a box filled with pottery from Motza. Hefetz's colleagues photographed the fragments, uploaded the images to AFIS and created a mini database to compare the ancient fingerprints to each other.

Since this initial analysis in fall 2020, the investigators and the archaeologists have spoken regularly by phone and met perhaps ten times in person. As Hefetz's analysis progressed, he noticed remarkable details in the fingerprints, like their secretion pores being clearly visible.

The clay used to make the pottery was of fine quality, ensuring the prints were well preserved. Hefetz could plainly see that the fingerprints were predominantly of the left and right thumbs, with their depth revealing something of the potters' technique: Both thumbs were pressed hard into the clay to compress it into a mold.

Furthermore, the same adjacent thumbprints appeared on both the top and bottom sections of each lamp, suggesting that one person had multitasked. Scores of the fingerprints were identical, leading Hefetz to conclude that one individual was the primary potter. One or possibly two additional people produced the rest of the lamps.

Most revelatory on a fundamental level was Hefetz's realization that fingerprint patterns today are virtually unchanged from 1,500 years ago. His lab operates on the basis of seven universal patterns—arch, tented arch, right loop, left loop, whorl, double loop and complex—while the Federal Bureau of Investigation, for example, recognizes eight.

“The interesting thing was that there was nothing new” in those patterns, Hefetz says. “It wasn't that it was one thing in Byzantine times and then it evolved. There was an evolutionary preservation.”

Hefetz also tested perhaps the most basic premise of his field: that no two fingerprints are identical. He found that none of the Byzantine-era fingerprints matched any in AFIS’s database of 1.3 million Israelis.

“If there were [matches], I’d have to look for another job,” he jokes.
“It was interesting to test that assumption.”

Key questions remain, such as the potters’ ages and genders. When the answers will come depends on the police officials’ workload. Their job demands leave few work hours for this side gig. They’ve also conducted research in their free time.

Uzi ’Ad, an IAA archaeologist who worked at the Motza site daily, understands the delay. “The police are really busy,” he says. “From the cynical side, people will ask, ‘Why is the police department doing this instead of trying to catch criminals?’”

Beyond the intellectual exercise, Hefetz says his “strange, unique, unusual” collaboration with archaeologists “establishes cooperation—that we can open the door to others.”

“We’re no longer only a criminal lab,” he adds.

In retrospect, the agencies’ partnership might have been launched nearly half a century ago.

Back in 1974, the police offered a job to young archaeologist Ronny Reich. He considered it until learning he’d be expected to rush to crime scenes in the middle of the night.

Reich chose to remain in his chosen profession and is now an emeritus scholar at the University of Haifa. On October 27, he hosted a daylong seminar on police-archaeology collaboration at the police department’s museum in Beit Shemesh.

Police work “is much more complicated than ours,” Reich told his audience. “You deal with living people, and all of my subjects have been dead 2,000 years. You have to bring truth to a court. If I make a mistake, I can correct myself in the next journal.”

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He has written for such publications as the New York Times, Washington Post and Wall Street Journal.

Please visit the site: <https://www.smithsonianmag.com/history/what-fingerprints-tell-us-about-jeruselems-ancient-artisans-180981238/> [Go there for pix]

ARCHAEOLOGISTS FIND WORLD'S OLDEST NARRATIVE STORY, AND IT'S INTENSE, BY AARON REICH

The carvings depict a man holding his penis flanked by leopards, and another man holding a snake standing next to a bull.

Archaeologists have managed to uncover what is believed to be the oldest narrative depiction in history: A man holding his penis while being flanked by leopards, and another man sitting near a bull and holding a snake, according to a new study.

Discovered in southeastern Turkey, the carving is important because not only does it depict a narrative, meaning a story, but the carving itself is dated to the ninth millennium BCE - over 11,000 years ago.

The findings of this study were published by Istanbul University archaeologist Eylem Özdoğan in the peer-reviewed academic journal *Antiquity*.

What is the world's oldest drawn story?

Many people have widely cited the famous Epic of Gilgamesh as the world's oldest story. This is not exactly true, however. While it is the oldest epic poem and it is one of the most influential pieces of writing in history, it was only from the 18th century BCE.

Stories, however, have been a part of human culture for far longer.

Rather, they seem to have been formed alongside the development of primitive human societies, with evidence of it first cropping up in the Neolithic era.

This particular era was defined by a number of things, most notably humans abandoning the hunter-gatherer lifestyle for a more sedentary agricultural life.

Here, evidence starts to crop up due to prolonged human settlement, which allows researchers to see how social roles developed, and so on.

This also can see some links to symbols and rituals, which are inherently linked to stories.

In other words, seeing early stories can tell about the society that made them.

This story in particular is told in the form of carvings in Sayburç, Turkey near the Syrian border.

These carvings depict five figures in two scenes. The first scene depicts a human holding his penis in his right hand, with round protrusions on the knees implying he is bent forward while sitting.

Standing on both sides of him are two leopards, each with open mouths with teeth and curled tails, with one leopard having a visible penis.

The second scene depicts another human, this one with his penis on his abdomen and squatting down. In his hand is what appears to be either a snake or a rattle, head pointing to the ground. Standing next to the man is a bull, with both horns visible.

Notably, the second scene has the human with his back turned to the three figures in the first scene.

So what does it mean?

Well, there are a few things we can tell right off the bat, especially when comparing it to other Neolithic carvings.

First, the use of the penis seems to mainly be a form of showing gender. Secondly, we can see that the dangerous aspects of animals, such as leopard teeth and bull horns, are shown emphasized.

Both of these are common in other Neolithic carvings.

What is different, however, is that the two carvings form a narrative, a story in their own right.

As for the meaning of the story, we may not know specifics, but it seems to be a comment on the relationship between humans and animals.

Later Neolithic art would show humans and animals stacked on top of each other, such as humans carrying animals.

But these carvings have humans and animals on the same horizontal level.

But what does that mean? That's the part we aren't sure about. Most likely, however, the progressing narrative story in these two scenes seems to indicate that this is meant to indicate specific events or stories are being told.

What those stories are, however, isn't clear.

Speaking to science news outlet LiveScience, Neolithic archaeologist Jens Notroff, who was not involved in the study, explained that most likely, there are references here that modern humans won't recognize.

"Unfortunately, while the Neolithic hunter may have easily recognized its message," he told LiveScience, "we are still lacking an understanding of the actual narrative."

However, that doesn't mean it will stay a mystery forever.

The area in Sayburç is still being excavated, and there is more work to be done. There may be more carvings to find nearby. Perhaps the missing pieces are still waiting to be found.

Please visit the site: <https://www.jpost.com/archaeology/article-724369> [Go there for pix]

READING “INVISIBLE” DEAD SEA SCROLLS, BY CHRISTY CHAPMAN AND W. BRENT SEALES

Technology in the hands of scholars, conservators, and archaeologists alike has long been central to the successful preservation and analysis of the Dead Sea Scrolls. While early technologies involved sticky tape for rejoining fragments and analog photography for their documentation, the advanced tools of today allow fragile scrolls to be read without even unwrapping them.

The breathtaking range of the scrolls spans everything from major texts, such as the Temple Scroll, to unopened phylactery cases with slips of hidden writing, to a small number of completely unopened scrolls. Although the glory of the collection is represented by the substantially complete and amazingly preserved copy of the Book of Isaiah on display at the Shrine of the Book in Jerusalem, its remarkable condition is the exception rather than the rule. According to the Israel Antiquities Authority (IAA), the scroll archive contains more than 25,000 fragments, many no larger than a postage stamp.

Practically all of them consist of many layers, portions of a single scroll stuck together due to damage and decay.

The painstaking work of conservators has stabilized these fragments against further decay and provided a superb effort at physical restoration. In many cases, however, not much can be done, leaving thousands of fragments unstudied because of the difficulty and risk associated with invasive efforts to separate the multiple layers that stubbornly cling to each other.

Fortunately, researchers have developed non-invasive, digital restoration techniques, including “virtual unwrapping” that reveals the interior writings on rolled-up surfaces and multilayer fragments.

Virtual unwrapping uses penetrating X-ray images to create a 3D model of an object. The 3D model data then passes through a series of steps that comprise the virtual unwrapping pipeline.

First, each individual layer on which writing may sit—each wrap of a scroll, for example—is identified and modeled. Every point on these segmented surfaces is then textured or assigned a brightness/intensity value corresponding to the density of that particular spot in the 3D model. Materials that are denser, such as certain kinds of ink, show up brighter than less dense materials, such as the animal skin often used as a writing surface. The software exploits this variation in density and brightness to make the text visible.

Because the model of the writing surface reflects the actual curvature of the scroll, it is then necessary to digitally flatten it for reading. This is accomplished through a material

simulation, which is common in video games and movies for effects like cloth flags waving in the wind.

Virtual unwrapping is completely non-invasive, as X-rays induce no damage during imaging, and the analysis takes place on the data, not the physical object. The technique was successfully applied for the first time in 2015, when an ancient Hebrew scroll from Ein Gedi was safely revealed to be an early copy of the Book of Leviticus.¹

This breakthrough technology is now being applied to the 25,000 fragments from Qumran. Among them is a multilayered fragment (1032a; see images above) with text concealed between a dozen stuck layers.

Even this is now readable digitally. Perhaps even more exciting, recent approaches inspired by artificial intelligence (AI) have made it possible to enhance and make more precise the results from virtual unwrapping. As anyone who has ever broken a bone knows, the gray-scale imagery that results from an X-ray is not as compelling as a color photograph. But using a machine-learning framework, researchers can now show the gray-scale images in full color.

To achieve this “data-informed colorization,” the X-ray evidence of ink and parchment from deep inside a closed fragment is matched with a color photo of the visible portions of the fragment. A convolutional neural network (CNN) is then trained to build a map between the two imaging modalities. Whenever the CNN encounters a massive number of associations between the two kinds of imagery—color photography and X-ray—it can learn the conversion between the two types of data. This learned conversion makes it possible for virtually unwrapped fragments to look like color photographs.

From layer separation of a digitized manuscript, to ink identification, to digital flattening of pages, to virtual “recoloring,” this new AI technology produces digital images of unopened manuscripts that rival actual photographs of undamaged parchment texts. As the next step in a long line of technological advances, this forges a new pathway for restoration. Machine learning and AI will continue to push against the boundaries of what was previously considered impossible. Such innovations will support and inspire the next generation of scholars dedicated to the study of fragmentary, damaged collections.

Christy Chapman is Research and Partnership Manager for the Digital Restoration Initiative in the Department of Computer Science at the University of Kentucky.

W. Brent Seales is Gill Professor in the Department of Computer Science at the University of Kentucky and Director of the Center for Visualization and Virtual Environments. He focuses on digital study and restoration of inscribed artifacts.

Please visit the site: <https://www.biblicalarchaeology.org/daily/biblical-artifacts/dead-sea-scrolls/reading-invisible-dead-sea-scrolls/> [Go there for pix]

THE ANCIENT GREEK SEX MANUAL OF PHILAEINIS, BY ALEXANDER GALE

Philaenis of Samos is believed to have written an ancient Greek sex manual sometime in the fourth century BC. Credit: Painting by Jean-Léon Gérôme /Public domain / Wikimedia Commons

The ancient Greeks are lauded for their contributions to the sciences, philosophy, and art, but they may also have been innovators in the bedroom. A woman called Philaenis of Samos is believed to have written an infamous sex manual of ancient Greece.

Despite the fact that the entire copy of Philaenis' sex manual has not survived to the present day and its exact composition is unknown, surviving fragments suggest it was somewhat similar to the famous Kama Sutra, which originated in India between 400 BC and 200 AD.

The ancient Greek sex manual was probably written in the fourth century BC. Some fragments of the guide are believed to have been discovered on papyri from the city of Oxyrhynchus in the 1970s.

Ancient Greek sex manual

Anyone hoping to make love like an ancient Greek may be disappointed by the scant primary evidence available on the guide. In 1972, some findings were published on what might be fragments of the guide written on papyrus.

The erotic manual was written in simple language and clearly divided into various sections. The manual was organized to take the reader through a process from seduction, to flattery, to kissing, and through to intercourse.

According to one surviving passage, Philaenis advised, “Now, the seducer must come to the woman untidy and uncombed, so that he does not seem to the woman to be a man who takes much trouble...”

Philaenis also advised that the man make flattering comparisons between the woman he wished to seduce and certain deities. A surviving passage reads, “while he says that she... is equal to a goddess, that she who is ugly is as lovely as Aphrodite and that she who is older is as Rhea.”

The sex manual laid out further specificities according to body type. Philaenis instructed men to use different techniques according to the body compositions of their partners. According to Philaenis, “petite,” “bodacious,” and “pretty” were among the different body types of women.

Most of the manual had disintegrated by the time it was discovered, and the handwriting is practically illegible in parts. This has made it difficult for historians to reconstruct the guide in its entirety.

The Romans produced paintings depicting sex positions described in the manual late into antiquity. This suggests that the erotic guide described sexual positions in significant detail.

Who was Philaenis of Samos?

Very little is known about Philaenis, and her identity was a point of conjecture even in antiquity. She may have been a hetaira. In ancient Greece, hetairai were prostitutes who provided music, entertainment, and conversation to male guests.

Unlike other prostitutes, such as the lower-class pornai, hetaira were usually well-educated. As a hetaira, it is possible that Philaenis could have been literate. In fact, Socrates even claimed that Aspasia, a hetaira, was the author of Pericles' famous funeral oration.

Another theory is that Philaenis was a pseudonym. The real author(s) of the sex manual may have hidden behind the name Philaenis to avoid attracting criticism.

One ancient Greek poet, Aeschryon of Samos, wrote verses in which Philaenis vehemently denies ever having written the manual. In the poem, she had inscribed on her tombstone: "No, by Zeus, in the name of the young people resting underground, I was not a debauched woman with men, offered to anyone. It is Polycrates of Athenian birth, a sort of subtlety of words and a perfidious tongue, who wrote what he wrote."

This Polycrates may have been an Athenian rhetorician and sophist. The accuracy of Aeschryon's account is uncertain because he may have had an agenda for ascribing the sex manual's authorship to Polycrates.

Legacy

Whoever Philaenis truly was, her sex manual became well-known across the Mediterranean region as well as to the neighboring Romans. The ancient Roman poet Marcus Valerius Martialis (Martial) introduced Philaenis as a character in one of his works.

Writing between the first and second centuries AD, Martial's characterization of Philaenis was as a contemporary to his own times, and not the Philaenis of the fourth century BC. The Roman poet portrayed her as a sexually-charged, masculine woman who sodomized men, slept with women, and lifted weights.

In late antiquity, when the Roman Empire became Christianized, Philaenis became an object of disapproval by the Church Fathers. For example, the theologian scholar Clement of Alexandria denounced those who displayed erotic paintings inspired by Philaenis' sex manual.

Please visit the site: <https://greekreporter.com/2022/12/13/ancient-greek-sex-manual-philaeinis/>

OLDEST SCENE IN WORLD: 11,000-YEAR-OLD WALL RELIEF NEAR GÖBEKLITEPE

An 11,000-year-old wall relief, located near Şanlıurfa's famous Göbeklitepe in southeastern Türkiye, constitutes the earliest known depiction of a narrative "scene" and reflects the complex relationship between humans, the natural world and the animal life that surrounded them during the transition to a sedentary lifestyle, new research revealed recently.

The ancient wall carving depicts five figures: Two humans, a bull and two leopards. Eylem Özdoğan, the author of the study published in the scientific journal *Antiquity*, stated that there is very little information about the civilization that made this relief.

"The communities living in this region share a common cultural environment. They certainly communicate with each other and share innovations, social ideology and a common culture," Özdoğan, an archaeologist at Istanbul University, said in a statement to Gizmodo.

According to the news of Independent Turkish, radiocarbon dating studies of samples taken from the region continue, but researchers believe that these reliefs were made around 9,000 B.C. That is due to the fact that the relief was found in the ancient city of Sayburç in Şanlıurfa. Sayburç was founded in 9,000 B.C. when hunter-gatherers switched to agriculture and settled life.

In 1949, most of the ancient city of Sayburç was open to settlement. However, excavations that began last year unearthed a Neolithic structure in the city. As the archaeological value of the city was revealed, some modern structures are planned to be demolished. So far, only half of the historic texture has been unearthed.

It is stated that the newly discovered relief is one of the oldest narrative works in archaeology. A 44,000-year-old pig painting, discovered in Indonesia in 2021, is the oldest known work of figurative art. However, there was no scene depiction in that work.

According to Özdoğan, the figures in Sayburç depict two scenes. The first tells the story of a man and a bull, and the other is of a man surrounded by two leopards. Both people are men.

It is striking that the dangerous features of the figures in the work, which covers an area of approximately 3.7 meters (12.1 feet), are also emphasized. It is not known what exactly was once the intended meaning or message of the relief, in which the teeth of leopards and horns of bulls are highlighted.

Please visit the site: <https://www.dailysabah.com/life/history/oldest-scene-in-world-11000-year-old-wall-relief-near-gobeklitepe> [Go there for pix]
