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# Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

**- Φεβρουάριος 2011 -**

# Newsletter of the Hellenic Society of Archaeometry

**- February 2011 -**

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## **ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS**

# **INTERNATIONAL ASSOCIATION FOR THE HISTORY OF RELIGIONS SPECIAL CONFERENCE 2012, RELIGIONS, SCIENCE AND TECHNOLOGY IN CULTURAL CONTEXTS: DYNAMICS OF CHANGE, NTNU – NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, 1-3 MARCH 2012**

In current public and academic debates, the complex relationships between ‘religion’ and ‘science’ tend to be reduced into one between monolithic entities. By exploring historical and contemporary interactions between religions, science and technology, a more complex understanding may be reached of the areas and ways in which they overlap, correspond, challenge and conflict with each other.

This conference seeks to explore how religions, science and technology interact and generate change (progressive, reactive, regressive), particularly in relation to such issues as the environment and climate change; the economy; welfare; life expectancy; popular representation; and sexual equality.

Of particular interest are explorations of dynamic relationships between worldviews/cosmologies, socio-cultural practices and technologies; and of ‘the politics of change’, i.e. how different actors seek to convince the public of the benefits of their own approaches or of the detriment of ‘the others’ approaches.

The conference is organized by the Department of Archaeology and Religious Studies of the Norwegian University of Science and Technology in Trondheim.

Registration fee until 1 December 2011 is 250 EUR, which includes conference materials, lunches and refreshments. There will also be bursaries for participants from lower income countries.

**Abstracts of 200 words and affiliation details should be submitted by 1<sup>st</sup> August 2011.** For submitting your abstracts and for any type of inquiries, you are welcome to contact the Conference secretary, Filip Ivanovic ([filip.ivanovic@ntnu.no](mailto:filip.ivanovic@ntnu.no)).

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# **ARCHAEOMETALLURGY IN EUROPE** **III, DEUTSCHES BERGBAU-MUSEUM** **BOCHUM, JUNE 29TH TO JULY 1ST, 2011**

Dear colleagues,

you are cordially invited to our conference "Archaeometallurgy in Europe III" which will take place at the Deutsches Bergbau-Museum Bochum from June 29th to July 1st (the first two conferences of this series were held 2003 in Milano and 2007 in Grado). Abstract of no more than one page (Din A4) have to be submitted until February 15th at the latest.

The conference papers will be grouped thematically:

- Metallurgical innovation stages in early metallurgy in Europe: from the Neolithic to the Medieval period
  - Regional studies
  - Early mining in Europe and the distribution of raw sources
  - Experimental archaeometallurgy
  - Reconstructing ancient technologies
  - New horizons: archaeometallurgy in eastern Europe and beyond
  - New approaches, new technologies in archaeometallurgy
- For each topic, a key note lecture providing the state of the art will be held. Papers on archaeometallurgy of Non-European countries will be grouped in a special session.

There will be a dinner party as well as two excursions during/after the conference to a famous Archaeological Museum and to a worldwide known industrial heritage monument of the Ruhr District.

Please book accommodation early: there will be the Women Soccer Worldcup in the same week at Bochum!

For further information as well as for downloading the announcement and registration form please visit our website: <http://aie3.bergbaumuseum.de>

Should any questions arise feel free to contact us any time.

Kind regards

Andreas Hauptmann / Diana Modarressi-Tehrani

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## **CALL FOR PAPERS: ORGANIC RESIDUE ANALYSIS IN ARCHAEOLOGY, ASOR ANNUAL MEETING, NOVEMBER 16-19, 2011, SAN FRANCISCO, CALIFORNIA**

Call for Papers: Organic Residue Analysis in Archaeology, at the ASOR annual meeting, November 16-19, 2011 in San Francisco, California.

Abstract: Organic residue analysis increasingly has been used as a means to answer archaeological questions about diet and cuisine, but also more recently, cult and crafts manufacture, that is to say, any activity that may have left behind traces of organic residue. In this session, papers will present a variety of methods for analyzing organic residues in archaeological contexts. Discussion will focus on critiquing different techniques and addressing present limitations and potential complications, as well as avenues for future research.

Questions about the session can be addressed to one of the co-chairs, listed below. Please note the deadline for submission of abstracts is February 15, 2011.

For information on the annual meeting, including registration and abstract submission go to:

<http://www.asor.org/am/call-for-papers.html>. Membership in ASOR is required to present at the meeting and registration for the meeting must be done together with abstract submission. Additional information about the annual meeting is available on the ASOR web site <http://www.asor.org/>.

Session Organizers:

Laura Mazow, Assistant Professor, East Carolina University, Department of Anthropology, [mazowl@ecu.edu](mailto:mazowl@ecu.edu)

Dr. Anthony Kennedy, Assistant Professor, East Carolina University, Department of Chemistry, [kennedyan@ecu.edu](mailto:kennedyan@ecu.edu)

Susanne Grieve, Director of Conservation, East Carolina University, Department of History, [grieves@ecu.edu](mailto:grieves@ecu.edu)

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## **INTRODUCTION TO CERAMIC PETROLOGY COURSE 2011**

In spring 2011, the Fitch Laboratory will hold a two-week postgraduate training course providing an introduction to ceramic petrology. The course, building upon the Fitch's established reputation on ceramic petrology applications and its extensive reference collections of geological and ceramic thin sections, was offered for the first time in spring 2010 after a generous grant by the Bradford McConnell Trust to build the necessary teaching infrastructure. Its unforeseen success, reflected in the excellent field of more than fifty applicants from thirty institutions across fifteen countries and the first-rate course assessment by the first participants, has enforced the need for its continuation. The course is open mainly to people with no previous experience on petrology although familiarity with archaeological ceramics will be useful. It is an excellent introduction for students already (or hoping to embark) on a Master's or research degree in archaeological materials, as well as for postdoctoral researchers interested in being familiar with ceramic petrology applications. Although the focus is primarily with ceramic materials the skills learnt are applicable to the study of lithics, building materials, pigments and soils.

The course will comprise daily lectures and practicals introducing to optical polarizing light microscopy, the identification of main rock-forming minerals, the classification of rock types, the use and interpretation of geological maps and, subsequently, the analysis of ceramic thin sections to reconstruct provenance and technology. Furthermore, a field class to Aegina, including a visit to a traditional pottery workshop, will provide practical experience on prospection for pottery raw materials and sampling, as well as contemporary potting practices. In the second week, each participant will have the opportunity to undertake a case study project. A course manual will be provided for participants covering all aspects of the course and further reading.

The course co-coordinators and instructors will be **Evangelia Kiriatzis** (Director, Fitch Laboratory) and **Ruth Siddall** (Lecturer, Earth Science, UCL).

**Dates: 11 – 22 April 2011.**

**Course Fee:** The course fee includes tuition, accommodation, fieldtrip expenses, all teaching materials, BSA membership for a month including 24 hour access to the superb library and entry to archaeological sites and museums. The fee is 900€ for shared accommodation in double rooms and 1000€ for single accommodation. Self-catering accommodation (including breakfast) will be provided at the BSA Hostel, next to the Fitch Laboratory building. Travel to and from Athens is the sole responsibility of the course participant.

The course is limited to 10 places. Post-graduate students are recommended to apply to their universities for financial support; limited funding (provided by the Bradford McConnell Trust) is available for students who would otherwise be unable to attend.

**Applications** should include: a brief curriculum vitae, two reference letters and a short covering letter stating the interest in ceramic petrology and reasons for wishing to do the course. Applications should be submitted via e-mail to [flsecretary@bsa.ac.uk](mailto:flsecretary@bsa.ac.uk)



Closing date: **18 February 2011**. References must also be received by then through e-mail: it is the applicant's responsibility to ensure that references are sent. The successful candidates will hear by early March 2011.

For further information, please check the relevant sections on the British School at Athens web pages or contact either of the two course coordinators

For more details see: [http://www.bsa.ac.uk/pages/content.php?cat\\_id=68](http://www.bsa.ac.uk/pages/content.php?cat_id=68)

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# **TECHNART 2011 – BERLIN, APRIL 26 - 29, 2011, NON-DESTRUCTIVE AND MICROANALYTICAL TECHNIQUES IN ART AND CULTURAL HERITAGE**

The aim of TECHNART 2011 is to provide a scientific forum to present and promote the use of analytical spectroscopy techniques in the field of cultural heritage. The conference builds on the momentum of TECHNART 2009 offering an outstanding and unique opportunity for exchanging knowledge on leading edge developments. Cultural heritage studies are interpreted in a broad sense, including pigments, stones, metals, glass, ceramics, chemometrics on artwork studies, resins, fibers, forensic applications in art history, archaeology and conservation science.

TECHNART 2011 is organised by [BAM Federal Institute for Materials Research and Testing](#) and will take place from 26 to 29 April 2011 in Berlin, Germany, at BAM Headquarters.

## **Conference topics**

X-ray microanalysis (XRF, PIXE, XRD, SEM-EDX)

Confocal X-ray microscopy (3D Micro-XRF, 3D Micro-PIXE) Synchrotron, ion beam and neutron based techniques/instrumentation

FT-IR and raman microscopy

UV-Vis and NIR absorption/reflectance and fluorescence

Laser-based analytical techniques

Magnetic resonance techniques

Chromatography (GC, HPLC) and mass spectrometry

Optical imaging and coherence techniques

Mobile spectrometry and remote sensing

## **Special Issue in Analytical Bioanalytical Chemistry**

We would like to invite you to contribute to a special issue in the context of the TECHNART 2011. The special issue will appear in Analytical and Bioanalytical Chemistry ([www.springer.com/abc](http://www.springer.com/abc)). Manuscripts need to be critical reviews or full research papers and present original, unpublished work focussing on analytical and bioanalytical themes presented at the conference. Deadline for submissions is May 15, 2011.

Please visit the site: <http://www.technart2011.bam.de/en/home/index.htm>

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**MYCENAEAN WALL-PAINTINGS IN  
CONTEXT. NEW DISCOVERIES AND OLD  
FINDS RECONSIDERED (FEBRUARY 11-13,  
2011), ΑΘΗΝΑ, COTSEN HALL (ASCSA)  
(ΑΝΑΠΗΡΩΝ ΠΟΛΕΜΟΥ 9) & ΕΘΝΙΚΟ  
ΊΔΡΥΜΑ ΕΡΕΥΝΩΝ (ΒΑΣΙΛΕΩΣ  
ΚΩΝΣΤΑΝΤΙΝΟΥ 48)**



Despite the obvious fragmentation and scarcity of Mycenaean wall-paintings, newly excavated finds and new restorations of old fragments are gradually changing the landscape of Mycenaean iconography by expanding the range of known subject matters.

The aim of the present workshop is to bring together scholars who are actively engaged in the study of Mycenaean murals, both those excavated long ago and those only recently discovered, at the major Greek mainland sites of Thebes, Orchomenos, Gla, Mycenae, Tiryns, Argos, Sparta, and Pylos. Their research presents an unparalleled opportunity for us to explore more systematically relationships between the pictorial themes of particular paintings and the specific contexts in which they have

been found.

## **PROGRAM**

### **Friday, February 11, 2011**

*Cotsen Hall, ASCSA, 9 Anapiron Polemou St.*

19.00 Opening Lecture

**John Bennet**, Centre for Aegean Archaeology,  
University of Sheffield.

*Telltale Depictions: A Contextual View of Mycenaean Wall-Paintings.*

Wine and Cheese Reception at ASCSA.

### **Saturday, February 12, 2011**

*National Research Foundation, 48 Vassileos Constandinou Ave.*

9.00-9.20

**Jack Davis**, The American School of Classical Studies at Athens.

*Welcome.*

*Chair: Vassilis Aravantinos, 9th Ephorate of Prehistoric  
and Classical Antiquities, Thebes*

9.20-10.00

**Andreas G. Vlachopoulos**, Department of History  
and Archaeology, University of Ioannina.

*Detecting "Mycenaean" Elements in the "Minoan" Wall-Paintings  
of a "Cycladic" Settlement. The Wall-Paintings of Thera and Their  
Iconographic Koine.*

10.00-10.40

**Adamandia Vasilogamvrou**, 5th Ephorate of Prehistoric and Classical Antiquities, Sparta.

*Preliminary Study of the First Mycenaean Fresco Fragments from Laconia.*

**10.40-11.20**

**Michael B. Cosmopoulos**, University of Missouri-St.Louis and Athens Archaeological Society.

*A Group of New Mycenaean Frescoes from Iklaina, Pylos.*

**11.20-11.40 Coffee break**

**Chair: Nicoletta Divari-Valakou**, 3rd Ephorate of Prehistoric and Classical Antiquities, Athens

**11.40-12.10**

**Sharon Stocker**, Department of Classics, University of Cincinnati.

**Jack Davis**, ASCSA.

*Land and Sea: The Stratigraphic Context for the Wall-Paintings from Hall 64 of the "Palace of Nestor" at Pylos.*

**12.10-12.50**

**Hariclia Brecolaki**, KERA, The National Research Foundation.

**Sharon Stocker**, Department of Classics, University of Cincinnati.

**Jack Davis**, ASCSA.

**Emily Egan**, Department of Classics, University of Cincinnati.

*An Unprecedented Naval Scene from Hall 64 of the "Palace of Nestor" at Pylos.*

**12.50-13.20**

**Katie Demakopoulou**, Former Director of the National Archaeological Museum at Athens, Director of the Midea Excavations.

**Christos Boulotis**, Academy of Athens, Research Centre for Antiquity.

*Evidence for Mycenaean Wall-Paintings at Midea.*

**13.20-15.00 Lunch break**

**Chair: Efi Sakellarakis**, Honorary Ephor of Antiquities

**15.00-15.30**

† **Yannis Sakellarakis**, Honorary Ephor of Antiquities.

**Iphigenia Tournavitou**, Department of History, Archaeology, and Social Anthropology, University of Thessaly.

**Hariclia Brecolaki**, KERA, The National Research Foundation.

*A Preliminary Presentation of the Mycenaean Wall-Paintings from Argos.*

**15.30-16.10**

**Alcestis Papadimitriou**, 4th Ephorate of Prehistoric and Classical Antiquities, Nauplion.

**Joseph Maran**, Institute for Prehistory, Early History, and Near Eastern Archaeology, University of Heidelberg.

**Ulrich Thaler**, Ludwigs-Maximilians-Universität, Munich.

*A New Wall-Painting Scene from Tiryns.*

**16.10-16.50**

**Christos Boulotis**, Academy of Athens, Research Centre

for Antiquity.

*Flying Blue Birds on an Offering Table from Tiryns.*

**16.50-17.10 Coffee break**

**Chair:** *Anna Michailidou, KERA, The National Research Foundation*

**17.10-18.10**

Discussion

### **Sunday, February 13, 2011**

*National Research Institute, 48 Vassileos Constandinou Ave.*

**Chair:** *Eleni Papazoglou-Manioudaki, National Archaeological Museum*

**9.00-9.40**

**Iphigenia Tournavitu**, Department of History, Archaeology, and Social Anthropology, University of Thessaly.

*Sport, Prestige, and Ritual Outside the Palaces: Pictorial Frescoes from the West House at Mycenae.*

**9.40-10.20**

**Kim Shelton**, Department of Classics, University of California, Berkeley.

*LH IIIA Frescoes from Petsas House, Mycenae: Splatters, Patterns and Scenes.*

**10.20-11.00**

**Diana Wardle**, Department of Archaeology, University of Birmingham.

*The Wall-Painting from the "Room with the Fresco" at Mycenae: Context and Content.*

**11:00-11.20 Coffee break**

**Chair:** *Spyros Iakovidis, Academy of Athens, Research Centre for Antiquity*

**11.20-11.50**

**Eleni Palaiologou**, 4th Ephorate of Prehistoric and Classical Antiquities, Nauplion.

*A Female Painted Plaster Figure from Mycenae.*

**11.50-12.30**

**Elena Kountouri**, Head of the Secretariat of Central Archaeological Council.

*Bits and Pieces: New Evidence Unfolds. Wall-Painting Fragments from the Stratified Context on the Spourlis Property in Thebes.*

**12.30-13.10**

**Theodoros Spyropoulos**, Honorary Ephor of Antiquities.

*Mural Paintings from the Mycenaean Palace of Boeotian Orchomenos.*

**13.10-13.50**

**Christos Boulotis**, Academy of Athens, Research Centre for Antiquity.

*A Dolphin Frieze and Nautili (?) from the Mycenaean Citadel of Gla, Boeotia.*

**13.50-15.20 Lunch break**

**Chair:** *Maria Vlazaki-Andreadaki, Director General of Antiquities and Cultural Heritage, Ministry of Culture and Tourism*

**15.20-17.00** Closing discussion

Closing discussion will take place at the foundation  
“The Other Arcadia”, where there will also be an exhibition  
of contemporary Greek painting (Christos Bokoros  
and Chronis Botsoglou) from Sotiris Felios’ Collection  
(16 Fokionos Negri St., Kypseli. Tel. 210 88 24 681).

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## **ΠΡΟΓΡΑΜΜΑ ΕΚΔΗΛΩΣΕΩΝ ΕΜΑΕΤ** **ΦΕΒΡΟΥΑΡΙΟΣ – ΜΑΙΟΣ 2011**

Στην αίθουσα του  
ΜΟΥΣΕΙΟΥ ΤΗΣ ΠΟΛΕΩΣ ΤΩΝ ΑΘΗΝΩΝ  
Παπαρρηγοπούλου 5-7, Πλατεία Κλαυθμώνος  
Ωρα έναρξης 18.30  
*Η αίθουσα παραχωρείται ευγενώς από το ΔΣ του Ιδρύματος Βούρου - Ευταξία*

### **Δευτέρα 14 Φεβρουαρίου 2011**

Χρυσόχου Στ.

*«Πτολεμαϊκή Χαρτογραφία στο Βυζάντιο»*

### **Δευτέρα 28 Φεβρουαρίου 2011**

Χόνδρος Θ.

*«Ο Απο-Μηχανής Θεός στα θέατρα Διονύσου και Φλοιούντος»*

### **Δευτέρα 14 Μαρτίου 2011**

Βρατσάνος Γ.

*«Η Πρακτική Αριθμητική των Αρχαίων Ελλήνων»*

### **Δευτέρα 21 Μαρτίου 2011**

Λαμπρινουδάκης Β.

*«Αρχαίο υδραγωγείο Μελάνων Νάζου»*

### **Δευτέρα 4 Απριλίου 2011**

Εγγλέζος Δ.

*«Σχεδιασμός περιμετρικού τείχους της Ακρόπολης των Αθηνών – Ιστορική παρουσίαση και αξιολόγηση με βάση σύγχρονες γεωτεχνικές αντιλήψεις»*

### **Δευτέρα 11 Απριλίου 2011**

Μουλλού Δ.

*«Τεχνητός φωτισμός στην Ελλάδα των κλασικών χρόνων»*

### **Δευτέρα 9 Μαΐου 2011**

Rihll T.E.

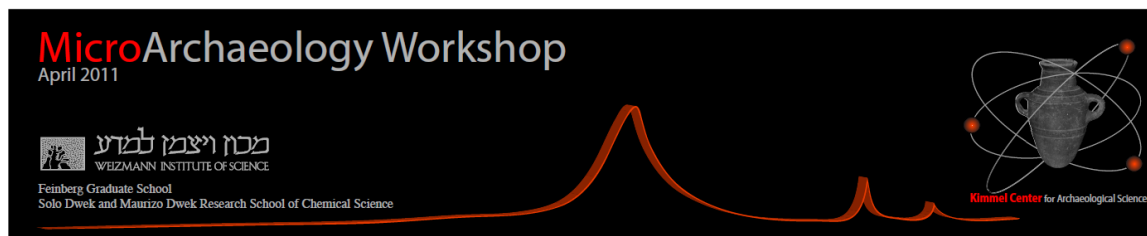
*«Η τεχνολογία στον Αινεία τον τακτικό» (διάλεξη στα αγγλικά)*

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*Η παρουσία Μελών και Φίλων της ΕΜΑΕΤ είναι χαρά για όλους-μας, ανεβάζει δε και τη στάθμη των παραγωγικών συζητήσεων που επακολουθούν κάθε ομιλίας.*

**Θ.Π. Τάσιος, Πρόεδρος ΕΜΑΕΤ**

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Dear colleagues,

Modern excavations include more than the traditional bucket and shovel methods, but also on and off-site laboratories. During April 3-8, 2011, an international student workshop on MicroArchaeology, will take place at the Weizmann Institute of Science, Israel. In the workshop, topics such as geomorphology, phytoliths, aDNA, radiocarbon, residue analysis, and more, will be discussed.

The number of participants is limited to 40, in order to enable informal interactions between students, postdocs, and professors, as well as to create the right atmosphere for discussions on the various related research fields.

Students who wish to participate can pre-register free of charge at:

<http://www.weizmann.ac.il/conferences/MicroArchaeology/>

The pre-registration is open till January 21, 2011.

Due to the limited number of participants, all students/postdocs are encouraged to present their work in either an oral presentation or a poster. Please attach the abstract in the pre-registration process.

Grants are available for selected applicants. The grant money will cover most of the travelling and accommodation expenses. Please refer to the website for full details.

List of invited speakers:

Prof. Rosa Maria Albert, University of Barcelona, Spain

Dr. Francesco Berna, Boston University, USA

Dr. Elisabetta Boaretto, Bar-Ilan University and Weizmann Institute of Science, Israel

Prof. Matthew Collins, University of York, UK

Prof. Israel Finkelstein, Tel-Aviv University, Israel

Prof. Yuval Goren, Tel-Aviv University, Israel

Prof. Carl Heron, University of Bradford, UK

Prof. Aren Maier, Bar-Ilan University, Israel

Dr. Shannon McPherron, Max Planck Institute for Evolutionary Anthropology, Germany

Prof. Kris Poduska, Memorial University of Newfoundland, Canada

Dr. Ruth Shahack-Gross, Bar-Ilan University and Weizmann Institute of Science, Israel

Prof. Noreen Tuross, Harvard University, USA

Prof. Steve Weiner, Weizmann Institute of Science, Israel

Dr. Ehud Weiss, Bar-Ilan University and Weizmann Institute of Science, Israel

Please do not hesitate to contact us with any question or comment.

All the best,



Organizing Committee  
[microarchaeology@weizmann.ac.il](mailto:microarchaeology@weizmann.ac.il)

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**INTERNATIONAL SYMPOSIUM, IECS**  
**2011, ON THE “SCIENCE & ART OF**  
**COLOR”, SUNDAY & MONDAY,**  
**FEBRUARY 27 & 28, 2011, SHENKAR**  
**COLLEGE OF ENGINEERING AND**  
**DESIGN IN RAMAT-GAN, ISRAEL**

It gives me great pleasure to invite you to a unique international symposium, iECS 2011, on the “Science & Art of Color”, which will take place on Sunday & Monday, February 27 & 28, 2011, at the Shenkar College of Engineering and Design in Ramat-Gan, Israel.

This symposium will convene experts in their fields who will discuss the use of color in modern design, urban lighting, architecture, painting styles, women’s fashion, as well as the psychology and philosophy of color. The nature of pigments and dyes, as detected by scientific methods, and the role of color in use in ancient palaces, historic paintings, medieval manuscripts, and ancient European textiles will also be presented. Additionally, the scientific discovery of the first authentic Biblical Tekhelet from ancient Israel will be announced and discussed.

Post-symposium Study Tours of Israel will further enhance the program.

The registration is now open. Please reserve your place soon in this colorful event. All the details regarding this symposium are available at its website address: [www.edelstein-center.com/color-symposium](http://www.edelstein-center.com/color-symposium)

We look forward to personally welcoming each and every one of you to iECS 2011 – the Celebration of Color.

On behalf of the organizing committee,  
Prof. Zvi C. Koren  
Director, The Edelstein Center for the Analysis of Ancient Artifacts  
[zvi@mail.shenkar.ac.il](mailto:zvi@mail.shenkar.ac.il)

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

**RESEARCH FELLOWSHIP**  
**ANNOUNCEMENT: "APPLICATION AND**  
**DEVELOPMENT OF COMPUTATIONAL**  
**INTELLIGENCE METHODOLOGIES IN**  
**ANALYZING ARCHAEOLOGICAL**  
**DATA"**

**-NARNIA-**

New Archaeological Research Network for Integrating Approaches to ancient material studies

A Marie Curie Initial Training Network  
FP7-PEOPLE-2010-ITN

Early Stage Researcher Fellowship Announcement

Fellowship Title and ID code

Marie Curie Early Stage Research Fellowship (ESR08) at G.M EuroCy Innovations LTD (Nicosia, Cyprus), in cooperation with the KIOS Research Center for Intelligent Systems and Networks and the Department of Electrical and Computer Engineering, University of Cyprus.

Title of Research Project

*“Application and development of computational intelligence methodologies in analyzing archaeological data”*

Fellowship Description

The main scope of the research project is to investigate, design, implement and use intelligent algorithms to facilitate archaeological research and archaeometry, in analyzing, classifying and making sense out of large quantities of structured and semi-structured data. The Fellow (PhD student) is expected to undertake research in the broad area of computational intelligence (pattern recognition, neural networks, statistical and adaptive learning, optimization etc.) and collaborate with the academic and industrial partners in the NARNIA network and beyond, to exploit the research outcomes.

Academic Requirements

Eligible applicants for this Fellowship (equivalent to a PhD position) must be in possession of a Master or a BSc degree, in the field of Electrical Engineering or Computer Engineering or Computer Science or Information Technology Science or Physics, or any other equivalent subject. Background in archaeology and/or archaeometry is not mandatory, however, it will be considered as an advantage.

*It is required that the degree has been acquired not more than 4 years earlier to the envisaged starting date.*

#### Marie Curie ITN programs mobility requirement

At the time of the selection, applicants must not have resided or carried out their main activity (work, studies, etc.) in Cyprus for more than 12 months in the 3 years immediately prior to the starting date.

#### Duration of fellowship

3 years – starting from September 2011.

#### Submitting an application

Deadline for Fellowship application: 20 March 2011

1. Applicants should contact Prof. Marios Polycarpou and Mr. George Milis (details provided below) via email, attaching their CV and a cover letter including a brief description of the reason they apply for the specific fellowship and their research plans.
2. Separately and in parallel to the Marie Curie Fellowship application, the candidates must apply for admission in the PhD program in the Electrical and Computer Engineering Department of the University of Cyprus. The deadline for the PhD application is the 15th April 2011. (please, check also the information at <http://www.ucy.ac.cy/goto/ece/en-US/GeneralInfo1.aspx>)

#### Financial regime

The fellowship covers tuition fees and monthly salary in line with the FP7-PEOPLE-2010-ITN ([http://ec.europa.eu/research/fp7/understanding/marie-curieinbrief/home\\_en.html](http://ec.europa.eu/research/fp7/understanding/marie-curieinbrief/home_en.html)). The annual salary amounts to €32.700 gross.

#### Contact persons

Prof. Marios Polycarpou ([mpolycar@ucy.ac.cy](mailto:mpolycar@ucy.ac.cy)), Department of Electrical and Computer Engineering, University of Cyprus

Mr. George Milis ([George.milis@eurocyinnovations.com](mailto:George.milis@eurocyinnovations.com)), G.M EuroCy Innovations LTD

More information on NARNIA:

<http://www.ucy.ac.cy/data/archreun/narnia%20information.pdf>

<http://www.narnia-itn.eu> (will be available by mid Feb 2011)

More information on G.M EUROCY INNOVATIONS LTD and the University of Cyprus:

<http://www.eurocyinnovations.com>

<http://www.ucy.ac.cy> (<http://www.kios.ucy.ac.cy>)

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Maria Dikomitou

FP7 (Marie Curie) NARNIA Project Manager and Research Fellow  
New Archaeological Research Network for Integrating Approaches to ancient material studies

Archaeological Research Unit  
University of Cyprus  
P.O.Box 20537 CY-1678 NICOSIA Cyprus

email: [m.dikom@ucy.ac.cy](mailto:m.dikom@ucy.ac.cy)

tel. +357-22-893574

fax: +357-22-674101

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## **ΕΕ: 40 ΕΚΑΤ. ΕΥΡΩ ΚΕΦΑΛΑΙΟ** **ΕΚΚΙΝΗΣΗΣ ΓΙΑ ΝΕΑΡΟΥΣ** **ΕΡΕΥΝΗΤΕΣ**

NAFTEMPORIKI.GR Τετάρτη, 19 Ιανουαρίου 2011

Το ποσό των 40 εκατομμυρίων ευρώ, που θα καλύψουν περισσότερες από **400 επιχορηγήσεις**, θα χορηγηθεί σε ερευνητές που ξεκινούν την πρώτη τους απασχόληση πλήρους χρόνου στην έρευνα σε ευρωπαϊκό ερευνητικό ίδρυμα το 2011.

**Οι επιχορηγήσεις για έναρξη σταδιοδρομίας, ύψους 100 000 ευρώ, χρηματοδοτούνται από το πρόγραμμα της ΕΕ Marie Curie** και αποσκοπούν να ενθαρρύνουν ευρωπαίους επιστήμονες να επιστρέψουν στην Ευρώπη, καθώς και να προσελκύσουν τους καλύτερους νεαρούς ερευνητές άλλων εθνικοτήτων **να εργαστούν σε ευρωπαϊκά πανεπιστήμια, επιχειρήσεις και άλλα ιδρύματα.**

«Εάν θέλουμε να προαγάγουμε την επιστήμη και να υποστηρίξουμε την καινοτομία στην Ευρώπη, οφείλουμε να εξασφαλίσουμε ότι η Ευρώπη είναι ελκυστικός τόπος εργασίας για τους Ευρωπαίους ερευνητές· πρέπει να προσελκύσουμε επίσης τα καλύτερα talέντα από το εξωτερικό» δήλωσε η Ανδρούλλα Βασιλείου, Ευρωπαϊά Επίτροπος αρμόδια για θέματα εκπαίδευσης και για το πρόγραμμα Marie Curie.

Σύμφωνα με το working paper (έγγραφο εργασίας) του 2010 του Οργανισμού Οικονομικής Συνεργασίας και Ανάπτυξης (ΟΟΣΑ) με θέμα την απασχόληση και την κινητικότητα των κατόχων διδακτορικού, έως και 30% των Ευρωπαίων κατόχων διδακτορικού εργάστηκαν εκτός της Ευρώπης την τελευταία δεκαετία, με σημαντικές ροές προς τις Ηνωμένες Πολιτείες.

### **Ποιοι μπορούν να υποβάλουν αίτηση**

Οι επιχορηγήσεις για έναρξη σταδιοδρομίας της ΕΕ προσφέρονται σε ερευνητές κάθε εθνικότητας. **Η χρηματοδότηση στοχεύεται στο μεταδιδακτορικό επίπεδο και δεν υπάρχουν περιορισμοί όσον αφορά το πεδίο της έρευνας.** Η προθεσμία για την υποβολή των αιτήσεων λήγει στις **8 Μαρτίου 2011**. Ένα ανεξάρτητο πάνελ κορυφαίων ευρωπαίων και διεθνών ειδικών αξιολογεί και επιλέγει τους καλύτερους ερευνητές για να λάβουν τις επιχορηγήσεις.

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## **ΠΡΟΚΗΡΥΞΗ ΘΕΣΗΣ ΕΡΕΥΝΗΤΗ ΣΤΟ ΤΜΗΜΑ ΙΣΤΟΡΙΑΣ ΚΑΙ ΑΡΧΑΙΟΛΟΓΙΑΣ ΤΟΥ ΠΑΝΕΠΙΣΤΗΜΙΟΥ ΚΥΠΡΟΥ**

Αγαπητοί συνάδελφοι,

Σας στέλνω την προκήρυξη θέσης ερευνητή στο Τμήμα Ιστορίας και Αρχαιολογίας του Πανεπιστημίου Κύπρου που προκηρύσσεται στο πλαίσιο του Προγράμματος «New Archaeological Research network for Integrating Approaches to ancient material studies (NARNIA)». Η θέση χρηματοδοτείται από το 7<sup>ο</sup> Πρόγραμμα Πλαίσιο της Ευρωπαϊκής Επιτροπής, και συγκεκριμένα από τις δράσεις Marie Curie.

Ο υποψήφιος που θα επιλεγεί, θα εργαστεί σε ερευνητικό πρόγραμμα με θέμα την αρχαία κυπριακή μεταλλοτεχνία. Η έρευνα θα επικεντρωθεί στη μελέτη της τεχνολογίας μεταλλικών αντικειμένων από διαφορετικές περιόδους της ιστορίας της Κύπρου, με τη χρήση φορητής συσκευής Φθορισμετρίας Ακτίνων Χ (portable XRF).

Για περισσότερες πληροφορίες για το πρόγραμμα NARNIA επισκεφθείτε το σύνδεσμο <http://www.ucy.ac.cy/data/archreun/narnia%20information.pdf>

Φιλικά

Λίνα Κασσιανίδου

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Vasiliki Kassianidou  
Associate Professor  
Archaeological Research Unit - Department of History and Archaeology  
University of Cyprus  
P.O. Box 20537  
CY-1678 Nicosia, CYPRUS  
tel. +357 22 893564, FAX. +357 22 674101  
<http://www.ucy.ac.cy/~arkasian.aspx>

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# **-NARNIA-** **NEW ARCHAEOLOGICAL RESEARCH** **NETWORK FOR INTEGRATING** **APPROACHES TO ANCIENT MATERIAL** **STUDIES**

A Marie Curie Initial Training Network  
FP7-PEOPLE-2010-ITN

## **Experienced Research Fellowship Announcement**

### **Fellowship Title and ID code**

Marie Curie Experienced Research Fellowship (ER01) at the Department of History and Archaeology, University of Cyprus

### **Title of Research Project**

*“A diachronic study of ancient Cypriot metalwork”*

### **Fellowship Description**

Research focuses on a diachronic study of the metalwork produced through the ages on the island. This is a subject which has not received much attention in the past and which is feasible today thanks to the possibility of using a portable XRF analyser which does not require sampling. Collaboration will be established with the NARNIA partner institution of Sheffield, which leads a relevant work-package about the application of portable XRF in archaeology within the broader NARNIA project.

### **Academic Requirements**

Eligible applicants for this Experienced Research Fellowship (equivalent to a post-doctoral position) must *either* be in possession of a doctoral degree, irrespective of the time taken to acquire it, *or* have at least four years of full-time equivalent research experience in archaeometallurgy, or archaeological sciences, or archaeology, or materials science, or chemistry.

Their total research experience must not exceed 5 years after obtaining their Masters' degree.

Applicants should send via e-mail a CV (with a list of publications), a covering letter including brief description of their research activities and the names of two referees, to Dr. Vasiliki Kassianidou (E-mail: [v.kassianidou@ucy.ac.cy](mailto:v.kassianidou@ucy.ac.cy)). If available, a copy of a relevant recent publication should also be included with the application.

### **Marie Curie ITN programs mobility requirement**

At the time of selection by the host organisation, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their host



organisation for more than 12 months in the 3 years immediately prior to their recruitment.

**Duration of fellowship**

2 years – starting from March 2011

**Closing date for applications**

11 February 2011

**Financial regime**

Fellowship covers monthly salary in line with FP7-PEOPLE-2010-ITN

[http://ec.europa.eu/research/fp7/understanding/marie-curieinbrief/home\\_en.html](http://ec.europa.eu/research/fp7/understanding/marie-curieinbrief/home_en.html)

**Contact person**

Dr Vasiliki Kassianidou, NARNIA Project Coordinator  
Department of History and Archaeology, University of Cyprus  
[v.kassianidou@ucy.ac.cy](mailto:v.kassianidou@ucy.ac.cy)

**More information on NARNIA**

<http://www.ucy.ac.cy/data/archreun/narnia%20information.pdf>

**More information on the University of Cyprus**

[www.ucy.ac.cy](http://www.ucy.ac.cy)

**Project website**

Under construction.

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Maria Dikomitou

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University of Cyprus  
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**ANCIENT AND HISTORIC METALS:  
TECHNOLOGY, MICROSTRUCTURE,  
AND CORROSION, UCLA: LOS  
ANGELES, MONDAY, JULY 4<sup>TH</sup> TO  
FRIDAY JULY 8<sup>TH</sup> 2011**

Held at UCLA: Los Angeles, From Monday, July 4<sup>th</sup> to Friday July 8<sup>th</sup> 2011.

Instructor: Professor David A. Scott

Course Aims: This five-day course will act both as an introduction and a focus of more intensive study dealing with the examination, analysis, metallographic examination and deterioration of ancient and historic metals. The course is designed to benefit conservators, scientists and archaeologists who wish to learn how to prepare metallic samples for metallographic study, learn something of the technological aspects of the working and structure of metals, and how corrosion and patination can be discussed and examined.

Artefacts for examination: Over the past 27 years an unrivalled collection of mounted metallographic samples has been assembled, which are studied as part of the course practical work, involving both polarized light microscopy and metallographic microscopy of both freshly polished and etched samples. These samples range from cast iron from China to wootz steel from India, bronze coinage alloys from the Roman Empire to high-tin bronze from ancient Thailand, silver alloys from the Parthian period to ancient Ecuador, gilded copper and tumbaga from Peru and Colombia, to mention only a few of the geographical areas covered by available samples. Course participants will be instructed in the use of polishing and etching in the examination of samples and are encouraged to keep digital images of the samples they have prepared during the week. Students may also bring their own samples for examination if mounted and ground, or if not mounted, then one or two samples may be brought which can be mounted and prepared during the course.

Course Instructor:

David A. Scott, Professor, Department of Art History, UCLA, and Director of the MA program in Archaeological and Ethnographic Conservation. His book, *Copper and Bronze in Art: Corrosion, Colorants, Conservation* won the prize from the Association of American Publishers as the best Scholarly/Art book published in the USA in 2002. His book on *Iron and Steel: Corrosion, Colorants, Conservation*, written with Professor Gerhard Eggert, was published from London in July 2009. Professor Scott's most recent book is very relevant for this course, and was published in 2011, it is: "Ancient Metals: Microstructure and Metallurgy, Volume 1" Published by CSP: Conservation Science Press, ISBN 978-0-9829338-0-0. Available from the author at a cheaper price than Amazon, for \$58.00 US, including postage. If interested send e-mail to: [dascott@ucla.edu](mailto:dascott@ucla.edu).

Dr. Scott has published over 100 papers in the peer-reviewed literature, five books, and has been an editor for the journal 'Studies in Conservation' for the past 26 years.

Course Schedule: The course will be held over the five days from Monday July 4<sup>th</sup> to Friday July 8<sup>th</sup> 2011. The course will be held at UCLA in the basement of the Fowler Museum Building, Room A312, on the UCLA campus. Many nearby hotels and parking available and details will be sent of a list of hotels on request. The course will run from 9:15am-5pm each day.

The course is open to a maximum of 10 participants only.

Course Costs: The cost of the instruction for the five days will be \$850.00 or sterling equivalent of this amount [530 Pounds Sterling]. For details of payment and to register for this course, please contact the course organizer and director:

Professor David A. Scott,  
Room A410,  
The Cotsen Institute of Archaeology, UCLA  
405 Hilgard Avenue,  
Los Angeles CA 90095-1510, USA  
dascott @ ucla.edu

Course Details:

Monday:

Introduction, use of the metallurgical microscope, the mounting and polishing of samples, their preparation, use of resins, grinding and polishing. Introduction to phase diagrams and their application to ancient bronzes and copper alloys. Copper-arsenical, copper-nickel, and copper-tin alloys. Casting and working of metals and aspects of bronze casting in the ancient world. Etching of some copper alloys. Recording of samples with digital camera and case studies in the examination of a group of copper alloy plaques and a bronze figurine of the God Osiris will be discussed.

Tuesday:

Continuation of the examination of copper-tin and copper-tin-lead alloys. Ancient coinage alloys of the Roman period, examination of copper-arsenic bronzes, aspects of the corrosion of bronze and copper alloys. The Pourbaix diagram and some of its applications. The extraction of metals from their ores and some principles of the Ellingham diagram.

Wednesday:

The phase diagram for copper-silver and lead-tin alloys. Examination of silver and debased silver alloys. Surface enrichment and corrosion. Problems in the authentication of ancient silver and bronze alloys. Metallographic examination of ancient silver alloys and techniques of etching silver. Discontinuous precipitation phenomena and the age of silver alloys. Colour etching of both copper alloys and silver alloys. The Philosopher plate and the Strozzi silver basin: case studies from the J. Paul Getty Museum.

Thursday:

Mounting of samples brought by students. Examination of some ternary phase issues in relation to gold-silver-copper alloys. The corrosion of tumbaga alloys and aspects of the Pourbaix diagram. Video concerning the extraction of iron and steel. Introduction to iron and steel. The principles of corrosion and the eight types of corrosion of metals. The examination of iron from meteorites. The technology of ancient iron and steel in the West, in India and in China will be contrasted and samples illustrating these different technologies examined. The metallography of ancient iron alloys.

Friday:

Corrosion issues of iron and steel. Weathering steel and patinas, the nature of iron corrosion products and their implications for the stabilization of iron artefacts during conservation treatments. Problems with the examination of lead, lead-tin, zinc, and aluminium alloys. The reasons why brass was made by cementation, the extraction of metallic zinc and examination of samples of brass alloys. The use of solders and aspects of tinning of ancient bronzes. Examination of mounted specimens prepared on the Tuesday, and continuation of practical metallography. Gold and gold alloys: gilding: examination of gold alloys. Lecture on the technology of ancient gold alloys in South America. Continuation of metallographic practical examination.

\*\*\*\*\*

Professor David A. Scott  
Chair, UCLA/Getty Conservation Program  
The Cotsen Institute of Archaeology, Room A410  
University of California, Los Angeles  
405 Hilgard Avenue  
Los Angeles, CA 90095

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# **MICHAEL VENTRIS MEMORIAL** **AWARD FOR MYCENAEAN STUDIES** **2011**

The Michael Ventris Memorial Fund was founded in 1957 in appreciation of his contribution to the fields of Mycenaean civilization and architecture. The Trustees of the Fund offer an annual award of up to £2,000 to a junior scholar for research into Mycenaean studies or kindred subjects: (1) Linear B and other Bronze Age scripts of the Aegean and Cyprus, and their historical and cultural connections and (2) all other aspects of the Bronze Age of the Aegean and Cyprus. It is intended that the Award should support a specific project, which may be part of a continuing programme of post-doctoral research.

The Award is open to applicants from all countries who have completed their doctorate within the past eight years. Applications are also accepted from postgraduate students who are about to complete their doctorate, but the Award is not intended to fund doctoral research per se.

**Applications must reach the Deputy Director, Institute of Classical Studies, Senate House, Malet Street, London WC1E 7HU not later than 15 February 2011.** Applicants should give particulars of their age, qualifications, academic record, and should outline the work they intend to pursue in the event of the Award being made to them, including projected costs. Applications should not exceed 6 single-sided pages (A4). They may be submitted either as hard copy or by email (the attachment to be in PDF or compatible with Word 2003).

Applicants must also supply the names and addresses of two referees, and, at the same time, ask the referees to write independently in support of their application.

For further information please contact [admin.icls@sas.ac.uk](mailto:admin.icls@sas.ac.uk)

The Award will be made by a Committee appointed by the Institute of Classical Studies and Architectural Association acting jointly. Payment will be in one single sum in May of each year. The Committee reserves the right to make no Award in any given year or to invite a scholar to hold the Award in a particular year. If sufficient money is available, the Committee may from time to time make small grants from the Fund.

The successful candidate will be required to submit a written report to the Advisory Committee on the work that the Award has enabled him or her to complete. He or she may be invited to make a public presentation of the results at the Institute of Classical Studies.

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Dr O. H. Krzyszkowska  
Deputy Director  
Institute of Classical Studies  
Senate House

Malet Street  
London WC1E 7HU  
0207 862 8700  
[admin.icls@sas.ac.uk](mailto:admin.icls@sas.ac.uk)

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## **ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS**

COSTA  
NAVARINO

### **INTERNATIONAL ARCHAEOLOGY AWARD**

Το *Εργαστήριο Αρχαιομετρίας* του Τμήματος Ιστορίας, Αρχαιολογίας και Διαχείρισης  
Πολιτισμικών Αγαθών

της Πανεπιστημιακής Σχολής Καλαμάτας, Πανεπιστήμιο Πελοποννήσου, ανέλαβε την  
πρωτοβουλία της θεσμοθέτησης ενός Διεθνούς Βραβείου με τον τίτλο  
**COSTA NAVARINO – INTERNATIONAL ARCHAEOLOGY AWARD**

Στόχο του βραβείου αποτελεί η ανά διετία βράβευση ενός επιστήμονα αναγνωρισμένου,  
διεθνούς κύρους,  
στον τομέα της *Αρχαιομετρίας* και της *Αρχαιολογικής Έρευνας*.

#### ΔΙΕΘΝΗΣ ΕΠΙΤΡΟΠΗ ΤΟΥ ΒΡΑΒΕΙΟΥ

ΚΑΘ. C. RENFREW, ΚΑΘ. P. BETANCOURT, ΚΑΘ. G. WAGNER,  
ΚΑΘ. TH. REHREN, ΚΑΘ. Π. ΘΕΜΕΛΗΣ, ΚΑΘ. Α. ΣΑΒΒΙΔΗΣ,  
ΑΝΑΠΛ. ΚΑΘ. Ι. ΚΑΚΟΥΛΛΗ, Δρ. Ξ. ΑΡΑΠΟΓΙΑΝΝΗ, ΕΠΙΚ. ΚΑΘ. Ν. ΖΑΧΑΡΙΑΣ

Η πρώτη τελετή επίδοσης του βραβείου έλαβε χώρα στο Αμφιθέατρο της Πανεπιστημιακής  
Σχολής

Καλαμάτας την Παρασκευή 3 Δεκεμβρίου, 2010.

Το βραβείο απονεμήθηκε στον **Ιωάννη Λυριτζή**, Καθηγητή του Πανεπιστημίου του  
Αιγαίου

για το σύνολο της προσφοράς του στην προαγωγή της αρχαιομετρικής έρευνας και  
διδασκαλίας

στον ελληνικό χώρο και διεθνώς.



Στην τελετή παρέστησαν ο Πρύτανης του Πανεπιστημίου Πελοποννήσου Καθ. Θ. Παπαθεοδώρου,  
ο καπετάν Βασίλης Κ. Κωνσταντακόπουλος, ιδρυτής της COSTA NAVARINO  
κα τα μέλη της Επιτροπής Καθ. Π. Θέμελης, Δρ. Ξ. Αραπογιάννη και Επικ. Καθ. Ν. Ζαχαριάς.

Η τελετή έλαβε χώρα υπό την αιγίδα του ΠΑΝΕΠΙΣΤΗΜΙΟΥ ΠΕΛΟΠΟΝΝΗΣΟΥ





## **ΑΡΧΑΙΟΛΟΓΙΑ - ΔΩΡΕΑΝ ΤΕΥΧΗ**

### **Αναστολή έκδοσης - δωρεάν διάθεση παλαιών τευχών**

Μετά την αναστολή της έκδοσης του εντύπου "Αρχαιολογία και Τέχνες", αντίτυπα παλαιών τευχών από το τ. 85 κ. εξ. διατίθενται στα γραφεία του περιοδικού (7ος όροφος, Πλ. Καρύτση 10, Αθήνα) **μέχρι και τις 15 Μαρτίου 2011.**

Μπορείτε να μας επισκεφθείτε **καθημερινά** - εκτός Σαββάτου και Κυριακής - **10.00 π.μ. – 2.00 μ.μ.**

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## NEOLITHIC POTTERY VOLUNTEERS

Dear colleagues:

The Cornell Halai and East Lokris Project is looking for one or two volunteers to work with Neolithic pottery during the summer of 2011 as we prepare for the final publication of Neolithic Halai. The work, which will take place in the project's workrooms at Tragana, will involve setting out sherds in their stratigraphical context and checking that our records are complete. Some conservation work may also take place at the site itself. For further information, please see <http://halai.arts.cornell.edu/wwwroot/chelp/fieldops.htm> or contact me by e-mail.

\*\*\*\*\*

John E. Coleman

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## *INTERNET SITES*

# **SCHLIEMANN DIARIES NOW AVAILABLE ONLINE THROUGH THE AMSSCHOOL, ATHENS**

The American School of Classical Studies, Athens, is pleased to report it has digitized five of Schliemann's diaries (including those for Troy and Mycenae) and 21 of his correspondence copybooks, all from 1869-1890.

**The diaries are available online:**

<http://www.ascsa.edu.gr/index.php/news/newsDetails/schliemanns-archaeological-diaries-available-at-ascsas-web-page/>

The files for the correspondence copybooks are not yet available (they are very large), but will be available soon, perhaps through FLICKR.

Stay tuned!

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## EVANS, PALACE OF MINOS ONLINE AS PDFS (COURTESY U. HEIDELBERG)

The entire PoM is online and downloadable from the University of Heidelberg:

<http://digi.ub.uni-heidelberg.de/diglit/evans1921ga>

Evans, A.J., Palace of Minos (London: MacMillan 1921-1935, Index 1936): I, 1921; II, 1928; III, 1930; IV, 1935; V (index by Joan Evans), 1936

Homepage: <http://digi.ub.uni-heidelberg.de/diglit/evans1921ga>

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II.2: <http://digi.ub.uni-heidelberg.de/diglit/evans1928a>

III: <http://digi.ub.uni-heidelberg.de/diglit/evans1930>

IV.1: <http://digi.ub.uni-heidelberg.de/diglit/evans1935>

IV.2: <http://digi.ub.uni-heidelberg.de/diglit/evans1935a>

V (index): <http://digi.ub.uni-heidelberg.de/diglit/evans1936>

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## **CENTER FOR ANCIENT MEDITERRANEAN AND NEAR EASTERN STUDIES**

The new Center for Ancient Mediterranean and Near Eastern Studies (CAMNES) is now online at <[www.camnes.org](http://www.camnes.org)>, with many links. Most of its pages are in English, with few in Italian, such as a notice that targets Italians about the IV National Congress of Young Archeologists with two scholarships dedicated to the memory of P.E. Pecorella.

The scientific committee includes Giovannangelo Camporeale (Etruscology and Italic Antiquities, University of Florence), Giovanni Alberto Cecconi (Antiquity Sciences, Florence), Nicola Laneri (Research fellow at the Istituto Italiano per l’Africa e l’Oriente), Stefania Mazzoni (Professor of Near Eastern Archaeology and Phoenician and Punic Archaeology at the University of Florence), Jason Alik Ur (Associate Professor of Anthropology at Harvard University).

[From the Welcome page]

For more than a century archeology has experienced a strong "two-party" system that has seen lined up, on the one hand, scholars of the Mediterranean area and on the other those of the Ancient Near East. In recent years, however, the development of research techniques and analytical models of archeological evidence have identified similar historical paths that are similar if not, in some cases, common to these two major areas of the ancient world. Therefore, a new concept of Archaeology of the Mediterranean and the Near East is starting to develop, reaching beyond the natural boundaries and problems tied to intercultural contacts and relationships between these two geographical areas.

A broader geographical perspective than the one that has characterized past studies gives us the possibility to reconstruct social, cultural and ideological dynamics more extensively, offering the chance to grasp which cultural elements are products of local achievement or experimentation and which, instead, are the result of external input or influence. Thus, the "archaeological" approach concerning the "East and West" question becomes now more important than ever, placing face to face two seemingly different cultures, which in the beginning shared similar roots and which descended one from another.

Therefore CAMNES aims at the achievement of an international project of scientific excellence, research and advanced studies that seeks to overcome traditional geographic boundaries by creating a network between different institutions and universities - public and private - involved in education and scientific research in Italy in the Mediterranean and Middle Eastern regions. The main objective of this Center therefore, is to bring continuity and dynamism to the study of ancient cultures of the Mediterranean and the Near East through new systems of integrated education and research to acquire knowledge about and faster transmission of the common roots of Western and Eastern civilization.

From Guido Guarducci <[guido.guarducci@camnes.org](mailto:guido.guarducci@camnes.org)> and "Stefano Valentini"  
<[stefano.valentini@camnes.org](mailto:stefano.valentini@camnes.org)>:

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

### **ARCHAEOLOGIA BULGARICA XIV 2010 #3**

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The last issue of volume XIV of ArchBulg has been printed. More information at [www.archaeologia-bulgarica.com](http://www.archaeologia-bulgarica.com)

Best,

Lyudmil Vagalinski  
editor of ArchBulg  
[www.naim.bg](http://www.naim.bg)

ARCHAEOLOGIA BULGARICA XIV 2010 #3

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## **TASTE OR TABOO: DIETARY CHOICES IN ANTIQUITY, MICHAEL BEER**

Bryn Mawr Classical Review 2011.01.07

Michael Beer, *Taste or Taboo: Dietary Choices in Antiquity*. Totnes: Prospect Books, 2009. Pp. 152. ISBN 9781903018637. \$24.00 (pb).

Reviewed by Jack Lennon, University of Nottingham ([abxj11@nottingham.ac.uk](mailto:abxj11@nottingham.ac.uk))

Follow this link to buy this book from Amazon and support BMCR

Beer's book offers a select series of case studies on key topics derived from his doctoral research on diet in ancient Mediterranean societies. Throughout the book Beer highlights examples of similarity and difference in Greek and Roman attitudes to foods and in those groups who ate or abstained from them. The central point, stressed throughout, is that food was a means of establishing identity within society or of labelling others as 'outsiders'. Its presentation, consumption or restriction could reveal social class, gender, ethnicity or religion. How one responded to social customs could reveal qualities to be abhorred or emulated. Beer divides his subject into 'actual practice and the realm of literature',<sup>1</sup> referring in particular to idealised attitudes towards certain foods or diets, such as the numerous links drawn in literature of gluttony with moral weakness.

The introduction sets the scene with some notable parallels between ancient and modern attitudes to food in popular culture. Did the ancients share our concept of a size zero or a comparable 'ideal form', and was this linked to diet? The author discusses the presence of involuntary and voluntary dietary restrictions in antiquity.

Involuntary restrictions might be environmental or economic, resulting from climate or location (soil conditions, distance from the coast, and costs of cultivation/storage/transport). Voluntary restrictions stemmed from social, religious or philosophical taboo, in some cases acting with such force as to blur the line with involuntary restriction.

Chapter 1, "Diet in the Ancient World" offers a general overview of eating practices, stressing that for most people diet was not determined by choice but by necessity. The chief source of sustenance was either wheat or barley. The Greek climate made barley a more suitable staple, whereas Rome favoured wheat. The rejection of barley was subsequently taken up by Latin authors to express 'separateness' from Greece as well as to create a feeling of cultural superiority.

Such divisions also appeared within the societies themselves. A number of basic foodstuffs including chickpeas, beans, lentils and pulses were available to all, but their presentation and context revealed the class divide. Foods imported from further afield possessed greater worth, indicating luxury and opulence. Meat was a rare extravagance for many and often available only at religious festivals. Beer raises some initial points about the variety of animals deemed suitable for eating while hinting ahead to the suspicion of vegetarians, whose rejection of meat set them apart from others. Beer stresses that any form of dietary restriction or rejection of cultural eating practices functioned not only as a means of self-representation but also as a way to stigmatise outsiders.



Chapter 2, “Vegetarianism” begins by noting that adherents to vegetarianism would have been a very select minority. They might, through their refusal to participate in sacrificial meals, be viewed as impious. Since sacrifice offered an opportunity to enhance social interaction, such a rejection might also threaten the group’s cohesion. A series of references to Greek myths explores the place of meat within the ‘idyllic’ past. Beer jumps from Porphyry and Plato in discussing attitudes towards the treatment of animals in various contexts, and the effects this had on their consumption. The chief focus of the chapter is Pythagoras and his followers, and Beer summarises the biographies of the philosopher’s life and the conflicting views concerning his vegetarianism. Abstinence from meat and its connections with spiritual ‘purity’ are explored in relation to Pythagorean doctrine, although Beer suggests that not all Pythagoreans were required to observe a vegetarian diet. It was a life choice, but one that Roman authorities might equate with foreign religions, and so could be dangerous. This is demonstrated by the fair-weather vegetarianism of Seneca, who abandoned the diet in the wake of Tiberius’ religious persecutions.

Chapter 3, “Beans” focuses on the taboos surrounding broad beans which appear in various forms across the ancient world. Once again the abstinence of the Pythagoreans is a major point of discussion. As with vegetarianism, abstinence is confined to a distinct minority, since references to cultivating and harvesting beans appear throughout agricultural manuals. Since beans were widely available, avoidance of them cannot have been a symbolic rejection of luxury. Various religious taboos are listed, along with the use of beans to exorcise/placate the spirits of the dead in the Lemuria. This is followed by an interesting biological discussion of the potentially harmful toxins within certain beans and the medical issues that may arise amongst those with a specific enzyme deficiency. However, Beer is careful to note the difficulties in attributing any form of taboo to such a condition.

Chapter 4, “Fish” begins by examining cultural attitudes towards the sea itself. Beer rejects the assertion that there was a clear divide between ocean-loving Greeks and hydrophobic Romans. The sea appears to have been associated with unknown dangers, of which large fish were a factor. A cause of some anxiety was their consumption of human flesh.

What follows is a slightly strained discussion of fish in Homer, where it could be argued that Beer reads too much into the scarcity of fish in the diet of Homeric heroes. In particular, Odysseus’ company’s resorting to theft of sacred oxen when starving, instead of fishing, does not suggest to me evidence that fish were abhorred, but rather that the oxen were more easily attainable (and more integral to the story). From here Beer outlines the problems with fish both as food and as sacrificial offerings in Homer, in which their nature as scavengers reappears as a potential explanation for their unsuitability. The lack of fish-sacrifices across the Graeco-Roman world is linked to the apparent ‘selfishness’ of eating fish, since fish were not shared with the gods (although no reference is made to the Piscatorii ludi, in which fish were offered to Vulcan).<sup>2</sup> Much of this section concerns views from ‘outsiders’ on the superstitious practices of foreigners.

The rest of the chapter deals with fish as a symbol of luxury and excess and with their potential as a corrupting influence. Fish represented a form of food that existed purely for pleasure and as such was the cause of some alarm. The connection with wealth made fish

a status symbol, but, as ever, the type of fish one ate was the true indicator of class. Large, exotic fish were the prizes of the wealthy, while the poor ate smaller fish, sometimes taken from insanitary water sources.

Chapter 5, “The Dietary Laws of the Jews” concentrates on the various restrictions observed by those Jews living outside of Judea, where their self-imposed dietary abstinence singled them out as different.

Beer lists the various animals excluded from the Jewish diet along with certain specific requirements for animals listed in Deuteronomy and Leviticus. From here he explores attempts by ancient authors, particularly Philo Judaeus, to interpret the laws. Comparable examples of animal avoidance from Greek and Roman society are noted, but what marked the Jews out as different was their apparently unflinching dietary observance. Beer suggests that food played a key role in Jewish identity within the urban environment, where their clothes and language did not mark them out, but where their diet did. He also notes the existence of several subdivisions of Jews, each observing different taboos, not only on what they ate, but also with whom they ate.

Abstention from pork remained the greatest cause of both curiosity and ridicule from non-Jewish observers. This hostility sometimes led to the association of Jews with other foreign groups who were perceived as subversive. Ultimately, Jewish dietary laws united those who followed them at the family or sect level and also excluded outsiders, potentially offending the sensibilities of the wider populace.

Chapter 6, “Restrictions upon Alcohol” first justifies the place of alcohol as a foodstuff, albeit one whose nutritional content was minimal. Its role as a social aid is acknowledged in antiquity, and this acknowledgement is compared to modern attitudes, as is the anxiety over alcohol’s potential to damage social cohesion. A clear line is drawn between the status of wine in the Graeco-Roman world and other forms of alcohol amongst barbarian peoples. As with the production of wheat and barley, climate appears to have been a major factor in the cultivation of wine in Greece and Italy, and viniculture became a similar badge of cultural identity. From here Beer moves on to examine those who either refused to consume alcohol or whose access to alcohol was either controlled or otherwise entirely denied, such as women. ‘Self-regulation’ is a recurring theme, both within the Greek symposium and the Roman convivium, and there appears to have been a distinct disapproval of those whose excesses strayed beyond the boundaries of these events. Again, whom one shared a drink with mattered as much as what one drank.

Chapter 7, “State Control of Food: Spartan Diet and Roman Sumptuary Laws” moves beyond self-control and uses these two examples to explore instances where government regulation of diet and lifestyle was deemed necessary in order to protect the status quo. Here, food existed as part of a wider category of luxury and exoticism. Beer deals with Sparta first, examining concerns about the invasion of foreign tastes and habits. He focuses on the structure of Spartan feasting as opposed to specific dietary regulations, arguing that the popular image of frugality is at least partly the construct of outsider commentators.

Seating at meals was determined by social position, and the rich may have been permitted to go beyond the basic foods provided.

In the case of Rome, Beer focuses on the various laws that attempted to restrain aristocratic excess and bring Rome back to an earlier, purer phase of its history. The laws

in question span the period from the mid-Republic to the early Principate, and they clearly had little impact on anyone outside the aristocracy. The various causes for the laws are noted, and the expansion of Roman territory is linked with the slow descent into luxury. Thus, by keeping themselves perpetually ready for war, Romans eventually brought about the very state they wished to avoid. In the escalating political competition of the late Republic, food became an ideal way to display the extent of one's influence and power. That sumptuary laws declined from Tiberius onwards is taken as a sign that wealth was no longer a threat when the supreme power centred on a single individual. The stigma attached to gluttony remained.

Chapter 8, "Gluttony versus Abstinence: The Tyrant and the Saint" is much shorter, bringing together various theories from previous chapters. It focuses on Roman emperors whose moral shortcomings were made manifest through their diet. The gluttony of Claudius, Nero and Vitellius is symbolic of their 'weakness', which inevitably leads to further tyrannical behaviour. Conversely, abstemious rulers were thought to have greater control over their urges and thus to be able to avoid the temptations of tyranny. The infamous practice of purging in order to continue eating at banquets is described in terms of pushing the body beyond its natural ability.

In the course of this work Beer addresses a number of heavily debated topics and provides a useful overview of some difficult material. The structure of some chapters is sometimes hard to follow, however, and the author moves back and forth between Greek and Latin examples and source material with some frequency. Without doubt the greatest omission is Petronius' *Satyricon*, which does not appear in any of the discussions of *luxuria*. Despite these flaws, the author does manage to simplify a number of tricky subjects. This work will be of interest to scholars while remaining accessible to non-specialists. It employs a large number of primary sources, always offered in translation, and neatly summarises modern theories, making it a good starting point for those wishing to learn more about diet in antiquity.

Notes:

1. p. 122.
2. Festus s.v. *Piscatorii ludi*; H.H. Scullard *Festivals and Ceremonies of the Roman Republic* (London, 1981), 148.

Please visit the site: <http://bmcr.brynmawr.edu/2011/2011-01-07.html>

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# **FROM MINOS TO MIDAS: ANCIENT CLOTH PRODUCTION IN THE AEGEAN AND IN ANATOLIA. ANCIENT TEXTILES SERIES 7, BRENDAN BURKE**

Bryn Mawr Classical Review 2010.12.67

Brendan Burke, *From Minos to Midas: Ancient Cloth Production in the Aegean and in Anatolia. Ancient Textiles Series 7.* Oxford/Oakville, CT: Oxbow Books, 2010. Pp. xv, 206. ISBN 9781842174067. \$60.00.

Reviewed by Daniel J. Pullen, The Florida State University ([dpullen@fsu.edu](mailto:dpullen@fsu.edu))

This book, a revision of the author's doctoral dissertation (UCLA 1998), is a study of the political economy of textiles in three cultures: Minoan Crete (including Neolithic Knossos), Mycenaean Greece (including Late Bronze Age Knossos during the "Mycenaean occupation"), and Phrygian Gordion in the Early Iron Age. While Aegean prehistorians might dismiss the inclusion of Gordion as irrelevant, Burke makes a convincing argument for Gordion to be considered as another case in his comparison of textile production at palatial or regional economic centers. Along with some additional examples, both Old and New World, brought into the discussion in the last chapter (chapter 5: Comparative Textile Production and Conclusions), Burke has attempted a cross-cultural comparative study of one component of palatial political economy, that of textile production.

In an admirably honest preface (ix-x), Burke describes both what this book is not about as well as what his focus is. As he points out, this is not a guide to ancient textiles or to the archaeology of ancient textiles and the tools of their production.<sup>1</sup> Rather, his focus is on "how people in the past mobilized resources, organized labor, and produced cloth for exchange," and "how the state financed itself with cloth industries" (ix-x). His objective is "to assemble as much evidence as possible... and to present a coherent picture for organized cloth production on a scale beyond the household level at regional economic centers" (x).

This focus on the regional economic centers leads to a particularly narrow definition of craft specialization: "repeated, surplus production of one type of good ... by attached, dependent specialists for exchange directed by a central authority (the palace)" (6). While such a definition is pertinent to the subject of his book, I think that most archaeologists would prefer a broader one (such as that of Costin, discussed briefly by Burke in chapter 5) that would incorporate such craft specialization as Mycenaean ceramic production which is not produced by attached dependent specialists under palatial administration.<sup>2</sup> The importance of the non- or para-palatial economy in Mycenaean Greece has been firmly established, and one wonders at the scale of textile production outside of the watchful eyes of palatial administrators.

Nevertheless, the focus of Burke's book is on palatial production, and he makes ample use throughout his book of important concepts in the study of political economy such as wealth and staple finance. He does not see a simple dichotomy between wealth and staple finance, but rather suggests that textiles can function in multiple ways. Thus he argues that textile production was so important to the Mycenaean palaces that cloth served as both wealth financing in that the product was used as a standard of value or payment for services and as staple financing in that the product (cloth) could be converted into staple goods. Likewise Burke does not lump all economic activity into a single mold and, though he does label the political economy of the Mycenaeans as "redistributive" (67) despite his earlier (34) caution against that term, instead he prefers to break down economic activity and its transactions into various forms and components in order to illustrate the central role of textile production in the economy (67, 104ff). He characterizes the Minoan palatial economy as one that mobilizes raw materials and products from producers to the consumers (34), rather than saying the goods are "redistributed."

The first chapter provides an introduction to the production of textiles in antiquity, followed by a brief introduction to the three cultures under study. Additionally, Burke sets out the methodology used, and discusses some of the concepts behind the study of political economy.

The main body of *From Minos to Midas* consists of three chapters, dealing with textile production in Minoan Crete, Mycenaean Greece, and Gordion, respectively. Because of the varying degrees of preservation of different types of evidence (e.g., the Linear B tablets documenting Mycenaean administrative activities), these three chapters are not directly comparable to one another, yet Burke has gone to great lengths to bring together much of the pertinent evidence for palatial textile production for the three cultures.

Chapter 2 presents a history of textile production on Crete, beginning in the Neolithic and running through the Palatial period, intertwined with a discussion of the emergence of complex social organization and the Minoan palaces. Much of the chapter is devoted to a presentation of the various tools used in textile production, especially spindle whorls and loom weights, within the context of increasing specialization and palatial production. Two interesting sections in this chapter caught my attention: his discussions of purple dye and of Minoan seal stones. Burke argues for the appearance of purple dye from murex snails to occur in Minoan Crete before anywhere else in the Mediterranean (34ff). He brings together textual sources, bioarchaeological evidence, artifacts, and archaeological facilities and contexts in his discussion, and extends it to consider the role of textiles in ancient overseas trade between Minoan Crete and other cultures in the eastern Mediterranean.

Burke argues for the administration of textile production in the Old Palace Period, based on seal impressed loom weights and spindle whorls as well as a certain type of prismatic seal. He suggests that a motif found on more than twenty-five different seal stones represents three to five loom weights suspended from a bar at the bottom of a warp-weighted loom (44ff, especially fig. 30).<sup>3</sup> Burke concludes that the standardized weights of loom weights and their concentrated numbers indicate a "regulated textile industry administered by the Old Palace at Knossos" (58).



Unfortunately the last section of chapter 2, called “summary,” does not summarize the information presented about the political economy of textile production in the First and Second Palace periods, but instead discusses briefly the Final Palatial period. While Burke does present much evidence for textile production, the central topic of his study – the political economy of textile production in Minoan Crete – is presented in a diffuse way throughout the chapter and not in a single, synthetic section. He cites Mitello’s 2007 article “Textile Industry and Minoan Palaces”<sup>4</sup> in a general context but Burke does not address Mitello’s thesis, that Minoan palaces were “consumers” of textiles, in contrast to Mycenaean palaces as “producers.” A discussion of this issue by Burke would have made a very welcome conclusion to chapter 2.

Textile production in the Mycenaean palaces is the subject of chapter 3. As opposed to chapter 2 in which he dealt with mostly artifactual evidence, in chapter 3 he devotes nearly thirty pages to a discussion of the Linear B evidence for textile production and administration.

While there are summaries within individual sections (e.g., 92-93 on the Knossos Le tablets dealing with receipt of cloth), there is no overall synthesis of the Linear B evidence. There are, however, several important points that Burke makes. He divides the transactions apparent in the tablets into five types (mobilization of goods and services; agricultural production; personnel maintenance; distribution of offerings; and craft production) and shows that cloth is featured in all five, indicating its overall importance to the palace economy.

He makes a strong argument for cloth being a part of the wealth financing strategy of the Mycenaean palaces: some types of cloth, such as the ke-se-nu-wi-ja clothing (found in the Knossos Ld tablets) “have such a standardized value that they can be used as payment for service” (90). He supports the notion that the ke-se-nu-wi-ja is a specific type of clothing for mercenary soldiers, even proposing that it may appear on the Amarna pictorial papyrus, worn by two distinctive participants (90, 103-104).<sup>5</sup>

At the end of chapter 4 Burke presents a neat summary of the question of whether textiles were prestige goods, in a wealth-finance model of the Mycenaean political economy. He tantalizes us with a chart of Homeric words referring to types of cloth, offering this as a parallel to the “high value of Bronze Age cloth and its use as a medium of exchange” (105). I look forward to Burke developing this line of research in the future.

The Phrygian capital of Gordion was a major center in Early Iron Age Anatolia. In chapter 4 Burke concentrates on the Early Phrygian destruction levels, now dated to ca. 800 BC, in large part because of the wealth of preserved materials including actual textiles. Though we lack administrative records such as those of the Mycenaean palaces, a large industrial sector has been excavated with evidence for large-scale production of textiles and food preparation, and perhaps production of other goods and storage. This industrial quarter is adjacent to the “elite quarter” that includes Megaron 2 with its early pebble mosaic floor with imitations of textile designs.

Burke devotes twenty-six pages to a discussion of the individual components of the industrial quarter. Each of the eight units, or “megaron,” comprised an anteroom and a main room, often with columns indicating lofts or balconies. While Burke has done an admirable job in piecing together the information for each unit, there is no overall summary of the textile production and food preparation such that he can apply his

definition of craft specialization here: large-scale textile production by attached, dependent specialists.

The concluding chapter briefly presents textile production in cultures as disparate as Egypt, Mesopotamia, Aztec Mexico, and Inca Peru in order to highlight some of the observations Burke made about Minoan, Mycenaean, and Phrygian textile production. In this chapter too Burke presents Costin's "types of specialization"<sup>6</sup> and tries to place the evidence for Aegean textile production into the various categories (Table 19), from the earliest evidence from Neolithic Knossos through that from Gordion. I wish he had made greater use of Costin's types throughout the book, as in this table he puts Mycenaean palatial production into the type "nucleated corvée laborers working part-time, recruited by government for special purposes," and thus by his narrow definition of craft specialization presented in chapter 1 ("repeated, surplus production of one type of good ... by attached, dependent specialists for exchange directed by a central authority"), Mycenaean textile production does not fall into his category of specialized production. Costin's typology is very useful for it has a broad range of degrees of specialization, with several dimensions.

Overall, Burke has marshaled a tremendous amount of evidence to study the political economy of textiles.

Notes:

1. The standard introduction to Aegean textiles remains E. Barber 1991, *Prehistoric textiles: The development of cloth in the Neolithic and Bronze Ages, with special reference to the Aegean*. Princeton: Princeton University Press. See also numerous of articles in C. Gillis and M.-L. B. Nosch (eds) 2003, *Ancient Textiles: Production, Craft and Society* (Ancient Textile Series 1). Oxford: Oxbow Books.
2. See M.L. Galaty 2010, *Wedging clay: Combining competing models of Mycenaean pottery industries*. In *Political Economies of the Aegean Bronze Age*, edited by D. J. Pullen, 230-247. Oxford: Oxbow Books.
3. While this interpretation is convincing in many instances of the motif, Burke can only explain the numerous instances where a person is shown standing next to a vertical placement of the motif as a "sword beater" for compacting the weft. But the orientation of motifs on Minoan seals is not always consistent.
4. P. Militello 2003, *Textile industry and Minoan palaces*. In *Ancient Textiles: Production, Craft and Society* (Ancient Textile Series 1), edited by C. Gillis and M.-L. B. Nosch, 36-45. Oxford: Oxbow Books.
5. An illustration of the Amarna papyrus would have been very useful for this discussion. In a similar vein, the long discussion of Linear B ideogram \*168 is not accompanied by an illustration (94-95), yet in chapter 2 appears a large photograph of a very familiar Vasiliki-ware teapot (fig. 20).
6. C. Costin 1991, *Craft specialization: Issues in defining, documenting and explaining the organization of production*. In *Archaeological Method and Theory*, edited by M. Schiffer, 1-56. Tucson: University of Arizona Press.

Please visit the site: <http://bmcr.brynmawr.edu/2010/2010-12-67.html>

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## **EΙΔΗΣΕΙΣ - NEWS RELEASE**

# **GREAT PYRAMID MAY HOLD TWO HIDDEN CHAMBERS A 3-D SIMULATION OF THE 4,500-YEAR-OLD STRUCTURE SUGGESTS AN ANCIENT SECRET LIES BENEATH THE DESERT SAND**

A French architect campaigning for a new exploration of the 4,500-year-old Great Pyramid of Giza said on Thursday that the edifice may contain two chambers housing funereal furniture.

Jean-Pierre Houdin -- who was rebuffed three years ago by Egypt in his appeal for a probe into how the Pyramid was built -- said 3-D simulation and data from a U.S. egyptologist, Bob Brier, pointed to two secret chambers in the heart of the structure.

The rooms would have housed furniture for use in the afterlife by the pharaoh Khufu, also known as Cheops in Greek, he told a press conference.

"I am convinced there are antechambers in this pyramid. What I want is to find them," he said.

In March 2007, Houdin advanced the theory that the Great Pyramid had been built inside-out using an internal spiral ramp, as opposed to an external ramp as had long been suggested.

He proposed mounting a joint expedition of Egyptian antiquities experts and French engineers, using infrared, radar and other non-invasive methods to check out the hypothesis.

The idea was nixed by Egypt's antiquities department. A Canadian team from Laval University in Quebec will seek permission this year to carry out thermal imaging from outside the Pyramid to explore the theory, Houdin said.

Houdin said a pointer to the antechambers came from the existence of such rooms in the pyramid of Snefru, Khufu's father. It was possible a similar design was retained for the Great Pyramid.

In addition, blocks in the northern wall of the king's chamber in the Great Pyramid indicate an overlooked passage which led to the hypothesized chambers and also enabled the funeral party to exit, he added.



Please visit the site: <http://news.discovery.com/archaeology/great-pyramid-giza-hidden-chambers-110127.html> [website at <http://khufu.3ds.com/company/passion-for-innovation/the-projects/khufu-revealed/khufu/home/>]

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## **MODERN HUMANS REACHED ARABIA EARLIER THAN THOUGHT, NEW ARTIFACTS SUGGEST**

Contact: Natasha Pinol

[npinol@aaas.org](mailto:npinol@aaas.org)

American Association for the Advancement of Science

Humans may have found the Arabian Peninsula as long as 125,000 years ago

Artifacts unearthed in the United Arab Emirates date back 100,000 years and imply that modern humans first left Africa much earlier than researchers had expected, a new study reports. In light of their excavation, an international team of researchers led by Hans-Peter Uerpmann from Eberhard Karls University in Tübingen, Germany suggests that humans could have arrived on the Arabian Peninsula as early as 125,000 years ago — directly from Africa rather than via the Nile Valley or the Near East, as researchers have suggested in the past.

The timing and dispersal of modern humans out of Africa has been the source of long-standing debate, though most evidence has pointed to an exodus along the Mediterranean Sea or along the Arabian coast approximately 60,000 years ago.

This new research, placing early humans on the Arabian Peninsula much earlier, will appear in the 28 January issue of *Science*, which is published by AAAS, the nonprofit science society.

The team of researchers, including lead author Simon Armitage from Royal Holloway, University of London, discovered an ancient human toolkit at the Jebel Faya archaeological site in the United Arab Emirates. It resembles technology used by early humans in east Africa but not the craftsmanship that emerged from the Middle East, they say.

This toolkit includes relatively primitive hand-axes along with a variety of scrapers and perforators, and its contents imply that technological innovation was not necessary for early humans to migrate onto the Arabian Peninsula. Armitage calculated the age of the stone tools using a technique known as luminescence dating and determined that the artifacts were about 100,000 to 125,000 years old.

This report by Armitage et al. was funded by the Government of Sharjah, the ROCEEH project (Heidelberg Academy of Sciences), Humboldt Foundation, Oxford Brookes University and the German Science Foundation (DFG).

The American Association for the Advancement of Science (AAAS) is the world's largest general scientific society, and publisher of the journal, *Science* ([www.sciencemag.org](http://www.sciencemag.org)) as well as *Science Translational Medicine* ([www.sciencetranslationalmedicine.org](http://www.sciencetranslationalmedicine.org)) and *Science Signaling* ([www.sciencesignaling.org](http://www.sciencesignaling.org)). AAAS was founded in 1848, and includes some 262

affiliated societies and academies of science, serving 10 million individuals. Science has the largest paid circulation of any peer-reviewed general science journal in the world, with an estimated total readership of 1 million. The non-profit AAAS ([www.aaas.org](http://www.aaas.org)) is open to all and fulfills its mission to "advance science and serve society" through initiatives in science policy; international programs; science education; and more. For the latest research news, log onto EurekAlert!, [www.eurekalert.org](http://www.eurekalert.org), the premier science-news Web.

Please visit the site: [http://www.eurekalert.org/pub\\_releases/2011-01/aaft-mhr012111.php](http://www.eurekalert.org/pub_releases/2011-01/aaft-mhr012111.php)

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## **CENTURIES-OLD CAVE REVEALS SECRETS OF ANCIENT HUMANS | MIDDLE EAST TOOLS AND TEETH FOUND IN ISRAEL COULD BE OLDEST EVER DISCOVERED, BY ROSANNE SKIRBLE**

Israeli archeologists are piecing together the history of the people who lived in Qesem Cave between 200,000 and 400,000 years ago.

Israeli archeologists have discovered ancient artifacts in a cave outside of Tel Aviv that could shed new light on the theory of human origins. Tel Aviv University archeologist Ran Barkai says what his team has excavated at Qesem Cave show a much more advanced people than the accepted image of our Stone Age ancestors in the Middle Paleolithic period.

These early hominids hunted for food, cooked meat over fires and crafted a sophisticated array of flint tools.

"We know that they had a set of different knives, almost like a modern butcher, that they used in the cave in order to cut the meat and eat it. And, we even have what we call Paleolithic cutlery. We have very small knives that we suggest were used while eating," Barkai says, adding that the tools are all remarkably well preserved. "They look like new, like they were made yesterday."

The archeologists also found human teeth in different strata in the cave. Barkai says scholars and dental anthropologists from Europe and the United States joined the Israelis to analyze the dental samples.

"It was clear from the comparison that the human teeth from Qesem Cave resembled most of the teeth of homo sapiens that lived in Israel much later, at an age of 100,000 years before present, at two caves, one in the Galilee and one in the Carmel."

According to a widely accepted scientific theory, modern humans emerged from Africa around 200,000 years ago. Barkai says the teeth in Qesem Cave would predate those early human migrants. "We think that we are right. It is still only eight teeth or 10 teeth. So we need more evidence. It might imply that during this phase, maybe even a new hominid was living and this is another link or piece of the chain leading to modern humans."

According to New York University paleo-dental anthropologist Shara Bailey, it may also represent another step in the evolution of man's ancient human relatives, the Neanderthals, who lived in Europe and Asia around 200,000 years ago.

"My take on it is that these teeth are quite primitive. There is nothing in the morphology of these teeth that looks like homo-sapiens at all," says Bailey. "In fact it looks primitive and if anything it looks a little bit Neanderthal like."

In a recent article in the American Journal of Physical Anthropology, Barkai and his team suggest three theories: the Qesem teeth could belong to earlier humans or homo sapiens that developed independently from those in Africa and Europe. They could, as Shara Bailey suggests, represent an evolving Neanderthal in Southwest Asia. Or they could be from unknown extinct hominid species.

But Bailey says whether the residents of Qesem Cave were like us or not, does not make the discoveries any less important. "Any new material that we find, especially from this poorly documented time period 200,000 to 400,000 years ago, is great and necessary for our ongoing interpretation of human evolution and Neanderthal evolution."

Israeli archeologist Barkai expects Qesem Cave will continue to yield magical artifacts. He and his team from Tel Aviv University hope to find bones to add to the story of our ancient ancestors.

New York University paleo-dental anthropologist Shara Bailey explains what can be learned from the teeth of our ancient ancestors.

It's a really good article!

The discovery indeed awesome to read/listen! As we are eager to know about our ancient human origin, the finding w'd add some light toward that keenness/eagerness. Let's see what new worth editible to History.

Advanced & small-brained Hominins lived in every part of Afroeurasia for 1/2 mil. years.. from Latter Day Australopithecus of Flores Island,Indonesia to 28k old NEolithic weavers in Moravia (clay imprints of fabrics). If modicum of Neanderthal & Denisova DNA is in us, they shared CULTURE TOO! We share culture with those with whom we copulate not!

**Please visit the site: <http://www.voanews.com/english/news/middle-east/Centuries-Old-Cave-Reveals-Secrets-of-Ancient-Humans-114637989.html>**

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## **WORLDS OLDEST WINERY FOUND IN ARMENIAN CAVE**

Analysis by University of California, (UCLA) scientists has confirmed the discovery of the oldest complete wine production facility ever found, including grape seeds, withered grape vines, remains of pressed grapes, a rudimentary wine press, a clay vat apparently used for fermentation, wine-soaked potsherds, and even a cup and drinking bowl.

The facility, which dates back to roughly 4100 BCE — 1,000 years before the earliest comparable find — was unearthed by a team of archaeologists from Armenia, the United States and Ireland in the same mysterious Armenian cave complex where an ancient leather shoe was found, a discovery that was announced last summer.

“For the first time, we have a complete archaeological picture of wine production dating back 6,100 years,” said Gregory Areshian, co-director of the excavation and assistant director of UCLA’s Cotsen Institute of Archaeology.

“This is, so far, the oldest relatively complete wine production facility, with its press, fermentation vats and storage jars in situ,” said Hans Barnard, the article’s lead author and a UCLA Cotsen Institute archaeologist. Archaeologists contemplate 6,100-year-old wine-making equipment. Archaeologist Levon Petrosyan has his left foot at the wine press, which is designed to drain into a vat. (Photo credit: Hans Barnard)

Archaeologists contemplate 6,100-year-old wine-making equipment. Archaeologist Levon Petrosyan has his left foot at the wine press, which is designed to drain into a vat. (Photo credit: Hans Barnard)

Cave outside Armenian village

The discovery in 2007 of what appeared to be ancient grape seeds inspired the team to begin excavating Areni-1, a cave complex located in a canyon where the Little Caucasus mountains approach the northern end of the Zagros mountain range, near Armenia’s southern border with Iran. The cave is outside a tiny Armenian village still known for its wine-making activities.

Under Areshian and Boris Gasparyan, co-director of the project, the dig continued through September, when the vat was excavated.

Radiocarbon analysis by researchers at UC Irvine and Oxford University has dated the installation and associated artefacts to between 4100 B.C. and 4000 B.C., or the Late Chalcolithic Period, also known as the Copper Age.

Archaeologists found one shallow basin made of pressed clay measuring about 3 feet by 3-and-a-half feet. Surrounded by a thick rim that would have contained juices, and positioned so as to drain into the deep vat, the basin appears to have served as a wine press. Similarly structured wine-pressing devices were in use as recently as the 19th century throughout the Mediterranean and the Caucasus, Areshian said. No evidence was

found of an apparatus to smash the grapes against the wine press, but the absence does not trouble the archaeologists.

The wine press (center) is clearly evident in this photograph of the excavation. Behind the press is an archaeological photo board. The vat (to the right of the press), which was apparently used for accumulating grape juice and the consequent wine fermentation, emerges clearly here as a result of the excavation. (Photo credit: Gregory Areshian)

“People obviously were trampling the grapes with their feet, just the way it was done all over the Mediterranean and the way it was originally done in California,” Areshian said.

All around and on top of the wine press archaeologists found handfuls of grape seeds, remains of pressed grapes and grape must, and dozens of desiccated vines. After examining the seeds, palaeobotanists from three separate institutions determined the species to be *Vitis vinifera vinifera*, the domesticated variety of grape still used to make wine.

#### Tell-tale evidence of grapes

A range of 6,100-year-old desiccated grape stems and dried, pressed grapes was found on and around the wine press in the Armenian cave.  
(Photo credit: Gregory Areshian)

A range of 6,100-year-old desiccated grape stems and dried, pressed grapes. (Photo credit: Gregory Areshian)

The vat, at just over 2 feet in height, would have held between 14 and 15 gallons of liquid, Areshian estimates. A dark grey layer clung to three potsherds — two of which rested on the press and the third was still attached to the vat. Analysis of the residue by chemists at UCLA’s Pasarow Mass Spectrometry Laboratory confirmed the presence of the plant pigment malvidin, which is known to appear in only one other fruit native to the area: pomegranates.

“Because no remnants of pomegranates were found in the excavated area, we’re confident that the vessels held something made with grape juice,” Areshian said.

The size of the vessel during an era that pre-dated mechanical refrigeration by many millennia points to the likelihood that the liquid was wine, the researchers stress.

“At that time, there was no way to preserve juice without fermenting it,” Areshian said. He went on to say, “At this volume, any unfermented juice would sour immediately, so the contents almost certainly had to be wine.”

The team also unearthed one cylindrical cup made of some kind of animal horn and one complete drinking bowl of clay, as well as many bowl fragments. A flashlight illuminates the inside of the vat into which the wine press drained. On the inner surface of the vat, below its rim, UCLA chemists found evidence of the plant pigment malvidin, the substance that makes wine stains so difficult to remove from fabric today. The bottom of the vat also is covered with dark gray organic residues.

A flashlight illuminates the inside of the vat into which the wine press drained. On the inner surface of the vat, below its rim, UCLA chemists found evidence of the plant pigment malvidin, the substance that makes wine stains so difficult to remove from fabric today.

The closest comparable collection of remains was found in the late 1980s by German archaeologists in the tomb of the ancient Egyptian king Scorpion I, the researchers said. Dating to around 3150 B.C., that find consisted of grape seeds, grape skins, dried pulp and imported ceramic jars covered inside with a yellow residue chemically consistent with wine.

After the Areni-1 discovery, the next earliest example of an actual wine press is two and a half millennia younger: Two plaster basins that appear to have been used to press grapes between 1650 B.C. and 1550 B.C. were excavated in what is now Israel's West Bank in 1963.

Over the years, archaeologists have claimed to find evidence of wine dating as far back as 6000 B.C.–5500 B.C. and references to the art and craft of wringing an inebriant from grapes appear in all kinds of ancient settings. After Noah's Ark landed on Mount Ararat, for instance, the Bible says he planted a vineyard, harvested grapes, produced wine and got drunk. Ancient Egyptian murals depict details of wine-making. Whatever form it takes, early evidence of wine production provides a window into a key transition in human development, scientists say.

“Deliberate fermentation of carbohydrates into alcohol has been suggested as a possible factor that prompted the domestication of wild plants and the development of ceramic technology,” said Barnard, who teaches in the UCLA Department of Near Eastern Languages and Cultures.

Three lines of investigation point to wine-making

In addition to its age and wealth of wine-making elements, the Areni-1 find is notable for its numerous levels of confirmation. In a field where claims often rest on one or two sets of collaborating evidence, this find is supported by radiocarbon dating, palaeobotanical analysis and a new approach to analysing wine residue based on the presence of malvidin. Most prior claims of ancient wine have rested on the presence of tartaric acid — which is present in grapes but also, at least in some level, in many other fruits and vegetables — or on the presence of tree resins that were added to preserve the wine and improve its taste, as is done today with retsina, a wine flavoured with pine resin.

“Tartaric acid alone can't act as a reliable indicator for wine,” Areshian said. He continued, “It is present in too many other fruits and vegetables, including hawthorn, which still is a popular fruit in the area, but also in a range of other fruits, including tamarind, star fruit and yellow plum.”

“Resins could indicate wine, but because they were used for a large number of other purposes, ranging from incense to glue, they also are unreliable indicators for wine,” Barnard said. “Moreover, we have no idea how wide the preference for retsina-like wine spread.”



The beauty of malvidin, the UCLA team emphasizes, is the limited number of options for its source. The deeply red molecule gives grapes and wine their red colour and makes their stains so difficult to remove.

“In a context that includes elements used for wine production, malvidin is highly reliable evidence of wine,” Areshian said.

Areshian and Ron Pinhasi, an archaeologist at Ireland’s University College Cork and a co-director of the excavation project, captured the world’s imagination in June, when they announced the discovery of a single 5,500-year-old leather moccasin at the Areni-1 site. It is believed to be the oldest leather shoe ever found.

The precise identity of the wine-swilling shoe-wearers remains a mystery, although they are believed to be the predecessors of the Kura-Araxes people, an early Transcaucasian group. Nevertheless, archaeologists who have been excavating the 7,500-square-foot-plus site since 2007 think they have an idea of how the wine was used. Because the press and jugs were discovered among dozens of grave sites, the archaeologists believe the wine may have played a ceremonial role.

“The fact that a fully developed wine production facility seems to have been preserved at this site strongly suggests that there are older, less well-developed instances of this technology, although these have so far not been found,” Barnard said.

Read more >> <http://www.pasthorizons.com/index.php/archives/01/2011/worlds-oldest-winery-found-in-armenian-cave#ixzz1BUpz0tSH>

Read the Archaeology News - then buy the Trowel at Past Horizons Tools

**Please visit the site:**

<http://www.pasthorizons.com/index.php/archives/01/2011/worlds-oldest-winery-found-in-armenian-cave> [Go there for nice pix]

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## SYRIA, 1 MILLION BC

Syria (Lattakia) – Director General of the Department of Archaeology and Museums Bassam Jamous affirmed that humans inhabited Syria one million years ago on the banks of Orontes, Euphrates and the Great Northern River and later the Syrian Desert.

In a lecture on new archeological finds in Syria during the past ten years, Jamous pointed out that recent studies revealed that humans settled in al-Dedariya Cave north of Aleppo, central Syria, where human skeletons dating back to 100,000 years ago.

Over the past ten years, the Department of Archaeology and Museums documented over 10,000 archaeological sites across Syria, 600 of which date back to prehistory.

Jamous noted that recent discoveries prove that the first villages with circular houses were established during the 10th millennium BC in the middle Euphrates area and Jadet al-Magharra site in Aleppo countryside.

In Damascus Countryside, three sites were discovered: Tal Aswad, a-Ramad and Ghrefi. They contain several buildings indicating urban development dating back to the 7th millennium BC.

In 2010, the Department announced the discovery of a village called "al-Jerf al-Ahmar" on the banks of the Euphrates, which showed an example of a pictography predating hieroglyphs. The village contained circular houses without pillars that are still standing after 11,000 years.

In al-Balaas site in the desert of Hama, excavations uncovered the symbols of an eagle and an inverted pyramid, indicating the beginning of the use of abstract symbolism during the 10th millennium BC.

Jamous pointed out to the diverse artistic aesthetics found in ancient Syrian cultures as shown by a floor mosaic and basalt tablets bearing various carved symbols found in al-Abar site in the Euphrates basin.

In the Haloula area, a red painting depicting dancing women dating back to the 7th millennium BC was uncovered. Recently discovered burial chambers in Palmyra contain 2000 year-old murals depicting women in ritualistic scenes.

Other excavations uncovered statues bearing the names of their owners on their shoulders.

Jamous said that there are more than 60 archaeological excavations working in various sites to uncover the history of Homo erectus (an extinct prehistoric hominid).

He went on to note that the Department will establish several new museums, including a mosaic museum on the highway between Hama and Aleppo, adding that Syria won the International Carlo Scarpa Prize for archaeological parks for the Dora site in Deir Ezzor.

Jamous concluded by saying that the Department is working on including several of Syria's archaeological sites on the World Heritage List such as Amrit city, Simeon Stylites Monastery and Suleiman Keep, in addition to eight archaeological villages in Aleppo and Idleb.

**Please visit the site:**

<http://www.english.globalarabnetwork.com/201101178685/Travel/archaeologists-human-settlement-in-syria-dates-back-to-one-million-years.html>

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## CALIGULA'S TOMB FOUND?

1.

Caligula's tomb found after police arrest man trying to smuggle statue Tom Kington in Rome

Police arrest tomb raider loading part of 2.5 metre statue into lorry near Lake Nemi, south of Rome, where Caligula had a villa

The lost tomb of Caligula has been found, according to Italian police, after the arrest of a man trying to smuggle abroad a statue of the notorious Roman emperor recovered from the site.

After reportedly sleeping with his sisters, killing for pleasure and seeking to appoint his horse a consul during his rule from AD37 to 41, Caligula was described by contemporaries as insane.

With many of Caligula's monuments destroyed after he was killed by his Praetorian guard at 28, archaeologists are eager to excavate for his remains.

Officers from the archaeological squad of Italy's tax police had a break last week after arresting a man near Lake Nemi, south of Rome, as he loaded part of a 2.5 metre statue into a lorry. The emperor had a villa there, as well as a floating temple and a floating palace; their hulks were recovered in Mussolini's time but destroyed in the war.

The police said the statue was shod with a pair of the "caligae" military boots favoured by the emperor – real name Gaius Julius Caesar Augustus Germanicus; as a boy, Gaius accompanied his father on campaigns in Germany; the soldiers were amused he wore a miniature uniform, and gave him his nickname Caligula, or "little boot".

The statue is estimated to be worth €1m. Its rare Greek marble, throne and god's robes convinced the police it came from the emperor's tomb.

Under questioning, the tomb raider led them to the site, where excavations will start today.

**Please visit the site: <http://www.guardian.co.uk/world/2011/jan/17/caligula-tomb-found-police-statue>**

2.

Caligula's tomb. Or is it?

Print

A report in the Guardian newspaper today (18.01.2011Full story) suggested that a tomb robber who was arrested while loading part of a 2.5 metre statue into lorry near Lake Nemi, south of Rome, had found the final resting place of Caligula.

The police said the statue was “shod with a pair of the ‘caligae’ military boots favoured by the emperor” hence his nickname by the troops, Caligula – or ‘Little Boots’, – his real name was Gaius Julius Caesar Augustus Germanicus.

Under questioning, the tomb robber led them to the site, where excavations will begin immediately.

However Mary Beard, professor of classics at Cambridge University, reported in the Times newspaper that she disagrees with the conclusion of the Italian police and cites some compelling evidence to show why this can’t be the tomb of Caligula. (Full Story)

“Caligula was assassinated in his palace on the Palatine Hill in Rome in 41 AD. According to Suetonius’ Life (chap 59), his body was taken to the horti Lamiani, the site of an imperial pleasure gardens on the Esquiline Hill. There he was quickly cremated and buried under a light covering of turf. Later on his sisters returned to cremate and bury it properly.” she points out.

There is no suggestion whatsoever, so far as I know, that this burial was at Nemi, or that it was a grand tomb

She continues that “..there is no suggestion whatsoever, so far as I know, that this burial was at Nemi, or that it was a grand tomb (the Latin just says ‘buried’, sepultum). True, Caligula had a big villa there, but it is almost inconceivable that this assassinated symbol of imperial monstrosity would have been given a grand monument, plus a big statue there.”

**Please visit the site:**

<http://www.pasthorizons.com/index.php/archives/01/2011/caligulas-tomb-or-is-it>

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## **REMAINS OF OLDEST FRUIT TREES IN IBERIAN PENINSULA FOUND BY STEPHEN RUSSELL**

Recent research on seed samples gathered over the years at medieval archaeological sites in the historic old quarter of Hondarribia, has that these are the remains of the oldest fruit trees in Southern Europe.

The town of Hondarribia, lies on the coast of the Basque province of Gipuzkoa, Spain.

The research was undertaken by the archaeobiology research team from the CSIC (Consejo Superior de Investigaciones Científicas) under the direction of Doctor Leonor Peña-Chocarro, with the financial aid of the Gipuzkoa Provincial Government.

This research has enabled the recording of numerous fleshy fruits such as plums of various types, cherries, peaches, sloes, grapes, apples, figs, quince and medlar and, in a token manner, olives. The overall collection of nuts is interesting, significant being the presence of hazel nuts, acorns, walnuts, pine kernels and, sporadically, beechnuts. As regards cereals, wheat, barley and oats have been identified. Also of particular important are the various seeds of the bottle (or calabash) gourd, a species of water pumpkin, very rarely recorded in archaeological contexts.

While the overall results can be considered relevant for knowledge about nutrition in the Middle Ages, the most striking part refers to the remains of quince and medlar found, being species hitherto unknown in the archaeobotanical register of the Iberian Peninsula.

This area has produced one of the best databases of archaeological seeds within the Spanish State, or indeed in Europe, thanks to the fact that, in many of its excavations, layers of terrain that had been flooded have conserved organic matter due to saturation of water.

**Please visit the site:**

**<http://www.archnews.co.uk/world-archaeology/european-archaeology/4736-remains-of-oldest-fruit-trees-in-iberian-peninsula-found.html>**

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## COINING A RARE ASTRONOMICAL EVENT

2,100 year-old Greek coin may have marked rare astronomical event New research suggests that this coin marks an eclipse of Jupiter by the moon.

It happened on January 17, 121 BC and was visible in Antioch, the capital of the Seleucid Empire. The coin itself show Zeus with a crescent moon above his head and a star like object hovering above the palm of his right hand.

An unusual Greek coin, minted around 120 BC, may have marked a moment in time when people in ancient Syria saw Jupiter being blocked out by the moon.

On one side is a portrait of Antiochos VIII, the king who minted it.

On the reverse is a depiction of Zeus, either nude or half-draped, holding a sceptre in his left hand. Above the god's head is the crescent of the moon, and his right arm is outreached with a star like figure (that may in fact be Jupiter) hovering just above his palm.

“Nobody ever re-used this iconography again – it was a one off,” said Professor Robert Weir, of the University of Windsor in Canada, who presented his research recently at the annual meeting of the Archaeological Institute of America.

Antiochos VIII was ruler of the Seleucid Empire, a kingdom created by one of Alexander the Great's officers, after the great conqueror died in 323 BC. By the time of Antiochos this realm was composed of a rump of territory centred on the city of Antioch, in south-eastern Turkey.

The empire had been in decline for some time, with the Parthians gaining territory in the east, the Romans in the west and the Hasmoneans, a dynasty of Jewish kings, coming to power in the south.

Antiochos's rise to the throne was brutal to say the least. His mother was a woman named Cleopatra Thea, and he started his rule having to share the throne with her. “She was a very oppressive, domineering sort of woman as far as we can gather,” said Professor Weir. “She had just killed his brother for no good reason.”

Perhaps fearing for his own life Antiochos VIII had her put to death in 121 BC, making him sole ruler of what was left of the Seleucid kingdom.

Why the cosmic iconography?

Weir is a Classics professor with an interest in astronomy and ancient coins. He was curious why Antiochos VIII would mint a piece of currency with such an unusual drawing – could there have been something going on in the night sky?

“I did some calculations to see what was visible from Antioch, the capital of the Seleucid Empire – I came up with some interesting patterns.” Weir found that on January 17, 121 BC, the city's residents would have seen Jupiter blocked out by the moon, an event modern day astronomers call an “occultation.”

Also “Jupiter, when it was eclipsed by the moon, was in the constellation of Cancer, which is a very significant constellation,”

he said. “This means that there might be a great king coming, or being born – in Syria, because Cancer governs that part of the world the ancient astrologers believed.”

That wasn’t all that was going on in the night sky.

“I noticed that there were other favourable occultations happening at the same time. There was another occultation of Jupiter within the year and just a week after the first one there was an occultation of Venus which is also a very good omen,” he said.

Antiochos VIII, a king ruling a shrinking empire alongside his murderous mother, may have felt that the heavens were finally with him. “It was significant in a good way – an occultation of Jupiter has to do with omens for kings.”

Weir pointed out that astrologers were powerful figures in the ancient world and the discipline they practiced was influential. “These people were everywhere and we know they were influential in influencing emperors in Rome for instance,” he said.

“I think it’s fair to say they probably had a foot in the door in the court of the Seleucids.”

The heavens turn against him

Unfortunately for Antiochos VIII his rule would be anything but great.

In the years that followed his empire would endure conflict, with one of his brothers, Antiochos IX, disputing his right to the throne.

Eventually the two had to agree to divide what was left of the Seleucid kingdom.

In the meantime the king’s run of cosmic good luck had come to an end.

Weir said that “a few years after he killed his mom there were (all) sorts of really bad luck eclipses of Mars and Saturn.”

Even worse, shortly before the coin stopped being minted, around 114 BC, “something happened in the heavens that happens only once every 2,000 years or so,” he said. “The moon eclipsed Mars and Saturn at the very same time.” An event “that’s about the worst omen you can get.”

The heavens, it seemed, had turned against the king.

**Please visit the site: <http://www.unreportedheritagenews.com/2011/01/2100-year-old-greek-coin-may-have.html>**

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## **"GOLDEN YEAR" IN ARCHEOLOGICAL EXCAVATIONS IN AEGEAN REGION**

Hundreds of valuable historical artifacts, most of which were made of gold, have been unearthed during the archeological excavations conducted in Turkey's Aegean region in 2010.

A total of 779 artifacts have been brought to sunlight thanks to 16 excavations in and near the Aegean province of İzmir throughout last year, head of İzmir Archeology Museum told the Anatolia news agency on Wednesday.

Museum's Director Mehmet Tuna said that the unearthed artifacts, a major part of which were jewelries made of gold, had been taken under record by his institution.

"Most of the pieces delivered to our museum are golden earrings, necklaces, rings and ornaments. There are also earthenware jugs, amphoras, statuettes and tools reflecting the social and economic life of ancient times," Tuna said.

The director noted that artifacts mainly came from the ancient prophecy center Claros, Menemen Tinaztepe region, Mount Nif, the tumulus in Urla Limantepe, Bornova Yeşilova and Kemalpaşa Ulucak, as well as the ancient cities of Smyrna, Klazomenai, Metropolis, Kyme and Teos.

Commenting on the excavations to be carried out in 2011, Tuna said experts would try to unearth an ancient vegetable oil production facility and two farmhouses in Kyme ancient city this year.

İzmir is a large metropolis in western Anatolia. It is Turkey's third most populous city and the country's second largest port city after İstanbul. It is located along the outlying waters of the Gulf of İzmir on the eastern shoreline of the Aegean Sea.

İzmir's history goes back to 3000 B.C. according to the results of historical knowledge and archaeological excavations. The city is known as one of the oldest settlements in the Mediterranean basin.

**Please visit the site: <http://www.todayszaman.com/news-232240-golden-year-in-archeological-excavations-in-aegean-region.html>**

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# **ANCIENT FARMERS SWIFTLY SPREAD WESTWARD - AGRICULTURAL VILLAGES APPEARED IN CROATIA NEARLY 8,000 YEARS AGO, BY BRUCE BOWER**

Croatia does not have a reputation as a hotbed of ancient agriculture.

But new excavations, described January 7 in San Antonio at the annual meeting of the Archaeological Institute of America, unveil a Mediterranean Sea-hugging strip of southern Croatia as a hub for early farmers who spread their sedentary lifestyle from the Middle East into Europe.

Farming villages sprouted swiftly in this coastal region, called Dalmatia, nearly 8,000 years ago, apparently with the arrival of Middle Easterners already adept at growing crops and herding animals, says archaeologist Andrew Moore of Rochester Institute of Technology in New York.

Moore codirects an international research team, with archaeologist Marko Mendušić of Croatia's Ministry of Culture in Šibenik, that has uncovered evidence of intensive farming at Pokrovnik and Danilo Bitinj, two Neolithic settlements in Dalmatia. Plant cultivation and animal raising started almost 8,000 years ago at Pokrovnik and lasted for close to a millennium, according to radiocarbon dating of charred seeds and bones from a series of occupation layers. Comparable practices at Danilo Bitinj lasted from about 7,300 to 6,800 years ago.

"Farming came to Dalmatia abruptly, spread rapidly and took hold immediately," Moore says.

Other evidence supports a fast spread of sophisticated farming methods from the Middle East into Europe (SN: 2/5/05, p. 88), remarks Harvard University archaeologist Ofer Bar-Yosef. Farming villages in western Greece date to about 9,000 years ago, he notes. Middle Eastern farmers exploited a wide array of domesticated plants and animals by 10,500 years ago, setting the stage for a westward migration, Bar-Yosef says.

Other researchers began excavating Pokrovnik and Danilo Bitinj more than 40 years ago. Only Moore and his colleagues dug deep enough to uncover signs of intensive farming.

Their discoveries support the idea that agricultural newcomers to southern Europe built villages without encountering local nomadic groups, Moore asserts. Earlier excavations at Neolithic sites in Germany and France raise the possibility that hunter-gatherers clashed with incoming villagers in northern Europe, he notes.

Surprisingly, Pokrovnik and Danilo Bitinj residents grew the same plants and raised the same animals, in the same proportions, as today's Dalmatian farmers do, Moore says. Excavated seeds and plant parts show that ancient villagers grew nine different domestic

plants — including emmer, oats and lentils — and gathered blackberries and other wild fruits.

Animal bones found at the two villages indicate that residents primarily herded sheep and goats, along with some cattle and a small number of pigs.

Diverse food sources provided a hedge against regional fluctuations in rainfall and growing seasons, according to Moore. “This is an astonishing demonstration of agricultural continuity from the Neolithic to present times,” he says.

Aside from farming, Neolithic villagers in Dalmatia were “oriented toward the sea, and enjoyed extensive long-distance contacts,” Moore adds. Chemical analyses of obsidian chunks found at Pokrovnik and Danilo Bitinj, directed by archaeologist Robert Tykot of the University of South Florida in Tampa, trace most of them to Lipari, an island off Sicily’s north coast.

Shapes and styles of pottery from the ancient Dalmatian villages changed dramatically several times during the Neolithic. Moore’s team can’t explain why these shifts occurred while the farming economy remained the same.

Other than three children found in separate graves, the researchers have unearthed no human skeletons at Pokrovnik and Danilo Bitinj.

**Please visit the site:**

[http://www.sciencenews.org/view/generic/id/68493/title/Ancient\\_farmers\\_swiftly\\_sp\\_read\\_westward](http://www.sciencenews.org/view/generic/id/68493/title/Ancient_farmers_swiftly_sp_read_westward)

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## **NEW EVIDENCE FOR CLIMATE IMPACTS ON ANCIENT SOCIETIES**

Annual-resolved European summer climate has, for the first time ever, been reconstructed over the past 2,500 years. Tree rings reveal possible links between past climate variability and changes in human history. Climate change coincided with periods of socioeconomic, cultural and political turmoil associated with the Barbarian Migrations, the Black Death and Thirty Years' War.

An international research team of archaeologists, climatologists, geographers and historians led by Willy Tegel (University of Freiburg, Institute for Forest Growth) and Ulf Büntgen (Swiss Federal Research Institute WSL) compared variations in European summer climate with conspicuous events and episodes in human history.

Their study, published Jan. 13, 2011 in the online version of the journal *Science*, provides new evidence that agrarian wealth and overall economic growth may have been impacted by climate change.

The researchers reconstructed the history of central Europe's summer precipitation and temperature for the past 2,500 years, extending the record more than 1,000 years further than previous studies into the past. Their results are based on measurements of annual tree-rings from thousands of sub-fossil, archaeological, historical and living tree samples from Germany, France, Italy and Austria.

The climate information stored in these trees allows comparison of natural precipitation and temperature fluctuations with the development of European societies. European summer climate during the Roman Era about 2,000 years ago was relatively warm and wet and characterized by less variability. Increased climate variations from around 250-600 A.D. coincided with the demise of the Western Roman Empire and the exceptional turmoil of the Migration Period during which the continent's population was substantially reordered.

The new study also revealed that humid and mild summers paralleled the rapid cultural and political growth of Medieval Europe, whereas unfavorable climate may have played a role in the underlying health conditions that contributed to the devastating economic crisis that arose in connection with the Black Death plague pandemic in the 14th century. More recently, temperature minima in the early 17th and 19th centuries coincided with large-scale settlement abandonment during the Thirty Years' War and the modern mass migrations from Europe to America.

Past hydroclimatic variations may have exceeded the magnitude and duration of variations seen in modern times. The situation is different for temperature though, as the recent warming in the late 20th and early 21st century appears unprecedented with respect to the past 2,500 years."

The authors, however, note that such comparative studies cannot be used to indicate a direct and simple relationship between climate variability and human history. Their detailed palaeoclimatic history, however, lends new credence to the idea that climate

variability can impact human society. Sounding a cautionary note, the researchers suggest that projected global climate change may affect human societies more than is currently expected, and that complex causal links between past climate changes and human responses urgently require more investigation.

**Please visit the site:**

<http://www.sciencedaily.com/releases/2011/01/110113082627.htm>

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## **A NEW WAY TO DATE OLD CERAMICS,** **BY MARCIA GOODRICH**

If you are an archaeologist, determining when a pot was made is not just a matter of checking the bottom for a time stamp. Dating clay-based materials like ceramics recovered from archeological sites can be time consuming, not to mention complex and expensive.

Patrick Bowen, a senior majoring in materials science and engineering, is refining a new way of dating ceramic artifacts that could one day shave thousands of dollars off the cost of doing archaeological research.

Called rehydroxylation dating, the technique was recently developed by researchers at the University of Manchester and the University of Edinburgh. It takes advantage of ceramics' predictable tendency to bond chemically with water over time.

“It’s simple,” says Bowen. First, dry the sample at 105 degrees Celcius. This removes any dampness that the ceramic might have absorbed.

Then, weigh the sample and put it in a furnace at 600 degrees Celsius.

The chemically bonded water, in the form of hydroxyl groups (single atoms of hydrogen and oxygen bound together), forms water vapor and evaporates. “When you do that, you mimic what the sample was like when it was originally fired,” says Bowen.

Then weigh the sample again and leave it alone. Over the next several weeks, the ceramic will react with water in the air and gain weight.

Plot the gain against a time constant, and the shape of the curve tells you the age of the ceramic. Theoretically.

But it ain’t necessarily so, Bowen discovered, working with his advisors, Jaroslaw Drelich, an associate professor of materials science and engineering, and Timothy Scarlett, an associate professor of archaeology and anthropology. “The dating process turns out to be more complicated than the literature suggests,” he says.

Using shards of pottery dating from 1854 to 1888, which Scarlett provided from an archaeological dig in Utah, Bowen tried out the original dating technique at different temperatures and got significantly different “ages” for the shards. He then developed a new equation that addresses those temperature effects, as well as the fact that rehydroxylation is actually a two-step process: First, water vapor physically penetrates the pottery. Then, it bonds chemically to the pottery’s constituent minerals.

Bowen’s equation worked better, but not well enough to generate definitive dates. Humidity fluctuations affected the samples’ weights, skewing the results. Now the research team is using new methods to provide constant humidity and will run additional tests over the next few months on various types of ceramics of different ages.

They won’t only be using rare, antique pottery this time, however.

“This year we are using broken pieces of brick from the Houghton Parking Deck; it’s easier to come by,” says Bowen. “Somebody hit it with their car, and when I saw the pieces, I thought, ‘Oh! Sample!’”

If all goes as planned, each of those samples dated by Bowen and fellow researcher Tyler Botbyl, a materials science and engineering junior, will turn out to be about forty years old.

The researchers believe their work has huge potential. “This will be a new, low-cost tool allowing archaeologists to derive dates from objects made over 10,000 years of human history,” said Scarlett.

Bowen wrote a paper on the team’s initial findings, which is being considered by the Journal of the American Ceramic Society. The paper was co-authored by fellow undergraduate Helen Ranck and both advisors.

His work was previously supported by a McArthur Research Internship and a Michigan Tech Summer Undergraduate Research Fellowship. It is currently supported by a Michigan Space Grant Consortium Undergraduate Fellowship.

Michigan Technological University (mtu.edu) is a leading public research university developing new technologies and preparing students to create the future for a prosperous and sustainable world. Michigan Tech offers more than 130 undergraduate and graduate degree programs in engineering; forest resources; computing; technology; business; economics; natural, physical and environmental sciences; arts; humanities; and social sciences.

**Please visit the site: <http://www.mtu.edu/news/stories/2011/january/story35249.html>**

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## **CYPRUS PAPHOS HELLENISTIC HOUSE** **DISCOVERY**

WHAT is believed to be the most ancient house in Paphos has been uncovered amid excavations to discover the extent of walls of the ancient city of Nea Paphos.

For Dr Claire Balandier, the head of the French archaeological team which uncovered the house, complete with wall paintings, last year's find was one of her most exciting during 20 years of excavating in Cyprus.

She believes the house is probably the oldest known of in Paphos, along with the first phases of the houses of Theseus and Dionysos, which date to the beginning of the Hellenistic period (fourth century BC). But, she pointed out that the latter two are underneath much later Roman houses.

"The importance of our discovery is that the house is on Fabrika hill.

This hill, which is the highest point of Paphos, must have been important in the urbanism of Nea Paphos," Balandier told the Sunday Mail in an interview.

Balandier said that little is known about the hill, situated north of the harbour area and close to the Tomb of the Kings, apart from its Hellenistic theatre on its southern slope, which was excavated for 15 years by an Australian expedition. Balandier added that Fabrika hill was initially a necropolis, around the time of the foundation of the city at the end of the fourth century BC.

"I think this was then quickly abandoned, and the tombs then used for quarrying activities in the Hellenistic period." The expedition leader said that the house was built at the bottom of an abandoned quarry with the area north of the hill becoming a residential area a few decades after the city had been established.

The French Archaeological Expedition began excavating in Paphos in 2008 and, as work began, they found a terraced wall of ashlar, or dressed stone blocks north of Fabrika hill.

They have since excavated that wall for more than 40 metres north and south. Balandier said that this wall, which was built at the very end of the first century BC, was an important find in helping to understand the ancient topography of the area.

"It was as we were looking for a possible return of this wall to the east that we found the back wall of the house," she said.

In front of the terraced wall was an area of wild undergrowth and rubbish, which needed to be cleared.

"I had asked the municipality of Paphos for help to remove it during the summer. We then found another wall, three metres to the north of the previous one, which had some wall paintings on it."



The exciting discovery meant that Balandier had to return to Cyprus in November, long after the season's dig had ended, to ensure the frescoes were properly preserved before the rains arrived.

She said that two different kinds of wall paintings, which are both frescoes - made on quicklime and not on plaster - were found in the rooms around the house. Some walls were decorated with simple paintings, which consisted of a white background with red crossed lines.

"We still have to study the stratigraphy, but it seems that these paintings belonged to a phase of the house which is older, so the house could date to the third century BC. Indeed, it appears that the southern room had been blocked up after the back wall had partly fallen," she said.

"In the courtyard, however, the wall paintings are much more colourful. The colours used are red, purple, and yellow panels with green frames," she said.

"It is only the beginning of our study, but these drawings look very much like the so-called first Pompeian style, so they should date from the second century BC. But a non-expert hand has made them."

According to Balandier the paintings are very similar, but better preserved, to wall paintings in houses found by a Polish expedition to the nearby Maloutena area in the 1980s.

Balandier believes that Fabrika hill became a residential area with terraces, with the upper part in the south and the lower one to the north and that this discovery has an important bearing on understanding the extent of the ancient city.

During the Hellenistic period, the residential area was usually always inside the city wall and the presence of a Hellenistic house on the northern part of Fabrika, close to the existing Agioi Arnagyroi avenue, could mean that the city wall is further to the north.

"So, the city was probably larger than supposed by scholars, and as I also thought until recently," she said.

The discovery of the courtyard decorated by wall painting and surrounded by three or four rooms was significant for other reasons too.

"We have started to excavate two of the rooms, whose walls are preserved to three metres in height, which is very rare on the island, where ancient buildings have been destroyed and stones reused through the centuries."

The archaeologist believes that the house, at least the back room, seems to have been abandoned before the first century AD, according to the material which now fills it.

The discovery of the house is one of the most exciting in a career that includes being part of the team that uncovered the northern city gate of Amathus in 1992.

"It was a fantastic experience, especially when the wall paintings appeared in front of us. It was something very special and does not happen very often in the life of an archaeologist," she said.

Balandier is certainly well qualified to lead the team working at Fabrika hill. She studied History and Archaeology at the University of Aix-Marseille and then in Paris at the Sorbonne. She completed her PhD on the fortifications and defence of the territories of Cyprus and she is currently the Maître de Conférences in Ancient Greek History and Archaeology at the University of Avignon, in France.

She has also undertaken a number of published studies from the city-wall of Apollonia in Albania, as well as in Georgia, to the defensive policies of the Achaemenid Persian and of the Ptolemies in Palestine. She is currently preparing the publication of her study of the ancient fortifications of Cyprus and will organise an international conference about ancient Paphos at the University of Avignon in 2012.

Balandier has led the French Archaeological Expedition in Paphos since 2008, and says she is grateful to the Department of Antiquities who granted them the permission to undertake their work. The French Ministry of Foreign Affairs finances the expedition.

"I proposed to the Department of Antiquities to work in Paphos, and when I asked permission to create the French Archaeological Expedition, Dr Pavlos Flourentzos, the then director of the Department of Antiquities, asked me to try to find where the city wall on Fabrika hill was."

Balandier will return to Paphos next June when the excavation of the house will continue, and its walls will be resorted. "We hope that the house will be restored quickly and protected by a roof, in order to be presented to the public. But all the area of Fabrika hill has to be preserved."

Balandier said there are still many antiquities to uncover and discover in Paphos.

"Many antiquities could still be found in Paphos. Unfortunately, despite the hard work of the different curators, evidence has disappeared under the tourist area," she said.

"Sometimes it is important to remember that our identity and wealth is also our cultural heritage. To go on, any generation has to understand where it comes from."

**Please visit the site: <http://www.archaeologydaily.com/news/201101095907/House-expected-to-reveal-hidden-secrets-of-an-ancient-city.html>**

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## **CRETAN TOOLS POINT TO 130,000- YEAR-OLD SEA TRAVEL**

Archaeologists on the island of Crete have discovered what may be evidence of one of the world's first sea voyages by human ancestors, the Greek Culture Ministry said Monday

A ministry statement said experts from Greece and the U.S. have found rough axes and other tools thought to be between 130,000 and 700,000 years old close to shelters on the island's south coast.

Crete has been separated from the mainland for about five million years, so whoever made the tools must have traveled there by sea (a distance of at least 40 miles). That would upset the current view that human ancestors migrated to Europe from Africa by land alone.

"The results of the survey not only provide evidence of sea voyages in the Mediterranean tens of thousands of years earlier than we were aware of so far, but also change our understanding of early hominids' cognitive abilities," the ministry statement said.

The previous earliest evidence of open-sea travel in Greece dates back 11,000 years (worldwide, about 60,000 years — although considerably earlier dates have been proposed).

The tools were found during a survey of caves and rock shelters near the village of Plakias by archaeologists from the American School of Classical Studies at Athens and the Culture Ministry.

Such rough stone implements are associated with Heidelberg Man and Homo Erectus, extinct precursors of the modern human race, which evolved from Africa about 200,000 years ago.

"Up to now we had no proof of Early Stone Age presence on Crete," said senior ministry archaeologist Maria Vlazaki, who was not involved in the survey. She said it was unclear where the hominids had sailed from, or whether the settlements were permanent.

"They may have come from Africa or from the east," she said. "Future study should help."

The team of archaeologists has applied for permission to conduct a more thorough excavation of the area, which Greek authorities are expected to approve later this year.

**Please visit the site: <http://www.guardian.co.uk/world/feedarticle/9433723>**

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## URARTIAN ROYAL CHAMBER

Urartian king's burial chamber opened for first time Burial chambers of Urartian King Argishti and his family in the western wing of the ancient castle in the eastern province of Van was opened for the first time.

The Anatolia news agency took photographs and video of the burial chambers which were closed to visitors.

Centered around the Lake Van in the eastern Turkey, the Urartian Kingdom ruled from the mid 9th century BC till its defeat by Media in the early 6th century BC. The most splendid monuments of the Urartian Kingdom take place in Van since the city was the capital of the kingdom.

Built on a rocky peak, the castle, one of the most significant samples of the Urartian architecture, was brought to daylight during excavations headed by lecturer Altan Cilingiroglu of the Ege University. The castle draws hundreds of Turkish and foreign visitors each year.

Argishti I was the sixth known king of the ancient kingdom, reigning from 786 BC to 764 BC. As the son and the successor of Menua, he continued the series of conquests initiated by his predecessors.

Victorious against Assyria, he conquered the northern part of Syria and made Urartu the most powerful state in the post-Hittite Near East.

His burial chamber in the west wing of the Van Castle is composed of five separate sections. There are Urartian inscriptions on the walls.

**Please visit the site: <http://www.todayszaman.com/news-231432-urartian-kings-burial-chamber-opened-for-first-time.html>**

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