



Επιστημονικό Σωματείο,
Έτος Ίδρυσης 1982, έδρα:
Κάνιγγος 27, 106 82 Αθήνα
(Ένωση Ελλήνων Χημικών)

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Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

- Ιούνιος 2011 -

Newsletter of the Hellenic Society of Archaeometry

- June 2011 -

Nr. 123

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ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS

CONFERENCE IN KIEV, OCTOBER 21ST,

2011

Dear Sir / Madame _____!

The Institute of Philology of Taras Shevchenko National University of Kyiv together with the Institute of Ukrainian Language of National Academy of Sciences of Ukraine and the Embassy of Greece in Ukraine organizes the International scientific conference *“Professor A. Biletskyi’s scientific legacy within modern paradigms of scientific knowledge: to his 100th birthday”*, which will be held on **October 21st, 2011**.

The Professor Andriy Biletskyi, often referred to as a whole philological epoch, is a scientist who in his research managed to secure succession of humanitarian traditions of the 19th and 20th centuries.

The Professor A. Biletskyi’s papers cover different linguistic fields: historical linguistics, etymology, linguosemiotics, typology, linguistic geography, lexicology, lexicography, grammar, phonology, onomatology, toponimics, classical studies, modern Greek studies, history and theory of writing, theory and history of literature, also the history of Greece (ancient, byzantine and modern periods).

The conference aims at reception of scientific legacy of Professor A. Biletskyi within modern paradigms of scientific knowledge, analysis of perspectives of modern functionalistic approach within humanitarian studies, combination of scientific methods from different fields of knowledge and grounding multidimensional approach for scientific research of a subject.

Conference themes shall be as follows:

- Aspects of historical and typological linguistics in contemporary dimensions;
- General linguistics within modern scientific paradigms;
- Classical studies and Modern Greek studies of the beginning of the 21st century;
- Semiotic problems of linguistics, philosophy and cultural studies;
- Culturological dimensions of translation;
- Current state of epigraphy and paleography studies;
- Current approaches in studies of the Greek world in historical sciences.

To take part in the International scientific conference, please, submit a written application **by June 15, 2011** at the following postal address:

14, Taras Shevchenko blvd., room 86

Kiev, 01033, Ukraine

or by an e-mail at: philolog@univ.kiev.ua; fax 38 (044) 234-14-12.

Papers should be submitted by October 5, 2011. They will be published in the proceedings with a corresponding specialized status (an estimated paper publishing cost – UAH 20 per one page). Texts of reports and papers shall be published only if the author participates in the conference.

Working languages of the conference are Ukrainian, English, Russian, Modern Greek.

Requirements for papers:

Annotations and key words must be given in Ukrainian, Russian and English.

Papers size is up to 5 full pages.

1. **Font:** Times New Roman. Font type: 14 points. 1.0 line spacing. Paragraph indention – 1,25. Margins:

2,5

3 – – 1,5

—
2,5

2. Should papers contain **other than Times New Roman fonts, please be sure to submit them separately in the electronic form.**

3. Author's surname and name; position/academic degree, academic title, if any; higher education institute, in which author works (or studies) should be indicated in the upper-right corner in boldface italic type; paper's title – in the centre in capital bold letters; bibliography should be given at the end of a paper in a line, font type 12 points.

4. Citations in text should be presented as follows [Швиденко 2000, 24], literature should be listed alphabetically according to the standards at the end of papers.

5. Post-graduate students, students and lecturers having no academic degrees should submit a review by their scientific supervisor, with timeliness and novelty of research stated.

6. Papers are to be submitted in 2 copies, the electronic version of papers should be saved in MS Word as *.rtf file.

Organizing Committee reserves the right for rejection of papers, should it happen, an author will be notified correspondingly.

All the expenses related to participation in the International conference (travel, accommodation, dinners) should be covered by participants.

Organizing committee

Αξιότιμοι Συνάδελφοι!

Το Ινστιτούτο Φιλολογίας του Εθνικού Πανεπιστημίου Κιέβου «Ταράς Σεβτσένκο» από κοινού με το Ινστιτούτο της Ουκρανικής Γλώσσας της Εθνικής Ακαδημίας Επιστημών της Ουκρανίας και την Ελληνική Πρεσβεία στην Ουκρανία διοργανώνει **Διεθνές Επιστημονικό Συνέδριο** με θέμα **«Η πνευματική κληρονομιά του καθηγητή Α. Ο. Μπιλέτσκι στο φως των νεότερων εξελίξεων της επιστημονικής γνώσεως»** με αφορμή τη συμπλήρωση εκατό χρόνων από τη γέννησή του.

Το Συνέδριο θα πραγματοποιηθεί στις **21 Οκτωβρίου 2011**.

Το έργο του καθηγητή Α. Ο. Μπιλέτσκι αποτελεί ορόσημο στην ιστορία της φιλολογικής σκέψεως. Στις έρευνές του κατόρθωσε να συγκεράσει γόνιμα τις ανθρωπιστικές παραδόσεις του 19-20^{ου} αι. Η επιστημονική κληρονομιά του Α. Ο. Μπιλέτσκι καλύπτει όλους σχεδόν τους κλάδους της γλωσσολογίας: συγκριτική και ιστορική γλωσσολογία, ετυμολογία, γλωσσική σημειολογία, τυπολογία, γλωσσολογική γεωγραφία, λεξικολογία, λεξικογραφία, γραμματική, φωνολογία, ονοματολογία, τοπωνυμολογία, κλασική φιλολογία, νεοελληνικές σπουδές, ιστορία και θεωρία της γραφής, λογοτεχνικές σπουδές καθώς και την ιστορία της Ελλάδας (αρχαιότητα, βυζαντινή, νεώτερη και σύγχρονη εποχή).

Σκοπός του Συνεδρίου είναι η διερεύνηση της πρόσληψης της επιστημονικής κληρονομιάς του Α. Ο. Μπιλέτσκι στο φως των νέων μεθοδολογικών προσεγγίσεων, η ανάλυση της λειτουργικής προσέγγισης στις σύγχρονες ανθρωπιστικές επιστήμες, της διασταύρωσης των μεθοδολογικών προσεγγίσεων διαφόρων επιστημονικών κλάδων καθώς και η τεκμηρίωση της πολυδιαστατότητας του αντικειμένου επιστημονικής έρευνας.

Στις **θεματικές ενότητες** του συνεδρίου περιλαμβάνονται οι εξής:

- σύγχρονες διαστάσεις θεμάτων συγκριτικής, ιστορικής και τυπολογικής γλωσσολογίας
- η γενική γλωσσολογία στο φως των νεότερων εξελίξεων της επιστημονικής γνώσεως
- κλασική φιλολογία και νεοελληνικές σπουδές στις αρχές του 21^{ου} αι.
- σημειολογικά ζητήματα της γλωσσολογίας, φιλοσοφίας και πολιτισμολογίας
- πολιτισμολογικές διαστάσεις της μετάφρασης
- σύγχρονες επιγραφικές και παλαιογραφικές σπουδές
- νέες προσεγγίσεις για τη διερεύνηση του ελληνικού κόσμου στις ιστορικές επιστήμες.

Για τη συμμετοχή στο Συνέδριο θα πρέπει να υποβληθεί γραπτή αίτηση το αργότερο μέχρι τις **15 Ιουνίου 2011** στην παρακάτω διεύθυνση:

Conference Organizing Committee
philolog@univ.kiev.ua
off. 86, 14 Taras Shevchenko Blvd.,
Kyiv 01033, UKRAINE

E-mail:

Fax: (044) 234-14-12

Τα κείμενα των ανακοινώσεων θα πρέπει να αποσταλούν στους διοργανωτές το αργότερο μέχρι τις **5 Οκτωβρίου 2011** προκειμένου να δημοσιευθούν σε εξειδικευμένες

συλλογές επιστημονικών άρθρων. Η δημοσίευση μίας σελίδας κοστίζει γύρω στις 20 γρίβνες. Τα κείμενα των ανακοινώσεων θα δημοσιευθούν μόνο εφόσον οι συγγραφείς τους λάβουν μέρος στις εργασίες του Συνεδρίου.

Γλώσσες του Συνεδρίου είναι ουκρανική, ρωσική, ελληνική, αγγλική.

Μορφοποίηση των άρθρων προς δημοσίευση:

- ✓ Κρίνεται απαραίτητο όπως τα κείμενα των ανακοινώσεων έχουν **μέγεθος 5 πλήρων σελίδων** και συνοδεύονται από **περίληψη με λέξεις-κλειδιά στην ουκρανική, ρωσική και αγγλική**.
- ✓ Παρακαλούμε όπως τα κείμενα ακολουθούν τις παρακάτω **παραμέτρους**:
 - **Γραμματοσειρά**: Times New Roman
 - **Μέγεθος**: 14
 - **Διάστιχο**: μονό
 - **Εσοχή παραγράφου**: 1,25
 - **Διαστάσεις σελίδας**: επάνω, κάτω – 2,5 cm· αριστερά – 3 cm· δεξιά – 1,5 cm.
- ✓ Άλλες γραμματοσειρές που τυχόν απαντώνται στο κείμενο της ανακοινώσεως **θα πρέπει να υποβληθούν χωριστά σε ηλεκτρονική μορφή**.
- ✓ Στην πρώτη σελίδα της εργασίας θα αναφέρονται κατά σειρά:
 - ονοματεπώνυμο του συγγραφέα στοιχισμένο δεξιά (14 έντονα κυρτά στοιχεία)
 - ιδιότητα (π.χ. καθηγητής γαλλικών, ερευνητής κ.λπ.)
 - ανώτατο εκπαιδευτικό ίδρυμα ή ερευνητικό κέντρο όπου εργάζεται ο συγγραφέας
 - τίτλος του άρθρου στοιχισμένο στο κέντρο (14 έντονα κεφαλαία στοιχεία)
- ✓ Οι βιβλιογραφικές πηγές στις οποίες γίνονται αναφορές μέσα στο κείμενο θα παρατίθενται στο τέλος του κειμένου (μέγεθος γραμματοσειράς –12). Μέσα στο κείμενο οι αναφορές θα γίνονται ως ακολούθως: [Πετρόπουλος 2000, 24].
- ✓ Στη βιβλιογραφία οι πηγές θα παρατίθενται κατά αλφαβητική σειρά σύμφωνα με τις ισχύουσες προδιαγραφές.
- ✓ Άρθρα φοιτητών, μεταπτυχιακών καθώς και διδασκόντων χωρίς επιστημονικό τίτλο θα πρέπει να συνοδεύονται από θετική έγκριση του επιβλέποντος καθηγητή τους στην οποία να αναφέρεται η επικαιρότητα και η πρωτοτυπία της εκπονηθείσας έρευνας.
- ✓ Παρακαλούμε όπως τα κείμενα των ανακοινώσεων υποβληθούν σε δισκέτα (μορφή RTF) με δύο εκτυπώσεις.

Η συντακτική επιτροπή επιφυλάσσει για τον εαυτό της το δικαίωμα να απορρίψει κείμενα των άρθρων και να ενημερώσει σχετικά τους συγγραφείς.

Τα έξοδα μετακινήσεως, διαμονής και διατροφής βαρύνουν τους συμμετέχοντες στο Συνέδριο.

Η ΟΡΓΑΝΩΤΙΚΗ ΕΠΙΤΡΟΠΗ

**CFP - 16TH INTERNATIONAL
CONFERENCE ON CULTURAL
HERITAGE AND NEW TECHNOLOGIES,
VIENNA - AUSTRIA, NOV 14-16, 2011,
CALL FOR PAPERS**

Join Us in Beautiful Vienna, Austria, Nov 14-16, 2011

16th International Conference on Cultural Heritage and New Technologies

Dear Colleagues,

In case you missed the original call for papers issued earlier this year, we wish to call your attention to this special opportunity now.

The Stadtarchäologie Wien (Urban Archaeology of Vienna) invites you to present a paper, poster or video clip at the 16th International Conference on Cultural Heritage and New Technologies.

Venue: City Hall of Vienna, Austria

Deadline for Abstracts: Call for Papers open until June 6, 2011. Please submit brief abstract now to be considered.

Conference Dates: Nov. 14 -16, 2011

Conference Theme: “Urban Archaeology and Prospection“

Conference Topics:

Section 1: Prospection, Survey and Data Integration

Section 2: Urban Archaeology – Streets, Roads and Squares

Don't miss this opportunity for “discussion and collaboration” in Vienna, Austria!

For the program and further information please visit: www.stadtarchaeologie.at

If you have further questions please do not hesitate to contact us.

I look forward to seeing you in Vienna!

Mag. Wolfgang Börner
Museen der Stadt Wien - Stadtarchäologie
Obere Augartenstraße 26-28, Zi. 2.11
A - 1020 Wien

Tel.: +43 (0)1 4000 81176
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wolfgang.boerner@wien.gv.at



TWO SPECIAL EVENTS HOSTED BY NEAREASTMED (NEM) ARCHAEOLOGY GROUP, OXFORD AND THE OXFORD AEGEAN SEMINAR

TUESDAY 7 June, 1 pm, Institute of Archaeology, Oxford, Lecture Room
Special lecture by:

Prof. Clairy Palyvou (Dept of Architecture, University of Thessaloniki)

‘Akrotiri on Thera: A Bronze Age cosmopolitan harbour of the Eastern Mediterranean & some thoughts on its possible relations to Ugarit’

THURSDAY 9 June, 5 - 7 pm, Institute of Archaeology, Oxford, Lecture Room
Special screening of the recent BBC documentary:

Atlantis: End of a World, Birth of a Legend.

Followed by followed by discussion with Prof. Palyvou, the documentary’s architectural advisor.

This event offers an excellent opportunity for students to ask questions about how such documentaries are made and the difficulties involved in making academic knowledge accessible to wider audiences.

ALSO:

THURSDAY, 9 June, 1 pm, Institute of Archaeology, Oxford Lecture Room
The regularly scheduled NEM lunchtime seminar:

Wolfgang Zwickel (Johannes Gutenberg Universität, Mainz)

"Ritual iconography in the East Mediterranean: the Iron Age II favissa at Yavneh, Israel

**“SOCIAL MATTER(S) RECENT
APPROACHES TO MATERIAL
CULTURE” ON THURSDAY, JUNE 2, 2011
AT THE NETHERLANDS INSTITUTE AT
ATHENS**

The **Netherlands Institute at Athens** cordially invites you to the conference “*SOCIAL MATTER(S) Recent Approaches to Material Culture*” on **Thursday, June 2, 2011** at the Netherlands Institute at Athens, Makri 11 – Makrygianni (Metro Akropoli)

Programme

09.00 – 09.30 Registration.

09.30 – 09.45 Welcome by Dr Christiane Tytgat – Director NIA, Dr Tryfon Bampilis – NIA & Leiden University.

INTRODUCTION

09.45 – 10.30 Dr Eleana Yalouri, Panteion University, *‘Things’, ‘Artefacts’, ‘Objects’ and ‘Stuff’: Why do ‘matter’ matters matter?*

SESSION 1: CLAIMS, DENIALS, AND THE MATERIALITY OF CULTURAL HERITAGE

10.30 – 11.00 Prof. Pieter ter Keurs, Dutch National Museum of Antiquities Leiden & Leiden University, *Flexible Networks: Reflections on objects and people.*

11.00 – 11.30 Dr Aris Anagnostopoulos, Swedish Institute at Athens, *The Materiality of Absence in Two Different Greek Cases.*

SESSION 2: THE MATERIALITY OF SPACE AND PLACE

11.50 – 12.20 Dr Aimilia Voulvouli, University of the Aegean, *Place as Matter, Matter as Identity: The struggle against the Third Bosphorus Bridge in Istanbul Turkey.*

12.20 – 12.50 Dr Andronicos Theocharidis, University of the Aegean, *Aging Things and their Substitutes: Vernacular collecting practices in an Aegean island.*

12.50 – 13.20 Dr Maria Jaidopulu Vrijea, Harokopion University, *Everyday Life in the City: Materiality in practices, representations and lived timespaces.*

SESSION 3: MATTERS OF PRACTICE, TRACES OF MATTER

15.30 – 16.00 Dr Elia Petridou, University of the Aegean, *Fashioning Culture: Practice and materiality in the study of clothes and clothing.*

16.00 – 16.30 Dr Elpida Rikou, Athens School of Fine Arts, *Tino Sehgal and ‘the dematerialization of the art object taken to an extreme’: Is ‘materiality’ of relevance to an anthropology of contemporary art?*

16.30 – 17.00 Dr Tryfon Bampilis, Netherlands Institute at Athens & Leiden University, *Liquor Matters: Reflections on the fetishism of a commodity.*

17.30 – 18.30 End Discussion and Conclusions.

R.S.V.P. tel. 210-92 10 760 or nia@nia.gr

¹⁴C & ARCHAEOLOGY, 7TH INTERNATIONAL SYMPOSIUM 8-13 APRIL 2013, GHENT, BELGIUM

At the last ¹⁴C & Archaeology meeting in Cyprus the consensus was to have the next meeting in 2013 so that the AMS conference, the Radiocarbon conference and ¹⁴C & archaeology meeting each will be held in a different year.

During the Cyprus meeting the Royal Institute for Cultural Heritage (Brussels, Belgium) and The Department of Archaeology of the Ghent University (Belgium) proposed to organize this meeting.

The conference will take place in the building of the Department of Archaeology in Ghent. The conference will start with an opening reception on Monday 8 April 2013, lectures will be held from Tuesday till Friday and on Saturday 13 April an optional conference tour will be organized.

Contacts:

Mark Van Strydonck Royal Institute for Cultural Heritage Jubelpark B-1000 Brussels (Belgium) T +32 2 739 67 02 F +32 2 732 01 05 E mark.vanstrydonck@kikirpa.be	Philippe Crombé Department of Archaeology 1 Ghent University B-9000 Gent (Belgium) T +32 9 331 01 53 F +32 9 331 02 97 E Philippe.Crombe@UGent.be
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HISTORICAL METALLURGY SOCIETY **ANNUAL CONFERENCE 2011, CARDIFF** **16TH-18TH SEPTEMBER 2011**

CALL FOR PAPERS

The HMS annual conference for 2011 will provide a forum for discussion on the development of the steel industry in the UK and continental Europe over the last 50 years. Most of the programme of the meeting will be held jointly with the Historical Committee of the German Steel Institute (VDEh).

The background to the steel industry in South Wales will also be a focus, with a session of contributions dealing with the regional post-18th century development of iron- and steel- making, particularly rolled products.

The conference will address the themes:

1. The South Wales iron and steel industry, particularly the development of rolled and engineering products,
2. The development of the steel industry in the UK and Europe post-1960
3. The social history of the iron and steel industry

Offers of 20-30 minute oral presentations are invited on archaeological, economic, engineering, historical, metallurgical or social aspects of any of the conference themes.

The conference is non-residential; accommodation advice will be posted on the HMS website (www.hist-met.org), together with the programme, registration form and updated conference details. The cost will be £130 for HMS Members (£115 student members), £150 non- members, and is inclusive of light refreshments, Saturday lunch, and the conference reception / dinner on Saturday evening.

Deadline for offers of presentations is July 15th.

Please submit a short abstract for your presentation in electronic form before July 30th

Deadline for registration for attendance is July 30th.

Enquiries to the organiser: Tim.Young@geoarch.co.uk

Dr Tim Young MA PhD FSA FGS
Email: Tim.Young@GeoArch.co.uk
Web: www.geoarch.co.uk
Phone: 029 20881431
Mobile: 07802 413704

Fax: 08700 547366

SECOND ANNOUNCEMENT & CALL FOR PAPERS

INTERNATIONAL SYMPOSIUM “HISTORY, TECHNOLOGY AND CONSERVATION OF ANCIENT METALS, GLASSES AND ENAMELS”, NOVEMBER 16 - 19, 2011, ATHENS, GREECE, COTSEN HALL, THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS (ASCSA)

General

The N.C.S.R. “Demokritos”/Institute of Materials Science and the National Technical University of Athens (N.T.U.A.)/Department of Chemical Engineering organizes an International Symposium on “History, Technology and Conservation of Ancient Metals, Glasses and Enamels”, to be held in Athens, 16-19 November 2011. The Symposium is expected to attract to a fruitful meeting researchers, scientists, archaeologists, conservation scientists and executives who are involved in the history, technology and conservation of ancient materials in Greece and the adjacent areas. The official language of the Symposium will be English.

Aim

The International symposium “History, Technology and Conservation of Ancient Metal, Glasses and Enamels” will give emphasis to topics related to the technology of fabrication and of conservation of ancient materials, focusing in findings from Greece and the adjacent areas. The symposium will also emphasize related topics to understanding and predicting the chemistry and technology of the fabrication, behavior, corrosion and properties of ancient materials (Copper-Bronze-Steel-Brass-Lead, Glasses and Enamels). The conference will consist of the topics:

1. History and objects
2. Structure and Properties
3. Dating techniques and applications
4. Technology (Raw materials, Furnaces, Melting, and Forming)
5. Corrosion of ancient materials
6. Modern aspects of corrosion of materials
7. Conservation

A special thematic session entitled “Hyalos-Vitrum- Glass: Ten Years Later” including review articles and outstanding papers dealing with vitreous material of the Mediterranean region, is going to be held on the occasion of completing ten years after

the important Conference Hyalos-Vitrum-Glass, organized in Rhodes-Greece, 3-5 April 2001.

Organizing Committee:

Dr. G. Kordas, Sol-Gel Laboratory, Institute of Materials Science, N.C.S.R. “Demokritos”, Athens

Prof. P. Vassiliou, Laboratory of Physical Chemistry, School of Chemical Engineers, N.T.U.A.

Dr. Y. Bassiakos, Laboratory of Archaeometry, Institute of Materials Science, N.C.S.R. “Demokritos”, Athens

Dr. L. Filippaki, Laboratory of Plasma Physics, Institute of Materials Science, N.C.S.R. “Demokritos”, Athens

International Steering Committee

□ **Emma Angelini**, Dipartimento di Scienza dei Materiali ed Ingegneria Chimica, Torino, Italy

□ **Vassiliki Argyropoulos**, TEI Athens, Greece

□ **Justine Bayley**, Editor, J. Historical Metallurgy, Ass. for the History of Glass, Un. College London, UK

□ **Joost M.A. Caen**, Hogeschool Antwerpen, Conservation Studies, Antwerpen, Belgium

□ **Patrick Degryse**, Department of Earth and Environmental Sciences, K.U. Leuven, Belgium

□ **Mário G.S. Ferreira**, Dep. of Ceramics and Glass Engineering, Univ. de Aveiro, Portugal

□ **Costas Fotakis**, Institute of Electronic Structure and Laser, FORTH, Heraklion, Greece

□ **Ian C. Freestone**, Department of Archaeology Cardiff, UK

□ **Sabrina Grassini**, Dipartimento di Scienza dei Materiali ed Ingegneria Chimica, Torino, Italy

□ **Susanne Greiff**, Römisch-Germanisches Zentralmuseum, Mainz, Germany

□ **Bernard Gratuze**, Institut de Recherche sur les ArchéoMATériaux, Univ. d’Orléans, France

□ **Caroline Jackson**, Department of Archaeology, University of Sheffield, UK

□ **Julian Henderson**, Dep. of Archaeology, The University of Nottingham, Nottingham, UK

□ **Fatma Marii**, The Jordan Museum, Amman, Jordan

□ **Anna Michailidou**, Institute for Greek and Roman Antiquity, NHRF, Athens, Greece

□ **M. Fatima Montemor**, ICEMS, Instituto Superior Tecnico, Technical Univ. of Lisbon, Portugal

□ **George Papadimitriou**, Department of Mining and Metallurgical Engineering, N.T.U.A., Athens, Greece

□ **Paul T. Nicholson**, Department of Archaeology, Cardiff, UK

□ **Thilo Rehren**, Institute of Archaeology, University College London, London, UK

□ **Sariel Shalev**, Inst. of Maritime Studies, School of Marine Sciences, Univ. of Haifa, Israel.

□ **Oren Tal**, The J.M. Alkow Department of Archaeology & ANE Cultures, Tel Aviv Univ., Israel

□ **George Thompson**, School of Mat. Corr. & Protect. Centre, The Univ. of Manchester, UK

- **George Varoufakis**, University of Athens, Halyvourgiki Inc., Athens, Greece
- **David B. Whitehouse**, The Corning Museum of Glass, Corning NY, USA

Invited Speakers

A.C. Antonaras: "Glass Working in Roman and Early Christian Thessaloniki. Older and More Recent Finds"

I. C. Freestone: "The Reuse and Recycling of Roman Glass in the Medieval Period"

M. Lykiardopoulou – Petrou: "The Conservation Project at the Aiani Museum"

M.F. Montemor: "Electrochemistry and Surface Analysis to Prevent Deterioration of Heritage Artefacts"

P. Triantafyllidis: "Glass Votive Offerings in the Great Rhodian Sanctuaries"; "Votive Metal Zoomorphic Small Objects from the Pan- Rhodian Sanctuary of Zeus Atavyrios"

M. Zheludkevich: "Self-healing Coatings as a Way to Extend Life of Metallic Materials"

G. Varoufakis: "The Rapid Development in Making Iron Clamps for the Erection of the Archaic and Classical Temples"

Important Deadlines

Papers for presentation will be accepted on the basis of extended abstract review with the following sequence of deadlines:

Abstract submission: June 20, 2011

Selection of Papers: September 30, 2011

Submission of manuscripts: November 16, 2011

Conference Proceedings:

After refereeing, papers will be published in a special book. The registration fees include a memory stick with pdf copies of all the published papers, and the hard copy of the book will be available at extra cost.

Location:

The conference will be held at the Cotsen Hall of the American School of Classical Studies at Athens (ASCSA). The School is located in the center of Athens within walking distance from Syntagma Square and Kolonaki Square.

Welcome Reception:

A welcome reception will be held during the evening of November 16, 2011 at the lobby of the Cotsen Hall.

Conference Banquet:

The Conference Banquet will be held on Thursday 17 November 2011 in the gardens of the ASCSA.

Travel:

Athens is the capital of Greece well connected with all major cities of the world via the Eleftherios Venizelos airport. You can use the metro, suburban railways, bus, taxi, and rental car to reach the center of Athens (Syntagma Square). The Evangelismos Metro Station is located approximately five minutes' walking distance from the ASCSA.

ASCSA campus is located at the base of the southern slope of Mount Lykavitos in the Kolonaki district, one of the most fashionable areas in the center of Athens.

Accompanying Persons Program:

An accompanying persons program will be arranged on informal basis, given sufficient interest.

Possible activities will include a visit to the Acropolis Museum, Acropolis, National Museum, etc.

Contact:

L. Filippaki,

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FAX: ++302106547690

A. Korda,

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Registration

Registration fee before September 30, 2011 will be 180 Euros (70 Euros for students). After September 20, 2011 the registration fee will be 220 Euros. A number of reasonably priced hotels will be available to host the participants.

If you wish to participate, please fill out the form below and send it to one of the contact persons.

Registration Form

Please fill in the form and send it back before June 20, 2011. Speakers, please send us an abstract of no more than 600 words by e-mail, fax, or mail, by the same date to:

L. Filippaki, email: lfilip@ims.demokritos.gr

A. Korda, email: akordas@ims.demokritos.gr;

Oral / Poster presentation (preference):

Family Name:

First Name:

Academic Title:

Student (stamped verification needed):

Institution:

Complete Professional Address:

Telephone:

Fax:

E-mail:

Title of Your Lecture:

Joint Authors:

Abstract:

Title of contribution

Names*

Addresses (Department, Institute, City, Zip code,
Country)

Text (maximum 600 words, justified, 12ppt, Times
New Roman)

*email (only of the corresponding author):

**"INDICES ET TRACES : LA MÉMOIRE
DES GESTES", COLLOQUE
INTERNATIONAL À LA FACULTÉ
D'ODONTOLOGIE, NANCY (FRANCE) -
16-18 JUNE 2011**

A multi-disciplinary conference on the trace evidence for human activity, including mining and metallurgy, with contributions from across France, the UK, Greece and Switzerland.

For details go to

http://www.uhp-nancy.fr/recherche/colloques_et_congres/indices_et_traces_la_memoire_des_gestes_collaque_international_a_la_faculte_d_odontologie

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<http://people.exeter.ac.uk/pfclaugh/about.htm>

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Co-owner - mining-history e-mail discussion list.

See <http://www.jiscmail.ac.uk/files/mining-history/> for details.

Mining History Pages - <http://www.people.exeter.ac.uk/pfclaugh/mhinf/>

ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ –
JOB VACANCIES/FELLOWSHIPS
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 (ESR09) AT THE
DEPARTMENT OF ARCHAEOLOGY,
UNIVERSITY OF SHEFFIELD

Title of Research Project

“The analysis of Neolithic to Bronze Age pottery from excavations in the Mesara Plain of Crete”

Fellowship Description

A project which examines the rich ceramic record of Phaistos in Southern Crete, working in close collaboration with the Italian excavators. The aim is to undertake a full technological reconstruction of pottery production from the Final Neolithic until the First Palace period and to assess fully recently discovered evidence of pottery production from Phaistos and the Mesara Plain. It is hoped that this work will shed light on changes in craft practice and social organisation in South Central Crete during this time. The project will provide further training for the fellow to use techniques of scanning electron microscopy, X-ray diffractometry and thin section petrography. The research project, which will be supervised by Dr Peter Day, will form part of the department’s commitment to the ‘NARNIA’ Marie Curie Initial Training Network, financed under the ‘People’ program of the European Union. The post offers the possibility of gaining a doctoral degree with a leading research team.

Main Duties and Responsibilities

- Conduct research over a three year period under the supervision of the scientist-in-charge / line manager.
- Plan, organise and carry out such fieldwork as necessary for the research project.
- Undertake such training in analytical and other techniques, as specified by the scientist-in-charge.
- Develop analytical protocols as required.

- Compile and write reports and jointly-authored publications such as those specified in the Initial Training Network contract.
- Attend project meetings and present progress reports.
- Any other duties, commensurate with the grade of the posts

Academic Requirements

The successful applicants will have an MA or MSc in Archaeology or a relevant subject, preferably at distinction level (or equivalent experience). Previous experience in the practice and research design of ceramic analysis is essential, and experience in the analytical study of ceramics within the Aegean is desirable. The post-holders will have the ability readily to combine archaeological and scientific information within an integrated program of research. The posts will involve the application of thin section petrography, chemical and micro-structural analysis to archaeological ceramics.

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

This post is offered in the context of a Marie Curie Initial Training Network and transnational mobility is a key element of eligibility. As such, applications will only be accepted from candidates who have spent less than 12 months in the United Kingdom within the last three years. The posts are open to all nationalities, regardless of citizenship of the European Union.

Duration of fellowship

3 years – This post is fixed-term with a start date of 1st September 2011 and an end date of 31st August 2014.

Submitting an application

Deadline for fellowship application: **21 June 2011**.

Applications should be submitted on line using the University of Sheffield online application system.

To apply for one of these posts please visit: <http://www.sheffield.ac.uk/jobs>

For all on-line application system queries and support, please contact: e-Recruitment@sheffield.ac.uk

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). The annual salary amounts to £30,151 per annum, with additional allowances as per Marie Curie.

Contact person

Dr Peter Day (P.M.Day@sheffield.ac.uk), Department of Archaeology, University of Sheffield

More information on NARNIA: www.narnia-itn.eu

Maria Dikomitou

FP7 (Marie Curie) NARNIA Project Manager
New Archaeological Research Network for Integrating Approaches to ancient material studies
www.narnia-itn.eu

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**MARIE CURIE ITN EXPERIENCED
RESEARCHER FELLOWSHIP ON "THE
USE OF PXRF IN ARCHAEOLOGY"
(ER03), DEPARTMENT OF
ARCHAEOLOGY, FACULTY OF ARTS
AND HUMANITIES, UNIVERSITY OF
SHEFFIELD**

This Experienced Researcher post (ER03) forms part of the Department's commitment to the recently funded EU initiative, NARNIA - "New Archaeological Research Network for Integrating Approaches to ancient material studies", coordinated by the University of Cyprus. The successful candidate will pursue research in line with NARNIA objectives, specifically undertaking research utilising pXRF in tandem with network partners. The successful candidate will be responsible for initiating and completing research, coordinating training events, and publishing scholarly articles. The successful candidate will be part of the department's large Post Doctoral research community reporting directly to Dr Roger Doonan who will be leading this aspect of the NARNIA network. The successful candidate will be an important member of the NARNIA ITN network and will benefit from attending numerous training events and networking in a number of research projects.

Applicants should possess a PhD (or have equivalent experience) in archaeology, archaeological science or materials analysis. Candidates should also be able to demonstrate a proven track record of pursuing independent research and experience of archaeological excavation methods. The ability to coordinate and organise resources also is essential.

The department is amongst the largest in the UK and has global research interests. The department is well equipped for field and laboratory research and has a vibrant community of Academics, Post-doctoral researchers and research students. The current post will require the candidate to both lead and collaborate in a number of research initiatives within the NARNIA network by liaising with academics at institutions in Cyprus, Jordan, France, Greece and Belgium.

Main duties and responsibilities:

- Undertake research in accordance with NARNIA objectives.
- Lead and coordinate research initiatives as part of the international NARNIA network.
- Develop, plan and manage the University's contribution to the research project.
- Contribute to general planning of the wider research project and plan for own/University contribution to the project, incorporating issues such as the availability of resources, deadlines, project milestones and overall research aims

- Liaise with NARNIA and commercial partners
- Report to the Work Package Leader and commercial partners
- Develop a strong international research profile in collaboration with network partners through high-impact journals and other high-impact channels including academic and professional conferences.
- Publish scholarly articles in collaboration with network partners.
- Plan, organise and carry out fieldwork as necessary for the research project.
- Read academic papers, journals, books and professional literature and attend conferences to keep abreast of developments in the area.
- Coordinate and organise training events for network partners.
- Manage research staff.
- Attend NARNIA network meetings as required.
- Any other duties, commensurate with the grade of the post.

This post is full time and fixed-term with a start date of 1 July 2011 and an end date of 30 June 2013.

The Post is offered in the context of a Marie Curie Initial Training Network and transnational mobility is a key element of eligibility. **As such, applications will only be accepted from candidates who have spent less than 12 months in the United Kingdom within the last three years.** Candidates eligibility for the post is determined by Marie Curie terms and conditions.

Terms and conditions of employment: Will be those for Grade 1-9 staff, except for when these are superseded by the Marie Curie Terms and conditions. **Salary for this grade:** £47,434 per annum, with additional allowances as per Marie Curie.

Closing date: Tuesday 21 June 2011.

To apply for one of these posts please visit: <http://www.sheffield.ac.uk/jobs>.

For all on-line application system queries and support, contact: e-Recruitment@sheffield.ac.uk.

For informal enquiries about this job and department, contact Dr Roger Doonan by email on r.doonan@sheffield.ac.uk

For NARNIA related enquiries, contact Maria Dikomitou by email on m.dikom@ucy.ac.cy

Maria Dikomitou

FP7 (Marie Curie) NARNIA Project Manager

New Archaeological Research Network for Integrating Approaches to ancient material studies

www.narnia-itn.eu

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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 RESEARCHER
FELLOWSHIP ANNOUNCEMENT,
FELLOWSHIP TITLE AND ID CODE MARIE
CURIE EXPERIENCED RESEARCHER
FELLOWSHIP (ER02) AT THE INSTITUTE OF
MATERIALS SCIENCE, NATIONAL CENTRE
FOR SCIENTIFIC RESEARCH
"DEMOKRITOS"**

Title of Research Project

"Mechanical and thermal behaviour of functional ceramics in the Aegean and
Cyprus"

Fellowship Description

This ER will undertake research on the technological evolution of transport pottery, cooking and refractory ceramics in the Aegean and Cyprus. More specifically the work will include methodological developments towards the role of raw materials composition and vessel shape to the mechanical and thermal properties of these types of ceramics. The work includes new techniques, such as NMR, to study the pore space characteristics of ceramic materials - essential to the above properties. Furthermore, archaeological applications will be undertaken, in collaboration with the University of Sheffield and the University of Cyprus for the study of assemblages of transport amphorae, cooking pots and metallurgical ceramics.

Academic Requirements

Eligible applicants for this Experienced Researcher 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 chemistry, or materials science, or archaeological sciences, or ceramic technology. Their total research experience must not exceed 5 years after obtaining qualifications which formally allowed them to embark on a PhD 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. Vassilis Kilikoglou (E-mail: kilikog@ims.demokritos.gr).

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 May 2011

Closing date for applications

6 May 2011

Financial regime

Fellowship covers monthly salary for two years in line with FP7-PEOPLE-2010-ITN. The annual salary is approximately 53.580 Euros before tax and national insurance deductions. For more information:

http://ec.europa.eu/research/fp7/understanding/marie-curieinbrief/home_en.html

Contact persons

Dr Vassilis Kilikoglou

Institute of Materials Science, National Centre for Scientific Research "Demokritos"

mailto: kilikog@ims.demokritos.gr

and

Dr. Yiannis Bassiakos

Institute of Materials Science, National Centre for Scientific Research "Demokritos"

mailto: bassiakos@ims.demokritos.gr

For more information about the Institute of Materials Science, National Centre for Scientific Research "Demokritos":

http://www.ims.demokritos.gr/ims_field.php?lang=en&ergo=G304

For more information about the NARNIA ITN please visit the project's website at www.narnia-itn.eu or contact the project's manager Maria Dikomitou, email: m.dikom@ucy.ac.cy

Maria Dikomitou

FP7 (Marie Curie) NARNIA Project Manager

New Archaeological Research Network for Integrating Approaches to ancient material studies

www.narnia-itn.eu

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ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS

DATA REQUEST

Dear all

More than 20 years have passed since we started our series of inter-comparisons including the production of consensus values for the reference materials, which archive has been widely used within the community. We are aware of the continuing widespread use of the reference materials from TIRI, FIRI and VIRI. It seems that this would be a timely juncture to review the consensus values, especially since some were based on a relatively small set of measurements and so may be less robust.

We would therefore like to instigate a review of the consensus values for as many of the reference materials as possible. We would then present an updated set of values at the next ¹⁴C conference in Paris.

Would you be willing to sending an Excel sheet of your results? As always we will retain laboratory anonymity, this exercise is purely to investigate whether evidence exists for updating the consensus values and their uncertainties.

Timescale

To allow time for re-analysis, the data sets would need to be sent by the end of October 2011. We would undertake the review and the evaluation sent back by May 2012 to all those who sent results, with a view to presenting the findings at Paris (with due acknowledgement of all those who have participated). Please email the data in Excel sheets with the sample identifier clearly marked to marian.scott@glasgow.ac.uk

thank you

Marian

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INTERNET SITES

EGYPTIAN PYRAMIDS FOUND BY INFRA-RED SATELLITE IMAGES, BY FRANCES CRONIN

Saqqara pyramid Two new finds are at Saqqara, an older but lesser known pyramid site than Giza

Seventeen lost pyramids are among the buildings identified in a new satellite survey of Egypt.

More than 1,000 tombs and 3,000 ancient settlements were also revealed by looking at infra-red images which show up underground buildings.

Initial excavations have already confirmed some of the findings, including two suspected pyramids.

The work has been pioneered at the University of Alabama at Birmingham by US Egyptologist Dr Sarah Parcak.

satellite image of pyramid An infra-red satellite image shows a buried pyramid, located in the centre of the highlight box.

She says she was amazed at how much she and her team has found.

"We were very intensely doing this research for over a year. I could see the data as it was emerging, but for me the "Aha!" moment was when I could step back and look at everything that we'd found and I couldn't believe we could locate so many sites all over Egypt.

"To excavate a pyramid is the dream of every archaeologist," she said.

The team analysed images from satellites orbiting 700km above the earth, equipped with cameras so powerful they can pin-point objects less than 1m in diameter on the earth's surface.

Infra-red imaging was used to highlight different materials under the surface.

Test excavations

Ancient Egyptians built their houses and structures out of mud brick, which is much denser than the soil that surrounds it, so the shapes of houses, temples and tombs can be seen.

"It just shows us how easy it is to underestimate both the size and scale of past human settlements," says Dr Parcak.

And she believes there are more antiquities to be discovered:

"These are just the sites [close to] the surface. There are many thousands of additional sites that the Nile has covered over with silt. This is just the beginning of this kind of work."

BBC cameras followed Dr Parcak on her "nervous" journey when she travelled to Egypt to see if excavations could back up what her technology could see under the surface.

In the BBC documentary Egypt's Lost Cities, they visit an area of Saqqara (Sakkara) where the authorities were not initially interested in her findings.

But after being told by Dr Parcak that she had seen two potential pyramids, they made test excavations, and they now believe it is one of the most important archaeological sites in Egypt.

Click to play

An infra-red satellite image reveals the city of Tanis

But Dr Parcak said the most exciting moment was visiting the excavations at Tanis.

"They'd excavated a 3,000-year-old house that the satellite imagery had shown and the outline of the structure matched the satellite imagery almost perfectly. That was real validation of the technology."

The Egyptian authorities plan to use the technology to help - among other things - protect the country's antiquities in the future.

"We can tell from the imagery a tomb was looted from a particular period of time and we can alert Interpol to watch out for antiquities from that time that may be offered for sale."

She also hopes the new technology will help engage young people in science and will be a major help for archaeologists around the world.

"It allows us to be more focused and selective in the work we do. Faced with a massive site, you don't know where to start.

"It's an important tool to focus where we're excavating. It gives us a much bigger perspective on archaeological sites. We have to think bigger and that's what the satellites allow us to do."

"Indiana Jones is old school, we've moved on from Indy, sorry Harrison Ford."

Egypt's Lost Cities is on BBC One on Monday 30 May at 2030 BST.

Please visit the site: <http://www.bbc.co.uk/news/world-13522957>, Video at <http://www.bbc.co.uk/news/world-13518143>

FORMAL LAUNCH OF CLAROS

CLAROS launched its first public service on May 17th with a web-based explorer interface, and a data-oriented service.

Based at the e-Research Centre in Oxford, CLAROS is an international research collaboration to enable simultaneous searching of major collections of digital material about archaeology and art in university research institutes and museums. It contains material from a wide range of data partners, including the Beazley Archive, various digital archives in the Ashmolean Museum, the Arachne archive, the Lexicon of Greek Personal Names, and the Lexicon Iconographicum Mythologiae Classicae, recording over 2 million objects, places, photographs, and people.

CLAROS is a resource discovery service, and its job is to provide cacheing, indexing, querying and visualization services. The working practice is one of federation. CLAROS ingests a catalogue of records from each data partner and amalgamates it into a single entity, but for more detailed information about a hit we return to the original web site of the partner. CLAROS data is modelled using RDF against the CIDOC CRM ontology, and can be accessed using an open SPARQL endpoint, as well as the powerful web site.

CLAROS is work in progress, with more data partners to come, and large amounts of work to be done on both internal linking, and linking to the wider semantic web. The first fruit of this will be completion of work to join up the places inside CLAROS with those in geonames and Pleiades.

Please visit the site: <http://bit.ly/145nq0>

VIRTUAL WORLD PROJECT! TAKE A VIRTUAL TOUR OF ARCHAEOLOGICAL SITES!

<http://moses.creighton.edu/vr/> is a website with this nifty program:

Welcome to the Virtual World Project! Take a virtual tour of archaeological sites!

The Virtual World Project is designed for educational purposes, with teachers and students in mind. The project offers two modes for viewing the archaeological sites (Tour and Presentation mode). See the help screens for further information on using the project. Audio commentary is being added to many of the sites (see Herodium, Dan, Qasr Bshir, and Ramm, among others).

The project is continually being updated. Find out what is new in the project by visiting the project's Blog. Click on the "Project Blog" link here or below. The project should be linked and accessed through its own domain at www.virtualworldproject.org

CYPRUS ARCHAEOLOGICAL DIGITIZATION PROGRAMME (CADIP)

The «Cyprus Archaeological Digitization Programme» is a programme aimed towards increasing efficiency and effectiveness in the retrieval and manipulation of information relating to Ancient Monuments and movable antiquities through the application of a Geographical Information System (GIS), resulting in the improvement of the protection of Cypriot cultural heritage. The programme is co-financed by the Norwegian Financial Mechanism www.eeagrants.org for a period of two years.

The «Cyprus Archaeological Digitization Programme» has two objectives:

- to digitise the declared Ancient Monuments of the First Schedule (Ancient Monuments on State Land) and of the Second Schedule (Ancient Monuments on Private Land) as well as areas where Archaeological Surveys have been conducted, Controlled Areas and Requisition Areas.
- to implement a pilot project involving the digitization of the movable antiquities recovered in the Pafos District until 1975 and are currently stored in the Pafos District Museum.

The introduction of a Geographical Information System (GIS) will integrate the geographical data with the archaeological findings and support decision making, regarding Ancient Monument management. The GIS will be linked to a metadata database which will include descriptive and technical information concerning the Ancient Monuments or movable antiquities.

A full digitised database will be available to the personnel of the Department of Antiquities with the completion of the programme, resulting to approximately 1300 digitized Ancient Monuments from all over Cyprus and approximately 5000 movable antiquities from the Pafos District. The digitization of artefacts is expected to continue after the completion of «CADiP » aiming at the creation of a fully digitized record of movable antiquities.

«CADiP » includes a provision for the creation of a website in which the public will be able to access a summarized version of the Ancient Monuments and previously published movable antiquities database. Full records will be made available to external researchers after they obtain a written authorization by the Director of the Department of Antiquities.

It is expected that alongside the increase in efficiency in the management of Ancient Monuments the future viability and preservation of valuable archival material will be made possible. This will attract more researchers and students promoting Cypriot cultural heritage.

Please visit the site:

<http://www.mcw.gov.cy/mcw/da/da.nsf/All/1A7BF21DA2D1652DC225750C00228456?OpenDocument>

ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS

MESOHELLADIKA: LA GRÈCE CONTINENTALE AU BRONZE MOYEN. ACTES DU COLLOQUE INTERNATIONAL ORGANISÉ PAR L' ÉCOLE FRANÇAISE D' ATHÈNES, EN COLLABORATION AVEC L' AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS ET LE NETHERLANDS INSTITUTE IN ATHENS, ATHÈNES 8-12 MARS 2006. BCH SUPPLEMENTS 52

Bryn Mawr Classical Review 2011.05.64

Anna Philippa-Touchais, Gilles Touchais, Sophia Voutsaki, James Wright (ed.), Mesohelladika: la Grèce continentale au Bronze Moyen. Actes du colloque international organisé par l' École française d' Athènes, en collaboration avec l' American School of Classical studies at Athens et le Netherlands Institute in Athens, Athènes 8-12 mars 2006. BCH

Supplements 52. Athènes: École française d' Athènes, 2010. Pp. 1046. ISBN 9782869582101. €120.00.

Reviewed by Irene Nikolakopoulou, Archaeological Institute of Aegean Studies (irene_nikolak@yahoo.com)

[Authors and titles are listed at the end of the review.]

This impressive volume of 1046 pages is the publication of the proceedings of a conference on the Greek Mainland in the Bronze Age held in Athens in March 2006, organised by the French School at Athens, the American School of Classical Studies at Athens and the Netherlands Institute in Athens. The volume includes 63 papers and 28 posters in Greek, English and French, each conveniently preceded by short abstracts in the two languages other than that of the paper or poster. The book opens with a preface by the directors of the three organising Schools and an introduction by the editors. There then follows a useful list of abbreviations of publications and chronological subdivisions, as bibliographical references are included in the footnotes of each paper. This book aims to bring to the forefront hard evidence which it is hoped will generate fruitful discussion on whether Middle Helladic (MH) Greece is still to be considered “The Third World” of the Aegean¹ in terms of cultural level and social processes.

In his usual vivid and succinct way, Oliver Dickinson uses his keynote paper to provide the broader background to many of the hotly debated issues in the study of MH society. Naturally, many of the contributions that follow in the main body of the book are strongly empirical in approach, presenting evidence that helps to fill material,

geographical, and chronological gaps, including data from the application of cutting-edge scientific methods. The editors have effectively opted to organise the large number of papers in seven thematic sections, including the poster presentations in the relevant parts. Inevitably, some papers discuss evidence related to more than one sections, but on the whole the outline of the book works for the reader. Nonetheless, the empirical and thematic foci work well together, as an effort is made by the editors to cluster papers presenting evidence from specific sites in broad geographical/regional terms within each thematic section.

The first section is the longest, as it includes 27 papers and posters on Topography and Settlement. Reports on new evidence, mostly retrieved in rescue excavations conducted by the Greek Archaeological Service, as well as thorough restudy of older material, provide us with the essential information for the reconsideration of settlement patterns, social organisation and local sequences. The clarification of Middle Bronze Age (MBA) site stratigraphies and the refinement of chronological phasing will hopefully trigger a much needed boost to research, allowing a comprehensive review of our perceptions of the nature of MH sites and their interaction patterns. Perhaps, however, the most welcome addition is the filling of the gaps in our knowledge of the habitation patterns of areas largely under-represented in the archaeological record. Starting with the Peloponnese, this is the case for Troezenia, with important discoveries at Megali Magoula, Galatas, presented by Konsolaki-Yiannopoulou; and Achaia, with reports on the sites of Pagona in the hinterland of modern Patras by Dietz and Stavropoulou-Gatsi, Aigion by Papazoglou-Manioudaki, and Aigeira by Alram-Stern. Similarly, Rambach offers an overview of recent research at MH sites in Elis and Messenia in the western Peloponnese, while evidence from Laconia is presented by Crouwel, on the important site of the acropolis of Geraki, and Zavvou, who reviews finds from known and newly located sites in the area of Sparta and wider Laconia. Synthetic approaches as a result of restudy of older material enhance our understanding of sites in the Argolid and Messenia (see papers by Demakopoulou and Divari-Valakou, Shelton, Davis and Stocker, Zavadil), while an insular detour extends the boundaries of the MH world to include the important site of Aegina, Kolonna discussed in Gauss and Smetana; the site of Lazarides on the same island presented by Sgouritsa; and the MBA acropolis at Sklavos, Salamis, with surface survey finds reviewed by Lolos. The MH period in Attica is now better understood both in regional and chronological terms as demonstrated by new evidence and restudied material discussed in five papers and one poster. A synthetic approach to the archaeological record for MH Attica by Papadimitriou argues that most sites, with the exception of Thorikos, retained a strong MH character well into the Late Helladic (LH) period. Moving further to Central Greece and Thessaly, balance is restored with new evidence shedding light on insufficiently known MH habitation patterns in the areas of Navpactia, Achaia Phthiotis and Karditsa, and focus on the MBA levels from the renowned sites at Eretria in Euboea, Palamari on the island of Skyros, and Dimini in Thessaly.

The second section of the volume comprises 15 papers and posters on Mortuary Practices and Physical Anthropology. Apart from a series of papers on new information and critical discussion on grave types and funerary practices in the Argolid and Central Greece, significant contributions by physical anthropologists and other forensic scientists included in this section testify to the emergence of bio-archaeology as a promising field in recent years. The anthropological and analytical data retrieved from the study of human bones and teeth, including breakthrough DNA analysis and facial reconstruction

of human remains from Mycenae and Lerna, allow for critical insights into the study of MH populations, such as the detection of nutrition and subsistence habits and the nature of diseases, as well as the reconstruction of socioeconomic patterns and kinship relations.

Given that the fields of Symbolism and Ritual in MH Greece are still considered blurry areas due to lack of related evidence, the five papers in the third section of the volume embark upon a challenging venture. Yiannouli and Blakolmer draw on evidence from weapons and iconography respectively to discuss symbolic meanings, while Theodorou-Mavrommatidi, Whittaker and Tranta-Nikoli delve into manifestations of religious beliefs and ritual action in MH societies. In view of the limitations of the material, the contributions present informative arguments on the use of hard evidence to infer ideological aspects building on a sound methodology.

The fact that only ten papers and posters discuss Pottery and Chronology in the fourth section of the book testifies to a shift in current research interests, as also noted by the editors in the concluding remarks. Nonetheless, this field undoubtedly constitutes the backbone for any further approach to archaeological data.² Therefore, papers by Cosmopoulos on Eleusis, Stamoudi on Kastro Lamias, Papakonstantinou and Sakkas on Amouri in the Spercheios valley and Froussou on Neo Monastiri Phthiotidas provide a better understanding of local sequences and ceramic production and complement the first section of the book in enriching data on insufficiently known areas. A thorough re-evaluation of distinctive MH pottery classes, exploring specific characteristics, chronological attributions and geographical distribution, is presented in papers by Dakoronia, Sarri, Overbeck and Mathioudaki. On a more methodological note, Gauss presents the research database implemented as an instrumental tool for the classification of the pottery from Aegina Kolonna, while Voutsaki et al. stress the significance of the application of radiocarbon dating methods on well-stratified contexts from MH Lerna.

In the fifth section on Production, Technology and Economy, two main fields are addressed. One is related to dietary and subsistence patterns in MH Mainland Greece and Aegina Kolonna, examined in two papers and a poster drawing on archaeozoological, archaeobotanical and marine data. The other is artefact production and consumption, discussed in three papers by Skorda, Spencer and Kiriati on pottery and one by Kayafa on metallurgy, with particular emphasis on technological practices and their social contexts. These integrated approaches reflect meaningful advances in the study of material assemblages, in that they can be inherently linked with issues discussed in the next section on social organisation and change. Of particular interest is the critical assessment of the outlook of material production during and towards the end of the MH period, with a view to exploring the big issue of the rise of the LH cultural phenomenon. Given that the MH period has been traditionally, and not without good reason, considered as unexciting in artistic expression and technological advances, a closer look at material production and consumption certainly has the potential to revise fundamentally these long-standing views.

Along similar lines, but on a more theoretical level, four papers and one poster in the sixth section explore aspects of Social Organisation and Social Change in MH Greece. Drawing on the archaeological record, Bintliff, Voutsaki, Philippa-Touchais and Wright offer socio-political perspectives into aspects of demography, domestic economy, settlement planning and social group identities and interaction. Hitchcock and Chapin emphasise the need for a closer look at the data from Laconia on MH exchange networks

and the emergence of elite groups. These insights aim towards a more subtle understanding of social dynamics and social change in MH communities, moving a step forward from the traditional quest for the formative processes that led to the rise of social complexity in Mycenaean societies.

Finally, a lengthy section with twenty papers and posters is dedicated to External Relations and Interaction. The almost pejorative treatment of MH culture(s) in Aegean Bronze Age studies has inevitably stemmed from comparison with the preceding EH and the following LH periods, but, possibly more influentially, from comparison with the contemporary thriving Middle Minoan and Middle Cycladic cultural groups and social structures. For this reason, this section is significant in that it places the MH in the wider context of interactions and synchronisms in the Aegean and beyond. While most of the papers on the Cyclades, Crete and the northeast Aegean (the island of Lemnos and western Anatolia) focus on the presentation of local sequences and traits at each site, interesting links with the Mainland are attested in terms of interaction and synchronisms. Evidence from Macedonia, a broad area at the periphery of the MH world which has not yet received due attention in Bronze Age studies, is discussed in a series of papers and posters bringing to light new data and exploring secular aspects, burial practices and interaction. Metallinou reviews the evidence from Corfu, an island with interesting interaction patterns due to its strategic location. The main body of the book is completed with glimpses into MBA material culture from two sites outside the borders of modern Greece, Sovjan in southeastern Albania and Vivara in Italy.

In the concluding remarks the editors emphasise the multifaceted contribution of the papers presented in the conference to the current state of research. Indeed, the compilation of topics in this volume reflects a much needed integrated approach to a disputed era. While due emphasis is unavoidably placed on problematic transitional phases at the beginning and end of the period and the big question of the origins of Mycenaean culture, it becomes evident that the main issue of bringing centre-stage the MH as a distinct cultural period is successfully addressed. This latter point is best exemplified by the imbalance attested among the sections of the book: the most numerous, the first section on the dissemination of data from MH sites and the last section on MH external relations, raise new questions about the uniformity of the MH culture(s) and the nature of interregional interactions in MBA Aegean and beyond.

The volume is certainly not meant to be read cover to cover, but it will definitely be used as a principal reference tool for scholars. The editors are to be commended for the quality of the publication, not least for the very few typographical errors in such a large volume. Illustrations are conveniently set at the end of each paper/poster. However, more plates for ceramic material, especially in colour, and petrographic thin sections would be most welcome by specialists, as only a small number of colour plates is reserved for sherd material from Vivara. A map with all sites mentioned would also be very useful and representative of the breadth of the areas covered in the book.

To sum up, it is too early to judge whether this collective volume represents in itself a rewriting of the history of the MH period, as all data needs to be brought together and assessed in future synthetic work. Nonetheless, it undoubtedly instigates a thought-provoking re-evaluation of the MH communities and it will certainly be at the centre of scholarly debate on the nature of this intriguing period.

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**A NEW MATHEMATICAL
APPROXIMATION OF SUNLIGHT
ATTENUATION IN ROCKS FOR
SURFACE LUMINESCENCE DATING,
JOURNAL OF LUMINESCENCE 131 (2011)
1874–1884**

Nikolaos Laskaris, Ioannis Liritzis

University of the Aegean, Department of Mediterranean Studies, Laboratory of
Archaeometry, 1 Demokratias Avenue, Rhodes 85100, Greece

A B S T R A C T

The attenuation of sunlight through different rock surfaces and the thermoluminescence (TL) or Optical stimulated luminescence (OSL) residuals clock resetting derived from sunlight induced eviction of electrons from electron traps, is a prerequisite criterion for potential dating. The modeling of change of residual luminescence as a function of two variables, the solar radiation path length (or depth) and exposure time offers further insight into the dating concept. The double exponential function modeling based on the Lambert–Beer law, valid under certain assumptions, constructed by a quasi-manual equation fails to offer a general and statistically sound expression of the best fit for most rock types. A cumulative log-normal distribution fitting provides a most satisfactory mathematical approximation for marbles, marble schists and granites, where absorption coefficient and residual luminescence parameters are defined per each type of rock or marble quarry. The new model is applied on available data and age determination tests.

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Semi-annual in Spring and Fall, 208 pages per volume

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Mitch Allen
Publisher
Left Coast Press, Inc.
1630 N. Main Street, #400
Walnut Creek, California 94596
925.935.3380 phone 925.935.2916 fax
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www.LCoastPress.com



THE OXFORD HANDBOOK OF THE BRONZE AGE AEGEAN

Bryn Mawr Classical Review 2011.05.04

Eric H. Cline (ed.), *The Oxford Handbook of the Bronze Age Aegean*.

Oxford/New York: Oxford University Press, 2010. Pp. xxxiii, 930.

ISBN 978019536550. \$175.00.

Reviewed by Gert Jan van Wijngaarden, University of Amsterdam
(G.J.M.vanWijngaarden@uva.nl)

[Authors and titles are listed at the end of the review.]

This volume has made me wonder what exactly the definition of a handbook is. According to the Oxford Advanced Dictionary, it is a small book, giving useful facts. The book under review here certainly does not fit the first part of this definition. It is big, comprising more than 900 pages, with 66 chapters by 61 contributors. I traveled abroad with the book several times and it definitely is not a comfortable companion in economy class airplane seats or on Greek KTEL buses. Fortunately, the book does provide many useful facts, and much more. All of the contributors are renowned scholars and together they treat an impressive range of topics.

The Aegean Bronze Age covers roughly the period from 3100-1050 BC. Research in this field began in 1870, when Heinrich Schliemann went to Hisarlik, now in Turkey, to excavate the site of Troy. In the 140 years which have passed since his pioneering excavations, the Bronze Age has been one of the most active fields within Greek archaeology, itself a discipline of intensive academic research. Bronze Age research has covered all parts of Greece and western Turkey and even beyond the Aegean in the eastern and Central Mediterranean. It is clear that such a rich field of study cannot easily be summarized in one book, not even if it has more than 900 pages. In order to structure the information, the book is subdivided in four parts: Background and Definitions, Chronology and Geography, Thematic Topics and Specific Sites and Regions. These parts are subdivided in sections, each containing a number of individual chapters of roughly equal length (8-13 pages). This structure has resulted in a very versatile book, since the contributors approach the subjects in their own ways and many of them rely heavily on personal experience and conviction. Because of its structure, this book is entirely different from a book with a similar title, the Cambridge Companion to the Aegean Bronze Age, which is more thematically organized (C. W. Shelmerdine, 2008). The editor of the volume under review here wisely chose not to end with a grand conclusion, but an introductory chapter on the goals of the volume, intended readers and the specific circumstances of research into the Bronze Age Aegean, could have provided more unity. The two contributions in part I that serve to provide background and definition are too particular. J. D. Muhly's chapter on the history of research is an adequate account of discoveries and people involved, but it lacks any reference to broader trends in intellectual and academic history. S. W. Manning's contribution on "Chronology and Terminology" hardly discusses any terminology, but provides a good overview of the state of affairs with regard to relative and absolute dating. A thorough introduction to the Aegean landscape and geography, unfortunately, is lacking.

The versatility of the book, which is one of its strengths, is also one of its weaknesses. The individual contributions vary enormously. Some are very detailed and specific, while others are very general, which made me wonder at various points about the intended target group. On the one hand, we have difficult discussions in detail, such as the one on Early-Middle Minoan sealing, writing and administration (Tomkins and Schoep, pp. 71-72) or that on seriation among Cycladic cemeteries (Renfrew, p. 87). On the other hand, little attention is devoted to Cycladic marble figurines (Renfrew, p. 88; Tzonou-Herbst, p. 214), which for many people are icons of Early Bronze Age Aegean art. To some extent, this misbalance among the articles is caused by the structure of the book itself. In part II, a traditional geographical and chronological approach is adopted, which often does not reflect the current state of research. For example, S. Voutsaki describes the Middle Bronze Age as one period, while showing convincingly that there is a clear distinction between the earlier part (MH I-MH II) and the later part, which clearly leads up to the beginning of the Late Bronze Age (MH III-LH I). The lengths of the individual chapters do not reflect the current state of research within the discipline. The chapter on Late Bronze Age mainland Greece (Shelton, 139-146), has 8 pages of text, while the LBA Cyclades, arguably a period of lesser archaeological prominence for this region, is discussed in 9 pages (Barber pp. 160-169). Likewise, the site of Thorikos is described in more detail (Laffineur pp. 712-720) than prominent sites such as Akroteri on Santorini (Dumas, pp. 752-759) or Pylos (Davis, pp. 680-687). Fortunately, this inequality among the various chapters is compensated for by the quantity of the contributions: several issues are treated in more than one chapter and omissions in one paper are often treated in another.

In a book aiming to cover a field of research as wide as the Bronze Age Aegean, tough choices need to be made and omissions are unavoidable. Some of these choices are unfortunate, for example the absence of a chapter on Thessaly, or on western Greece, including Achaia, Epirus and the Ionian Islands. Why are there two chapters on seals and sealings (chapters 24 and 25), when most, if not all, seals found in Mycenaean Greece were made on Crete (J. G. Younger, pp. 329)? The presence of a whole chapter on the Cypro-Minoan writing system (chapter 28) is also a bit odd, considering that Cyprus is mostly lacking in the book, except for one chapter in the section on the “wider Mediterranean” (chapter 60). The order of the various contributions is not always logical. For example, the chapter on the Trojan war (chapter 35 in the section “events”), treats many of the same issues as the one on Troy (chapter 63 in the section “wider Mediterranean”). In fact, these two chapters would have made a good separate section together with the chapter on Western Anatolia (chapter 65). As it is, there is quite some redundancy in information. However, one may wonder how many people will read this book cover to cover and, as stated above, the repetitions in the book, often from a somewhat different perspective, ensure completeness.

The most serious shortcoming of the book is its paucity of figures and maps. Aegean art has produced many impressive objects worthy of reproduction in color. The text by A. P. Chapin (chapter 17) on Aegean frescoes, for which color is crucial for appreciation and understanding, has only two small black-and-white figures of low quality. The chapters on Minoan and Mycenaean pottery (chapters 30, 31), which describe typological sequences of pot shapes and decorations have no pictures at all! Had I not had some knowledge of Aegean pottery, I doubt whether the text would have made much sense to me. The people of the Aegean Bronze Age have produced monumental architecture in

addition to a range of more modest structures. They are described in the sections on architecture (chapters 14, 15), but, unfortunately, there are no pictures and plans. Even several descriptions of individual sites, such as Kato Zakro on Crete (chapter 38) and Pylos in Messenia (chapter 51), do not have site plans. A map of the Aegean indicating the location of sites is lacking altogether. The decision by the editor (or the publisher?) to include so few figures, and only in black and white, severely limits the accessibility of the information and diminishes the quality of the book.

Judging from the critical remarks above, one could have the impression that I have a negative opinion on the book. However, the opposite is the case. The majority of the contributions is of excellent quality and I have learned many things. An example is the chapter on "Materials and Industries" by D. Evely (chapter 29) who gives a good overview of the development of metalworking and ceramic production. Also of note is Chapter 18 on "State and Society" by D. Nakassis, M. L. Galaty and W. A. Parkinson. They show very clearly the difference between Minoan and Mycenaean palaces in terms of statehood and organization and are able to point to the limitations and possibilities of these palaces as political centers. The real treasure troves of the book are the bibliographies. With a few exceptions, the individual chapters provide ample literature, in some cases covering 5 or 6 pages (in small font). Most of the bibliographies are up to date and will provide the readers with the tools to explore in detail many of the issues raised in this volume.

In short, this handbook is big, but very useful. There are some serious omissions and shortcomings, notably the paucity of good pictures and maps. However, the quality of the contributions and the accompanying bibliographies is such that it will be of great help to anyone interested in the Aegean Bronze Age.

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ANCIENT ELEUTHERNA. SECTOR I, **VOLUME 1**

Bryn Mawr Classical Review 2011.05.03

Petros G. Themelis (ed.), Ancient Eleutherna. Sector I, Volume 1.

University of Crete: Athens, 2009. Pp. 232. ISBN 9789608839496.

Reviewed by Dimitris Grigoropoulos, German Archaeological Institute, Athens
Department (grigoropoulos@athen.dainst.org)

[Authors and titles are listed at the end of the review.]

Eleutherna, an important Cretan city southeast of modern Rethymno, was settled continuously from the Early Iron Age (at the latest) down to the Byzantine period and has been the focus of systematic excavations by the University of Crete since 1985 under the direction of Thanasis Kalpaxis, Petros Themelis and Nikolaos Stampolidis. Research has concentrated on three areas (Sectors I-III), where rich evidence for the fortifications, residential quarters, public buildings, the street network and the cemeteries of this multi-period urban centre have come to light. Following a number of publications from the site, this volume is nominally the first in the series of final reports on the excavations from Sector I (on the east slopes of the acropolis hill) directed by P. Themelis. Though not made explicit, the open-ended noun "ancient" in the title is apparently used to differentiate the chronological span of the subject matter of the present series (dealing mainly with Classical antiquity, especially the Hellenistic and Roman periods) from the volumes dedicated to Early Byzantine Eleutherna Sector I, published in 2000 and 2004 respectively.¹

As the first final report and after more than two decades of excavation in Sector I, one would first expect here a detailed exposition of the contextual and stratigraphic information for the entire material of all periods under consideration, a point made by reviews in BMCR and elsewhere regarding Volume 2 from Sector I on Early Byzantine Eleutherna.² Instead, as stated by Themelis in his foreword, the purpose of this volume is to assemble and present all epigraphic evidence from Sector I, "written or scratched on stone, clay, and metal".³ Certainly, the five contributions by Themelis himself and the various specialists go beyond this programmatic aim; they also explore and synthesize, to varying degrees of detail but with a solid approach, a range of aspects of the epigraphic, numismatic and archaeological evidence.

After a brief foreword (p. 9), chapter 1 by Themelis, examines literary sources, epigraphic finds and archaeological evidence from Sector I to provide a historical synthesis from the earliest human presence in the Neolithic period to the 8th century AD, when the last bishop of Eleutherna is mentioned by historical sources. Overall, the text is based heavily on the chapter published by the same author in an exhibition catalogue in 2004.⁴ Themelis rightly stresses from the beginning the significance of the decision to excavate Eleutherna, despite the pessimistic view expressed by Humfry Payne (year, citation?) that the site had little to offer. A brief exploration of the topography and geographical setting is followed by several sections discussing the rich evidence in chronological order.

Beginning with the early phases of the settlement down to the Classical period, a substantial part of this section is dedicated to the remains of an oblong rectangular building (termed "megaron") constructed at some point in the Geometric-Archaic periods (8th-7th c. BC) and used as late as the 4th c. BC. Below the so-called megaron, Bronze Age levels yielding EM-LM pottery and some Neolithic sherds were investigated. Less space is devoted to the Classical period, and the discussion here is mainly based on references to Crete and Eleutherna in historical sources rather than archaeological or epigraphic finds.

The next section is dedicated to the Hellenistic period (ending, conventionally, with the destruction of the city by Metellus in 67 BC). In addition to exploring various facets of the rich epigraphic record, Themelis traces the origins of urban organization to the period from the late 4th to the later 3rd c. BC and links the attested building activity with internal political developments in the aftermath of the war of the Achaean League against Sparta. To this period he dates the road network as well as several building remains, including a succession of building phases under the Roman temple to the S of the Early Christian Basilica, which Themelis associates with a probable cult place of Hermes Psychopompos. Another patchily preserved but apparently well-appointed "Public Building" is interpreted as the residence of a senior official, but here, as with the above, a detailed study of the architecture and finds would have provided a more definitive idea of its possible function(s).

In the following section, which deals with the Roman period (post-67 BC - 365 AD), Themelis moves first to the discussion of the two large residential complexes (House 1 and 2) that occupy the central area of Sector I. In each case he provides a detailed exposition of the layout and interior arrangements of the two houses, interspersed with comments on select finds from their various rooms. In both cases, Themelis identifies two main building phases, attributing the terminal destruction and abandonment of the two houses to the earthquake of AD 365, as demonstrated dramatically by the discoveries of human skeletons in various locations of the two complexes. Themelis then provides a synopsis of the architecture and finds from the Large and Small Bathhouse; he places the original construction of the first to the second half of the 2nd c. BC, making the building one of the earliest bathhouses in Crete, while for the Small Bath he favours a date in the 2nd c. AD with the building's use stretching to the 7th c. AD.

Themelis' contribution ends with a section on the Early Byzantine period, a large part of which is dominated by the discussion of the Early Byzantine Basilica of Euphratas and in many respects iterates the conclusions presented in the relevant final report.⁵ The evidence for the Early Byzantine settlement itself is accorded some space but here the lack of a plan hinders the reader from visualizing the information discussed. Apart from the basilica's architecture and phasing, Themelis pays particular attention to the various materials and decorative features used for its construction, including mosaics, wall paintings and sculptural decor. For the construction of the basilica, Themelis convincingly argues for a date in the second quarter of the 5th c. AD on various (archaeological-stylistic, epigraphic and historical) grounds, while placing its destruction during the reign of Constans II or Constantine IV.

Sidiropoulos's contribution (pp. 97-99) is a short commentary on the coin types from the Hellenistic period down to the Early Byzantine period and their provenance. The coin evidence is discussed by general period and the majority dates to Roman imperial times,

from Augustus to Diocletian, with some Late Roman, Early Byzantine, Hellenistic and Venetian coins. After discussing the Hellenistic evidence, which is characterized by a large number of Eleuthernian mints, Sidiropoulos points out the frequency of coins from the mint of Knossos predating the battle of Actium and suggests for Eleutherna a pattern of continued local predominance of Cretan mints for the entire Roman period, with coins from other provinces playing a secondary role. As for the Late Roman and Early Byzantine period, Constantinopolitan issues appear to be most common, with the presence, especially for the Late Roman period, of small denominations, a phenomenon widely attested in the Aegean in the 4th c. AD.

The epigraphic part per se opens with a chapter by Tzifopoulos (pp. 103-152) which presents and discusses 38 inscriptions from a total of 62, of which 16 have already been published elsewhere. The material spans the Archaic to the Roman periods, with a single Early Byzantine inscription (no. 17), while thematically it encompasses, amongst others, honorific, dedicatory and funerary inscriptions, a treaty, inscribed altars, as well as dipinti and graffiti on instrumentum domesticum. The few Archaic-Classical inscriptions are either badly preserved or difficult to interpret, while from the Hellenistic examples perhaps the most important is the treaty between Eleutherna and Rhaukos, which Tzifopoulos convincingly dates to the period between 250 and 167 BC. Roman inscriptions represent the majority of the finds and are mostly in Greek; three possible Latin inscriptions are also presented, the only certain one being a dedication to Augustus on an Ionic base which, as argued, might have been originally placed in the city's (as yet undiscovered) Sebasteion. At the end of the section, Tzifopoulos provides additional comments on some previously published Early Byzantine inscriptions and re-assesses the historical evidence for the dating of Euphratas' Basilica, for which he proposes several dates ranging from the second quarter of the 5th to the 6th century AD.

Two extended chapters by Baldwin-Bowsky deal with two particular aspects of the epigraphic record for Roman Eleutherna. The first chapter (pp. 157-196) is a thorough analysis and interpretation of the corpus of 20 Italian sigillata stamps from Sector I accompanied by a detailed catalogue. Baldwin-Bowsky first examines this material using a series of tabulated data covering potters' names, the chronological span of their activity and the number and geographical distribution of attested stamps first on a Cretan and then on a Mediterranean-wide basis; she then tackles a number of questions regarding the chronology, supply sources and possible routes, as well as the economic, social and cultural factors behind the importation of Italian sigillata. The author has to be commended for paying particular attention to the contexts of discovery and for her astute and structured analysis; given the strong focus of this part on issues of trade and economy, it is a pity that no mention is made of the unstamped Italian sigillata or indeed other imported finewares, so that a quantitative control of the rather limited stamped corpus is not possible. Arguably, it will be possible to appreciate these issues more fully with the final publication of the Roman pottery from the site.

In the final chapter (pp. 201-223), Baldwin-Bowsky examines a rare dipinto recording a Latin name written in Greek and preserved on a marble revetment slab discovered in a small bath suite south of House 1. By way of prelude, the author sets the inscription first against the background of discovered Roman inscriptions from Eleutherna as well as inscriptiones parietariae from the rest of the Roman world, before moving to discuss in particular detail its archaeological context. Despite the problematic architectural evidence, Baldwin-Bowsky cautiously links the bath suite with House 1, and argues in

tandem with Themelis' interpretation for an overall Italian and more specifically Campanian influence in the layout of this particular residential complex. She then examines exhaustively the inscription's contents from an epigraphical as well as onomastic point of view, arguing that the named Tonnios may be linked to names attested in cities of Italy and the Aegean and pointing out this person's probable involvement in the Cretan wine trade; a good number of Roman names on inscriptions from Eleutherna and its region reveal similar links with traders and entrepreneurs, permitting to discern, as the author argues, Eleutherna's strategic regional economic and administrative role in the early imperial period.

The layout, editing and overall production of the volume continues the high standard set by the previous volumes on Early Byzantine Eleutherna, accompanied with numerous photographs, plans and drawings, many of which are in colour; very few editorial oversights were noted (e.g., "Hingely" instead of "Hingley" on p. 22 of the bibliography). Given the systematic nature of the excavations at Eleutherna, the publication of this final report from Sector I is of obvious importance for illuminating various aspects of the evolution of this urban centre in antiquity. In particular, the chapters on the inscriptions offer fresh material and insights into the epigraphic habit, onomastics and the social, political and economic history of Hellenistic and Roman Crete, and will undoubtedly become indispensable tools for students of these periods. Last but not least, the volume gives a good foretaste of the final reports yet to appear on Sector I, the publication of which is eagerly awaited.

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2. See BMCR 2002.01.20 (J.K. Papadopoulos) and AJA 106 (2002), 504-506 (J. Rife).
3. Foreword, p. 9.
4. Π. Θέμελης, The Polis. East Excavation Sector I, in N.C. Stampolidis (ed.) Eleutherna: Polis - Acropolis - Necropolis. Athens: University of Crete, 2004, 46-80.
5. Π. Θέμελης, Η πρωτοβυζαντινή βασιλική, in Π. Θέμελης (ed.) Πρωτοβυζαντινή Ελεύθερνα: Τομέας I, Τόμος 1. Rethymno: University of Crete, 2004, 46-63.

Please visit the site: <http://bmcr.brynmawr.edu/2011/2011-05-03.html>

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LATE ANTIQUE/EARLY BYZANTINE **GLASS IN THE EASTERN** **MEDITERRANEAN**

Dear Colleagues,

PDF offprints of the articles in our glass book (below) are available.
Please check the list carefully and let us know whichever you wish to have. It is free of charge.

LAFLI E. (ed.), Late Antique/Early Byzantine Glass in the Eastern Mediterranean. Colloquia Anatolica et Aegaea – Acta congressus communis omnium gentium Smyrnae II/Dokuz Eylül University, Faculty of Arts, Department of Archaeology, Division for Medieval Archaeology, Publication Series, No. 1. Izmir, Hürriyet Matbaası 2009. ISBN 978-605-61525-0-4. 1st Edition (500 samples). 34 papers with xx+403 pages and numerous black-white figures. Conference papers and abstracts, presented at the International Colloquium, “Late Antique Glass in Anatolia (4th to 8th cent. A.D.)”, in October 25–28, 2009 in Izmir, Turkey. All papers are in English, with the exception of two contributions in German; abstracts and key words in English, German, Turkish, and Italian. 21,5 x 28,7 cm; paperback; 80 gr. quality paper.

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EΙΔΗΣΕΙΣ - NEWS RELEASE

LICHENS, WEEDS THREATENING SASSANID BAS-RELIEFS TEHRAN TIMES CULTURE DESK

TEHRAN -- Lichens and weeds growing in the narrow gaps and holes of the Sassanid bas-reliefs at the ruins of the ancient city of Bishapur in southwestern Iran are gradually destroying these irreplaceable antiquities.

The lichens and weeds are clearly visible on all six bas-reliefs of the city, which is located 19 kilometers north of Kazerun, the Persian service of the Mehr News Agency reported on Saturday.

One of the bas-reliefs depicts Shapur I, Persian king of the Sassanid dynasty, who consolidated and expanded the empire founded by his father, Ardashir I.

It shows him seated on a throne, witnessing a triumph of his army. In the top row, he is flanked by nobles of the court, and the lower row contains soldiers who present captives and trophies of victory.

Another bas-relief portrays Bahram, a son of Shapur I. During his father's reign, he governed the province of Atropatene. There is an inscription beside the bas-relief, which originally bore the name of Bahram, although his name was later erased by the Sassanid king Narses.

The Shiraz Cultural Heritage, Tourism and Handicrafts Department, which is responsible for protecting ancient site historical monuments in Fars Province, has made no efforts to remove the lichens and weeds.

The ruins of Bishapur are in peril by several other factors.

The ruins are trampled every day under the hoofs of livestock, which are taken to the site for grazing.

In addition, provincial officials have recently announced that they plan to construct a road north of the ruins.

As a result, their plan may turn into another threat to the site.

In a report published in Persian media outlets in March 2010, experts warned about the growth of the various types of fungus, lichen, and plants on the stone structures at Persepolis.

However, their warnings have not been heeded.

Photo: Weeds are seen in the narrow gaps beside the bas-relief of Sassanid king Shapur I at the ruins of the ancient city of Bishapur in southwestern Iran. (Photo by Mehr)

Please visit the site: http://www.tehrantimes.com/index_View.asp?code=241193

4500-YEAR-OLD ‘GRAFFITI’ FOUND INSIDE GREAT PYRAMID TUNNEL

A robot explorer designed and built by University of Leeds engineers, in collaboration with Scoutek, UK and Dassault Systèmes, France, has revealed hieroglyphs beyond a narrow tunnel inside the Great Pyramid of Khufu at Giza. The 4500-year-old markings, seen on video images gathered by the Djedi robot expedition, may give clues to how this part of the pyramid was built.

The Great Pyramid of Khufu is known to contain four narrow tunnels – two leading from the King’s Chamber and two from the Queen’s Chamber

The Great Pyramid of Khufu is known to contain four narrow tunnels – two leading from the King’s Chamber and two from the Queen’s Chamber.

However, scholars are unable to agree on what they were used for. This is partly due to problems researchers face getting into these narrow spaces.

Dr Hawass (Minister for Antiquities in the Egyptian government), states, “No one is sure why the builders of the Great Pyramid incorporated the four shafts into the design of Khufu’s monument.

Since the shafts in the King’s Chamber open outside of the pyramid, I believe that Khufu’s soul was meant to travel through them. The southern King’s Chamber shaft was intended for Khufu to use as the sun god Ra. It opens exactly between the two boat pits to the south of the Pyramid.

“Khufu would take the two boats and use them as solar boats for his journey as the sun god through the daytime and nighttime skies – one for the day trip, one for the evening trip. The northern shaft was made for the soul of Khufu as Horus to travel to the eternal circumpolar stars.

“As for the Queen’s Chamber shafts, I cannot imagine that they had a religious function, as they do not seem to open to the outside of the pyramid – their outlets, if such exist, have never been found in spite of our careful searching.”

Researchers on the Djedi robot expedition have now obtained video images from a tiny chamber hidden at the end of one of the shafts leading from the Queen’s chamber. This tunnel is particularly hard to explore because it is extremely narrow (20cm x 20cm), it is built at angle of 40 degrees and has no outside exit.

The team overcame these practical difficulties by using a robot explorer that could climb up inside the walls of the shaft whilst carrying a miniature ‘micro snake’ camera that can see around corners.

The bendy camera (8 mm diameter) was small enough to fit through a small hole in a stone ‘door’ at the end of the shaft, giving researchers a clear view into the chamber beyond.

The ‘micro snake’ camera’ allowed all walls of the chamber to be carefully examined, revealing sights not seen by human eyes since the construction of the pyramid

On previous expeditions, camera images were only taken looking straight ahead. The ‘micro snake’ camera’ allowed all walls of the chamber to be carefully examined, revealing sights not seen by human eyes since the construction of the pyramid.

The Djedi team was selected in a competition coordinated by Dr Hawass, to pick the best possible robot to explore the shafts. This process lasted approximated two years and resulted in a head-to-head competition between robots from the University of Leeds and Singapore University. Djedi was named by Dr Hawass after the magician who Khufu consulted when planning the layout of this pyramid.

Chamber floor looking towards second blocking stone - A composite image of the floor behind the first blocking stone showing red figures to the right of a masons line. credit: Djedi Team

Chamber floor looking towards second blocking stone - A composite image of the floor behind the first blocking stone showing red figures to the right of a masons line. credit: Djedi Team

“The Djedi robot is completely unique, it is the lightest, gentlest climbing robot that has ever been deployed within the pyramid,” said Dr Rob Richardson of the University of Leeds and academic leader of the team. “Djedi robot climbs the shaft walls using soft pads on its ‘feet’ that grip but leave no trace. This is in complete contrast to other climbing robots that rely on tracks to move upwards on sloping surfaces, leaving scuff marks in their wake.”

A close up view of the red figures/hieroglyphs on the floor behind the first blocking stone. credit: Djedi Team

A close up view of the red figures/hieroglyphs on the floor behind the first blocking stone. credit: Djedi Team

When pieced together, the images gathered by Djedi revealed hieroglyphs written in red paint that team members suggest were made by workmen. Prior to this, researchers had only found hieroglyphs in the roof of the King’s Chamber, which lies some distance above the Queen’s Chamber.

“We believe that if these hieroglyphs could be deciphered they could help Egyptologists work out why these mysterious shafts were built,”

Dr Richardson said.

As well as the painted symbols, the researchers found lines they believe stonemasons made when the hidden chamber was being carved out.

They were also able to scrutinise two copper pins embedded in the ‘door’ to the chamber that had only ever been glimpsed from the front before. The very existence of these pins – the only metal ever discovered in the Great Pyramid – has previously puzzled scholars. The detail revealed in these latest images may help to settle those questions.

A composite image of the rear of the first blocking stone - Shows the back of the metal pins embedded in the first blocking stone. The pins terminate on the rear face of the stone with small loops. credit:

Djedi team

A composite image of the rear of the first blocking stone - Shows the back of the metal pins embedded in the first blocking stone. The pins terminate on the rear face of the stone with small loops. credit:

Djedi team

Mission manager of the project, Shaun Whitehead, of Scoutek UK, said:

“People have been wondering about the purpose of these pins for over 20 years. It had been suggested that they were handles, keys or even parts of an electrical power plant but our new pictures from behind the pins cast doubt on these theories.

“We now know that these pins end in small, beautifully made loops, indicating that they were more likely ornamental rather than electrical connections or structural features. Also, the back of the ‘door’ is polished so it must have been important. It doesn’t look like it was a rough piece of stone used to stop debris getting into the shaft.”

The team’s next task is to look at the chamber’s far wall to check whether it is a solid block of stone or another door.

“We are keeping an open mind and will carry out whatever investigations are needed to work out what these shafts and ‘doors’ are for. It is like a detective story, we are using the Djedi robot and its tools to piece the evidence together,” Shaun Whitehead said.

The founder of the project, Dr TC Ng from Hong Kong, said: “I am proud that my dream has become a reality. By carrying out a detailed examination of the southern shaft and the space beyond the first door the Djedi team has gone further than anyone has ever been before in this pyramid. Now I suppose that the world is waiting to find out if there is anything beyond the second door.”

Mehdi Tayoubi and Richard Breitner of project partners Dassault Systèmes in France commented: “These results are fascinating. For a long time we have watched the robot being built and tested in virtual reality using our company’s 3D software. Now we see the real robot, working in the pyramid, behaving as predicted and bringing back these amazing images.”

Djedi is a joint international-Egyptian mission being carried out under the supervision of Dr Zahi Hawass, who has recently been reappointed as Minister for Antiquities in the Egyptian government.

The team has committed to completing the work by the end of 2011.

Please visit the site: <http://www.pasthorizons.com/index.php/archives/05/2011/4500-year-old-graffiti-found-inside-great-pyramid-tunnel> [Go there for pix]

ARSLANTEPE (MALATYA, TURKEY) **OPEN AIR MUSEUM**

Malatya – On the 25th of May, in occasion of the 33rd International Symposium of Excavations, Surveys and Archaeometry

(<http://iys.inonu.edu.tr/index.php?web=kazisempozyumu33&mw=7074&dil=en>)

organised at Malatya by the General Directorate for Cultural Heritage and Museums of Ministry of Culture and Tourism of the Republic of Turkey, the open air museum at the site of Arslantepe has been opened to the public. The inauguration coincides with the 50th anniversary of the Italian archaeological expedition at the site (<http://w3.uniroma1.it/arslantepe>).

The mound of Arslantepe lies in the modern village of Orduzu, 10 km south of the right bank of the Euphrates river. The sequence ends with a mediaeval cemetery, under which a Roman village, Hittite palaces and walls (1st and 2nd millennia BC), Middle and Early Bronze age small settlements and towns (early 2nd and 3rd millennia BC) reveal the succession of crises, new systems, and again crises following one another and marking the history of the Malatya plain and the Upper Euphrates valley between 3000 and 2000 BC.

A flourishing economic, political, religious, and administrative centre had arisen at Arslantepe in the preceding 4th millennium BC, whereas the first urban societies were emerging in Mesopotamia.

Monumental public buildings, pottery, metal weapons, and thousands of impressions of beautiful seals have been unearthed, providing documentary evidence of the birth of a state systems, and revealing that this phenomenon involved, besides Mesopotamia, also the mountainous regions of Eastern Anatolia. The 4th millennium public buildings cover an area of 2000 square metres and their mud brick walls are preserved for an height of more than 2m. Both impressed and painted decorations are still visible in many rooms.

The public may visit these Late Chalcolithic complex and all the site.

Numerous panels explain with short texts and significant images the processes that brought to the formation of complex societies in this area of Greater Mesopotamia, giving a glimpse at Arslantepe unique case.

THE STORY BEHIND THE WORLD'S OLDEST MUSEUM, BUILT BY A BABYLONIAN PRINCESS 2,500 YEARS AGO ALASDAIR WILKINS

The story behind the world's oldest museum, built by a Babylonian princess 2,500 years ago
In 1925, archaeologist Leonard Woolley discovered a curious collection of artifacts while excavating a Babylonian palace. They were from many different times and places, and yet they were neatly organized and even labeled. Woolley had discovered the world's first museum.

It's easy to forget that ancient peoples also studied history - Babylonians who lived 2,500 years ago were able to look back on millennia of previous human experience. That's part of what makes the museum of Princess Ennigaldi so remarkable. Her collection contained wonders and artifacts as ancient to her as the fall of the Roman Empire is to us. But it's also a grim symbol of a dying civilization consumed by its own vast history.

The Archaeologist

Ennigaldi's museum was just one of many remarkable finds made by Leonard Woolley, generally considered to be among the first of the modern archaeologists. Born in London in 1880, Woolley studied at Oxford before becoming the assistant keeper at the school's Ashmolean Museum. It was there that Arthur Evans - himself a renowned archaeologist for his work with the Minoan civilization on the Greek island of Crete - decided that Woolley would be of more use out in the field, and so Evans sent him to Rome to begin his excavating career.

The story behind the world's oldest museum, built by a Babylonian princess 2,500 years ago
Although Woolley had a longstanding interest in excavation, he had little or no formal training in how to actually go about doing it. He would be left to teach himself on the job, and many of the techniques and approaches he came up with would prove hugely influential to future archaeologists. Just before the outbreak of World War I, he excavated the ancient Hittite city of Carchemish alongside his younger colleague T.E. Lawrence, who would soon cast aside his archaeological career for his more famous role as...well, as Lawrence of Arabia. You can see the two together in the photo on the left.

But it was Woolley's work in the ancient Mesopotamian city of Ur that would really cement his legacy. Beginning in 1922, Woolley excavated huge swaths of an ancient city-state that had endured for thousands of years, from the ancient Sumerian civilization of 3000 BCE to the Neo-Babylonian Empire of 500 BCE. One of his biggest discoveries - you might call it the Sumerian equivalent of King Tut's tomb - was the tomb of Shubad, a woman of great importance in 27th century Sumer whose tomb had remained undisturbed through the ensuing 4,600 years.

However, it was the discovery of something from the very end of Ur's existence that interests us in this particular case. And for that, we might as well go straight to the words of Leonard Woolley himself.

The Discovery

Full size

In his book *Ur of the Chaldees*, Woolley recounts his excavations of a palace complex in Ur. This particular palace dated to the very end of the city-state's long history, right before the absorption of its territories into the Persian Empire and the eventual abandonment of the city around 500 BCE. This was the time of the Neo-Babylonian Empire, and while Babylon was (unsurprisingly) the capital of this empire, the now ancient city of Ur was still important both for its strategic location near the Persian Gulf and for its legacy as a once great power.

As Woolley explains in his book, he and his team were quite confident that they were excavating Ur from its latest period, which is why the artifacts they found in one particular chamber (a photo of which is on the left) made so little sense:

Suddenly the workmen brought to light a large oval-topped black stone whose top was covered with carvings in relief and its sides with inscriptions; it was a boundary-stone recording the position and the outlines of a landed property, with a statement as to how it came legally into the owner's hands and a terrific curse on whosoever should remove his neighbor's landmark or deface or destroy the record.

Now, this stone belonged to the Kassite period of about 1400 BC. Almost touching it was a fragment of a statue, a bit of the arm of a human figure on which was an inscription, and the fragment had been carefully trimmed so as to make it look neat and to preserve the writing; and the name on the statue was that of Dungi, who was king of Ur in 2058 BC. Then came a clay foundation-cone of a Larsa king of about 1700 BC, then a few clay tablets of about the same date, and a large votive stone mace-head which was uninscribed but may well have been more ancient by five hundred years.

What were we to think? Here were half a dozen diverse objects found lying on an unbroken brick pavement of the sixth century BC, yet the newest of them was seven hundred years older than the pavement and the earliest perhaps sixteen hundred.

In this single room, Woolley had discovered at least 1,500 years of history all jumbled together, a bit like if you randomly found a Roman statue and a piece of medieval masonry while cleaning out your closet.

Left to their own devices, these objects would never be found together like this. Somebody had messed around with these artifacts - they just couldn't have guessed how long ago and to what purpose that tampering took place.

The Museum

The story behind the world's oldest museum, built by a Babylonian princess 2,500 years ago. It quickly dawned on Woolley that this might actually be an ancient museum, the 6th century BCE equivalent of the sorts of institutions that were now sponsoring him. Indeed, a key piece of evidence was how the artifacts were arranged - while they were all mixed up from a temporal perspective, whoever had brought these items together had done so with considerable care and attention.

What sealed the deal was the discovery of the world's earliest known museum label. In his book, Woolley describes finding clay cylinders in the chamber, each with text written in three different languages, including the language of ancient Sumerian and the more modern (for the period) late Semitic language. He quotes one of these descriptions, along with a rather wry appraisal of what was said:

"These," it said, "are copies from bricks found in the ruins of Ur, the work of Bur-Sin king of Ur, which while searching for the ground-plan [of the temple] the Governor of Ur found, and I saw and wrote out for the marvel of beholders."

The scribe, alas! was not so learned as he wished to appear, for his copies are so full of blunders as to be almost unintelligible, but he had doubtless done his best, and he certainly had given us the explanation we wanted. The room was a museum of local antiquities...and in the collection was this clay drum, the earliest museum label known, drawn up a hundred years before and kept, presumably together with the original bricks, as a record of the first scientific excavations at Ur.

Sure, Woolley didn't think much of the scribe's attention to detail.

But he was man enough to admit when he had been beaten to the punch - and in this case, he readily acknowledged that archaeology in Ur had been thriving about 2,500 years before he had ever set foot there.

And, even more remarkably, this most ancient museum predated the first modern museums by about two millenniums.

The Curator And The King

So who was responsible for this ancient wonder full of even more ancient wonders? That honor goes to Princess Ennigaldi, the daughter of King Nabonidus, the last king of the Neo-Babylonian Empire. As was traditional for the daughters of Mesopotamian kings, her primary duties were religious in nature, both as the high priestess of the moon god Nanna and as the administrator of a school for young priestesses. It was around 530 BCE that Ennigaldi created her museum.

That comes dangerously close to being everything we know about the woman behind the world's first museum.

The story behind the world's oldest museum, built by a Babylonian princess 2,500 years ago. We do know that the museum was built with the support and encouragement of her father the king, who was himself a committed antiquarian and collector of ancient artifacts. It's hard to know just where his interest in the past came from, but it might have had something to do with the fact that he came from self-described humble origins and that he only sat on the throne because he had overthrown his predecessor. Without a rich regal history of his own to draw on, it's possible that Nabonidus found a substitute in the ancient city of Ur.

To that end, the king undertook what would become his most lasting contribution to archaeology, and that was the restoration of the Great Ziggurat of Ur. While we're not 100% sure what purpose this massive structure served - the best guess is that it and the other ziggurats were some sort temple - we do know that the original Sumerian ziggurat had crumbled to nothing by the time of Nabonidus, and so he decided to restore the

ziggurat to its former glory (and then some). The discovery of the remains of this second ziggurat in the 19th century would be key to identifying this site as the ancient city of Ur, and in turn setting up Leonard Woolley's excavations in the 1920s.

The Dying World

The story behind the world's oldest museum, built by a Babylonian princess 2,500 years ago. Since we don't have records direct from Ennigaldi or Nabonidus about the museum, we can only guess at why they decided to set up the museum in Ur. But in his 1927 account of his findings, "Ur Excavations: The Neo-Babylonian and Persian Periods", Leonard Woolley suspects it was just the natural outgrowth of an era that had become obsessed with its past:

That there should be a collection is altogether in accordance with the antiquarian piety of the age and especially of the ruler Nabonidus with whose daughter this building is probably to be associated. That the museum should be connected with a school is also no matter for surprise. Schools were commonly organised in temples, and some at least of the teaching was of a sort that would be fitly illustrated by specimens of antiquity. In Larsa schools we find that copies of old historical inscriptions extant in the city were regular objects of study.

As is perhaps only appropriate for a city coming to the end of over two thousand years of history, the Ur of King Nabonidus's reign was one governed by a seemingly overwhelming sense of nostalgia, a fascination with times gone by. That's not entirely surprising - even Princess Ennigaldi's school for priestesses was already 800 years old when she took over, making it roughly as old as Oxford and Cambridge are now. Ur had become one vast museum commemorating times long since gone by, so Princess Ennigaldi could perhaps be forgiven for building a home version in miniature.

Indeed, Ur was just the most extreme example of an entire empire that ran on nostalgia. The Neo-Babylonian Empire was a very conscious throwback to the past, as it represented Mesopotamia's first period of self-rule after centuries of domination by their northern neighbors.

We can see it in the imperial inscriptions, as expressions dating back to at least 1,500 years earlier suddenly found themselves popping up on inscriptions, as well as choice selections from the long dead Sumerian language. Even the writing system was altered to look like it had done thousands of years ago.

In that context, the invention of the museum in 530 BCE doesn't seem particularly new or revolutionary. Instead, it seems like just more evidence of a civilization consumed by its own history and afraid to step into the future. In retrospect, they had good reason to be, considering their eastern neighbors in Persia would soon conquer the empire and Ur itself would be abandoned, likely a victim of severe drought and the vagaries of the Euphrates River.

And yet for all that cultural stagnation, Princess Ennigaldi and her father came up with an idea that is still relevant 25 centuries later.

If it takes the death of your civilization's future to realize that your past is worth celebrating, preserving, and (most importantly) organizing...well, I've heard of worse trade-offs.

Further Reading

Ur Excavations Volume IX: The Neo-Babylonian and Persian Periods by Leonard Woolley
Ur of the Chaldees: A Record of Seven Years of Excavation by Sir Leonard Woolley
Woolley of Ur: The Life of Sir Leonard Woolley by Harry Victor Frederick Winstone
Treasures from the royal tombs of Ur by Richard L. Zettler, Lee Horne, Donald P. Hansen, Holly Pittman
Nabonidus and Belshazzar: A Study of the Closing Events of the Neo-Babylonian Empire by Raymond Phillip Daughtery

Please visit the site: <http://io9.com/5805358/the-story-behind-the-worlds-oldest-museum-built-by-a-babylonian-princess-2500-years-ago> [Go there for pix and better formatting]

REPLICATING CUNEIFORM TABLETS

Researchers replicate rare cuneiform tablets using 3-D scanning and printing Cuneiform tablets By Anne Ju

Today's Assyriology scholars study Sumerian and Babylonian cuneiform tablets with the help of digital photographs or handwritten copies of the texts, but ideally, they visit collections to see the tablets firsthand.

Technology could introduce a new way to connect researchers to these precious, unique artifacts by creating exact replicas.

Such an effort is under way at Cornell in the lab of Hod Lipson, associate professor of mechanical and aerospace engineering, who specializes in the burgeoning field of 3-D scanning and printing of everyday objects.

Natasha Gangjee '12, a student in Lipson's lab, worked with six cuneiform tablets to try and replicate them exactly using optical scanning and layer-by-layer printing technology. A former student of Lipson's, Evan Malone, made an initial prototype.

"If we can create very accurate reproductions, this would be a great help to us," said David I. Owen, the Bernard and Jane Schapiro Professor of Ancient Near Eastern and Judaic Studies.

Tablets can be copied using latex molds, but this runs the risk of damaging the original, Owen said. The most important recent technological development in the field was digital photography; this allowed millions of ancient artifacts to become instantly available to scholars everywhere. But it is nothing like the real thing.

"With a photograph you can see a lot and that's great, but oftentimes you can read even more if you can actually hold the tablet because of the angle of the light -- how it hits the signs can help you see it better," added Alexandra Kleinerman '03, a postdoctoral associate working with Owen.

The collaboration started because Owen and Lipson are neighbors and friends. Hearing Owen talk about his research got Lipson thinking about how 3-D printing could contribute to Owen's field. The challenge would be to find the right materials to color-match the tablets and give them an authentic feel, weight and texture.

Gangjee used a 3-D scanner in the lab to make files of each tablet. She then sent the files for fabrication at a ZCorp color 3-D printing service, averaging about \$25 per tablet.

The first 3-D reproductions looked like the originals, but the smallest signs will require additional refinements before a completely accurate result is possible. Nevertheless, Lipson says they will continue with various techniques and may try using a CT scanner to improve performance.

Lipson thinks this is just one of a myriad of applications that these printers will bring to people's lives when they become more available to the general public.

"We are basically taking two existing technologies, scanning and 3-D printing, and trying to use them in a new way," Lipson said. "This will make tablet collections accessible to more scholars and students the world over."

Download and print your own cuneiform tablet at
<<http://creativemachines.cornell.edu/cuneiform>>.

Please visit the site:

<http://www.news.cornell.edu/stories/May11/cuneiformCollab.html>

2000 YEARS-OLD TOMB FOUND IN WESTERN TURKEY

Turkish road workers found 2000 years old tomb during the road rehabilitation works in Southern Turkish city of Kutahya on Monday.

Road workers who unearthed ancient tomb near the Aydogdu village of Kutahya. They also found skeleton shoes and socks.

Kutahya Museum Director Metin Turktuzun said they found burial chambers which dates back two thousands years old.

"We found many ceramic, porcelain plates and water jugs. Kutahya's history dated back the early ancient period and our city is very rich in the fields of history," Turktuzun noted.

Museum Director Turktuzun also noted that tomb has two rooms walls wall of the tomb full of the red paint figures. "The burial structure of the front door enters a small room. Inside, there are three-digit threshold. The front room, vaulted over the square-shaped. Tomb is 3 meters height, 2.5 meters width, 4 feet high," added Turktuzun.

Please visit the site: <http://www.worldbulletin.net/?aType=haber&ArticleID=73851>

MYSTERIOUS ANCIENT ROCK CARVINGS FOUND NEAR NILE, BY OWEN JARUS

An archaeological team in the Bayuda Desert in northern Sudan has discovered dozens of new rock art drawings, some of which were etched more than 5,000 years ago and reveal scenes that scientists can't explain.

The team discovered 15 new rock art sites in an arid valley known as Wadi Abu Dom, some 18 miles (29 kilometers) from the Nile River. It's an arid valley that flows with water only during rainy periods. Many of the drawings were carved into the rock faces — no paint was used — of small stream beds known as "khors" that flow into the valley.

Some of the sites revealed just a single drawing while others have up to 30, said lead researcher Tim Karberg, of the Westfälische Wilhelms-Universität Münster in Germany.

"We asked the local people about the rock art and they said that it would be very old, before their grandfathers," Karberg told LiveScience. [See images of the rock art]

Knight rider

A number of the images appear to date back around 1,500 years ago, to a period when Christianity was spreading in Sudan. They include depictions of crosses, a church, which may show a nearby, ancient monastery called al-Ghazali, and one remarkable picture of a knight riding an animal with horns.

Rock art showing a knight riding a horned animal.

This piece of rock art found in Wadi Abu Dom depicts a knight riding a horned animal. There's a chance the armed rider may be a legendary soldier named St. George who was said to have slain a dragon.

CREDIT: Courtesy of Tim Karberg/Westfälische Wilhelms-Universität Münster.

"One is a depiction of an armed rider, with a lance and a shield, a kind of knight depiction," Karberg said, suggesting this may be an image of St. George, the legendary soldier said to have slain a dragon.

Drawings of St. George are known from Sudan and texts discussing him have been found within the country. "Our texts attest to the popularity of the Saint in Christian Nubia," wrote historian Gerald Brown, in a study he did on the subject.

The team also found detailed representations of cattle at Wadi Abu Dom that, based on rock drawings found at other sites, are probably from the late Bronze Age. During this time, more than 3,000 years ago, the northern parts of the country were occupied by the Egyptian empire.

Mystery carvings

Another, even more mysterious, set of rock art appears to be at least 5,000 years old and shows a mix of geometric designs.

The "oldest rock art we found are the spiral motifs," said Karberg, which, as their name suggests, twist up in a way that is hard to interpret. Similar drawings have been found in the Sahara Desert.

They were created at a time when Africa was a wetter place, with grasslands and savannah dominating Sudan; people were moving to a lifestyle based on animal husbandry and, in some instances, farming.

Understanding what these drawings mean is difficult. Some researchers connect the "spiral motifs to some astronomical or astrological forms," Karberg said, but he thinks it might have more to do with math. "The regularity of the spiral might be one of the earliest mathematical ideas the people developed."

A second set of geometric drawings, probably a bit younger than the spirals, is "hard to describe," Karberg said. They consist of "amorphous patterns which are not circular. ... It looks like an irregular-shaped net," Karberg said.

There is no evidence that people were fishing in this area 5,000 years ago, ruling out fishing nets. One possibility is that these irregular "nets" may actually be animal hides. Similar drawings found in Uganda were identified as showing the hide of a crocodile or some other animal, Karberg said.

Music in the desert?

Finally, what artist wouldn't like to relax with a bit of music? The team also uncovered several "rock gongs," large rocks that someone would have smacked a small rock against to make a sound. When the archaeologists experimented with them they found that some of the gongs could produce multiple tones.

Karberg said that it's difficult to pin down when they were used; it could have been centuries ago or millennia. They may have been used for signalling rather than for actual music. But one thing is for sure, they would have made a pretty decent sound. "As we tried out the sound of many of those rock gongs you could hear (them) quite a long distance," Karberg said.

The research at Wadi Abu Dom is ongoing and the rock art discovery was first presented last year at the 12th International Nubian Studies Conference.

Please visit the site: <http://www.livescience.com/14149-mysterious-ancient-rock-art-nile-river.html> [Go there for pix]

PHOENICIAN PORT IN BEIRUT MINA EL HOSN

An ancient Phoenician port has recently been discovered in Mina El Hosn area of Beirut, in a plot (#1893) located behind the Hotel Monroe. The area of approximately 7500 square meters is owned by Venus, a real estate firm that plans to erect 3 large skyscrapers on the terrain.

Since five months ago, a team from the General Directorate of Antiquities headed by expert Hisham Sayegh has undertaken excavations in the area, resulting in the discovery of numerous archaeological findings, including two parallel canals carved in the rock within a distance of 120 meters from the beach the old city of Beirut, part of the Phoenician port dating back to the fifth century BC. (hence the name Mina El Hosn, suggesting the presence of a small port on the Gulf.)

Based on old historical references, a port located in the region was said to have actually been consecutively covered up through the years, starting with the construction of roads by the Ottomans, followed by the construction of Hotel Normandy by the French, up to the period of the Lebanese civil war during which a trash landfill was established in the area. In his book "Beirut Our Memory", Fouad Debbas had mentioned that the old Roman city of Beirut extended until this port.

The excavations showed that the port was buried between the first and second centuries AD, with this Phoenician port believed to be the first to be discovered in Beirut.

Other Roman urban infrastructures were also discovered during the excavations, including two large sandstone walls part of a huge building, believed to have belonged to the foundations of a temple.

One of them has a length of 25 meters. These findings date back to the beginning of Roman rule to Beirut, revealing once more the city's importance that made the Roman emperors build up a big city

(Metropolis) and reside in this particular region, with large structures such as the Hippodrome and the Forum and other luxury villas, theater, tower, fortress, baths and the wrestling ring and streets at the beach Port... all belonging to the first and second centuries AD. All of these features are part of the construction project in the Imperial Beirut, indicating the exceptional of Beirut as a Roman colony.

Other archaeological finds as well have emerged from different periods, namely: urban landmarks from late Ottoman period (house and wells), and a stone quarry from the limestone sedimentary rock used to built most the urban discoveries belonging to the second half of the first millennium BC, the Phoenician and Persian periods, Hellenistic.

Also found were a variety of shards (pottery, ceramics etc..) dating back to Ottoman periods of the end of the nineteenth century, and the Roman period between the second half of the first century AD and the first half of the century AD, in addition to the foundations of the temple, and shards dating to the second half of the first century and the first half of the second century found in layers of debris in those two carved canals. Shards were also unearthed from the stone quarry dating back back to the fifth century BC.

The discovery of the first Phoenician port in Beirut along with the foundations of the Roman temple did not thrill the construction firm Venus all that much, as this will delay or maybe even put to stop the process of building their project on the plot. They have also prevented the media from entering or filming the area. Beirut has lost most of its archeological treasures in the Solidere area, and many fear the port will end up completely bulldozed before crucial historical research has been carried out properly.

Please visit the site:

http://www.fanoos.com/research/phoenician_port_in_beirut_mina_el_hosn.html

[For alarm at its obliteration for modern construction:
http://phoenicia.org/obliterating_Phoenician_harbor.html]

B(L)OG BUTTER IN GALWAY!



The Bog Butter, as seen by first archaeologist on the scene, Headland's Ross MacLeod!

Peat bogs have long been recognised as a source of unusual and remarkably well preserved ancient remains – these include famous Bog Bodies like Ireland's own Clonycavan Man – who can be [viewed in the National Museum](#) along with three other Irish examples.

Most of these poor unfortunates were found to have been dispatched in gruesome and painful ways during the Iron Age, possibly as sacrificial victims, kingship rivals or criminals suffering execution. The high acidity, lack of oxygen (anaerobic conditions) and low temperatures in the water-logged depths of a sphagnum peat bog cause the extreme preservation of organic remains by tanning and encourage the formation of adipocere – a waxy, preserved body fat, formed during the process of anaerobic bacterial hydrolysis.

A less morbid but no less exciting ancient product of peat bogs is Bog Butter, and it was a recent discovery of this type which saw Headland Archaeology (Ireland) Ltd's Director Ross MacLeod called to Shanclon near Caherlistrane, north Galway to investigate the unexpected discovery of a large timber object by Ray Moylan from Liss, Headford and local contractor Declan McDonagh during peat cutting works.

The first archaeologist on the scene, Ross was able to examine the amazing find and ascertain that it was indeed a large wooden cask filled with approximately 2 stone (28lbs) of Bog Butter, and possibly as old as 2,500 years. Bog butter can consist either of dairy based fats or tallow (animal fat), it is yet to be ascertained what the Shanclon example consists of.

Theories about the origins of Bog Butter deposits are divided between two schools. The first suggests ritual 'votive offerings' – the deliberate deposition of the casks in honour of/supplication to a deity. The second school proposes 'human error' – accidental deposition either as a result of forgetfulness or the death of the owner. Bogs would have

acted as a reliable form of refrigeration for a winter stock of butter surplus and the unfortunate owners of the butter failed to adequately mark the stockpile.

The [IPCC \(Irish Peatland Conservation Council\)](#) lists a reference to a recipe for Bog Butter from an account of Irish food written by Dinely in 1681: ‘Butter, layed up in wicker baskets, mixed with a sort of garlic and buried for some time in a bog to make a provision of an high taste for Lent’.

Please visit the site: <http://headlandarchaeology.wordpress.com/2011/05/12/blog-butter-in-galway/>

ARCHAEOLOGISTS UNRAVEL THE ORIGINS OF ARCHITECTURE

Recent excavations of a Pre-Pottery Neolithic A (PPNA) site at Wadi Faynan (WF16) in southern Jordan have revealed remarkable evidence of architectural developments in the early Neolithic.

A paper published online in the Proceedings of the National Academy of Sciences reports the discovery of a large, oval-shaped building at a site in southern Jordan called Wadi Faynan 16 (WF16). The archaeological team led by Bill Finlayson, director of the Council for British Research in the Levant in London and Steven Mithen from the University of Reading in the United Kingdom, claim that this find sheds light on both special purpose structures and “domestic” settlement, allowing fresh insights into the development of increasingly sedentary communities and the social systems they supported.

The development of sedentary communities is a central part of the Neolithic process and architecture with its ideas of home and household have been important to the debate. There has been discussion on the role of communal buildings and the organization of early sedentary communities since the discovery of the tower at Jericho around sixty years ago.

The discovery of a large, amphitheatre-like building at the site in southern Jordan adds to a growing body of evidence that the earliest permanent buildings might not have been houses, but ‘community centres’. The find, researchers say, suggests that during the advent of agriculture these early farmers may have at first come together in communal activities, prior to congregating in villages.

Early settlers lived at WF16 between 11,600 and 10,200 years ago, cultivating plants such as wild barley, pistachio and fig trees, and hunting or herding wild goats, cattle and gazelle.

Recently, the focus has been on northern Levantine PPNA sites, such as Jerf el Ahmar, or the emergence of ritual buildings in the Pre-Pottery Neolithic B of the southern Levant. Much of the debate revolves around a division between what is interpreted as domestic space, contrasted with “special purpose” buildings. The authors are quoted as saying “recent evidence allows a fresh examination of the nature of early Neolithic communities.”

Our recent evidence allows a fresh examination of the nature of early Neolithic communities.

The structure is recorded as Building 075 constructed of mud-brick, with a smooth floor of mud plaster, and at 22 x 19 metres is large for the period. The central area is surrounded by a long bench about a metre deep and half a metre high. In parts of the building there is a second bench above the first one that forms an additional tier of seating. Along the southern side of the building the lower bench is decorated with a wave pattern incised into the mud-brick.

Thus the structure echoes the architecture of the Jerf el Ahmar community building – but building 075 is about three times larger. The building's central area also contains a series of stone mortars set into plaster platforms on the floor, which may have been used to process wild plants. The structure includes a number of post-holes which the team think might have held up a roof that covered at least part of the building. The team also found two other, smaller structures nearby, which it interprets as storehouses for cereals and other food resources.

In this time period there may have been little distinction between ritual and household activities and that people lived and worked as a community

These three buildings were found within a cluster of smaller structures, though none of these buildings appear to be individual family homes. The researchers suggest that in this time period there may have been little distinction between ritual and household activities and that people lived and worked as a community.

Archaeologist Trevor Watkins, emeritus professor at the University of Edinburgh is quoted in Science Now magazine that he “agrees strongly” with the conclusions that the social changes taking place during the transition from hunting and gathering to farming were at least as important as the later economic changes that led to full-blown domestication of plants and animals. However, he thinks that it is still possible that some of the other buildings at WF16 were used as domestic dwellings. Nevertheless, Watkins says, “the communal activities at WF16 and other Neolithic sites probably created powerful bonds of collective identity in the earliest farmers that kept them together in stable societies over many generations.”

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Please visit the site:

<http://www.pasthorizons.com/index.php/archives/05/2011/archaeologists-unravel-the-origins-of-architecture>

NEANDERTHALS AND EARLY HUMANS MAY NOT HAVE MINGLED MUCH, BY NICHOLAS WADE

An improvement in the dating of fossils suggests that the Neanderthals, a heavily muscled, thick-boned human species adapted to living in ice age Europe, perished almost immediately on contact with the modern humans who started to enter Europe from the Near East about 44,000 years ago. Until now bones from several Neanderthal sites have been dated to as young as 29,000 years ago, suggesting there was extensive overlap between the two human species. This raised the question of whether there had been interbreeding between humans and Neanderthals, an issue that is still not resolved.

But researchers report that tests using an improved method of radiocarbon dating, based on a new way to exclude contaminants, show that most, and maybe all, Neanderthal bones in Europe are or will be found to be at least 39,000 years old. Thomas F. G. Higham, a specialist in radiocarbon dating at Oxford University, and Ron Pinhasi, an archaeologist at University College Cork in Ireland, have dated the bones of a Neanderthal child less than 2 years old whose remains were found in the Mezmaiskaya Cave in the northern Caucasus Mountains. A second Neanderthal baby, found in a lower layer in the cave, was previously dated back 29,000 years.

The first baby, since its bones were retrieved from a higher layer, must be even younger, but in fact it turns out to be 39,000 years old when an improved version of the radiocarbon dating technique is used, Dr. Higham and Dr. Pinhasi reported Monday in The Proceedings of the National Academy of Sciences.

Radiocarbon dating depends on measuring the radioactive isotope of carbon known as carbon 14, which is ingested during a person's lifetime and steadily decays after death. Very little carbon 14 remains in specimens more than 30,000 years old, and even tiny amounts of contaminating carbon 14 can make a sample seem much younger than it is.

Dr. Higham has developed a method of ultrafiltration that removes contaminants and leaves whole molecules of collagen recovered from fossil bone.

Reviewing other Neanderthal dates ascertained with the new ultrafiltration method, Dr. Higham sees an emerging pattern that no European Neanderthal site can reliably be dated to less than 39,000 years ago. "It's only with reliable techniques that we can interpret the archaeological past," he said.

He is re-dating Neanderthal sites across Europe and so far sees no evidence for any extensive overlap between Neanderthals and modern humans. "There was a degree of contemporaneity, but it may not have been very long," he said. A short period of contact would point to the extinction of the Neanderthals at the hands of modern humans.

"It's very unlikely for Neanderthals to go extinct without some agency from modern humans," Dr. Higham said.

Paul Mellars, an expert on Neanderthals at Cambridge University in England, said that the quality of the dates from Dr. Higham's laboratory was superb and that samples of bone re-dated by the lab's method were almost always found to be several thousand years older than previously measured. The picture supported by the new dates is that the interaction between modern humans and Neanderthals in Europe was brief in each region, lasting perhaps a few hundred years, Dr. Mellars said, until the modern humans overwhelmed their competitors through better technology and greater numbers.

Richard Klein, a paleoanthropologist at Stanford University, said Dr. Higham's re-dating was "compelling" and fit with his own view that "modern humans were technologically and intellectually far superior to the Neanderthals." This, he said, "would have allowed them to spread very rapidly and to precipitate the extinction of the Neanderthals almost immediately on contact."

The new radiocarbon findings show little evidence that the two species peacefully coexisted within Europe. But geneticists who have decoded the Neanderthal genome reported last year that some 2.5 percent of the modern human genome is derived from Neanderthals. The interbreeding, they postulate, occurred not in Europe 40,000 years ago but in an earlier encounter 100,000 years ago. They believe that this encounter must have been in the Near East.

Modern humans and Neanderthals occupied the same sites in what is now Israel, but it is not clear that the populations overlapped. The Neanderthals seem to have occupied the sites during cold periods and the modern humans during spells of warmer weather.

The presence of modern humans in Israel 100,000 years ago was long assumed to have been a failed attempt to leave Africa, since there is no archaeological evidence of modern humans outside Africa until some 44,000 years ago. But geneticists led by Svante Paabo of the Max Planck Institute for Evolutionary Anthropology argue that this earlier attempt was in fact successful, and that modern humans commingled with Neanderthals in the Near East before going on to occupy Europe and Asia. This would explain, they say, why Neanderthal genes are found in Europeans and Asians but not in Africans.

Dr. Klein said interbreeding between the two species was perfectly possible in principle, "but it's kind of anti-archaeological because there is no evidence that they overlapped" in the Near East.

"I would be more convinced if it were in fact postulated for the extensive, if brief, contact between Neanderthals and modern humans after 50,000 years ago," he said.

Please visit the site: <http://www.nytimes.com/2011/05/10/science/10neanderthal.html>

INFANTICIDE COMMON IN ROMAN EMPIRE - BEFORE THE INVENTION OF MODERN CONTRACEPTION, FAMILY PLANNING TOOK THE FORM OF A CHILLING PRACTICE, BY JENNIFER VIEGAS

Infanticide, the killing of unwanted babies, was common throughout the Roman Empire and other parts of the ancient world, according to a new study.

The study, which has been accepted for publication in the Journal of Archaeological Science, explains that "until recently, (infanticide) was a practice that was widely tolerated in human societies around the world. Prior to modern methods of contraception, it was one of the few ways of limiting family size that was both safe for the mother and effective."

Based on archaeological finds, the practice appears to have been particularly widespread in the Roman Empire.

"I think it was tolerated in the Roman world rather than something that was completely acceptable, but it's hard to be sure," lead author Simon Mays told Discovery News.

Mays, a senior scientific officer for the Ancient Monuments Laboratory of English Heritage, and colleague Jill Eyers focused their attention on Yewden Roman villa, otherwise known as "Hambleden." This villa, which dates from the 1st to the 4th century, is located at Hambleden, Buckinghamshire, England.

A previous excavation of Hambleden in 1921 determined that the site has 97 infant burials, the largest number of such burials for any Roman location in Britain. The excavator at the time suspected infanticide "with surreptitious disposal of the bodies."

Since few infant skeletons show evidence of cause of death, Mays and Eyers used an indirect method to investigate possible infanticide at Hambleden. Natural deaths tend to show a dispersed age distribution at burial sites. At places where infanticide occurred, the age distribution is more uniform, corresponding to full-term infancy.

The researchers took bone measurements of the Hambleden infant remains and compared them to those taken at two other sites: Ashkelon, Israel and the medieval Wharram Percy, England. Infants buried at Wharram Percy likely died of natural causes. Ashkelon, once part of the Roman Empire, told a different story.

Nearly 100 infants all died at Ashkelon at about the same full-term age. They were not buried, but instead were cast into a sewer that ran beneath a brothel. Researchers suspect that most such victims were suffocated to death.

Although the Hambleden babies were buried, their age distribution matched that of the infants at Ashkelon.

"Why so many infants were found in the Hambleden excavations is unclear," Mays said. "The infant burials were clustered together rather than scattered, and the excavated area just happened to contain the infant burial ground."

The findings add to the growing body of evidence that infanticide was common in the Roman Empire. The prehistoric sites of Khok Phanom Di, Thailand, and Lepinski Vir and Vlasac, Serbia, also yielded probable evidence for infanticide. A 1973 survey of human societies determined that 80 percent of them, at some time in the past or more modern times, practiced this intentional killing of babies.

Gwen Hunnicutt of the University of North Carolina at Greensboro and Gary LaFree of the University of Maryland, College Park, have extensively studied infanticide, directing their attention to more recent documented cases from 27 countries around the world.

Hunnicutt and LaFree found what they conclude is "a positive relationship between income inequality and female infant homicide victimization."

"Societies with extreme poverty may use infant homicide as a means to conserve resources, reduce economic strain, or improve the quality of life for the family," they explained. "Infanticide actually decreases in countries characterized by a culture of violence."

The researchers suggest that the practitioners may, in some cases, perceive infanticide as "mercy killing, where the goal may be to alleviate suffering, not to cause it."

Hunnicutt and LaFree believe "increases in government support of family services, day care relief, and other types of parental support, might mitigate some negative effect of the economic impact of women in the labor force."

Please visit the site: <http://news.discovery.com/archaeology/infanticide-roman-empire-110505.html>

BGAN FROM STRATOS CONNECTIVITY PLAYS VITAL ROLE IN EXPANDING ARCHAEOLOGICAL STUDY IN REMOTE MONGOLIA

--National Geographic-supported project searches for tomb of Genghis Khan, with help of virtual explorers worldwide--

Stratos Global, the leading global provider of advanced mobile and fixed-site remote communications solutions, today announced it has continued its support of the world-renowned survey that is identifying archaeological sites in Genghis Khan's homeland - Mongolia's most sacred heritage area.

During the expedition's second phase, completed last summer, Stratos supplied Inmarsat BGAN mobile satellite communications service to researchers as they used digital imagery to search for archaeological sites in the remote valley of the ancient Mongolian empire. Stratos equipment supplier ViaSat also continued its support by donating its VRT-100 rugged BGAN terminal for this project.

The Valley of the Khans (VOTK) research project (<http://exploration.nationalgeographic.com/>), supported by the joint National Geographic Society/Waite Grants Program, is led by University of California San Diego research associate Albert Yu-Min Lin, Ph.D. Dr. Lin initiated this project in 2009 using a new, non-invasive scientific approach.

The project is performing a non-destructive archaeological search, utilizing modern digital tools from a variety of disciplines, including digital imagery, computer vision, non-destructive surveying, and on-site digital archaeology.

Expanded Expedition Uses Human Computation Component

The 2010 VOTK expedition, utilizing twice as many professionals as the 2009 inaugural search, was expanded to include a search area of 3,000 kilometres. This expansion was made possible by using satellite imaging and an innovative Human Computation toolkit.

BGAN from Stratos made it possible for the 2010 VOTK expedition to deploy the Human Computation toolkit. Before entering a new region, the team would use its BGAN connection to enable members of the general public to serve as "virtual explorers" online to help search through and tag GeoEye-1 satellite imagery of the region in which the team was operating.

Each morning, the team would again use its BGAN connection to download annotations provided by virtual explorers - then use those annotations to direct its ground search. This application enabled the team to significantly increase its search area and deploy a multi-stage approach to discovery, including: satellite imagery; aerial imagery; and geomagnetic surveys such as ground-penetrating radar and electro-magnetometers.

"The expansion of our expedition would have been impossible without BGAN from Stratos," said Dr. Lin. "BGAN provided us with reliable voice and data connectivity in one of the world's most remote regions.

This helped us maintain the highest levels of safety and productivity while in the field. In addition to the human computation toolkit, we used BGAN for photo transmission, blogging and to secure critical medical consultations from the field."

The research team now is analyzing its field data and expects to announce its results by the end of this year. The VOTK search seeks to locate archaeological sites from the period of Genghis Khan without disturbing them, thus shedding light on Mongolia's rich historical heritage and enabling conservation and education in this rapidly changing landscape. The search maintains respect for local customs while enabling protective measures through organizations such as UNESCO. The VOTK research project was one of National Geographic Adventure magazine's 2010 Adventures of the Year.

Stratos President and CEO Jim Parm said, "It is gratifying to know that our continued contribution of BGAN is helping support pioneering research that is of vast historical significance. This is the latest demonstration of BGAN's effectiveness in the world's harshest, most remote environments."

Those seeking more information on the Valley of the Khans or crowdsourcing technology can contact the project team atvotk@tomnod.com.

About BGAN from Stratos

Stratos is one of the world's largest distributors of Inmarsat's BGAN (Broadband Global Area Network) service, a mobile satellite offering that uses portable, lightweight terminals to provide video (guaranteed up to 384 kbps streaming), high-speed data (up to 492 kbps) and voice connectivity anywhere in the world. Since its introduction in late 2005, BGAN from Stratos has been widely adopted by media organizations, military agencies, first responders and professionals in many other industries worldwide. Stratos now boasts more than 15,000 BGAN activations in 185 countries.

Stratos customers fully utilize The Stratos Advantage, a suite of value-added services that help elevate BGAN from Stratos far above baseline offerings. These value-added services, including Stratos Dashboard, provide users with cost control, firewall management, full traffic information, pre-paid facilities, high security options, easy VPN access, messaging services and a full range of IP options. More information on BGAN from Stratos is available at www.thepowerofbgan.com.

About Stratos

Stratos is the world's trusted leader for vital communications.

Stratos offers the most powerful and extensive portfolio of remote communications solutions including mobile and fixed satellite and microwave services. More than 20,000 customers use Stratos products and industry-leading value-added services to optimize communications performance. Stratos serves U.S. and international government, military, first responder, NGO, oil and gas, industrial, maritime, aeronautical, enterprise, and

media users on seven continents and across the world's oceans. Stratos is a wholly owned subsidiary of Inmarsat plc. For more information, visit www.stratosglobal.com.

Please visit the site: <http://www.prnewswire.com/news-releases/bgan-from-stratos-connectivity-plays-vital-role-in-expanding-archaeological-study-in-remote-mongolia-121302099.html>

RICE'S ORIGINS POINT TO CHINA, GENOME RESEARCHERS CONCLUDE

Rice originated in China, a team of genome researchers has concluded in a study tracing back thousands of years of evolutionary history through large-scale gene re-sequencing. Their findings, which appear in the latest issue of the Proceedings of the National Academy of Sciences (PNAS), indicate that domesticated rice may have first appeared as far back as approximately 9,000 years ago in the Yangtze Valley of China. Previous research suggested domesticated rice may have two points of origin-India as well as China.

The study was conducted by researchers from New York University's Center for Genomics and Systems Biology and its Department of Biology, Washington University in St. Louis' Department of Biology, Stanford University's Department of Genetics, and Purdue University's Department of Agronomy.

Asian rice, *Oryza sativa*, is one of world's oldest crop species. It is also a very diverse crop, with tens of thousands of varieties known throughout the world. Two major subspecies of rice - japonica and indica - represent most of the world's varieties. Sushi rice, for example, is a type of japonica, while most of the long-grain rice in risottos are indica. Because rice is so diverse, its origins have been the subject of scientific debate. One theory-a single-origin model-suggests that indica and japonica were domesticated once from the wild rice *O. rufipogon*.

Another-a multiple-origin model-proposes that these two major rice types were domesticated separately and in different parts of Asia. The multiple-origin model has gained currency in recent years as biologists have observed significant genetic differences between indica and japonica, and several studies examining the evolutionary relationships among rice varieties supported more than domestication in both India and China.

In the PNAS study, the researchers re-assessed the evolutionary history, or phylogeny, of domesticated rice using previously published datasets, some of which have been used to argue that indica and japonica rice have separate origins. Using more modern computer algorithms, however, the researchers concluded these two species have the same origin because they have a closer genetic relationship to each other than to any wild rice species found in either India or China.

In addition, the study's authors examined the phylogeny of domesticated rice by re-sequencing 630 gene fragments on selected chromosomes from a diverse set of wild and domesticated rice varieties. Using new modeling techniques, which had previously been used to look at genomic data in human evolution, their results showed that the gene sequence data was more consistent with a single origin of rice.

In their PNAS study, the investigators also used a "molecular clock" of rice genes to see when rice evolved. Depending on how the researchers calibrated their clock, they pinpointed the origin of rice at possibly 8,200 years ago, while japonica and indica split apart from each other about 3,900 years ago. The study's authors pointed out that these

molecular dates were consistent with archaeological studies. Archaeologists have uncovered evidence in the last decade for rice domestication in the Yangtze Valley beginning approximately 8,000 to 9,000 years ago while domestication of rice in the India's Ganges region was around about 4,000 years ago.

"As rice was brought in from China to India by traders and migrant farmers, it likely hybridized extensively with local wild rice," explained NYU biologist Michael Purugganan, one of the study's co-authors. "So domesticated rice that we may have once thought originated in India actually has its beginnings in China."

"This study is a good example of the new insights that can be gained from combining genomics, informatics and modeling," says Barbara A. Schaal, Mary-Dell Chilton Distinguished Professor of Biology at Washington University in St. Louis, who is also a co-author. "Rice has a complicated evolutionary history with humans and has accompanied them as they moved throughout Asia. This work begins to reveal the genetic consequences of that movement."

Note: This story has been adapted from a news release issued by the New York University

Please visit the site:

http://www.geneticarchaeology.com/research/Rices_origins_point_to_China_genome_researchers_conclude.asp

FIRST BUILDINGS MAY HAVE BEEN COMMUNITY CENTERS, BY MICHAEL BALTER

Nearly 12,000 years ago, the world's first villages began to spring up in the Near East. Until recently, archaeologists assumed that the stone and mud-brick buildings that made up these small settlements were the houses of the first farmers, who had begun to give up the hunting and gathering lifestyle. But the discovery of a large, amphitheater-like building at a site in southern Jordan, reported today, adds to growing evidence that the earliest permanent buildings might not have been homes, but community centers. The find, researchers say, suggests that during the advent of agriculture—a pivotal turning point that prehistorians call the Neolithic Revolution—early farmers may have come together first to engage in communal activities, and only later did they begin living together.

“This is definitely one of the most exciting discoveries in recent years associated with the [Neolithic] in the Near East,” says Nigel Goring-Morris, an archaeologist at the Hebrew University of Jerusalem in Israel.

Archaeologists have little doubt that the larger villages that crop up after about 10,000 years ago across the Near East—an area that includes modern-day Turkey, Syria, Jordan, and neighboring countries—were residential communities made up of individual family houses. At 9500-year-old Çatalhöyük in Turkey, for example, thousands of people lived in a tight, honeycomb-like cluster of mud-brick homes that they entered through holes in the roof, and hundreds of similar sites have been excavated across the region.

But the earliest Neolithic villages, which date to about 11,700 years ago, are much smaller, and include a variety of buildings of different sizes and shapes. At an 11,500 year old site called Jerf el Ahmar in Syria, for example, the entire community apparently used a number of structures, including storehouses and a circular building with a long bench. And at 11,000-year-old Göbekli Tepe in southeastern Turkey, researchers have argued that fantastic monolithic stone structures were part of a community ritual center.

Today, in a paper published online in the Proceedings of the National Academy of Sciences, a team led by Bill Finlayson, director of the Council for British Research in the Levant in London and archaeologist Steven Mithen, an archaeologist at the University of Reading in the United Kingdom, reports the discovery of a large, oval-shaped building at a site in southern Jordan called Wadi Faynan 16 (WF16). Early farmers lived here between between 11,600 and 10,200 years ago, cultivating wild plants such as wild barley, pistachio, and fig trees, and hunting or herding wild goats, cattle, and gazelle.

The structure, designated building 075 was made of mud-brick, with a floor of mud plaster, and measures a whopping (by Neolithic standards) 22 by 19 meters. Its central area is surrounded by a long bench about a meter deep and half a meter high. In parts of the building, there is a second bench above the first one that forms an additional tier of seating. And along the southern side of the building, the lower bench is decorated with a wave pattern incised into the mud-brick.

Thus the structure echoes the architecture of the Jerf el Ahmar community building--but building 075 is about three times larger. The building's central area also contains a series of stone mortars set into plaster platforms on the floor, which may have been used to grind wild plants. The structure includes a number of post-holes, which the team thinks might have held up a roof that covered at least part of the building. The team also found two other, smaller structures nearby, which it interprets as storehouses for cereals and other food resources.

The three structures, the team reports, lie within a cluster of other buildings in a 1-hectare site. But none of these other buildings appear to be domestic houses either: Rather, they seem to have served as storehouses or workshops; one building contained green stone beads and seems to have specialized in their manufacture.

Finlayson, Mithen, and their colleagues conclude that the evidence from WF16, combined with evidence from other sites, suggests that the earliest villages were not made up of houses, but rather communal structures where people came together to process their wild harvests and possibly also to engage in community performances. "These settlements appear to be all about community and not about emerging households," the team writes, adding that this "ritualized community activity" might have helped to bring together the work force necessary to harvest the wild crops.

The authors don't speculate on where the farmers lived, and there is no way to be sure. Researchers working at similar sites have surmised that they lived in small camps near the central site, but such open air habitations are very difficult to find and often leave little or no archaeological traces.

Archaeologist Trevor Watkins, emeritus at the University of Edinburgh in the United Kingdom, says he "agrees strongly" with the authors' conclusion that the social changes that took place during the transition from hunting and gathering to farming were at least as important as the later economic changes that led to full-blown domestication of plants and animals. But he thinks that it's still possible that some of the other buildings at WF16 were used as domestic dwellings. Nevertheless, Watkins says, the communal activities at WF16 and other Neolithic sites probably created "powerful bonds of collective identity" in the earliest farmers that kept them together in stable societies "over many generations."

Please visit the site:

<http://news.sciencemag.org/sciencenow/2011/05/first-buildings-may-have-been-co.htm>

IMPERIAL PERIOD ROMAN SHIP **FOUND IN OSTIA ANTICA**

Archaeologists say they have found part of an ancient ship near Rome during repair work to a bridge. The 11 metre vessel is one of the largest ancient vessels excavated near Ostia Antica, a port city founded some 2,500 years ago.

The original river harbour of Ostia had limitations as larger ships such as this one could not enter it due to a sand bar near the mouth of the river. Mercantile goods that arrived in large sea going ships had to be transferred to smaller vessels at sea then these shallow-draught vessels could navigate the river and moor at the Tiber quays, but as time passed there was just not enough capacity for Rome's growing needs.

The Emperor Claudius started the construction of an artificial harbour, in AD 42 a few kilometres to the north of Ostia. A huge basin was created by enhancing a natural bay, protected by two curved moles and a lighthouse. A number of ships filled with Roman concrete was used as foundations for these moles.

A ship of Imperial Rome

The remains of the ship, missing its bow and stern, was found at a depth of 4 metres during repairs of a bridge linking modern-day Ostia to Fiumicino, the town that hosts Rome's Leonardo da Vinci airport. A tentative date for the vessel is early Imperial period (25 BCE – 197 CE)

This excavation showed that the coastline was 4 kilometres inland from where it is now.

Anna Maria Moretti, superintendent of archaeology in Rome and Ostia Antica, was quoted as saying that she had not expected this find, but the remarkably preserved vessel has even the remains of rope. The boat has to be constantly sprayed with water to ensure the timbers do not dry out. She added that restoring the ship "will be an extremely delicate operation."

"When things are so important the money is there", the Minister of Cultural Heritage, Giancarlo Galan was reported as saying in Nuova Resistenza, about a possible financial commitment from the ministry after the discovery.

Archaeology at Ostia Antica

Archaeology has been undertaken in Ostia for decades, with the history and layout of the town being slowly uncovered providing a unique window into Rome's sea port to the world.

Ostia was provided with all the services a town would require and of course its famous lighthouse. It also contained the earliest synagogue yet identified in Europe [1] which caused great excitement when first unearthed in 1960-61. Archaeologists also discovered public latrinas, which were laid out as a series of conjoined seats, a large theatre, several public baths, numerous taverns and inns, and even the evidence of a fire fighting service.

[1] Synagogue and Society in Imperial Ostia: Archaeological and Epigraphic Evidence,”
L. Michael White The Harvard Theological Review, Vol. 90, No. 1 (Jan., 1997), pp. 23-
58.

Please visit the site:

<http://www.pasthorizons.com/index.php/archives/04/2011/imperial-period-roman-ship-found-in-ostia-antica>

OLDEST REMAINS OF CASPIAN HORSE **DISCOVERED IN NORTH OF IRAN** **GOHAR TAPPEH**

During the eighth season of archaeological research in Gohar Tappeh, in the northern Iranian province of Mazandaran, archaeologists have discovered the remains of a horse identified as the Caspian also known as the Māzandarān Horse, the oldest breed of horse in the world still in existence.

The remains were discovered in a cemetery dating back to the late Bronze and early Iron age, around 3400 BCE.

“Due to the form, figure and size of the discovered remains of the horse, we now have the oldest evidence for Caspian horse ancestry at hand”, said Ali Mahforuzi, the director of the archaeological team in Gohar Tappeh.

He added: “We have to continue our research until we reach the virgin soil in order to establish the oldest human occupation of the site.”

“It seems the excavation is gradually moving past the cemetery, and into an industrial level since we found a clay-kiln in 2006. We are hoping that we will have more information about the industrial section of the site too by next year”, said Mahforuzi.

Mahforuzi concluded: “obtaining information from Gohar Tappeh helps us to understand the site’s cultural settings and its link to other cultures in the region during pre-historic times.”

The Gohar Tappeh historical site with a 50 hectare area is located in the eastern part of Mazandaran province between the cities of Neka and Behshahr, north of Iran. It is one of the most important archaeological sites in Iran located near the Caspian Sea, which carries the secret of an ancient civilisation. It is also believed that Gohar Tappeh once enjoyed a complicated urbanisation some 6,500 to 7,000 years ago.

Discovery of architectural structures as well as a large number of graves with different burial methods observed in this region all point to the existence of continual life in this region during different periods of history till 1st millennium BCE.

The oldest stratum identified in this season is of the chalcolithic age (3500 to 3400 BCE) and the oldest so far dates to the Neolithic age, circa 14,000 years ago.

The Caspian Horse

The Caspian horse or the ‘Kings’ Horse’, was celebrated in ancient Iran as a chariot horse for racing and in battle, and presented to kings and queens as a valuable gift and is known to be favoured by Darius the Great.

The Caspian horse was thought to have disappeared into antiquity, until 1965 when the American wife of an Iranian aristocrat called Louise Firouz went on an expedition on horseback and discovered small horses in the Iranian mountainous regions south of the Caspian Sea.

The number of surviving Caspian horses in Iran is still quite small. In addition, there are only 1300 registered Persian Caspians world-wide, mainly in the US, UK, Germany and Australia. The last export of Caspian horses out of Iran occurred in the early '90s, with a small shipment arriving in Great Britain.

The Caspians are smaller than modern horses at around 11.3 hands compared with a modern racehorse at 16. They have light frames, thin bones, short, fine head with a pronounced forehead, large eyes, short ears and small muzzles. They are very fast, and incredibly strong and spirited, but also have good temperaments, and described by Louise Firouz as “kind, intelligent and willing.”

Please visit the site:

http://www.cais-soas.com/news/index.php?option=com_content&view=article&id=361:the-oldest-remains-of-caspian-horse-discovered-in-north-of-iran-&catid=59 [Go there for pix]
