



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

**ΔΙΟΙΚΗΤΙΚΟ  
ΣΥΜΒΟΥΛΙΟ:**

Ε. Φώτου-Jones (πρόεδρος),  
Ι. Μπασιάκος (αντιπρόεδρος),  
Ι. Καρατάσιος (γραμματέας),  
Ε. Κουλουμπή (ταμίας),  
Ε. Φιλιπάκη (βοηθός γραμ.),  
Β. Κυλίκογλου (μέλος),  
Α. Hein (μέλος)

**Πληροφορίες:**

Γ. Φακορέλλης (σύνταξη,  
επιλογή ύλης)

**E-mail:** [yfacorel@teiath.gr](mailto:yfacorel@teiath.gr)

Scientific Association, Year  
of Establishment 1982,  
Headquarters: Kaniggos 27,  
106 82 Athens (Association  
of Greek Chemists)

**BOARD:**

Ε. Photos-Jones (president),  
J. Bassiakos (vice-president),  
J. Karatassios (secretary),  
Ε. Kouloumpi (treasurer),  
Ε. Philippaki (ass. secretary),  
V. Kilikoglou (member),  
Α. Hein (member)

**Information:** Y. Facorellis  
(editor)

**E-mail:** [yfacorel@teiath.gr](mailto:yfacorel@teiath.gr)

# Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

**- Απρίλιος 2012 -**

**The secret of Happiness is Freedom, and the secret of  
Freedom, Courage.**  
*(Thucydides)*

## Newsletter of the Hellenic Society of Archaeometry

**- April 2012 -**

**Nr. 133**

## **ΠΙΝΑΚΑΣ ΠΕΡΙΕΧΟΜΕΝΩΝ – TABLE OF CONTENTS**

### **ΣΥΝΕΔΡΙΑ – CONFERENCES/WORKSHOPS**

Armenoi Colloquium - 19 April 2012, Odeon, Bernadou Street (Platinos Area),  
Rethymnon ..... page 5

Διεθνές Συνέδριο - Εκατό χρόνια έρευνας στην προϊστορική Μακεδονία  
Αρχαιολογικό Μουσείο Θεσσαλονίκης, 22-24 Νοεμβρίου 2012 ..... page 7

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

Διατμηματικό Πρόγραμμα Μεταπτυχιακών Σπουδών (ΔΠΜΣ) στο αντικείμενο  
“Προστασία, Συντήρηση και Αποκατάσταση Μνημείων Πολιτισμού” -  
ΠΡΟΣΚΛΗΣΗ ΕΚΔΗΛΩΣΗΣ ΕΝΔΙΑΦΕΡΟΝΤΟΣ ..... page 10

NARNIA training course on interdisciplinary research of archaeological and  
historical glass ..... page 12

**Associate/Assistant Curator** for the Department of Ancient Near Eastern Art  
The Metropolitan Museum of Art ..... page 14

Project Doctoral Student: Dama International, The Fallow Deer Project  
Fallow Deer in the Material and Visual Culture of European Society 6000BC-  
AD1600 ..... page 16

ARCS Archaeological Field School in Heraclea Sintica, SW Bulgaria,  
June 28 - July 22, 2012 ..... page 17

Field School in Cyprus, June 17 - July 22 ..... page 20

UMass Anthropology 2012 Field Schools ..... page 21

POSTDOCS: 3, at UC (London) ..... page 22

Fulbright Scholar Opportunities 2013-14 ..... page 23

IAMS Summer School 2012 and New Website ..... page 24

Italy Preservation Field School - Buildings, Art, Ceramics and Paper  
DEADLINE EXTENDED ..... page 25

Introduction to the Archaeometallurgy of Cyprus, A NARNIA Project  
Training Course, 7-11 May 2012, Archaeological Research Unit, University of  
Cyprus ..... page 27

### **ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS**

ENVI-Med CALL FOR PROPOSALS ..... page 30

Παρουσίαση του τόμου των Πρακτικών του 5ου Συμποσίου της Ε.Α.Ε.,

Αμφιθέατρο Εθνικού Αρχαιολογικού Μουσείου, Παρασκευή 30 Μαρτίου 2012 **page 32**

### **INTERNET SITES**

Aegeus - Society for Aegean Prehistory ..... **page 33**

Ο Κύκλος των Μουσείων..... **page 34**

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

Le Vocabulaire de la métallurgie et la nomenclature des objets en métal dans les textes de Mari ..... **page 35**

Evolution of Water Supply Through the Millennia ..... **page 36**

AIDONA, E. and LIRITZIS, I., 2012. Magnetic susceptibility and radioactivity changes of Aegean and Ionian Sea sediments during last glacial/interglacial: Climatic and chronological markers. *Journal of Coastal Research*, 28(2), 342–353. West Palm Beach (Florida), ISSN 0749-0208 ..... **page 38**

### **ΕΙΛΗΣΕΙΣ - NEWS RELEASE**

Neanderthals were ancient mariners, by Michael Marshall ..... **page 39**

A Unique Hoard Was Found At Tel Megiddo ..... **page 41**

A New Pharaoh was discovered, The Royal name of the 17th Dynasty at Karnak Temple ..... **page 42**

Arabic museum in Paris gets a new look for 25-year anniversary - The Institut du Monde Arabe in Paris unveils its revamped exhibition space, by Florence Evin ..... **page 43**

Chemical analysis shows Medici Venus was once far gaudier ..... **page 45**

Do blue eyes stem from the Black Sea 8,000 years ago? By Douglas Stanglin .. **page 47**

Hong Kong dentist to help check pharaoh's cavity, By Sisi Tang ..... **page 48**

Laser-mapping LiDAR [light detection and ranging] revolutionizes archaeology, By Curt Hopkins ..... **page 50**

Google Begins to Scale Back Its Scanning of Books From University Libraries, By Jennifer Howard ..... **page 53**

Why It Took So Long to Invent the Wheel - The tricky thing about the wheel is not conceiving of a cylinder rolling on its edge. It's figuring out how to connect a stable, stationary platform to that cylinder, By Natalie Wolchover ..... **page 55**

Βωμός 3.500 χρόνων στα Πευκάκια! ΡΕΠΟΡΤΑΖ: ΓΛΥΚΕΡΙΑ ΥΔΡΑΙΟΥ .... **page 57**

In search of Ancient Egypt's very own watery answer to Venice ..... **page 60**

Greeks find remains of healing sanctuary ..... **page 61**

Satellites Expose 8,000 Years of Lost Civilization ..... **page 62**

Ένας σημαντικός οικισμός της 3ης π.Χ. χιλιετίας στη Θάσο - Παρουσιάστηκαν  
τα ευρήματα της ανασκαφής που έγινε τη διετία 2009-2010, Μαρία Θερού .... **page 64**

---

---

## **ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS**

### **ARMENOI COLLOQUIUM - 19 APRIL 2012, ODEON, BERNADOU STREET (PLATINOS AREA), RETHYMNON**

On behalf of the organisers, I append details of an Evening Colloquium on the excavation and finds of the LM III Necropolis of Armenoi. I hope that some of you might be able to attend.

Friends of the Archaeological Museum of Rethymnon (Supported by the 25th Ephorate of Prehistoric and Classical Antiquities. Ministry of Culture and Tourism)

#### **EVENING COLLOQUIUM**

Thursday, 19 April 2012  
6.30 – 9.30 p.m.

#### **The Late Minoan III Necropolis of Armenoi**

This evening colloquium introduces the site and its spectacular finds to members of the local community and others and to increase knowledge and awareness of such an important Minoan site on their doorstep

#### *Introductions*

Dr Maria Andreadaki-Vlazaki

Director-General of Antiquities, Ministry of Culture and Tourism

Irini Gavrilaki

Chief of the Department of Museums, Exhibitions and Educational Programmes of the 25th Ephorate of Prehistoric and Classical Antiquities, Ministry of Culture and Tourism

Dr Yannis Tzedakis

Director-General of Antiquities Emeritus, Ministry of Culture and Tourism  
Director of Excavations at Armenoi

*Speakers* (or papers read on their behalf) include the experts studying the architecture and finds from the excavation: Dr Yannis Tzedakis [Pottery]; Dr Holley Martlew [Food and Drink]; Professor Robert Arnott [Health and Diet]; Dr Andrew Gize [The Geological Setting]; Dr Photini Nezeri [The Local Pottery Workshop]; Dr Anna Simandiraki-Grimshaw [Miniature Vases]; Ioanna Efstathiou [Bronzes]; Katerina Baxevani [Larnakes]; Eleni Papadopoulou [Tomb Stele]; Dr Olga Krzyszowska [Seals]; Vassiliki Kolivaki [Small Finds]; and Steve Litherland [The Survey]

ALL ARE WELCOME TO ATTEND

For further details contact Irimi Gavrikaki at the Rethymnoin Museum on 28310 54668 or Robert Arnott on [R.Arnott@medsci.ox.ac.uk](mailto:R.Arnott@medsci.ox.ac.uk)

---



ΔΙΕΘΝΕΣ ΣΥΝΕΔΡΙΟ

## ΕΚΑΤΟ ΧΡΟΝΙΑ ΕΡΕΥΝΑΣ ΣΤΗΝ ΠΡΟΪΣΤΟΡΙΚΗ ΜΑΚΕΔΟΝΙΑ

επισκεφθείτε <http://macedonia.prehistoric-conference.com>

ΑΡΧΑΙΟΛΟΓΙΚΟ ΜΟΥΣΕΙΟ ΘΕΣΣΑΛΟΝΙΚΗΣ | 22-24 ΝΟΕΜΒΡΙΟΥ 2012

### 1<sup>η</sup> Εγκύκλιος

Το 2012 αποτελεί μια επετειακή χρονιά για την πόλη της Θεσσαλονίκης και ευρύτερα για τη βόρεια Ελλάδα, καθώς συμπληρώνεται μία εκατονταετία από την ενσωμάτωσή της στο Ελληνικό Κράτος. Αυτά τα 100 χρόνια η αρχαιολογική έρευνα πέρασε από πολλά στάδια και κλήθηκε να προσαρμοσθεί στις μεταβαλλόμενες ιστορικές συνθήκες, να σταθεί κριτικά απέναντί τους ή να τις υπηρετήσει. Στα 100 χρόνια που πέρασαν έγιναν πολλά, μέσα από τη δράση εκατοντάδων Ελλήνων και ξένων αρχαιολόγων, της Αρχαιολογικής Υπηρεσίας, του Αριστοτέλειου Πανεπιστημίου Θεσσαλονίκης και των Ξένων Αρχαιολογικών Σχολών, αλλά υπάρχουν και πολλά που απομένουν να γίνουν και μπορούν να αποτελέσουν τους στόχους των επόμενων δεκαετιών. Δίνεται, έτσι, η αφορμή να γίνει ένας απολογισμός των όσων έχει επιτύχει η προϊστορική αρχαιολογική έρευνα μέχρι σήμερα, να γίνει μία κριτική προσέγγιση των θεωρητικών και μεθοδολογικών της προσανατολισμών και να αναδειχθούν οι προοπτικές για το μέλλον.

Το Αρχαιολογικό Μουσείο Θεσσαλονίκης κρίνοντας ως ιδιαίτερα σημαντική τη σφαιρική και ουσιαστική παρουσίαση των αποτελεσμάτων της έρευνας αλλά και την έναρξη ενός διαλόγου, που δεν αφορά μόνο τους επιστήμονες, αλλά το σύνολο της κοινωνίας και σχετίζεται με τις κοινωνικές συνδέσεις της αρχαιολογίας, διοργανώνει το Συνέδριο για τα Εκατό Χρόνια Έρευνας της Προϊστορικής Μακεδονίας σε συνεργασία με το Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης.

Σας καλούμε να πλαισιώσετε αυτή την προσπάθεια και να συμμετέχετε στο Συνέδριο με ανακοινώσεις, οι οποίες θα είναι απαραίτητες συνθετικές και θα αποτελέσουν συμβολή στη γνώση μας για την Προϊστορική Μακεδονία. Το χρονολογικό πλαίσιο το οποίο θα καλυφθεί περιλαμβάνει όλες τις περιόδους από την Παλαιολιθική Εποχή μέχρι το τέλος της Ύστερης Εποχής του Χαλκού και τη μετάβαση στην Πρώιμη Εποχή του Σιδήρου. Οι κύκλοι γύρω από τις οποίους μπορούν να κινηθούν οι ανακοινώσεις είναι οι ακόλουθοι:

1. **Η ιστορία της προϊστορικής έρευνας στη Μακεδονία:** Ιστορικές και κριτικές προσεγγίσεις – Θεωρητικά και μεθοδολογικά ζητήματα – Οι ανασκαφές και τα πρόσωπα της έρευνας.
2. **Χρονολόγηση:** Στρωματογραφικές ακολουθίες – Ανασκαφικά σύνολα – Απόλυτη χρονολόγηση.
3. **Το περιβάλλον της Μακεδονίας και ο προϊστορικός άνθρωπος:** Παλαιοπεριβάλλον – Διατροφή – Αρχαιοζωολογία – Αρχαιοβοτανολογία – Παλαιοανθρωπολογία – Αρχαιομετρία.
4. **Η δημιουργία του χώρου:** Αρχιτεκτονική – Οικισμοί και νεκροταφεία – Ο χώρος και οι νοσηματοδοτήσεις του.
5. **Από τα αντικείμενα στις ιδέες:** Τεχνολογίες και τεχνουργήματα – Ερμηνευτικές προσεγγίσεις – Η γνώση μας για τις προϊστορικές κοινωνίες της Μακεδονίας μέσα από τις μέχρι σήμερα έρευνες.

6. **Από την αρχαιολογική έρευνα στην κοινωνία :** Μουσειολογικά και μουσειοπαιδαγωγικά ζητήματα – Δημόσια αρχαιολογία – Προϊστορικές έρευνες και μεγάλα δημόσια έργα.

7. **Αρχαιολογία και κρίση: μετά τα εκατό χρόνια, τι;** Προβληματισμοί για το μέλλον και τις προοπτικές της προϊστορικής αρχαιολογικής έρευνας στο ρευστό και μεταβαλλόμενο περιβάλλον της εποχής μας.

- Το συνέδριο θα πραγματοποιηθεί στο Αρχαιολογικό Μουσείο Θεσσαλονίκης.
- Ως καταληκτική προθεσμία υποβολής αιτήσεων συμμετοχής ορίζεται η 31<sup>η</sup> Μαΐου 2012.
- Οι δηλώσεις συμμετοχής να συνοδεύονται από σύντομη περίληψη (όχι παραπάνω από 300 λέξεις).
- Η επιστημονική και οργανωτική επιτροπή διατηρεί το δικαίωμα να μη δεχθεί ανακοινώσεις που δεν εντάσσονται στη θεματολογία και τη φιλοσοφία του συνεδρίου.
- Θα υπάρχει η δυνατότητα συμμετοχής με ανακοίνωση προφορική ή αναρτημένη (poster).
- Δεν θα καλυφθούν έξοδα μετακίνησης και διαμονής.

#### **Συντονισμός διοργάνωσης**

Δρ. Πολυξένη Αδάμ-Βελένη, Διευθύντρια Αρχαιολογικού Μουσείου Θεσσαλονίκης

Δρ. Ευαγγελία Στεφανή, Αρχαιολόγος Αρχαιολογικού Μουσείου Θεσσαλονίκης

#### **Επιστημονική Επιτροπή**

Στέλιος Ανδρέου, Καθηγητής Προϊστορικής Αρχαιολογίας Α.Π.Θ.

Νίκος Ευστρατίου, Καθηγητής Προϊστορικής Αρχαιολογίας Α.Π.Θ.

Κώστας Κωτσάκης, Καθηγητής Προϊστορικής Αρχαιολογίας Α.Π.Θ.

Αικατερίνη Παπαευθυμίου-Παπανθίμου, Καθηγήτρια Προϊστορικής Αρχαιολογίας Α.Π.Θ.







ΔΙΕΘΝΕΣ ΣΥΝΕΔΡΙΟ

# ΕΚΑΤΟ ΧΡΟΝΙΑ ΕΡΕΥΝΑΣ ΣΤΗΝ ΠΡΟΪΣΤΟΡΙΚΗ ΜΑΚΕΔΟΝΙΑ

επισκεφθείτε [http:// macedonia.prehistoric-conference.com](http://macedonia.prehistoric-conference.com)

ΑΡΧΑΙΟΛΟΓΙΚΟ ΜΟΥΣΕΙΟ ΘΕΣΣΑΛΟΝΙΚΗΣ | 22-24 ΝΟΕΜΒΡΙΟΥ 2012

## ΔΗΛΩΣΗ ΣΥΜΜΕΤΟΧΗΣ

**ΟΝΟΜΑ:**

**ΕΠΩΝΥΜΟ:**

**ΙΔΙΟΤΗΤΑ/ΙΔΡΥΜΑ:**

**ΔΙΕΥΘΥΝΣΗ:**

**ΣΤΟΙΧΕΙΑ ΕΠΙΚΟΙΝΩΝΙΑΣ:**

e-mail

τηλέφωνο

**ΤΙΤΛΟΣ ΑΝΑΚΟΙΝΩΣΗΣ:**

**ΜΟΡΦΗ ΑΝΑΚΟΙΝΩΣΗΣ:**

προφορική

αναρτημένη (poster)

Το παρόν να επιστραφεί συμπληρωμένο μέχρι 31 Μαΐου 2012

στην ηλεκτρονική διεύθυνση [register@macedonia.prehistoric-conference.com](mailto:register@macedonia.prehistoric-conference.com)

---

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

### **ΔΙΑΤΜΗΜΑΤΙΚΟ ΠΡΟΓΡΑΜΜΑ ΜΕΤΑΠΤΥΧΙΑΚΩΝ ΣΠΟΥΔΩΝ (ΔΠΜΣ) ΣΤΟ ΑΝΤΙΚΕΙΜΕΝΟ “ΠΡΟΣΤΑΣΙΑ, ΣΥΝΤΗΡΗΣΗ ΚΑΙ ΑΠΟΚΑΤΑΣΤΑΣΗ ΜΝΗΜΕΙΩΝ ΠΟΛΙΤΙΣΜΟΥ” - ΠΡΟΣΚΛΗΣΗ ΕΚΔΗΛΩΣΗΣ ΕΝΔΙΑΦΕΡΟΝΤΟΣ**

Τα Τμήματα Αρχιτεκτόνων Μηχανικών, Πολιτικών Μηχανικών, Αγρονόμων και Τοπογράφων Μηχανικών, Μηχανολόγων Μηχανικών, Ηλεκτρολόγων Μηχανικών και Μηχανικών Ηλεκτρονικών Υπολογιστών, Χημικών Μηχανικών και το Γενικό Τμήμα της Πολυτεχνικής Σχολής του Αριστοτελείου Πανεπιστημίου Θεσσαλονίκης οργανώνουν για 7η συνεχή διετία το Διατμηματικό Πρόγραμμα Μεταπτυχιακών Σπουδών (ΔΠΜΣ) στο αντικείμενο “Προστασία, Συντήρηση και Αποκατάσταση Μνημείων Πολιτισμού”.

Το ΔΠΜΣ έχει δύο κατευθύνσεις:

**Κατεύθυνση Α΄ - Προστασία, Συντήρηση και Αποκατάσταση Αρχιτεκτονικών Μνημείων** (έως 30 μεταπτυχιακοί φοιτητές)

**Κατεύθυνση Β΄ - Προστασία, Συντήρηση και Αποκατάσταση Έργων Τέχνης και Μηχανισμών** (έως 10 μεταπτυχιακοί φοιτητές).

Η έναρξη λειτουργίας του ΔΠΜΣ θα γίνει τον Σεπτέμβριο του 2012.

Οι Μεταπτυχιακές Σπουδές οδηγούν στη λήψη Μεταπτυχιακού Διπλώματος Ειδίκευσης (ΜΔΕ) μετά από κύκλο σπουδών διάρκειας τριών (3) ακαδημαϊκών εξαμήνων.

Για την απονομή του Μεταπτυχιακού Διπλώματος Ειδίκευσης απαιτείται η παρακολούθηση και η επιτυχής εξέταση στα προβλεπόμενα από το οικείο πρόγραμμα μαθήματα, όπως αυτά ορίζονται στον Εσωτερικό Κανονισμό Μεταπτυχιακών Σπουδών του ΔΠΜΣ. Επίσης απαιτείται η εκπόνηση και επιτυχής εξέταση μεταπτυχιακής διπλωματικής εργασίας.

Η παρακολούθηση των μαθημάτων και η συμμετοχή στις συναφείς εκπαιδευτικές δραστηριότητες είναι υποχρεωτική. Για την κάλυψη μέρους των λειτουργικών εξόδων των δραστηριοτήτων αυτών, προβλέπεται οικονομική συμμετοχή των φοιτητών.

□ Στο ΔΠΜΣ γίνονται δεκτές αιτήσεις υποψηφιότητας, όπως ο νόμος ορίζει, αποφοίτων ή τελειόφοιτων (εφόσον αποφοιτήσουν μέχρι τον Ιούνιο του 2012) Τμημάτων Πολυτεχνικών Σχολών της χώρας, αποφοίτων Τμημάτων Θεωρητικής και Θετικής κατεύθυνσης Ελληνικών Α.Ε.Ι., καθώς και ισοτίμων Σχολών και Τμημάτων της χώρας και του εξωτερικού.

□ Η επιλογή των σπουδαστών θα γίνει σύμφωνα με τις διαδικασίες του άρθρου 4 του Ν.3685/08. Για την αξιολόγηση θα ληφθούν υπόψη ο γενικός βαθμός διπλώματος ή πτυχίου, η επίδοση στα συναφή προς το ΔΠΜΣ προπτυχιακά μαθήματα, το θέμα και η επίδοση στη διπλωματική εργασία, εφ' όσον υπάρχει, η καλή γνώση ξένων γλωσσών και ιδίως της Αγγλικής, η τυχόν ερευνητική και επαγγελματική δραστηριότητα του υποψηφίου καθώς και οι συστατικές επιστολές. Σε περίπτωση αριθμού υποψηφίων μεγαλύτερου από τις προβλεπόμενες θέσεις οι υποψήφιοι θα κληθούν για προσωπική συνέντευξη.

□ Η επιλογή των σπουδαστών θα γίνει βάσει των μορίων της αξιολόγησης του φακέλου που υποβάλλεται και της προφορικής συνέντευξης.

□ Οι ενδιαφερόμενοι καλούνται να υποβάλουν αίτηση **από 5 Μαρτίου μέχρι και 6 Απριλίου 2012** στη γραμματεία του Διατμηματικού Προγράμματος Μεταπτυχιακών Σπουδών, από 9:30 π.μ. έως 14:00 μ.μ., τηλ. 2310-99 5559, 2310 99 5483 (+Fax) (<http://prosynapo.web.auth.gr>), ή να αποστείλουν ταχυδρομικά στη διεύθυνση:

Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης

Πολυτεχνική Σχολή Α.Π.Θ., Τμήμα Αρχιτεκτόνων Μηχανικών, Τ.Θ. 459

Πανεπιστημιούπολη, 54124 Θεσσαλονίκη

με την ένδειξη για το «Διατμηματικό Πρόγραμμα Μεταπτυχιακών Σπουδών στην Προστασία, Συντήρηση και Αποκατάσταση Μνημείων Πολιτισμού της Πολυτεχνικής Σχολής του Α.Π.Θ.» τα εξής δικαιολογητικά:

**α.** Αίτηση υποψηφιότητας σε ειδικό έντυπο, χορηγούμενο από τη Γραμματεία του ΔΠΜΣ.

**β.** Επικυρωμένο αντίγραφο διπλώματος ή πτυχίου, ή στοιχεία από τα οποία να προκύπτει ότι αναμένεται η αποφοίτησή τους μέχρι την περίοδο Ιουνίου του 2012.

**γ.** Βεβαίωση ισοτιμίας πτυχίου από το ΔΟΑΤΑΠ (πρώην ΔΙΚΑΤΣΑ) για όσους προέρχονται από πανεπιστημιακές σχολές της αλλοδαπής.

**δ.** Πιστοποιητικό αναλυτικής βαθμολογίας.

**ε.** Πλήρες βιογραφικό σημείωμα, που θα περιλαμβάνει οπωσδήποτε στοιχεία για τις σπουδές, την ερευνητική και επαγγελματική δραστηριότητα, τις τυχόν επιστημονικές εργασίες, δημοσιεύσεις ή διακρίσεις του υποψηφίου καθώς και αν λαμβάνουν υποτροφία. Οι επιστημονικές εργασίες (σε συνοπτική μορφή) και οι δημοσιεύσεις πρέπει να υποβληθούν σε 3 αντίτυπα.

**στ.** Τεκμηρίωση επαρκούς γνώσης μιας ή περισσοτέρων ξένων γλωσσών, οι δε αλλοδαποί και της ελληνικής γλώσσας με την υποβολή των σχετικών επικυρωμένων αντιγράφων πιστοποιητικών σπουδών.

**ζ.** Δύο συστατικές επιστολές.

**η.** Αποδεικτικά επαγγελματικής εμπειρίας (αν υπάρχουν).

Σχετικές πληροφορίες παρέχονται από τη γραμματεία του ΔΠΜΣ, κα Κοσκινά τηλ. 2310 99 5559, 2310 99 5483 (+Fax).

Η υπεύθυνη του Προγράμματος

Αιμιλία Στεφανίδου

Αναπλ. Καθήτρια Α.Π.Θ.

Θεσσαλονίκη, 05 Μαρτίου 2012

# **NARNIA TRAINING COURSE ON INTERDISCIPLINARY RESEARCH OF ARCHAEOLOGICAL AND HISTORICAL GLASS**

I would like to draw your attention to the second NARNIA workshop in Brussels on **interdisciplinary research of archaeological and historical glass** from the 16th until the 20th of April 2012.

The workshop has both a theoretical and an experimental component.

## **Theoretical part:**

We are pleased that we have the opportunity to organise the theoretical component in the scope of Europe's largest conference on Photonics (SPIE Photonics Europe – Square Brussels Meeting Centre Brussels, Belgium).

This conference section, which will take place between the 16th and 17th of April 2012, is focused on methods and methodologies for the study, documentation and conservation of ancient glasses. Lectures will target on studies where analytical tools and measurement techniques are applied to specific archaeological and art historical questions. This includes but is not limited to the use of SEM-EDX (EPMA), LA-ICP spectrometry, PIXE, XRF, Raman spectroscopy, UV-VIS-NIR spectroscopy, luminescence, isotope analysis, X-ray diffraction and Xanes.

## **Experimental part:**

*Title:* Combined workshop on:

- (1) The optical study of ancient glasses with a focus on UV/VIS/NIR- & Raman spectroscopy.
- (2) The chemical study of ancient glasses.

*Content:* In the second part of the workshop lab demonstrations will be given (SEM-EDX, UV/VIS/NIR & Raman spectroscopy) and the participant has the opportunity to perform hands-on experiments with the available optical spectrum analyzers (own material can be studied).

## **Registration:**

Registration for both the theoretical and the experimental part is free of charge but is compulsory

For the theoretical part: for registration please visit the NARNIA website (<http://narnia-itn.eu/training-courses/>) and fill-in the attached pdf document and mail it to both SPIE and Wendy Meulebroeck ([wmeulebr@vub.ac.be](mailto:wmeulebr@vub.ac.be)).

For the experimental part: for registration please send an e-mail to Wendy Meulebroeck ([wmeulebr@vub.ac.be](mailto:wmeulebr@vub.ac.be)).

## **Accommodation:**

A limited amount of student and professor rooms is available at reduced costs (more info at <http://www.vub.ac.be/huisvesting/beschrijvingENG.html>). Please contact Mrs. Bernadette Callebaut (email: [bcalleba@b-phot.org](mailto:bcalleba@b-phot.org)) for more information.

For any enquiries regarding this NARNIA training course on interdisciplinary research of archaeological and historical glass, please contact Dr Wendy Meulebroeck (email: [wmeulebr@vub.ac.be](mailto:wmeulebr@vub.ac.be)).

Event sponsored by SPIE

The organising committee,

**Prof. Dr. Hugo Thienpont & Dr. Wendy Meulebroeck**, Vrije Universiteit Brussel – Applied Physics and Photonics Department – Brussels Photonics Team B-Phot

**Prof. Dr. Karin Nys**, Vrije Universiteit Brussel – Department of Art Studies and Archaeology – Mediterranean Archaeological Research Institute MARI

**Prof. Dr. Herman Terryn & Kitty Baert**, Vrije Universiteit Brussel – Department of Electrochemical and Surface Engineering, Materials and Chemistry – Electrochemical and Surface Engineering SURF

\*\*\*\*\*

Maria Dikomitou Eliadou

Project Manager

New Archaeological Research Network for Integrating Approaches to ancient material studies (NARNIA)

FP7 - PEOPLE - Marie Curie European Actions

[www.narnia-itn.eu](http://www.narnia-itn.eu)

Research Fellow

Archaeological Research Unit

Department of History and Archaeology

University of Cyprus

P.O.Box 20537 CY-1678 NICOSIA Cyprus

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

tel. +357-22-893573

fax: +357-22-674101

\*\*\*\*\*

---

**ASSOCIATE/ASSISTANT CURATOR FOR**  
**THE DEPARTMENT OF ANCIENT NEAR**  
**EASTERN ART**  
**THE METROPOLITAN MUSEUM OF ART**

(to start July 2012)

The Metropolitan Museum of Art is seeking a specialist in the art and archaeology of the ancient Near East to fill the position of Associate Curator or Assistant Curator, dependent upon experience, in the Department of Ancient Near Eastern Art.

**Primary Responsibilities and Specific Duties:**

This position supports the head of the department. General duties include active participation in the management, care of, and research on the collection, as well as participation in all the activities of the Department, specifically exhibitions, publications, collections management, and displays in the permanent Ancient Near Eastern Art galleries.

The Associate/Assistant Curator will be involved in the organization of permanent gallery exhibits and long term loans including research, label writing and database maintenance as well as working on preparation for a special exhibition scheduled for 2014, which focuses on art and cultural interaction during the Iron Age. Participation in departmental projects of general and scholarly publications is also expected while also answering correspondence related to the collection and assisting the public and visiting scholars. The Associate/Assistant Curator will contribute to public programs organized by the museum, and interact with potential sponsors. Involvement in planning programs for the departmental Friends group and the Visiting Committee will also be essential.

**Requirements and Experience:**

The successful candidate must possess demonstrated experience in accomplishing original research on objects of various regions and cultures of the ancient Near East, and preferably show expertise specifically on aspects of the art and archaeology from the Achaemenid through Sasanian periods. Experience working in a collaborative museum environment is highly desirable. A PhD in the art history and archaeology of the ancient Near East is preferred for this position. A working knowledge of German, French or other relevant languages for research is important.

The Associate/Assistant Curator is full-time and includes full benefits. Salary will be commensurate with experience. Please send cover letter, resume, list of publications, salary history, and names of references, to:

[employoppty@metmuseum.org](mailto:employoppty@metmuseum.org) as a Word attachment only with the position title in the subject line.

\*\*\*\*\*

Tim Healing  
Ancient Near Eastern Art

The Metropolitan Museum of Art  
1000 Fifth Avenue  
New York, NY 10028-0198  
Tel: (212) 650 2348 Fax: (212) 650 2997

\*\*\*\*\*

---



**PROJECT DOCTORAL STUDENT: DAMA**  
**INTERNATIONAL, THE FALLOW DEER**  
**PROJECT**  
**FALLOW DEER IN THE MATERIAL AND**  
**VISUAL CULTURE OF EUROPEAN SOCIETY**  
**6000BC-AD1600**

The doctoral research will explore the cultural significance of European fallow deer (*D. d. dama*), their impact on ideological landscapes and their role in cosmologies throughout Europe from the Neolithic to the Post-Medieval period. Issues to be addressed will include how status, gender and religious and cultural beliefs are reflected in fallow deer images and material culture. This will involve extensive research of iconographic representations of fallow deer, their display in material culture and the artefacts deriving from their remains. The doctoral thesis will not involve a zooarchaeological examination of fallow deer remains from archaeological deposits, as this research is being carried out by other members of the project team. Therefore an archaeological background is not a prerequisite.

The successful candidate will be expected to work alongside the Dama International team and engage fully in all aspects of the project, including liaising with members of the steering committee, presenting research at conferences and contributing to the creation of the project's visual outputs (including documentary film and museum exhibitions). For more information on the project visit: <http://www.fallow-deer-project.net/home>.

This studentship is available from 1 October 2012 for a period of three years and includes a stipend of approx. £13,590 per annum plus full UK/EU fees. Due to funding restrictions this studentship is only available to UK/EU students.

**Closing date: 4<sup>th</sup> May 2012.**

**Interview date: 28<sup>th</sup> May 2012.**

**For full advert: <http://www.jobs.ac.uk/job/AEC279/project-doctoral-student-dama-international-the-fallow-deer-project/>**

\*\*\*\*\*

**Dr Richard Madgwick**

Research Fellow: Dama International Project

Department of Archaeology

Humanities Building

University of Nottingham

University Park

NG7 2RD

Tel: +44 (0)115 9514897

\*\*\*\*\*



**ARCS ARCHAEOLOGICAL FIELD SCHOOL**  
**IN HERACLEA SINTICA, SW BULGARIA,**  
**JUNE 28 - JULY 22, 2012**

Dear Colleagues,

Please feel free to distribute this announcement for a fieldwork opportunity to your students.

Please address your questions to Dr. Emil Nankov at [ehn2@cornell.edu](mailto:ehn2@cornell.edu).

Best regards,

\*\*\*\*\*

Dr. Emil Nankov  
Archaeology Program Officer  
American Research Center in Sofia  
75 Vasil Petleshkov Str.  
Sofia 1510, Bulgaria  
[+359 2 947 9498](tel:+35929479498)  
[+359 879 121 902](tel:+359879121902)

\*\*\*\*\*

\*ARCS Archaeological Field School in Heraclea Sintica, SW Bulgaria\*  
June 28 — July 22, 2012

\* \*

Organized by the American Research Center in Sofia (ARCS), in collaboration with the National Institute of Archaeology with a Museum, Bulgarian Academy of Sciences, Sofia (NIAM-BAS)

\*Team leaders: \*

Dr. Emil Nankov, Archaeology Program Officer, American Research Center in Sofia  
Assist. Prof. Hallie Franks, The Gallatin School, New York University,  
Assoc. Prof. Lyudmil Vagalinski, Director of the National Institute of Archaeology with  
a Museum, Bulgarian Academy of Sciences, Sofia

\* \*

\*\* \*\*

The American Research Center in Sofia (ARCS) announces the inauguration of its archaeological Field School to take place in the summer of 2012. The Field School is focused on the excavation of the Hellenistic and Roman town of Heraclea Sintica located near the village of Rupite, 12 km northeast of the town of Petrich in southwest Bulgaria. A major center of the region of Sintica, inhabited by the Thracian tribe Sinti, the site lies

on the southern slopes of an extinct volcano, at the juncture of Strumeshnica (ancient Pontos) and Struma (ancient Strymon) river.

More information about the site is available at  
<http://arcsofia.org/en/page/35-ARCS-Archaeological-Field-School-in-Heraclea-Sintica-SW-Bulgaria>

\*

\*Application Deadline: March 26, 2012\*

\*School Session: (July 2 to July 21, 2012)\*

\*Program includes:\*

- Three weeks of excavation experience at the site of Heraclea Sintica
- Rooms in houses in the city center of Petrich. Each room has two beds in a very clean setting.
- Breakfasts and lunches each day on the site; dinners at home base.
- Transportation from Sofia-Petrich-Sofia, and from Petrich to and from Heraclea
- Instruction in archaeological field techniques and lectures
- Study trips to archaeological sites and museums in Bulgaria, FYROM and Greece

\*

\*\*\*

\*Program Description:\*

The Program offers one excavation session, lectures and field trips, continuing for three weeks. Each participant will receive hands-on instruction in archaeological fieldwork on the site by qualified supervisors. In addition to learning excavation and recording techniques, the participants will be expected to produce a short report on a subject of their interest (architecture, metal finds, coins, pottery, diet, faunal remains, etc.). Further instruction will be offered by a series of lectures delivered by the field school staff, invited US faculty members and visiting Bulgarian scholars. The topics of these presentations range from graphic documentation to non-invasive field methods in archaeology, study of inscriptions on stone and broader political history. A one-day walking tour of downtown Sofia, with a focus on Roman Serdica and visits to the National Archaeological Museum and the National Museum of History, will take place immediately before the fieldwork. \*Participants are required to arrive in Sofia on June 28\*. Organized transportation from Sofia to Petrich is provided for all participants on the morning of June 30.

The students will be required to participate in the excavations five days each week, as well as attend the ten lectures, the three field trips and the Sofia tour. There will be one day off each work week. Study trips are arranged to archaeological sites and museums in Bulgaria, FYROM and Greece. Among the sites included are Sandanski, Drenkovo, Melnik, Strumica, Bansko, Valandovo, Amphipolis and Philippi. The program covers room, including 2 night stay in Sofia, board, field trips, Sofia tour. The program does not include: airfare to Bulgaria, dinners and meals on non work days, site and museum tickets. Participants will be provided with a certificate upon completion of the program.

A maximum of 10 students will be accepted in the program. Advanced undergraduate students and graduate students, based at US institutions, will be given priority in the selection process. Students are expected to arrange for medical insurance and to obtain visas, if applicable. Participants are required to bring a pair of hiking boots, sun and mosquito protection.

**\*Schedule:\***

June 28: Arrive in Sofia, hotel accommodation.

June 29: A tour of Roman Serdica.

June 30: Transfer to Petrich, accommodation and orientation

July 1: Walking tour of Petrich and museum visit

July 2: Work on site begins at 6am.

The school consists of work on site from 6am to 1pm, lunch in Petrich, afternoon session of finds processing or a lecture from 4pm to 6pm.

The work schedule is:

Week 1-3: Monday to Friday, Saturday: study trips 1-3, Sunday free

July 22: Transfer to Sofia airport.

**\*Project Location:\***

Heraclea Sintica is located near the village of Rupite, approximately 12 km northeast of Petrich, SW Bulgaria. All fieldwork will take place on the site, with frequent visits to the Municipal Museum of History in Petrich. The project base is located in the town of Petrich (pop. 30,000), situated 180 km south of Sofia (Bulgaria), 130 km north of Thessaloniki (Greece) and 200 km northwest of Skopie (FYROM). Transportation from the airport to the hotel at downtown Sofia will be available for all participants throughout the day on June 28.

**\*Application:\*** Application forms are available for download at

<http://arcsofia.org/en/page/35-ARCS-Archaeological-Field-School-in-Heraclea-Sintica-SW-Bulgaria>

All application materials, including letter of recommendation and transcripts, must be sent via e-mail to Dr. Emil Nankov at [ehn2@cornell.edu](mailto:ehn2@cornell.edu) \*March 26, 2012\*.

\*\*\*\*\*

Dr. Emil Nankov  
Archaeology Program Officer  
American Research Center in Sofia  
[www.arcsofia.org](http://www.arcsofia.org)  
75 Vasil Petleshkov Str.  
Sofia 1510, Bulgaria  
+359 2 947 9498  
+359 879 121 902

\*\*\*\*\*

## **FIELD SCHOOL IN CYPRUS,** **JUNE 17 - JULY 22**

The University of Arkansas is offering a field school this summer on Cyprus in conjunction with the Kalavassos and Maroni Built Environments Project. This collaborative project between Cornell University, Ithaca College and the University of Arkansas's Center for Advanced Spatial Technologies (CAST) is investigating the relationship between the island's first cities and the revolutionary social changes that took place during the Late Bronze Age (1700-1100 BCE). Students will work at the sites of Kalavassos-Ayios Dhimitrios and Maroni-Tsaroukkas, using geophysical survey, test excavations, and the latest spatial technologies, including 3D scanning and RTK GPS, to help reconstruct the urban fabric of these Bronze Age centers. Dates are (approximately) June 17 - July 22. For more information or to apply please see <http://cast.uark.edu/home/education/field-programs/cyprus-field-school.html>.

\*\*\*\*\*

Kevin D. Fisher, PhD  
Center for Advanced Spatial Technologies  
& Department of Anthropology  
304 JBHT  
University of Arkansas  
Fayetteville AR  
72701

\*\*\*\*\*

---

## **UMASS ANTHROPOLOGY 2012 FIELD SCHOOLS**

### **Information:**

**Anthro 577:** Field School in Archaeological Heritage

Director: Whitney Battle-Baptiste email: [wbbaptiste@anthro.umass.edu](mailto:wbbaptiste@anthro.umass.edu)

Director: Robert Paynter email: [rpaynter@anthro.umass.edu](mailto:rpaynter@anthro.umass.edu)

[brochure](#)

[application](#) (deadline is April 17, 2012)

Register @ <http://www.umasslearn.net/>

**Anthro 598BA:** Field and Lab Methods in Bioarchaeology  
and Forensic Anthropology

Director: Ventura Perez email: [vrperez@anthro.umass.edu](mailto:vrperez@anthro.umass.edu)

[description](#)

[application](#) (deadline is April 20, 2012)

Register @ <http://www.umasslearn.net/>

Please visit the site: [http://www.umass.edu/anthro/fieldschool\\_files/maininfo.html](http://www.umass.edu/anthro/fieldschool_files/maininfo.html)

---

## **POSTDOCS: 3, AT UC (LONDON)**

Three interdisciplinary post-doctoral research associateships in the arts and humanities are to be held within the newly created UCL Centre for Interdisciplinary Research in the Humanities.

Successful candidates will carry out collaborative, interdisciplinary research in the arts and humanities and undertake a limited amount of teaching. Each associateship may be held for a period of two or three years. The posts are funded for three years in the first instance.

**Further information:** <http://www.ucl.ac.uk/shs/current-vacancies>

---

## **FULBRIGHT SCHOLAR OPPORTUNITIES**

### **2013-14**

The Council for International Exchange of Scholars (CIES) is pleased to draw attention to Fulbright Scholar Program awards for 2013-2014 in the field of archaeology. The Award Catalog lists 197 awards that will be of interest to you and your colleagues, including 175 All Discipline awards. Full details can be found at the CIES website at [www.cies.org](http://www.cies.org).

Andy Riess, Ph.D., Assistant Director of Outreach Council for International Exchange of Scholars

---

## **IAMS SUMMER SCHOOL 2012 AND NEW WEBSITE**

Dear Colleagues,

Following in our traditional footsteps, the Institute for Archaeo-Metallurgical Studies (IAMS) and NARNIA are pleased to announce that this year's Summer School will be taking place at UCL's Institute of Archaeology over two weeks from the 25th of June to 6th of July 2012. Please find details of the planned program in the attached pdf or on our website at [http://www.ucl.ac.uk/iams/2012\\_summer\\_school](http://www.ucl.ac.uk/iams/2012_summer_school).

IAMS is also proud to announce the launching of its new official website (<http://www.ucl.ac.uk/iams>). We hope that it will become a regular stop for professionals and academics interested in the field of metallurgy. In an effort to make this new website useful to the community as a whole, we will be keeping our front page up to date with archaeometallurgy news and events. As such, please feel free to send us any relevant items you wish to advertise on our website. We would also like to point visitors to the now freely downloadable IAMS journal.

Best wishes,  
Loic Boscher

---

---



## **ITALY PRESERVATION FIELD SCHOOL - BUILDINGS, ART, CERAMICS AND PAPER** **DEADLINE EXTENDED**

Dear Colleague,

**DEADLINE EXTENDED: April 15, 2012**

I would like to inform you that we have a few spaces left in our summer 2012 field school, the San Gemini Preservation Studies Program, now in its 14th year, which is dedicated to the preservation of cultural heritage and offers students the opportunity to study and travel in Italy. The courses offered are listed below:

**Building Restoration\*** (May 20th thru Jun 16<sup>th</sup>, 2012)

Introduction to Art and Building Restoration in Italy  
Surveying and Analyzing Historic Buildings

**Restoration of Archaeological Ceramics and Pottery** (May 20th thru Jun 16<sup>th</sup>, 2012)

Four week Intensive course on Conservation of Archeological Ceramics  
Workshop and Field Work on Ceramics and Ceramics Conservation in Italy

**Traditional Painting Materials & Techniques** (July 1<sup>st</sup> thru July 28<sup>th</sup>, 2012)

Traditional Painting Methods and Techniques in Italy, including Issues of Weathering and Aging  
Restoration Issues and Theory in Italy

**Paper Restoration** (July 1<sup>st</sup> thru July 28<sup>th</sup>, 2012)

Introduction to Paper Restoration  
Preservation Theory and Practice in Italy

**\*Field Projects:**

Restoration of the Porta Burgi  
Surveying the 12<sup>th</sup> Century San Giovanni Battista Church complex  
Archaeological survey of the public baths in Carsulae

To find out more about our program and review the syllabi, please visit our [WEBSITE](#).

Our courses are open to students from various disciplines, both undergraduate and graduate. All lessons are taught in English.

If you know any students, scholars, or others interested in this type of study, please inform them about our program. We would appreciate it if you could list our program on your organization's website as an available educational resource.

We have a 2012 flyer that you may wish to post on your department notice board or forward to interested parties. You can print this from our website, on our About Us page. Please let us know if you have any problem printing and we can email you the PDF.

Thank you very much.

Cordially, Polly Withers  
Program Coordinator  
San Gemini Preservation Studies Program

---

**INTRODUCTION TO THE**  
**ARCHAEOMETALLURGY OF CYPRUS, A**  
**NARNIA PROJECT TRAINING COURSE, 7-11**  
**MAY 2012, ARCHAEOLOGICAL RESEARCH**  
**UNIT, UNIVERSITY OF CYPRUS**

*The training course is dedicated to the memory of  
Prof. Beno Rothenberg (Institute of Archaeometallurgical Studies, UCL) and  
Prof. Ulrich Zwicker (University of Erlangen)*

**Program**

**Monday, 07 May 2012**

8.15-8.30 Registration

8.30-8.45 Dr. Vasiliki Kassianidou, NARNIA Project Coordinator, University of Cyprus  
*Welcome*

8.45-9.45 Prof. Thilo Rehren, University College London Qatar

*“The archaeometallurgy of copper - what we study, how and why?”*

10.00-11.00 Prof. James Muhly, University of Pennsylvania

*“Forty years of archaeometallurgical studies in Cyprus (1970-2010)”*

11.15-11.45 Coffee Break

11.45-12.45 Prof. Edgar Peltenburg, University of Edinburgh

*“The beginnings of metalwork on Cyprus”*

13.00- 14.00 Prof. Bernard Knapp, Cyprus American Archaeological Research Institute

*“Metallurgical production and exchange on Bronze Age Cyprus: An overview”*

14.15-15.15 Lunch

15.30 – 19.00 Excursion to the mining district of Kalavassos and the Late Bronze Age site of Kalavassos *Agios Demetrios*

**Tuesday, 08 May 2012**

9.00-10.00 Dr Vasiliki Kassianidou, University of Cyprus

*“Cypriot Late Bronze Age smelting technology”*

10.15-11.15 Dr Cemal Pulak, Texas A&M University

*“The Uluburun ship: Copper and tin ingots, and the trade of copper”*

11.30-12.00 Coffee Break

12.00-13.00 Prof. Andreas Hauptmann, Deutsches Bergbau Museum Bochum

*“The Uluburun copper oxhide ingots. Past studies, and new analyses based on melting experiments and Cu-isotopes”*

13.15- 14.15 Dr Fulvia Lo Schiavo

*“The Cyprus-Sardinia connection: Tighter than ever”*

14.30-15.30 Lunch

15.45 – 19.00 Excursion to the mining district of Mathiatis

**Wednesday, 09 May 2012**

9.00-10.00 Dr George Papasavvas, University of Cyprus

*“Cypriot Late Bronze Age metalwork”*

10.15-11.15 Dr Vasiliki Kassianidou, University of Cyprus

*“Copper for the Kings. Cypriot copper production and trade in the Iron Age”*

11.30-12.00 Coffee Break

12.00-13.00 Prof. Hartmut Matthäus, University of Erlangen

*“Iron Age metalwork in Cyprus. Insularity and connectivity”*

13.15-14.15 Erez Ben Yosef, Tel Aviv University

*“Archaeomagnetic investigations of copper slag deposits: potential for a direct dating method”*

14.30-15.30 Lunch

15.45 – 19.00 Excursion to the mining district of Mitsero

#### **Thursday, 10 May 2012**

9.00-10.00 Dr Vasiliki Kassianidou, University of Cyprus

*“Cypriot copper mining and smelting in the Roman period”*

10.15-11.15 Dr Myrto Georgakopoulou, Fitch Laboratory

*“Analyses of slags: the slag heaps of Skouriotissa and Ayia Marina Mavrovouni”*

11.30-12.00 Coffee Break

12.00-13.00 Dr Anno Hein, National Center for Scientific Research “Demokritos”

*“Pyrotechnical ceramics used in metallurgy - Fabrication, performance and use”*

13.15- 14.15 Maria Socratous, Università degli studi di Siena

*“Charcoal analysis and archaeology. A case study from the ancient copper industry in Cyprus”*

14.30- 15.30 Lunch

15.45 – 19.00 Excursion to the Skouriotissa mining district

#### **Friday, 11 May 2012**

9.00-10.00 Dr Roger Doonan, University of Sheffield

*“Fire and brimstone: the pyrotechnology of sulphide ores”*

10.15-11.15 Dr David Bourgarit, Centre de Recherche et de Restauration des Musées de France

*“Experimental simulation of copper smelting and alloying processes: laboratory versus field experiments”*

11.30-12.00 Coffee break

12.00 – 18.00 Experimental Archaeology - Copper Smelting experiments

#### **Additional information**

##### **Venue:**

7th -10th of May Amphitheater B108,

The University Senate House - A.G. Leventis Building, Panepistimiou Avenue, Aglantzia, Nicosia

11th of May Archaeological Research Unit, 12 Gladstonos street, Nicosia

**Scientific Coordinators:** Dr Vasiliki Kassianidou and Dr George Papasavvas

**Organizing team:** Dr Vasiliki Kassianidou and Maria Dikomitou-Eliadou

**Contact person:** Maria Dikomitou, email: [m.dikom@ucy.ac.cy](mailto:m.dikom@ucy.ac.cy)

**No. of places available:** a very limited number of places is still available. In order to secure one of the remaining places please express your interest by email to Maria Dikomitou.

**Fee:** No fee. The coffee breaks and excursions are covered by the NARNIA project and are offered for free to all participants. The cost of travel and accommodation is not provided by the organizers or the project.

---

## **ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS**

### **ENVI-MED CALL FOR PROPOSALS**

- Deadline for submitting applications: 12 June 2012 • Project assessment, selection and notification: October 2012

ENVI-Med programme aims to support the internationalization of research in the Mediterranean, to strengthen the high-level collaborations with Mediterranean countries on the basis of mutual benefit and to contribute to the regional integration of the least developed countries in all aspects of the field of study of Mediterranean Basin operation by promoting excellence in research and support for Euro-Mediterranean scientific communities.

ENVI-Med aims to initiate multilateral cooperation by supporting the mobility of researchers as part of joint research projects and seminars, workshops and regional scientific conferences.

The programme is focused on Mediterranean countries in partnership with France.

Each project must link at least one French research team, including teams attached to French research units based abroad, with at least two teams from two different Mediterranean countries, at least one of which must be a non-EU state.

All scientific fields, including human and social sciences, as well as interdisciplinary approaches, are eligible.

the following themes are particularly encouraged:

\* The Mediterranean Sea: its effect on climate in the regions to the north and south of the Basin.

\* Environment and sustainable development:

- interactions between man, the climate, the environment and the development of the Mediterranean environment;
- desertification
- the future of Mediterranean biodiversity;
- Coastal zones: places for exchanges and for living;
- Natural risks, within a context of global change and growing human pressure;

\* Resource management: the assessment and reasoned management of Mediterranean basin resources – the specific issue of water sanitation;

\* Towards sustainable governance in the Mediterranean:

- Sustainable city: habitability, cities, societies, crises;
- Political and social structures;
- Public policies and territorial equity in the Mediterranean;
- Links between urban and regional development in the Mediterranean;

\* Archaeology and sustainable development in the Mediterranean (preservation of natural and formerly man-made landscapes, and cultural heritage in environments destabilized by economic and tourist flows, studies on adaptation to the natural environment).

Project duration is set at two years.

The amount allocated by the MAEE must not exceed a total of €40,000 over the project's two-year duration. Financing is granted on an annual basis.

**Please visit the site: <http://www.mistrals-home.org/spip/spip.php?article191>**

**[French: <<http://www.mistrals-home.org/spip/spip.php?article190>**

---

**ΠΑΡΟΥΣΙΑΣΗ ΤΟΥ ΤΟΜΟΥ ΤΩΝ**  
**ΠΡΑΚΤΙΚΩΝ ΤΟΥ 5ΟΥ ΣΥΜΠΟΣΙΟΥ ΤΗΣ**  
**Ε.Α.Ε., ΑΜΦΙΘΕΑΤΡΟ ΕΘΝΙΚΟΥ**  
**ΑΡΧΑΙΟΛΟΓΙΚΟΥ ΜΟΥΣΕΙΟΥ,**  
**ΠΑΡΑΣΚΕΥΗ 30 ΜΑΡΤΙΟΥ 2012**

**ΠΡΟΣΚΛΗΣΗ**

Οι Εκδόσεις του Πανεπιστημίου Πελοποννήσου σε συνεργασία με τις Εκδόσεις Παπαζήση και την Ελληνική Αρχαιομετρική Εταιρεία (Ε.Α.Ε.), σας προσκαλούν στην παρουσίαση του τόμου των **Πρακτικών του 5ου Συμποσίου της Ε.Α.Ε.** η οποία θα λάβει χώρα στο αμφιθέατρο του Εθνικού Αρχαιολογικού Μουσείου την **Παρασκευή 30 Μαρτίου 2012** και ώρα **19.00** ( είσοδος από Τοσίτσα )

Τον τόμο θα παρουσιάσουν οι κ.κ. *Καθηγητής Πέτρος Θέμελης, Καθηγητής Γρηγόριος Τσόκας, κα Α. Μωραΐτου*

Τη εκδήλωση θα χαιρετίσει ο *Πρύτανης του Πανεπιστημίου Πελοποννήσου Καθηγητής Θεόδωρος Π. Παπαθεοδώρου*

*Οι Επιμελητές το Δ.Σ. της Ε.Α.Ε. Ο εκδοτικός οίκος*

**ΕΚΔΟΣΕΙΣ ΠΑΠΑΖΗΣΗ** : Νικηταρά 2 & Εμμ. Μπενάκη, 10678 Αθήνα |  
τηλ.: 210 3838020, 210 38.08.173 | fax: 210 38.09.150 | e-mail: [papazisi@otenet.gr](mailto:papazisi@otenet.gr)

---



## *INTERNET SITES*

### **AEGEUS - SOCIETY FOR AEGEAN PREHISTORY**

*Aegeus* is proud to present his upgraded website. The improved website is not only a domain where information and news on Aegean prehistoric archaeology are presented, it is above all a place where the members and friends of *Aegeus* can express their opinion and exchange ideas. Moreover, it is possible for the members of *Aegeus* to have their own personal web-page.

Please visit the site: <http://www.aegeussociety.org/en/>

---

## Ο ΚΥΚΛΟΣ ΤΩΝ ΜΟΥΣΕΙΩΝ

Από το 1997, ο Όμιλος Λάτση και η Eurobank EFG υπό την αιγίδα και το συντονισμό του Ιδρύματος Ιωάννη Σ. Λάτση εκδίδουν κάθε χρόνο έναν τόμο αφιερωμένο σε ένα αρχαιολογικό μουσείο, με σκοπό τη δημιουργία μιας σειράς λευκωμάτων που, με την επιστημονική εγκυρότητα και την αισθητική τους προσέγγιση, συμβάλλουν στη βαθύτερη γνώση και κατανόηση των επιμέρους σελίδων της ιστορίας του ελληνικού πολιτισμού.

Παρακαλώ επισκεφθείτε το δικτυακό τόπο: [http://www.latsis-foundation.org/gr/elibrary/1/O\\_kyklos\\_ton\\_mouseion.html](http://www.latsis-foundation.org/gr/elibrary/1/O_kyklos_ton_mouseion.html)

---

## **ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS**

### **LE VOCABULAIRE DE LA MÉTALLURGIE ET LA NOMENCLATURE DES OBJETS EN MÉTAL DANS LES TEXTES DE MARI**

I. Arkhipov, Le Vocabulaire de la métallurgie et la nomenclature des objets en métal dans les textes de Mari.

Matériaux pour le Dictionnaire de Babylonien de Paris III, ARM 32, Paris.

Editor: Peeters

Year: 2012

ISBN: 978-90-429-2620-2

Pages: XII-538 p.

Price: 67 EURO

L'ouvrage d'I. Arkhipov sur Le vocabulaire de la métallurgie et la nomenclature des objets en métal dans les textes de Mari constitue le troisième volume de la série des Matériaux pour le Dictionnaire de Babylonien de Paris. Après des études portant sur le vocabulaire des habits et textiles (MDBP I) et sur la vaisselle de luxe (MDBP II), cet ouvrage s'intéresse aux techniques et produits de la métallurgie et de l'orfèvrerie. Peu d'objets ont été retrouvés lors des fouilles, mais de nombreux documents administratifs et lettres donnent des descriptions souvent très précises de leur forme, de leur fabrication ou de leur emploi.

Une première partie étudie le vocabulaire akkadien et ses éventuelles notations idéographiques, à partir du corpus entier des archives de Mari. Les mots y sont classés en douze catégories. La seconde partie donne l'édition de nombreux textes administratifs en ordre chronologique. Pas moins de 645 textes sont édités: 114 sont entièrement nouveaux, 531 constituent la reprise de textes déjà publiés (essentiellement dans ARM XXV), collationnés et parfois complétés par des joints. L'ensemble est suivi de diverses annexes.

L'ouvrage montre le haut niveau technologique atteint par les ateliers syriens à cette époque ancienne. Ces témoignages écrits, issus de l'administration du palais de Mari, sont désormais à la disposition de toutes les personnes intéressées: philologues, archéologues, historiens des techniques, etc.

Please visit the site: <http://www.peeters-leuven.be/boekoverz.asp?nr=9106>

---

# **EVOLUTION OF WATER SUPPLY THROUGH THE MILLENNIA**

Author(s): Andreas N Angelakis, Larry W Mays, Demetris Koutsoyiannis, and Nikos Mamassis

Publication Date: 15 May 2012 • ISBN: 9781843395409

Pages: 550 • Paperback

**Evolution of Water Supply Through the Millennia** presents the major achievements in the scientific fields of water supply technologies and management throughout the millennia. It provides valuable insights into ancient water supply technologies with their apparent characteristics of durability, adaptability to the environment, and sustainability. A comparison of the water technological developments in several civilizations is undertaken. These technologies are the underpinning of modern achievements in water engineering and management practices. It is the best proof that “the past is the key for the future.”

Rapid technological progress in the twentieth century created a disregard for past water technologies that were considered to be far behind the present ones. There are a great deal of unresolved problems related to the management principles, such as the decentralization of the processes, the durability of the water projects, the cost effectiveness, and sustainability issues such as protection from floods and droughts. In the developing world, such problems were intensified to an unprecedented degree.

Moreover, new problems have arisen such as the contamination of surface and groundwater. Naturally, intensification of unresolved problems led societies to revisit the past and to reinvestigate the successful past achievements. To their surprise, those who attempted this retrospect, based on archaeological, historical, and technical evidence were impressed by two things: the similarity of principles with present ones and the advanced level of water engineering and management practices.

## **Table of contents**

Prolegomena, The Goddesses and the Gods of Water, Water for Human Consumption Through the History, History of Water and Health, Diachronic Climatic Changes Impact on Water Resources, The Impact of Climate Changes on the Evolution of Water Supply Works in the Region of Jerusalem, Water Supply Technologies in Ancient Crete, Greece, Urban Water Management in Ancient Greece, Historical Development of Water Supply in Cyprus, Water Supply in Pre-Columbian Civilizations in Ancient Peru and South America, Water Supply in Ancient Egypt, Contribution of the Greek and Roman Civilizations to the Evolution of Water Supply, History of Water Supply in Premodern China, Hydraulics Techniques in the Middle-east during Roman and Byzantine Periods, Water Services in Tenochtitlan and in Mexico City, Mexico, Water Supply Sustainability of Ancient Civilizations in Mesoamerica and the America Southwest, Water Supply of Barcelona City, Spain Throughout the Centuries, Water Supply of Athens city, Greece in Antiquity, History of the Water Supply of Rome, Italy, Analysis of the Water Supply System of the Ancient city of Apamea (Syria), during Roman and Byzantine Periods: A Case study, Water Supply in Modern Times in Relation to the Ancient Civilizations: Legacies and Lessons

**Please visit the site:**

<http://www.iwapublishing.com/template.cfm?name=isbn9781843395409>

---

**AIDONA, E. AND LIRITZIS, I., 2012.**  
**MAGNETIC SUSCEPTIBILITY AND**  
**RADIOACTIVITY CHANGES OF AEGEAN**  
**AND IONIAN SEA SEDIMENTS DURING**  
**LAST GLACIAL/INTERGLACIAL: CLIMATIC**  
**AND CHRONOLOGICAL MARKERS.**  
**JOURNAL OF COASTAL RESEARCH, 28(2),**  
**342–353. WEST PALM BEACH (FLORIDA),**  
**ISSN 0749-0208**

ABSTRACT

Five marine sediment boreholes from the Aegean and Ionian Sea have been measured here for their magnetic susceptibility and (in an earlier work) by alpha- and beta-particle radioactivity. The corresponding borehole cores cover the Holocene period and closely spaced data have been sampled from all cores. The obtained depth data series have been converted here to the time series by using appropriate conversions on the basis of sedimentation rates derived from dating of selected samples of each core. The spectral characteristics of the new statistical elaboration for the final time series exhibit a significant correlation of the magnetic susceptibility and radioactivity data. This correlation is prominent especially for intermediate periods (typically 1–10 ky) of the examined spectra and tends to disappear for higher frequency variations (1 ky), suggesting that mainly long-period climatic and other changes are the ones that affect the examined quantities in a similar manner. This pattern is verified by the band-pass filtered time series for intermediate periods, which reveals well-correlated susceptibility and radioactivity changes. In addition, specific time markers are observed in the filtered time series, and comparison of their variation to certain climatic phases within the Holocene is recognized.

ADDITIONAL INDEX WORDS: Susceptibility, radioactivity, Aegean sediments, Fourier analysis, climate, Ionian Sea, dating.

---

## **EΙΔΗΣΕΙΣ - NEWS RELEASE**

# **NEANDERTHALS WERE ANCIENT MARINERS, BY MICHAEL MARSHALL**

IT LOOKS like Neanderthals may have beaten modern humans to the seas. Growing evidence suggests our extinct cousins criss-crossed the Mediterranean in boats from 100,000 years ago - though not everyone is convinced they weren't just good swimmers. Neanderthals lived around the Mediterranean from 300,000 years ago. Their distinctive "Mousterian" stone tools are found on the Greek mainland and, intriguingly, have also been found on the Greek islands of Lefkada, Kefalonia and Zakynthos. That could be explained in two ways: either the islands weren't islands at the time, or our distant cousins crossed the water somehow.

Now, George Ferentinos of the University of Patras in Greece says we can rule out the former. The islands, he says, have been cut off from the mainland for as long as the tools have been on them.

Ferentinos compiled data that showed sea levels were 120 metres lower 100,000 years ago, because water was locked up in Earth's larger ice caps. But the seabed off Greece today drops down to around 300 metres, meaning that when Neanderthals were in the region, the sea would have been at least 180 metres deep (*Journal of Archaeological Science*, DOI: 10.1016/j.jas.2012.01.032).

Ferentinos thinks Neanderthals had a seafaring culture for tens of thousands of years. Modern humans are thought to have taken to the seas just 50,000 years ago, on crossing to Australia.

The journeys to the Greek islands from the mainland were quite short - 5 to 12 kilometres - but according to Thomas Strasser of Providence College in Rhode Island, the Neanderthals didn't stop there. In 2008 he found similar stone tools on Crete, which he says are at least 130,000 years old. Crete has been an island for some 5 million years and is 40 kilometres from its closest neighbour - suggesting far more ambitious journeys.

Strasser agrees Neanderthals were seafaring long before modern humans, in the Mediterranean at least. He thinks early hominins made much more use of the sea than anyone suspects, and may have used the seas as a highway, rather than seeing them as a barrier. But the details remain lost in history. Any craft were presumably made from wood, so rotted away long ago. The oldest known Mediterranean boat, a dugout canoe from Lake Bracciano in Italy, is just 7000 years old. Ferentinos speculates that Neanderthals may have made something similar.

There is a simpler explanation for how they reached the islands, says Paul Pettitt of the University of Sheffield, UK: maybe they just swam there. Pettitt also points out that the tools on the islands have not been chemically dated, so estimates of their age are based entirely on their design.

Even if Ferentinos is right, the Neanderthals were probably not the first hominin seafarers. One million-year-old stone tools have been found on the Indonesian island of Flores (*Nature*, DOI: 10.1038/nature 08844). Something, perhaps primitive *Homo erectus*, crossed the sea to Flores before Neanderthals even evolved.

Please visit the site: <http://www.newscientist.com/article/mg21328544.800-neanderthals-were-ancient-mariners.html>

---



## **A UNIQUE HOARD WAS FOUND AT TEL MEGIDDO**

The Megiddo Expedition have recently discovered a collection of gold, silver and bronze jewelry, wrapped in fabric, hidden in a vessel at Tel Megiddo. The vessel was found in a domestic context that was dated to the Iron Age I (around 1100 B.C.). This vessel was actually excavated during the 2010 season, but remained uncleaned while awaiting for a molecular analysis of its content (soil). When it was finally emptied during the summer of 2011, the pieces of jewelry appeared.

Both the textile and the jewelry itself were sent to analysis that should tell us more about the origins of this exceptional collection.

Please visit the site: [https://sites.google.com/site/megiddoexpedition/additional-information/area\\_h\\_hoard](https://sites.google.com/site/megiddoexpedition/additional-information/area_h_hoard) [Go there for pix]

---

## **A NEW PHARAOH WAS DISCOVERED, THE ROYAL NAME OF THE 17TH DYNASTY AT KARNAK TEMPLE**

During his visit yesterday to Karnak temple, Dr. Mohamed Ibrahim (Minister state of Antiquities) announced the discovery of a new pharaoh's name from the 17th dynasty that was not known to Egyptologists which helps in revealing the chronological order of the Kings of this dynasty.

It was the IFAO mission headed by Christophe Thiers that found a limestone door at the north of Amon's temple dated back to 17th dynasty with hieroglyphics inscriptions and a royal cartouche bears the name of a King that didn't appear before in ancient Egyptian history and the name is "Sen Nakht N' Ra"

The Minister confirmed that this discovery is the first of this Pharaoh's work as the text mentioned that he established buildings for God Amon in Karnak with the limestone he quarried from Tora, near Cairo and demanded the work to continue in the area in order to reveal more architecture elements that had been established by this King. This discovery will add a new King to the 17th dynasty which witnesses the Hyksos occupation.

Please visit the site: <http://luxortimesmagazine.blogspot.com/2012/03/new-pharaoh-was-discovered-royal-name.html> [Go there for cartouche]

---

## **ARABIC MUSEUM IN PARIS GETS A NEW LOOK FOR 25-YEAR ANNIVERSARY - THE INSTITUT DU MONDE ARABE IN PARIS UNVEILS ITS REVAMPED EXHIBITION SPACE, BY FLORENCE EVIN**

The Institut du Monde Arabe in Paris, which has just turned 25, has completely revamped its interior design and contents. Having previously concentrated on Islamic art, from now on the institute will also explore the pre-Islamic past of Arab countries, highlighting the diversity of cultures, languages, beliefs and ways of life that have coexisted in the Arabian peninsula and Africa for thousands of years.

"This change involved a new chronological approach," says Marie Foissy, the senior curator who led the reorganisation, "because, historically, the Arab identity coalesced before the arrival of Islam.

We have tried to link it to the prehistoric cultures that preceded it and the civilisations that followed: Mesopotamia, Egypt, Persia, Greece, Rome and Byzantium."

The oldest item on show was found at the neolithic site at Ain Ghazal in Jordan. This tiny (10cm-high) clay figure of a mother goddess, a universal symbol of fertility with her rounded belly, is a descendant of France's Lespugue Venus, which is 25,000 years old.

The change of atmosphere is immediately apparent on entering the museum, passing through a long gallery brought to life by scenes of busy streets and markets, with a barely audible buzz of sound mixing various languages and dialects – Arabic, Berber, Turkmen, Kurdish, Aramaic, Assyrian.

Among the most remarkable items, a series of alabaster heads opens the visit. They are the faces on funerary pillars from the second and third century before our era, found in southern Arabia (now Yemen).

They are on loan from the Dubroff family collection, a marvellous stand-in for pieces promised by Yemen but held back by the country's current political turmoil.

The Arabia of legend, with its oases ruling over a land criss-crossed by countless caravans, owed its prosperity to trade in incense and myrrh. The precious alabaster figures suggest a very real link to the Suffering Man, from northern Arabia some 3,000 years earlier, which was the centrepiece of the Louvre Roads to Arabia exhibition.

The institute set up a special working group of archaeologists, historians, curators, anthropologists, ethnologists and linguists, headed by Foissy, to think of ways of addressing Arabia's multiple facets. "The visit is a tale, a story unfolding, intended to make visitors feel at home with the message of civilisation enshrined in the various communities which make up the Arab world," she explains.

It was decided to mix exhibits, with themes overlapping in space to illustrate the timeless quality of the spiritual quest. Certainly as the visit progresses there are some striking

similarities: the Torah, Bible and Qur'an presented side by side, from the 12th and 14th century, are the same size and use the same materials: paper, gouache and gold.

All the rituals involve light to uplift prayer and purify worship: an eight-branched Kabylian chandelier made of painted terracotta stands beside a bronze Christian oil-lamp from Syria, a Copt light, a limestone cup from Carthage and a Hanukkah lamp, endlessly commemorating the rededication of the (second) temple in Jerusalem.

After this idealised, ecumenical vision of the pre-Islamic Arab world, the exhibition continues with a section devoted to daily life, from the sixth century to the present day. A new chapter, on the ongoing revolutions in the Arab world, has yet to be written.

This article originally appeared in Le Monde

Please visit the site: <http://www.guardian.co.uk/artanddesign/2012/mar/13/institut-du-monde-arab-review/print>

---

## **CHEMICAL ANALYSIS SHOWS MEDICI VENUS WAS ONCE FAR GAUDIER**

The Medici Venus, one of the world's most celebrated classical statues, would originally have had ruby red lips, gold-flecked hair and dangling earrings, a new study has found.

The sensuous statue, which was feted by the likes of Lord Byron and John Evelyn, the English diarist, is currently immaculately white but was once much gaudier, experts said.

A chemical analysis of the 2,000-year-old statue, which is displayed in Florence's Uffizi Galleries, has revealed miniscule traces of paint and gold leaf.

Her lips would have been painted a rich red, her sculpted hair would have shone with gold leaf and earrings would have hung from holes in her earlobes, according to researchers from the University of Modena and Reggio and the Uffizi Galleries.

The paint and gold leaf was scrubbed off during "an overly zealous" restoration carried out around 1815, when the statue was brought back to Italy from France, after being taken by Napoleon.

The life-size statue, a Hellenistic sculpture depicting Aphrodite, the Greek goddess of love, was a high point of the Grand Tour.

British and French art aficionados in the 18th century returned home with ecstatic reports of the statue's colourful facial features and golden locks.

The latest tests confirm that their observations were not "the result of a collective hallucination," said Fabrizio Paolucci, the head of the Uffizi's classical antiquities department.

The splashes of colour would have made the statue come alive, he said, giving the Venus "the realistic look of a young woman." The statue is believed to be a 1st century BC copy of an original bronze made in Greece.

The marble statue's exact origins are unknown, but it has been kept in the Uffizi since 1667, after being moved there from Rome, where the pope at the time believed it encouraged lewd behaviour.

The erotic nature of the work – depicting Venus trying to cover her breasts and pubic area with her hands – made it immensely popular.

A 1772 oil painting, 'The Tribuna of the Uffizi', shows five British art connoisseurs clustered around the statue, gazing rapturously at Venus's bottom.

The tests were carried out as part of an extensive restoration of the statue, funded by the Friends of Florence foundation

Please visit the site: <http://www.telegraph.co.uk/culture/art/9124246/Chemical-analysis-shows-Medici-Venus-was-once-far-gaudier.html>

---

## **DO BLUE EYES STEM FROM THE BLACK SEA 8,000 YEARS AGO? BY DOUGLAS STANGLIN**

The blue eyes that gave Frank Sinatra his nickname, Paul Newman his allure and Cameron Diaz her magnetism apparently stem from a single mutation by a lone individual who lived around the northwestern coast of the Black Sea about 8,000 years ago, according to a new genetic research.

The findings of a team of researchers from Copenhagen University are published in the latest edition of the journal Human Genetics.

READ: The full study in Human Genetics:

<http://www.springerlink.com/content/2045q6234h66p744/>

The study analyzed three generations of a large Danish family, as well as five blue-eyed, light-skinned individuals from Turkey and a blue-eyed, dark-skinned person from Jordan.

The Daily Mail quotes Hans Eiberg, leader of the team, as saying that a gene called OCA2 does not "make" blue eyes, rather it turns off the mechanism that produces brown melanin pigment. "Originally, we all had brown eyes," he says.

The research, as would be expected, is dense, but concludes that the mutations responsible for blue eye color "most likely originate from the nearest area or northwest part of the Black Sea region, where the great agriculture migration to the northern part of Europe took place in the Neolithic periods about 6,000–10,000 years ago."

The study does not try to explain the evolutionary selection at work, but notes that fair skin, normally associated with blue-eyed people, is better able to make Vitamin D in the weak sunlight in northern latitudes.

Another theory, which any Hollywood casting director could attest to, has to do with sexual selection.

Here's how the Daily Mail puts it, in decidedly unscientific prose:

"The theory is that in Europe, where men had to spend weeks at a time out on the hunt, males were in very short supply. In such societies, women who had flaxen locks stood a better chance of standing out and attracting the attention of the few men that would have been available for mating. Even back then, the blue-eyed blonde was not only in demand, but also definitely would have had more fun.

**Please visit the site:**

<http://content.usatoday.com/communities/ondeadline/post/2012/02/do-blue-eyes-stem-from-a-black-sea-resident-8000-years-ago/1#.T1zWOXmibwl>

## **HONG KONG DENTIST TO HELP CHECK PHARAOH'S CAVITY, BY SISI TANG**

A Hong Kong dentist is wielding forceps to help reach for answers inside the last surviving example of the Seven Wonders of the Ancient World, the Great Pyramid of Giza.

Pulling teeth by day and devising inventions by night, Ng Tze-chuen, 59, said he organized a team working with Egypt's former antiquities minister Zahi Hawass to unlock the mystery surrounding the doors blocking two narrow shafts in the pyramid, which is the tomb of the Pharaoh Cheops, also known as Khufu.

"The Chinese have more experience with chopsticks. And a dentist has more experience in gripping with forceps," said Ng.

"Why Egypt is so interesting, it's because of the hieroglyphics. It's like a detective story. It's all waiting for me to use my grippers."

Inspired by dental forceps -- he has designed 70 of his own to properly grip the tricky crevices of patients' teeth -- Ng said his team will mount tiny grippers on an insect-sized robot expected to gently trek the winding shafts of the pyramid without causing damage to the walls.

The Great Pyramid, the largest and oldest of the three pyramids at Giza, stands 146.5 meters (482 ft) and was completed around 2,500 BC.

The two shafts, which rise from a chamber in the pyramid, and their doors have puzzled archaeologists since they were first discovered in 1872. There is some speculation that Khufu's burial chamber might lie beyond the doors.

The robot will travel up the shafts, which are so narrow only a small robot could fit, to eventually drill through the two doors. It carries a camera to record what it finds.

The international team, which will take the name Djedi -- after the magician with whom Khufu is thought to have consulted for the pyramid layout -- plans to use the robot this spring, depending on when the license to do so will be issued, Ng said.

The expansive Giza plateau is a far cry from Ng's office in a high rise amidst the concrete jungle of Hong Kong, where he said dentists prefer to talk about money and expensive cars rather than ancient Egypt or Mars, another of his passions.

"I want to test my grippers in the most secretive places," said Ng. "I want to see my tools used on sea, land and space."

He already has an impressive record and says he was behind the concept to use a rock sampling tool on board the Beagle 2 mission to Mars in 2003.



A self-described maverick as a child, with an adamant allergy to schoolwork, Ng said he was an avid daydreamer who imagined playing marbles on Mars and feels he lived on Mars in a previous incarnation.

"I always think that I was a Martian crab in my past life," added Ng, whose home is stacked with cat drawings, volumes on ancient Egypt, and books by Carl Sagan. On the walls are plaques and newspaper clippings recognising his contribution to a number of projects.

The Great Pyramid is only one of 10 missions Ng plans to finish before the age of 65. Future plans include a German rover to sample soil on the moon, a submarine rescue cutter, and a search for Cleopatra's tomb - all scrawled in marker pen on the inside of his mobile phone cover so he is constantly reminded of his dreams.

"Egypt is one of the testing grounds for my toys," he said.

Even talk of the apocryphal "Curse of the Pharaohs" said to cause the illness or death of anybody who disturbs the mummy of an ancient Egyptian doesn't faze him -- much.

"No matter, curse or no curse, I just want to take a peek. That's it," he said. "And then I will run."

(Editing by Elaine Lies and Bob Tourtellotte)

Please visit the site: <http://www.reuters.com/article/2012/03/08/us-hongkong-dentist-egypt-idUSBRE82707K20120308>

---

## **LASER-MAPPING LIDAR [LIGHT DETECTION AND RANGING] REVOLUTIONIZES ARCHAEOLOGY, BY CURT HOPKINS**

"This is it—the paradigm shift," archaeologist Chris Fisher told Ars.  
"Just like the advent of radiocarbon dating, LiDAR will have the same impact."

LiDAR, or "light detection and ranging," acts as a sort of radar with light, painting the target area with lasers and recording the time it takes to reflect back to the instruments.

An archaeologist specializing in Western Mexico, Fisher studies the way environments affect and change cultures. LiDAR has helped him repaint the picture of ancient Mexico, bringing the little-known Purepecha empire a lot more historical prominence.

In the once tech-resistant area of anthropology, high-tech tools are enabling new discoveries on an almost-daily basis. Several years ago, Fisher started out with rugged handheld computers and a few GPS receivers to map the recently-discovered city Sacapu Angamuco in western Mexico, occupied from about 1,000 to 1,350 CE. The Purepechan or Tarascan people had proven more difficult to pinpoint archeologically than had their contemporaries and rivals, the Aztecs.

But initial data gathering and geo-referencing allowed Fisher to identify the city at an important moment on the crux of empire, and to do so in a fraction of the time it would have taken with tape measures and grid-plotting. Still, there was more to be done.

Last year, LiDAR enabled Fisher to create a full-fledged picture of the important Mesoamerican capital in greater detail. This included the discovery of several pyramids, ceremonial complexes and thousands of residences and other buildings that no one knew existed in the city. Much is known about the Purepecha at the time of European contact in the 16th century, but little has been uncovered about their origins. This project should help with that.

"We got LiDAR flown over the ancient city last January and were able to use the data last summer," Fisher said. "We've been able to analyze and manipulate the data quite a bit since then. Wow! What's unique about our use of LiDAR is the density of points and the high accuracy levels. Our data are like the scene in Avatar where they have the three-dimensional table and are planning the assault on the home tree."

Just for the record, Fisher and his students aren't looking to take down the metaphorical tree. Far from it; his Legacies of Resilience project is dedicated to understanding landscape change over time, both for the historical merit of such an investigation and for the practical purposes of understanding our own future. Fisher and his team seek to understand how the environment allowed for the development of a people capable of limiting Aztec expansion.

Pure science is not the only rationale for the use of LiDAR and other technologies. In a tight economic time, academic funds are sparser than usual, so anything that can save money is welcome.

"LiDAR technology (helps) map not only ancient architecture," Fisher wrote, "but the underlying landscape in a more cost-effective manner than would a traditional archaeological survey."

Additionally, the quality of the data is better than any method that has come before.

"LiDAR has been around for a while (since the 80's), used extensively for archaeology in the UK, and other places in Europe," Fisher said.

"But it has only been recently that the resolution is high enough to see individual archaeological features. Each point that we have has a plus/minus range of 2.5cm—roughly the size of a Rubik's Cube. So we can now use it to investigate not only ancient cities but the broader landscape, and connections between these features on the landscape.

For the first time we are able to record the world in the same way that we experience it—in three dimensions. "

A geospatial revolution

The only other analogous use of LiDAR since the data density has increased was by Arlen and Diana Chase, at Caracol in Belize. In four days of LiDAR over-flights in 2009, the Chases gathered more information than in the previous 25 years of investigations at that site, mapping 80 square miles of the city and its surroundings.

Arlen Chase responded briefly to our inquiries. ("I am currently at Caracol on a BlackBerry barely sending through a Guatemalan cell tower," he wrote.) He agreed with Fisher's description of LiDAR.

"LiDAR is a paradigm shift for archaeology," he wrote. In fact, he, Diane Chase, and Fisher have co-authored a yet-to-be-published paper that makes that case: "The Geospatial Revolution in Archaeology: LiDAR, Regional Survey, and the Protection and Modeling of Ancient Societies."

What exactly does this revolution consist of? Speed. Cost. Complexity.

LiDAR and its related technology have compressed information gathering in much the same way that computing itself increased the speed of number-crunching. A landscape, with its architectural and agricultural artifacts, can be mapped in extraordinary detail in a fraction of the time it used to take, and for a much-reduced price. This enables archaeologists to model, reason, and theorize, to spend more of their time using the data rather than gathering it.

Additionally, the information gathered is conceivably immune to time, or at least more resistant to decay than much of archaeology's early information.

"The data are indelible," Fisher told Ars, "not like a photograph; [they] do not degrade. They also represent a point cloud rather than a static image. We as archaeologists are in a losing battle to preserve cultural heritage in the face of an ever expanding world. LiDAR freezes the landscape--everything in that landscape; vegetation, animals, etc.--at the

moment. Imagine if we had LiDAR images for critical archaeological sites from a hundred years ago. We hope that a hundred years from today researchers will be able to use our LiDAR data to investigate Angamuco in ways that we cannot yet conceive."

**Please visit the site: <http://arstechnica.com/science/news/2012/03/indiana-jones-goes-geek-laser-mapping-lidar-revolutionizes-archaeology.ars> [Go there for pix]**

---

## **GOOGLE BEGINS TO SCALE BACK ITS SCANNING OF BOOKS FROM UNIVERSITY LIBRARIES, BY JENNIFER HOWARD**

Google has been quietly slowing down its book-scanning work with partner libraries, according to librarians involved with the vast Google Books digitization project. But what that means for the company's long-term investment in the work remains unclear.

Google was not willing to say much about its plans. "We've digitized more than 20 million books to date and continue to scan books with our library partners," a Google spokeswoman told The Chronicle in an e-mailed statement.

Librarians at several of Google's partner institutions, including the University of Michigan and the University of Wisconsin systems, confirmed that the pace has slowed. "They're still scanning. They're scanning at a lower rate than the peak," said Paul N. Courant, Michigan's dean of libraries.

At Wisconsin, the scanning pace is "something less than half of what it was" in 2006, the year the work started there, said Edward V. Van Gemert, the university's interim director of libraries.

Wisconsin's agreement with Google stipulated that the scanning would continue for at least six years or until half a million works had been digitized. "We anticipated this slowdown," he said.

It will be six years as of October 2012, and 600,000 volumes have been digitized so far, Mr. Van Gemert estimates. "It would have been next to impossible for the library to come up with the resources to digitize that amount of material," he said. "So I really cast the partnership as being highly successful at a time when digitization was highly needed." He credited Google's work with helping the partner libraries and others create the HathiTrust digital repository, which now contains more than 10 million scanned volumes. That, he said, "has allowed us to think differently about out-of-copyright material and the preservation of resources in our collections."

According to Mr. Courant at Michigan, the slackening pace reflects a natural maturation of the project. "They've done about 5.5 million volumes from our collections," he said. That means "the pickings are getting kind of slim if you're worried about duplication" with what Google has scanned from other library partners.

When the work began, "Google would come in and take things by the stack row," he said. Now they've switched to a book-by-book model, scanning only volumes that fill gaps in what's been digitized so far.

Some institutions struck agreements with Google to scan only specific collections. Much of that work has now wrapped up. The University of Texas at Austin, for instance, signed on to have Google digitize its Latin American collection—about half a million volumes, said Fred Heath, vice provost and director of the University of Texas Libraries.

"We were not interested in a situation where we'd have to pick from the 10 million volumes in all of the libraries and have to ship them and then refile them," Mr. Heath said.

Google completed the work far more quickly than the university could have done by itself, according to Mr. Heath. "We figured we could do it in a hundred years," he said. Google did it in two. "They were in and out with method and efficiency and no loss" of materials, he said.

For now, the work has slowed down but continues at Michigan and Wisconsin and other institutions with whom Google has open-ended arrangements. Mr. Courant expects "it will continue for the indefinite future."

Google isn't saying whether it has pulled back from its longstanding goal of collecting all of the world's knowledge. Some of its digitization efforts have shifted to Europe. Much of the company's public focus lately has been not on mass digitization but on how to use individuals' data to create more focused advertising and online browsing. Meanwhile, a copyright-infringement lawsuit brought against it by authors' and publishers' groups drags on. HathiTrust and five universities, including Michigan's and Wisconsin's, face their own challenge from the Authors Guild and other groups over control of the scanned works.

The legacy of the Google scanning depends in part on what happens in court and "the ability of the libraries and the rights holders to come to agreement" on how best to use the wealth of digitized material, Mr. Courant said.

Please visit the site: [http://chronicle.com/article/Google-Begins-to-Scale-Back/131109/?sid=at&utm\\_source=at&utm\\_medium=en](http://chronicle.com/article/Google-Begins-to-Scale-Back/131109/?sid=at&utm_source=at&utm_medium=en)

---

# **WHY IT TOOK SO LONG TO INVENT THE WHEEL - THE TRICKY THING ABOUT THE WHEEL IS NOT CONCEIVING OF A CYLINDER ROLLING ON ITS EDGE. IT'S FIGURING OUT HOW TO CONNECT A STABLE, STATIONARY PLATFORM TO THAT CYLINDER, BY NATALIE WOLCHOVER**

Wheels are the archetype of a primitive, caveman-level technology. But in fact, they're so ingenious that it took until 3500 B.C. for someone to invent them. By that time — it was the Bronze Age — humans were already casting metal alloys, constructing canals and sailboats, and even designing complex musical instruments such as harps.

The tricky thing about the wheel is not conceiving of a cylinder rolling on its edge. It's figuring out how to connect a stable, stationary platform to that cylinder.

"The stroke of brilliance was the wheel-and-axle concept," said David Anthony, a professor of anthropology at Hartwick College and author of "The Horse, the Wheel, and Language" (Princeton, 2007). "But then making it was also difficult."

To make a fixed axle with revolving wheels, Anthony explained, the ends of the axle had to be nearly perfectly smooth and round, as did the holes in the center of the wheels; otherwise, there would be too much friction for the wheels to turn. Furthermore, the axles had to fit snugly inside the wheels' holes, but not too snugly — they had to be free to rotate. [What Makes Wheels Appear to Spin Backward?]

The success of the whole structure was extremely sensitive to the size of the axle. While a narrow one would reduce the amount of friction, it would also be too weak to support a load. Meanwhile, a thick axle would hugely increase the amount of friction. "They solved this problem by making the earliest wagons quite narrow, so they could have short axles, which made it possible to have an axle that wasn't very thick," Anthony told Life's Little Mysteries.

The sensitivity of the wheel-and-axle system to all these factors meant that it could not have been developed in phases, he said. It was an all-or-nothing structure.

Whoever invented it must have had access to wide slabs of wood from thick-trunked trees in order to carve large, round wheels. They also needed metal tools to chisel fine-fitted holes and axles. And they must have had a need for hauling heavy burdens over land. According to Anthony, "It was the carpentry that probably delayed the invention until 3500 B.C. or so, because it was only after about 4000 B.C. that cast copper chisels and gouges became common in the Near East."

The invention of the wheel was so challenging that it probably happened only once, in one place. However, from that place, it seems to have spread so rapidly across Eurasia and the Middle East that experts cannot say for sure where it originated. The earliest images of wheeled carts have been excavated in Poland and elsewhere in the Eurasian steppes, and this region is overtaking Mesopotamia (present-day Iraq) as the wheel's most likely birthplace. According to Asko Parpola, an Indologist at the University of Helsinki in Finland, there are linguistic reasons to believe the wheel originated with the Tripolye people of modern-day Ukraine. That is, the words associated with wheels and wagons derive from the language of that culture.

Parpola thinks miniature models of wheeled wagons, which are commonly found in the Eurasian steppes, likely predated human-scale wagons. "It is ... striking that so many models were made in the Tripolye culture.

Such models are often thought to have been children's toys, but it seems more likely to me that they were miniature counterparts of real things," he said. "The primacy of the miniature models is suggested by the fact that wheeled images of animals even come from native Indian cultures of Central America, where real wheels were never made."

Toys or not, those popular models of old have their counterparts in today's Hot Wheels and miniature fire trucks. Who appreciates wheeled vehicles more fully than babies and toddlers? Their almost universal fascination with the way tiny vehicles can be rolled along the floor, and the joy they derive from transportation in life-size ones, calls attention to the remarkable ingenuity of the wheel

**Please visit the site: <http://www.scientificamerican.com/article.cfm?id=why-it-took-so-long-to-inv>**

---



## **ΒΩΜΟΣ 3.500 ΧΡΟΝΩΝ ΣΤΑ ΠΕΥΚΑΚΙΑ!** **ΡΕΠΟΡΤΑΖ: ΓΛΥΚΕΡΙΑ ΥΔΡΑΙΟΥ**

### **Πολύ σημαντικά και πλούσια ευρήματα στο λιμάνι της αρχαίας Ιωλκού**

Εξαιρετικά σημαντικό αρχαιολογικό εύρημα αποτελεί ο συμποσιακός και τελετουργικός χώρος που ανακαλύφθηκε πρόσφατα στην διάρκεια ανασκαφών που διενεργήθηκαν στο λιμάνι της αρχαίας Ιωλκού. Το εντυπωσιακό, από κάθε άποψη, εύρημα, χρονολογείται στην μυκηναϊκή περίοδο, συγκεκριμένα στον 13ο π.Χ. αιώνα, και ανήκει στον παραθαλάσσιο αρχαίο οικισμό που αποκαλύπτεται τα τελευταία χρόνια στην περιοχή των Πευκακίων. Πολύ σημαντικό είναι το γεγονός ότι βρέθηκαν καμένα οστά ζώων, τα οποία μαρτυρούν τελετουργίες 3.500 χρόνων, καθώς και ο πλούτος των κινητών ευρημάτων, των πολυάριθμων, δηλαδή, αγγείων που αποκαλύφθηκαν και σχετίζονται άμεσα με την παρασκευή και διανομή φαγητού στους συνδαιτυμόνες.

Το εντυπωσιακό εύρημα, που βλέπει για πρώτη φορά το φως της δημοσιότητας μέσω του ΤΑΧΥΔΡΟΜΟΥ, ανακαλύφθηκε κατά τις ανασκαφικές περιόδους 2010-2011 και παρουσιάστηκε προχθές, στο πλαίσιο του 4ου Πανελληνίου Συνεδρίου για το Αρχαιολογικό Έργο Θεσσαλίας και Στερεάς Ελλάδας, της τελευταίας τριετίας, που πραγματοποιείται στο Βόλο. Οι ανασκαφικές έρευνες που ξεκίνησαν το 2006 στην περιοχή των Πευκακίων, έφεραν στο φως τμήμα του παραθαλάσσιου οικισμού που αποτελεί το λιμάνι της Ιωλκού και συνδέεται άμεσα με το ανακτορικό κέντρο του Διμηνιού, καθώς και τον ανάλογης χρονολόγησης οικισμό που εντοπίστηκε στο Κάστρο των Παλαιών. Εντύπωση προκαλεί το γεγονός, ότι κατά την πρόσφατη ανασκαφική περίοδο ανακαλύφθηκε κτήριο με συμποσιακή και τελετουργική χρήση, το οποίο έρχεται να ενισχύσει την θέση ότι τα ανακτορικά κέντρα οργάνωναν συμπόσια σε ευρεία κλίμακα όχι μόνο στην έδρα τους αλλά και στην περιφέρειά τους, προκειμένου να ενισχύσουν την εικόνα και την κοινωνική τους θέση. Το τρίτο τμήμα οικιών που αποκαλύφθηκε πρόσφατα και παρουσιάστηκε στο προαναφερθέν συνέδριο από την επικεφαλής των ανασκαφών και Διευθύντρια της ΙΕ΄ Εφορείας Προϊστορικών και Κλασικών Αρχαιοτήτων κ. Ανθή Μπάτζιου-Ευσταθίου, παρουσιάζει ιδιαίτερο ενδιαφέρον. Συγκεκριμένα, έχουν ανακαλυφθεί μέχρι στιγμής καμένα οστά ζώων, καμένα αγγεία, δύο εστίες, πολυάριθμα αποθηκευτικά αγγεία, αρκετά εδώδιμα οστρακόδερμα όπως πορφύρες και πίνες, καθώς επίσης δύο μεγάλοι πήλινοι λουτήρες μαζί με ψευδόστομους αμφορείς, οι οποίοι περιείχαν αρωματικά έλαια και βρέθηκαν στον χώρο όπου εντοπίστηκε η δεύτερη εστία. Την τελετουργική και συμποσιακή χρήση του χώρου ενισχύουν παράλληλα τα πολυάριθμα αγγεία μεταφοράς και διανομής τροφίμων που βρέθηκαν, ενώ ανακαλύφθηκαν επίσης πύραυλα, σκευή δηλαδή, που χρησιμοποιούνταν συνήθως για την μεταφορά κάρβουνου, προκειμένου να παρασκευαστούν τα γεύματα. Το σχήμα πέραν αυτής της οικιακής χρήσης του, έχει συνδεθεί και με τελετουργικές πρακτικές, είτε για την απολύμανση είτε για το κάψιμο θυμιάματος.

### **Νέα δεδομένα στο φως**

«Ο παράλιος οικισμός που ανακαλύπτεται, χρονολογείται την ίδια ακριβώς περίοδο με τον οικισμό του Διμηνιού και του Κάστρου των Παλαιών, οι οποίοι είναι τρεις μυκηναϊκοί οικισμοί γύρω από το Βόλο. Ο συγκεκριμένος οικισμός είναι παραλιακός και έχει σχέση με το εμπόριο και την ναυπήγηση, αποτελούσε δε, το λιμάνι της αρχαίας Ιωλκού» εξηγεί η κ. Μπάτζιου.

Όπως προσθέτει παράλληλα η ίδια «τα κτίρια που αρχίζουν να διαφαίνονται είναι πολύ σημαντικά, διότι δεν είναι απλά μια μυκηναϊκή οικία, αλλά διαπιστώνουμε πρακτικές που εφαρμόζονται στα ανακτορικά κέντρα ή σε οικισμούς, που εξαρτώνται από τα ανακτορικά κέντρα. Τα συμπόσια, προσθέτει η ίδια, είναι μια πρακτική των ανακτορικών κέντρων τον 14ο και 13ο πΧ αιώνα, προκειμένου να στηρίζουν την ανακτορική εξουσία».

Τα αγγεία που βρέθηκαν δεν σχετίζονται μόνο με οικιακή, όπως προαναφέρθηκε, αλλά και με συμποσιακή χρήση, ενώ παράλληλα οι μεγάλοι πήλινοι λουτήρες και οι ψευδόστομοι αμφορείς που βρέθηκαν στο κτίριο που ανακαλύφθηκε, μπορούν να συσχετιστούν με τον εξαγνισμό και την προετοιμασία του σώματος για το συμπόσιο.

Μεταξύ των πολυάριθμων κινητών ευρημάτων περιλαμβάνονται, σημειωτέον, πάρα πολλά αγγεία που σχετίζονται με την μέτρηση και διανομή υγρών, πιθανότατα κρασιού, που είναι πολύ σημαντικό στοιχείο για συμπόσια. Έχουν βρεθεί επίσης μεγάλα πιθάρια, το ένα εκ των οποίων βρέθηκε ακέραιο στην θέση του, σφραγισμένο με λίθινο καπάκι. Στο εσωτερικό του εντοπίστηκε χώμα σε ύψος 5 εκατοστών από τον πυθμένα και ήδη εξετάζεται, προκειμένου να διαπιστωθεί εάν περιείχε καρπούς. Δίπλα από το πιθάρι βρέθηκε σέσουλα από θαλάσσιο όστρεο, ενώ παράλληλα βρέθηκαν πάρα πολλά μαγειρικά σκεύη και χύτρες, που χρησιμοποιούνταν για την παρασκευή συμποσίων. Χαρακτηριστικός είναι ως προς αυτό, ο χώρος αποθήκευσης πολλών μαγειρικών σκευών που εντοπίστηκε σε τμήμα του συγκεκριμένου αρχαίου κτιρίου, καθώς και δύο μεγάλα κύπελλα που βρέθηκαν, τα οποία προορίζονταν για μέτρηση τροφίμων και διανομή, όπως μαρτυρούν οι οριζόντιες εγχάρακτες γραμμές που φέρουν.

Στην διάρκεια των ανασκαφών ανακαλύφθηκε επίσης λαβή από πυρσό, όπου τοποθετούνταν ρητίνη και χρησιμοποιούνταν για τον φωτισμό των χώρων όπου πραγματοποιούνταν συμπόσια κατά την αρχαιότητα.

### **Η έρευνα συνεχίζεται**

Τα νέα αρχαιολογικά ευρήματα εντοπίζονται σε πλούσιες επιχώσεις, σε βάθος από ενάμιση έως τρία περίπου μέτρα. Οι ομοιότητες του αρχαιολογικού υλικού με άλλα μυκηναϊκά κέντρα της κεντρικής και νότιας Ελλάδας σε συνδυασμό με τον αρχαιολογικό χώρο του Διμηνίου, δίνουν μια πληρέστερη εικόνα για την μυκηναϊκή περίοδο στην περιοχή του Βόλου.

Οι ανασκαφές διενεργούνται με χρηματοδότηση του Ιδρύματος Ψύχα και του ΙΝΣΤΑΠ, του Ινστιτούτου για την Προϊστορική Έρευνα στο Αιγαίο και εκτιμάται ότι η συνέχισή τους θα προσθέσει νέα σημαντικά δεδομένα στα ήδη υπάρχοντα. «Στενός συνεργάτης όλα αυτά τα χρόνια και πολύτιμος βοηθός είναι ο αρχαιολόγος Δρ. Γρ. Στουρνάρας, ενώ η Προϊσταμένη και το προσωπικό της ΙΓ΄ ΕΠΚΑ, η αρχαιολόγος κ. Π. Τριανταφυλλοπούλου, οι συντηρητές Μάνια Μαργαριτώφ, Μάνος Διονυσίου και Δημ. Παπακυριάκος, είναι πολύτιμοι αρωγοί στο έργο μας» τονίζει η κ. Μπάτζιου.

Όπως επισημαίνει, τέλος, η επικεφαλής της ανασκαφικής ομάδας «στις ανασκαφές που διενεργήσαμε τα προηγούμενα χρόνια αποκαλύφθηκαν δύο τμήματα οικιών και στην διάρκεια της πρόσφατης ανασκαφικής περιόδου, αποκαλύπτεται τρίτο κτήριο, το οποίο μας δίνει πολύ σημαντικά στοιχεία. Ελπίζουμε, καταλήγει η κ. Μπάτζιου, να συνεχιστούν οι ανασκαφικές εργασίες, προκειμένου να αποκτήσουμε πληρέστερη εικόνα του παράλιου μυκηναϊκού οικισμού, που μόλις αρχίζει να αποκαλύπτει την ταυτότητά του».

Ταχυδρόμος, Πανθεσσαλική Εφημερίδα

**Παρακαλώ επισκεφθείτε το δικτυακό τόπο:**

<http://www.taxydromos.gr/article.php?id=42476&cat=1>

---

---

## **IN SEARCH OF ANCIENT EGYPT'S VERY OWN WATERY ANSWER TO VENICE**

Long before the canals of Venice sprung up in the swamps of the Adriatic, the ancient Egyptians are said to have used their own waterways to build an entire city into the Nile River. Now at last, we might actually find it.

The city of Thebes was never really lost, but the ruins of the city — which was first inhabited over 5000 years ago — have changed a lot in the ensuing millennia. While archaeologists have found and excavated countless incredible remains, there are plenty of things still left to uncover.

And, as New Scientist reports, one of the big questions left unresolved is whether Thebes really did once resemble an ancient Venice, with canals and waterways dug into the area surrounding the Nile to allow barges to easily cross from one side of the city — and one side of the Nile — to the other:

Texts and pictures from nearby temples and tombs suggest that sites on both sides of the Nile were connected by canals and navigable by boat.

Descriptions of the Beautiful Festival of the Valley, for example, state that statues of gods were taken by barge from the temple complex at Karnak on the east bank to visit the dead kings at their mortuary temples on the west bank. These descriptions have never been tested, and [archaeologist Angus ]Graham wants hard evidence. If the waterways existed, did they operate all year round or just during flood season?

Were they also used to transport supplies, including the immense stones used to build the temples?

Angus Graham, the field director for the Egypt Exploration Society in London, is hard at work on that very problem, using a technique known as electrical resistivity tomography to determine the different substances hidden below the surface, be they bedrock, watery sediments, or archaeological remains. Check out the link for more on this work, including the amazing discovery that the Karnak temple was actually most likely located on an island in the middle of the Nile, and it was actually probably submerged underwater during the annual Nile floods.

Please visit the site: <http://io9.com/5896945/in-search-of-ancient-egypts-very-own-watery-answer-to-venice>

---

## **GREEKS FIND REMAINS OF HEALING SANCTUARY**

Archaeologists in Greece have stumbled upon the remains of a sanctuary to Asclepios, the ancient god of healing, during the construction of a highway in central Greece, a project official said on Monday. “We were fortunate enough to find this previously unknown sanctuary,” supervising archaeologist Maria-Fotini Papaconstantinou said. She added that her team had “raced against time” to study and relocate the findings before the bulldozers moved in. “It was just before the deadline for excavation when we would have had to hand over the site to construction,” she said. “In six months we carried out work that could have taken at least two years.”

The sanctuary was found some 200 kilometres north of Athens on the outskirts of the ancient port town of Dafnounta, near the present city of Lamia.

It dates to the fifth century BCE and is one of the oldest associated with the cult of Asclepios — and best preserved — ever discovered in Greece, the archaeologist said. Its modest size, 30 by 15 metres, suggests that it was near a small provincial town, she said. The remains of the sanctuary, which had been visited and cited by the Greek historian Strabon in the first century AD, were found during construction on the new Patras-Athens-Thessaloniki highway in 2005-2007. Its identity was confirmed thanks to the discovery of snake-shaped offerings and jewels and shards bearing the healing god’s name. Asclepios, son of the sun-god Apollo, carried a snake-entwined staff which remains a symbol of medicine today.

The entire sanctuary was removed stone by stone using cranes and rebuilt at an adjacent location as it lay directly in the highway’s path, Papaconstantinou said. The largest Greek shrine to Asclepios is in Epidaurus in the southern Peloponnese peninsula.

**Please visit the site: <http://www.asianage.com/newsmakers/greeks-find-remains-healing-sanctuary-492>**

---

## **SATELLITES EXPOSE 8,000 YEARS OF LOST CIVILIZATION**

Archaeologists have developed a large-scale method and mapped some 14,000 settlement sites in northeastern Syria. The effort could uncover long-term trends in urban activity  
By Virginia Gewin of Nature magazine

Hidden in the landscape of the fertile crescent of the Middle East, scientists say, lurk overlooked networks of small settlements that hold vital clues to ancient civilizations.

Beyond the impressive mounds of earth, known as tells in Arabic, that mark lost cities, researchers have found a way to give archaeologists a broader perspective of the ancient landscape. By combining spy-satellite photos obtained in the 1960s with modern multispectral images and digital maps of Earth's surface, the researchers have created a new method for mapping large-scale patterns of human settlement. The approach, used to map some 14,000 settlement sites spanning eight millennia in 23,000 square kilometers of northeastern Syria, is published today in the Proceedings of the National Academy of Sciences.

"Traditional archaeology goes straight to the biggest features -- the palaces or cities -- but we tend to ignore the settlements at the other end of the social spectrum," says Jason Ur, an archaeologist at Harvard University in Cambridge, Massachusetts, who is co-author of the study. "The people who migrated to cities came from somewhere; we have to put these people back on the map."

Such comprehensive maps promise to uncover long-term trends in urban activity. "This kind of innovative large-scale application is what remote sensing has been promising archaeology for some years now; it will certainly help us to focus our attention on the big picture," says Graham Philip, an archaeologist at Durham University, UK.

### **Soil signatures**

The satellite-based method relies on the fact that human activity leaves a distinctive signature on the soil, called anthrosols. Formed from organic waste and decayed mud-brick architecture, anthrosols are imbued with higher levels of organic matter and have a finer texture and lighter appearance than undisturbed soil -- resulting in reflective properties that can be seen by satellites.

To sift through satellite images for those signatures, co-author Bjoern Menze, a research affiliate in computer science at the Massachusetts Institute of Technology in Cambridge, built on his skills from his day job identifying tumors in clinical images.

Menze trained software to detect the characteristic wavelengths of known anthrosols in images spanning 50 years of seasonal differences.

This automation was key. "You could do this with the naked eye using Google Earth to look for sites, but this method takes the subjectivity out of it by defining spectral characteristics that bounce off of archaeological sites," says Ur.

Menze and Ur also used digital elevation data collected in 2000 by the space shuttle as part of NASA's Shuttle Radar Topography Mission (SRTM). This information enabled the authors to estimate the volume of the larger sites for the first time -- and to use this volume as a proxy for a site's longevity. The bigger the mound, the longer the settlement survived.

Tony Wilkinson, an archaeologist at Durham University and Ur's former mentor, says that being able to measure the volume of many sites over large areas remotely is a breakthrough. However, Philip cautions that the resolution of the SRTM data may be too coarse to provide an accurate measurement for the volume of the smaller settlements. Nonetheless, he expects that the method will spark new archaeological insights for several different regions.

### **New life for old hypotheses**

The method has already renewed speculation about the importance of water to city development. Surprisingly, this study found that a handful of sites are unexpectedly large given that they are not located near rivers or in areas of high precipitation. "The settlement known as Tell Brak, for example, is far too large for what one would expect at such a marginal position," says Ur. "This is where things get interesting."

Jennifer Pournelle, a landscape archaeologist at the University of South Carolina in Columbia, agrees. "These findings validate hypotheses I've introduced in southern Iraq -- namely that irrigation is an after-effect of urbanization," she says. "It's not what enables a city to develop; it's what keeps them going after soil moisture dries up."

Pournelle says that she plans to adopt this method as soon as possible, and notes that it offers a valuable way to learn more about large regions, particularly when they are remote and difficult to access because of local conflicts.

**Please visit the site: <http://www.scientificamerican.com/article.cfm?id=satellites-expose-8000-years-lost-civilization>**

---

---



## **ΕΝΑΣ ΣΗΜΑΝΤΙΚΟΣ ΟΙΚΙΣΜΟΣ ΤΗΣ 3ΗΣ** **Π.Χ. ΧΙΛΙΕΤΙΑΣ ΣΤΗ ΘΑΣΟ -** **ΠΑΡΟΥΣΙΑΣΤΗΚΑΝ ΤΑ ΕΥΡΗΜΑΤΑ ΤΗΣ** **ΑΝΑΣΚΑΦΗΣ ΠΟΥ ΕΓΙΝΕ ΤΗ ΔΙΕΤΙΑ 2009-** **2010, ΜΑΡΙΑ ΘΕΡΜΟΥ**

Εναν ακμαίο οικισμό της Εποχής του Χαλκού, που είχε έντονη μεταλλουργική και νηματουργική δραστηριότητα και σχέσεις με την νότια Ελλάδα έφεραν στο φως οι ανασκαφές που έγιναν στον λόφο του Αγίου Αντωνίου στον Ποτό της Θάσου. Εννέα κτίσματα αποκαλύφθηκαν από αυτόν τον οικισμό και όλα είχαν λίθινα θεμέλια, ανωδομή από πλίνθους και πηλοκατασκευές στο εσωτερικό και στις αυλές τους. Επίσης όλα είναι μονόχωρα με ορθογώνια κάτοψη και ένα μόνο με αψιδωτό πέρα ενώ η άμεση γειτνίαση των κτιρίων και η χρήση μεσοτοιχίας μαρτυρούν τους ισχυρούς ενδοκοινοτικούς δεσμούς των κατοίκων. Η ανασκαφή έγινε την διετία 2009 – 2010 αλλά μόλις τώρα παρουσιάζονται τα ευρήματα.

Σύμφωνα με τους αρχαιολόγους βασικό κίνητρο των ανθρώπων της εποχής για την εγκατάστασή τους στη συγκεκριμένη θέση ήταν η γειτνίαση με τη θάλασσα και οι δυνατότητες άσκησης θαλάσσιου εμπορίου. Η πρώτη κατοίκηση φαίνεται ότι έγινε στα μέσα της 4<sup>ης</sup> π.Χ. χιλιετίας, μιας περιόδου που εντοπίζεται σπανίως στον βορειοελλαδικό χώρο ενώ υπάρχουν και ευρήματα της Τελικής Νεολιθικής που χρονολογήθηκε με C14 ανάμεσα στο 3900 και στο 3600 π.Χ.

Στη δόμηση δύο τουλάχιστον κτιρίων της Πρώιμης Εποχής του Χαλκού φάνηκε ότι είχε χρησιμοποιηθεί η τεχνική του «ψαροκόκκαλου», πολύ αγαπητή στο Αιγαίο κατά την 3<sup>η</sup> π.Χ. χιλιετία ενώ σε μία άλλη οικία εντοπίστηκε λίθος με βαθύνσεις που στον μινωικό κόσμο αποκαλείται «κέρνος» ή «τράπεζα προσφορών».

Η κεραμική της 3<sup>ης</sup> και της 2<sup>ης</sup> χιλιετίας π.Χ. που ήρθε στο φως έχει εγχάρακτη και εμπίεστη διακόσμηση ενώ η ύπαρξη και μυκηναϊκής κεραμικής μαρτυρά τις έντονες εμπορικές σχέσεις του οικισμού με τη Νότια Ελλάδα. Επίσης για πρώτη φορά διαπιστώθηκε και παρουσία μινωικής κεραμικής (η πιο χαρακτηριστική κατηγορία μεσαελλαδικής κεραμικής) της Μέσης Εποχής του Χαλκού. Εντυπωσιακότερο εύρημα αυτής της εποχής είναι ένας τριποδικός υποστάτης με συμβολικά εγχάρακτα θέματα. Εντοπίστηκε επίσης προϊστορική ελεύθερη ταφή με το νεκρό τοποθετημένο σε συνεσταλμένη στάση μέσα σε λάξευμα του βράχου και δίπλα του αγγείο τοποθετημένο, επίσης, σε κοιλότητα του εδάφους.

Να σημειωθεί ότι με την ανασκαφή στον Άγιο Αντώνιο προστίθεται μία νέα θέση της Εποχής του Χαλκού στις ήδη γνωστές της Θάσου, του Αγίου Ιωάννη, της Σκάλας Σωτήρος και εκείνης στο Καστρί Θεολόγου.

Στο βόρειο τμήμα του οικισμού εξάλλου βρέθηκαν τάφοι που ανήκουν σε νεκροταφείο του 2<sup>ου</sup>, 3<sup>ου</sup> και 4<sup>ου</sup> αιώνα μ.Χ. Οι τάφοι είναι στην πλειονότητά τους κιβωτιόσχημοι και κτερίζονται με αγγεία και κοσμήματα, ενώ σε μία από τις ταφές βρέθηκε λάγνος με θησαυρό 22 αργυρών και χάλκινων νομισμάτων. Εντοπίστηκαν επίσης δύο εντυπωσιακοί



σε μέγεθος και τρόπο δόμησης κτιστοί οικογενειακοί τάφοι σκαμμένοι μέσα στον βράχο και εν μέρει χτιστοί με τα σκελετικά λείψανα ενήλικων σε εξαιρετική κατάσταση διατήρησης.

**Παρακαλώ επισκεφθείτε το δικτυακό τόπο:**

**<http://www.tovima.gr/culture/article/?aid=449532#.T2r65p2iYpg.email>**

---