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# Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

**- Απρίλιος 2006 -**

## *450 BC - Anaxagoras - the universal intelligence.*

Anaxagoras (500-428 BC) introduced the concept of "Nous" (mind, reason) into Greek philosophy. Nous, the eternal mind, transforms chaos into order and through it the material world comes into being. The primordial One produces forms of multiplicity through dichotomisation. This process is originated and controlled by the power of mind, or Nous. According to Anaxagoras, mind is infinite and self-organizing. It is not intermixed with anything, but pure in its being.

*(<http://www.thebigview.com/> ®)*

# Newsletter of the Hellenic Society of Archaeometry

**- April 2006 -**

**Nr. 62**

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ΓΙΑ ΜΕΤΑΠΤΥΧΙΑΚΕΣ ΣΠΟΥΔΕΣ ΠΟΛΙΤΙΚΟΥ  
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**ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS**

**AMERICAN SCHOOLS OF ORIENTAL  
RESEARCH, 2006 ANNUAL MEETING,  
NOVEMBER 15-18, 2006, CAPITAL  
HILTON, WASHINGTON, DC**

**CALL FOR PAPERS**

**ART AND ARTIFACTS OF THE ANCIENT NEAR  
EAST**

Section Chairs:

Elise A. Friedland, Program in Classical Studies, Rollins College, 1000 Holt Ave.-2676,  
Winter Park, FL 32789. Tel: 407-646-2502; Email: [efriedland@rollins.edu](mailto:efriedland@rollins.edu).

Marian Feldman, Dept. of Near Eastern Studies, Univ. of California Berkeley, 250  
Barrows Hall #1940, Berkeley, CA 94720. Tel: 510 642-7793, Email:  
[feldman@calmail.berkeley.edu](mailto:feldman@calmail.berkeley.edu).

This session welcomes submissions that present innovative analyses of any facet of Near  
Eastern artistic production or visual culture.

One section is planned for 2006. All submissions must be made electronically via the  
ASOR web site and should be directed to the first chair of the section.

Deadline for submission of abstracts to first Section Chair is April 1,  
2006.

For more information, please visit the ASOR Annual Meeting website:  
<http://www.asor.org/AM/am.htm> (including the Call For Papers)

\*\*\*\*\*

Elise A. Friedland, Ph.D.  
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**INTERNATIONAL CONFERENCE:**  
**"TERRACOTTA FIGURINES IN THE**  
**GREEK AND ROMAN EASTERN**  
**MEDITERRANEAN: PRODUCTION,**  
**DIFFUSION, ICONOGRAPHY AND**  
**FUNCTION", JUNE 2-6, 2007, IZMIR,**  
**TURKEY**

Web site: <http://web.deu.edu.tr/terracottas/>

English, French, German, Italian, Greek and Turkish call for papers that are attached to here are also available at this web address!

### **First Circular - Call for Papers**

Dear Colleagues,

I trust that the following will be of interest to folks here: We are glad to inform you that an international conference on the terracotta figurines of the Eastern Mediterranean in Antiquity (7th c. B.C.-A.D. 4th c.) will take place on June 2nd-6th, 2007 at Dokuz Eylul University (DEU) in Izmir, Turkey. We warmly invite contributions by scholars and graduate students from a variety of disciplines related to this subject. Intended to bring together Turkish, European, Mediterranean, and North American scholars to discuss a range of issues concerning terracotta figurines, this conference should be an excellent opportunity to increase our knowledge of this material. It also aims to encourage dialogue among Turkish and European scholars in Classical Archaeology. The aim of this meeting is to report on the state of research concerning the terracotta figurines of Antiquity in a broad sense, between ca. 7<sup>th</sup> century B.C. and 4th century A.D. in the Greek and Roman Eastern Mediterranean. The geographical areas concerned are Turkey, Greece, Cyprus, Egypt, Syria, Israel, Lebanon, Jordan, the rest of the Near East and the Black Sea countries. The focus is, however, Asia Minor. The quantities of figurines which have come to light on numerous sites, as well as recent research on the various collections from the geographical area concerned, now permit us to make significant additions to the archaeological evidence to which we owe recent progress in coroplastic research in western Europe. The colloquium aims to tackle, concentrating on unpublished finds or collections from the Eastern Mediterranean and Asia Minor, a series of questions which can be grouped as four principal interlinked and overlapping themes: production and diffusion, iconography and function. On these themes and questions, all approaches and methods susceptible to bring some progress to our knowledge are of course very welcome: archaeology, archaeometry, history of art, iconology and critical approach of texts, cultural anthropology. Papers and oral presentations can be given in English, French, German, Italian, Greek or Turkish, but English will be the preferred language for

oral presentations. We would be delighted if you could consider contributing to this conference. If you wish to participate, please fill out the form below and send it to one of the organizers.

Please submit an abstract of no more than 300 words together with the attached registration form before July 1, 2006 by e-mail (if possible) to: <[terracottas@deu.edu.tr](mailto:terracottas@deu.edu.tr)>, or by fax to: +90.232.453 41 88.

The issue number 24 (Dec. 2006) of the journal *Instrumentum* is planned as a special issue containing the Conference abstracts. Abstracts of accepted papers will also be made available on the conference web site: <[web.deu.edu.tr/terracottas/](http://web.deu.edu.tr/terracottas/)>.

A participation fee of 50,- euro will be charged (25,- euro for students and colleagues from Eastern Europe, Black Sea and Arab countries), including lunches at the DEU Cafeteria, coffee and refreshments at conference breaks, but not accommodation, travel expenses, excursions, the booklet of conference abstracts and publication of the proceedings. Soon we will apply for some financial aids (travel and accommodation) for the conference participants. We will make the required hotel and travel reservations as soon as we know the exact number of participants. The conference proceedings will be published in 2008. Post-conference excursions are planned on June 5th-6th to the archaeological museums of Izmir, the excavations at the Agora and in Old Smyrna, Ephesus, the Ephesus Museum, Pergamon and its museum, Kyme and Myrina. Along with the conference an exhibition will be displayed at the University Chancellery as well as DEU Culture and Congress Hall, entitled: "Greek and Roman Terracotta Figurines from Asia Minor: Samples from Turkish Museums and Excavations". The organizers seek to widen participation at this conference, and would like to encourage colleagues from all parts of the world to attend. The conference committee kindly requests that you alert any persons within your research community who would be interested in participating at this conference, either by forwarding this e-mail, or by printing the attached circular and displaying it in your institution. We hope that you will be able to join us at Dokuz Eylul University, and look forward to seeing you in Izmir!

\*\*\*\*\*

Yard. Doc. Dr. Ergun Lafli, M.A.  
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E-mail: <[arthur.muller@univ-lille3.fr](mailto:arthur.muller@univ-lille3.fr)>.

\*\*\*\*\*

### **Scientific Organizers**

- Chief Organizer: Dr. Ergun LAFLI (DEU, Izmir).
- Co-Organizer: Prof. Arthur MULLER (UL3, Lille).
- Scientific Committee (to be completed): Dr. Ergun LAFLI, Prof. Arthur MULLER, Dr. Michel FEUGERE (CNRS, Lattes) and Prof. Dominique MULLIEZ (EFA, Athens).

### **Institutional Organizers**

- Dokuz Eylul Universitesi, Izmir, TURKEY;
- Halma-Ipel - UMR 8164 (CNRS, Lille 3, MCC) Histoire, Archeologie, Litterature des Mondes Anciens, Lille, FRANCE; - Instrumentum. Groupe de travail europeen sur l'artisanat et les productions manufacturees dans l'Antiquite, Montagnac, FRANCE;
- Ecoles Francais d'Athenes, Athens, GREECE.

International Conference: "Terracotta Figurines in the Greek and Roman Eastern Mediterranean: Production and Diffusion, Iconography and Function".

June 2-6, 2007 / Izmir, Turkey

### **Registration Form**

Please fill in the form and send it back before July 1, 2006. Speakers : please send us an abstract of no more than 300 words by e-mail, fax, or mail, by the same date.

Type of Participation:

Lecturer:

Observer:

Family Name:

Name:

Academic Title:

Student:

Graduate:

Undergraduate:

Institution:

Complete Professional Address:

Telephone:

Fax:

E-mail:

Title of Your Lecture:

Joint Authors:



Abstract:

NB: one illustration can be included, if necessary; it should be sent by e-mail in tif or jpg.

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# **ΕΚΠΑΙΔΕΥΤΙΚΑ ΕΠΙΜΟΡΦΩΤΙΚΑ** **ΣΕΜΙΝΑΡΙΑ**

**ΜΟΥΣΕΙΟΛΟΓΙΑΣ, ΑΡΧΑΙΟΜΕΤΡΙΑΣ, ΣΥΝΤΗΡΗΣΗΣ**

Οργάνωση από την  
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Εταιρεία Διαχείρισης Πολιτιστικής Κληρονομιάς

## **ΠΡΟΛΗΠΤΙΚΗ ΣΥΝΤΗΡΗΣΗ ΥΦΑΣΜΑΤΩΝ**

Η Time Heritage λόγω της μεγάλης συμμετοχής στην προηγούμενη συνάντηση, επαναλαμβάνει το σεμινάριο για το διάστημα **Σάββατο-Κυριακή 08/04 και 09/04-06**. Απευθύνετε σε αρχαιολόγους, επιμελητές, συλλέκτες, υπεύθυνοι εκκλησιαστικών συλλογών, συντηρητές, μελετητές και φοιτητές.

Το σεμινάριο έχει ως σκοπό να εισάγει την απαραίτητη τεχνογνωσία στο θέμα της προληπτικής συντήρησης των υφασμάτων έργων τέχνης είτε αυτά είναι αρχαιολογικά, λαογραφικά, ιστορικά και εκκλησιαστικά. Μέσα από την θεωρία αλλά και την πρακτική προσέγγιση σε ιστορικά υφάσματα που θα έχουν την ευκαιρία οι ενδιαφερόμενοι να έρθουν σε επαφή, θα κατανοήσουν τις αιτίες φθορών αυτών των αντικειμένων και πως μπορούν να αντιμετωπιστούν, τρόποι καταγραφής, μεταφοράς και μεταχείρισης κ.ά. σε ένα τόσο εύθραυστο υλικό όπως είναι τα υφάσματα.

Κόστος σεμιναρίων: ημερίδες 75 Ευρώ (65 Ευρώ φοιτητικό) Διήμερα workshops 100 Ευρώ.

**Τα θεωρητικά μαθήματα πραγματοποιούνται στο Μουσείο Νεώτερης Κεραμικής, Μελιδώνη 4-6, Κεραμικός**

Για περισσότερες πληροφορίες και εγγραφές απευθυνθείτε στην Δρ. Αφροδίτη Καμαρά και στα τηλέφωνα 210 65 10 549. e-mail: [info@timeheritage.gr](mailto:info@timeheritage.gr) ή επισκεφτείτε την ηλεκτρονική σελίδα της εταιρείας: [www.timeheritage.gr](http://www.timeheritage.gr)

Εισηγητής σεμιναρίου: **Χρήστος Χ. Καρύδης**  
(University of Lincoln, Conservation Department, UK) [c.karydis@gmail.com](mailto:c.karydis@gmail.com)

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**EDUCATIONAL SEMINARS IN ATHENS**  
**PREVENTIVE CONSERVATION OF TEXTILES**

Organized by  
**TIME HERITAGE**

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## Technology Information Management Education

Saturday and Sunday: 09<sup>th</sup> and 10<sup>th</sup> of April 2006 in the Lecture Theater of the Modern  
Ceramic Museum in Athens, Plaka  
Tutor: Christos Karydis

For more informations's visit: [www.timeheritage.gr](http://www.timeheritage.gr) or email [info@timeheritage.gr](mailto:info@timeheritage.gr)  
[c.karydis@gmail.com](mailto:c.karydis@gmail.com)

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**INTERDISCIPLINARY CONFERENCE:**  
**"RENAISSANCE MEDIEVALISMS",**  
**CENTRE FOR REFORMATION AND**  
**RENAISSANCE STUDIES, VICTORIA**  
**COLLEGE, UNIVERSITY OF TORONTO,**  
**6-7 OCTOBER 2006**

**Call for Papers**

This interdisciplinary conference will examine the presence of the medieval past in the culture of Renaissance Europe. While the rejection of the medieval heritage and the renewal of classical ideals have traditionally been used to define the Renaissance, the undeniable continuum of medieval culture into the early modern period is undisputable, especially in light of recent scholarship on "early modern" Europe. Clearly, then, the transference and adaptation into the Renaissance of patently "medieval" elements of European civilization from Boethius to Boccaccio needs further investigation in order not only to validate their continued presence, but also to determine exactly how and what they contributed to the "renewal" we call the "Renaissance."

Proposals are invited on all areas of scholarly investigation into Early Modern Europe and the European expansion overseas (1400-1650), and especially (but not exclusively) in the following general areas:

Art and Literature  
Commerce and Economics  
Learning, Scholarship, and Humanism  
Science and Medicine  
Politics and Judicial Practices  
Religion  
Sex and Gender  
Theatre and Spectacle  
Travel and Exploration

Proposals should include the title of the presentation, a 150 words abstract, and a one-page c.v. Proposals should be emailed to [konrad.eisenbichler@utoronto.ca](mailto:konrad.eisenbichler@utoronto.ca)

**Deadline for submission: Wednesday, 15 March 2006**

**CALL FOR SUBMISSIONS,**  
**ARCHAEOLOGICAL SCIENCES OF THE**  
**AMERICAS SYMPOSIUM 2006,**  
**SEPTEMBER 13 - 16, 2006, THE**  
**UNIVERSITY OF ARIZONA**  
**USS ARIZONA MEMORIAL UNION,**  
**TUCSON, ARIZONA USA**

<http://asas06.ltc.arizona.edu>

Deadlines extended:

Organized session proposals due: May 15, 2006

Individual submissions/abstracts due: June 1, 2006

The organizing committee of the Archaeological Sciences of the Americas Symposium is pleased to solicit contributions for 2006. ASAS encourages regular and sustained collaboration between archaeological, conservation, and natural scientists in the Americas. The meeting will be hosted by graduate students in the Department of Anthropology at the University of Arizona. The Integrative Graduate Education and Research Traineeship (IGERT) Program in Archaeological Sciences at the University of Arizona will co-sponsor this event.

The Biennial Symposium will focus on studies, techniques, and approaches that emphasize the analysis and interpretation of prehistoric and historic materials, human cultures and ecology. Researchers at all levels of experience and training are invited to participate. A special invitation is extended to colleagues from Canada, Mexico, Central America, and South America. Conceptual and methodological contributions that transcend geographic boundaries of research are also encouraged; applications need not be confined to the Americas. In recognition that archaeological science represents an interdisciplinary effort, six major themes will be represented at the meeting:

- 1) Geoarchaeology
- 2) Conservation Studies and Ephemeral Remains
- 3) Spatial Analysis and Remote Sensing
- 4) Chronometry
- 5) Human-Environmental Interaction
- 6) Material Culture Studies

Proposals of organized sessions (5-6 papers and one discussant) are due May 15, 2006. Abstracts for individually-submitted papers, posters, and computer simulations are due June 1, 2006 and are limited to 250 words.

Application fees are \$60(US) for students and \$90(US) for professionals. Checks are to be made out to the University of Arizona Foundation. Please note that none of the application fee is tax deductible.

For more information, visit our website or contact an organizing committee chair directly: R. Emerson Howell ([rhowell@email.arizona.edu](mailto:rhowell@email.arizona.edu)) or AJ Vonarx ([ajvonarx@email.arizona.edu](mailto:ajvonarx@email.arizona.edu)). We look forward to hearing from you and meeting you in Tucson in September 2006!

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**MINING AND METALS IN BRITAIN:  
FROM BRONZE AGE TO BLAST  
FURNACE, OXFORD UNIVERSITY,  
DEPARTMENT FOR CONTINUING  
EDUCATION**

**Starts: Tuesday 25 April 2006 7.30-9.30pm (10  
meeting(s))**

**email contact: [ppweekly@conted.ox.ac.uk](mailto:ppweekly@conted.ox.ac.uk)**

Metals changed the world forever. But how were ancient metal artefacts produced? What impact did mining and metals have on ancient societies? This course looks at the evidence from Bronze Age Britain up until the invention of the blast furnace, discussing copper, bronze, tin, gold, silver, lead and iron.

Always wondered how iron tools were invented? Fascinated by mines and want to learn more? Here is the answer! This course will give you an overview of the evidence for mining and metal production in Britain from prehistoric to post-medieval times, discussing copper, bronze, tin, gold, silver, lead and iron production. Mining sites, smelting installations, waste products, metal working techniques and artefacts will all be examined in chronological order and their main characteristics studied. There will also be a very brief introduction to the benefits of scientific analysis of metal production but throughout the course a particular emphasis will be given to the ways in which ancient mining and metal production affected the lives of the people who were engaged in these processes. This will involve an evaluation of the social and landscape development related to metal production, including settlement growth, interregional trade networks and economic and cultural exchange.

**For further information see:**

**<http://www.conted.ox.ac.uk/courses/showCourse.asp?courseId=O05P112AHW>**

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**ICHAJ: "CROSSING JORDAN"**  
**\*\*FIRST NOTICE\*\* FEBRUARY 2006,**  
**10<sup>TH</sup> INTERNATIONAL CONFERENCE**  
**ON THE HISTORY & ARCHAEOLOGY**  
**OF JORDAN**

Theme: "Crossing Jordan", This conference will focus on the many peoples and their cultures who "crossed Jordan" from the earliest times to the present and on the conservation of Jordan's heritage.

Dates: Wednesday, May 23 through Monday, May 28, 2007

Place: Washington, D.C.

Host Institution:

George Washington University's Elliott School of International Affairs located at 1957 E Street, Washington, D.C.

Organizing Institutions:

The American Center of Oriental Research and The Department of Antiquities of Jordan in cooperation with: The American Schools of Oriental Research, Boston and The American Schools of Oriental Research in Canada

Abstracts will be due September 15, 2006.

When the Conference Web Site is available a Second Notice will be sent.

For the sake of planning, the organizers would appreciate a preliminary indication of your interest in attending. Please send an e-mail message to the ACOR Amman office at [acor@go.com.jo](mailto:acor@go.com.jo).

Private contributions to support ICHAJ 2007 are welcome. Please make checks payable to ACOR, with ICHAJ 2007 noted on the check and send to:

ACOR, P.O. Box 2470, Amman 11181, Jordan or ACOR, 656 Beacon Street, 5th Floor, Boston, MA 02215-2010, USA.

ACOR is tax exempt as a 501(c)(3) organization.

\*\*\*\*\*

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## **SUMMER SCHOOL INTENSIVE IN ANCIENT AND HISTORIC METALS: 2006, COTSEN INSTITUTE OF ARCHAEOLOGY, JULY 9-16, 2006**

Dear All,

There are still two places left on the course advertised below....let me know if interested in attending.

David A. Scott

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

**Artefacts for examination:** Over the past 25 years an unrivalled collection of mounted metallographic samples has been assembled, which are studied as part of the course practical work, involving both polarized light microscopy and metallographic microscopy of both freshly polished and etched samples. These samples range from cast iron from China to wootz steel from India, bronze coinage alloys from the Roman Empire to high-tin bronze from ancient Thailand, silver alloys from the Parthian period to ancient Ecuador, gilded copper and tumbaga from Peru and Colombia, to mention only a few of the geographical areas covered by available samples. Course participants will be instructed in the use of polishing and etching in the examination of samples and are encouraged to keep digital images of the samples they have prepared during the week. Students may also bring their own samples for examination if mounted and ground, or if not mounted, then one or two samples may be brought which can be mounted and prepared during the course.

**Course Instructor:**

Professor David A. Scott, Director of the MA program in Archaeological and Ethnographic Conservation. His book, *Copper and Bronze in Art: Corrosion, Colorants, Conservation* won the prize from the Association of American Publishers as the best Scholarly/Art book published in the USA in 2002. Professor Scott has published over 70 papers in the peer-reviewed literature and is an Editor for the journal *Studies in Conservation*.

**Course Schedule:** The course will be held over the eight days from July 9-16, 2006. The course will be held at the Cotsen Institute of Archaeology, located in the basement of the Fowler Museum Building at the UCLA campus in Los Angeles from 9:15am-5pm each

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

Course Costs: The cost of the instruction for the eight days will be \$800.00. For details of payment and to register for this course, as well as to receive leaflets on local housing and hotels, please contact the course organizer and director:

Professor David A. Scott  
Room A410  
The Cotsen Institute of Archaeology, UCLA  
405 Hilgard Avenue  
Los Angeles CA 90095-1510, USA  
dascott [at] ucla\_\_edu.

Course Details:

Saturday:

Introduction, use of the metallurgical microscope, the mounting and polishing of samples, their preparation, use of resins, grinding and polishing. Introduction to phase diagrams and their application to ancient bronzes and copper alloys. Copper-arsenical, copper-nickel, and copper-tin alloys. Casting and working of metals and aspects of bronze casting in the ancient world. Etching of some copper alloys.

Sunday:

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

Monday:

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

Tuesday:

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

Wednesday:

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

Thursday:

Examination of patinas and corrosion. The problems associated with corrosion and sampling for polarized light examination. Continuation of practical metallographic examination and colour etching of a variety of samples. Recording of samples with digital camera and case studies in the examination of a group of copper alloy plaques and a bronze figurine of the God Osiris will be discussed.

Friday:

Gold and gold alloys: gilding: examination of gold alloys. Lecture on the technology of ancient gold alloys in South America. Continuation of metallographic practical examination.

Saturday:

Examination of further metallographic samples. Additional case studies dealing with metals technology and corrosion. End of the course.

For those who need to leave early, the principal part of the teaching will finish by 3pm. For those wishing to continue, we will work until 4:15pm and pack away samples and equipment to finish at 5pm.

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

\*\*\*\*\*



**4<sup>TH</sup> INTERNATIONAL STUDENT  
CONFERENCE OF THE BALKAN  
PHYSICAL UNION" (ISCBPU-4), 29  
AUGUST - 1 SEPTEMBER, 2006,  
BODRUM-TURKEY**

**FIRST ANNOUNCEMENT**

The "4<sup>th</sup> International Student Conference of the Balkan Physical Union" (ISCBPU-4) will be held between 29 August - 1 September, 2006 at Bodrum-TURKEY. It will be jointly organized by Balkan Physical Union, Turkish Physical Society, Yildiz Technical University, Istanbul University and Mugla University.

The BPU-4 Student Conference belongs to a series of triennial general physics student conference organized under the auspices of the Balkan Physical Union (BPU). The previous conferences were organized in Izmir / Turkey (1994), Bansko / Bulgaria (1996) and Cluj-Napoca / Romania (1997).

The conference is open to all physics undergraduate and graduate students from all the European and Balkan countries. The aim of the conference is to create a friendly and scientific atmosphere between the students. The lectures will be given, by the known physicists from Turkey and abroad, from a basic level to make the recent developments more familiar to all students. The oral and poster presentations of the students will be preferably from known or popular physics subjects. The aim of the oral and poster presentation is to encourage the students do research and practise on giving presentations. The language of the conference will be in English.

For more information about ISCBPU4 you can visit the conference web page at:

<http://www.istanbul.edu.tr/fen/fizik/nuclear/ISCBPU4/>

or contact the Coordinators of ISCBPU4 :

Res. Ass. Lidya Amon (Coordinator for the Students From Balkan and European Countries)

\*\*\*\*\*

Istanbul University,  
Sciences Faculty,  
Department of Physics,  
34459 Vezneciler-Istanbul,  
Turkey  
e-mail : [lidyamon@istanbul.edu.tr](mailto:lidyamon@istanbul.edu.tr)

Burcu Sorgunlu (Coordinator for the Students From Turkey)

Istanbul University,  
Sciences Faculty,  
Department of Physics,  
34459 Vezneciler-Istanbul,  
Turkey  
e-mail : [iscbpu4@istanbul.edu.tr](mailto:iscbpu4@istanbul.edu.tr)

We would appreciate your efforts in circulating this message to colleagues and students who would be interested in participating/contributing to this event.

Prof. Dr. Baki AKKUS  
President of Turkish Physical Society

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**INFORMATION ON AEGAEUM  
CONFERENCE, ORGANIZED BY  
UNIVERSITY OF LIÈGE, UCLA, J. PAUL  
GETTY MUSEUM, *EPOS* :  
*RECONSIDERING GREEK EPIC AND  
AEGEAN BRONZE AGE ARCHAEOLOGY,*  
APRIL 20-23, 2006**

**PRE-REGISTRATION**

*Pre-registration is required* due to space limitations at all venues (see attached form). Attendees can only be admitted to the AEGAEUM events at the Getty Villa on Friday, April 21st, with an official Getty Villa ticket AND advanced registration (there will be a guest list at the Villa's front gate on Pacific Coast Highway).

Registration admits you to events on all four days of the conference and includes lunch on Saturday and Sunday as well as receptions on Thursday and Friday. A copy of the program and abstracts will also be provided to all registrants at the conference.

To register, please complete the attached form and send it with a check made out to **Regents of the UC** to Heather Gould at UCLA, by APRIL 10th, in order to receive Villa ticket by mail, which will confirm your registration for the conference. You may also request confirmation by e-mail if you do not plan to attend the Friday events at the Getty Villa.

**DIRECTIONS TO CONFERENCE VENUES:**

**FRIDAY, APRIL 21st**

**Getty Villa  
17985 Pacific Coast Highway  
Pacific Palisades 90272**

Entrance only from northbound lane of Pacific Coast Highway. For directions, see <http://www.getty.edu/visit/hours/>

Parking at the Getty Villa costs \$7 per day per car. We advise you to carpool or take a bus if possible. The Getty is served by a bus route (see below).

**Thursday APRIL 20st. and Friday APRIL 22nd-23rd:**

**UCLA**

**Directions for getting to UCLA:**

<http://www.transportation.ucla.edu/visitors/navigating/directions/index.htm>

Campus Map : [http://www.transportation.ucla.edu/pdf/maps/campusmap\\_sep2004.pdf](http://www.transportation.ucla.edu/pdf/maps/campusmap_sep2004.pdf)

Map of Parking Structures :

<http://www.transportation.ucla.edu/maps/parkmap/parkmap.htm>

### **UCLA PARKING STRUCTURE RECOMMENDATIONS FOR AEGAEUM CONFERENCE:**

- Thursday, April 20st: Royce Hall 314 (parking in Lot #5)  
*Enter campus at Sunset & Westwood*
- Saturday, April 22nd : UCLA Faculty Center (parking in Lot #2)  
*Enter campus at Hilgard & Westholme*
- Sunday, April 23rd: Lenart Auditorium  
Fowler Museum of Cultural History  
(parking in Lots #4 & #5)  
*Enter campus at Sunset & Westwood*

Parking at UCLA is \$8.00 per car per day. We advise you to carpool or take a bus if possible.

### **BUS TRANSPORTATION**

Both the Getty Villa and UCLA are served by major bus routes. Information is available at the following websites :

[www.bigbluebus.com/](http://www.bigbluebus.com/)

[www.mta.net/](http://www.mta.net/)

## **PROGRAM**

### **11th International AEGAEUM conference EPOS : Reconsidering Greek Epic and Aegean Bronze Age Archaeology**

#### **Wednesday April 19, 2006**

Arrivals and check-in to hotels

#### **Thursday April 20, 2006**

**Daytime:** *Optional sightseeing (Getty Center, downtown LA, Disneyland, etc.)*

#### **Evening event hosted by UCLA Department of Classics**

**(Doubletree shuttle to Dickson Plaza/flagpole, or walk through campus)**

**7 pm** Royce Hall 314 (UCLA Campus: shuttle from Doubletree)

Welcome and opening: J. Papadopoulos, R. Laffineur, S. Morris

Opening Lecture: Stanley **LOMBARDO** – *“Homeric Performance”*

Reception (Royce Hall 306 terrace) -

Sponsored by UCLA Department of Classics



**Friday April 21**

**Site: The Getty Villa, Malibu**

7:45 am Bus leaves Doubletree for Malibu (Getty Villa)

8:30-8:45 Coffee, welcome (Ken Lapatin, Getty Museum)

**I. Epos and Logos: Homer and Troy**

9:00-9:25 Malcolm **WIENER** (Connecticut),  
*The Historicity of Homer*

9:25-9:50 Marianna **NIKOLAIDOU** and Dimitra **KOKKINIDOU**  
(Cotsen Institute of Archaeology, UCLA),  
*Epos, History, Meta-history in Aegean Bronze Age Studies*

9:50-10:15 Susan **SHERRATT** (Ashmolean Museum),  
*Homer's Trojan War: The Use and Abuse of Archaeology*

10:15 Coffee break

11:00 Maureen **BASEDOW** (Miami University),  
*Troy without Homer: The Transition from the Bronze Age  
to the Iron Age*

11:25 Sarah P. **MORRIS** (UCLA),  
*The Iron Curtain: Homer, Finley and the Bronze Age*

11:50 Discussion

12:00 Lunch in Founders Room for speakers and session chairs

1-3 pm Visit the J. Paul Getty Museum exhibitions

**II. Epos and Eikon: Art, Poetry and Writing**

3 pm John **YOUNGER** (University of Kansas),  
*The Mycenaean Bard: The Evidence for Sound and Song*

3:25 Robert **LAFFINEUR** (University of Liège),  
*Homeric Similes: A Bronze Age Background?*

3:50 Edmund F. **BLOEDOW** (University of Ottawa),  
*Homer and the Depas Amphikypellon*

4:15 Refreshments break

4:45 L. Vance **WATROUS** (University at Buffalo),  
*The Thera Frescoes: Oral Literacy and Epic Poetry*

5:10 Andreas **VLACHOPOULOS** (Akrotiri excavation),  
*Motifs of Early Greek Poetry and the Wall Paintings of Xeste 3, Akrotiri*

5:35 Marie Louise Bech **NOSCH** (University of Copenhagen),  
*Minoan, Mycenaean, and Homeric Textiles*

6:00 Discussion

6:30 Reception at the Getty Villa

8:00-8:30 Bus returns to Westwood hotels

**Saturday April 22**

**Site: UCLA Faculty Center** (walk or shuttle from Doubletree)

8:30 a.m. Coffee, registration

**III. Wanax and Basileus: Rulership in Homer and Archaeology**

- 9:00 Pierre **CARLIER** (Université de Paris X – Nanterre),  
*Are the Homeric basileis Big Men ?*
- 9:25 Thomas G. **PALAIMA** (University of Texas at Austin),  
*Mycenaean Society and Kingship: Cui Bono?  
A Counter-Speculative and Homeric View*
- 9:55 Bryan E. **BURNS** (University of Southern California),  
*Epic Reconstructions: Homeric Palaces and Mycenaean Architecture*
- 10:20 Discussion
- 10:30 Coffee break
- 11:00 Georges **KORRES** (University of Athens),  
*Mythos, Utopias Epos and Mycenaean Pylos. New Evidence*
- 11:25 Brendan **BURKE** (University of Victoria),  
*Gordion of Midas and the Homeric Age*
- 11:55 Eric H. **CLINE** (George Washington University) and  
Assaf **YASUR-LANDAU** (Tel Aviv University),  
*Poetry in Motion: Canaanite Rulership and Minoan Narrative at Kabri*
- 12:20 Discussion
- 1 pm Buffet luncheon (UCLA Faculty Center)

**IV. Beyond Elite: Homeric Society and Archaeology**

- 2:00 Barbara A. **OLSEN** (Vassar College),  
*The World of Penelope: Women in Palatial Society in Homer and  
Linear B*
- 2:25 Kim **SHELTON** (University of California, Berkeley),  
*Foot Soldiers and Cannon Fodder: The Underrepresented Majority of the  
Mycenaean Civilization*
- 2:50 Helene **WHITTAKER** (University of Tromsø),  
*Sacrificial Practice in Homer and in the Bronze Age*
- 3:15 Discussion
- 3:30 Coffee break
- 4:00 Sigrid **DEGER-JALKOTZY** (University of Salzburg),  
*Mycenaean Elements in Homer: A View from the Post-Palatial Period*
- 4:25 Andrea **GUZZETTI** (Bryn Mawr College),  
*Homer and the Dorians: The Reasons of a Missed Encounter*
- 5:00 RESPONDENT: Carol **THOMAS** (University of Washington)

Evening free for dinner in Westwood, etc.

**Sunday April 23**

**Site: Cotsen Institute of Archaeology, UCLA**

**Lenart Auditorium, Fowler Museum of Cultural History, UCLA** (walk or shuttle from Doubletree Hotel)

8:30 a.m. Coffee, registration

**V. Epos and Mythos**

- 9:00 Ernestine S. **ELSTER** (Cotsen Institute, UCLA),  
*Odysseys before Homer: Trade and Adventure in Aegean Prehistory*
- 9:25 Cynthia S. **COLBURN** (Pepperdine University),  
*The Symbolic Significance of Distance in the Homeric Epics  
and the Bronze Age Aegean*
- 9:55 Break
- 10:30 Olga **POLYCHRONOPOULOU** (Athens),  
*Myth and Archaeology. A still Persisting Interaction*
- 10:55 Fritz **BLAKOLMER** (University of Vienna),  
*Fighting Heroes on Minoan Palace Walls at Knossos ?*
- 11:20 Massimo **PERNA** (Istituto Universitario “Suor Orsola Benincasa”  
Napoli),  
*Homère et les tablettes “de bois replié”*
- 11:45 Discussion

12:30 Luncheon in amphitheater of Fowler Museum; visit Museum

**VI. Epos and Topos: Homeric Landscapes**

- 2 p.m. Oliver **DICKINSON** (York),  
*Aspects of Homeric Geography*
- 2:25 Philip P. **BETANCOURT** (Temple University, Philadelphia),  
*Homer's Description of Amnissos and the Eileithyia Cave:  
Poetry and Reality*
- 2:55 Aleydis **VAN DE MOORTEL** (University of Tennessee),  
*The Site of Mitrou and the North Euboean Gulf in Homeric Times*
- 3:15 Break
- 4:00 Arianna **RIZIO** (Italy)  
*Homeric Topography in the Peloponnese*
- 4:25 Anne P. **CHAPIN** (Brevard College) and Louise A. **HITCHCOCK**  
(University of Melbourne),  
*Homer and Laconian Topography: This Is What the Book Says, and This  
Is What the Land Tells Us*
- 5:00 Final discussion

**Evening: Greek Easter Celebration (for speakers, chairs)**

## **PRE-REGISTRATION FORM**

**11th International AEGAEUM Conference**  
Organized by University of Liège, UCLA, J. Paul Getty Museum

April 20-23, 2006  
**Los Angeles, California**  
**EPOS : Reconsidering Greek Epic and Aegean Bronze Age Archaeology**

Name:.....

Institutional affiliation:.....

Address:.....

.....

.....

Telephone: ..... Fax:.....

E-mail:.....

**I will be attending the UCLA-Getty EPOS conference on :**

\_\_\_\_\_ *Thursday, April 20th* at UCLA Royce Hall 314

\_\_\_\_\_ *Friday, April 21st* at the J. Paul Getty Museum (Getty Villa)

\_\_\_\_\_ *Saturday, April 22nd* at UCLA Faculty Center

\_\_\_\_\_ *Sunday, April 23rd* at UCLA Lenart Auditorium, Fowler Museum

**I have enclosed my check, made out to Regents of the UC,  
for \$40\_\_\_\_\_ or \$20\_\_\_\_\_ (student, with ID)**

**MAIL OR FAX PRE-REGISTRATION FORM BY APRIL 10th TO:**

Heather Gould  
UCLA Department of Classics  
100 Dodd Hall  
405 Hilgard Avenue  
Los Angeles, California 90095-1417 USA  
Fax +310-206-1903  
E-mail: [gould@humnet.ucla.edu](mailto:gould@humnet.ucla.edu)

**IRENE LEVI-SALA ANNUAL RESEARCH  
SEMINAR: “MINOAN ART IN THE  
MEDITERRANEAN KOINE”, THURSDAY,  
11 MAY 2006, W.A. MINKOFF SENATE  
HALL, SAMUEL AND MILADA AYRTON  
UNIVERSITY CENTER**

The Sala Family Trust, London  
Canada Chair in Near Eastern Archaeology  
Department of Bible, Archaeology and Ancient Near Eastern Studies  
Ben-Gurion University of the Negev

**PROGRAM**

09:30-10:00

Registration and Refreshments

10:00-12:30

MORNING SESSION

Opening Remarks

Prof. E.D.Oren, Coordinator

Prof. R. Carmi, Acting President, BGU

H.E. Ambassador M.Spinellis, Greece

AWARDING OF THE IRENE LEVI-SALA BOOK PRIZE

Guest Scholar:

Prof. Nanno Marinatos

Department of Classics and Mediterranean Studies

University of Illinois at Chicago, USA

The Tell el-Dab'a Frescoes and the Mediterranean Cultural  
Koine

12:30-14:00

LUNCH

14:00-16:00

AFTERNOON SESSION

Prof. Nanno Marinatos

How Minoan are the Theran Frescoes?

Panel Discussion

Prof. T.Dothan, Hebrew University of Jerusalem

Prof. E.D.Oren, Ben-Gurion University of the Negev

Prof. M. Artzy, Haifa University  
Dr. A. Yasur-Landau, Tel Aviv University

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The Athens - Greece Society of the Archaeological  
Institute of America



cordially invites you to a lecture a

by

Professor Emeritus Erik Østby (University of Bergen)

*“Continuation, Renovation and Innovation: the Birth of the  
Doric Temple”*

Tuesday, April 11<sup>th</sup> 2006 at 7.30 p.m.

in the library of the Canadian Institute in Greece

Dionysiou Aiginitou 7 (3<sup>rd</sup> floor)

Ilisia

(nearest Metro station: Megaro Mousikis)



**THE COLORS OF CLAY: SPECIAL  
TECHNIQUES IN ATHENIAN VASES,  
SYMPOSIUM, JUNE 15, 16 & 17, 2006, THE  
J PAUL GETTY MUSEUM AT THE  
GETTY VILLA 17985 PACIFIC COAST  
HWY, MALIBU, CALIFORNIA**

Exhibition

On view June 8 - September 4, 2006

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A major loan exhibition, The Colors of Clay brings together approximately one hundred vases produced in Athens during the Archaic and Classical periods. The exhibition explores the use of the special decorative techniques, a subject never before examined as a whole. The symposium brings together an international group of scholars, curators, conservators, and scientists to explore and address issues raised by this exhibition including:

- Social Contexts for Athenian Vases in Special Techniques
- Conservation, Analysis, Experimentation
- Artists, Workshops, and Production
- Ancient Markets and Exchange

To receive more information, when it becomes available, please send an email to [villaprograms@getty.edu](mailto:villaprograms@getty.edu)

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## **31ST INTERNATIONAL PATRISTIC, MEDIEVAL, AND RENAISSANCE STUDIES CONFERENCE, VILLANOVA UNIVERSITY, OCTOBER 13-15, 2006**

The Patristic, Medieval, and Renaissance Studies Conference at Villanova University invites you to participate in its 31st International PMR Conference, October 13-15, 2006. The PMR invites Papers, Panels, or Sponsored Sessions in all areas and topics in late antiquity/patristics, Byzantine Studies, Medieval Studies, Islamic Studies, Jewish Studies, and renaissance/reformation studies. We especially encourage papers addressing the plenary theme, Structure, Space, and Meaning, but all areas are open.

Abstracts and Panel Proposals must be postmarked or emailed to [pmr.conference@villanova.edu](mailto:pmr.conference@villanova.edu) by May 15, 2006 to be considered. Notice of papers accepted will be made by June 15, 2006. Please visit <http://www3.villanova.edu/augustinianinstitute/PMR.htm> for further details.

The central theme of the conference is "Structure, Space, and Meaning: The Walls and Portals of Premodern Worlds," featuring Annabel J. Wharton, William B. Hamilton Professor of Art and Art History at Duke University AND Richard Kieckhefer, Professor of Religion and History at Northwestern University. We particularly invite papers that will reflect on architecture and space as 'meaning-making' AND/OR on the use of structural or architectural metaphors in texts and artefacts of premodern cultures of the Common Era.

We look forward to seeing you in October!

Kevin Hughes  
[kevin.hughes@VILLANOVA.EDU](mailto:kevin.hughes@VILLANOVA.EDU)

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

**ΠΡΟΚΗΡΥΞΗ**

**Η ΥΠΟΤΡΟΦΙΑ ΤΗΣ ΕΛΛΗΝΙΚΗΣ**  
**ΕΤΑΙΡΕΙΑΣ ΓΙΑ ΜΕΤΑΠΤΥΧΙΑΚΕΣ**  
**ΣΠΟΥΔΕΣ ΠΟΛΙΤΙΚΟΥ ΜΗΧΑΝΙΚΟΥ**  
**ΣΤΟ ΠΑΝΕΠΙΣΤΗΜΙΟ YORK ΤΗΣ**  
**ΑΓΓΛΙΑΣ, 2006-2007**

Η ΕΛΛΗΝΙΚΗ ΕΤΑΙΡΕΙΑ για την Προστασία του Περιβάλλοντος και της Πολιτιστικής Κληρονομιάς με χορηγία του **Ιδρύματος Α. Γ. Λεβέντη** προκηρύσσει διαγωνισμό για μία (1) υποτροφία για μεταπτυχιακές σπουδές διάρκειας ενός (1) έτους για το ακαδημαϊκό έτος 2006-2007 στο **Centre for Conservation Studies του Πανεπιστημίου York (Αγγλία)** σε θέματα συντήρησης μνημείων.

Η θέση προκηρύσσεται καταρχήν για Έλληνες, Ελληνοκυπρίους και ελληνικής καταγωγής **πολιτικούς μηχανικούς**. Αν δεν υπάρξει ενδιαφέρον θα δοθεί σε **αρχιτέκτονες μηχανικούς**. Οι υποψήφιοι πρέπει να έχουν άριστη γνώση της αγγλικής γλώσσας και, στην περίπτωση που είναι υπάλληλοι (Δημοσίου, Οργανισμών Τοπικής Αυτοδιοίκησης, ΝΠΔΔ ή ιδιωτικοί), να μπορούν να εξασφαλίσουν άδεια απουσίας ή εκπαιδευτική ενός πλήρους έτους, η οποία να αρχίζει την 1.9.2006.

Οι ενδιαφερόμενοι πρέπει να υποβάλουν αίτηση στην ΕΛΛΗΝΙΚΗ ΕΤΑΙΡΕΙΑ, όπου θα αναγράφονται τα πλήρη στοιχεία του αιτούντος (διεύθυνση, τηλέφωνο κ.λπ.). Η αίτηση θα συνοδεύεται από συνοπτικό αλλά πλήρες βιογραφικό σημείωμα (σπουδές, ομιλούμενες γλώσσες, προγενέστερη πείρα σε θέματα συντήρησης, δημοσιεύματα κ.λπ. με όλα τα σχετικά αποδεικτικά).

Οι υποψήφιοι πρέπει να δηλώσουν απαραίτητως στην αίτησή τους κατά πόσον έχουν άλλη τυχόν υποτροφία για μεταπτυχιακές σπουδές στο Πανεπιστήμιο York της Αγγλίας για το έτος 2006-2007. Εάν τυχόν έχει χορηγηθεί άλλη υποτροφία στον υποψήφιο, τούτο δεν αποκλείει τη συμμετοχή του στον παρόντα διαγωνισμό. Εάν όμως ο υποψήφιος επιλεγεί για τη χορήγηση της παρούσας υποτροφίας, προϋπόθεση της χορήγησής της είναι η παραίτηση από οποιαδήποτε άλλη παράλληλη υποτροφία.

Οι **αιτήσεις** μπορούν να υποβληθούν ιδιοχείρως στο γραφείο της ΕΛΛΗΝΙΚΗΣ ΕΤΑΙΡΕΙΑΣ, Τριπόδων 28, 10558 Αθήνα (Πλάκα), καθημερινά, 10.00-17.00, εκτός Σαββάτου και Κυριακής, τηλ. 2103225245, 2103226693, να σταλούν με fax (2103225240) ή να σταλούν ταχυδρομικώς (στην Ελληνική Εταιρεία), το αργότερο μέχρι

την Τρίτη 25 Απριλίου 2006 (Πληροφορίες: Ειρήνη Γρατσία, 210-3225245 εσ. 3, 210-3226693, [sak@ellinikietairia.gr](mailto:sak@ellinikietairia.gr), [www.ellinikietairia.gr](http://www.ellinikietairia.gr))

Οι υποψήφιοι θα πρέπει να περάσουν γραπτή και προφορική εξέταση στην αγγλική γλώσσα την Πέμπτη 4 Μαΐου 2006, στις 15:00 στα γραφεία της Ελληνικής Εταιρείας. Οι επιτυχόντες θα έχουν προσωπική συνέντευξη με την Εξεταστική Επιτροπή Ειδικών Καθηγητών και Επιστημόνων, τη Δευτέρα 15 Μαΐου 2006, 15:00-17:00. Τα αποτελέσματα θα ανακοινωθούν την Παρασκευή 19 Μαΐου 2006 στα γραφεία της Ελληνικής Εταιρείας, ώρες 10:00-17:00.

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**UNIVERSITY of GLASGOW, SCOTTISH**  
**UNIVERSITIES ENVIRONMENTAL**  
**RESEARCH CENTRE, EAST KILBRIDE,**  
**SCOTLAND (SUERC), AMS SCIENTIST**  
**(2 POSTS)**

**REF 12109/DPV/A3 RA1A £20,044 - £30,002 per annum**

**REF 12110/DPV/A3 RA2 £27,929 - £36,959 per annum**

The SUERC operates a high performance accelerator mass spectrometer for environmental science  $^{10}\text{Be}$ ,  $^{14}\text{C}$ ,  $^{26}\text{Al}$ ,  $^{36}\text{Cl}$ ,  $^{41}\text{Ca}$  &  $^{129}\text{I}$  measurements. A second spectrometer with compound-specific radiocarbon analysis and positive-ion AMS capabilities is due in 2006. Working with the other AMS staff, and partner radiocarbon and cosmogenic isotope groups, you will develop and apply these tools in pursuit of relevant science.

You will share responsibilities for routine and experimental work, liaison with the user community, collaborative and in-house research, facility development, and administrative duties as required. This will require a strong commitment to collaborative research, a flexible attitude to duties and good interpersonal skills.

Applicants with a relevant PhD and postdoctoral experience, or similar, in some or all of the following would be preferred: AMS physics, instrumentation, measurement and procedures in general, and NEC spectrometers in particular; cosmogenic isotope analysis, including of in situ  $^{14}\text{C}$ , and cosmogenic isotope science; compound-specific small sample radiocarbon analysis and science.

Appointees to RA2 are expected to take the initiative in research and development, including independent work and significant responsibility for collaborator interaction and training at a supervisory level as necessary.

Posts are available for three years in the first instance.

Further enquiries to Dr S Freeman at [toodeep@suerc.gla.ac.uk](mailto:toodeep@suerc.gla.ac.uk). Applications in writing, including a CV and the names of two referees, to Mrs M Kerr at SUERC, Scottish Enterprise Technology Park, East Kilbride, G75 0QF, UK. Closing date is 30 April 2006.

**ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS**  
**ARCANE (ASSOCIATED REGIONAL**  
**CHRONOLOGIES FOR THE ANCIENT**  
**NEAR EAST)**

Dear colleagues,

The Steering Committee of ARCANE (Associated Regional Chronologies for the Ancient Near East) is pleased to announce the launch of this 5-year international European Science Foundation research project with the aim of synchronizing cultures and civilizations of the Eastern Mediterranean and the Ancient Near East in the third millennium BC.

The ultimate goal of the ARCANE project is to produce a reliable relative and absolute chronology of the entire Near East and East Mediterranean primarily based on the identification and characterisation of sequences of third millennium BC benchmark assemblages with high degrees of chronological integrity.

Twelve regions have been identified for this purpose, and for each region there is a team headed by well known scholars. The Aegean region team co-ordinator is Christos Doumas, Cyprus team Edgar Peltenburg and the Western (and Central) Anatolian team is headed by Mehmet Ozdogan and Turan Efe. There are also interdisciplinary transversal teams dealing with radiocarbon and other dating technologies, for example.

The project seeks the active collaboration of field directors with securely dated assemblages. For further details about this initiative, and contact addresses, see

<http://www.uni-tuebingen.de/arcane/index.html>

\*\*\*\*\*

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## [INTERNET SITES](#)

# [BRONZE AGE SHIPWRECK EXCAVATION AT ULUBURUN](#)



*Excavation: 1984-1994*

*Project Directors: [Cemal Pulak](#) and [George F. Bass](#)*



Uluburun promontory as viewed from the south. The wreck site is located directly to the right of the INA research vessel *Virazon*. (Photo: INA)

The Institute of Nautical Archaeology's (INA) shipwreck excavation between 1984 and 1994 at Uluburun, near Kas in southern Turkey, brought to light one of the wealthiest and largest known assemblages of Late Bronze Age items found in the Mediterranean. The shipwreck lay on a steep rocky slope at a depth of 44 to 52 m, with artifacts scattered down to 61 m. The ship's cargo, perhaps a royal one, comprised mostly raw materials, but manufactured goods were also present. The main cargo was approximately 10 tons of what appears to be primarily Cypriot copper in the form of 354 flat, usually four-handled rectangular oxhide [ingots](#), and about 120 discoid "bun," or piano-convex ingots. Also on board was a ton of the earliest securely dated tin ingots in both bun and four-handled oxhide shapes. Dendrochronological dating of a small piece of presumably fresh-cut firewood or dunnage suggests a date of 1306 B.C.E., or sometime shortly thereafter, for the sinking of the ship.

Approximately one ton of terebinth resin carried in most of the nearly 150 Canaanite jars from the site may have been for use as incense. The earliest known intact [ingots of glass](#), some 175 of discoid shape in cobalt blue, turquoise, and a unique lavender example, are likely the materials mentioned in tablets from Ras Shamra/Ugarit and Amarna as items traded from the Syro-Palestinian coast. Also carried on board as [raw material](#) were logs of Egyptian ebony (*Dalbergia melanoxyton*); ostrich eggshells (probably intended for use as containers); elephant tusks, and more than a dozen hippopotamus teeth; opercula from murex seashells (a possible ingredient for incense); and modified tortoise carapaces (almost certainly sound-boxes for stringed musical instruments).

The largest group of manufactured goods on the ship consists of Cypriot fine- and coarseware [ceramics](#). Nine large storage jars contained Cypriot finewares, pomegranates, and possibly olive oil. Four faience drinking cups were crafted as the heads of rams and,

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One of 354 four-handled copper 'oxhide' ingots found on the Uluburun shipwreck. (Photo: INA)

[INGOTS PAGE](#)

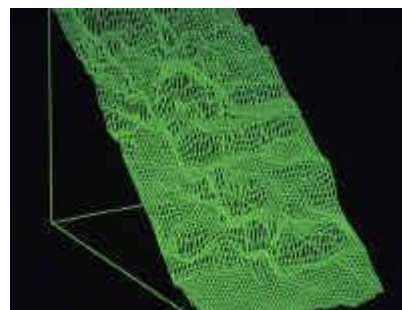
in one case, a woman. Poorly preserved bronze and copper caldrons and bowls suggest these must have also been a component of the manufactured part of the cargo.



Egyptian scarab  
naming queen  
Nefertiti.(Photo: INA)  
[SCARABS & SEALS](#)  
[PAGE](#)

Canaanite [jewelry](#) included bracelets and gold pendants. Scrap gold and silver was also found in some quantity, with Egyptian objects of gold, electrum, silver, and stone among them, including a unique [scarab](#) bearing the cartouche of queen Nefertiti. Thousands of [beads](#) are of glass, agate, carnelian, quartz, faience, ostrich eggshell, and amber. Other artifacts included two duck-shaped [ivory](#) cosmetics containers, a trumpet carved from a hippopotamus incisor into the shape of a ram's horn, and more tin vessels and jewelry than had previously been found throughout the Bronze Age Mediterranean. Bronze [tools](#) comprise awls, drills, chisels, axes, adzes, and a saw. Also found were bronze spearheads, arrowheads, daggers, swords, and stone maceheads. Lead net and line sinkers, netting needles for repairing nets, fishhooks, a harpoon, and a bronze trident are evidence of fishing from the ship. There were two wooden writing boards (diptychs), each consisting of a pair of leaves joined with an ivory hinge, and slightly recessed to receive wax writing surfaces. These boards represent by far the earliest examples of their type. A [bronze female figurine](#), partly clad in gold, is similar to those of Syro-Palestinian origin and may have served as the ship's protective deity.

While the majority of personal possessions and shipboard items, such as tools, anchors, and oil lamps, indicate that the ship and its crew were Canaanite or Cypriot, the presence of at least two Mycenaean on board is revealed by a pair of lentoid seals, a pair of swords, a pair of pectorals with glass relief beads, spearheads, curved knives, razors, chisels, amber [beads](#) of Mycenaean types, and more than two dozen pieces of fine- and coarseware [pottery](#). A bronze pin, spearheads, and a stone ceremonial scepter/mace head, with its closest parallel (but of bronze) found in Rumania, suggest connections between the ship, or at least with some of those on board, and lands to the north of mainland Greece.



Contour map of the site topography.(Drawing: M.Smith)

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Please visit the site: [http://ina.tamu.edu/ub\\_main.htm](http://ina.tamu.edu/ub_main.htm)

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## **BRONZE AGE SHIPWRECK** **EXCAVATION AT CAPE** **GELIDONYA**

*Excavation: 1960*

*Project Director: [George F. Bass](#)*



Cape Gelidonya, sometimes known also as Khelidonya or Silidonya Burnu, is the Chelidonian promontory of Pliny (*Natural History* 5.27.97) in Lycia. The cape marks the western extremity of the Bay of Antalya. Running south from the cape is a string of five small islands, the Chelidoniae of antiquity, called Celidoni by Italian sailors, and later, Selidonlar by the Turks, but today known simply as Besadalar (Five Islands). Strabo (14.2.1 and 14.3.8) noted only three of them and Pliny (*Natural*

*History* 5.35.1 31 ) only four.

In about 1200 BC, a merchant vessel apparently ripped its bottom open on a pinnacle of rock that nears the surface of the sea just off the northeast side of Devecitasi Abasi, the largest of the islands (36° 11'40" N, 30° 24'Z7" E). Spilling artifacts in a line as she sank, the ship eventually settled with her stern resting on a large boulder 50 meters or so away to the north; her bow landed on a flat sea-floor of rock. At some point during the hull's disintegration, the stern slipped off the boulder into a natural gully formed by the boulder and the base of the island.

In 1954, Kemal Aras, a sponge diver from Bodrum, stumbled on the wreck's main concentration of cargo, between 26 and 28 meters deep. Four years later, he described it to American journalist and amateur archaeologist Peter Throckmorton, who was cataloguing ancient wrecks along the southwest Turkish coast. Throckmorton was able to locate the site in 1959 and, recognizing its great age, asked the University Museum of the University of Pennsylvania if it would organize its excavation.



The expedition camp in 1960 on the narrow beach (to the right). (Photo:INA)

The subsequent excavation of this Late Bronze Age site, between the middle of June and the middle of September 1960, was the first shipwreck excavation carried to completion on the sea bed, the first directed by a diving archaeologist, and the first conducted following the standards of terrestrial excavation. Visits to the site in the late 1980s by a team from the Institute of Nautical Archaeology (INA) at Texas A&M University showed, after more artifacts were recovered, how the ship had sunk. The sinking has been dated to the late thirteenth century BC by two nearly intact [Mycenaean IIIB stirrup jars](#) discovered on these visits and by a radiocarbon date of 1200 BC +/-50 years from brushwood on the wreck.

Because of a lack of protective sediment, most of the ship's hull had been devoured by marine borers, especially teredos. We know, however, that its planks were held together

with pegged mortise-and-tenon joints, the method of ship construction used in Greek and Roman times. Furthermore, its [brushwood dunnage](#) gave for the first time meaning to the brushwood Odysseus placed in a vessel he had built (*Odyssey*. 5.257). The distribution of cargo originally led to a published estimate of not much longer than 10 meters for the hull, but recent discoveries suggest that this estimate was low.



Scrap bronze tools with modern handles and two stone hammers. (Photo:INA)

The bulk of the cargo consisted of the ingredients for making bronze implements, including both [scrap bronze tools](#) from Cyprus, intended to be recycled, and [ingots](#) of both copper and tin, meant to be mixed to form new bronze. The scrap, at least partly carried in wicker baskets, included broken plowshares, axes, adzes, chisels, pruning hooks, a spade, knives, and casting waste. The copper, mined on Cyprus, was shipped as 34 flat, four-handled ingots, weighing on average 25 kilograms apiece, of the type once thought to imitate dried ox hides in a pre-monetary form of currency; discoid "bun ingots," averaging only about 3 kilograms each; and fragments chiseled from each type. The tin ingots were

too badly corroded to reveal their original shapes, but seabed evidence suggests that at least one was a rectangular bar. In addition, there were 18 much smaller, flat, ovoid ingots, at least one of them bronze, that seem to have been cast in multiples of 0.5 kilograms.

The discovery on the wreck of a bronze swage, stone hammerheads of the kinds sometimes used for metalworking, many stone polishers and a whetstone, and a large, flat close-grained stone that could have served as an anvil suggest that a tinker may have been on the voyage.

The wreck's importance derives from the historical conclusions drawn from it. At the time of its excavation, it was generally accepted that Mycenaean Greeks had a monopoly on maritime commerce in the eastern Mediterranean during the latter part of the Late Bronze Age, and that Phoenician sailors did not begin their great tradition of seafaring until the following Iron Age. Indeed, the main reason that Homer's *Odyssey* has been commonly dated to the eighth century BC by modern classicists is his frequent mention of Phoenician sailors and bronze-smiths.

The Cape Gelidonya shipwreck suggests new possibilities. The southeast end of the wreck, most probably its stern, held what may be considered personal possessions of crew and/or passengers, as opposed to the mostly Cypriot cargo and the shipboard mixture of Mycenaean, Cypriot, and Syrian pottery. These possessions included four [scarabs](#) and a scarab-shaped plaque, an oil lamp, stone mortars, more than 60 stone [pan-balance weights](#) (including Egyptian *qedets*, and Syrian *nesefts* and *shekels*), and a merchant's [cylinder seal](#), all apparently of Syrian, or Canaanite, origin; a razor is of Egyptian rather than Mycenaean type.



The conclusion was that the ship was probably Canaanite, or early Phoenician (the Canaanites being simply Bronze Age Phoenicians), although because so many Near Eastern artifacts were found on Cyprus from the same period, there was the possibility that the ship was Cypriot. Library research revealed that, with a single exception, contemporary Egyptian artists associated the trade in four-handled copper ingots, and tin ingots, solely with Syrian merchants (the only known mold for casting four-handled copper ingots was found after the Cape Gelidonya

Syrian cylinder seal with the long dead merchant's "signature" and its clay impression. (Photo:INA)

excavation, in a palace at Ras-ibn-Hani, the port of Ras Shamra/Ugarit, the greatest of Late Bronze Age Syrian port cities). Furthermore, the only foreign merchant ships depicted in Egyptian art of the time are Syrian. All this suggested that Homer's Phoenicians are not anachronistic in the Late Bronze Age of the Trojan War. The discovery in 1994 of the Cape Gelidonya ship's Syro-Canaanite or Cypriot stone anchor bolstered my contention that the ship was of Near Eastern origin.

(text adapted from G.F. Bass, "Cape Gelidonya," *Shipwrecks in the Bodrum Museum of Underwater Archaeology*, Bodrum Museum of Underwater Archaeology Publications **3**, 25-35.)

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**Please visit the site: <http://ina.tamu.edu/capegelidonya.htm>**

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## CULTURE & LIFESTYLE | 27.02.2006, BRONZE AGE SKY DISC DECIPHERED



*Großansicht des Bildes mit der Bildunterschrift: 3,600 years ago, this sky disc was used as an astronomical clock*

**A group of German scientists has deciphered the meaning of one of the most spectacular archeological discoveries in recent years: The mystery-shrouded sky**

**disc of Nebra was used as an advanced astronomical clock.**

The purpose of the 3,600 year-old sky disc of Nebra, which caused a world-wide sensation when it was brought to the attention of the German public in 2002, is no longer a matter of speculation.

A group of German scholars who studied this archaeological gem has discovered evidence which suggests that the disc was used as a complex astronomical clock for the harmonization of solar and lunar calendars.

"This is a clear expansion of what we knew about the meaning and function of the sky disc," said archeologist Harald Meller.

### **A thirteenth month?**



*Bildunterschrift: Großansicht des Bildes mit der Bildunterschrift: The sky disc of Nebra was not all moonshine*

Unlike the solar calendar, which indicates the position of the earth as it revolves around the sun, the lunar calendar is based on the phases of the moon. A lunar year is eleven days shorter than the solar year because 12 synodic months, or 12 returns of the moon to the new

phase, take only 354 days.

The sky disc of Nebra was used to determine if and when a thirteenth month -- the so-called intercalary month -- should be added to a lunar year to keep the lunar calendar in sync with the seasons.

"The functioning of this clock was probably known to a very small group of people," Meller said.

### **Bronze Age science**





*Bildunterschrift: A slice of prehistory for romantic sky gazers*

The 32-centimeter-wide (seven-inch) bronze disc with gold-leaf appliqué representing the sun, the moon, and the stars is the oldest visual representation of the cosmos known to date. A cluster of seven dots has previously been interpreted as the Pleiades constellation as it appeared 3,600 years ago.

The explanation of the disc's purpose sheds new light on the astronomical knowledge and abilities of the Bronze Age people, who used a combination of solar and lunar calendars as important indicators for agricultural seasons and passage of time.

"The sensation lies in the fact that the Bronze Age people managed to harmonize the solar and lunar years. We never thought they would have managed that," Meller said.

According to astronomer Wolfhard Schlosser of the Ruhr University at Bochum, the Bronze Age sky gazers already knew what the Babylonians would describe only a thousand years later.

"Whether this was a local discovery, or whether the knowledge came from afar, is still not clear," Schlosser said.

### **From Saxony-Anhalt to Babylon**



*Bildunterschrift: [Großansicht des Bildes mit der Bildunterschrift: The sky disc of Nebra was found near Europe's oldest observatory in Goseck](#)*

Ever since the disc was discovered, archaeologists and astronomers have been puzzled by the shape of the moon as it appears on the disc.

"I wanted to explain the thickness of the crescent on the sky disc of Nebra because it is not a new moon phase," said Hamburg astronomer Ralph Hansen.

In his quest to explain why the Nebra astronomers created a sky map with a four or five days old moon on it, Hansen consulted the "Mul-Apin" collection of Babylonian documents from the 7th and 6th centuries B.C.

These cuneiform writings represent, according to Hansen, a compendium of "astronomic knowledge from the earliest times." They also contain a calculation rule for the crescent that looks strikingly similar to the one from Nebra.

According to the ancient Babylonian rule, a thirteenth month should only be added to the lunar calendar only when one sees the constellation of the moon and the Pleiades exactly as they appear on the Nebra sky disc.

### **Knowledge comes and goes**



*Bildunterschrift: [Großansicht des Bildes mit der Bildunterschrift: The sky disc of Nebra was first discovered by treasure hunters](#)*

The Bronze Age astronomers would hold the Nebra clock against the sky and observe the position of the celestial objects. The intercalary month was inserted when what they saw in the sky corresponded to the map on the disc they were holding in their hands. This happened every

two to three years.

But the German researchers also discovered that in the 400 years that the disc was in use, its status had evolved. The perforations on the edge of the object as well as a ship that was later added to the map suggest that the knowledge about the lunar calendar's shortage of days was lost along the way.

"That means, that in the end the disk became a cult object," Meller said.

The disc was found in 1999 by two previously convicted treasure looters. It was seized by the authorities in 2002 along with other Bronze Age objects in a police operation in Switzerland.

DW staff (tt)

Please visit the site: <http://www.dw-world.de/dw/article/0,2144,1915398,00.html>

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## ACROPOLIS RESTORATION WORK

Related to the Acropolis restoration, the following should be of interest:

"The Restoration of the Athenian Acropolis (1834 - 2005)" Lecture delivered on January 18, 2005 by Dr. Fani Mallouchou-Tufano, head of the Documentation Office at the Acropolis Restoration Service. Copyright 2006 Dr. Fani Mallouchou-Tufano

<http://www.lsa.umich.edu/UofM/Content/modgreek/document/MallouchouLectureJan18-06.pdf>  
<http://tinyurl.com/hcnnl>

<http://www.lsa.umich.edu/modgreek/window/>

If the long link does not work, the short one should take you there.

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# **INFORMATION RE KOMMOS DIGITAL PUBLICATIONS, KOMMOS EXCAVATION ARCHIVES AND PUBLICATIONS ON THE NET**

This is to bring to your attention a new web site at the University of Toronto ( “T Space,” at <https://tspace.library.utoronto.ca/handle/1807/3004> ). This site contains digital copies of Kommos publications in PDF format. The files can thus be and downloaded.

Contained are:

- The Kommos volumes that have already been published by Princeton University Press – all four except for Vol. V, which, though out, has not yet been scanned. Vol. V deals with the monumental Minoan buildings in the southern area of the site.
- Some sixteen articles and preliminary excavation reports.
- A conference volume and a monograph on a ceramic kiln.

The above been authored by a number of writers, including J. W. Shaw, M. C. Shaw, P. P. Betancourt, L.V. Watrous, J. B. Rutter and A. Van de Moortel, the last two also the authors of an extensive catalogue of the Bronze Age pottery which accompanies ceramic studies in recently published Volume V. Libraries are encouraged to print th is catalogue and shelve it next to Kommos V, to be used as a supplement.

To be added -- not long from now -- are the excavation archives: field records, including the trench notebooks and reports that now exist only in paper form and on microfiche.

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## **ΕΙΔΗΣΕΙΣ - NEWS RELEASE**

# **BIOFUELS USED IN 4,000-YEAR-OLD FURNACES, ANCIENT CYPRIOTS USED OLIVE OIL FOR COPPER SMELTING, ARCHAEOLOGISTS SAY**

By Michele Kambas

Updated: 6:05 p.m. ET March 9, 2006



PYRGOS, Cyprus - It is praised for its culinary and health properties by any cooks worth their salt, but long before olive oil made it into the Mediterranean diet, Cypriots used it as fuel to melt copper, archaeologists say.

Italian researchers have discovered that environmentally friendly olive oil was used in furnaces at a site in southern Cyprus up to 4,000 years ago, instead of the fume-belching charcoal used in industry for hundreds of years since.

Described as “liquid gold” by the ancient Greek poet Homer, olive oil has long been associated with grooming, pampering and the religious rites of the ancients, but not — at least in the Mediterranean — with heavy industry.

“We know that olive oil made it into our food around 1000 B.C., but it is the first time we have laboratory evidence that it was used in smelting as a fuel,” archaeologist Maria Rosaria Belgiorno told Reuters.

Cyprus was famed in antiquity for its copper and is believed to have given its name to the Latin term for the metal, Cuprum.

The find by Belgiorno’s team suggested mankind might be returning to its roots, at least in terms of energy.

“It is the first time this has been discovered ... and in Europe it’s only recently that industry has turned to biofuels. This oil burns like benzene,” Belgiorno said.

Today’s Cypriots might, however, think twice about pumping this precious commodity into their petrol tanks instead of drizzling it over their meals.

Average annual production of about 13,500 tons just about meets local demand and olive oil now sells for around \$23 a gallon (\$6 per liter), compared with a little more than \$2 a gallon (55 cents per liter) for regular fuel.

### **Dark marks left by time**

The smelting site known as Pyrgos Mavroraki is thought to be part of a larger industrial unit dating from 2000 B.C., when Cyprus was in its early to mid-Bronze Age.

Lying about 60 miles (90 kilometers) southwest of the capital Nicosia among sprawling villas, the complex includes copper smelting works, facilities for textile weaving and dyeing, a winery and an olive press.

“The olive press and storage facilities were in the middle of two areas where copper was worked. It shows that for sure they used olive oil. Can you imagine building an olive press in the middle of a metallurgy plant? Why?” said Belgiorno.

Tests carried out by the Italian Institute of Technologies Applied to Cultural Heritage, for whom Belgiorno works, have discovered olive oil residues in ovens on the site.

Belgiorno said researchers were puzzled by the fact that no charcoal — the fuel most widely used at the time — was found. Charcoal remains intact despite the passage of time, she said.

“There were no storage areas for charcoal. We have discovered that to melt copper you need 5 kilos of olive oil, compared to 80 kilos of charcoal.”

Dark marks on the hard-packed earth in the complex might escape the untrained eye. But these are stains from the oil used in the furnaces, traces which also do not fade.

### **Probably not the first**

Belgiorno said metallurgy sites have been found close to olive oil production areas in Egypt and Jordan, so Cypriots could not lay claim to being the first to use biofuels.

It was, however, the first time science had conclusively proven that olive oil was used as a fuel, she said.

The highly prized commodity was a key ingredient of perfumes, and ancient geographers noted the abundance of olive groves and copper mines in Cyprus.

“I suspect the technology came from abroad, most probably through contact with Palestine and Jordan,” said Belgiorno.

Last year at the same site, Belgiorno’s team found what they described as the world’s most ancient perfumery, which used olive oil infused with local herbs.

The site’s textile dyeing facilities also suggested Cypriots had a fashionable flair with their fabrics, using tiny veins painstakingly extracted from Mediterranean sea snails to dye their clothes indigo.

“Nobody can really speak about prehistory without mentioning Cyprus. It was a filter. It took technology from the Middle East and redistributed it to the western world,” said Belgiorno.

**Please visit the site: <http://msnbc.msn.com/id/11750051/from/RS.3/>**

## **PALACE OF TROJAN WAR HERO** **FOUND IN ATHENS, MARCH 27 2006 AT** **08:49PM**

Athens - Greek archaeologists have unearthed the remains of an ancient palace associated with Ajax the Great, a legendary warrior-king cited by Homer as a key participant in the Trojan War, the senior archaeologist supervising the project said Monday.

Dating from the 13th century BC, the Mycenaean-era palace found on the small island of Salamis, west of Athens, is part of a four-level complex extending over 750 square metres, supervising archaeologist Yiannos Lolos said in a statement.

"Travellers and archaeologists have been seeking this city from the early 19th century," Lolos said.

"This is one of the few cases where a Mycenaean-era palace can be attributed to a famed Homeric hero...with every possible certainty," he added.

**'Travellers and archaeologists have been seeking this city from the early 19th century'**

The city, named 'Kychreia' on an epigraph found on the Athens Acropolis that dates from the first century BC, is mentioned by the ancient geographer Strabo. Its geographical location also concurs with writings by ancient poets Hesiod and Sophocles, Lolos said.

Working on the island hilltop of Kanakia for the past six years, the archaeological team found an entire ancient citadel with at least 33 rooms and other buildings.

The team also found a variety of items of Cypriot and Anatolian origin, testifying to the city's contact with the eastern Mediterranean basin.

Among the discoveries were part of a Cyprus-made bronze talent, an ancient heavy unit of coinage, and a rare piece of armour stamped with the royal mark of Ramesses II the Great, an Egyptian Pharaoh of the 13th century BC.

The island of Salamis was also the site of a 480 BC Greek naval victory over the Persians which effectively ended their invasion of Greece.

**Please visit the site:**

[http://www.int.iol.co.za/index.php?set\\_id=1&click\\_id=588&art\\_id=qw1143483300245G626](http://www.int.iol.co.za/index.php?set_id=1&click_id=588&art_id=qw1143483300245G626)