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(Ένωση Ελλήνων Χημικών)

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# Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

**- Φεβρουάριος 2009 -**

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**- February 2009 -**

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## **ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS**

# **2<sup>ND</sup> IWA INTERNATIONAL SYMPOSIUM ON WATER AND WASTEWATER TECHNOLOGIES IN ANCIENT CIVILIZATIONS, BARI, ITALY, MAY 28–30 2009**

## **1<sup>ST</sup> ANNOUNCEMENT AND CALL FOR PAPERS**

### **Objectives**

The principal aims of the Conference are:

- (a) To reveal the cultural heritage in several regions of the world and to make visible the archaeological remnants of practices which have contributed to the development of the existing technologies in water and wastewater management.
- (b) To describe and evaluate the old technologies, which on a long term may contribute to water and wastewater management systems and to the development of integrated methodologies.
- (c) To develop small systems based on old technologies using new equipment, which may be of great significance for water, wastewater and environmental management in the future.
- (d) Water knowledge related to the water services and juridical/economic aspects.

### **Topics**

Topics of interest include but are not limited to:

- (a) Methods, practices, and techniques of water resources management.
- (b) Farmers and citizens: The socio-economic role of water.
- (c) Urban water use.
- (d) Urban wastewater and stormwater technologies.
- (e) Historical development of aqueducts and other water technologies: From mythology to water sciences.
- (f) Old influence in modern water and wastewater technologies.
- (g) Iconographic aspects of water in ancient civilizations.
- (h) Sociological and economical issues.
- (i) Juridical aspects.

### **Call for Papers**

Authors are invited to submit the manuscripts of maximum 8 pages in English, including figures and tables (as MS Word file single interspace). The manuscripts should be submitted electronically at <http://www.federutility.it/> or via e-mail to: [acqua@federutility.it](mailto:acqua@federutility.it), no later than **30 November 2008**. Please refer to the dedicated website page for the submission details.

Manuscripts will be accepted based on quality, originality and relevance to the Symposium themes. All accepted manuscripts (papers or posters) will be published as the Symposium Proceedings. Contributions (papers and posters) will also be reviewed, on

their quality, originality and relevance to the Symposium themes, by the International Scientific Committee for publication in a special edition of *Water Science and Technology*. €40.00 discount will be applied to the registration fee for authors whose manuscript is accepted.

### **CALL FOR SPONSORS AND EXHIBITORS FOR WWTAC09**

Don't miss the chance to expose your company's experience, brand your products, and trade on the opportunities by becoming an Exhibitor or Sponsor of the 2nd International Symposium on Water and Wastewater Technologies in Ancient Civilizations (WWTAC09). If you would like to have more information about sponsoring or exhibiting at Hotel Villa Romanazzi Carducci, please contact:

**Noema srl, Via Orefici, 4, 40124 Bologna, Italy.**

**Phone + 39 051 230385; Fax + 39 051 221894;**

**E-mail [info@noemacongressi.it](mailto:info@noemacongressi.it)**

### **Registration Fees (20% VAT included)**

Before 30 January 2009 After 30 January 2009

IWA members €420.00 €480.00

Non-members €540.00 €600.00

Students €240.00 €300.00

Accompanying persons €180.00 €240.00

€40.00 discount will be applied to the fee for authors whose manuscript has been accepted.

It will be possible to register by sending the attached form to the Organizing Secretariat Noema Srl to the indicated address. It will also be possible to register online at the conference homepage [www.federutility.it](http://www.federutility.it).

**Participant's registration fee includes:** admittance to all sessions; congress material; Proceedings published and mailed to participants after the Conference; certificate of attendance; coffee-breaks; lunch on May 28; Gala Dinner on May 28; post-conference excursion to Matera.

**Students' registration fee includes:** admittance to all sessions; congress material; certificate of attendance; coffee-breaks; lunch on May 28; post-conference excursion to Matera.

**Accompanying person's registration fee includes:** Gala Dinner on May 28; post-conference excursion to Matera.

### **Important Dates to Remember**

Manuscripts submission (up to 8 pages): **November 30, 2008**

Notification to authors regarding manuscripts' acceptance: **January 30, 2009**

Registration at a reduced rate: **January 30, 2009**

Receipt of the final version manuscript: **March 30, 2009**

### **Participation at both the IWA Specialist Conference and XVI European Conference H2Obiettivo 2000**

Fees (20% vat included):

IWA members: €1.250.00 before January 30, 2009; €1.400.00 after January 30, 2009

Non-members: €1.600,00 before January 30, 2009; €1.700.00 after January 30, 2009

Students: €600.00 before January 30, 2009; €650.00 after January 30, 2009

€40.00 discount will be applied to the fee for authors whose manuscript has been accepted.

### **Organizers**

- (a) FederUtility (Rome, Italy)
- (b) N.AG.RE.F. National Agricultural Research Foundation (Iraklion, Greece)
- (c) IWA International Water Association (London, UK)
- (d) Federculture (Rome, Italy)
- (e) IRSA - CNR (Rome, Italy)
- (f) AII Associazione Idrotecnica Italiana (Rome, Italy)
- (g) AQP Acquedotto Pugliese SpA (Bari, Italy)
- (h) Fondazione AMGA (Genoa, Italy)
- (i) EUREAU European Union of National Associations of Water Suppliers and Waste Water Service (Brussels, Belgium)
- (j) UTILITATIS (Rome, Italy)
- (h) Hellenic Water Supply and Sewerage System Association (Larissa, Greece)

### **Organising Committee**

- Renato Drusiani, FederUtility, Rome, Italy
- Pietro Laureano, IPOGEA, Matera, Italy
- Andreas N. Angelakis, N.AG.RE.F., Iraklion, Greece
- Lorenzo Bardelli, UTILITATIS, Rome, Italy
- Osvaldo Conio, Fondazione AMGA, Genoa, Italy
- Giovanni De Feo, University of Salerno, Italy
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- Dimitris Koutsoyiannis, National Technical University of Athens, Greece
- Antonio Lopez, IRSA - CNR, Bari, Italy
- Pierluigi Martini, AII, Rome, Italy
- Vito Palumbo, AQP SpA, Bari, Italy
- Nikolaos Paranychianakis, Technical University of Crete, Chania, Greece
- Adrian Puigarnau, IWA, London, UK
- Enrico Rolle, University 'La Sapienza', Rome, Italy
- Miquel Salgot, University of Barcelona, Spain
- Marco Tallini, University of L'Aquila, Italy
- Anastasia Zourou, Cultural Association Ithaki, Rome, Italy

### **Programme Committee**

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- Andreas N. Angelakis, N.AG.RE.F., Iraklio, Greece
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- Marco Tallini, University of L'Aquila, Italy
- Andrea Tilche, European Commission, EU

### **Bari and Matera**

The city of the Conference, Bari, has been founded by the mythical heroes of the Hellenic world. Influences from the Romans to the Arabs and the Byzantines, under whose rule Bari lived its apex in wealth and cultural prestige, were subsequently followed by the Norman invasion. Afterwards the town was conquered by the Angevin rulers, Aragonese, Sforza, and Bourbons down to Napoleon's time when Gioacchino Murat decreed that the town should become the provincial capital in 1813. The main monuments of the old town centre are the basilica of San Nicola, the Cathedral of San Sabino and the Norman-Swabian Castle.

An historical and cultural post-conference excursion to Matera will be organised for the participants and their accompanying persons on March 30th. The route's stop over will be the city of Matera, one of Southern Italy's most charming locality and one of the most ancient towns in the world, famous for its Sassi or caves from the Paleolithic age (dating back to 1500 B.C.). Built on a rocky plateau and sliced in two by the Gravina ravine, Matera's cave dwellings were inhabited by man as early as the Palaeolithic era. To link the dwellings in the Sassi, there is a complex network of narrow streets and flights of steps climbing up to the fronts of houses.

Matera is one of the most fascinating historic centres in Italy which was formally recognized in 1993 as a UNESCO world heritage site.

### **Additional Information**

Additional information on the 2nd International Symposium on Water and Wastewater Technologies on Ancient Civilizations (venue, climate, access to Bari, travel and stay) can be found in the following URL [www.federutility.it](http://www.federutility.it) or contact Dr Renato Drussiani ([acqua@federutility.it](mailto:acqua@federutility.it)) or organising secretariat ([info@noemacongressi.it](mailto:info@noemacongressi.it)).



## **ROMAN METALWORKING WORKSHOP, WEST DEAN, SUSSEX, FEB 12-13, 2009**

Experiments in making a bronze mirror and burial vessels — sand and lost wax casting and raising. Participants are welcome to join us for 2 days of analysis and experimentation in Roman high tin bronze mirror, patera and ewer making. Following the discovery and conservation of a group of High Status 1st century Roman burials along the A2 in Kent.

Toolmarks, surface textures and X-radiography of originals and experimental work will be compared.

The experimental workshop will take place at West Dean, Sussex. Cost is £250, including materials--participants will be able to take away sample pieces.

The workshop will be led by Dana Goodburn-Brown, Jon Privett and Shane Wright. To register and/or request details, please contact [danagb@msn.com](mailto:danagb@msn.com)

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**AUSTRALIAN EARLY MEDIEVAL**  
**ASSOCIATION SIXTH ANNUAL**  
**CONFERENCE**  
**GATHERING THE THREADS - WEAVING**  
**THE EARLY MEDIEVAL WORLD**  
**AEMA'S SIXTH ANNUAL CONFERENCE, 1-3**  
**OCTOBER 2009, CAULFIELD CAMPUS OF**  
**MONASH UNIVERSITY, VICTORIA**

AEMA's sixth annual conference will be held from **1-3 October 2009** at the Caulfield Campus of Monash University, Victoria.

From the Middle East to the North Atlantic, cultural differences were woven into the new social fabric of the early medieval world. Peoples, languages, religions, traditions and technologies were the threads woven into the period's complex tapestry. The Australian Early Medieval Association invites papers which explore the patterns and intersections formed by these diverse threads.

Papers on any other aspect of early medieval research or scholarship will also be accepted. A title and a 250 word abstract for papers of twenty minutes in length should be submitted to the conference convenor by **June 30 2009**. Please include affiliation and contact details with your abstract.

Presenters will be invited to publish their papers in the refereed *[Journal of the Australian Early Medieval Association](#)*.

\*\*\*\*\*

**CONFERENCE CONVENOR**

Natasha Amendola [Natasha.Amendola@arts.monash.edu.au](mailto:Natasha.Amendola@arts.monash.edu.au)

School of Historical Studies  
Building 11, Clayton Campus  
Monash University  
Victoria 3800  
Australia

\*\*\*\*\*

Please download and circulate the conference poster available [here](#).

## **BYZANTINE ART IN THE MAKING, A STUDY DAY AT THE BRITISH MUSEUM, FRIDAY 27 FEBRUARY 2009, 11-17.00**

How was Byzantine art made? In what ways did manufacturing techniques affect appearance? What difference does it make to use stone or glass in a mosaic, to use elephant ivory or bone, beaten silver or silver-gilt? Exactly how do you make an enamel? How did the Byzantines sculpt and on what? And what goes into a Byzantine coin? These and other similar questions will be discussed by speakers at this study day devoted to making Byzantine art. Come and discover how the objects now on display at the Royal Academy came into being.

### Speakers:

Antony Eastmond, *Byzantine ivories: 101 uses for a tusk*  
Paul Hetherington, *Byzantine enamels: jewels in the crown*  
Daniel Howells, *Byzantine gold glass: don't try this at home*  
Ruth Leader-Newby, *Byzantine silver: heavy metal*  
Rowena Lowerance, *Byzantine sculpture: rare and precious*  
Marco Verità, *Byzantine wall mosaics: techniques and tricks*  
Will Wootton, *Byzantine floor mosaics: lay your own*

Dave the Moneyer will be on hand, making Byzantine coins for all participants to take away.

The Study Day is organised by Prof Liz James, Sussex Centre for Byzantine Cultural History, University of Sussex, and Dr Tony Eastmond, the Courtauld Institute of Art. It is associated with the exhibition *Byzantium 330-1453* at the Royal Academy of Arts and the Leverhulme International Network for the Composition of Byzantine Glass Mosaic Tesserae (housed at Sussex). The event is funded by the London Centre for Arts and Cultural Enterprise.

Venue: The Sackler Room, BM, Great Russell St, London WC1B 3DG.

### To book:

Places are £7 each or, if you also book *Byzantium in London*, £12 for the two together (incl. tea and coffee). Concessions £4/£6. There is a maximum of 60 spaces available for this Study Day, so book early to avoid disappointment!

Booking can be done on email to [B.K.Bjornholt@sussex.ac.uk](mailto:B.K.Bjornholt@sussex.ac.uk) or via post using the slip below. You can pay by postal order or by sending a cheque made out to University of Sussex to Dr Bente Bjornholt, Art History, EH 151, University of Sussex, Falmer, Brighton BN1 9QQ. Please send a self addressed stamped envelope if you need a receipt. Enquiries can also be made via Bente.

**BYZANTIUM IN LONDON, A**  
**WORKSHOP AT THE HELLENIC**  
**CENTRE, SATURDAY 28 FEBRUARY**  
**2009, 10.30-18.00**

Byzantium may seem remote from London both in time and space. This workshop will bring the two societies together by investigating the ways in which they interacted in the past and by exploring the reminders, remnants and reflections of Byzantium that can be found in London today.

Speakers:

Anthea Harris (University of Birmingham): *Curious connections? Early Byzantium in London and the Thames Valley*

Scot McKendrick (British Library): *Codex Sinaiticus and the British Library's collection of Greek Manuscripts*

Geoff Egan (Museum of London): *Byzantium in 11th Century and Later Medieval London*

Eugenia Russell (Royal Holloway, University of London): *The Voice of Exile: Andronicus Kallistos's Death in London (1476) and his Monody*

George Manginis (Archaeological Museum, Ioannina): *Bosphorus-on-Thames: Byzantine Footprints in Victorian London*

The Workshop is organised by Dr Jonathan Harris, Department of History, Royal Holloway, University of London and is associated with the exhibition Byzantium 330-1453 at the Royal Academy of Arts. It is funded by the London Centre for Arts and Cultural Enterprise, the Hellenic Foundation, and the Centre for Hellenic Studies, King's College London.

Venue: The Great Hall of the Hellenic Centre, 16-18 Paddington St, London, W1M 4AS.

To book:

Places are £7 each or, if you also book *Byzantine Art in the Making*, £12 for the two together (incl. tea, coffee and a light lunch). Concessions £4/£6.

Booking can be done on email to [B.K.Bjornholt@sussex.ac.uk](mailto:B.K.Bjornholt@sussex.ac.uk) or via post using the slip below. You can pay by postal order or by sending a cheque made out to University of Sussex to Dr Bente Bjornholt, Art History, EH 151, University of Sussex, Falmer, Brighton BN1 9QQ. Please send a self addressed stamped envelope if you need a receipt. Enquiries can also be made via Bente.



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Title and Name .....

Contact email, address, tel. no .....

I would like to attend Byzantine Art in the Making

I would like to attend Byzantium in London

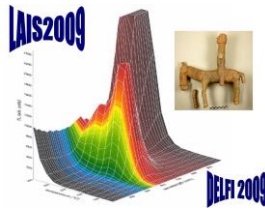
Please indicate if you are registered as disabled, a jobseeker, or a student

I have enclosed a cheque for £ ..... I have sent a postal order for £ .....

I have enclosed and SAE

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## LUMINESCENCE IN ARCHAEOLOGY INTERNATIONAL SYMPOSIA

Dear All,

We are pleased to announce that due to additional Sponsoring agents the Organizing Committee has decided to partially waive the registration fees to lower prices. See attached file.

Also we provide a wider range of Hotel prices (including Congress Transfers).

You may send the *Registration Form* to the following fax number: +302106642116 or email: [natalia.tsakmakidou@zita-congress.gr](mailto:natalia.tsakmakidou@zita-congress.gr)

You can also find the congress documents here: <http://kalamata.uop.gr/~lais2009>

We look forward to seeing you in Delphi!

Kindest Regards,

\*\*\*\*\*

Natalia Tsakmakidou  
*Congress Department*

Zita Congress & Travel  
Tel: +30 2111001783 (direct)  
Fax: +30 2106642116  
e-mail: [natalia.tsakmakidou@zita-congress.gr](mailto:natalia.tsakmakidou@zita-congress.gr)  
[www.zita-congress.gr](http://www.zita-congress.gr)

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# **ICONEA 2009 - THE INTERNATIONAL CONFERENCE OF NEAR EASTERN ARCHAEOLOGY: COMPARATIVE ORGANO-PHILOLOGY**

## **First Call for papers**

[www.iconea.org](http://www.iconea.org)

### Conference Theme

The only instrument of which we are sure of its name is the famous LILIS = lilissu - the kettle-drum.

There are many words for musical instruments scattered throughout three millennia of cuneiform practice. However, there is much debate on which word defines the bovine lyre, the shoulder harp, rattles, pipes, clappers, etc. The word for bell seems to have vanished altogether, although these idiophones appear on most horse trappings during the first millennium, in Assyria.

We are calling for papers covering all aspects of general comparative organo-philology. These will be delivered during the morning sessions.

To submit your abstract, please click on the Registration Form button to the left.

The afternoons will host round-table debates on the following specific themes:

giš ZÀ.MÍ - sammu; BALAG -balaggu; giš GÙ.DÉ - inu; giš BAN - qaštu / tilpnu; ALGAR; GI-GID - embubu / malilu; TIGI - tigu

A set of instruments, with typical features, taken from the iconography, will be offered for debate as to their possible equation to a name that could arise from their special features, for instance could the third millennium harp with a foot equate to the KAB ZÀ.MÍ, etc.

Additional propositions are welcome.

### Program Organization

For obvious reasons, contributions may not exceed 20 minutes with 10 minutes for questions. All equipment requirements during presentations can be submitted ahead of time using the online registration form on this website.

Please send abstracts and handouts no later than October 1st, 2009.

### Registration and Payments

Registrations should be made online, preferably. Please click on the appropriate bar to the left. Payments can be made either online or on the spot (cash only) at the beginning of the conference. Fees are: 60 euros for speakers, 40 euros for students, and 30 euros for accompanying persons or visitors.



Bank transfers within the Euro zone are now usually tax-free when using an online-banking system.

#### Conferences and round-table debates

All sessions will take place at the Maison de la Recherche, Salle D 035, 28 rue Serpente, Paris 75006.

#### Accommodation

We kindly ask you to take care of hotel booking yourselves. There are numerous websites helping you find and book a room.

For instance: <http://www.hotels-paris.fr>

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#### Additional Information

Most useful information will be found on this website.

#### Academic Board

Frédéric Billiet,  
Irving Finkel,  
Richard Dumbrill  
Dominique Collon,  
Myriam Marcetteau,

#### Coordinator

Myriam Marcetteau: [mailto: mmarcetteau@iconea.org](mailto:mmarcetteau@iconea.org)

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#### Richard J Dumbrill

[www.iconea.org](http://www.iconea.org)

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## **TECHNART 2009**

Dear Friends and colleagues,

We would like to remind you that the TECHNART 2009 abstract submission procedure is open and the deadline is the 20th of February.

Please visit the TECHNART 2009 web site (<http://www.inp.demokritos.gr/~technart2009/>) to get all relevant information and the abstract template.

Looking forward to your contribution,

On behalf of the TECHNART 2009 organizing committee

A.G. Karydas

D. Anglos

**"THE ANCIENT KOURION AREA: PENN  
MUSEUM'S LEGACY AND RECENT  
RESEARCH IN CYPRUS"**  
**AN INTERNATIONAL CONFERENCE AT THE  
UNIVERSITY OF PENNSYLVANIA MUSEUM  
OF ARCHAEOLOGY AND ANTHROPOLOGY,  
MARCH 27-29, 2009, UNIVERSITY OF  
PENNSYLVANIA MUSEUM OF  
ARCHAEOLOGY AND ANTHROPOLOGY,  
UNIVERSITY OF PENNSYLVANIA,  
PHILADELPHIA, PA USA**

"The Ancient Kourion Area: Penn Museum's Legacy and Recent Research in Cyprus" will provide a holistic focus on the greater region around Kourion, from earliest prehistory through medieval times. Conference participants will revisit old excavations in the light of recent interdisciplinary research in order to set an agenda for future directions. The program includes ample time for general discussion among presenters and audience.

The first scientific investigation of Kourion was undertaken by the University of Pennsylvania Museum between 1934 and 1953. A portion of the finds were exported to Philadelphia, and some are currently exhibited in the Museum's Greek and Roman galleries. A small temporary exhibition of additional material will accompany the conference.

**Details are now available on the Penn Museum website:**  
[www.museum.upenn.edu/cyprus](http://www.museum.upenn.edu/cyprus).

Registration can be done on-line at the website.

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# **V MEETING OF THE INTERNATIONAL SOCIETY FOR THE HISTORY OF MEDICINE, THEME: LIGHT & FIRE IN MEDICINE, NICOSIA, CYPRUS, 9-12 SEPTEMBER 2009**

Dear colleagues

Welcome to Cyprus, the island of Hospitality and the birthplace of Aphrodite, the goddess of beauty and love.

It is my pleasure and privilege to invite you to attend this V International Meeting of ISHM to be held in Cyprus, 9-12 September 2009. This monothematic Meeting will focus specifically on the role and significance of LIGHT & FIRE in MEDICINE and many interesting topics will be covered such as:

1. Philosophical and Historical aspects of the role and significance of Light and Fire in medicine throughout the centuries.
2. The role of Light and Fire in the pathogenesis and treatment of various illnesses. Hyperpyrexia & hypopyrexia.
3. Bleeding cupping! From Galen to the 20th century.
4. Climate & Disease: From the Icebergs to the Tropics. Survival in cold climates. Migration of nomads from Asia to the Americas BC.
5. Fevers in Medicine throughout the ages. Short & long term sequences. Historical perspectives. Epidemiological studies
6. End of Life. The history of cremations.
7. Burns and Skin grafts. Historical aspects. Wars. The Atomic bomb. Nuclear disasters as exemplified by the Chernobyl disaster in 1986. Fire in human torture.
8. Temperature control to treat disease. Electroconvulsive therapy. Hyperpyrexia.
9. Infectious diseases. Heat and the principles of sterilization.
10. Pasteur, Semmelweis and Lister.
11. Electrocautery and the revolution it brought to Surgery
12. Laser therapy: History. Applications. Results. The new era in Urology and other specialties
13. Storage tissues at -700C. The use of liquid nitrogen. Diagnostic procedures. Sperm, foetal cord and other cell banks. Historical aspects and present day use
14. Thermometers. Their development and influence in Medicine
15. Circadian rhythms
16. etc

***PLEASE COME TO CYPRUS AND SHARE YOUR SPECIAL KNOWLEDGE WITH THE REST OF US!***

Cyprus has a long, well documented history, extending to over 8000 years BC. During your visit you will have the opportunity to visit some of the best archaeological and historical sites in Cyprus.

On behalf of the members of the Local Organising Committee, I look forward to seeing you and welcoming you in Cyprus.

Dr Alkis Pierides

**For more information information and registration please visit the site:**  
<http://www.ishm-cyprus.org/>

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## **III INTERNATIONAL CONFERENCE ON REMOTE SENSING IN ARCHAEOLOGY, 17TH - 21ST AUGUST 2009, INDIA, TAMIL NADU, TIRUCHIRAPPALLI**

Dear friends and colleagues,

we are pleased to invite you to the III INTERNATIONAL CONFERENCE ON REMOTE SENSING IN ARCHAEOLOGY which will be held in Tiruchirappalli, India, on 17-21 August 2009 (<http://www.spacetimeplace2009.org>).

The IIIrd International Conference will be organized jointly by Bharathidasan University, Tiruchirappalli, the University of California, Merced and Berkeley, the University of Siena (Italy) and the REACH Foundation, Chennai.

The conference will discuss a wide range of perspectives, approaches and issues on the use of remote sensing and digital technologies in documenting, analyzing and interpreting archaeological and anthropological contexts.

Innovative contributions, case studies, research projects and posters are invited under the following themes and related topics:

- \* Aerial archaeology: satellite, aerial photography and airborne scanning
- \* 3D remote sensing: technologies and archaeological interpretation
- \* Close-range aerial photography: mast, balloon, kite, blimp , UAV, helikiteβ }
- \* Ground-based sensing archaeology
- \* Integrated remote sensing technologies for the interpretation of landscape ecosystems: confronting scales of detail.
- \* Issue of archaeological interpretation of remote sensing data
- \* Cyber archaeology and 3D landscapes visualization through the time
- \* Issues of quality framework in archaeological remote sensing: defining high standards
- \* Experience of archaeological remote sensing from commercial sector

\*Special sessions will be addressed to archaeology in the digital age and heritage management:

- \* Digital Cultural Atlases (projects and prototypes) and cultural atlas components (gazetteers, time-periods, biography and social networks, thesauri, technical infrastructure, content sources and display models)
- \* National and Trans-National Historical GIS
- \* Conservation Issues: methods, environmental issues, causes/remedies, legal status, traditional and international norms, integration
- \* Cultural and natural sites resource management
- \* Sustainability, utility and management of Heritage sites

**Important dates:**

Abstract (max 500 words): 28th, February, 2009

Send By E-Mail to: [cliuzza@ucmerced.edu](mailto:cliuzza@ucmerced.edu)

Notification of acceptance 15th, April, 2009

Full Papers (Camera ready) 1st, June, 2009

Send By E-Mail to: [cliuzza@ucmerced.edu](mailto:cliuzza@ucmerced.edu)

**Registration Fee:**

Full registration: 400 US\$ (till 31st June)

450 US\$ (after 31st June)

Includes:

- B· Accommodation
- B· Participation in the conference program
- B· Conference Pack
- B· Copy of the Proceedings
- B· Coffee breaks, lunch and dinner
- B· Excursion to World Heritage Monuments

Student registration: 50 US\$

Includes:

- B· Participation in the conference program
- B· Conference Pack
- B· Coffee breaks, lunch
- B· Excursion to World Heritage Monuments (subject to extra payment of 50 US\$)

A limited number of places in hostel accommodations are available for foreign students.  
Booking will be made on first come first served basis

FOR INDIAN DELEGATES Registration, contact:

[indian@spacetimeplace2009.org](mailto:indian@spacetimeplace2009.org)  
<<mailto:indian@spacetimeplace2009.org>>

FOR PRESS a JOURNALIST REGISTRATION is available at the registration desk.

**Proceedings:**

All the accepted articles will be published by British Archaeological Report (deadline Full Papers 1st, June, 2009).

Looking forward to meeting you in Tiruchirappalli,

Best Regards,



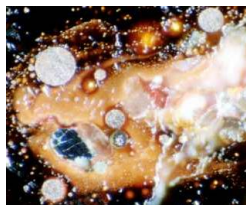
D. Dayalan (Archaeological Survey of India)  
Maurizio Forte (University of California, Merced, USA)  
Stefano Campana (University of Siena, Landscape Archaeology and Remote Sensing  
LAB, Italy)  
Lewis Lancaster (University of California, Berkeley, USA)  
M.Ponnaivaiko (Bharatidasan University, India)  
Mario Hernandez (UNESCO, Paris)  
Franciscus Verellen (Ecole française d'Extreme-Orient)

\*\*\*\*\*

Maurizio Forte  
PhD, Professor of World Heritage  
University of California, Merced,  
School of Social Sciences, Humanities and Arts .  
P.O. Box 2039  
Merced, CA 95344  
Telephone number: 209-228-4614  
Cell Phone Number: 209-201-5943  
FAX Number: 209-228-4007  
E-Mail Address: [mforte@ucmerced.edu](mailto:mforte@ucmerced.edu)

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# **ARCHAEOMETALLURGY: TECHNOLOGICAL, ECONOMIC AND SOCIAL PERSPECTIVES IN LATE PREHISTORIC EUROPE**

*TESME*

**(Madrid, 25-27 November 2009)**

*Meeting in honour of Salvador Rovira*

Research on the Bronze Age in Europe has been strongly influenced first by the consideration that metallic objects are the main chronological and cultural markers for periodisation and, later on, by the idea that metallurgical activities are related to concepts such as “specialisation”, “social complexity” and “trade”.

Since the last decades of the 20<sup>th</sup> century, other questions have also been posed, these include the importance of the context in which this technology was adopted, as well as technological change conceived from a double perspective: internal and external to metal production. The internal perspective explains the change within the technological system itself: what shifts occur and how they occur due to pre-existing knowledge and innovations. The external one tries to answer the question “why does it change?” by looking at the society, the economy and the politics in which the technology works, acting as factors that unleash this change through innovation and adoption mechanisms.

The scientific meeting will take place in Madrid from the 25<sup>th</sup> to the 27<sup>th</sup> of November 2009 and it is organised by the Centre for Human and Social Sciences (CCHS) of the Spanish National Research Council (CSIC) of Madrid.

This conference hopes to bring together specialists interested in this topic, to exchange knowledge and update the different notions about metallurgical activity in late prehistoric Europe from a global archaeometallurgical perspective.

The conference will schedule six sessions discussing the following topics:

1. Technological change;
2. Craft specialisation and organisation of production;
3. Exchange and/or trade of raw materials and objects;
4. Technology and experimental archaeology;
5. Function and use of metal;
6. Environmental impact of the mining and metallurgical activity.

Oral presentations will have a maximum length of 20 minutes. The conference programme will allow a total of 40 presentations.

The Conference Organisers and Scientific Committees will select among all the proposals those that will be finally presented.

In addition, 20 poster presentations will be also admitted; the poster format will be notified at the time of the acceptance of proposals.

Abstracts should be sent as text documents (preferably in Word format) by **March 20<sup>th</sup>, 2009** to: [tesme.cchs@cchs.csic.es](mailto:tesme.cchs@cchs.csic.es). Please include a title, the authors' complete name and affiliation, a full postal address and your email address.

Abstract should be maximum 1000-2000 characters and contain a clear description of the main paper's topic. Please indicate the preferred session for the presentation at the end of the text.

#### **LANGUAGE OF THE CONFERENCE:**

The official languages will be Spanish and English.

#### **ORGANIZING COMMITTEE (IH, CCHS, CSIC)**

Pedro Díaz del Río  
Maria Isabel Martínez Navarrete  
Ignacio Montero Ruiz  
Alicia Perea  
Juan Vicent García

#### **SCIENTIFIC COMMITTEE**

Paul Ambert (Centre National de la Recherche Scientifique-CNRS, Toulouse)  
Evgenij Chernykh (Russian Academy of Science, Moscu)  
Paul Craddock (The British Museum, London)  
Yannis Bassiakos (National Center for Scientific Research-NCSR "Demokritos", Athens)  
Germán Delibes de Castro (Universidad de Valladolid)  
Julio Fernández Manzano (Universidad de Valladolid)  
Claudio Giardino (Università degli Studi "Suor Orsola Benincasa", Napoli)  
Antonio Gilman (California State University)  
Alessandra Giunlia-Mair (AGM Archeoanalisi, Merano (BZ), Italy)  
Andreas Hauptmann (Ruhr-Universität Bochum)  
Duncan Hook (The British Museum, London)  
Mark Hunt (Universidad de Sevilla)  
Miguel Kunst (Deutsches Archäologisches Institut, Madrid)  
Catalina Martínez Padilla (University of Almería)  
William O'Brien (University College Cork)  
Thilo Rehren (UCL Institute of Archaeology)

#### **SCIENTIFIC SECRETARIAT (IH, CCHS, CSIC)**

Susana Consuegra  
Fabián Cuesta  
Marc Gener  
M<sup>a</sup> de las Mercedes Murillo  
Martina Renzi

#### **REGISTRATION FEES**

All Conference participants: 150 €  
Students: 75 € (proof of student status is required)

#### **METHOD OF PAYMENT:**

The fees have to be deposited on the bank account n.0049/5134/35/2317224221 (IBAN: ES88 0049 5134 35 2317224221; SWIFT: BSCHEMXXX), "Banco

Santander Central Hispano” and made payable to CCHS-CSIC. All receipts must clearly state “TESME CONFERENCE” and the subscriber’s information.

**CONFERENCE VENUE:**

Centro de Ciencias Humanas y Sociales, CSIC  
C/ Albasanz 26-28. Madrid  
(Metro station: “Ciudad Lineal” or “Suanzes”, green line n.5).

**DEADLINES AND KEY DATES:**

Proposal submission (Title and Abstract): **March 20<sup>th</sup>, 2009**  
Acceptance of the abstracts: **May 30<sup>th</sup>, 2009**

**CONFERENCE DATES:**

Wednesday 25 November – Friday 27 November 2009

**Contact:** [tesme.cchs@cchs.csic.es](mailto:tesme.cchs@cchs.csic.es).

**Information:** <http://www.ih.csic.es/>

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

**PH.D. POSITION IN BIOGEOCHEMISTRY**  
**- COMPOUND-SPECIFIC RADIOCARBON**  
**DATING OF LAKE SEDIMENTS**

We invite applications for a three-year Ph.D. position at the ETH Zurich, Switzerland, opening April 1<sup>st</sup>, 2009.

The goal of the project is to further develop the technique of compound-specific radiocarbon dating. Good age models of natural archives like lake sediments are a primary prerequisite for their use for e.g. climate reconstruction. However, only a small fraction of studied lakes contains recognizable terrestrial macrofossils that can be used for radiocarbon dating. In order to circumvent this problem, compound-specific radiocarbon dating can be performed on organic compounds derived from either terrestrial material that has not been pre-aged in the soils in the catchments, or from an aquatic source if no hard water effect is present. The Ph.D. project will focus on the practical aspects of analysis and purification of individual compounds from the complex mixture of lake sedimentary organic matter, as well as on radiocarbon dating of small samples. Techniques involved will be liquid chromatography, gas chromatography, and the operation of a newly developed gas-source for sample introduction into an accelerator mass spectrometer (AMS). Collection of fresh lake sediment cores will also likely be part of the work.

The project will be performed in close conjunction with another Ph.D. project that started last year, and that focuses on the use of compound-specific radiocarbon dating from lake sediments in order to reconstruct soil carbon dynamics. The successful applicant will join the Climate Geology group within the Geological Institute at the ETH, that harbours active research in the field of climate change on 'geologic' to annual timescales, paleoceanography, limnogeology, and biogeochemical cycling processes in oceans and lakes. Further details at <http://www.climategeology.ethz.ch>

An M.Sc. or comparable degree is required in any field related to biogeochemistry or earth sciences, in the broadest sense. Preference will be given to candidates with some laboratory experience.

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For further inquiries and applications please contact:

Dr. Stefano Bernasconi, [stefano.bernasconi@erdw.ethz.ch](mailto:stefano.bernasconi@erdw.ethz.ch) or

Dr. Rienk Smittenberg, [smittenberg@erdw.ethz.ch](mailto:smittenberg@erdw.ethz.ch) or

Dr. Irka Hajdas, [hajdas@phys.ethz.ch](mailto:hajdas@phys.ethz.ch)

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# **UNIVERSITY OF CINCINNATI** **DEPARTMENT OF CLASSICS, TYTUS** **SUMMER RESIDENCY PROGRAM**

The University of Cincinnati Classics Department is pleased to announce the Margo Tytus Summer Residency Program. Summer Residents, in the fields of philology, history and archaeology will come to Cincinnati for a minimum of one month and a maximum of three during the summer. Applicants must have the Ph.D. in hand at the time of application. Apart from residence in Cincinnati during term, the only obligation of Summer Residents is to pursue their own research. They will receive free university housing. They will also receive office space and enjoy the use of the University of Cincinnati and Hebrew Union College Libraries.

The University of Cincinnati Burnam Classics Library (<http://www.libraries.uc.edu/libraries/classics/index.html>) is one of the world's premier collections in the field of Classical Studies. Comprising 235,000 volumes and other research materials, the library covers all aspects of the Classics: the languages and literatures, history, civilization, art, and archaeology. Of special value for scholars is both the richness of the collection and its accessibility -- almost any avenue of research in the classics can be pursued deeply and broadly under a single roof. The unusually comprehensive core collection, which is maintained by three professional classicist librarians, is augmented by several special collections such as 15,000 nineteenth century German *Programmschriften*, extensive holdings in Palaeography, Byzantine and Modern Greek Studies. At neighboring Hebrew Union College, the Klau Library (<http://library.cn.huc.edu/>), with holdings in excess of 450,000 volumes and other research materials, is rich in Judaica and Near Eastern Studies.

Application Deadline: February 15.

A description of the Tytus Summer Residency Program is available online at <http://classics.uc.edu/resources/tytus2.html>. There is an online application at <http://classics.uc.edu/resources/tytussummerap.lasso>. Questions can be directed to [secretary@classics.uc.edu](mailto:secretary@classics.uc.edu).

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Getzel M. Cohen  
Professor of Classics and History  
Director, Tytus Visiting Scholars Program  
Phone: 513-556-1951; Fax: 513-631-1715  
Dept. of Classics, 410 Blegen Library, University of Cincinnati, Cincinnati, Ohio 45221-0226

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**PHD STUDENTSHIP IN RADIOCARBON  
DATING LAND SNAILS, SCHOOL OF  
GEOGRAPHY, ARCHAEOLOGY AND  
PALAEOECOLOGY, QUEEN'S  
UNIVERSITY BELFAST, BELFAST,  
NORTHERN IRELAND**

Dear colleagues,

Please bring this to the attention of anyone who might be interested.

Many thanks,

Drs Paula Reimer & Chris Hunt

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Applications are invited for a PhD studentship on radiocarbon dating of land snails based in the School of Geography, Archaeology and Palaeoecology, Queen's University Belfast, Belfast, Northern Ireland for entry in 2009-10. Please note the deadline for consideration for funding is 31 January 2009.

The project: Many Quaternary deposits and archaeological sites in the Mediterranean coastlands are rich in land molluscs but poor in other potentially-dateable material. Radiocarbon dates on land molluscs are relatively common, but several authors, most recently Romaniello (et al.\* 2008, /Quat. Geochron/. 3, 68-75) have pointed out that a number of Mediterranean species show  $^{14}\text{C}$  age anomalies in modern specimens, apparently related to sources of old carbon in their diets. It is necessary to resolve these age anomalies in order to use land mollusc shells for reliable dating. The project aims to enable reliable dating of ancient land snail shells from the Mediterranean coastlands by resolving the prevalence and magnitude of  $^{14}\text{C}$  age anomalies in (1) collections of modern land molluscs from North Africa, the Maltese Islands and southern Italy and (2) collections of land molluscs from the same regions from well-stratified contexts where high-precision dates from other materials are also available. It will also explore the routes by which old carbon may be taken into the mollusc shell, by analysis of the diets of key species. The project should enable the reliable extension of radiocarbon dating into land mollusc shell, a class of material where there is currently significant doubt about the quality of dates. This will enable the reliable dating of suites of deposits which are currently extremely difficult to date, in regions where there are few other types of material available. The project will use material from current projects at the internationally important sites of Haua Fteah (Libya) and the Brochtorff Circle (Gozo, Maltese Islands), together with material from a past project in the Biferro Valley (southern Italy). Support for field-trips to North Africa is available from the Cyrenaica Prehistory Project, co-led by Dr Hunt, which has British



Academy and European funding, plus support in kind from the Libyan State Antiquities Department.

\*\*Special requirements: Detailed knowledge of the theory of radiocarbon dating and dating laboratory experience are highly desirable. Experience of Quaternary deposits or archaeology in the Mediterranean or of mollusc palaeoecology is desirable.

Project Supervisors: \* Dr C O Hunt, Dr P Reimer

Funding: A full studentship covers approved tuition fees and a stipend of £13,290 pa up to 3 years. To be eligible for consideration for funding through the Department of Education and Learning (DEL), candidates must satisfy criteria relating to academic qualifications, residency and nationality/citizenship including

- \* Candidates should hold at least a 1st class or 2:1 Honours degree or equivalent in Geography, Archaeology or related subject, depending upon the research project.
- \* be ordinarily resident in the UK and Islands (since 1 October 2006). For non-UK, EU applicants, ordinary residency may include full-time education.

The final closing date for consideration of DEL awards is 31st January 2009.

For application procedures, further details and other available projects please see our website at <http://www.qub.ac.uk/schools/gap/ProspectiveStudents/PostgraduateStudies/NewPhDProjects2009-2010/>

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Paula J. Reimer, Director  
Centre for Climate, the Environment & Chronology (14CHRONO)  
School of Geography, Archaeology and Palaeoecology  
Queen's University Belfast

e-mail: [p.j.reimer@qub.ac.uk](mailto:p.j.reimer@qub.ac.uk)

Phone: 028 9097 3980  
FAX: 028-9097-3897  
International callers:  
Phone: +44 28 9097 3980  
FAX: +44 28-9097-3897

Websites:  
[www.chrono.qub.ac.uk](http://www.chrono.qub.ac.uk)  
[www.calib.org](http://www.calib.org)

Mailing/Shipping address:

Archaeology & Palaeoecology Building  
Queen's University Belfast

42 Fitzwilliam Street  
Belfast BT9 6AX  
U.K.

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## **2009 MICHAEL VENTRIS MEMORIAL AWARD FOR MYCENAEAN STUDIES**

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

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

Applications must be typewritten and should not exceed 6 single-sided pages (A4). They should reach the Secretary, Institute of Classical Studies, Senate House NB 312, Malet Street, London WC1E 7HU not later than 20 February 2009. Applicants should give particulars of their age, qualifications, academic record, and should outline the work they intend to pursue in the event of the Award being made to them, including projected costs. They should also give the names and addresses of two referees, and, at the same time, ask the referees to write independently in support of their application. For further information please contact [admin.icls@sas.ac.uk](mailto:admin.icls@sas.ac.uk)

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

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

\*\*\*\*\*

Dr O. H. Krzyszkowska  
Institute of Classical Studies  
Senate House North Block 312  
Malet Street  
London WC1E 7HU  
020 7862 8700  
[admin.icls@sas.ac.uk](mailto:admin.icls@sas.ac.uk)

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## **AMERICAN RESEARCH CENTER IN SOFIA 2008/2009 FELLOWSHIP COMPETITION**

For the academic year 2008/2009, the American Research Center in Sofia, Bulgaria (ARCS) will offer three programs with accompanying fellowships: a 9-month program for the period September-May; a fall term program for the period September-November; and a spring term program for the period February-April. ARCS will host the programs'

lectures and seminars, organize related trips, and facilitate opportunities for taking Bulgarian and other Balkan language classes, logistical support, and access to local libraries, museums, and other educational institutions.

1. Those interested in the 9-month program (only for graduate students) will devote one term of their choice to independent research and travel, and participate in the ARCS academic program during the other term. The content of the Fall and Spring Programs is described below.

2. The Fall Term Program is intended for graduate and advanced undergraduate students, scholars and teachers interested in the history, material culture, and civilization (including ethnography and music) of Bulgaria and the Balkan region. The term of the program is from the first Monday of September through the last Saturday of November. The first part of the program consists of lectures, seminars and trips relating to the period from antiquity to the present day.

Although most scholars specialize in one historical period, we believe that for students of Bulgarian and Balkan history it will be very helpful to get a diachronic overview from local experts. The second part of the program will include independent research in local libraries and optional trips.

The participants are expected to attend the entire program. They will choose a topic on which they will prepare an oral presentation at the end of first half of the program. During the second half of their stay, participants are expected to engage in independent research dedicated to their special fields and/or dissertation topics. The goal of the program is to engage the participants with eminent local scholars in the study of Bulgarian (and to a certain extent, Balkan) history and civilization in their continuity and facilitate specialized research in local institutions.

In addition, undergraduate students have the option to be given an examination and write a term paper at the end of the program if they need to receive credits for the program from their home institutions.

ARCS does not grant credit, but can issue certificates of participation, and the students' home institutions can then confer credits based on the students' examination and term papers.

Exemplary schedule:

Week 1

Orientation; visit Sofia's landmarks; visit Rila Monastery Week 2

Monday-Wednesday: lectures and seminars on Bulgaria in antiquity;

Thursday-Saturday: trips to ancient sites (e.g., Thracian tombs at Starosel and Kazanlak, Roman town of Hissar, Plovdiv) Week 3

Monday-Wednesday: lectures and seminars on Mediaeval Bulgaria;

Thursday-Saturday: trips to Mediaeval sites (e.g. Bulgaria's former capitals Pliska, Preslav, and Veliko Tarnovo) Week 4

Monday-Wednesday: lectures and seminars on Bulgaria and the Balkans in recent history;

Thursday-Saturday: trips to sites of cultural and ethnographical interest (e.g. Koprivshtica, Etera) Week 5 preparation of presentations and papers Week 6 presentations Weeks 7-12 independent research and/or trips

3. The Spring Term Program is intended for graduate and advanced undergraduate students, teachers and scholars interested in the history of religion in Bulgaria from antiquity to the 20th century, including ancient religion, Christianity (Orthodoxy, Catholicism, and other Christian faiths and movements), Judaism, and Islam. The term of the program is from the first Monday of February to the last Saturday of April. The first part of the program will consist of lectures and seminars by local experts, and the second part of the program will include independent research in local libraries and trips to famous Bulgarian religious sites (many of which are part of the world's cultural heritage).

The participants are expected to attend the entire program. They will choose a topic on which they will prepare an oral presentation at the end of first half of the program. The second half of the program will include independent research in local libraries and trips to famous Bulgarian monasteries and churches (many of which are part of the world's cultural heritage).

In addition, undergraduate students have the option to be given an examination and write a term paper at the end of the program if they need to receive credits for the program from their home institutions.

ARCS does not grant credit, but can issue certificates of participation, and the students' home institutions can then confer credits based on the students' examination and term papers.

Exemplary schedule:

Week 1

Orientation; visit Sofia's landmarks

Week 2

Monday-Tuesday: lectures and seminars on religions in Bulgaria, including ancient religions, Christianity, Judaism and Islam.

Wednesday-Friday: Orthodoxy in different countries; specifics of Bulgarian Orthodoxy

Week 3 Orthodox art, architecture, and music Week 4 visit museums, churches and monasteries in and around Sofia (e.g. Rila Monastery, Cherepishki Monastery, Dragalevtzi Monastery, Knyazhevo Monastery, Boyana Church) Week 5 preparation of presentations

Week 6 presentations Weeks 7-11 independent research Week 12 trip to churches and monasteries in Bulgaria (e.g. Bachkovo Monastery, Troyan Monastery, Glozhene Monastery, Kapinovo Monastery, Kilifarevo

Monastery)

#### ELIGIBILITY AND APPLICATION REQUIREMENTS:

All applicants need to submit a completed application form available to download at <http://www.einaudi.cornell.edu/arcs/application.pdf>

Graduate and advanced undergraduate students at educational institutions registered in North America, regardless of their citizenship, are eligible for fellowships. Students with partial support or without support from ARCS can apply for alternative sources of funding. Faculty members at these institutions are welcome to participate in the programs or part thereof, but are not eligible for fellowships. Please visit the ARCS website (<http://www.einaudi.cornell.edu/arcs/>) for more information or contact Professor Kevin Clinton via e-mail at [kmc1@cornell.edu](mailto:kmc1@cornell.edu).

Graduate Students: Please submit a project proposal (up to three double-spaced pages) describing how participation in the ARCS Fall/Spring or 9-month program will serve your academic interests and/or dissertation research. The proposal, together with the application form, a CV, copies of official transcripts from each graduate institution you have attended, and two letters of reference in a signed sealed envelope from professors who are familiar with your academic work, should be mailed to the Chair of the Fellowship Committee, Professor Kevin Clinton, 120 Goldwin Smith Hall, Department of Classics, Cornell University, Ithaca, NY, 14853.

Advanced Undergraduate Students: Please submit a project proposal (up to three double-spaced pages) describing how participation in the ARCS Fall/Spring program will serve your academic interests. The proposal, together with the application form, a CV, copies of official transcripts from each undergraduate institution you have attended, and two letters of reference in a signed sealed envelope from professors who are familiar with your academic work, should be mailed to the Chair of the Fellowship Committee (address as above).

Faculty Members: Please submit an application form, a project proposal (up to three double-spaced pages) describing how participation in the ARCS Fall/Spring program will serve your academic interests, and a CV to Professor Kevin Clinton (address as above).

Application deadline: All application materials must be postmarked by February 15th, 2008. The candidates will receive notification by April 1st, 2008.

US and European citizens can stay in Bulgaria without a visa for up to three months. If you wish to stay beyond this 90-day period, a D-visa is necessary, which can be issued by the closest Bulgarian consulate.

Visas need to be obtained before arriving in Bulgaria. We recommend that those choosing the three-month program stay in Bulgaria within the 90-day period.

#### FELLOWSHIPS

ARCS plans to offer two 9-month fellowships for the period September-May; five fall term fellowships; and five spring term fellowships. The stipends will amount to \$500 a month. (It is estimated that \$500 will be entirely sufficient to cover daily expenses given

the current cost of living in Bulgaria). In addition, ARCS will pay for accommodation, on-site language instruction, and travel expenses within the academic program. Travel expenses between North America and Bulgaria and meals in Bulgaria are not included.

#### ESTIMATED COST

Applicants who have been accepted without a fellowship are welcome to look for alternative sources of funding: the total cost of the programs for participants from member institutions is estimated as \$10,000 for the 9-month program and \$5,000 for either the fall or the spring semester program. This estimate is based on the assumption that the participants will reside at ARCS. Participants from non-member institutions will be charged an additional fee of \$100 per month.

Please visit the ARCS website (<http://www.einaudi.cornell.edu/arcs/>) for more information about the American Research Center in Sofia, or contact Professor Kevin Clinton at the address given above, or via e-mail at [kmc1@cornell.edu](mailto:kmc1@cornell.edu).

**From <http://www.einaudi.cornell.edu/arcs/index.asp?page=programs>**

**[For an application form, go to**

**<http://www.einaudi.cornell.edu/arcs/application.pdf>**

**For history and objectives of the ARCS go to**

**<http://www.einaudi.cornell.edu/arcs/index.asp>**

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## **RESEARCH SCHOLARSHIPS AT KING'S COLLEGE LONDON**

Dear all

Please see the following links for information on research scholarships at King's College London, and pass on to any potentially interested parties:

1. Robert Browning Memorial Fund Scholarship - for research students - there is more information at: <http://www.kcl.ac.uk/schools/humanities/hrc/chs/rbscholar.html>
2. CHS 20th Anniversary MA Scholarships - for Greek & Cypriot nationals - please see: <http://www.kcl.ac.uk/schools/humanities/hrc/chs/anniversaryscholar.html>

Best wishes

Ellen

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Dr Ellen Adams

Lecturer in Classical Art and Archaeology Department of Classics King's College  
London Strand, London, WC2R 2LS

Tel: +44 (0)20 7848 2768

<http://www.kcl.ac.uk/classics/staff/adams.html>

<http://www.kcl.ac.uk/classics/archaeology/>

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## ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS

### PHD DEFENSE

# COINING AND COUNTERFEITING. THE HAMMERED COIN PRODUCTION IN FRANCE (XIII<sup>TH</sup> - XVII<sup>TH</sup> CENTURIES). A PHYSICO-CHEMICAL, EXPERIMENTAL AND HISTORICAL APPROACH

Dear colleague,

I am pleased to announce to you that the defense of my PhD, whose title is: "**Coining and counterfeiting. The hammered coin production in France (XIII<sup>th</sup> - XVII<sup>th</sup> centuries). A physicochemical, experimental and historical approach.**"

Advisors: **Bernard Gratuze** and **Florian Téreygeol**

will take place at 14h00 on february 13th, at the Délégation Centre Poitou-Charentes of the CNRS in Orléans (France).

Presentation and discussion will be hold in French.

Abstract:

*In the Nineties excavations made in La Rochelle (France) have produced objects of archaeometallurgical evidence with regards to the second royal mint. For the time being, this workshop is still the only one that has been discovered in France. Moreover, the observations of the artefacts seem to allow the reading of the whole money making process. These archaeological samples, complemented with ceramics from the medieval mint of Montreuil-Bonnin (France), have been studied by an archaeometric approach to propose an original research on the official French hammer striking process. This multidisciplinary study is based on the analysis of historical samples but also on a bibliographic compilation: monetary treaties, official reports, mint accounts... The experimental work takes an important part in the study too. Providing more than experimental samples easily studied and compared with the archaeological ones, this pragmatic method allows to point out the complexity of a technique. Finally, the gathering of all data defines the raw materials and the processes used in the French hammer coining until the mid XVII<sup>th</sup> century, but also their respective purposes. As a particular coinage, counterfeiting has also been studied through two post-medieval examples that took place in Southern France caves. The experimental study reveals the originalities of these illegal activities besides some links with the official processes.*

Best regards

\*\*\*\*\*

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## **INTCAL ORGANIZING COMMITTEE** **(IOC) NOMINEES**

Hello all,

We wanted to thank you for voting for the IntCal Organizing Committee (IOC) nominees. After nearly 300 votes, we are pleased to announce the three who earned the most votes in their respective categories. All three have agreed to accept the nomination and serve on the IOC, the oversight committee for the IntCal Working Group (IWG).

Congratulations to Marian Scott (statistics), Christine Hatté (terrestrial paleoscience), and Hafliði Hafliðason (marine paleoscience).

Thank you again for all your votes.

Best,

Mark

\*\*\*\*\*

Mark McClure  
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## *INTERNET SITES*

# **HELLO FROM ARCHAEOLOGY DAILY NEWS**

Dear All,

Archaeology Daily News is a daily updated online newspaper since November 3, 2008.

Archaeology Daily News is dedicated to bring you up to the daily news from sources around the world. We track and aggregate news feeds by their published dates.

Archaeology Daily News is a true community-oriented, giving readers all they want to know about latest archaeology, anthropology, paleontology and fossils news, headlines and top stories. Readers know that if something is going to affect them, it will be in Archaeology Daily News.

Our Free Services:

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Free RSS Feeds : Recieve the latest news when it is posted.

Free E-mail Newsletters : Free newsletters highlight the latest coverage from Archaeology Daily News.

Mobile : Get our news and daily trivia on your web enabled device.

Widget : Add the latest content from Archaeology Daily News to your blog or website.

We hope you enjoy our website and we encourage your comments.

So discover for yourself Archaeology Daily News.

Best Regards,

Archaeology Daily News Team  
<http://www.archeologydaily.com>

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Contact Us  
<http://www.archeologydaily.com/news/index.php?/Contact-Us.html>

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## **TWO WEBSITES FOR TERRACOTTA- STUDIES**

Here are two new websites on terracotta studies:

Greek and Roman terracottas from Cyrenaica <http://www.cyrenaica-terracottas.org>

the Coroplastic Studies Interest Group <http://www.coroplasticstudies.org>

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## **UPDATE TO GOOGLE EARTH PLACEMARKS FOR ANE SITES**

Important update to ANE.kmz with 1300 placemarks for Ancient Near Eastern archaeological sites in Google Earth.

This is about 200% more sites than in the old ANE.kml, including several corrections. (The .kml has been changed to .kmz in order to get a smaller download.)

Free download at <<http://www.anst.uu.se/olofpede/Links.htm>>.

\*\*\*\*\*

Olof Pedersen

Email: [Olof.Pedersen@lingfil.uu.se](mailto:Olof.Pedersen@lingfil.uu.se)

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**ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS**

**PROCEEDINGS OF THE  
INTERNATIONAL CONFERENCE ON  
GEOARCHAEOLOGY AND  
ARCHAEOMINERALOGY 2008**

The Proceedings of the International Conference on Geoarchaeology and Archaeomineralogy 2008, with several contribution with Near Eastern focus, can now be downloaded at <<http://mgu.bg/geoarchmin/>>.

Jan Pieter van de Giessen

Email: [vdgiessen@solcon.nl](mailto:vdgiessen@solcon.nl)



# **"IDENTIFICATION OF A CHRYSOCOLLA AMULET IN AN EARLY DYNASTIC CHILD MUMMY" BY RAFFAELLA BIANUCCIA, (ET AL.)**

## Abstract

Two pyriform formations were identified within a bundle of linen bandages wrapping a 15–18 months old Early Dynastic mummy. The upper one was taken out of the bandages and examined to ascertain its nature.

This formation showed to be a small bag closed by a knot containing an emerald-green mineral. For identification and with the aim of identifying the compound kept inside it, several different green minerals used for adornment in Ancient Egypt (from the Pre-dynastic period up to the Ptolemaic one) were examined by scanning electron microscope (SEM-EDX) followed by microanalysis.

The pyriform formation's content is consistent, based on morphological and micro-analytical data, with the natural cryptocrystalline hydrated copper silicate identified as a bead of chrysocolla.

The use of chrysocolla was less common than that of malachite as chrysocolla ores were rarer. To present days, only one other example of chrysocolla as a funerary equipment from an Ancient Egypt child burial can be traced.

Since our archaeological finding indicates the presence of a chrysocolla bead in one other infant burial, it is possible that the use of this particular mineral was limited, in the Early Dynastic Period as a protective amulet for children.

At [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6WH8-4SX3P36-3&\\_user=10&\\_coverDate=03%2F31%2F2009&\\_rdoc=3&\\_fmt=high&\\_orig=browse&\\_srch=doc-info\(%23toc%236844%232009%23999639996%23836078%23FLA%23display%23Volume\)&\\_cdi=6844&\\_sort=d&\\_docanchor=&\\_ct=39&\\_acct=C000050221&\\_version=1&\\_urlVersion=0&\\_userid=10&md5=2a5460c308caf08d4b339329b78f1976](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WH8-4SX3P36-3&_user=10&_coverDate=03%2F31%2F2009&_rdoc=3&_fmt=high&_orig=browse&_srch=doc-info(%23toc%236844%232009%23999639996%23836078%23FLA%23display%23Volume)&_cdi=6844&_sort=d&_docanchor=&_ct=39&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=2a5460c308caf08d4b339329b78f1976) is a downloadable pdf.

## **EΙΔΗΣΕΙΣ - NEWS RELEASE**

# **ARCHEOLOGISTS FIND TRACES OF THE MOST ANCIENT CIVILIZATION IN EUROPE NEAR YUNATSITE VILLAGE, PAZARDZHİK DISTRICT**

Pazardzhik The archeological excavations at the prehistoric tomb in the village of Yunatsite, Pazardzhik district, give pleasant surprises every year to specialists working there, the leader of the team of archeologists Stoilka Ignatova told FOCUS radio – Pazardzhik.

In 2008 the joint Bulgarian-Greek team had excavated the layers of the tomb that date back from the Halcolite age.

After finding the skeleton of a young woman, now they found the fortifying system that includes a big 5m wide wall that has surpassed the settlement.

According to Ignatova, in contrast to other sites dating back to the same age, this was is massive and not temporary, and had existed till the end of the settlement in the 5th c. BC, probably as a result of some hostile attack.

Archeologists have not yet found the necropolis of the settlement due to the deep river drifts, but they had found out that at about 350 m from the tomb there had been other settlements too. This gives specialists the grounds to speak about the so-called 'protopolis', Ignatova adds. According to her, the structure of the settlement, the culture of the people that lived there, give archeologists the grounds to define it as a civilization from the Halcolite age.

Another interesting fact that proves the high level of development of this ancient settlement in the Bulgarian lands is the presence of pre-script signs, Ignatova said. The existence of high-cultured society through the stone-copper age is a proof for the fact that the most ancient civilization in Europe was born in the frames of the Bulgarian lands. The excavations of the tomb would continue next year and archeologists expect to find more interesting facts.

Vanya NIKOLOVA

Please visit the site: <http://www.focus-fen.net/index.php?id=n165021>

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# **TEMPORAL RELATIONSHIPS** **ESTABLISHED WITHIN** **ARCHAEOLOGICAL COMPLEXES**

ScienceDaily (Jan. 16, 2009) — A researcher from the Rovira i Virgili University (URV) has developed a solution that makes it possible to establish the temporal relationships between artefacts within archaeological complexes. He has linked the lifestyle and behaviour of the Neanderthals of the Mid Palaeolithic with archaeological remains deposited over the period. This is the best way of understanding the history of stones.

According to Manuel Vaquero, author of the study and a researcher in the Prehistory Department at the URV, the time dimension of archaeological complexes is "crucial in order to be able to understand changes in hominid behaviour". In addition, characterising these sites from only a behavioural point of view without taking the time aspect into account "can mask the variations in behaviour over time".

The article, which has been published in the Journal of Archaeological Science, studies how temporal differences can distort behavioural inferences if the period over which the archaeological complex was formed is not taken into account. In order to reach his conclusions, the researcher focused on the area of behaviour related to the use of stone.

Manuel Vaquero is clear on the issue. "The use of ethnographic models on archaeological palimpsests (deposits yielding a mixture of strata) without the time factor being taken into account can give rise to errors in interpretation." Archaeological complexes are formed from remains in the same strata and have been deposited over time. During this long period there will have been an indeterminate number of episodes of occupation.

"The totality of remains corresponding to different episodes may result in a 'behavioural average', which does not correlate to any episode that actually existed," Vaquero tells SINC. In order to make behavioural inferences, we need to bring the archaeological and ethnographic timescales as close together as possible, "working with archaeological complexes formed over time periods that covered, as near as possible, the ethnographic period".

## **Case of the Abric Romaní deposit in Barcelona**

The research focused on the Mousterian deposit of Abric Romaní in Capellades, Barcelona, which is 52,000 years old and one of the most important in the world in terms of understanding the lifestyle of Neanderthal groups. Level L of Abric Romaní has a series of accumulations of spatially-differentiated archaeological remains.

"These accumulations are associated with hearths, and reveal a pattern of activities concentrated around them," says Vaquero. By studying lithic material, and making connections between two or more stone artefacts or bone remains coming from the same carved item or bone, it can be seen that these accumulations are not contemporaneous, but "correspond to occupation episodes separated by time" with specific stone provision strategies, and reflecting significant changes in behaviour. For example, the recycling of

abandoned lithic remains can be seen in the later stages of the occupation, while in earlier periods these resources were accumulated on a massive scale.

**Journal reference:**

1. Vaquero et al. The history of stones: behavioural inferences and temporal resolution of an archaeological assemblage from the Middle Palaeolithic. *Journal of Archaeological Science*, 2008; 35 (12): 3178  
DOI: 10.1016/j.jas.2008.07.006

Adapted from materials provided by Plataforma SINC.

Email or share this story:

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APA

MLA

Plataforma SINC (2009, January 16). Temporal Relationships Established Within Archaeological Complexes. *ScienceDaily*. Retrieved January 17, 2009, from <http://www.sciencedaily.com/releases/2009/01/090116091521.htm>

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# **ARMENIAN CAVE YIELDS ANCIENT HUMAN BRAIN EXCAVATIONS HAVE PRODUCED ROUGHLY 6,000-YEAR-OLD RELICS OF A POORLY KNOWN CULTURE EXISTING NEAR THE DAWN OF CIVILIZATION**

**BY BRUCE BOWER**

PHILADELPHIA — In a cave overlooking southeastern Armenia's Arpa River, just across the border from Iran, scientists have uncovered what may be the oldest preserved human brain from an ancient society.

The cave also offers surprising new insights into the origins of modern civilizations, such as evidence of a winemaking enterprise and an array of culturally diverse pottery.

Excavations in and just outside of Areni-1 cave during 2007 and 2008 yielded an extensive array of Copper Age artifacts dating to between 6,200 and 5,900 years ago, reported Gregory Areshian of the University of California, Los Angeles, January 11 at the annual meeting of the Archaeological Institute of America. In eastern Europe and the Near East, an area that encompasses much of southwest Asia, the Copper Age ran from approximately 6,500 to 5,500 years ago.

The finds show that major cultural developments occurred during the Copper Age in areas outside southern Iraq, which is traditionally regarded as the cradle of civilization, Areshian noted. The new cave discoveries move cultural activity in what's now Armenia back by about 800 years.

"This is exciting work," comments Rana Özbal of Bogazici University in Istanbul, Turkey.

A basin two meters long installed inside the Armenian cave and surrounded by large jars and the scattered remains of grape husks and seeds apparently belonged to a large-scale winemaking operation.

Researchers also found a trio of Copper Age human skulls, each buried in a separate niche inside the three-chambered, 600-square-meter cave.

The skulls belonged to 12- to 14-year-old girls, according to anatomical analyses conducted independently by three biological anthropologists. Fractures identified on two skulls indicate that the girls were killed by blows from a club of some sort, probably in a ritual ceremony, Areshian suggested.

Remarkably, one skull contained a shriveled but well-preserved brain.

"This is the oldest known human brain from the Old World," Areshian said. The Old World comprises Europe, Asia, Africa and surrounding islands.

Scientists now studying the brain have noted preserved blood vessels on its surface. Surviving red blood cells have been extracted from those hardy vessels for analysis.

It's unclear who frequented Areni-1, where these people lived or how big their settlements were. No trace of household activities has been found in or outside the cave.

Whoever they were, these people participated in trade networks that ran throughout the Near East, Areshian proposes. Copper Age pottery at the site falls into four groups, only one of which represents a local product. A group of painted ceramic items came from west-central Iran.

Some pots display a style typical of the Maikop culture from southern Russia and southeastern Europe. Still other pieces were characteristic of the Kura-Araxes culture that flourished just west of Maikop territory in Russia.

Radiocarbon dating of pottery and other Copper Age finds pushes back the origins of the Maikop and Kura-Araxes cultures by nearly 1,000 years, Areshian says.

Additional discoveries at Areni-1 include metal knives, seeds from more than 30 types of fruit, remains of dozens of cereal species, rope, cloth, straw, grass, reeds and dried grapes and prunes.

A hard, carbonate crust covering the Copper Age soil layers, along with extreme dryness and stable temperatures inside the cave, contributed to preservation of artifacts and, in particular, the young girl's brain.

Medieval ovens from the 12th to 14th centuries have also been excavated at the cave's entrance, underneath a rock shelter.

Areshian expects much more material to emerge from further excavations at Areni-1 and from explorations of the many other caves bordering the Arpa River. "One of these caves is much larger than Areni-1, covering about an acre inside," he said.

**Please visit the site:**

**[http://www.sciencenews.org/view/generic/id/39826/title/Armenian\\_cave\\_yields\\_ancient\\_human\\_brain](http://www.sciencenews.org/view/generic/id/39826/title/Armenian_cave_yields_ancient_human_brain)**

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# **BBCNEWS, ISTANBUL'S ANCIENT PAST** **UNEARTHED**

**By Sarah Rainsford**

Digging through thick mud and an ancient swamp of black clay, archaeologists in Istanbul have discovered a grave that proves the city is 6,000 years older than they previously thought.

The skeletons of two adults and two children lie curled-up, perhaps to save space. Alongside them are pots: gifts placed in the grave to use in the afterlife.

The ancient family was unearthed at the site of a 21st Century rail project.

"We found the grave, pots and other artefacts. There were signs of houses made of tree-branches and next to the settlement was a swamp where we found small tools, wooden pieces and bones," explains Ismail Karamut, head of the Istanbul Archaeology museum, which is leading the dig.

"It all shows there was a Neolithic settlement here in the historic peninsula of Istanbul where people lived, farmed and fished," he adds.

Historians had believed modern-day Istanbul was first settled around 700 BC. The discovery of the skeletons has revealed far deeper roots.

The Neolithic era - when man abandoned the nomadic, hunting lifestyle and settled to farm the land and raise cattle - began east of here, gradually carrying the foundations of "civilised" life west, to Europe. The new find in Istanbul helps map that transition.

"Neolithic culture changed as it moved west. Not all of what we call the 'Neolithic package' was transferred," explains Professor Mehmet Ozdogan of Istanbul University.

"Domesticated animals and some of the cereal crops came, but mud brick became wooden architecture, settlements were re-organised. The transformation is important to understand the Neolithic culture in Europe. Every new site adds data to the picture."

Past and present

Neolithic remains were discovered in two Istanbul suburbs in the 1950s and 1980s, but this is the first such find in the historic heart of the city. That has created a stir the other sites never managed.

Prof Ozdogan believes the Yenikapi settlement dates from between 6400BC and 5800BC - long before the Bosphorus Strait had formed and in the days when the Marmara Sea was a small, inland lake. Istanbul's first inhabitants appear to have lived on both sides of a river that flowed then through Yenikapi.

The excavation of Istanbul's first settlement is taking place at the site of a state-of-the-art train station on the multi-million dollar Marmaray rail project. The line will link Europe and Asia with the world's deepest underwater tunnel, 56 metres beneath the Bosphorus. The last sections of underwater tubing were joined in October.

But above ground, the revolutionary project has been held up by history.

Scheduled to last six months, Yenikapi archaeological dig is still going strong four years later. The Marmaray is now expected to open in 2011 at the earliest.

"Of course the project has been delayed, but it's important to discover the culture here," argues Yasar Anilir, chief archaeologist at the dig.

"But if there was no Marmaray project we would not have been digging at all. This requires a lot of labour and money."

#### Archaeological delight

The team's first major discovery was a section of the first city walls, believed to date back to Constantine I.

As anticipated, they also uncovered a 4th Century port - once the busiest in Byzantium - and the stunningly well-preserved remains of more than 30 wooden ships, many wrecked in storms in the 10th and 11th centuries.

Unearthing the Neolithic settlement was an unexpected archaeological delight.

Under pressure to complete their excavations and let-in the construction workers, archaeologists have at times worked in shifts, digging 24 hours a day. The cost of the delay to construction has not been calculated yet.

"The Marmaray project is very important, but you cannot sacrifice our cultural heritage," says Ismail Karamut, who insists his team has not compromised on the quality of their work. "We're trying to reconcile both demands - to help the project, and protect the heritage."

The Yenikapi dig has now reached bedrock, so archaeologists don't expect any more major discoveries. They're still working through piles of ancient swamp mud though, which has preserved some of the oldest wooden artefacts ever found.

On the far side of the site, beyond the Marmaray station, excavation work will continue alongside construction.

"We're expecting to find more - maybe a small settlement," Yasar Anilir explains. "We have to remove the Byzantine ships first, then we can complete our dig."

This experience should be a lesson to the authorities, according to Prof Mehmet Ozdogan, who says there have been no archaeological digs for purely scientific purposes in Istanbul since the 1960s.



"Of course a city should live, you can't turn it into a museum. But we should not wait for construction projects to learn the history of a town. We should dig on purpose, just to learn," the professor argues.

"Once the past is destroyed, it's irreversible."

**Please visit the site: <http://news.bbc.co.uk/2/hi/europe/7820924.stm> [Go there for video report]**

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## GERMAN BATTLEFIELD YIELDS ROMAN SURPRISES

### Story Highlights

Relics found from battle between Romans, Barbarians in third century Historians had thought Rome had given up control of northern Germany by then Battlefield found by relic-hunters illegally searching for souvenirs of recent wars

HANOVER, Germany (CNN) -- Archaeologists have found more than 600 relics from a huge battle between a Roman army and Barbarians in the third century, long after historians believed Rome had given up control of northern Germany.

"We have to write our history books new, because what we thought was that the activities of the Romans ended at nine or 10 (years) after Christ," said Lutz Stratmann, science minister for the German state of Lower Saxony. "Now we know that it must be 200 or 250 after that."

For weeks, archeologist Petra Loenne and her team have been searching this area with metal detectors, pulling hundreds of ancient Roman weapons out of the ground. They paint a picture of a highly organized, technologically superior Roman army beset by Germanic tribes in a forest about 80 km (50 miles) south of the modern city of Hanover.

The hillside battlefield was discovered by relic-hunters illegally searching for souvenirs of more recent wars near the town of Kalefeld-Oldenrode. One of them brought some of the items he found to Loenne, who works for the local government.

The artifacts are so well preserved that the scientists can already retrace some of the battle lines. Watch how the battlefield discovery could re-write history »

"We believe the Germans ambushed the Romans here, but the legions quickly fired back with catapults and archers -- and then it came to a massive man-on-man onslaught," Loenne said.

The items unearthed so far include an axe, still sharp after nearly 1,800 years; horseshoes; shovels; spearheads; and dozens of arrowheads for a Scorpio, a cross between a catapult and a crossbow -- the ancient equivalent of artillery.

"With a very high speed, on a very long distance -- about 300 meters -- you can hit targets precisely," said Henning Hassman, of Hanover's archeological institute.

Researchers say the evidence suggests the tribesmen lured the Romans into the forest to keep them from making full use of those long-range weapons and draw them into hand-to-hand combat, outside of the formations the imperial troops had mastered. However, they believe the Romans ultimately prevailed.

Other relics include coins depicting the late second-century Roman emperor Commodus, depicted in the Oscar-winning Hollywood epic "Gladiator" -- a film that opens with a scene of battle against a barbarian horde that scientists say appears to be largely accurate. And Loenne said her team may have only begun to scratch the surface of the forest.

"We hope we might find fortifications and if we are lucky, maybe even battlefield graveyards," she said.

**Please visit the site:**

<http://www.cnn.com/2009/WORLD/europe/01/05/germany.battlefield/index.html>

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## **EXCAVATIONS AT EPISKOPI- BAMBOULA COMPLETE**

**By FAMAGUSTA GAZETTE ONLINE STAFF**

The Department of Antiquities in Cyprus has announced the completion of this season's excavations at Episkopi-Bamboula by the University of Cincinnati under the direction of Prof. Gisela Walberg.

This year's finds in Area XVI indicate that the walls and floors belong to a Late Bronze Age citadel, which protected the site of Episkopi-Bamboula from an early stage and overlooked the western side of the river Kouris.

Excavations were also carried out in Area XI under the supervision of J.Gordon.

In that area, a large rock cut cistern, a well (Well 3) and the foundation of part of a structure, which appeared to be apsidal, were found in 2005.

The ceramics from this area were studied in 2006 and 2007 and were found to be predominantly Late Roman, especially those associated with the foundations of the building.

Three new, adjoining trenches were opened between the cistern and the wall. The new excavations confirmed the date of the wall and showed that a) the apsidal building had a rectangular phase, b) this building may have been destroyed at least once and c) the finds and ceramics are related to domestic and industrial use.

They also suggested that water from the cistern was kept in basins for industrial, agricultural or other use.

Further excavations will be undertaken in the area of the cistern to conserve this structure and, hopefully, to shed further light on the function of this suburban Roman site. -

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## PHAISTOS DISK

Please check the article about the Phaistos disk in the VIMA newspaper dated sunday 18th of January, <http://www.tovima.gr/default.asp?pid=2&ct=33&artId=251116>. I think that if this symbol of the minoan ship represents the island of Crete then the other symbols next of it or after it should be referred to the arrival or the departure of a ship. This is may be an initial key for the deciphering of the disk.

Minas Tsikritsis

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**A VOLCANO, OLD WOOD, AND HISTORY,  
AN OLIVE TREE, BURIED BY THE  
CATACLYSMIC VOLCANO ERUPTION THAT  
DESTROYED THE ISLAND OF SANTORINI -  
GIVING RISE TO THE MYTH OF ATLANTIS -  
IS ALLOWING SCIENTISTS TO DATE THE  
EVENT THAT CHANGED MEDITERRANEAN  
CULTURE 2,500 YEARS AGO**

**BY HEINRICH HALL**

About 140 generations ago, a massive explosion shook the Aegean island of Thira (Santorini). It was probably audible as far away as modern Iraq or Southern France. The island, including its capital at Akrotiri - hitherto a bustling centre of Aegean trade and in close contact with the great Minoan palaces of Crete, but also with Egypt and the Near East - was buried under up to 50 metres of ash and rock.

Tsunamis devastated much of the Aegean, especially the densely settled northern coast of Crete. Ash rained down on distant areas like Turkey and Crete. A plume of smoke rose tens of kilometres into the air, blowing enormous amounts of dust into the stratosphere and thus affecting the global climate for months or years to come.

More than 2,500 years later, a middle-aged Danish professor stood halfway up the steep edge of the caldera, the crater that now defines the inside of the C-shaped island of Santorini. Awkwardly perched on a ladder placed on the rubble eroding from the cliffs, he was trying to peer into a smallish hole in the cliff face itself. He suspected that a piece of wood just visible in that hollow could help him answer a key question: When exactly did the island explode?

On December 1, 2008 the Danish Archaeological Institute hosted a lecture by professors Walter Friedrich (University of Aarhus, Earth Sciences Department) and Walter Kutschera (University of Vienna, Department of Physics) entitled "The Puzzle of Dating the Minoan Eruption - News from Santorini and Egypt". It was the first time that their new, still highly controversial proposal (originally published in Science Magazine in 2006) for the dating of the so-called Minoan eruption was presented in Athens.

That event has long been recognised as a linchpin of Greek prehistory.

At some point around the middle of the 2nd millennium BC, during the heyday of the Minoan civilisation of Crete, which controlled much of the Aegean coasts and islands, the long-dormant volcano of Thira erupted. The explosion is estimated to have been 10 times as violent as the famous Krakatoa event (1883, in Indonesia) and stronger than the 1815 eruption of Mount Tambora (Indonesia), which blew so much dust into the

atmosphere that it led to a two-year global climate cooling, an event remembered in Europe and North America as "the year without a summer".

Although we do not know exactly what effects the eruption had, apart from burying the now-famous Bronze Age town of Akrotiri, it must have been a devastating blow to the Minoan world, causing tsunamis and weakening the sea-borne power of Crete. Although Minoan culture survived for several more generations, it has been speculated that the end of that civilisation was triggered by the event. More fancifully, some have tried to recognise the origins of the Classical legend of Atlantis in it.

Technology to the rescue?

Since there are no known historical texts to verify the 2nd millennium BC Bronze Age Aegean, scholarship lacks exact dates. So far, the archaeology of the area can only be dated in relative terms - through the development of architecture and pottery. Precise dates can only be estimated indirectly - through the interaction between the Aegean and areas such as Egypt and the Near East, whose literate civilisations produced dateable objects, naming eg the reigns of pharaohs, for which a series of precise estimates exists.

If the Thira eruption, an event that left visible traces at many individual sites, could be dated even to the decade, it would massively advance our understanding of Aegean prehistory. In recent decades, scholars have studied various things, from the tree rings of oaks buried in Irish bogs to the minute deposits of ash found in the glaciers of Greenland, in order to find an exact date for the eruption.

Hence the professor on the ladder. Professor Friedrich realised that the holes in the cliff represented the decayed remains of an olive tree that stood on the island at the time of the eruption and was buried alive by it. Wood is usable for the radiocarbon (or  $^{14}\text{C}$ ) technique, a modern scientific dating method based on the presence and uniform decay of a specific radioactive isotope in all living things.

The method, first developed in the 1950s, has reached immense precision lately. Thus, a one-metre branch was retrieved and analysed, leading to a date of 1,613 BC, +/- 13 years, BC. Professor Kutschera, involved in a project of  $^{14}\text{C}$  dating over 130 archaeological finds from the Aegean and especially from Tell el-Daba, in northern Egypt, suggests a very similar timeframe.

Problem solved? Not so fast! As the discussion after the lecture, attended by several internationally-renowned experts, showed, the new date is causing a stir. The problem is that conventional archaeological dating, based on the comparative methods mentioned above, places the event about a century later, around 1,500BC.

Since Egyptian chronology appears internally coherent and since a 100-year move would substantially upset our understanding of the complex relationships across the Bronze Age Eastern Mediterranean, many scholars cannot accept it. The debate is only starting. Since traditional dating and new scientific methods seem incompatible in their results, as one member of the audience put it, eventually something will have to give.

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## **FIRST EVIDENCE OF DAMAGE TO GAZA'S CULTURAL SITES EMERGES, ANTIQUITIES MUSEUM HIT; FEARS GROW FOR EXCAVATED ARCHAEOLOGY, LAUREN GELFOND FELDINGER**

JERUSALEM. After a 3,500-year history of invasions, the latest war on the beleaguered coastal strip of Gaza has once again put historic sites at risk.

With the fragile ceasefire still in force, The Art Newspaper has learned that Gaza's only museum has been damaged and other heritage sites and buildings may also be at risk.

The Antiquities Museum of Gaza, privately founded and run by Gazan contractor and collector Jawdat Khoudary, was badly damaged during Israel's 22 days of air and land strikes. The glass doors and windows have been shattered and the roof and walls have been damaged. Roman and Byzantine pottery, Islamic bronze objects and many amphorae have been destroyed, initially during shooting 20m to 200m away, and later because of nearby shelling, with one direct hit to the museum's conference hall, Mr Khoudary said. Amphorae, clay and ceramic vessels with two looped handles, were created in Gaza and the region during the fourth to seventh centuries for storing wine, olive oil and food and trading perishable commodities.

"I am very concerned: the entire Gaza Strip is an archaeological site," said Palestinian archaeologist Professor Moain Sadeq, who founded the Palestinian Antiquities Department of Gaza in 1994, and is currently a visiting lecturer at the University of Toronto while in contact daily with Gaza.

"Historical sites and buildings in Gaza are adjacent to urban areas, so any location that was hit as a target also put the nearby historical sites and buildings in danger," he said.

Major sites where damage is expected because of heavy fighting in adjacent areas include: Tell es-Sakan, an early Bronze Age settlement that is the largest and oldest walled Canaanite city in the local region, and the oldest Egyptian fortified site outside of Egypt; Tel el-Ajull, an important middle and late Bronze period city that was an important trade hub between ancient Egypt and the Levant; and the remains of Anthedon, a Hellenist port. The Byzantine church of Jabalya was also near heavy fighting, and was the site of partial damage by Israeli tanks during an incursion in 2005. Al-Zeitoun residential quarter in Gaza's Old City, a medieval historic district, has also been largely destroyed, Professor Sadeq added.

Archaeologists are expecting assessment of all of Gaza's historical sites to be slow. As humanitarian assistance is the urgent priority, serious archaeological surveys of historic sites will be delayed.

"I hope that Israel and the Palestinians will work to restore the sites. I am worried about Gaza sites that were excavated and are above the ground because I am sure during the military activity that some sites have been damaged," Dr Yigal Yisrael, of the Israel Antiquities Authority Ashkelon region and Western Negev said.

The first mention of an invasion in Gaza dates back approximately 3,500 years to the annals of Pharaoh Tutmosis III. At least a dozen empires have controlled Gaza in its 6,000-year known history, including the ancient Egyptians, Assyrians, Babylonians, Persians, Macedonians, Romans, Byzantines, Muslims, Crusaders, Mamluks, Ottomans and British, and the modern states of Egypt and Israel.

Artefacts from ancient Muslim, Jewish and Christian communities are routinely discovered.

Even so, Gaza has not been widely excavated. In recent history, the Palestinian authorities have faced shortages of funding, staff, equipment and conservation facilities.

Local artefacts could previously only be viewed in foreign museums, such as in Istanbul, London and Jerusalem, until Mr Khoudary opened his museum in August with his private collection of artefacts salvaged from land and sea, during two decades in the construction business.

The museum was originally planned as a national museum, with backing from Palestinian Authority President Mahmoud Abbas, until Hamas took authority in Gaza in 2007.

Since 1994, seven major sites in Gaza have been excavated by the Palestinian Antiquities Authority, but in late 2000 activity stalled with the rise of the intifada.

According to American archaeologist Professor Lynn Swartz Dodd, of the University of Southern California, the latest war in Gaza has also set back plans for joint Israeli-Palestinian excavation projects in the West Bank, including a heritage preservation field school.

Professor Dodd with Professor Ran Boytner of the University of California, Los Angeles, oversaw a five-year secret committee of Israeli and Palestinian archaeologists that culminated last year in the publication of a 39-point archaeological joint heritage plan, dubbed "the archaeological peace plan". This group also published the first public database of archaeological work in the West Bank and Gaza since 1967.

"A significant educational and training endeavour and the intended investment in a heritage resource that would have been made through that partnership have become invisible casualties of [the] conflict,"

Professor Dodd told The Art Newspaper.

Professor Sadeq says that the next step is to invite colleagues from abroad to come and assist in Gaza. New historical sites may also emerge from such an effort, as scores of buildings were erected without salvage excavations first, before he founded the Gaza Antiquities Department in 1994, he adds.

"We need expertise, technical support and various types of help with conservation," Professor Sadeq said.

Swiss experts from Geneva's Museum of Art and History, which hosted the first satellite show of Gaza antiquities in 2007 from Mr Khoudary's collection, have already voiced plans to assist with assessment and conservation.

"I hope other international organisations will also help," Mr Khoudary said. "If there is peace, antiquities should be a priority, after humanitarian aid."

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## **SEARCHING FOR UNDERWATER TREASURES, ANCIENT WRECKS BEING HUNTED IN ONCE FORBIDDEN SEA OFF ALBANIA, POSTED BY LLAZAR SEMINI, THE ASSOCIATED PRESS**

Once Europe's most forbidding coast, this sparkling stretch of the Ionian Sea is slowly revealing lost treasures that date back 2,500 years and shipwrecks from ancient times.

Over the past two summers, a research ship carrying U. S. and Albanian experts has combed the waters off southern Albania, using scanning equipment and submersible robots to seek ancient wrecks. In what organizers say is the first archeological survey of Albania's seabed, at least five sites were located, which could fill in blanks on ancient shipbuilding techniques.

The project would not have been even imaginable just 18 years ago, when the small Balkan country was still ruled by Communists who banned contact with the outside world. The brutal regime pockmarked the countryside with more than 700,000 bunkers, against a foreign invasion that never came. Instead, the Communists were toppled after a student-led revolt in 1990, which opened Albania to the world.

"Albania is a tremendous untapped (archeological) resource," said U. S. archeologist Jeffrey G. Royal from the Key West, Fla.-based RPM Nautical Foundation, a non-profit group leading the underwater survey. "With what we've discovered until now we may say that Albania is on a par with Italy and Greece."

The latest expedition has revealed traces of four sunken Greek ships dating from the sixth to the third centuries BC, while another three suspected sites have still to be verified. In comparison, the 2007 season netted signs of just one ancient wreck.

"The discoveries are very important because of the lack of properly documented objects from that period," said Andrej Gaspari, a leading Slovenian underwater archeologist who was not involved in the project.

"The only ships found and documented from that time belong to the western Mediterranean and Israel . . . so our knowledge on the technology used for construction of ships is more or less limited."

During ancient times, Albania stood on an important trade route, receiving traffic from Greece, Italy, north Africa and the western Mediterranean. That history shows in what Albanian mission co-ordinator Auron Tare called "a real underwater treasure trove" discovered during the six-week season that ended in August 2008.

A 51-centimetre-long pottery jar, or amphora, used to transport wine and olive oil, and a smaller version found about 80 metres deep were probably made in the southern Greek

city of Corinth, in the sixth or early fifth centuries BC. Both were recovered from a merchant ship that sank about three kilometres off shore. Albanian archeologist Adrian Anastasi said if the sixth-century BC dating is confirmed, it would be only the fifth of its kind found in the world.

Other highlights included a fourth-century BC amphora and roof tiles, a north African jar from the first to third centuries AD and a Roman stone ship's anchor of the second-first century BC. The team, operating off the southern port city of Saranda, also located more than 20 unknown 20th-century shipwrecks.

Anastasi said what was unique in the 2008 season was the discovery of the fired clay tiles, which appeared to be part of an entire sunken shipload.

"A wreck with a whole shipload of tiles has never been found before," Anastasi said. "The number of tiles and the way they were lying clearly shows the ship is below them."

Anastasi said he had unearthed the same type of large tiles -- which measure 74 by 51 inches -- during excavations on land at the ruins of ancient cities in western Albania. He said the ship seemed to have been loaded on the nearby Greek island of Corfu and possibly foundered on its way to a Corinthian colony in Albania.

To protect the wrecks from looting, the team is keeping their precise sites secret.

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<http://www.owensoundsuntimes.com/ArticleDisplay.aspx?e=1410051>

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## **GOBEKLI TEPE: THE WORLD'S FIRST TEMPLE? PREDATING STONEHENGE BY 6,000 YEARS, TURKEY'S STUNNING GOBEKLI TEPE UPENDS THE CONVENTIONAL VIEW OF THE RISE OF CIVILIZATION**

Six miles from Urfa, an ancient city in southeastern Turkey, Klaus Schmidt has made one of the most startling archaeological discoveries of our time: massive carved stones about 11,000 years old, crafted and arranged by prehistoric people who had not yet developed metal tools or even pottery. The megaliths predate Stonehenge by some 6,000 years. The place is called Gobekli Tepe, and Schmidt, a German archaeologist who has been working here more than a decade, is convinced it's the site of the world's oldest temple.

"Guten Morgen," he says at 5:20 a.m. when his van picks me up at my hotel in Urfa. Thirty minutes later, the van reaches the foot of a grassy hill and parks next to strands of barbed wire. We follow a knot of workmen up the hill to rectangular pits shaded by a corrugated steel roof—the main excavation site. In the pits, standing stones, or pillars, are arranged in circles. Beyond, on the hillside, are four other rings of partially excavated pillars. Each ring has a roughly similar layout: in the center are two large stone T-shaped pillars encircled by slightly smaller stones facing inward. The tallest pillars tower 16 feet and, Schmidt says, weigh between seven and ten tons. As we walk among them, I see that some are blank, while others are elaborately carved: foxes, lions, scorpions and vultures abound, twisting and crawling on the pillars' broad sides.

Schmidt points to the great stone rings, one of them 65 feet across. "This is the first human-built holy place," he says.

From this perch 1,000 feet above the valley, we can see to the horizon in nearly every direction. Schmidt, 53, asks me to imagine what the landscape would have looked like 11,000 years ago, before centuries of intensive farming and settlement turned it into the nearly featureless brown expanse it is today.

Prehistoric people would have gazed upon herds of gazelle and other wild animals; gently flowing rivers, which attracted migrating geese and ducks; fruit and nut trees; and rippling fields of wild barley and wild wheat varieties such as emmer and einkorn. "This area was like a paradise," says Schmidt, a member of the German Archaeological Institute. Indeed, Gobekli Tepe sits at the northern edge of the Fertile Crescent—an arc of mild climate and arable land from the Persian Gulf to present-day Lebanon, Israel, Jordan and Egypt—and would have attracted hunter-gatherers from Africa and the Levant. And partly because Schmidt has found no evidence that people permanently resided on the summit of Gobekli Tepe itself, he believes this was a place of worship on an unprecedented scale—humanity's first "cathedral on a hill."

With the sun higher in the sky, Schmidt ties a white scarf around his balding head, turban-style, and deftly picks his way down the hill among the relics. In rapid-fire German he explains that he has mapped the entire summit using ground-penetrating radar and geomagnetic surveys, charting where at least 16 other megalith rings remain buried across 22 acres. The one-acre excavation covers less than 5 percent of the site. He says archaeologists could dig here for another 50 years and barely scratch the surface.

Gobekli Tepe was first examined—and dismissed—by University of Chicago and Istanbul University anthropologists in the 1960s. As part of a sweeping survey of the region, they visited the hill, saw some broken slabs of limestone and assumed the mound was nothing more than an abandoned medieval cemetery. In 1994, Schmidt was working on his own survey of prehistoric sites in the region. After reading a brief mention of the stone-littered hilltop in the University of Chicago researchers' report, he decided to go there himself. From the moment he first saw it, he knew the place was extraordinary.

Unlike the stark plateaus nearby, Gobekli Tepe (the name means "belly hill" in Turkish) has a gently rounded top that rises 50 feet above the surrounding landscape. To Schmidt's eye, the shape stood out.

"Only man could have created something like this," he says. "It was clear right away this was a gigantic Stone Age site." The broken pieces of limestone that earlier surveyors had mistaken for gravestones suddenly took on a different meaning.

Schmidt returned a year later with five colleagues and they uncovered the first megaliths, a few buried so close to the surface they were scarred by plows. As the archaeologists dug deeper, they unearthed pillars arranged in circles. Schmidt's team, however, found none of the telltale signs of a settlement: no cooking hearths, houses or trash pits, and none of the clay fertility figurines that litter nearby sites of about the same age. The archaeologists did find evidence of tool use, including stone hammers and blades. And because those artifacts closely resemble others from nearby sites previously carbon-dated to about 9000 B.C., Schmidt and co-workers estimate that Gobekli Tepe's stone structures are the same age. Limited carbon dating undertaken by Schmidt at the site confirms this assessment.

The way Schmidt sees it, Gobekli Tepe's sloping, rocky ground is a stonemason's dream. Even without metal chisels or hammers, prehistoric masons wielding flint tools could have chipped away at softer limestone outcrops, shaping them into pillars on the spot before carrying them a few hundred yards to the summit and lifting them upright. Then, Schmidt says, once the stone rings were finished, the ancient builders covered them over with dirt. Eventually, they placed another ring nearby or on top of the old one. Over centuries, these layers created the hilltop.

Today, Schmidt oversees a team of more than a dozen German archaeologists, 50 local laborers and a steady stream of enthusiastic students. He typically excavates at the site for two months in the spring and two in the fall. (Summer temperatures reach 115 degrees, too hot to dig; in the winter the area is deluged by rain.) In 1995, he bought a traditional Ottoman house with a courtyard in Urfa, a city of nearly a half-million people, to use as a base of operations.

On the day I visit, a bespectacled Belgian man sits at one end of a long table in front of a pile of bones. Joris Peters, an archaeozoologist from the Ludwig Maximilian University



in Munich, specializes in the analysis of animal remains. Since 1998, he has examined more than 100,000 bone fragments from Gobekli Tepe. Peters has often found cut marks and splintered edges on them—signs that the animals from which they came were butchered and cooked. The bones, stored in dozens of plastic crates stacked in a storeroom at the house, are the best clue to how people who created Gobekli Tepe lived. Peters has identified tens of thousands of gazelle bones, which make up more than 60 percent of the total, plus those of other wild game such as boar, sheep and red deer. He's also found bones of a dozen different bird species, including vultures, cranes, ducks and geese.

"The first year, we went through 15,000 pieces of animal bone, all of them wild. It was pretty clear we were dealing with a hunter-gatherer site," Peters says. "It's been the same every year since." The abundant remnants of wild game indicate that the people who lived here had not yet domesticated animals or farmed.

But, Peters and Schmidt say, Gobekli Tepe's builders were on the verge of a major change in how they lived, thanks to an environment that held the raw materials for farming. "They had wild sheep, wild grains that could be domesticated—and the people with the potential to do it," Schmidt says. In fact, research at other sites in the region has shown that within 1,000 years of Gobekli Tepe's construction, settlers had corralled sheep, cattle and pigs. And, at a prehistoric village just 20 miles away, geneticists found evidence of the world's oldest domesticated strains of wheat; radiocarbon dating indicates agriculture developed there around 10,500 years ago, or just five centuries after Gobekli Tepe's construction.

To Schmidt and others, these new findings suggest a novel theory of civilization. Scholars have long believed that only after people learned to farm and live in settled communities did they have the time, organization and resources to construct temples and support complicated social structures. But Schmidt argues it was the other way around: the extensive, coordinated effort to build the monoliths literally laid the groundwork for the development of complex societies.

The immensity of the undertaking at Gobekli Tepe reinforces that view.

Schmidt says the monuments could not have been built by ragged bands of hunter-gatherers. To carve, erect and bury rings of seven-ton stone pillars would have required hundreds of workers, all needing to be fed and housed. Hence the eventual emergence of settled communities in the area around 10,000 years ago. "This shows sociocultural changes come first, agriculture comes later," says Stanford University archaeologist Ian Hodder, who excavated Catalhoyuk, a prehistoric settlement 300 miles from Gobekli Tepe. "You can make a good case this area is the real origin of complex Neolithic societies."

What was so important to these early people that they gathered to build (and bury) the stone rings? The gulf that separates us from Gobekli Tepe's builders is almost unimaginable. Indeed, though I stood among the looming megaliths eager to take in their meaning, they didn't speak to me. They were utterly foreign, placed there by people who saw the world in a way I will never comprehend. There are no sources to explain what the symbols might mean. Schmidt agrees. "We're 6,000 years before the invention of writing here," he says.



"There's more time between Gobekli Tepe and the Sumerian clay tablets [etched in 3300 B.C.] than from Sumer to today," says Gary Rollefson, an archaeologist at Whitman College in Walla Walla, Washington, who is familiar with Schmidt's work. "Trying to pick out symbolism from prehistoric context is an exercise in futility."

Still, archaeologists have their theories—evidence, perhaps, of the irresistible human urge to explain the unexplainable. The surprising lack of evidence that people lived right there, researchers say, argues against its use as a settlement or even a place where, for instance, clan leaders gathered. Hodder is fascinated that Gobekli Tepe's pillar carvings are dominated not by edible prey like deer and cattle but by menacing creatures such as lions, spiders, snakes and scorpions. "It's a scary, fantastic world of nasty-looking beasts," he muses. While later cultures were more concerned with farming and fertility, he suggests, perhaps these hunters were trying to master their fears by building this complex, which is a good distance from where they lived.

Danielle Stordeur, an archaeologist at the National Center for Scientific Research in France, emphasizes the significance of the vulture carvings. Some cultures have long believed the high-flying carrion birds transported the flesh of the dead up to the heavens. Stordeur has found similar symbols at sites from the same era as Gobekli Tepe just 50 miles away in Syria. "You can really see it's the same culture," she says. "All the most important symbols are the same."

For his part, Schmidt is certain the secret is right beneath his feet.

Over the years, his team has found fragments of human bone in the layers of dirt that filled the complex. Deep test pits have shown that the floors of the rings are made of hardened limestone. Schmidt is betting that beneath the floors he'll find the structures' true purpose: a final resting place for a society of hunters.

Perhaps, Schmidt says, the site was a burial ground or the center of a death cult, the dead laid out on the hillside among the stylized gods and spirits of the afterlife. If so, Gobekli Tepe's location was no accident. "From here the dead are looking out at the ideal view," Schmidt says as the sun casts long shadows over the half-buried pillars. "They're looking out over a hunter's dream."

Andrew Curry, who is based in Berlin, wrote the July cover story about Vikings.

Berthold Steinhilber's hauntingly lighted award-winning photographs of American ghost towns appeared in Smithsonian in May 2001.

**Please visit the site:**

<http://www.smithsonianmag.com/history-archaeology/gobekli-tepe.html?c=y&page=1>