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**ΔΙΟΙΚΗΤΙΚΟ
ΣΥΜΒΟΥΛΙΟ:**

Κ. Πολυκρέτη (πρόεδρος),
Ε. Αλούπη (αντιπρόεδρος),
Μ. Γεωργακοπούλου
(γραμματέας),
Ε. Κουλουμπή (ταμίας),
Θ. Βάκουλης (μέλος),
Β. Κυλίκογλου (μέλος),
Γ. Φακορέλλης μέλος)

Πληροφορίες:

Γ. Φακορέλλης
E-mail: yfacorel@teiath.gr

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

BOARD:

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Information: Υ. Facorellis

E-mail: yfacorel@teiath.gr

Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

- Ιανουάριος 2010 -

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ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS

ANCIENT AND HISTORIC METALS: TECHNOLOGY, MICROSTRUCTURE, AND CORROSION, UCL: LONDON, DEPARTMENT OF MECHANICAL ENGINEERING, AUGUST 16TH-20TH, 2010

Instructor: Professor David A. Scott

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

Artefacts for examination: Over the past 26 years an unrivalled collection of mounted metallographic samples has been assembled, which are studied as part of the course practical work, involving both polarized light microscopy and metallographic microscopy of both freshly polished and etched samples. These samples range from cast iron from China to wootz steel from India, bronze coinage alloys from the Roman Empire to high-tin bronze from ancient Thailand, silver alloys from the Parthian period to ancient Ecuador, gilded copper and tumbaga from Peru and Colombia, to mention only a few of the geographical areas covered by available samples. Course participants will be instructed in the use of polishing and etching in the examination of samples and are encouraged to keep digital images of the samples they have prepared during the week. Students may also bring their own samples for examination if mounted and ground, or if not mounted, then one or two samples may be brought which can be mounted and prepared during the course.

Course Instructor:

David A. Scott, Professor, Department of Art History, UCLA, and Director of the MA program in Archaeological and Ethnographic Conservation. His book, *Copper and Bronze in Art: Corrosion, Colorants, Conservation* won the prize from the Association of American Publishers as the best Scholarly/Art book published in the USA in 2002. His book on *Iron and Steel: Corrosion, Colorants, Conservation*, written with Professor Gerhard Eggert, was published from London in July 2009. Professor Scott has published over 95 papers in the peer-reviewed literature and has been an Editor for the journal 'Studies in Conservation' for over 25 years.

Course Schedule: The course will be held over the five days from Monday 16th August to Friday 20th August 2010. The course will be held at the Department of Mechanical

Engineering, University College London, Torrington Place, [just off of Malet Street], London WC1E 7JE, England. The course will run from 9:15am-5pm each day.

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

Course Costs: The cost of the instruction for the five days will be \$800.00 or sterling equivalent of this amount [500 Pounds Sterling].

For details of payment and to register for this course, please contact the course organizer and director:

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

Course Details:

Monday:

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

Tuesday:

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

Wednesday:

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

Thursday:

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

Friday:

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

EXPERIMENT AND EXPERIENCE:
ANCIENT EGYPT IN THE PRESENT
PRELIMINARY CONFERENCE
ANNOUNCEMENT. PRIFYSGOL CYMRU
ABERTAWE, UNIVERSITY OF WALES
SWANSEA

Are you interested in ancient Egypt ? Are you interested in ancient technology or crafts?

We have an exciting array of demonstrations and talks lined up for you, from flint knapping to flower arranging, from textiles to ship building, not to mention woodworking, stoneworking, manufacturing ritual clay artefacts, shipbuilding, antler bow manufacture, glassworking, an oral performance, and of course mummification!

This is a conference where academics, craftspeople and the general public, in fact all those interested in ancient Egypt or in technology can meet and share their common enthusiasm. All ages and abilities are welcome.

Experimental archaeology has the potential to be a powerful research tool while being interdisciplinary. Along with experiential approaches, it is a perfect medium for education and widening participation.

This conference aims to bring together both the public and academics who are interested in the practice of ancient Egyptian technology.

Through a series of lectures, workshops and practical demonstrations we will explore the value of a hands-on approach to understanding the past, including experimental as well as experiential approaches.

Hosted by CEMA, Egypt Centre and the Department of History and Classics, Swansea University 9am Monday 10th to 1pm Wednesday 12th May 2010 Faraday A , Swansea University Provisional Programme

Provisional List of Speakers

Salima Ikram (key note speaker)

From the Meadow to the Em-baa-lming Table: Experimental Archaeology and Mummification

Ashley Cooke

The Experimental Work of F.C.J. Spurrell: Faience, Glass and Beads

Pearce Paul Creasman

Exposing Ancient Shipbuilders Secrets Through Experimental Reconstruction

Andrzej Ćwiek

Limestone Speaking: Experience and Experiments in the Field

Carolyn Graves-Brown

Experimental Work on Egyptian Lithics: From Spurrell to Lund

Sonia Focke

The Horn Bow - Egyptology's Problem Child

Rosalind Janssen

Textile Demonstration

Janet Johnstone

Practical Dressmaking for Ancient Egyptians: Ancient Sewing Techniques and Replica Clothing Construction

Geoffrey Killen

Ancient Egyptian woodworking

Marquardt Lund

Flintknapping scenes from the Beni-Hasan tombs viewed and interpreted by a contemporary flintknapper

Sally McAleely

Experimental Recreation of a an Ancient Egyptian Funerary Garland Found on the Mummy of Ramesses II.

Paul Nicholson

Could the Egyptians Make Glass? An Integrated Approach to Experimental Archaeology.

Pauline Norris

Keeping the Horse in Front of the Chariot: Experiments and Observations on Harnessing and Handling Horses in Ancient Egypt

Richard Parkinson and Barbara Ewing

Experimental Philology: Performing Ancient Egyptian Poetry

Ann Richards

Could Ancient Egyptian Textiles Have Pleated Themselves?

Donald Ryan (reed boat building tbc)

Denys Stocks

Some Experiments in Ancient Egyptian Stone Technology

Kasia Szpakowska

Making and Breaking Ritual Figurines

Willeke Wendrich

Apprenticeship as a Research Method

If you wish to express an interest in the conference, either attending, presenting a paper or a poster please contact either:

Kasia Szpakowska
k.szpakowska@swansea.ac.uk or
Carolyn Graves-Brown
c.a.graves-brown@swansea.ac.uk

Please visit the site: <http://www.swan.ac.uk/egypt/conference010.htm> [Go there for links to abstracts]



**"DRESSING THE DEAD. CLOTHING,
TEXTILES AND BODILY ADORNMENT
IN FUNERARY CONTEXTS",
CONFERENCE CONNECTED TO THE
5TH GENERAL MEETING OF DRESSID
SHEFFIELD START DATE: THU,
27/05/2010, END DATE: THU, 27/05/2010**

In addition to the 5th General Meeting of DressID (held on May 28-29, 2010) a one-day conference will be held on Thursday, 27th of May on the topic of Dressing the Dead. Clothing, Textiles and Bodily Adornment in Funerary Contexts.

We plan to have speakers from within the DressID project as well as contributions from scholars outside it to broaden the approach to the available material from the Graeco-Roman period.

We invite you to contact us as soon as possible if you would like to give a paper relevant to this topic (25 minutes, 5 minutes discussion), as slots for speakers on this day are limited.

Please let us know if you wish to participate by 20th December 2009.
Contact: Rachel Symonds (r.symonds@sheffield.uk)

* * * * *

Preliminary Programme: May 27, 2010

9.00 - 9.50 Registration for Conference and DressID-Meeting

9.50 - 10.00 Welcome address

10.00 - 10.45 Keynote address

10.45 - 12.45 Papers

12.50 - 14.00 Lunch

14.00 - 17.30 Papers

* * * * *

Travel and Accommodation Information

Information regarding travel by train from various airports to Sheffield is available upon request. The closest airports are Manchester International Airport (with connection by train to Sheffield) or Nottingham East Midlands Airport (with connection by coach to Sheffield). Regular train service from London St. Pancras station also connects Sheffield with London and its airports.

There is a range of hotels in Sheffield from which to choose. These include:

- * Etruria House (£ 40/person per night, single room with breakfast);
91 Crookes Road, Sheffield, S10 5BD; Tel.: 0044-114-266241; <http://etruriahouse.com>
- * The Cutlers Hotel (£ 55/person per night, single room with breakfast); Theatreland,
George Street, Sheffield, S1 2PF; Tel.:
0044-114-2739939; <http://www.cutlershotel.co.uk>
- * Leopold Hotel (£ 75/person per night); 2 Leopold Street, Leopold Square, Sheffield, S2
3GZ; Tel.: 0044-114-3634000; <http://www.leopoldhotel.co.uk>
- * Rutland (£ 90/person per night); 452 Glossop Road, Sheffield, S1 2GZ; Tel.: 0044-114-
2664411; <http://www.rutlandhotel-sheffield.com>

Should you require any assistance in booking any of these hotels, please do not hesitate to contact us.

Confirm your attendance at the Conference and General Meeting, or for further information, please email Rachel Symonds:
R.Symonds@Sheffield.ac.uk

Please visit the site: <http://www.dressid.eu/calendar/dressid-dressing-dead-clothing-textiles-and-bodily-adornment-funerary-contexts-conference-c>

1ST ANNOUNCEMENT OF THE: RADIOCARBON DATING & THE EGYPTIAN CHRONOLOGY SYMPOSIUM OXFORD, UK, 17TH-18TH MARCH 2010

On 17th-18th March 2010, the Research Laboratory for Archaeology and the History of Art at the University of Oxford will be hosting a symposium at the Ashmolean Museum to discuss the results of the Egyptian Chronology Project.

The Egyptian Chronology Project has investigated synchronisms between the Egyptian historical chronology and dates that have been obtained by radiocarbon measurements, including a new series of radiocarbon measurements on Egyptian material from collections in Europe and the USA. The project has also been developing methodologies and protocols for the sampling and analysis of archaeological materials and investigating such issues as the reservoir effect, thought to have an impact on the viability of the use of radiocarbon dating in Egypt. The chronological scope under discussion during the symposium will be that from the 1st until the 21st Dynasty and the impact of the radiocarbon results on the historical chronology will be considered by specialists in the periods concerned.

Scholars from the international community have already been invited to present and to act as discussants during the meeting.

There will also be a public lecture and reception at Oxford University's Museum of Natural History on the evening of 17th March.

Further details and on-line registration can be found at:
http://c14.arch.ox.ac.uk/LEC_Symposium.html

Please note that spaces are limited, so early booking is advised. All enquiries can be sent to Egyptian.chronology@rlaha.ox.ac.uk.

The Egyptian Chronology project team:
Christopher Bronk Ramsey, Andrew Shortland, Thomas Higham, Joanne Rowland, Fiona Brock & Mike Dee.

**CONFERENCE SERIES “NEW
DEVELOPMENTS IN ANATOLIAN
ARCHAEOLOGY”, IZMIR, TURKEY, 6TH
JANUARY, 2010**

A new conference series, entitled New Developments in Anatolian Archaeology, a joint project by myself and Prof. Binnur GURLER as well as French Cultural Center in Izmir will have a start on 6th of January, 2010.

On 6th of January, 2010 as the first speaker of our conference series Colloquia Anatolica et Aegaea: Colloquia Symnensia, the French Cultural Center at Izmir as well as Dokuz Eylul University is welcoming Prof. Altan CILINGIROGLU for a lecture, entitled A New Insight to Urartian Art in the Light of Ayanis Excavations. The lecture will be given at 7.00 pm at the Conference Hall of the French Cultural Institute in Pasaport, in downtown Izmir. These conferences are free, and all interested in Anatolian archaeology is welcome! No former reservation is required. For those interested to come, for bus schedules or road description please contact: elafli@yahoo.ca.

The organizers seek to widen participation at this conference, and would like to encourage colleagues from all parts of the world to attend. The conference committee kindly requests that you alert any persons within your research community who would be interested in participating at this conference, either by forwarding our e-mail, or by printing this mail and displaying it in your institution.

We hope that you will be able to join us at Dokuz Eylul University, and look forward to seeing you in Izmir!

Happy new year!

Doc. Dr. Ergun Lafli
Dokuz Eylul Universitesi
Fen-Edebiyat Fakultesi
Arkeoloji Bolumu
Oda No: A 418
Tinaztepe/Kaynaklar Yerleskesi
Buca
TR-35160 Izmir, TURKEY.
Fax: +90.232.453 41 88.
E-mail: ergun.lafli@deu.edu.tr

ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ –
JOB VACANCIES/FELLOWSHIPS

ENGLISH HERITAGE, HEAD OF
ARCHAEOLOGICAL CONSERVATION
AND TECHNOLOGY

English Heritage protects and provides advice on this country's unique legacy of historic buildings, landscapes and archaeological sites. We also manage over 400 sites and welcome in excess of 11 million visitors to these each year.

Head of Archaeological Conservation and Technology
Fort Cumberland, Portsmouth
£29,337 to £40,695 depending on qualifications and experience

English Heritage is looking for an individual experienced in archaeological conservation and/or ancient technology who will head up its newly merged Archaeological Conservation & Technology Team.

Based at Fort Cumberland, and working with other teams in English Heritage's Research Department, you'll manage and develop the newly merged team of conservators and materials scientists with its wide range of analytical facilities. You'll ensure the provision of specialist advice, training, guidance and services in Archaeological Conservation and Technology for English Heritage, as well as stimulating integrated research and publication. You'll develop best practice and help raise awareness of the historic environment by promoting and widening access to the practice and benefits of Archaeological Conservation and Technology.

Along with a substantial track record of relevant work experience, research and publication, you'll need a qualification such as a post-graduate degree (or equivalent experience) in either Archaeological Conservation or Archaeotechnology (Materials Sciences). Comfortable with managing multi-disciplinary teams, you'll have a genuine talent for developing and encouraging people. A valid driving licence is also desirable.

To discover more and apply, please visit our website at www.english-heritage.org.uk/jobs

We are unable to accept CVs. MINICOM, FOR TEXT PHONES ONLY, 0800 0150516.

Closing Date: 31st December 2009.

Interview Date: 18th January 2010.

English Heritage values diversity and aims to employ people who reflect this.

INAUGURATION OF THE ROBINSON FELLOWSHIP

Members of the ASCSA Managing Committee,

The American School of Classical Studies at Athens is pleased to announce the inauguration of the Henry S. Robinson Fellowship, funded to encourage research at the ASCSA excavations at Ancient Corinth. It is named for Henry Robinson, Director of the School from 1959 to 1969, who at the same time as Director of Corinth Excavations, set the stage for a new era in reviving field work at Corinth.

HENRY S. ROBINSON CORINTH RESEARCH FELLOWSHIP, 2010-2011

Eligibility: Ph.D. candidate or recent Ph.D. (within five years), for research on a doctoral dissertation or primary publication specifically on Corinth, requiring the use of the resources, archaeological site, and collections at the ASCSA excavations at Ancient Corinth in Greece. Open to all nationalities. The Robinson Fellowship may not be held concurrently with another School fellowship.

Terms: The fellowship award is up to \$4,500 for one or more individuals. Funding is for research activities at Corinth, to be used to cover living expenses, including room, board, and fees, and other costs associated with the study, such as photography and drawings. The fellowship does not allow travel costs. A final report is due at the end of the award period, and the ASCSA expects that copies of all publications that result from research conducted as a Fellow of the ASCSA be contributed to the Blegen Library or the Gennadius Library of the School.

Duration: Up to three months, within the period from July 1, 2010 to June 30, 2011. (Note: Availability of rooms and workspace is limited during the excavation season from April to June.)

Application: Submit application for ASCSA associate membership online, curriculum vitae, proposal statement including project outline, explanation of goals, statement of the significance of the project, work completed to date, schedule for completion, dates for project, budget, and two letters of support, including one from dissertation advisor if applicant is a Ph.D. candidate.

Submit application form and materials online on the ASCSA web site at: www.ascsa.edu.gr.

POSTMARK DEADLINE: FEBRUARY 21, 2010.
The award will be announced by April 2010.

**GEOSCIENCE FACULTY, UNIVERSITY
OF TÜBINGEN, NEW POST IN THE
INSTITUTE FOR PRE- AND
PROTOHISTORY AND MEDIEVAL
ARCHAEOLOGY FOR A W1-
ASSITANTPROFESSOR IN
ENVIRONMENTAL ARCHAEOLOGY**

The Geoscience Faculty of the University of Tübingen is advertizing a new post in the Institute for Pre- and Protohistory and Medieval Archaeology for a **W1- Assitantprofessor in Environmental Archaeology** ideally to filled by April 1, 2010.

Applicants should have expertise in teaching and research on topics including, for example: palaeogenetics, archaeobotany, or zooarchaeology.

The successful candidate should conduct internationally recognized research and will be expected to establish a research team based primarily on external funding. Candidates will be expected to participate in interdisciplinary collaborations within the Geoscience Faculty and with other neighboring faculties.

The assistant professorship is initially funded for 6 years, and the hiring follows the procedure specified in § 51 *des Landeshochschulgesetzes Baden-Württemberg*. Candidates should have earned their Ph.D. and should have teaching experience.

The university seeks to increase the number of women professors and particularly encourages applicants from women. Applications from disabled scholars will be given preferential consideration.

Applications including: CV, cover letter discussing past and future research, teaching experience, lists of publications and funded research grants, as well as copies of the relevant diplomas and certificates should be submitted along with three examples of published research to the: Dean of the Geoscience Faculty, University of Tübingen, Sigwartstraße 17, 72076 Tübingen, Germany. The deadline for applications is **January 15, 2009**.

**GEOSCIENCE FACULTY, UNIVERSITY
OF TÜBINGEN, NEW POST IN THE
INSTITUTE FOR PRE- AND
PROTOHISTORY AND MEDIEVAL
ARCHAEOLOGY FOR A W1-
ASSITANTPROFESSOR IN
GEOARCHAEOLOGY**

The Geoscience Faculty of the University of Tübingen is advertizing a new post in the Institute for Pre- and Protohistory and Medieval Archaeology for a **W1- Assitantprofessor in Geoarchaeology** ideally to filled by April 1, 2010.

Applicants should have expertise in teaching and research on topics including, for example: micromorphological and paleoenvironmental research.

The successful candidate should conduct internationally recognized research and will be expected to establish a research team based primarily on external funding. Candidates will be expected to participate in interdisciplinary collaborations within the Geoscience Faculty and with other neighboring faculties.

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PH.D. STUDENTSHIP IN **ARCHAEOOMETRY** **(ARCHAEOMETALLURGY)**

Technical ceramics for bronze working during Antiquity

An assistant position for three to four years in view to obtain the PhD degree is available at the Department of Geosciences, University of Fribourg, Switzerland.

The successful applicant will study the technical ceramics (moulds, crucibles, etc.) used for different metallurgical processes (small and large casting, production of alloys, recycling, etc.) during Antiquity. The focus will be on the vessels related to the metallurgy of the copper alloys during the Roman period. The project plans the investigation of crucibles etc. from Autun (France), from Avenches (VD-Suisse) and from other sites in Switzerland. Objects from other periods and/or régions are also available for comparison.

The ceramics will be investigated in the laboratory using various techniques of analysis (optical microscopy, electronic microscopy, XRD, XRF, etc.) to characterize the properties regarding the technical requirements, identify the raw materials and investigate the local resources and define specific criteria for the identification of the metallurgical processes.

The aim is to describe and understand the technology of the Roman metallurgical ceramics.

Requirement :

Master degree in Earth Sciences or similar.

Good knowledge in mineralogy and petrography.

Interest for archaeometallurgy and archaeology in général.

Gross salary 38'000 CHF / year (PhD assistantship / 66%)

Starting date : 1st March 2010

The direction of the PhD will be under the responsibility of Prof. V. Serneels.

Applications (curriculum vitae, copy of education documents, brief statement of research experience and addresses of two referees) should be sent to :

Vincent Serneels, Department of Geosciences, University of Fribourg, Chemin du Musée 6, CH-1700 Fribourg, Switzerland. Phone : +41 26 300 89 31.

E-mail : Vincent.serneels@unifr.ch

Home page : www.unifr.ch/geoscience

ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS

**THE MEDITERRANEAN
ARCHAEOLOGICAL TRUST - GRANTS
TO ASSIST PUBLICATION**

The Mediterranean Archaeological Trust, set up in 1959 for the promotion of the study of archaeology, invites applications for grants, made on a competitive basis, for expenses in 2010-11, in the preparation for publication of material from archaeological *fieldwork* in the Mediterranean world, *excluding* subventions to publishers and publication of material not from a specific excavation. Within the terms of the Trust, priority may be given to publication of Bronze Age sites.

Grants for any amount, however small, will be considered, provided they expedite publication. The grants do not normally exceed £ 3000.

Applications comprising a 2000-word (*maximum*) description of the proposed work and an outline budget, together with two referees' names, should be sent *no later than 15 January 2010*, to:

Professor Sir John Boardman
(Mediterranean Archaeological Trust)
Classics Centre
66 St. Giles
Oxford OX1 3LU
G.B.

[or *also* by fax to 01865 610237; *NOT* by e-mail]

The references (which are *essential*) should be sent directly by the referees (to meet the deadline of 15 January), or accompany the application in a sealed envelope. Successful applicants will be informed by around the end of March 2010.

John Bennet, Head of Department & Professor of Aegean Archaeology Department of
Archaeology, University of Sheffield Northgate House
West Street T: +44 (0)114-2225103
Sheffield S1 4ET F: +44 (0)114-2722563
England, UK E: d.j.bennet@sheffield.ac.uk

ARCHEOMATICA, CULTURAL HERITAGE TECHNOLOGIES, CALL FOR PAPERS 2010, ISSUES 1-2-3-4 / 2010

<http://www.archeomatica.it/call-for-papers>

CALL FOR PAPERS

Archeomatica is a new, multidisciplinary journal, printed in Italy, devoted to the presentation and the dissemination of advanced methodologies, emerging technologies and techniques for the knowledge, documentation, safeguard, conservation and exploitation of cultural heritage.

The journal aims to publish papers of significant and lasting value written by scientists, conservators and archaeologists involved on this field with the diffusion of specific new methodologies and experimental results. Archeomatica will also emphasize fruitful discussion on the best up-to-date scientific applications and exchanging ideas and findings related to any aspect of the cultural heritage sector.

Archeomatica is intended also to be a primary source of multidisciplinary and divulgata information for the sector of cultural heritage.

The journal is divided in three sections Documentazione (Survey and documentation), Rivelazioni (Analysis, diagnostics and monitoring), Restauro (Materials and intervention techniques).

The issues are also published on line at the website www.archeomatica.it

Archeomatica invites submissions of high-quality papers and interdisciplinary works for the next issues in all areas related to science and technology in cultural heritage, particularly on recent developments.

If you are interested please submit an original paper to paper-submission@archeomatica.it Questo indirizzo e-mail è protetto dallo spam bot. Abilita Javascript per vederlo.

The papers will be subject to review by the scientific board after which they are accepted or rejected in order to maintain quality. Applicants will be notified by email as to their acceptance.

Topics and trends relevant to the Archeomatica Issues include, but are not limited to, the following:

Methodologies and analytical techniques for the characterization and for the evaluation of the preservation state of historical masterpieces

On-site and remotely sensed data collection

Digital artefact capture, representation and manipulation

Experiences in cultural heritage conservation

Methods for data elaboration and cataloguing

Setting of historical architectures

Intelligent tools for digital reconstruction

Augmentation of physical collections with digital presentations

Applications in Education and Tourism

Archaeological reconstruction
Electronic corpora
XML and databases and computational interpretation
Three-dimensional computer modeling, Second Life and virtual worlds
Image capture, processing, and interpretation
3-D laser scanning, synchrotron, or X-ray imaging and analysis
Technology
Metadata of material culture
Optical 3D measurement
Cultural heritage recording
Terrestrial laser scanning
Virtual reality data acquisition
Photogrammetric processing
GPS
GIS
Remote sensing
Culture portals
Advanced systems for digital culture in museums, archives and art institutions
Digitalization of cultural property
Web 2.0 and development of social networks on the top of cultural heritage portals
Applications of mobile technologies for digital culture and cultural heritage
Ubiquitous and pervasive computing
Methodologies and approaches to digitization
Augmented reality, virtual reality and digital culture
Access to archives in Europe
Books and electronic publishing
2/3/4D Data Capture and Processing in Cultural Heritage
Web-based museum guides
Applications of Semantic Web technologies in Cultural Heritage
Non-Destructive analytical techniques for the study of the composition and decay of cultural heritage components
Management of heritage knowledge and data
Visualization for cultural heritage

Publication Frequency

The journal is published quarterly a year

Submission Preparation Checklist

As part of the submission process, authors are required to check off their submission's compliance with all of the following items, and submissions may be returned to authors that do not adhere to these guidelines.

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Interested authors should download and read the Instructions to Authors Manual for all details of requirements, procedures, paper mechanics, referencing style, and the technical review process for submitted papers.

Color diagrams, figures, and photographs are encouraged. Papers should be submitted in a plain text, single-spaced Word or RTF file. Formatting should be kept to an absolute minimum. Do not embed graphics, tables, figures, or photographs in the text, but supply them in separate files, along with captions.

Papers, diagrams, tables, etc. should be emailed as attached files to the email address listed in the Instructions Manual.

December 27, 2009

Renzo Carlucci

Editor

dir@archeomatica.it

INTERNET SITES

ROBERT BALLARD'S UNDERSEA DISCOVERIES

At <http://www.cbsnews.com/video/watch/?id=5825993n&tag=contentMain;cbsCarousel> is a 60 minutes broadcast about Robert Ballard's undersea discoveries, this time mostly about recovery of a Byzantine ship. Go there for link.

RUINS OF POMPEII NOW ON GOOGLE STREETVIEW

This is cool: Google mapped and photographed the ruins of ancient Pompeii in Italy. Pompeii was a Roman city that was covered in volcanic ash after nearby Mt. Vesuvius erupted in 79 A.D.

I visited Pompeii in 1997 and was struck by its relatively immense size, and appreciated how big of a disaster the eruption must have been for what was once a thriving little seaside city in the Roman empire.

Google Streetview gives you a good peek inside the place, but it's definitely worth a visit with your feet on the ground, if you're ever in Italy. Anybody else been there?

Please visit the site:

http://weblogs.baltimoresun.com/news/technology/2009/12/ruins_of_pompeii_now_on_google.html [Go there for access]

ARCHAEOLOGY IN GREECE
ONLINE/CHRONIQUE DES FOUILLES
EN LIGNE

The new resource from The British School at Athens and the École française d’Athènes

<http://ancientworldonline.blogspot.com/2009/11/archaeology-in-greece-onlinechronique.html> or <http://tinyurl.com/ya9u2hn>

ROYAL SOCIETY HISTORIC COLLECTION OF SCIENTIFIC PAPERS ONLINE

In case you are interested, the Royal Society has put its historic collection of scientific papers online.

Please visit the site: <http://news.bbc.co.uk/2/hi/science/nature/8385560.stm>

Aaron

Aaron Shugar

aaron.shugar@gmail.com

shugaran@buffalostate.edu

LAUNCH OF THE DATABASE FOR EXPERIMENTAL ARCHAEOLOGY **(DEXAR)**

Dear Colleagues,

Having campaigned for the setup of a Database for Experimental Archaeology for the past 2 years, I am now happy to report that it has been established and was formally launched at the 4th Experimental Archaeology Conference in Aberdeen, UK. The initial setup has been funded by the Leverhulme Trust and the University of Glasgow.

The field of experimental archaeology is sometimes justifiably criticised for continuously "re-inventing the wheel." It is hoped that the information exchange facilitated by DEXAR will help reduce unnecessary duplication of effort and maximise the value derived from experimental work by the community as a whole.

Before you take a look please be aware that this is a database which requires your input. The database collates information on archaeological experimentation carried out to date and experimental work that is currently ongoing. This is a resource which relies on the input of data by archaeologists, researchers and craftworkers for archaeologists, researchers and craftworkers. Please do not log in with the expectation of finding a comprehensive dataset. This database is designed to build up over time as entries are added. The primary purpose of DEXAR is to provide a facility that will enable more efficient networking and information exchange between experimental archaeologists, researchers, experimental research centres, craftsmen, anthropologists etc. There is also the added benefit of publicising your work and communicating your interests to a larger audience.

Please note also that this database is a pilot study for a much larger project for which further funding is sought. The current database is neither pretty to look at nor is it perfect, but it is functional. I have outlined a list of corrections, changes, additions (e.g. multi-language support) and suggestions that I have already received, in the Help/About this site section of the website. Your input in this respect is very much welcome. Remember, this is designed to be a resource to be used by you, but which is essentially also created from your contributions.

This is the link: <http://www.arts.gla.ac.uk/dexar/>

The site is currently password protected to prevent misuse (It is acknowledged that this initial solution is less than ideal.), but the data will be freely available in a future version and only persons entering data will require unique credentials with which they may also edit their entries. The current credentials are as follows:

Username: omnia
Password: insitu

As with all such projects, its/DExAr's success and survival depends on the users. I strongly encourage you to make use of it, as the saying goes "use it or loose it".

Please be so kind to forward this email on to anyone who may be able to contribute to the Experimental Database.

Kind regards,

Farina

Dr. Farina Sternke
Leverhulme Trust Early Career Fellow
Department of Archaeology
University of Glasgow
Gregory Building
Lilybank Gardens
Glasgow
G12 8QQ
Phone: (0044) 0141 3305463
Email: F.Sternke@Archaeology.gla.ac.uk

The University of Glasgow, charity number SC004401



ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS

**BIOGRAFIA DI UN VASO: TECNICHE DI
PRODUZIONE DEL VASELLAME
CERAMICO NEL VICINO ORIENTE ANTICO
TRA IL IV E IL II MILLENNIO A.C.
(BIOGRAPHY OF A VASE: POTTERY
MANUFACTURING TECHNIQUES IN THE
ANCIENT NEAR EAST BETWEEN THE FIFTH
AND SECOND MILLENNIA BC)**

Author: Nicola Laneri

paperback

Publisher: Pandemos (Paestum, Italy)

Serie: Tekmeria 10

Publication date: December 2009

ISBN: 88-87744-23-8

Price: Euro 36,00

In Italian with English Summary and Preface

Pages: 176 p.; Figures: 39 B/W; Tables: 6

Book's Summary:

This book aims at bringing together all the technological elements (i.e., manufacturing techniques, surface treatments, firing methods) that can help scholars and students to better define the chaîne opératoire enacted by the potter during the making of pottery among ancient Near Eastern societies between the fifth and second millennia BC.

Through visual and X-radiographic analyses of a high number of shards and completed vessels from selected sites -- such as Cheshmeh Ali, Shahr- i Sokhta, Tepe Rud-i Byaban 2 and Susa (Iran), Tell Mardikh/Ebla (Syria) and Hacinebi Tepe (southeastern Turkey) -- the author investigates the life-history of the ceramic containers conceived as part of a broader socioeconomic landscape in which the manufacturing techniques are pivotal for interpreting the organization of ancient craft productions.

Laneri's book, *Biografia di un vaso*, will be a good guide for those interested in studying the pottery technology of ancient societies.

Keywords: Pottery technology, Ceramic studies, Ancient Near East, Archaeology, X-Radiography.

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For information and ordering this book or other volumes published by Pandemos contact:

Dr. Fausto Longo

Email: info@pandemos.it

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84047 Paestum (SA)

Italy

SPECTRAL IMAGING OF OSTRACA

Bearman, G. & W.A. Christens-Barry. 2009. Spectral Imaging of Ostraca. – Palarch's Journal of Archaeology of Egypt/Egyptology 6(7) (2009), 1-20. ISSN 1567-214X. 20 pages + 22 figures.

SPECTRAL IMAGING OF OSTRACA

Gregory Bearman* & William A. Christens-Barry# *ANE Image, Pasadena, CA 91104, gregb@snapshotspectra.com #Chief Scientist, Equipoise Imaging, LLC, 4009 St. Johns Lane, Ellicott City, MD 21042

ABSTRACT

By analogy with ancient texts, infrared imaging of ostraca has long been employed to help improve readings. We report on extensive spectral imaging of ostraca over the visible and near infrared. Spectral imaging acquires the complete spectrum for each pixel in an image; the data can be used with an extensive set of software tools that were developed originally for satellite and scientific imaging. In this case, the spectral data helps explain why infrared imaging works to improve text legibility (and why not in some cases). A better understanding of the underlying imaging mechanism points the way for inexpensive methods for taking data either in the field or at museums.

Please visit the site :

http://www.palarch.nl/wp-content/bearman_g_wa_christens_barry_spectral_imaging_of_ostraca_palarchs_journal_of_archaeology_of_egypt_egyptology_6_7_2009.pdf [Go there to download full article.]

EΙΔΗΣΕΙΣ - NEWS RELEASE

GREECE: ARCHAEOLOGISTS DISCOVER WALL OF ANCIENT CITY OF VERGINA BALKANTRAVELLERS.COM

An exceptional fortification structure surrounding the ancient city of Vergina, located in northern Greece, was recently discovered by archaeologists from the Aristotle University of Thessaloniki.

According to the university's announcement, cited by the www.ana-mpa.gr website, the architectural elements of the enclosure indicate that it dates back to the reign of Cassander, in the early third century BC, a period when Macedonia was plagued by major turmoil, including civil wars and attacks from the outside.

The finding, according to the publication, is of remarkable importance because the wall is preserved in perfect condition.

In addition to the structure, the university's archaeological team also discovered a large number of artefacts, charred seeds and food, dating to the second and first centuries BC.

Vergina is a small town in northern Greece, located in the prefecture of Imathia, Central Macedonia. The town became internationally famous in 1977, when Greek archaeologist Manolis Andronikos unearthed what he claimed was the burial site of the kings of Macedon, including the tomb of Philip II, father of Alexander the Great. The finds established the site as the ancient Aigai, which was once the royal capital of ancient Macedon, ruled by the Argead dynasty from about 650 BC onwards.

Please visit the site: <http://www.balkantravellers.com/en/read/article/1611>

ΣΤΟ ΦΩΣ Η ΑΡΧΑΙΑ ΑΓΟΡΑ ΤΗΣ ΚΥΘΝΟΥ **- ΕΝΑ ΔΗΜΟΣΙΟ ΟΙΚΟΔΟΜΗΜΑ** **ΔΕΙΧΝΟΥΝ ΤΑ ΕΥΡΗΜΑΤΑ ΠΟΥ** **ΕΝΤΟΠΙΣΤΗΚΑΝ ΚΑΤΑ ΤΗ ΔΙΑΡΚΕΙΑ** **ΑΝΑΣΚΑΦΩΝ ΣΤΗΝ ΞΗΡΑ ΤΟΥ** **ΝΗΣΙΟΥ, ΡΕΠΟΡΤΑΖ ΜΑΡΙΑ ΘΕΡΜΟΥ**

Μπορεί η υποβρύχια αρχαιολογική έρευνα στο αρχαίο λιμάνι της Κύθνου να έφερε στο φως εφέτος το καλοκαίρι ερμαϊκές στήλες και θραύσματα γλυπτών, μερικά από τα οποία συνταιριάζουν με εκείνα που είχαν ανελκυσθεί πέρυσι, αλλά και στην ξηρά οι ανασκαφές φαίνεται ότι εντόπισαν την Αγορά της πόλης. Ο αρχαιολόγος κ. **Αλέξανδρος Μαζαράκης-Αινιάν**, καθηγητής Κλασικής Αρχαιολογίας στο Πανεπιστήμιο Θεσσαλίας και υπεύθυνος των ανασκαφών στην Κύθνο, είναι ακόμη επιφυλακτικός σχετικά με αυτή την τελευταία αποκάλυψη, όμως τα ευρήματα δείχνουν προς την κατεύθυνση ενός δημόσιου οικοδομήματος. Αλλωστε η αρχαία Αγορά της Κύθνου αναζητείται από τον ίδιο εδώ και χρόνια στην Ανω Πόλη της Αρχαίας Κύθνου.

Διαστάσεων 17x12 μέτρων, αυτό το ορθογώνιο κτίριο χωρίζεται κατά το μήκος του σε δύο περίπου ίσα μέρη, ενώ ένα τμήμα του ήταν στρωμένο με μεγάλες σχιστόπλακες, δίνοντας την εντύπωση μιας επίσημης αίθουσας. Η αποκάλυψη όμως ήρθε από μια τετράγωνη κατασκευή στο μέσον της αίθουσας γεμισμένη από μικρούς λίθους και κεράμους, στο βάθος στάχτη, καρβουνάκια και, τέλος, πολυάριθμα ευρήματα: πήλινα γυναικεία ειδώλια, μικρά ακέραια αγγεία πόσης και βρώσης (κυρίως μικρογραφικά), μικρογραφικός λύχνος, σιδερένιο εγχειρίδιο, μολύβδινο σταθμίο (με σύμβολο τον παναθηναϊκό αμφορέα και με την επιγραφή ΤΡΙΤΗ- ενός στατήρα) κ.ά.

Πολλά ήταν τα ευρήματα έξω από την κατασκευή: πήλινες αγνύθες και σφονδύλια, ένα αργυρό νόμισμα Αλεξάνδρου και μολύβδινα σταθμία (το 1/8 ενός στατήρα με την επιγραφή ΔΗΜΟ[ΣΙΟΝ] και ένα πυραμιδόσχημο βάρος), μία πυρά με οστά ζώων και ανάμεσά τους ένας μικρογραφικός πήλινος λύχνος. *«Πρόκειται για οικοδόμημα δημόσιου, ίσως και εμπορικού χαρακτήρα, ενώ η κατασκευή στο μέσον του δωματίου φαίνεται ότι είχε λατρευτικό προορισμό. Τα ευρήματα το χρονολογούν στον 4ο αι. π.Χ., αν και η παρουσία πολλών άλλων ευρημάτων της Ελληνιστικής Περιόδου στις άμεσες επιχώσεις του οικοδομήματος («μεγαρικοί» σκύφοι, λύχνοι και ενσφράγιστες λαβές αμφορέων) μάλλον μιλούν για τη χρήση του και κατά τους ελληνοιστικούς χρόνους»* λέει ο κ. Μαζαράκης-Αινιάν. Η συνέχιση της ανασκαφικής έρευνας πάντως στην περιοχή αυτή το 2010 θα επιτρέψει την αποσαφήνιση του ευρήματος.

Ε φέτος εξάλλου ανασκάφη και το μνημειακό ανάλημμα στα δυτικά του ναού (60 μέτρα μήκος και 20 πλάτος), στο εσωτερικό του οποίου αποκαλύφθηκαν και παλαιότεροι αναλημματικοί τοίχοι, ενώ στο μπάζωμα της βορειοδυτικής γωνίας του βρέθηκε πλούσια απόθεση αγγείων και μετάλλινων αφιερωμάτων, ορισμένα από τα οποία συνανήκουν με παλαιότερα. Μεταξύ αυτών αναφέρονται θραύσματα αγγείων διακοσμημένα με παραστάσεις (7ος και 6ος αι. π.Χ.), χάλκινες βελόνες, δακτύλιοι και ρόδακες. Από την

επίχωση εξωτερικά του αναλήμματος προέκυψαν και άλλα ενδιαφέροντα ευρήματα, κυρίως της ελληνοιστικής περιόδου, όπως πήλινα ειδώλια γυναικείων μορφών. Το ανάλημα φαίνεται ότι χτίστηκε στη διάρκεια της αρχαϊκής περιόδου και πιθανώς επεκτάθηκε και έλαβε τη μνημειακή μορφή του στη διάρκεια της ελληνοιστικής περιόδου.

Η Αρχαία Κύθνος υπήρξε σημαντική ναυτική δύναμη με επαφές στον αιγαιακό και μεσογειακό χώρο, κάτι που προκύπτει κυρίως από τα ευρήματα του ιερού της, τα οποία προέρχονταν από την Κάτω Ιταλία και τη Σικελία ως τη Φοινίκη. Η υποβρύχια ανασκαφή λοιπόν που έγινε στον όρμο Μανδράκι έχει εντοπίσει τα κατάλοιπα του αρχαίου λιμανιού της πρωτεύουσας του νησιού, φέρνοντας στο φως τρεις μαρμάρινες στήλες, η μεγαλύτερη από τις οποίες ανήκει στο κεφάλι που είχε βρεθεί πέρυσι και μπορεί να συγκριθεί με τις στήλες των κοσμητών από την Αρχαία Αθήνα. Από τον βυθό ανελκύστηκαν ακόμη ένα τμήμα από το ένδυμα μαρμάρινου γλυπτού, μία λίθινη άγκυρα, καθώς και πολυάριθμα θραύσματα αγγείων, μολύβδινα αλιευτικά βάρη κ.ά. Η συνεργατική ενάλια ανασκαφή διεξάγεται υπό τη διεύθυνση του κ. **Μαζαράκη-Αινιάν** από την πλευρά του Πανεπιστημίου Θεσσαλίας και του αρχαιολόγου δρος **Δημήτρη Κουρκουμέλη** από την Εφορεία Εναλίων Αρχαιοτήτων.

Παρακαλώ επισκεφθείτε το δικτυακό τόπο:

<http://www.tovima.gr/default.asp?pid=2&ct=4&artid=302998&dt=04/12/2009>

ANCIENT TEMPLE ARCHITECTS MAY HAVE BEEN CHASING A BUZZ FROM SOUND WAVES

Emerging archaeology in a new study highlighted by the Old Temples Study Foundation suggests that sound and a desire to harness its effects may have been equally important as vision in the design of humankind's earliest ancient temples and monumental buildings.

You need Flash to see the Feature Video
We may be hitting on one of those 'lost secrets'

There is a small niche in what we call 'The Oracle Chamber', and if someone with a deep voice speaks inside, the voice echoes all over the hypogeum. The resonance in the ancient temple is something exceptional. You can hear the voice rumbling all over. Standing in the Hypogeum is like being inside a giant bell. You feel the sound in your bones as much as you hear it with your ears. It's really thrilling! Sounds of the Stone Age At certain frequencies you have standing waves that emphasize each and other waves that de-emphasize each other. The idea that it was used thousands of years ago to create a certain trance -- that's what fascinates me. . . . a gradual growth, from the cave to the tomb. The idea of continuity comes from an underground architecture. Gradually from these ovular rock-hewn spaces, man moved above ground, and above ground he fashioned an architecture of the living which followed the form of an architecture for the dead. Once you know what you are looking for, you can see these same ceiling curves in natural caves in Malta. It's logical that the ancient temple builders observed the echoes and sound characteristics in the caves and came up with the idea of recreating the same environment in a more controlled way. Were they doing it intentionally to facilitate an altered state of consciousness? There is a lot that we are never going to know.

Sarasota, FL (PRWEB) December 1, 2009 -- Six-thousand-year-old ancient temples are giving up acoustic clues for modern scientists. Intriguing new research on ancient temples in Malta and highlighted by the Old Temples Study Foundation is resonating through international archaeology and interdisciplinary classics research. Reaching beyond the scope of traditional archaeology, a multi-disciplinary approach has opened a new dimension for the study of the ancient world.

Hal Safflieni Hypogeum, Malta. A 6,000 year old underground necropolis with notable acoustic properties replicates sophisticated architectural features. Hal Safflieni Hypogeum, Malta. A 6,000 year old underground necropolis with notable acoustic properties replicates sophisticated architectural features. "We may be hitting on one of those 'lost secrets'," says Linda Eneix, President of The OTS Foundation, dedicated to archaeology research and education related to the ancient temples of Mediterranean Malta.

Located south of Sicily, the islands of Malta and Gozo are home to megalithic structures that were created by a highly developed people more than a thousand years ahead of Stonehenge and the pyramids. The monuments, including ancient temples, represent free-standing architecture in its purest and most original form. Design features including

corbelled ceilings, are mirrored in subterranean mortuary shrines that have been carved out of solid limestone. (In architecture, corbelling is a system of a row of stones oversailing the one below it, reducing the area of the ceiling with each row upward and distributing its weight.) Malta's Hal Saflieni Hypogeum provides the most extraordinary example. A multi-leveled complex of caves and ritual chambers, it is a gem of archaeology that lay undisturbed until workers broke into it accidentally in 1902.

Science Officer at the Hypogeum, Joseph Farrugia describes unusual sound effects in the UNESCO World Heritage Site: "There is a small niche in what we call 'The Oracle Chamber', and if someone with a deep voice speaks inside, the voice echoes all over the hypogeum. The resonance in the ancient temple is something exceptional. You can hear the voice rumbling all over."

As anyone who sings in the shower knows, sound echoing back and amplifying itself from hard walls can do unusual things. That effect is magnified several times over in the stone chambers. "Standing in the Hypogeum is like being inside a giant bell," says Eneix. "You feel the sound in your bones as much as you hear it with your ears. It's really thrilling!"

After catching a film about the "Sounds of the Stone Age" on a flight from London, Eneix jumped on the chance to explore further and sought out the principals.

A consortium called The PEAR Proposition: Princeton Engineering Anomalies Research are pioneers in the field of archaeo-acoustics, merging archaeology and sound science. Directed by Physicist Dr. Robert Jahn, the PEAR group set out in 1994 to test acoustic behavior in megalithic sites such as Newgrange and Wayland's Smithy in the UK. They found that the ancient chambers all sustained a strong resonance at a sound frequency between 95 and 120 hertz: well within the range of a low male voice.

In subsequent OTSF testing, stone rooms in ancient temples in Malta were found to match the same pattern of resonance, registering at the frequency of 110 or 111 hz. This turns out to be a significant level for the human brain. Whether it was deliberate or not, the people who spent time in such an environment were exposing themselves to vibrations that impacted their minds.

Sound scientist, Prof. Daniel Talma of the University of Malta explains: "At certain frequencies you have standing waves that emphasize each and other waves that de-emphasize each other. The idea that it was used thousands of years ago to create a certain trance -- that's what fascinates me."

Dr. Ian A. Cook of UCLA and colleagues published findings in 2008 of an experiment in which regional brain activity in a number of healthy volunteers was monitored by EEG through different resonance frequencies. Findings indicated that at 110 hz the patterns of activity over the prefrontal cortex abruptly shifted, resulting in a relative deactivation of the language center and a temporary switching from left to right-sided dominance related to emotional processing. People regularly exposed to resonant sound in the frequency of 110 or 111 hz would have been "turning on" an area of the brain that bio-behavioral scientists believe relates to mood, empathy and social behavior.

Although archaeologists had not found an explanation for such sophisticated engineering suddenly blossoming nearly six thousand years ago, Prof. Richard England, a Fellow of the American Institute of Architects, sees an evolution: “. . . a gradual growth, from the cave to the tomb. The idea of continuity comes from an underground architecture. Gradually from these ovular rock-hewn spaces, man moved above ground, and above ground he fashioned an architecture of the living which followed the form of an architecture for the dead.”

“Once you know what you are looking for, you can see these same ceiling curves in natural caves in Malta.” Eneix observes. “It’s logical that the ancient temple builders observed the echoes and sound characteristics in the caves and came up with the idea of recreating the same environment in a more controlled way. Were they doing it intentionally to facilitate an altered state of consciousness? There is a lot that we are never going to know.”

Acoustics may well have been part of a widespread religious tradition. Old photos in an early edition of National Geographic Magazine show the discovery in securely dated levels of the Malta temples, of conical shaped stones bearing a distinct resemblance to the Omphalos or “belly-button” oracle stone at Delphi, used much later in time by ancient Greek priestesses who listened to the voice of the earth for guidance. The Omphalos became an Umbilicus when the Romans took over the concept and spread it over their empire. The timeline places the ancient Temple Builders at the head of a long chain of “coincidence.”

Research about Malta’s Temple Culture has been documented on a DVD available from the foundation at <http://www.otsf.org/Legacy.htm>. This captivating documentary details how inquiry into ancient temples in Malta mirrors the evolution of a discovery, branching beyond archaeology to become a multi-disciplinary fascination.

Contact: Linda Eneix
Phone: 941 776 8382

Please visit the site:
http://www.prweb.com/releases/ancient_temples/archaeology/prweb3243374.htm

EGYPT TO DEMAND THE ROSETTA STONE FROM BRITISH MUSEUM, CRISTINA RUIZ

EGYPT is preparing to make a formal request for the return of the Rosetta Stone, the ancient artefact that helped to unlock the secrets of the pharaohs, from the British Museum.

Zahi Hawass, the head of Egypt's Supreme Council of Antiquities, said he is preparing to "fight" for the restitution of the stone which has been on display in the museum in London since 1802.

He regards the pinkish-grey tablet — the key to deciphering hieroglyphs — as one of the most important treasures removed from Egypt which now take pride of place in western collections. It dates from 196BC.

Hawass hopes Britain will hand it back in time for the opening of a new museum near the pyramids at Giza in 2013. The demand follows the decades-old tussle between Britain and Greece over the Elgin Marbles.

The Rosetta Stone was discovered by French soldiers in 1799 in the Nile Delta town of el-Rashid, or Rosetta. On Napoleon's defeat in 1801, the artefact was taken by British troops and shipped to London.

The 3ft 9in by 2ft 4in stone is inscribed with a decree relating to the royal cult of Ptolemy V, a 13-year-old king. It appears in three scripts: hieroglyphics; demotic, the historic Egyptian script used for daily interaction; and classical Greek.

By comparing the pictorial hieroglyphs with their Greek equivalent, the French scholar Jean-François Champollion deciphered the ancient symbols in 1822, a breakthrough in understanding Egyptian civilisation.

Hawass first asked the British Museum to lend the Rosetta Stone to Egypt for a temporary display. However, he was angered when trustees asked him to provide assurances that the stone would be safe.

"The [security] standards of our new museums in Egypt are better than the standards of security at the British Museum and therefore I decided that we are not going to ask for a loan. We are going to bring [it back] for good," said Hawass.

He is launching a new book on egyptology at the British Museum on Tuesday, but he is unlikely to make a formal request for the permanent return of the stone until next spring.

A spokeswoman for the British Museum said it was considering Egypt's request to borrow the stone and that asking for information about the conditions of display was standard for any loan request.

Please visit the site:

http://entertainment.timesonline.co.uk/tol/arts_and_entertainment/visual_arts/article6946133.ece

ARCHAEOLOGY: BURIED CITY FOUND BY ITALIANS IN LIBYA

A buried city from the Roman era has been discovered by Italian archaeologists in Libya along the eastern coast of Cyrenaica. The area has been located between the cities of Derna and Bomba, not far from Tobruk.

The discovery was made by Italian archaeologists and technical experts from the Sicily region Sea Superintendence and the Suor Orsola Benincasa University in Naples under Sebastiano Tusa. The group is carrying out archaeological searches along the African coastline as part of the ArCoLibia (Coastal Archaeology of Libya) project, which was started a few years ago and which has already led to such exceptional finds as that of the Venetian ship "Tigre", which had sunk off the cape of Ras al-Hilal. The first traces of the buried city were found during reconnaissance diving in the waters of Ras Etteen.

The archaeologists were searching for shipwrecks and port structures on the western edge of the Gulf of Bomba. They found walls, roads, buildings and tombs at a depth of between one and three metres. It is a portion which extends over a hectare of a large city which some of the scholars had intuited the presence of due to the remains of wall structures hidden among the sandy dunes hit by strong winds. It is believed that a large part of the city sunk due to a large bradyseism.

Initial morphological analysis showed that changes to the area were macroscopic even in recent times, and the ruins found at the bottom of the sea are part of a city existing in the Imperial Roman era during the second century AD. (ANSAMED).

Please visit the site: <http://www.ansamed.info/en/top/ME13.XAM19315.html>

ANCIENT MED FLOOD MYSTERY SOLVED, BY VICTORIA GILL

Research has revealed details of the catastrophic Zanclean flood that refilled the Mediterranean Sea more than five million years ago.

The flood occurred when Atlantic waters found their way into the cut-off and desiccated Mediterranean basin.

The researchers say that a 200km channel across the Gibraltar strait was carved out by the floodwaters.

Their findings, published in Nature, show that the resulting flood could have filled the basin within two years.

The team was led by Daniel Garcia-Castellanos from the Research Council of Spain (CSIC).

He explained that he and his colleagues laid the foundations for this study by working on tectonic lakes.

They developed a model of how the mountain lakes quickly "cease to exist" when erosion produces "outlet rivers" that drain them.

This same principle, Dr Garcia-Castellanos said, could be used to explain the Zanclean flood that reconnected the Mediterranean with the rest of the World's oceans.

"We could for the first time link the amount of water crossing the channel with the amount of erosion causing it to grow over time," he told BBC News.

New approach

Using existing borehole and seismic data, his team showed how the flood would have begun with water spilling over a sill.

The water would have gradually eroded a channel into the strait, eventually triggering a catastrophic flood, Dr Garcia-Castellanos explained.

He and his colleagues created a computer model to estimate the duration of the flood, and found that, when the "incision channel" reached a critical depth, the water flow sped up.

In a period ranging from a few months to two years, the scientists say that 90% of the water was transferred into the basin.

"This extremely abrupt flood may have involved peak rates of sea level rise in the Mediterranean of more than 10m per day," he and his colleagues wrote in the Nature paper.

Previous estimates of the duration of the flood were very variable, said Dr Garcia-Castellanos, because scientists "had to assume the size of the channel" rather than measure it.

Some estimates suggested that the flood continued for as long as 10,000 years.

Rob Govers, a geoscientist from Utrecht University in the Netherlands, who was not involved in this study, said that the findings were important.

"I think the authors have been very creative using existing data and making sense of it in a completely new way," he said.

Dr Govers said the next important step would be to measure the volume of breccia, or ancient eroded material, in the strait, to confirm whether there was enough material there to have filled the flood channel.

Please visit the site: <http://news.bbc.co.uk/2/hi/science/nature/8404363.stm>

ARISTOTELIAN UNIV OF THESSALONIKI ANNOUNCES NEW FINDINGS ON THE ANTIKYTHERA MECHANISM

Aristotelian University of Thessaloniki has announced on 9 Dec. some new findings of a research conducted in the University on the Antikythera mechanism.

The research was conducted by doctoral candidate Magdalini Anastasiou, under guidance by professor Ioannis Seiradakis, from the Physics Department.

Here's the announcement of the Aristotelian University, in Greek:

http://press.auth.gr/news/wordpress/wp-content/uploads/2009/12/9_12_2009_nea_evrinata_mixanismo_antikytheron.doc
<http://tinyurl.com/ybmro49>

The news from the Athenian News Agency, in Greek:

<http://www.ana-mpa.gr/anaweb/user/showprel?service=3&maindoc=8219879>
<http://tinyurl.com/yhh78mq>

From "Kathimerini", in English:

http://www.ekathimerini.com/4dcgi/_w_articles_politics_2_10/12/2009_113191
<http://tinyurl.com/ybjasdg>

"Kathimerini" makes no reference to the Aristotelian Univ announcement and the new findings. But it does report a press conference on Wednesday.

As I can't find an English translation of the announcement, here's a rough summary:

According to the announcement, the main findings of the doctoral study are so far these:

First, the mechanism is probably associated with North-western Greece (Epeiros, Kerkyra). This is indicated by three independent findings: (a) The calendar of the spiral of Meton. [they mean "the calendar on the spiral", probably] (b) Among the other <gr>stefanites</gr> games (Olympia, Pythia, Isthmia and Nemea), the mechanism also refers the games <gr>Na'i'a</gr> of Dodone. (c) an analysis of the astrical events written on the mechanism.

A second main finding concerns the way that the spirals are made. The spirals on the back side are not what is called a spiral of Archimedes [the usual kind of a spiral], but are really made by [joining] two halves of a circle.
[apparently, they mean two halves of a circle's periphery]

A third finding concerns the pointer of the spiral of Meton.

This pointer is not fixed, but is free to move so as to follow the spiral. [but wasn't that known?]

The announcement is accompanied by two photos. One is a rather well known photo of the mechanism. The other shows "the main cities of the Hellenistic period", where the size of the indicating square is analogous to the number of months of that city's calendar that are written on the mechanism. Also shown are the sites of ancient panhellenic games. Actually, these are only the main cities of mainland Greece and Sicily -- Alexandria, for example, and eastern Mediterranean are missing.

Lampros F. Kallenos
Idalion, Lefkosia
Kypros



ΕΚΡΗΞΗ ΧΡΩΜΑΤΟΣ ΣΤΑ ΑΡΧΑΙΑ ΓΛΥΠΤΑ - ΟΙ ΘΕΟΙ ΠΟΥ ΑΠΕΙΚΟΝΙΖΟΝΤΑΝ ΣΤΑ ΑΓΑΛΜΑΤΑ ΤΩΝ ΑΡΧΑΙΩΝ ΕΛΛΗΝΩΝ ΚΑΙ ΚΑΤΟΙΚΟΥΣΑΝ ΣΤΗΝ ΑΓΟΡΑ ΚΑΙ ΣΤΟΥΣ ΝΑΟΥΣ ΦΟΡΟΥΣΑΝ ΠΟΛΥΧΡΩΜΑ ΡΟΥΧΑ ΚΑΙ ΑΞΕΣΟΥΑΡ ΚΑΙ ΚΟΙΤΑΖΑΝ ΤΟΥΣ ΔΙΕΡΧΟΜΕΝΟΥΣ ΜΕ ΕΝΤΟΝΟ ΚΑΣΤΑΝΟ ΒΛΕΜΜΑ, ΤΗΣ ΛΑΛΙΝΑΣ ΦΑΦΟΥΤΗ | ΤΟ ΒΗΜΑ ΚΥΡΙΑΚΗ 20 ΔΕΚΕΜΒΡΙΟΥ 2009

Τα λευκά μαρμάρινα αρχαία αγάλματα που βλέπουμε σήμερα στα μουσεία μας τελικά δεν ήταν λευκά. Τουλάχιστον όχι στην ελληνιστική περίοδο, όχι στη Δήλο. Αυτό υποστηρίζει μια νέα μελέτη γύρω από την πολυχρωμία των αρχαίων γλυπτών που πραγματοποιήθηκε στο πλαίσιο ενός προγράμματος της Γαλλικής Αρχαιολογικής Σχολής και του Κέντρου Ερευνών και Αποκατάστασης των Μουσείων της Γαλλίας, με τη συνδρομή των ελληνικών αρμοδίων φορέων. Η έρευνα είναι ιδιαίτερα ενδιαφέρουσα όχι μόνο για τα ευρήματά της αλλά και για την πρωτότυπη μεθοδολογία που εισήγαγε.

«Ακριβώς οι μέθοδοι που εφαρμόστηκαν μας επέτρεψαν να ανακαλύψουμε νέα αποτελέσματα» εξηγεί μιλώντας στο «Βήμα» ο Φιλίπ Ζοκέ, καθηγητής Ελληνικής Ιστορίας και Πολιτισμού και διευθυντής του Τμήματος Ιστορίας του Πανεπιστημίου της Προβάνς, ο οποίος ηγήθηκε του προγράμματος μαζί με την Μπριζίτ Μπουρζουά του Κέντρου Ερευνών και Αποκατάστασης των Μουσείων της Γαλλίας. «Το πρόγραμμα συνδύασε διάφορες τεχνολογίες αιχμής, τόσο στο επίπεδο της παρατήρησης των υπολειμμάτων χρώματος ή χρυσού όσο και σε αυτό της ανάλυσης- στο να αναλύσουμε σε πρώτη φάση αυτά τα χρώματα και στη συνέχεια να τα αποκαταστήσουμε σε τρισδιάστατη απεικόνιση».

Εδώ και περίπου έναν αιώνα αρκετοί αρχαιολόγοι είχαν παρατηρήσει υπολείμματα χρωμάτων στα ελληνιστικά αγάλματα της Δήλου, η διαθέσιμη τεχνολογία όμως δεν επέτρεπε ως τότε μια καλύτερη εξέτασή τους. Η πρώτη καινοτομία που εισήγαγαν οι δυο γάλλοι ερευνητές ήταν η χρήση του βιντεομικροσκοπίου, ενός οπτικού μικροσκοπίου το οποίο, αν και ήταν γνωστό από την αποκατάσταση έργων τέχνης, δεν είχε χρησιμοποιηθεί ποτέ σε αρχαία γλυπτά.

Η τεχνική αποδείχθηκε εντυπωσιακά βοηθητική. «Τα πλεονεκτήματά της είναι πολλά» εξηγεί ο κ. Ζοκέ. «Προσφέρει μεγάλη ευχέρεια κινήσεων και επιτρέπει την παρατήρηση της επιφάνειας των αγαλμάτων επί τόπου, χωρίς μετακίνηση ή δειγματοληψία, σαν να ανιχνεύει κανείς έναν αρχαιολογικό χώρο». Μόλις οι ερευνητές δουν στην οθόνη κάτι που μοιάζει με υπόλειμμα χρώματος έχουν τη δυνατότητα να μεγεθύνουν την εικόνα ως και 175 φορές. «Φθάνει σχεδόν στη δομή του χρώματος, στη σύσταση του υλικού του» λέει ο αρχαιολόγος. «Για παράδειγμα, είδαμε αμέσως ότι το μοβ που παρατηρούσαμε με

γυμνό μάτι αποτελούνταν από δύο χρώματα, από αιγυπτιακό μπλε αναμεμειγμένο με μια ροζ χρωστική που νομίζουμε ότι είναι από ερυθρόδανο».

Οι ερευνητές εξέτασαν με αυτόν τον τρόπο περισσότερα από 100 γλυπτά, στη Δήλο και στο Αρχαιολογικό Μουσείο της Αθήνας, επί μία δεκαετία. «Το έργο ήταν μακρόχρονο, μας έδωσε όμως σημαντικά αποτελέσματα» λέει ο κ. Ζοκέ. «Όπως διαπιστώσαμε, ολόκληρη η επιφάνεια των αγαλμάτων είχε υπολείμματα χρώματος ή χρυσού. Ακόμη και σημεία που φαίνονταν σαν λεκέδες ήταν τελικά χρώμα».

Το φάσμα της πολυχρωμίας



φωτογραφία: efa/ c2rnf Οι έρευνες εντόπισαν πολλές αποχρώσεις του ροζ και του μπλε στο άγαλμα της Αφροδίτης

Το οπτικό μικροσκόπιο κατόρθωσε να «χαρτογραφήσει» την παρουσία χρωμάτων και χρυσού στην επιφάνεια των αγαλμάτων, δεν ήταν όμως σε θέση να προσφέρει την επιστημονική τεκμηρίωση που απαιτείται για την ταυτοποίησή τους. Για να γίνει αυτό χρειάζονται ειδικές αναλύσεις στο εργαστήριο οι οποίες στη συγκεκριμένη περίπτωση δεν ήταν δυνατές, εφόσον στη μεγάλη πλειονότητά τους τα υπολείμματα ήταν απειροελάχιστα. Εδώ ανέλαβε ένας Έλληνας ειδικός, ο Ανδρέας Καρύδας, ερευνητής Β Δ του Ινστιτούτου Πυρηνικής Φυσικής του Εθνικού Κέντρου Έρευνας Φυσικών Επιστημών «Δημόκριτος», ο οποίος εισήγαγε τη δεύτερη πρωτοτυπία της έρευνας, εφαρμόζοντας, για πρώτη φορά σε αρχαία γλυπτά και για την εξέταση της πολυχρωμίας τους, την τεχνική της φθορισμετρίας ακτίνων Χ. «Η καινοτομία της μεθοδολογίας που ακολουθήθηκε» εξηγεί μιλώντας στο «Βήμα» «έγκειται στον συνδυασμό των τεχνικών. Η φθορισμετρία ακτίνων Χ δεν θα μπορούσε να εντοπίσει από μόνη της την παρουσία του χρώματος αν τα σημεία δεν είχαν προηγουμένως υποδειχθεί από την παρατήρηση με το οπτικό μικροσκόπιο».

Χρησιμοποιώντας ένα πρωτότυπο φασματόμετρο που έχει αναπτυχθεί εξ ολοκλήρου στο Ινστιτούτο Πυρηνικής Φυσικής του Ε.Κ.Ε.Φ.Ε «Δημόκριτος», ο κ. Καρύδας συνέβαλε στην ταυτοποίηση των περισσότερων από τις ανόργανες χρωστικές που ανιχνεύθηκαν με βάση το φάσμα που εκπέμπουν όταν ακτινοβολούνται με ακτίνες Χ. «Η μέθοδος είναι εξαιρετικά ενδιαφέροντα και δίνει άμεσα αποτελέσματα, βλέπει κανείς τα φάσματα στην οθόνη του υπολογιστή και βάσει αυτών μπορεί, τις περισσότερες φορές, να περιγράψει τη φύση της χρωστικής» επισημαίνει ο κ. Ζοκέ. Τα χρώματα που εντοπίστηκαν ήταν πολλά, από το αιγυπτιακό μπλε (γνωστό και ως κύανος) και το λευκό του μολύβδου ως τις κίτρινες και κόκκινες ώχρες, τον πράσινο μαλαχίτη και την πράσινη γη.

Μια έκπληξη για τους ειδικούς ήταν η ανίχνευση μιας χρωστικής με βάση το ορυκτό βαναδινίτη. «Είναι γνωστή χρωστική αλλά πολύ σπάνια. Έχει βρεθεί σε άλλα ελληνιστικά αντικείμενα, και συγκεκριμένα σε στήλες από την Αλεξάνδρεια που βρίσκονται στο Μουσείο του Λούβρου» λέει ο κ. Καρύδας. «Ποτέ ως τώρα όμως» διευκρινίζει ο κ. Ζοκέ «δεν είχε βρεθεί σε γλυπτά, ούτε υπήρχαν σχετικές αναφορές». Το χρώμα που ήθελαν οι αρχαίοι καλλιτέχνες να επιτύχουν με αυτήν ήταν μάλλον ένα έντονο, φωτεινό κίτρινο. «Το χρησιμοποιούσαν στις πτυχώσεις του μανδύα προς τα κάτω, σαν μια από τις λωρίδες στο τελείωμα» εξηγεί ο κ. Καρύδας «και είναι ενδιαφέρον γιατί δείχνει μια προσοχή στη λεπτομέρεια. Δεν έβαζαν για παράδειγμα μια κίτρινη ώχρα, που είναι πιο μουντή. Δεν έκαναν συμβιβασμούς προκειμένου να αποδώσουν το αποτέλεσμα που ήθελαν».

Χρυσός σε φύλλα

Το άλλο εντυπωσιακό εύρημα του έλληνα ερευνητή ήταν η ποιότητα και το πάχος των υπολειμμάτων του χρυσού, τα οποία μαρτυρούν εξαιρετικά εξελιγμένες τεχνικές κατεργασίας και επιχρυσώσης. Όλα αποτελούν πολύ «καθαρά» κράματα, με περιεκτικότητα πλέον του 97,5% χρυσού, περίπου 1,5% αργύρου και ελάχιστου χαλκού, ενώ το πάχος τους είναι μόλις μερικά μικρόμετρα, συνήθως τέσσερα- πέντε, αλλά ορισμένες φορές δύο ή και ένα. «Το ότι βρέθηκε χρυσός, και μάλιστα εμπλουτισμένος, δεν ήταν έκπληξη, το περιμέναμε» λέει ο κ. Καρύδας «Αυτό που μας έκανε πολύ μεγάλη εντύπωση ήταν το πάχος του φύλλου του χρυσού. Το να φτιάχνεις και να τοποθετείς φύλλα της τάξης του ενός ή των τεσσάρων μικρομέτρων, των τεσσάρων χιλιοστών του χιλιοστού δηλαδή, είναι πολύ ντελικάτη δουλειά».

Ο χρυσός εντοπίστηκε στα πιο εκλεπτυσμένα και «πολυτελή» σημεία των αγαλμάτων, αλλά κάποιες φορές φαίνεται να καλύπτει εξ ολοκλήρου τα γυμνά μέρη του σώματος. «Σε ορισμένα αγάλματα» λέει ο κ. Ζοκέ «τα ρούχα, τα υφάσματα, είναι χρωματισμένα αλλά το σώμα είναι επιχρυσωμένο με φύλλο χρυσού. Εγώ προτείνω για αυτά την ονομασία χρυσόχρωμα». Σε κάποιες άλλες περιπτώσεις το πολύτιμο μέταλλο φαίνεται να επιλέγεται για να υποστηρίξει την αντιγραφή. «Ο Διαδούμενος» εξηγεί ο ερευνητής «το μαρμάρινο αντίγραφο του έργου του Πολυκλείτου, ήταν εντελώς επιχρυσωμένος. Μάλλον για να μιμηθεί το πρωτότυπο, που ήταν χάλκινο. Κάποιος πλούσιος της εποχής φαίνεται ότι είχε παραγγείλει ένα αντίγραφο του περίφημου αυτού κλασικού έργου και για να μιμηθεί τον χαλκό, που τότε δεν ήταν πατιναρισμένος, πράσινο, αλλά είχε ακόμη κίτρινο χρώμα, ο καλλιτέχνης κάλυψε το μάρμαρο με χρυσό».

Η τελική αποκατάσταση



Η φθορισμετρία ακτίνων X μπορεί να διαγνώσει μόνο τις ανόργανες χρωστικές και όχι αυτές που έχουν οργανική προέλευση. Με την ταύτιση των τελευταίων ασχολήθηκε μια άλλη ελληνίδα ειδικός, η Χαρίκλεια Μπρεκουλάκη, ερευνήτρια του Εθνικού Ιδρύματος Ερευνών και μέλος του Προγράμματος Βορείου Ελλάδας του Κέντρου Ελληνικής και Ρωμαϊκής Αρχαιότητας. «Με τη βοήθειά της» εξηγεί ο κ. Ζοκέ «μπορέσαμε να καθορίσουμε τη στρωματογραφία των χρωμάτων». Εδώ απαιτήθηκε η λήψη μικρών δειγμάτων, τα οποία εξετάστηκαν από το ελληνικό Ίδρυμα Ορμύλια και το ιταλικό Ινστιτούτο Επιστήμης και Τεχνολογίας της Πληροφορίας (ISTI) του Πανεπιστημίου της Πίζας, κυρίως με τεχνικές χρωματογραφίας αέριας φάσης και φασματογραφίας μάζας, προκειμένου να διαπιστωθεί η μοριακή δομή τους.

Η αναπαράσταση των αγαλμάτων σε τρισδιάστατη απεικόνιση έγινε από το Visual Computing Lab του ιταλικού Εθνικού Κέντρου Ερευνών, γνωστό, μεταξύ άλλων, για τη συνεργασία του στην αποκατάσταση του Δαβίδ του Μιχαήλ Άγγελου. Τέλος, η εφαρμογή των χρωμάτων στις ασπρόμαυρες τρισδιάστατες απεικονίσεις, σύμφωνα με τις υποδείξεις των αρχαιολόγων, έγινε από τη Φαμπρισιά Φοκέ, γαλλίδα αρχιτέκτονα που ειδικεύεται στον χρωματισμό τρισδιάστατων αρχαιολογικών εικόνων. Τα πλήρη αποτελέσματα της έρευνας θα κυκλοφορήσουν σε βιβλίο από τη Γαλλική Αρχαιολογική Σχολή, πιθανότατα στα τέλη του 2010.

Γλυπτά σαν πίνακες



Για την ανάλυση των χρωστικών οργανικής προέλευσης απαιτήθηκαν μικρές δειματοληψίες

«Από τα βασικά ευρήματά μας δεν ήταν μόνο η απόλυτη παρουσία των χρωμάτων και της επιχρυσώσης αλλά και οι εξαιρετικά εξελιγμένες τεχνικές, τόσο στη σύνθεση όσο και στην εφαρμογή των χρωμάτων» λέει ο κ. Ζοκέ. Το μάρμαρο καλυπτόταν εξ ολοκλήρου με ένα υπόστρωμα από λευκό μολύβδου (κοινώς, στουπέτσι), μάλλον σαν «αστάρι», για να εξομαλυνθεί η επιφάνεια και να στερεωθεί το χρώμα. Εν συνεχεία το χρώμα εφαρμοζόταν σε στρώσεις ενώ στις επιχρυσώσεις επάνω από το λευκό υπήρχε μια στρώση κίτρινης ώχρας στην οποία τοποθετούνταν τα φύλλα χρυσού. Η γκάμα των χρωμάτων ήταν εντυπωσιακή: «Βρήκαμε χρώματα καθαρά, όπως η ώχρα, χρώματα σε μείγματα, όπως οι διάφορες αποχρώσεις του γαλάζιου ή το ροζ, αλλά και χρώματα που δημιουργούνται από την αλληλοεπικάλυψη άλλων χρωμάτων» συμπληρώνει.

Τα ευρήματα των αρχαιολόγων μαρτυρούν μια τέχνη ιδιαίτερα εκλεπτυσμένη. Τα γλυπτά φαίνονται να έχουν ζωγραφιστεί σαν ζωγραφικοί πίνακες, με φωτοσκιάσεις, αντιθέσεις, διαβαθμίσεις του χρώματος. «Το χρώμα δεν είναι ποτέ απλό. Δεν χρωμάτιζαν σαν να βάφουν ένα τοίχο, δεν ήταν “μπογιατζήδες” αλλά πραγματικοί ζωγράφοι» εξηγεί ο κ. Ζοκέ, προσθέτοντας ότι κατά τη γνώμη του ορισμένες σύγχρονες αποκαταστάσεις που παρουσιάζουν τα αρχαία γλυπτά με «άγρια» χρώματα δεν είναι ακριβείς.

Επίσης η πανταχού παρουσία του χρώματος υποδηλώνει ότι ένα γλυπτό «γυμνό», με εμφανές το λευκό του μάρμαρο, ήταν ημιτελές. «Συχνά σκέφτομαι» λέει ο αρχαιολόγος «ότι αν ένας Έλληνας του 2ου αιώνα π.Χ. επισκεπτόταν σήμερα ένα μουσείο, στην Αθήνα, στο Παρίσι, στο Λονδίνο ή αλλού, και έβλεπε όλα αυτά τα λευκά γλυπτά θα έλεγε μα, δεν είναι δυνατόν, είναι όλα ατελείωτα, πρέπει να τα ζωγραφίσουν».

Ο ζωγράφος ερχόταν λοιπόν να ολοκληρώσει τη δουλειά του γλύπτη, διαμορφώνοντας με την τέχνη του την τελική εμφάνιση του έργου. Όπως τονίζει ο ερευνητής, έχουμε ήδη την περίφημη αναφορά του Πλίνιου του πρεσβύτερου ο οποίος λέει στη «Φυσική Ιστορία» του ότι ο Πραξιτέλης θεωρούσε πιο επιτυχημένα τα γλυπτά του που είχε ζωγραφίσει ο ζωγράφος Νικίας. «Από τον 4ο αιώνα π.Χ. υπήρχε μια στενή συνεργασία ανάμεσα στον γλύπτη και στον ζωγράφο, έναν διάσημο γλύπτη και έναν διάσημο ζωγράφο» λέει.

Σημαίνουν τα ευρήματα της Δήλου ότι η πολυχρωμία των γλυπτών ήταν εξίσου πλούσια και διαδεδομένη στην κλασική εποχή; «Επιστημονικά είμαστε υποχρεωμένοι να πούμε ότι αυτό παρατηρείται στη Δήλο, στα ελληνιστικά γλυπτά της Δήλου, και αυτό είναι» απαντά ο κ. Ζοκέ. «Τώρα αν μπορούμε να πούμε ότι υπήρχε πάντοτε, εγώ πιστεύω πως ναι. Αυτό όμως δεν είναι επιστημονικά τεκμηριωμένο, είναι η γνώμη μου. Για να τεκμηριωθεί, χρειάζονται περισσότερες έρευνες».

Επισκοφθείτε το δικτυακό τόπο:

<http://www.tovima.gr/default.asp?pid=46&ct=33&artId=284818&dt=20/12/2009>

THE ORIGINS OF TIDINESS, BY **MICHAEL BALTER, SCIENCENOW** **DAILY NEWS**

"A tidy house, a tidy mind." Some of the more slovenly among us might bristle at this scolding old proverb, but to human evolution researchers it makes perfect sense. One of the hallmarks of modern behavior is the sophisticated way Homo sapiens organizes the spaces it lives in, with everything in its place. But new work at a nearly 800,000-year-old hominin site in Israel suggests that the roots of tidiness may lie deep in our evolutionary past.

Prehistoric humans did not start building permanent dwellings until about 15,000 years ago, but earlier hominins--the term now commonly used by scientists for humans and their ancestors but not other apes--frequented caves and open-air sites as they hunted and gathered food. Whereas sites occupied by modern humans often show signs of separate "activity areas" such as hearths, stone-tool knapping areas, food preparation areas, sleeping areas, and so forth, not so long ago there was little evidence that other hominins engaged in such organized behavior.

More recently, however, work at Neandertal sites has demonstrated that our evolutionary cousins also divided up their living spaces into activity areas. New research at rock shelters like Abric Romaní in Spain and Tor Faraj in Jordan, where Neandertals lived between 50,000 and 70,000 years ago--before modern humans migrated into Europe and Asia--has demonstrated spatial organization at times indistinguishable from that typical of H. sapiens. Now, a team working at Geshert Benot Ya'aqov (GBY), a 790,000-year-old site in northern Israel's Hula Valley, claims that a much older species also showed tendencies toward tidiness. GBY is thought to have been occupied by H. heidelbergensis, a species that may have given rise to H. sapiens in Africa and the Neandertals in Europe. It is also the site of the earliest widely accepted mastery of fire by prehistoric humans.

The researchers, led by archaeologists Nira Alperson-Afil and Naama Goren-Inbar of the Hebrew University in Jerusalem, mapped the precise locations and densities of thousands of plant and animal remains as well as stone tools found in one of GBY's 14 archaeological levels.

The excavated area, a long strip covering about 26 square meters, had been covered rapidly by lake sediments in ancient times, thus preserving the remains in place.

The team found that hominin activities were concentrated in two main areas at opposite ends of the strip. Knapping of stone tools made from flint was concentrated in the northwest area, while production of tools made from basalt and limestone was concentrated around a hearth in the southeast. There was also a clear pattern of animal and plant remains. For example, remains of crabs consumed by the hominins were clustered around the hearth, as were the remains of nuts and stone tools, such as anvils and choppers, suitable for cracking them open.

On the other hand, fish bones were found in two clusters, one at each end of the excavated area.

The team concludes, in its report on the findings in the 18 December issue of Science, that the GBY hominins' division of their living space into designated activity areas is a sign of "sophisticated cognition" once thought to be the special preserve of modern humans.

Clive Gamble, an archaeologist at Royal Holloway, University of London, says the new work confirms other research showing that H.

heidelbergensis "was a very tidy species." At the 500,000-year-old site of Boxgrove in southern England, Gamble points out, "across a landscape with no hearths they followed rules about where to get, make, and throw away their stone tools. There was nothing random in these activities, and GBY now extends this pattern back in time."

But Lyn Wadley, an archaeologist at the University of the Witwatersrand in Johannesburg, South Africa, sounds a cautionary note.

"The GBY site is remarkable and the use of space there is more complex than one might expect for the age of the occupation," Wadley says. But she thinks it would be a sure sign of sophisticated cognition only if the GBY hominins had attributed symbolic meanings to the way they divided their living quarters—something the research team has yet to demonstrate.

**Please visit the site: <http://sciencenow.sciencemag.org/cgi/content/full/2009/1218/3>
[Go to <http://www.sciencemag.org/cgi/content/abstract/326/5960/1677> for scholarly article]**

MIDDLE EUPHRATES CIVILIZATION - MAGNIFICENT ARCHITECTURE BEARS THE STAMP OF CLAY, BY H. SAID IDELBI

The 'clay civilization', a name attributed to the civilization in the Middle Euphrates region (Deir Ezzor, Eastern Syria), as the raw material that epitomizes that civilization is clay. In the almost exclusively mud-brick architecture, the Middle Euphrates bears the stamp of clay.

Clay typically has been considered easy to use and handle. Among other attributes is its ability to keep warm in winter and cool in summer and to be molded into different shapes.

Clay can be aesthetically functional in geometric shape art, which is why it became number one building material over numerous periods of time.

Director of Deir Ezzor Museums and Antiquities Department Yaser Shouhan said the distinct style of architecture in the Euphrates Valley is assumed to be adequately expressed by the nature of the raw materials available in the structure of geographical environment, foremost among those was clay, which was most commonly used in designing the skeletons of buildings in ancient cities and urbanism.

According to studies, the ancient man who inhabited the Middle Euphrates region used to form huge lumps of clay mixed with straw that are left to dry in the sun to be later used in construction.

The oldest inhabited village so far discovered at the site of Tal Buqrus (hill), 40 km to the south east of Deir Ezzor and dating back to the 7th millennium B.C. was built in the same way.

The village was amazingly constructed according to a ready-made design, where houses were set closely together based on a certain pattern. Walls and floors were daubed with soft clay and lanes served as transportation means.

Art of architecture in the Middle Euphrates magnificently progressed over time. Cities appeared for the first time in the region surrounded by high ramparts built on adobe-covered limestone bases and varying in shape and thickness. Some of those were circular; others were rectangular to fit the geographic structure of the region. Cities used to have two ramparts separated by orchards and houses for the lower class. The ramparts also had gates with clay-daubed guard towers on top.

Economic and trade development played a key role in bringing about a change in social relations. Religion came to power. People at the time started to form visions of ideal life and religious beliefs were epitomized by many divine symbols and sacred places like the Temples of Ishtar, Ninursag and Nini-Zaza.

Architectural style also developed; high temples were erected, mostly patterned after pyramid-like structures like al-Zuqurat, a building with six brick mastabas locating on the highest spot in the city. People could make it to the top via three clay runways.

The sweeping urbanism movement resulted in the emergence of temporal power taking over the religious authority.

Buildings of the ruling class started to have new distinct nature of their own. Houses were no longer considered as mere means of providing shelter, safety and stability. They were rather looked at as a mark of civilization due to diversity in shape and style.

Grand palaces were built of dried clay, most notably is the Palace of Zimri-Lim in the ancient city of Mari.

The Palace spreads over two and a half hectares, including 306 rooms. Successive chambers and meandering passages follow the one-room entrance and lead to a courtyard that allows access to other parts of the palace.

The Palace comprises meeting rooms, halls to hold religious ceremonies, a temple and the throne hall. There are also rooms for guests and servants, administrative offices and a royal family suite that includes kitchens, bathrooms and upper rooms. The Palace also had a school consisting of three rows of clay mastabs to serve as student seats.

The clay models and designs unearthed give evidence of how mathematics and geometry progressed over time. The Palace's sloping ceilings were skillfully designed leaning on parallel wooden pillars which rely on wooden beams to lighten pressure on the clay walls.

Clay was not used merely in construction; it had other cultural functions. Clay cuneiform tablets recording diaries were accumulated in libraries, most prominent and well-known of which is the royal archive of the Palace of Zimri-Lim at Mari.

Experiences accumulated over time helped man realize the chemical nature of clay, its use, utility and limitations. Pottery water pipes were used as canals to draw fresh water to houses and facilities. There were also sewage canals made of clay. Brick was also made from clay and used for building baths like the baths at Dura-Europos.

People in Deir Ezzor, particularly in rural areas and al-Badiya (the desert), still use adobe which besides being low-cost seems to well fit the dry-hot summer and cold-winter climate. (ASNA)

Please visit the site:

<http://www.english.globalarabnetwork.com/200912184073/Culture/archaeologists-middle-euphrates-civilization-magnificent-architecture-bears-the-stamp-of-clay-in-syria.html>

ANCIENT SEED SPROUTS PLANT FROM THE PAST

Kütahya: Radikal

Wednesday, December 16, 2009

A 4,000-year-old lentil seed found during an archeological excavation has germinated, exciting scientists as the event might lead to invaluable data for comparisons between the organic and genetically engineered plants of today. ‘It would be the first seed from very old times whose genes were never modified,’ say the scientists.

A 4,000-year-old lentil seed unearthed in an archeological excavation has successfully sprouted after being planted.

Project leader and Dumlupınar University archeology faculty Professor Nejat Bilgen said they found the seeds during an excavation undertaken last year in Kütahya province.

Bilgen said a layer from the container in which they found the seeds was determined to be from the middle bronze age.

He said his team found many seeds, but most had been burnt, adding that they had failed to make the others turn green before the recent success. The excavation team believes they found a silo because there were many other containers around.

“A seed dug from underground and dating back approximately 4,000 years sprouted. The plant that came out of this seed is under examination and will be presented to the scientific community [so they can] make various analyses over it,” Bilgen said.

Nükhet Bingöl, an assistant professor from the same department, said she planted one of the seeds last year but that it dried up after germinating, adding that she sent another to Istanbul for fat analyses.

Bingöl said she planted the present seed three months ago before it successfully germinated. “Scientifically, we are still at the beginning,” said Bingöl, who explained that the age of the seed needs to be determined and compared to the lentils of today.

“Although [the seed] was found in an archeological excavation, we should prove it scientifically. We should look into whether those seeds came from outside [the container] or not,” she said.

Bingöl said the lentil is pretty weak – unlike its modern day versions – yet they hope it will be able to flower and produce seeds. If that happens, according to Bingöl, they would have extremely important data to compare with the organic and genetically engineered plants of today. “It would be the first seed from very old times whose genetics were never modified.”

Bingöl said the lentil is a plant that does not require much water and heat to grow, so it is very likely that they were planted near the excavation area. “Barley, lentil, wheat, all of these originated in Anatolia,” said Bingöl.

“That is why finding this seed was not a surprise for us but finding it alive was. This is caused by the structure of the [container’s] mold. A fire broke the mold, it collapsed and so [some] of the seeds were able to stay alive,” she said.

If the plant produces seeds, they would be genetically unmodified original seeds, she said. “Original seeds are always weaker than others. Maybe it would not offer much benefit to the country’s economy but we would be pioneering for other work in universities on collecting old seeds.”

Bingöl said there are domestic and foreign examples of centuries-old plants germinating, adding that Japan’s magnolia plant has different qualities than today’s magnolia plant in other parts of the world.

Please visit the site: <http://www.hurriyetdailynews.com/n.php?n=ancient-seed-came-into-leaf-2009-12-16>

MONUMENT LIFTED FROM CLEOPATRA'S UNDERWATER CITY, BY KATARINA KRATOVAC

ALEXANDRIA, Egypt — Egyptian archaeologists have lifted out of the Mediterranean Sea an ancient granite temple pylon from the palace complex of Cleopatra, submerged in the waters of Alexandria's harbor.

Divers and underwater archaeologists used a giant crane and ropes to lift the 9-ton, 7.4-foot-tall pylon from the murky waters Thursday.

The tower was originally part of the entrance to a temple of Isis, a pharaonic goddess of fertility and magic. The temple is believed to have been near the palace that belonged to the 1st century B.C. Queen Cleopatra in the ancient city of Alexandria, submerged in the sea centuries ago.

The pylon is to be the centerpiece of a planned underwater museum featuring relics uncovered from the Mediterranean seabed.

Please visit the site:

<http://www.google.com/hostednews/ap/article/ALeqM5hj2ISVgyh3V91TUO-c54GOrFidKgD9CL3KD00>

ANCIENT BOOK OF MARK FOUND NOT SO ANCIENT AFTER ALL

A biblical expert at the University of Chicago, Margaret M. Mitchell, together with experts in micro-chemical analysis and medieval bookmaking, has concluded that one of the University Library's most enigmatic possessions is a forgery. The book, a copy of the Gospel of Mark, will remain in the collection as a study document for scholars studying the authenticity of ancient books.

Scholars have argued for nearly 70 years over the provenance of what's called the Archaic Mark, a 44-page miniature book, known as a "codex," which contains the complete 16-chapter text of the Gospel of Mark in minuscule handwritten text. The manuscript, which also includes 16 colorful illustrations, has long been believed to be either an important witness to the early text of the gospel or a modern forgery, said Mitchell, Professor of New Testament and Early Christian Literature.

"The mystery is now solved from textual, chemical, and codicological (bookmaking) angles," said Mitchell, who first became intrigued by the codex when she saw it as a graduate student in 1982. Comprehensive analysis demonstrates that it is not a genuine Byzantine manuscript, but a counterfeit, she said, "made somewhere between 1874 and the first decades of the 20th century."

Mitchell said experts from multiple disciplines made the findings possible. "Our collective efforts have achieved what no single scholar could do -- give a comprehensive analysis of the composite artifact that is an illustrated codex. The data collected in this research process has given us an even deeper understanding of the exact process used by the forger," said Mitchell. "It will, we hope, assist ongoing scholarly investigation into and detection of manuscripts forged in the modern period."

Since 1937, when Edgar J. Goodspeed a University of Chicago biblical scholar, acquired the Archaic Mark, the manuscript has been an enigma. As early as 1947, scholars speculated about its authenticity. Because it is the closest of any known manuscript to the venerable 4th-century Codex Vaticanus for the text of Mark's Gospel, Mitchell said, it was believed to be "either a very important textual witness (from the 14th Century) or a forgery based upon some late 19th-century critical edition of the Greek New Testament incorporating the readings of the Vatican manuscript." The modern blue pigment in the illustrations, identified in 1989, would support the latter, but Mitchell explained this finding was not definitive because the pigment could have come from a restoration effort on an earlier manuscript.

In 2006, the University of Chicago Library digitized the Archaic Mark, making it available to scholars worldwide (goodspeed.lib.uchicago.edu) and stimulating renewed interest in it. The following year, in response to that growing interest in the mysterious manuscript, Alice Schreyer, Director of the Special Collections Research Center, convened a committee to lead a complete and definitive examination of the material components of the Archaic Mark.

The Library commissioned materials analysis from McCrone Associates, and enlisted the aid of Abigail Quandt, a rare books expert and preservationist at the Walters Art Museum in Baltimore.

Last January, Joseph G. Barabe, a senior scientist at McCrone, took 24 samples of parchment, ink and a range of paints used in illustrations. Barabe analyzed the samples using an array of techniques -- polarized light; energy dispersive X-ray spectrometry; the scanning electron microscope for elemental analysis; X-ray diffraction; Fourier Transform infrared spectroscopy; and Raman spectroscopy. Under microscopic analysis, Barabe and his colleagues found no evidence of retouching of any kind in the manuscript, disproving earlier suspicions of restoration attempts.

Barabe determined the Archaic Mark was created after 1874 -- using materials not available until the late 19th century -- on a parchment substrate dating from about the middle of the 16th century. Carbon dating determined the animal hide was from some time between 1485-1631.

The rest of the authentication team confirmed and helped interpret Barabe's findings.

Quandt carefully reconstructed the steps the modern forger took to produce the manuscript, from preparing the parchment, to the painting of images and inscription of text, as well as the application of the modern coating, cellulose nitrate. Quandt also identified specific ways in which its production defies usual Byzantine procedures, and she determined that the reused parchment contains no recoverable text underneath.

Mitchell completed the analysis with a study of the textual edition the forger had used. She confirmed and refined Stephen C. Carlson's proposal that the modern edition from which the forger copied the text was the 1860 edition of the Greek New Testament by Philipp Buttmann. Mitchell identified telltale readings in the Archaic Mark that arose from the original 1856 edition of Buttmann's critical text, reproducing errors later corrected in the flurry of collations of the famous manuscript Vaticanus between 1857 and 1867.

Mitchell, Barabe and Quandt have detailed these findings in a paper scheduled for February publication in the journal *Novum Testamentum*.

Please visit the site:

<http://www.sciencedaily.com/releases/2009/12/091211203717.htm>

REMAINS IN 2,000-YEAR-OLD TOMB NEAR OLD CITY SHOW FIRST KNOWN CASE OF LEPROSY, BY JUDY SIEGEL- ITZKOVICH

DNA taken from the shrouded remains of a man discovered in a tomb next to the Old City of Jerusalem shows him to be the first human proven to have suffered from leprosy, according to Hebrew University researchers and North American and British collaborators. They published their findings in the December 16 issue of the PLoS One - the US Public Library of Science journal.

Prof. Mark Spigelman and Prof. Charles Greenblatt of the Sanford F. Kuvin Center for the Study of Infectious and Tropical Diseases at HU in Jerusalem, along with Prof. Carney Matheson and Kim Vernon of Lakehead University in Canada, Prof. Azriel Gorski of New Haven University and Dr. Helen Donoghue of University College London performed the molecular investigation. The archeological excavation was led by Prof. Shimon Gibson, Dr. Boaz Zissu and Prof. James Tabor on behalf of the Israel Antiquities Authority and the University of North Carolina at Charlotte.

The burial cave, known as the Tomb of the Shroud, is located in the lower Hinnom Valley near the Jaffa Gate and part of a first century CE cemetery known as Akeldama, or "Field of Blood" (mentioned in the Book of Matthew 27:3-8, and Acts 1:19 in the Christian Bible). It is located adjacent to the spot where Judas is said to have committed suicide.

The tomb of the shrouded man is also located next to the tomb of Annas, the high priest (6 CE to 15 CE), who was the father-in-law of Caiaphas, the high priest who betrayed Jesus to the Romans. It is thus believed that this shrouded man was either a priest or a member of the aristocracy. Gibson suggests that the view from the tomb would have looked directly toward the Second Temple.

The tomb is very unusual because it is clear that this man, whose remains are dated by radiocarbon methods to 1 CE to 50 CE, did not receive a subsequent burial. Secondary burials were common practice at the time, when the bones were removed after a year and placed in an ossuary (a bone box made of stone). In this case, however, the entrance to this part of the tomb was completely sealed with plaster. Spigelman believes this is because the man had suffered from leprosy and died of tuberculosis, as DNA of both diseases was found in his bones.

Historically, disfiguring diseases such as leprosy led to the sufferer being ostracized from their community. However, a number of indications - the location and size of the tomb, the type of textiles used as shroud wrappings, and the clean state of the hair - suggest that the shrouded individual was a fairly affluent member of Jerusalem society, and that tuberculosis and leprosy may have crossed social boundaries at that time.

This is also the first time fragments of a burial shroud have been found from the time of Jesus in Jerusalem. The shroud is very different to that of the Turin Shroud, until now assumed to be the one that was used to wrap the body of Jesus after his crucifixion. Unlike the complex weave of the Turin Shroud, this is made up of a simple two-way weave, as textile historian Dr. Orit Shamir was able to demonstrate.

Based on the assumption that this is representative of a typical burial shroud widely used at the time of Jesus, the researchers conclude that the Turin Shroud did not originate from Jesus-era Jerusalem.

The excavation also found a clump of the shrouded man's hair, which had been ritually cut before he was buried. These are both unique discoveries because organic remains are only rarely preserved in the Jerusalem area owing to the soil's high humidity levels.

Spigelman and Greenblatt state that the origins and development of leprosy are largely obscure. Leprosy in the Jewish Bible may well refer to skin diseases such as psoriasis. The leprosy known to us today was thought to have originated in India and brought over via bacteria to the Near East and Mediterranean countries during the Hellenistic period. The results from the First Century Tomb of the Shroud fill a vital gap in our knowledge of this disease, they said.

Furthermore, the new research has shown that molecular pathology clearly adds a new dimension to the archeological exploration of disease in ancient times and a better understanding of the evolution, geographic distribution and epidemiology of disease and social health in antiquity.

The co-infection of both leprosy and tuberculosis here and in 30 percent of DNA remains in Israel and Europe from the ancient and modern period provided evidence for the postulate that the medieval plague of leprosy was eliminated by an increased level of tuberculosis in Europe as the area urbanized.

Please visit the site:

<http://www.jpost.com/servlet/Satellite?cid=1260894117527&pagename=JPost/JParticle/ShowFull>

MOLECULAR EXPLORATION OF THE FIRST-CENTURY TOMB OF THE SHROUD IN AKELDAMA, JERUSALEM

Carney D. Matheson^{1,2,3*}, Kim K. Vernon^{3,4}, Arlene Lahti^{1,5}, Renee Fratpietro¹, Mark Spigelman^{3,6}, Shimon Gibson⁷, Charles L. Greenblatt³, Helen D. Donoghue⁶

¹ Paleo-DNA Laboratory, Lakehead University, Thunder Bay, Canada,

² Department of Anthropology, Lakehead University, Thunder Bay, Canada,

³ Department of Microbiology and Molecular Genetics, The Hebrew University-Hadassah Medical School, Jerusalem, Israel,

⁴ Department of Anthropology, Department of Zoology, University of Queensland, St. Lucia, Australia,

⁵ Department of Biology, Lakehead University, Thunder Bay, Canada,

⁶ Department of Infection, University College London, London, United Kingdom,

⁷ University of North Carolina at Charlotte, Charlotte, North Carolina, United States of America

Abstract: The Tomb of the Shroud is a first-century C.E. tomb discovered in Akeldama, Jerusalem, Israel that had been illegally entered and looted. The investigation of this tomb by an interdisciplinary team of researchers began in 2000. More than twenty stone ossuaries for collecting human bones were found, along with textiles from a burial shroud, hair and skeletal remains. The research presented here focuses on genetic analysis of the bioarchaeological remains from the tomb using mitochondrial DNA to examine familial relationships of the individuals within the tomb and molecular screening for the presence of disease. There are three mitochondrial haplotypes shared between a number of the remains analyzed suggesting a possible family tomb. There were two pathogens genetically detected within the collection of osteological samples, these were *Mycobacterium tuberculosis* and *Mycobacterium leprae*. The Tomb of the Shroud is one of very few examples of a preserved shrouded human burial and the only example of a plaster sealed loculus with remains genetically confirmed to have belonged to a shrouded male individual that suffered from tuberculosis and leprosy dating to the first-century C.E. This is the earliest case of leprosy with a confirmed date in which *M. leprae* DNA was detected.

Please visit the site:

<http://www.plosone.org/article/info:doi/10.1371/journal.pone.0008319> Go there for full downloadable article]

PREVIOUSLY UNDISCOVERED **ANCIENT CITY FOUND ON CARIBBEAN** **SEA FLOOR, BY JES ALEXANDER**

Researchers have revealed the first images from the Caribbean sea floor of what they believe are the archaeological remains of an ancient civilization. Guarding the location's coordinates carefully, the project's leader, who wishes to remain anonymous at this time, says the city could be thousands of years old; possibly even pre-dating the ancient Egyptian pyramids, at Giza.

The site was found using advanced satellite imagery, and is not in any way associated with the alleged site found by Russian explorers near Cuba in 2001, at a depth of 2300 feet. "To be seen on satellite, our site is much shallower." The team is currently seeking funding to mount an expedition to confirm and explore what appears to be a vast underwater city. "You have to be careful working with satellite images in such a location," the project's principle researcher said, "The digital matrix sometimes misinterprets its data, and shows ruins as solid masses. The thing is, we've found structure - what appears to be a tall, narrow pyramid; large platform structures with small buildings on them; we've even found standing parallel post and beam construction in the rubble of what appears to be a fallen building. You can't have post and beam without human involvement."

Asked if this city is the legendary city of Atlantis, the researchers immediately said no. "The romanticized ideal of Atlantis probably never existed, nor will anyone ever strap on a SCUBA tank, jump in the water, and find a city gateway that says, 'Welcome to Atlantis.' However, we do believe that this city may have been one of many cities of an advanced, seafaring, trade-based civilization, which may have been visited by their Eurocentric counterparts."

It is unknown at this time how the city came to be on the sea floor, and not on dry land. "We have several theories."

The team hopes to conduct a massive mapping and research expedition, to learn as much as possible about who these people were, before turning the site over to the Caribbean island's home government. "Whatever we've found does not belong to us," the project's leader said, "It belongs to the people of this island, and to the world at-large. If any pieces are brought to the surface, they belong in the hands of a museum."

The project team asks that for more information, or to find out how to help fund their research, please contact the Herald de Paris' publisher, Jes Alexander, at a specially set-up telephone number: 415-738-7811.

Please visit the site:

<http://www.heralddeparis.com/previiously-undiscovered-ancient-city-found-on-caribbean-sea-floor/65855> [Go there for slideshow]

FORAGING EARLY HUMANS DID NOT PASS UP GRAINS, BY HENRY FOUNTAIN

Early humans were hunter-gatherers, but what did they gather? The easy stuff, archeologists say — roots, fruits and nuts. Until relatively late in the Pleistocene, which ended about 12,000 years ago, grains were thought to have been largely ignored by foraging humans, at least in part because they were difficult to process.

But Julio Mercader, an archeologist at the University of Calgary, has now found evidence from a cave in Mozambique that humans were eating sorghum grasses at least 105,000 years ago. The evidence was in the form of microscopic starch granules found on stone tools from the cave.

The limestone cave, in the highlands of northern Mozambique about 60 miles from Tanzania, has a long entry corridor that leads to chambers that are completely dark. “Humans were bringing in plants,” said Dr. Mercader, whose findings are published in *Science*. “Being so dark, you can’t argue that the plants were growing there naturally.”

Dr. Mercader, who has been excavating the cave site for three years, examined 70 stone tools, including scrapers and grinders. Of more than 2,350 granules found, 89 percent were of sorghum. But he also found starches from nongrasses including the African false banana, which is actually a tuber, and the African wine palm, which has a trunk that is starchy and sweet.

The addition of different food resources, Dr. Mercader said, shows that there was “economic complexity” in the behavior of these Middle Stone Age humans.

Please visit the site:

http://www.nytimes.com/2009/12/22/science/22obstarch.html?_r=1&ref=science

THE HEART OF A MUMMY

Hardening of the arteries has been detected in Egyptian mummies, some as old as 3,500 years, suggesting the factors causing heart attack and stroke are not strictly modern, but afflicted ancient people, too.

"Atherosclerosis is ubiquitous among modern day humans and, despite differences in ancient and modern lifestyles, we found that it was rather common in ancient Egyptians of high socioeconomic status living as much as three millennia ago," University of California, Irvine clinical professor of cardiology and co-principal investigator Dr. Gregory Thomas was quoted as saying. "The findings suggest that we may have to look beyond modern risk factors to fully understand the disease."

The nameplate of the Pharaoh Merenptah (c. 1213-1203 BC) in the Museum of Egyptian Antiquities reads that when he died at approximately age 60, he was afflicted with atherosclerosis, arthritis, and dental decay. Intrigued that atherosclerosis may have been widespread among ancient Egyptians, Thomas and a team of U.S. and Egyptian cardiologists, joined by experts in Egyptology and preservation, selected 20 mummies on display and in the basement of the Museum of Egyptian Antiquities in Cairo, Egypt, for scanning on a Siemens 6 slice CT scanner during the week of February 8, 2009.

The mummies underwent whole body scanning with special attention to the cardiovascular system. The researchers found that nine of the 16 mummies who had identifiable arteries or hearts left in their bodies had calcification either clearly seen in the wall of the artery or in the path where the artery should have been. Some mummies had calcification in up to six different arteries.

Using skeletal analysis, the Egyptology and preservationist team was able to estimate the age at death for all the mummies and to determine the names and occupations of the majority. Of the mummies who had died when they were older than 45, seven of eight had atherosclerosis while only two of eight of those who died at an earlier age had calcification.

Atherosclerosis did not spare women, either. Vascular calcifications were observed in both male and female mummies.

The most ancient Egyptian afflicted with atherosclerosis was Lady Rai, who lived to an estimated age of 30 to 40 years around 1530 BC and had been the nursemaid to Queen Ahmose Nefertiri. To put this in context, Lady Rai lived about 300 years before Moses and 200 years prior to King Tutankhamun (Tut).

In those mummies whose identities could be determined, all were of high socioeconomic status, generally serving in the court of the Pharaoh or as priests or priestesses. While the diet of any one mummy could not be determined, eating meat in the form of cattle, ducks and geese was not uncommon during those times. "While we do not know whether atherosclerosis caused the demise of any of the mummies in the study, said Thomas, we can confirm that the disease was present in many."

SOURCE: Journal of the American Medical Association (JAMA), November 18, 2009

Please visit the site: <http://www.healthscout.com/news/1/8023113/main.html>
