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Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

- Ιανουάριος 2016 -

ΚΑΛΗ ΧΡΟΝΙΑ ΜΕ ΥΓΕΙΑ ΚΑΙ ΤΥΧΗ
HAPPY AND PROSPEROUS NEW YEAR!!!

Newsletter of the Hellenic Society of Archaeometry

- January 2016 -

Nr. 178

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Archaeologists uncover Bronze Age trade routes between Iran and
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ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS

5TH INTERNATIONAL CONFERENCE FROM NANOPARTICLES AND NANOMATERIALS TO NANODEVICES AND NANOSYSTEMS (IC4N), PORTO HELI, ARGOLID- PELOPONNESE, JUNE 26-30, 2016

Dear Colleagues,

It is a great pleasure to announce the **5th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems (IC4N)**. Following four previous successful conferences, this year's IC4N goes to the exclusive area of **Porto Heli, Argolid-Peloponnese**. Argolid is one of the most historical and beautiful locations in Greece and home of the ancient sites of Mycenae, magnificent theater of *Epidauros*, and *Nafplion*.

As in previous editions of this highly popular conference series, the overarching goal of this event is to combine a very high quality of scientific dialogue with a relaxing environment. This is a unique opportunity for both senior and junior researchers to exchange ideas and stimulate collaborations on a global scale. This year's event kicks off with plenary, keynote and invited lectures by renowned scientists from all over the world making IC4N the Nano forum of the highest quality.

A special symposium on **Cultural Heritage Materials** is included in the program of the 5th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems (IC4N).

We are pleased to invite you to submit your abstract(s) focusing on (i) the use of nanoparticles and nanomaterials for innovative conservation and restoration methods, (ii) the traditional use of nanomaterials, developed by empirical procedures in the past & (iii) the use on nanodevices and nanosystems for damage assessment, monitoring and analysis. Other contributions, however, related to modern conservation science and practises are also welcome.

Conference website: www.uta.edu/ic4n

Conference venue: Porto Heli, Greece

Conference dates: June 26-30, 2016

Sincerely yours,

Ioannis (Yiannis) Karapanagiotis

.....
Ioannis (Yiannis) Karapanagiotis, Associate Professor
Head of the Dept of Management and Conservation of Ecclesiastical Cultural Heritage
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University Ecclesiastical Academy of Thessaloniki

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http://www.researchgate.net/profile/Ioannis_yiannis_Karapanagiotis

We look forward to seeing you in Porto Heli

On behalf of the Organizing Committee.

Stathis I. Meletis, Conference Chair
University of Texas at Arlington

ΠΑΛΑΙΟΛΙΘΙΚΟ ΣΕΜΙΝΑΡΙΟ

Παλαιολιθικό Σεμινάριο

Σε μια κοινή προσπάθεια για τη συνομιλία της Παλαιολιθικής Αρχαιολογίας στην Ελλάδα με το ειδικό και ευρύ κοινό, τα Τμήματα Ιστορίας και Αρχαιολογίας του Πανεπιστημίου Αθηνών και του Πανεπιστημίου Κρήτης αναλαμβάνουν την πρωτοβουλία διοργάνωσης διαρκούς επιστημονικού σεμιναρίου. Το σεμινάριο θα λειτουργήσει ως forum για την παρουσίαση και συζήτηση των σύγχρονων θεωρητικών ρευμάτων και των αποτελεσμάτων της έρευνας πεδίου.

Πρόγραμμα

16 Δεκεμβρίου 2015

Naama Goren-Inbar, καθηγήτρια Πανεπιστημίου Ιερουσαλύμων
The Acheulian site of Gesher Benot Ya'aqon, Israel: environment, hominin culture, subsistence and adaptation

14 Ιανουαρίου 2016

Geoff Bailey, καθηγητής Πανεπιστημίου York
Submerged landscapes and hominin dispersals: a world perspective

18 Φεβρουαρίου 2016

Ανδρέας Ντάρας, Διευθυντής Εφορείας Παλαιοανθρωπολογίας - Σπηλαιολογίας, Υπουργείο Πολιτισμού
Χίλιοι αιώνες προϊστορίας στη Μάνη: οι πολιτισμοί της Μέσης και της Ανώτερης Παλαιολιθικής

23 Μαρτίου 2016

Νένα Γαλανίδου, αναπλ. καθηγήτρια Πανεπιστημίου Κρήτης
Η Λέσβος πριν από μισό εκατομμύριο χρόνια: οι αρχαιολογικές μαρτυρίες από τα Ροδαφνίδια

Απρίλιος 2016

Javier Baena Preysler, καθηγητής Αυτόνομου Πανεπιστημίου Μαδρίτης
The Lower and Middle Paleolithic in Madrid (Spain): recent discoveries

Μάιος 2016

Κατερίνα Χαρβάτη, καθηγήτρια Πανεπιστημίου Eberhard-Karls, Tübingen
Νέες παλαιοανθρωπολογικές έρευνες στα πλαίσια του προγράμματος PaGE, 2012-2015



Αμφιθέατρο "Αλ. Αργυριάδης"
Κεντρικό κτήριο Πανεπιστημίου Αθηνών (Πανεπιστημίου 30)
Ωρα 19.00. Είσοδος ελεύθερη



Υπεύθυνες διοργάνωσης:

Γεωργία Κουρτέση-Φιλιππάκη, αναπλ. καθηγήτρια Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών
Νένα Γαλανίδου, αναπλ. καθηγήτρια Πανεπιστημίου Κρήτης

HMS SUMMER MEETING - 17TH-19TH JUNE **2016**

This meeting (which will include the HMS 2016 AGM) will be held in Merthyr Tydfil to commemorate the 250th anniversary of the construction of Cyfarthfa Ironworks (1765-7) and the 225th anniversary of the first successful commercial implementation of the puddling process at Cyfarthfa (1791). The meeting will include a pre-conference fieldtrip on the 17th to an opencast mine (to examine both the natural resources and archaeological remains; numbers strictly limited), a reception on the evening of the 17th, a day of conference sessions on the 18th and visits to the industrial remains in the Taff Valley, Merthyr Tydfil, on the 19th.

Papers (oral or poster) are invited across a wide range related areas including:

- the story of puddling (technology, economics, social history, engineering implications, international adoption...).
- the wider story of the development of iron conversion technology
- the development of Cyfarthfa Ironworks and its people (Anthony Bacon, the Homfrays, the Crawshays, their engineers and partners)
- the broader development, social history and context of the iron industry in Merthyr Tydfil and South Wales from 1750 to 1950.

Please submit an abstract (maximum of 500 words) to Tim.Young@GeoArch.co.uk by 10th February 2016, indicating whether you would prefer to give an oral or poster presentation.

Further details (including a downloadable booking form) are available on the HMS website (www.hist-met.org). Online booking will become available on the website shortly. The booking deadline is 1st May 2016, but attendees are advised to book their hotel accommodation as soon as possible (see website for details and advice).

Tim Young

TECHNOLOGY IN CRISIS.
TECHNOLOGICAL CHANGES IN CERAMIC
PRODUCTION DURING PERIODS OF
TROUBLE - INTERNATIONAL WORKSHOP
ORGANISED BY ARC ‘A WORLD IN CRISIS?’
AND AEGIS (UCL-INCAL-CEMA), 18-19
FEBRUARY 2016, SALLE DU SÉNAT
ACADÉMIQUE À LOUVAIN-LA-NEUVE,
BELGIUM

Please visit the site: <https://www.uclouvain.be/530391.html>

Prof Jan Driessen
ARC « A World in Crisis ? »
sites.uclouvain.be/arc-crisis



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<http://www.i6doc.com/fr/collections/aegis/>
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Makri 11
GR-117 42, Athens, Greece



TRADITION AND INNOVATION IN TEXTILE TECHNOLOGY IN BRONZE AGE EUROPE AND THE MEDITERRANEAN

Dear Colleagues,

We are very pleased to inform you that our session:

TH1-13: ‘Tradition and innovation in textile technology in Bronze Age Europe and the Mediterranean’ has been provisionally accepted in the theme 1. Interpreting the Archaeological Record, at the 22nd Annual Meeting of the EAA in Vilnius 2016 (31st August – 4th September) and the call for proposals of papers and posters has now been opened.

We would like to kindly invite you to take part in our session or to confirm formally your participation, being convinced that your expertise and knowledge will add much to our understanding of the transformations in textile technology in Bronze Age Europe and the Mediterranean.

Abstract of the session:

Textile craft with its complex technology and socio-cultural significance has been a key craft in the societies of Bronze Age Europe and the Mediterranean. However complex and socially and economically important, textile technology has often been considered as being rather traditional and non-innovative throughout many centuries of the Bronze Age.

The present session aims to examine textile technology in search for its traditional and innovative elements, through investigating the evidence of archaeological textiles, textile tools and their diachronic changes, botanical and faunal environment, textual sources and imagery of textiles and cloths. The session will focus on the Bronze Age in Europe and the Mediterranean, although papers referring to transitional periods from the Neolithic to the Early Bronze Age, and from the Late Bronze Age to the Early Iron Age will also be welcomed.

We particularly welcome all papers discussing various aspects of traditions and innovations traced in textile technology, especially these regarding raw materials and their processing, textile techniques, textile tools and equipment, organisation of textile production and dynamics of its specialisations, cross-cultural and cross-craft interactions, and changes of textile craft in relation to socio-cultural transformations of the past societies.

All paper and poster proposals should be submitted electronically at: https://www.eventure-online.com/eventure/welcome.form?type=abstract&congress=152_EAA&c=bd4350a3-56f9-46d1-8d66-514d76e0eb3c by 15 February 2016 but we would be grateful if you could send us the copy of abstracts of your proposed papers (200 words), as well.

We would like to kindly inform you that all presenters have to be registered as the EAA members and need to have paid in full for their membership for 2016 and the conference fee by 15 April 2016 (<http://eaavilnius2016.lt/general-info/deadlines/>).

All relevant information about the EAA conference, conditions, fees, accommodation etc., can be found on the conference web page, <http://eaavilnius2016.lt/>:

1. Conference and membership fees and conditions: <http://eaavilnius2016.lt/registration-fees-and-conditions/>
2. Accommodation: <http://eaavilnius2016.lt/registration-fees-and-conditions/> and <http://www.vilnius-tourism.lt/en/information/accommodation/>
3. Guidelines for speakers and poster presentations: <http://eaavilnius2016.lt/general-info/guidelines/>
4. Deadlines: <http://eaavilnius2016.lt/general-info/deadlines/>

If you have any questions regarding participation in the session, please do not hesitate to contact us.

We are looking forward to hearing from you soon and to meeting in Vilnius!

Organisers:

Dr Agata Ulanowska, The Centre for Research on Ancient Technologies of the Institute of Archaeology and Ethnology, Polish Academy of Sciences, Tylna 1 Street, 90-364 Łódź, Poland
e-mail: a.ulanowska@uw.edu.pl

Dr Małgorzata Siennicka, The Danish National Research Foundation's Centre for Textile Research, SAXO Institute, University of Copenhagen, Denmark, Karen Blixens Vej 4, 2300 Copenhagen S, Denmark
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EGU-2016 SESSION: USING RADIOCARBON (¹⁴C) TO TRACE, MODEL AND LINK THE CARBON CYCLE IN THE ATMOSPHERE- TERRESTRIAL-FRESHWATER-MARINE CONTINUUM

Dear Colleagues,


We would like to draw your attention to the following session at EGU-2016 <http://meetingorganizer.copernicus.org/EGU2016/session/21868> , with invited speaker Dr Bob Hilton, University of Durham UK: BG4.4/SSS12.20 Using radiocarbon (¹⁴C) to trace, model and link the carbon cycle in the atmosphere-terrestrial-freshwater-marine continuum This session welcomes submissions from any field of biogeochemistry applying ¹⁴C to carbon cycle research, with the aim of bringing together researchers applying different models and methods to understand sources, fates or fluxes of carbon in the atmosphere and/or terrestrial, freshwater and marine environments. We particularly encourage applications using bulk and compound-specific ¹⁴C to investigate signals of environmental change in conjunction with other indicators, or incorporating ¹⁴C as a tracer and calibration point in earth system models.

The abstract submission deadline is the 13th January 2016 (13:00 CET) http://egu2016.eu/information/deadlines_and_milestones.html.

We apologise for any cross-posting.

Kind regards

J Dean, C Bryant, J Vonk, L Street and M Billett (co-organisers)

	<h2 style="text-align: center;">SAMARIA 2016</h2> <p style="text-align: center;">3rd International Geo-Cultural Symposium 13-15 May 2016, Chania - Crete</p> <hr/> <p style="text-align: center;">Organizer “MESONISOS”, Center of Island & Mediterranean Culture</p> <p style="text-align: center;">Members of Department of Geology and Geoenvironment, University of Athens</p> <p style="text-align: center;">KEPPEDIH-KAM, Municipality of Chania</p>
<p>The purpose of the symposium is to highlight and interpret the geological phenomena of the island, while also explaining their influence in its cultural evolution. The Symposium will take place in the Mediterranean Architecture Center at Chania in the island of Crete, in Greece.</p>	
<p>Registration Payment can be done by bank transfer. Instructions can be found on the registration form. Please attach the proof to your e-mail. Payment receipts will be given to participants at the Symposium.</p>	
<p>Abstracts Abstracts are invited on the topics outlined and others falling within the scope of the meeting. Abstracts of no more than 300 words should be submitted before 28th March 2016. Abstracts should clearly state the purpose, results and conclusions of the work to be described in Symposium. Abstracts could be oral or poster. For more information please click here To Submit an abstract please click here</p>	
<p>Scientific Committee</p> <ul style="list-style-type: none">- PRESIDENT: <u>Dimitrios Papanikolaou</u>, Professor of Dynamic, Tectonic and Applied Geology, University of Athens.- <u>Grigorios Tsaltas</u>, Prof. of International Law, Rector of Panteion University, Director of the European Center for the Environmental Research and Training.- <u>Konstantinos Synolakis</u>, Prof. of Natural Hazards Management & Coastal Engineering, Technical University of Crete.- <u>Filippos Valianatos</u>, Prof. of Physics Geophysics – Solid Earth Physics, Technological Educational Institute of Crete.- <u>Nena Galanidou</u>, Associate Prof., History & Archaeology, University of Crete- <u>Paraskevi Nomikou</u>, Lecturer of Natural Geography & Geological Oceanography, University of Athens.- <u>Charalampos Fassoulas</u>, Natural History Museum, University of Crete.	<p style="text-align: center;">Symposium Topics</p> <p style="text-align: center;">Geology Geography Climatology Oceanography Environment New Technology History Archaeology Natural Hazards Folklore</p>
<p>Organizer Committee</p> <p>PRESIDENT: <u>Elisavet Grapsa</u>, Dr. of History, President of “MESONISOS”, Center of Island & Mediterranean Culture. VICE PRESIDENT: <u>Efthimia Verikiou – Pappaspyridakou</u>, Associate Prof. of Physical Geography-Geomorphology, University of Athens. SECRETARY: <u>Paraskevi Nomikou</u>, Lecturer of Natural Geography & Geological Oceanography, University of Athens. MEMBER: <u>John Makris</u>, Associate Prof. Division of Electronics at Technology Educational.</p>	<p style="text-align: center;">Secretary</p> <p style="text-align: center;">Moel Conferences Ms Maria Kavvadia, Philologist Tel.: (+30) 2106203614 Fax: (+30) 2108078342 Email: info@moel.gr</p>

Please circulate this announcement to colleagues who may be interested in this conference. They can subscribe by emailing info@moel.gr with 'Subscribe – SAMARIA 2016' as the subject line.

ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ –
JOB VACANCIES/FELLOWSHIPS

ORIENTAL INSTITUTE JOB POSTING:
STATISTICAL ANALYSIS PROJECT
MANAGER CRESCAT PROJECT
(COMPUTATIONAL RESEARCH
ECOSYSTEM FOR SCIENTIFIC
COLLABORATION ON ANCIENT TOPICS) /
ANALYSIS OF ANCIENT GREEK COIN
HOARDS

Term: September 1st, 2016 to August 31st, 2017

The Statistical Analysis Project Manager will work for the CRESCAT Project (Computational Research Ecosystem for Scientific Collaboration on Ancient Topics) under the supervision of Alain Bresson and Sandra Schloen to assist with analyzing by statistical methods (regression, principal components, network analysis...) data from ancient coin hoards. This position requires a Ph.D. and an expertise in manipulation of social science data by statistical methods. An expertise in ancient history and archaeology will be much appreciated although it is not a basic requirement.

To apply for this position, please apply online at the University of Chicago's job posting website at <http://jobs.uchicago.edu> Job posting number: 099554

Inquiries can be directed to oi-administration@uchicago.edu with the subject heading "Statistical Analysis Project Manager".

Review of applications will begin on February 1, 2016 and the deadline for receiving the application is January 26, 2016, midnight.

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, protected veteran status or status as an individual with disability.

The University of Chicago is an Affirmative Action / Equal Opportunity / Disabled / Veterans Employer. Job seekers in need of a reasonable accommodation to complete the application process should call 773-702-5671 or email ACOppAdministrator@uchicago.edu with their request.

PHD STUDENTSHIP, SOUTHERN OCEAN ATMOSPHERIC RADIOCARBON (SOAR), BASED IN WELLINGTON, NEW ZEALAND

We seek a highly motivated person for a three-year PhD studentship on the Southern Ocean Atmospheric Radiocarbon (SOAR) project. SOAR aims to use atmospheric measurements and modelling of radiocarbon (^{14}C) in atmospheric CO_2 and tree rings to understand the mechanisms driving the Southern Ocean carbon sink.

The student project will include method development for Southern Hemisphere atmospheric radiocarbon measurements from the recent atmosphere, synthesizing existing and new datasets, and interpreting these results in the context of Southern Ocean carbon exchange over the last 30 years. The project will initially focus on laboratory methods and measurement and data analysis, and there will be opportunities for field work and to be involved in global and regional atmospheric transport modelling.

The student will be expected to enrol as a PhD student at Victoria University of Wellington. The student will be co-supervised by Jocelyn Turnbull (GNS Science) and Sara Mikaloff-Fletcher (NIWA) and will be physically based at the National Isotope Centre of GNS Science, also in Wellington, New Zealand. GNS Science and NIWA are government-owned research institutes serving earth sciences disciplines.

Prospective candidates must have a background in chemistry, physics, earth science or related discipline, be proficient in one or more scientific programming languages (Matlab, R, IDL, Fortran, etc.), and be eligible for acceptance to a PhD program, requiring a Masters or equivalent degree. A generous scholarship will be provided.

The start date will be in early 2016 and we will accept applications until Feb 2016. Applications should include a cover letter, recent CV and evidence of eligibility for the Victoria University of Wellington PhD program. Please direct questions and applications to:

Dr Jocelyn Turnbull
National Isotope Centre
GNS Science
30 Gracefield Rd
Lower Hutt
New Zealand
email: J.Turnbull@gns.cri.nz

Dr Sara Mikaloff Fletcher
NIWA
301 Evans Bay Parade
Greta Point
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New Zealand

email: Sara.Mikaloff-Fletcher@niwa.co.nz



**POST-DOCTORAL FELLOWSHIP, DANISH
NATIONAL RESEARCH FOUNDATION'S
CENTRE OF EXCELLENCE, CENTRE FOR
URBAN NETWORK EVOLUTIONS (URBNET),
SCHOOL OF CULTURE AND SOCIETY,
AARHUS UNIVERSITY – IN
COLLABORATION WITH THE DANISH
INTERDISCIPLINARY CENTRE FOR
PLASMA MASS SPECTROMETRY (DK-
ICPMS), DEPARTMENT OF GEOSCIENCE,
AARHUS UNIVERSITY**

Dear colleagues,

I would like to draw your attention to the following post-doctoral position available at Aarhus University: <http://www.au.dk/en/about/vacant-positions/scientific-positions/stillinger/Vacancy/show/791515/5283/>

Danish National Research Foundation's Centre of Excellence, Centre for Urban Network Evolutions (UrbNet), School of Culture and Society, Aarhus University – in collaboration with the Danish Interdisciplinary Centre for Plasma Mass Spectrometry (DK-ICPMS), Department of Geoscience, Aarhus University – invites applications for a post-doctoral fellowship focused on archaeometallurgy and isotope geochemistry. We are seeking a post-doctoral scientist interested in exploring the application of techniques to the study of the origin and production/processing techniques of archaeological materials from Northern Europe to the Middle East and Africa. The ideal candidate will have a PhD in geochemistry or archaeometallurgy, the requested analytical skills, a good command of English, excellent interpersonal skills, the ability to work in international collaborations, and a strong publication record commensurate with career stage. The successful candidate is expected to present her/his research at international meetings, and publish results in peer-reviewed scientific journals in a timely manner.

For further information about the position, please contact UrbNet core-members Assistant Professor Gry Barfod (grybarfod@geo.au.dk) and Niels Bohr Professor of Geoscience, Charles Leshner (lesher@geo.au.dk), or UrbNet Centre director Professor Rubina Raja (rubina.raja@cas.au.dk).

Kind regards,

Lara O'Dwyer Brown, Ph.D.

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volcano.au.dk

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THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS FELLOWSHIPS

URL: <http://www.ascsa.edu.gr/index.php/admission-membership/grants>

Deadline: Various (Jan. 15 - Mar. 15)

FUNDING FOR GRADUATE STUDENTS FOR STUDY AT THE ASCSA (FULL ACADEMIC YEAR)

REGULAR MEMBER FELLOWSHIPS:

Up to twelve fellowships are available for the School's Regular Members. Fellowships provide a stipend of \$11,500 plus room and board at Loring Hall on the School grounds and waiver of School fees. Regular Member fellowships are awarded for the entire nine-month program. All awards are made on the recommendation of the Committee on Admissions and Fellowships and are based on the results of the qualifying examinations and materials submitted with the application.

Fellowships include the Heinrich Schliemann and the John Williams White Fellowships in archaeology, the Thomas Day Seymour Fellowship in history and literature, and nine Fellowships unrestricted as to field — the Virginia Grace, the Michael Jameson, the Philip Lockhart, the Lucy Shoe Meritt, the Fowler Merle-Smith, the Martin Ostwald, and the James Rignall Wheeler. The Bert Hodge Hill is unrestricted, but with a preference for a student in art history, and the Emily Townsend Vermeule is unrestricted, but with a preference for Bronze Age archaeology.

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Submit application for Regular Membership with fellowships. \$50 application fee.

DEADLINE: JANUARY 15, 2016.

ADVANCED FELLOWSHIPS: Seven fellowships for the full academic year at the School with a stipend of \$11,500 plus room, board, and waiver of School fees are available to students who have completed the Regular Program or one year as a Student Associate Member and plan to return to the School to pursue independent research, usually for their Ph.D. dissertation.

Advanced Fellowships awarded by the School: the Samuel H. Kress Fellowship in art and architecture of antiquity; the Gorham Phillips Stevens Fellowship in the history of architecture; the Ione Mylonas Shear Fellowship in Mycenaean archaeology or Athenian architecture and/or archaeology; the Homer A. and Dorothy B. Thompson Fellowship in the study of pottery; and three Fellowships unrestricted as to field: the Edward Capps, the Doreen Canaday Spitzer, and the Eugene Vanderpool Fellowships.

[Download bulletin](#)

Submit application for Student Associate Membership with fellowships (long form).

DEADLINE: FEBRUARY 15, 2016.

FULBRIGHT FELLOWSHIPS: Contact the Institute of International Education, at 809 United Nations Plaza, NY 10017 or (<http://us.fulbrightonline.org/home.html>) for an application and stipend information. Candidates must submit ASCSA application for

Student Associate Membership by due date for Fulbright application. ASCSA *Student Associate membership* is the only eligible membership for Fulbright grants.

(<http://us.fulbrightonline.org/countries/selectedcountry/greece>)

Submit application for Student Associate Membership (long form).

DEADLINE: OCTOBER 13, 2015.

FUNDING FOR GRADUATE STUDENTS AND POSTGRADUATES FOR STUDY AT THE ASCSA (FULL ACADEMIC YEAR)

THE M. ALISON FRANTZ FELLOWSHIP: Ph.D. candidates and recent Ph.D.'s for work in the Gennadius Library. A stipend of \$11,500 plus room, board, and waiver of School fees.

[Download bulletin](#)

Submit application for Associate Membership with fellowships (long form).

DEADLINE: JANUARY 15, 2016.

THE JACOB HIRSCH FELLOWSHIP: For projects carried out in Greece, Ph.D. candidate from U.S. or Israel (Israeli citizens) writing a dissertation or recent Ph.D. revising a dissertation for publication. A stipend of \$11,500 plus room, board, and waiver of School fees.

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Submit application for Associate Membership with fellowships (long form).

DEADLINE: JANUARY 15, 2016.

WIENER LABORATORY FELLOWSHIP: (Future program: 2017-2019) Funding up to \$20,000 per year for a two-year fellowship term. Ph.D. candidates from colleges or universities worldwide pursuing archaeological research related to the ancient Greek world at the Wiener Laboratory.

[Link to more information](#)

DEADLINE: JANUARY 15, 2017.

FUNDING FOR GRADUATE STUDENTS OR POSTGRADUATES FOR STUDY AT THE ASCSA (SHORT-TERM FELLOWSHIPS)

ARCHAEOLOGICAL INSTITUTE OF AMERICA (AIA) ANNA C. AND OLIVER C. COLBURN FELLOW: Ph.D. candidates and recent Ph.D.'s whose field is classical archaeology. Contact the AIA, Boston, MA for information. Applications completed on website: www.archaeological.org. Stipend of \$5,500.

[Download bulletin](#)

Submit application for Student Associate Membership with fellowships (long form).

DEADLINE: JANUARY 15, 2016.

THE HARRY BIKAKIS FELLOWSHIP: North American or Greek graduate students researching ancient Greek law or Greek graduate students working on a School excavation. The \$1,875 fellowship is awarded periodically. School fees are waived.

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Submit application for Student Associate Membership with fellowships (long form).

DEADLINE: JANUARY 15, 2016.

COTSEN TRAVELING FELLOWSHIP FOR RESEARCH IN GREECE: Short-term travel-to-collections award of \$2,000 for senior scholars and graduate students for projects and research at the Gennadius Library. At least one month of residency required. School fees are waived.

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Submit application for Associate Membership with fellowships (long form).

DEADLINE: JANUARY 15, 2016.

MELLON MEDITERRANEAN REGIONAL RESEARCH FELLOWSHIPS, Program of the Council of American Overseas Research Centers (CAORC): US citizen who is Ph.D. candidate or recent Ph.D. researching in the humanities or related social sciences in countries bordering the Mediterranean and served by American overseas research centers. Fellowship program funded by the Mellon Foundation. See www.caorc.org for details.

SUBMIT VISITING ASSOCIATE MEMBER APPLICATION TO ASCSA AFTER CAORC AWARDS GRANT IN SPRING 2016.

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THE GEORGE PAPAIOANNOU FELLOWSHIP: Ph.D. candidates or recent Ph.D.'s researching Greece in the 1940's and the post-war period. Fellows are required to make use of and refer to the George Papaioannou Papers housed at the Archives of the Gennadius Library. Open to all nationalities. Stipend of €1,000. School fees are waived for a maximum of two months.

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Submit application for Associate Membership with fellowships (long form).

DEADLINE: JANUARY 15, 2016.

THE HENRY S. ROBINSON CORINTH RESEARCH FELLOWSHIP: Ph.D. candidate or Ph.D. 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. Open to all nationalities. The Robinson Fellowship may not be held concurrently with another School fellowship. One or more grants for up to three months, maximum amount of stipend is \$4,000. School fees are waived.

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DEADLINE: JANUARY 15, 2016.

WIENER LABORATORY RESEARCH ASSOCIATE APPOINTMENTS: Short term funding for Ph.D. candidates and postdoctoral scholars from colleges or universities worldwide pursuing archaeological research related to the ancient Greek world at the Wiener Laboratory. Variable amounts up to \$7,000. Term variable, up to nine months.

[Link to more information](#)

[Download bulletin](#)

Submit application for Associate Membership with fellowships (long form).

DEADLINE: JANUARY 15, 2016.

TRAVELING AND EXCHANGE FELLOWSHIPS FOR GRADUATE STUDENTS AND POSTGRADUATE STUDY

OSCAR BRONEER TRAVELING FELLOWSHIP: Ph.D. candidate or recent Ph.D. for study in Athens and Rome in alternate years, using either the American Academy in Rome (AAR) or the American School of Classical Studies at Athens (ASCSA) as a base from which to pursue work through trips to sites, museums, or repositories of materials of interest to the Fellow's studies. Three to six months, award up to \$30,000.

For 2016-2017, past Members of the ASCSA may apply for study in Italy. Submit all application materials, including three letters of recommendation to the American Academy in Rome via email to Shawn Miller, Program Director at s.miller@aarome.org, or via ground mail addressed to Oscar Broneer Traveling Fellowship, c/o American Academy in Rome, 7 East 60th Street, New York, NY 10022. <http://www.aarome.org>

[Download bulletin](#)

DEADLINE: MARCH 15, 2016.

COULSON/CROSS AEGEAN EXCHANGE PROGRAM (CAORC): Short-term fellowships for Greek nationals and scholars to pursue research in Turkey under the auspices of the American Research Institute in Turkey (ARIT). Stipend of \$250 per week plus up to \$500 for travel expenses. Send applications to ASCSA.

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Submit application for Associate Membership with fellowships (long form).

DEADLINE: MARCH 15, 2016.

MULTI-COUNTRY RESEARCH FELLOWSHIPS, Program of the Council of American Overseas Research Centers (CAORC): US citizen who is Ph.D. candidate or postdoctoral scholar with research in the humanities, social sciences, or allied natural sciences requiring travel to several countries with an American overseas research center. Consult CAORC website for application and deadline: www.caorc.org.

SUBMIT VISITING ASSOCIATE MEMBER APPLICATION TO ASCSA AFTER CAORC AWARDS GRANT IN SPRING 2016.

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THE PAUL REHAK MEMORIAL TRAVELING FELLOWSHIP: Regular members and Student Associate members already attending the School for the entire 2015-2016 academic year. A grant of \$1,000 or grants of lesser amounts. School fees are waived. The purpose is to allow individuals to travel in Greece to conduct a research project from September 1, 2015 to July 1, 2016.

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Submit application for Student Associate Membership with fellowships (long form).

DEADLINE: MARCH 1, 2016.

FUNDING FOR SENIOR SCHOLARS FOR STUDY AT THE ASCSA

KRESS PUBLICATIONS FELLOWSHIPS: Postdoctoral scholars working on assigned material from excavations at Ancient Corinth, Ancient Agora, Lerna, and affiliated projects of the ASCSA to support research for publication of the excavated material. Grants for at least three months (up to \$10,000) to a maximum of nine months (up to \$30,000).

[Download bulletin](#)

Submit application for Senior Associate Membership with fellowships (long form).

DEADLINE: JANUARY 15, 2016.

WIENER LABORATORY POSTDOCTORAL FELLOWSHIP: (Future program: 2017-2020): Fellowship for recent postdoctoral scholar from colleges or universities worldwide pursuing archaeological research related to the ancient Greek world at the Wiener Laboratory. Stipend of \$35,000 per year for three-year term.

[Link to more information](#)

DEADLINE: JANUARY 15, 2017.

WIENER LABORATORY SENIOR FELLOWSHIPS: Fellowships for postdoctoral scholar from colleges or universities worldwide pursuing archaeological research related to the ancient Greek world at the Wiener Laboratory. Stipend of \$15,000 for five month term or \$30,000 for ten month term.

[Link to more information](#)

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Submit application for Associate Membership with fellowships (long form).

DEADLINE: JANUARY 15, 2016.

ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS

INTRODUCTION TO CERAMIC PETROLOGY

COURSE 2016

From May 30th to June 10th, the Fitch Laboratory will hold a two-week postgraduate training course providing an introduction to ceramic petrology, building upon the Laboratory's established reputation on ceramic petrology applications and its extensive reference collections of geological and ceramic thin sections.

The course is open mainly to people with no (or limited) previous experience on petrology although familiarity with archaeological ceramics will be useful. It is an excellent introduction for students already on a research degree in archaeological materials, as well as for postdoctoral researchers and academics interested in being familiar with ceramic petrology applications. Although the focus is primarily with ceramic materials, the skills learnt are applicable to the study of lithics, building materials, pigments and soils.

The course comprises daily lectures and practicals introducing to optical polarizing light microscopy, the identification of main rock-forming minerals, the classification of rock types, the use and interpretation of geological maps and, subsequently, the analysis of ceramic thin sections to reconstruct provenance and technology. The participants are also introduced to the principles of chemical analysis of ceramics (with a critical review of the most commonly used techniques involving both desktop and portable equipment) and the combined use of chemical and petrographic data. Moreover a demonstration is held on the preparation of thin sections as well as of samples for chemical analysis. Furthermore, a field class to Aegina, including a visit to a traditional pottery workshop, provides practical experience on prospection for pottery raw materials and sampling, as well as contemporary potting practices. Towards the end, each participant has the opportunity to undertake a case study project. In total, the course includes 20 hours of lectures, 28 hours of laboratory practicals, 11 additional contact hours for project accomplishment, plus a day-fieldtrip.

A course manual and a fieldtrip guide are provided for participants covering all aspects of the course and further reading, and a certificate of attendance is issued for each participant upon course completion. The course co-coordinators and instructors are Dr **Evangelia Kiriatzi** (Director, Fitch Laboratory) and Dr **Ruth Siddall** (Senior Lecturer, Earth Science/Dean of Students, UCL) with contributions by Dr Noemi Müller (Scientific Research Officer, Fitch Laboratory), Dr John Gait (Williams Fellow in Ceramic Petrology, Fitch Laboratory) and Mr Michalis Sakalis (Technician, Fitch Laboratory).

Course Fee: The course fee includes tuition, accommodation, fieldtrip expenses, all teaching materials, BSA membership for a month including 24 hour access to the superb library and entry to archaeological sites and museums, plus daily coffee and biscuits, packed lunch for the fieldtrip and a welcome and a farewell meal. The fee is 850€ (for shared accommodation in double rooms) or 1000€ (for single accommodation). Self-

catering accommodation (including breakfast) will be provided at the BSA Hostel, next to the Fitch Laboratory building.

(http://www.bsa.ac.uk/index.php?option=com_content&view=article&id=46&Itemid=146).

Travel to and from Athens is the sole responsibility of the course participant.

The course is limited to 12 places. Post-graduate students are recommended to apply to their universities for financial support; limited funding will be available (to cover part of the fees) **only** for students who would otherwise be unable to attend and they should express their interest in such financial support in their application.

Applications forms can be downloaded from the BSA website. Applications should be submitted to the Fitch Laboratory administrator, Ms Zoe Zgouleta via e-mail (zoe.zgouleta@bsa.ac.uk).

Closing date: **29 January 2016**. References must also be received by then through e-mail: it is the applicant's responsibility to ensure that the references are sent. The successful candidates will hear by mid-March 2016.

For further information, please check the relevant sections on the British School at Athens web pages
(http://www.bsa.ac.uk/index.php?option=com_content&view=article&id=12&Itemid=111) or contact either of the two course coordinators, Dr Evangelia Kiriati (e.kiriati@bsa.ac.uk) or Dr Ruth Siddall (r.siddall@ucl.ac.uk).

Zoe Zgouleta
Fitch Laboratory Administrator
British School at Athens
52 Souedias Str.
Tel: ++30 211 10 22 830
Email: zoe.zgouleta@bsa.ac.uk



ADVANCED MASTER COURSE IN STRUCTURAL ANALYSIS OF EXISTING BUILDINGS, MONUMENTS AND HISTORICAL CONSTRUCTIONS

Dear Colleague,

Please find below information about the Advanced Master Course in Structural Analysis of Existing Buildings, Monuments and Historical Constructions.

I kindly invite you to disseminate this information to anybody who could be interested in applying.

SCHOLARSHIPS FOR THE ADVANCED MASTERS IN STRUCTURAL ANALYSIS OF MONUMENTS AND HISTORICAL CONSTRUCTIONS

Applications for the **Advanced Masters in Structural Analysis of Monuments and Historical Constructions**, approved and financially sponsored by the European Commission within the framework of the Erasmus+ Programme, are opened up to January 15, 2016.

This Master Course is organized by a Consortium of leading European Universities/Research Institutions in the field, composed by **University of Minho** (coordinating institution, Portugal), the **Technical University of Catalonia** (Spain), the **Czech Technical University in Prague** (Czech Republic), the **University of Padua** (Italy) and the **Institute of Theoretical and Applied Mechanics of the Czech Academy of Sciences** (Czech Republic). The course combines the most recent advances in research and development with practical applications.

A significant number of **scholarships**, ranging from 4,000 to 25,000 Euro, are available to students of any nationality.

Please find full details on the MSc programme, as well as electronic application procedure, on the website www.msc-sahc.org

Yours sincerely,

Paulo B. Lourenco

Course Coordinator

Editor of the International Journal of Architectural Heritage: Conservation, Analysis, and Restoration

ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS



Λίλιαν Καραλή, Γιώργος Φερεντίνος (επιμ.)
Τετράδια Γεωαρχειολογίας
Εκδόσεις Ολκός, 2015,
σελ. 300, τιμή 20 ευρώ

Το πώς οι θετικές επιστήμες μπορούν να βοηθήσουν αποτελεσματικά τους αρχαιολόγους στον εντοπισμό θαμμένων αρχαιοτήτων, βυθισμένων πόλεων, αρχαίων ναυαγίων, αρχαίων λιμανιών κ.λπ. είναι το θέμα αυτού του βιβλίου. Επιστημονικό αλλά και κατανοητό στο ευρύ κοινό, αυτό το συλλογικό βιβλίο ασχολείται με έναν νέο κλάδο της Αρχαιολογίας, τη Γεωαρχειολογία.

Μέσα από μια σύντομη ιστορική αναδρομή ο αναγνώστης μυείται και κατανοεί τους στόχους και τη σημασία της Γεωαρχειολογίας και της Περιβαλλοντικής Αρχαιολογίας στις σύγχρονες αρχαιολογικές έρευνες και την τεράστια συμβολή τους στην ερμηνεία

των αρχαιολογικών δεδομένων. Εξηγεί πώς η Αρχαιολογία «δανείζεται» μεθόδους και τρόπο μελέτης από τις φυσικές επιστήμες, που είχαν φανερό επιτυχία στο να περιγράφουν και να εξηγούν τον κόσμο. Γενικότερα, με εύληπτο τρόπο, γίνονται προσεγγιστικά στο ευρύτερο κοινό επιστημονικά εργαλεία και μέθοδοι για τις οποίες γίνεται λόγος στις ανασκαφές των τελευταίων ετών.

Κάθε συγγραφέας, ανάλογα με την ιδιότητά του, παρουσιάζει ελκυστικά θέματα. Ο πυθμένας των θαλασσών παύει να είναι απρόσιτος, όπως είχε παραμείνει για χιλιετίες. Με τη χρήση του ήχου επιτυγχάνεται η λεπτομερής επισκόπηση και αποτύπωση του σε όλα τα βάθη και ο εντοπισμός αρχαίων ναυαγίων. Υπερνικήθηκε η έλλειψη οξυγόνου, καθώς και οι τεράστιες πιέσεις και το πλήρες σκοτάδι που επικρατούν στα μεγάλα βάθη. Τα αρχαία ναυαγία προσφέρουν πλούτο πληροφοριών σχετικά με τον τρόπο ζωής των αρχαίων κοινωνιών. Όπως όλες οι καταστροφές, έτσι και τα ναυαγία αποτελούν ακραίες και τραγικές στιγμές στην ανθρώπινη ζωή. Συγχρόνως όμως διατηρούν αναλλοίωτα αρχαία ανθρώπινα δημιουργήματα, χάρη στις περιβαλλοντικές συνθήκες που επικρατούν στον βυθό της θάλασσας. Είναι πολύτιμα επίσης γιατί από τα ευρήματά τους μαθαίνουμε τους εμπορικούς δρόμους της αρχαιότητας, τις ναυπηγικές τεχνικές, την προέλευση πρώτων υλών και πολλές άλλες ενδιαφέρουσες πληροφορίες. Χαρακτηριστικό παράδειγμα τα πρόσφατα εντυπωσιακά ευρήματα του ναυαγίου των Αντικυθήρων. Επίσης, με τις γεωαρχαιολογικές μελέτες κατανοούμε τους λόγους επιλογής παρακτίων θέσεων για τη δημιουργία αρχαίων λιμανιών, όπως το αρχαίο λιμάνι της Αλεξανδρείας, καθώς και τους λόγους εξαφάνισής τους. Οι ακτογραμμές αποτελούν ένα από τα δυναμικότερα περιβάλλοντα στη γη. Οι συνεχείς μεταβολές τους οφείλονται στην ενέργεια των κυμάτων, στα θαλάσσια ρεύματα, στις τεκτονικές κινήσεις, στις διαβρώσεις, στα φαινόμενα ευστασίας και ισοστασίας, στις αποθέσεις των ποταμών και τέλος στις παρεμβάσεις του ανθρώπου.

Αντίστοιχα στην ξηρά με τη Μαγνητική Χαρτογράφηση, χωρίς να είναι αναγκαίο να γίνει ανασκαφή και να χαθούν περιττός χρόνος και χρήματα, εντοπίζονται θαμμένα αρχαία μνημεία, όπως έγινε πρόσφατα με τη συγκλονιστική περίπτωση του τύμβου της Αμφίπολης, που έχει προκαλέσει το ενδιαφέρον του ελληνικού και διεθνούς κοινού. Επίσης, είναι πολύ ενδιαφέρον ότι οι αρχαιολόγοι μπορούν να εντοπίζουν τον τόπο προέλευσης του μαρμάρου στο οποίο είναι λαξευμένα τα αρχαία γλυπτά. Ένα ακόμη σημαντικό επιστημονικό εργαλείο αποτελούν τα Γεωγραφικά Συστήματα Πληροφοριών, τα οποία δίνουν τη δυνατότητα στον αρχαιολόγο να δημιουργεί τρισδιάστατα (3D) φωτορεαλιστικά μοντέλα, δυνατότητες πρόβλεψης αρχαιολογικών θέσεων, προσομοίωσης της παλαιογεωγραφίας μιας περιοχής κ.ά.

Όπως ο σύγχρονος κόσμος μας, έτσι και ο κόσμος του παρελθόντος ήταν σύνθετος και πολυποίκιλος, όπου λάμβαναν χώρα βιολογικές, κοινωνικές, οικολογικές και τεχνολογικές αλλαγές. Αυτές με τη σειρά τους σηματοδοτούσαν την ύπαρξη θετικών ή αρνητικών εξελίξεων. Οι αρχαιοπεριβαλλοντικές λοιπόν μελέτες εντοπίζουν τα οικοσυστήματα του παρελθόντος, τις αιτίες κατάρρευσής τους, είτε από φυσικά φαινόμενα είτε από ανθρωπογενείς αιτίες, και μας βοηθούν να προβλέψουμε ή και να αποτρέψουμε παρόμοιες καταστροφές στο μέλλον. Τα κοινωνικά συστήματα αποτελούν και αυτά τμήματα ενός οικοσυστήματος, που είναι μια ευρύτερη έννοια και τα περιλαμβάνει. Η έλλειψη σταθερότητας μεταξύ οικοσυστήματος και κοινωνικού συστήματος οδηγεί στη σταδιακή κατάρρευση του δεύτερου. Αρκετοί από τους πρώιμους νησιωτικούς πολιτισμούς (όπως στην περίπτωση των Κυκλάδων ο νεολιθικός πολιτισμός στη νησίδα Σάλιαγκος, κοντά στην Αντίπαρο) θεωρείται ότι εξαφανίστηκαν

λόγω της αδυναμίας τους να προσαρμοστούν στα ιδιαίτερα χαρακτηριστικά του νησιωτικού περιβάλλοντος. Οι γεωαρχαιολογικές έρευνες έδειξαν ότι η επιλογή τοποθεσίας για την ίδρυση των πρώτων οικισμών σχετίζεται με την ύπαρξη φυσικής άρδευσης, εύφορου εδάφους κ.λπ. Άλλο πόρισμα γεωαρχαιολογικών μελετών είναι ότι ο ελλαδικός χώρος εποίκιστηκε κατά τη νεολιθική εποχή πρώτα στην ακατοίκητη και εύφορη πεδιάδα της Θεσσαλίας από όπου οι κάτοικοί της διέδωσαν τον τρόπο ζωής τους στα Βαλκάνια. Ακόμη, η πληροφορία που αντλούμε από γεωαρχαιολογικές μελέτες ότι η Μήλος στο τέλος του Πλειστοκαίνου ήταν νησί και όχι ενωμένη με την ηπειρωτική Ελλάδα, οδηγεί στο συμπέρασμα πως η παρουσία οψιανού στο σπήλαιο Φράγγχι στην Αργολίδα απαιτούσε τη χρήση πλοιαρίου και την ικανότητα ταξιδιού και επιβίωσης στο νησιωτικό περιβάλλον. Επίσης, μια από τις επιπτώσεις των κλιματικών αλλαγών στο περιβάλλον είναι και η αυξομείωση της στάθμης της θάλασσας, κίνδυνος υπαρκτός και στη σημερινή εποχή.

Οι γεωαρχαιολογικές μελέτες, επομένως, προσφέρουν πολύτιμα στοιχεία στην αρχαιολογική έρευνα, τα οποία είναι αδύνατον να προκύψουν με άλλον τρόπο. Η Γεωαρχαιολογία μπορεί εξίσου να συνεισφέρει στην προστασία και στη διαχείριση των πολιτιστικών μνημείων, κάτι ιδιαίτερα σημαντικό για μια χώρα σαν την Ελλάδα, με πλούσια πολιτιστική κληρονομιά, αλλά και έντονους ρυθμούς οικιστικής ανάπτυξης, που συχνά οδηγούν στην καταστροφή των αρχαιοτήτων.

Το βιβλίο συμβάλλει δημιουργικά στη γοητευτική προσπάθεια κατανόησης και ερμηνείας του φυσικού περιβάλλοντος, μέσα στο οποίο έζησε και δημιούργησε ο άνθρωπος κατά το παρελθόν. Είναι προϊόν συνεργασίας ελλήνων επιστημόνων, αρχαιολόγων και γεωλόγων. Η επιμέλεια έχει γίνει από την καθηγήτρια Αρχαιολογίας του Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών Λίλιαν Καραλή και τον ομότιμο καθηγητή Γεωλογίας του Πανεπιστημίου Πατρών Γιώργο Φερεντίνο.

Η κυρία Ειρήνη Πέππα - Παπαϊωάννου είναι καθηγήτρια Κλασικής Αρχαιολογίας στο Πανεπιστήμιο Αθηνών.

THE TOOLS OF ASCLEPIUS: SURGICAL INSTRUMENTS IN GREEK AND ROMAN TIMES. STUDIES IN ANCIENT MEDICINE

Bryn Mawr Classical Review 2015.12.14

Lawrence J. Bliquez, *The Tools of Asclepius: Surgical Instruments in Greek and Roman Times. Studies in ancient medicine*, 43. Leiden; Boston: Brill, 2014. Pp. xxxv, 439. ISBN 9789004279070. \$194.00.

Reviewed by Lesley Bolton, University of Calgary (labolton@ucalgary.ca)

For over a century, John Stewart Milne's *Surgical Instruments in Greek and Roman Times* has been the definitive handbook on the topic.¹ In this new offering, an addition to Brill's series 'Studies in Ancient Medicine', Bliquez has drawn on his extensive experience to present a thoroughly up-to-date treatment of the field, yet not without giving due respect to his predecessor, as reflected in the subtitle of this present volume.

A brief introductory chapter addresses previous scholarship, the taxing problem of nomenclature, and the design and manufacture of the tools, along with some speculation as to the span of surgeons' training and the success, or not, of their surgeries. The bulk of the work then falls into three chronologically arranged chapters that examine the Hippocratic, Hellenistic and Imperial evidence. This is, in itself, a departure from Milne's approach, which was to "bundle together all literary testimonia to a particular category of instrument from the Hippocratics to Imperial times" (p. 5).

Material survival from the period of the Hippocratic texts is scarce. Bliquez notes that the only reliably 'Hippocratic' remains are a number of cupping vessels recovered as grave goods; the emphasis, then, of chapter two is chiefly on the literary sources, bolstered by some inscriptional evidence from the healing sanctuaries. The instruments are presented by category with sections on, for example, cupping vessels, probes, forceps and cutting instruments. Each discussion brings together the relevant references from the Corpus, progressing from the instrument in its simplest manifestation ("a knife", for example, p. 28) to special purpose types marked out by modifying adjectives (so, "a knife that is curved and not too narrow at the tip", p. 28). The majority of citations are either paraphrased or translated in full, the more important passages include the Greek alongside the text itself, or in a footnote. Where a number of passages exist relating to one procedure or theme, they are gathered together in useful summaries, clearly marked out from the surrounding prose. Parallels in later testimonia and material remains are collected in the footnotes.

The topic of the third chapter is the Hellenistic contribution. With physical evidence seemingly absent, and literary testimony fragmentary at best, this is a very short discussion, scarcely five pages. Bliquez here calls upon the evidence of Celsus' *De Medicina*, a generation or so later than the Hellenistic age, to make good the gaps. Where surgical tools are mentioned both in the Hippocratic texts and by Celsus, Bliquez argues for a continuation of type and usage; where Celsus introduces types not mentioned in the

earlier works, Bliquez suggests this represents considerable developments that should be attributed to the Hellenistic surgeons.²

The meat of the work comes in the fourth chapter, which is devoted to the tools of the empire. The format is almost identical to the earlier chapter on the Hippocratic instruments, but with some additional tool categories, namely, needles, vessels and containers, and some miscellaneous surgery-related items. Here, Bliquez has amassed a huge quantity of testimonia from Greek and Latin sources, so much so that the tool categories are further broken down into subcategories such as simple probe, eyed probe, spatula probe and so on. Equally extensive is Bliquez' treatment of the material remains. A sizeable appendix deals with natural products such as wool, linen, and sponge, which surely played a significant part in the surgeon's practice. The volume concludes with an extensive bibliography, appropriate Greek, Latin and English indices, and ninety-five black and white/halftone illustrations.³

Bliquez accepts that searchable databases have given him an advantage over Milne, but, even so, the range of written testimonia he addresses is extensive and impressive. Selections from poets, grammarians, historians, philosophers and veterinary texts supplement a complete survey of the medical writings; a good number of less well-known Byzantine and mediaeval sources round off the list. The author makes appropriate use of use of modern translations where available, but has himself translated or paraphrased many of the Greek and Latin passages in a clear, concise fashion, yet one that does not pass over any difficulties of interpretation. Unlike Milne, he has opted to at least acknowledge as many relevant references as he has come across, even if they advance little new knowledge, since they can allow speculation as to who invented a particular tool, and may give some indication of the route of information through the witnesses.⁴ As a testament to Bliquez' engagement with the sources, he can, for example, elicit the following information about a seemingly humble instrument like the eyed needle: its alternate names, both Greek and Latin, as well as several Greek terms for the actual eye of the needle, its numerous forms, where it is variously 'sharp', 'fine', 'extremely fine', 'large', 'stout', 'dull', 'bent', 'slightly bent' or 'fine with a blunt part', and the stitching materials, including wool, sinew, dried gut, silk and hair (both human and animal), that it might employ. He also summarizes, according to author, no less than sixty five individual instances in which the needle is used surgically. This reader finds these summaries, some categorized by procedure, some by implement, some by author, particularly useful and very effective in bringing both tool and surgery 'to life'.

There have been many finds of surgical instruments since Milne's day. Bliquez notes there have been smaller recoveries from graves particularly, but also houses, bathing and military installations, and shipwrecks, while sites at Rimini and, most recently, Allianoi in Turkey, have yielded collections numbering in the hundreds. New categories of tools have emerged, and using a more stringent typology than previously, existing museum collections that lacked context have also been reassessed. The author quite rightly credits Künzl and Jackson (amongst others) for their pioneering work in this field, but somewhat underplays his own contributions, which have been considerable. In this present volume, he brings his substantial knowledge to bear upon the material evidence, proposing potential candidates amongst the survivals to match the literary descriptions he has collected. As with the written testimonia, his treatment is most thorough, with due attention to construction, mechanical function and decoration of the instruments.

Sometimes he supports Milne's position on an artefact, sometimes not, but all assertions are convincingly argued; where he is unsure, or at a loss, he says so.

There are a few niggling problems with this volume. It seems not to have benefitted from a rigorous editorial process, since there are more typographic errors than one would expect, along with some mistakes in punctuation and the occasional factual slip-up. Furthermore, while the quality of illustrations is generally adequate, with the line drawings being particularly effective, sometimes it is just too difficult to make out in the photographic reproductions the fine detail that Bliquez describes in the text.⁵ The sheer volume of medical terminology, both ancient and modern, is also problematic, and most readers would have been well served by an extensive glossary.

The strengths of this volume, however, far outweigh any weaknesses, and it should indeed replace Milne's outdated and sometimes inaccurate treatment. It is an important resource, particularly for those interested in the history of medicine; anyone working on medical texts, whether in translation or not, knows the difficulties any mention of the tools inevitably throws up. Those more interested in the archaeological artefacts and their associated technologies should also find much of interest, and may be amazed at the variety and the complexity of surgeries carried out in the ancient world.

Notes:

1. Milne, John Stewart, *Surgical Instruments in Greek and Roman Times*. Oxford: Clarendon Press, 1907 (reprinted New York: Augustus M. Kelley, 1970). This work is now easily accessible online at archive.org.
2. Bliquez includes new forms of dissectors, retractors, forceps, needles and catheters in this group.
3. Roughly one fifth of the illustrations are reproduced in colour in the e-text format; unfortunately, figures 20 and 29 seem to have been carelessly cropped in this version.
4. This practice is not extended to the appendix, where references to items such as wool and sponge are numerous and extend beyond the medical sphere.
5. The scalpel handles in the form of Hercules, for example (pp. 74-75 and Figure 2) are impossible to make out. The figures which feature collections of instruments would also have benefitted from some numbering of the individual items, since having to search, for example, for 'middle row, 12th from the left' soon becomes tedious and subject to error.

Please visit the site: <http://bmcr.brynmawr.edu/2015/2015-12-14.html>

THE ARCHITECTURE OF THE ANCIENT GREEK THEATRE

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In this volume the leading experts on ancient Greek theatre architecture present new excavation results and new analyses of individual monuments. Many well-known theatres such as the one of Dionysos in Athens and others at for instance Messene, Sikyon, Chaironeia in Greece and Aphrodisias in Turkey have been re-examined since their original publication with stunning results. New research also includes less well-known or newly discovered ancient Greek theatres in Albania, Turkey, Cyprus and Sicily. Further studies on the history of research, regional theatrical developments, terminology and function, as well as a perspective on Roman theatres built in Greek traditions make this volume a comprehensive book of new research for specialist scholars as well as for students and the interested public. Fundamental publications on the topic have not been presented for many years, and this book aims to form a new foundation for the study of theatre architecture.

Please visit the site: <http://en.unipress.dk/udgivelser/a/architecture-of-the-ancient-greek-theatre,-the/>

EΙΔΗΣΕΙΣ - NEWS RELEASE

ANCIENT 'WAND' MAY BE OLDEST EXAMPLE OF LEAD WORK IN THE LEVANT, BY LAURA GEGGEL

A lead and wood artifact discovered in a roughly 6,000-year-old grave in a desert cave is the oldest evidence of smelted lead on record in the Levant, a new study finds.

The artifact, which looks like something between an ancient wand and a tiny sword, suggests that people in Israel's northern Negev desert learned how to smelt lead during the Late Chalcolithic, a period known for copper work but not lead work, said Naama Yahalom-Mack, the study's lead researcher and a postdoctoral student of archaeology with a specialty in metallurgy at the Institute of Earth Sciences and the Institute of Archaeology at The Hebrew University of Jerusalem.

Moreover, an analysis of the lead suggests that it came from Anatolia (in modern-day Turkey), which is part of the Levant, or the area encompassing the eastern Mediterranean. The artifact was likely a valuable tool, given that it shows signs of wear and was placed in a grave alongside the remains of an individual in the cave, she said. [See Photos of Another Ancient Burial in the Southern Levant]

"This is an incredible find," Yahalom-Mack told Live Science. "It's a uniquely preserved object from the late fifth millennium, which includes metal that was brought all the way from Anatolia. It probably had very high significance for the people who were buried with it."

Researchers discovered the artifact in Ashalim Cave, a sprawling underground cavern that's been on archaeologists' radar since the 1970s. In 2012, the Israel Cave Research Center remapped the cave, and called in a team of archaeologists when they discovered artifacts.

Archaeologists Mika Ullman and Uri Davidovich led the archaeological survey and studied the mazelike rooms, including one used for a burial chamber. The chamber was so small and low that they had to get down on their stomachs and wiggle forward to see the secluded space, Yahalom-Mack said.

It was there that they found the lead artifact.

"It was just lying there," Yahalom-Mack said. "All they needed to do was pick it up from the surface of the cave."

The artifact is small - a stick of wood attached to a sculpted lead piece. The wood measures 8.8 inches (22.4 centimeters) long, and is made of tamarisk (a group of plants common in the Negev desert, from the genus *Tamarix*). The lead piece is 1.4 inches (3.7 cm) long and weighs about 5.5 ounces (155 grams), according to the study.

Radiocarbon dating suggests the wood was created between 4300 B.C. and 4000 B.C., "which is extremely early," Yahalom-Mack said. "For a wooden artifact to be preserved [that long] is incredible."

Smelting lead

Lead, a bluish-white and malleable metal, is typically found with other elements - such as zinc, silver and copper - in nature. Lead is rarely found by itself, meaning that metal workers have to smelt it - or heat and extract it from rocks known as ore that contain metals and other minerals.

In fact, smelted lead is unheard of during the Late Chalcolithic, Yahalom-Mack said. During that time, people had figured out how to smelt copper and copper alloys - which is unusual, given that copper is more difficult to smelt than lead because lead can be smelted at lower temperatures.

Lead doesn't tend to occur naturally in the Negev desert, so after discovering the artifact, the researchers studied its isotopes (variations of an element) to determine its origin. An analysis showed that the artifact "was made of almost pure metallic lead, likely smelted from lead ores originating in the Taurus [mountain] range in Anatolia," the researchers wrote in the study. [In Photos: Amazing Ruins of the Ancient World]

Perhaps the finished artifact was brought from Anatolia, or maybe the raw materials made their way to the southern Levant, where the object was assembled, the researchers said.

"In this respect, it fits very well with what we know about the Chalcolithic culture, which was a highly developed culture with amazing abilities in art and craft," Yahalom-Mack said. People from the Chalcolithic period also carved ivory and used a sophisticated method known as "lost-wax casting" to fashion metal objects, she said.

Ultimate purpose

How the Late Chalcolithic people used the artifact, however, is anyone's guess.

It could be a mace-head used mostly for ceremonial purposes, as mace-heads (clublike objects) were found at another Late Chalcolithic archaeology site known as Nahal Mishmar, or the Cave of the Treasure, in the southern Levant. But unlike the Nahal Mishmar mace-heads, the newfound artifact is likely not made of cast metal, and it's also smaller, so it may have served another purpose, Yahalom-Mack said.

Another idea is that the artifact is a spindle, with the wooden shaft serving as the spindle rod and the lead object serving as a weight known as a whorl. There are abrasions on the lead that could have been made by spinning, and Dafna Langgut, a co-researcher of the study and the director of the Laboratory of Archaeobotany and Ancient Environments at Tel Aviv University, is investigating this idea.

If the object were a spindle, its whorl would have been slightly heavier than most known whorls (which are typically made of stone), meaning the artifact would have produced only coarse yarn, Yahalom-Mack noted. Because of this discrepancy, the researchers speculate that the artifact was used for some unknown purpose before being repurposed as a spindle whorl, they said in the study.

"Its eventual deposition in the deepest section of Ashalim Cave, in relation to the burial of selected individuals, serves as evidence of the symbolic significance it possessed until the final phase of its biography," the researchers wrote.

Other lead work

There are a few examples of lead work during the Late Chalcolithic, but none has been studied as thoroughly as the new artifact.

For instance, archaeologists have found two lead objects dating to before the fourth millennium B.C. in northern Mesopotamia and eastern Anatolia. But because these objects haven't been examined, it's unknown whether they were smelted or crafted from native lead, Yahalom-Mack said.

However, if these two objects were smelted, it would suggest that ancient people in the Middle East had learned how to smelt lead but that the groups likely learned this skill independently of each other, at around the same time during the Late Chalcolithic, Yahalom-Mack said.

The findings were published online Wednesday (Dec. 2) in the journal PLOS ONE.

Please visit the site: <http://www.livescience.com/52984-oldest-lead-artifact-in-levant.html>

INTACT, PACKED ETRUSCAN TOMB FOUND, BY ROSSELLA LORENZI

An intact Etruscan tomb, complete with sarcophagi, a full array of grave goods and a mysterious marble head, has been brought to light in the Umbria region of Italy, in what promises to be one of the most important archaeological findings in recent history. Dated to the end of the 4th century B.C., the burial site was found by a farmer who opened a void in the earth while working with his plow in a field near Città della Pieve, a small town some 30 miles southwest of Perugia.

The intact Etruscan house seen here is the first of its kind and is providing archaeologists with fresh details about daily life within a civilization that disappeared some 2,000 years ago.

"It was a totally unexpected discovery. The area is away from the sites visited by tomb robbers and indeed the burial is undisturbed," Clarita Natalini of the archaeological superintendency of Umbria, told Discovery News.

Finding an undisturbed Etruscan tomb is an extremely rare event that has the potential to reveal more about one of the ancient world's most fascinating and mysterious cultures.

The Etruscans were a fun-loving and eclectic people who among other things taught the French how to make wine, the Romans how to build roads, and introduced the art of writing into Europe. They began to flourish around 900 B.C., and dominated much of Italy for five centuries.

Known for their art, agriculture, fine metalworking and commerce, they began to decline during the fifth century B.C., as the Romans grew in power. By 300-100 B.C., they eventually became absorbed into the Roman empire.

First Ever Etruscan Pyramids Found in Italy Since their puzzling, non-Indo-European language was virtually extinguished (they left no literature to document their society), the Etruscans have long been considered one of antiquity's great enigmas.

Much of what we know about them comes from their cemeteries. Only the richly decorated tombs they left behind have provided clues to fully reconstruct their history.

In this way, the burial in Città della Pieve looks more than promising. As Natalini and her team reached the dromos (the corridor leading to the tomb's entrance) they found themselves in front of a perfectly sealed double door made from heavy stone.

Giant Ancient Roman Water Basin Uncovered

Once opened, the tomb revealed a 16 square-foot rectangular chamber with two sarcophagi, four marble urns and various grave goods. One of the sarcophagi, made from stone, bears a long inscription.

So far Natalini and colleagues have been able to read the word "Laris." Lars is a common Etruscan male first name. The stone coffin contains the skeleton of a male individual.

Natalini and her team expect to find more information in the inscription, such as the deceased's family name, the name of his parents, and possibly his age at death.

The other sarcophagus, covered with painted plaster, also shows an inscription.

Please visit the site: <http://news.discovery.com/history/archaeology/intact-packed-etruscan-tomb-found-151204.htm> [Go there for pict]

ARCHAEOLOGISTS UNCOVER BRONZE AGE TRADE ROUTES BETWEEN IRAN AND MESOPOTAMIA

The impressive statues of ancient Mesopotamian rulers bear witness to the wealth of Bronze Age Akkadian and Sumerian city-states more than four thousand years ago. But they are made of black diorite and gabbro stone not found in the region of today's Iraq and northeastern Syria. Where did it come from? The blocks of stone must have been transported along ancient roads from distant trading partners to the Bronze Age cities of Mesopotamia.

A team of researchers from the University of Tübingen's ResourceCultures collaborative research centre has investigated the origins of the stone and the methods used to move such heavy loads over great distances. The team from Tübingen collaborates with the Iranian Centre of Archaeological Research (ICAR) to find the answers and is jointly headed by Professor Peter Pfälzner and Nader Soleimani.

Kerman Province

The archaeologists found diorite and gabbro in the Iranian province of Kerman, not far from the Persian Gulf, which matches that used in the Mesopotamian statues. In the same area, the archaeologists also found deposits of chlorite, which was used to make stone vessels traded as far away as Mesopotamia and the Levant. Close to these deposits, the researchers found petroglyphs and Early Bronze Age settlements, indicating that the stone was quarried during the Jiroft Culture of southeastern Iran (approx. 3000-2000 B.C.), and that it was traded across the Near East.

One of the recently-discovered settlements may have been a production and distribution centre for the valuable stone. "This shows that the civilizations of Mesopotamia and southeastern Iran were in direct contact in the Early Bronze Age," says Pfälzner of the Institute for Ancient Near Eastern Studies. "The Persian Gulf most likely served as a trade route." Pfälzner said this illustrated the great significance of this waterway in the international ties between important regions - from the Bronze Age to the present day.

Aerial photography

Pfälzner and his Iranian colleague Nader Soleimani are jointly heading research into an area of 110 by 120 kilometres in Kerman Province - both on the ground and from the air using unmanned aircraft. Until now, there has been little archaeological research conducted in the hot, dry region south of the city of Jiroft. Using aerial photography, the team creates 3D models of ancient settlements (tells) from the Jiroft Culture era and other historical periods up to the coming of Islam. Along the potential trade routes running between high mountain chains to the coast of the Persian Gulf, the team is looking out for Early Bronze Age way-stations and any other trade activity. The German-Iranian team has so far mapped and investigated 42 settlements.

Now that the initial investigations have yielded results, work is set to resume in Iran in February 2016. The researchers are hoping to find out more about where the Bronze Age trade routes ran between the Jiroft Culture and the city-states of Mesopotamia, as well as what sort of effects this early long-distance trade had on Iranian civilizations more than four thousand years ago.

Please visit the site:

<http://www.pasthorizonspr.com/index.php/archives/12/2015/archaeologists-uncover-bronze-age-trade-routes-between-iran-and-mesopotamia>

HOPE FOR NEFERTITI'S TOMB, AND EGYPT'S ECONOMY, BY KAREEM FAHIM

LUXOR, Egypt - For weeks, a group of explorers have scanned the walls of a tomb in the Valley of the Kings, using radar and infrared devices, in the hopes that science might confirm one Egyptologist's theory: that hidden behind a wall of King Tutankhamen's burial chamber sits the long-sought tomb of Queen Nefertiti.

The prospect of such a discovery is beyond tantalizing, and would be as momentous a find as any here for almost a century, antiquities officials say. It would also come at a time when Egypt's tourism industry, frozen by years of political unrest and fears of militant attacks, is in urgent need of good news.

For the noted Egyptologist, Nicholas Reeves, the tests could vindicate his arguments that two of the walls in the tomb of Tutankhamen, also known as King Tut, are likely to mask hidden rooms, and that the tomb itself was in fact an antechamber to a larger burial complex that belonged to Nefertiti, Pharaoh Akhenaten's powerful queen who according to some theories, succeeded him as ruler of Egypt.

Dr. Reeves acknowledges that Egyptian officials, including some of his colleagues in the search, do not share the conviction that Nefertiti is waiting to be found in any undiscovered chambers.

For Egypt, there is much at stake. The government is desperate for the kind of earth-shattering archaeological find that would lure tourists back to its ancient monuments. Visitors have been driven away from everywhere in Egypt but its beaches, and in the last few weeks, the seaside resorts have emptied, too, after militants claimed responsibility for downing a plane full of Russian beachgoers in late October, killing everyone onboard.

With that gathering sense of urgency, the explorers emerged from Tutankhamen's tomb this weekend, plainly exhausted by the work but carrying what they said was promising news: Radar scans had provided strong evidence of hollow chambers behind the walls. Mamdouh Eldamaty, Egypt's antiquities minister, said at a news conference announcing the findings that there was an "approximately 90 percent" chance that something - "another chamber, another tomb" - was waiting beyond Tutankhamen's burial chamber.

"I think it's a very good result," he said, adding that more analysis would be carried out over the coming weeks on the radar data to try to determine more precisely what is beyond the walls. After that, researchers may drill into the walls to get an even better look, though there is no set timetable for that step.

Hours after the news conference on Saturday, the explorers returned to Tutankhamen's tomb, where Hirokatsu Watanabe, the Japanese specialist carrying out the radar scans, surveyed an area outside the entrance to the burial chamber. Mr. Watanabe dragged his silver, battered-looking device back and forth across the dirt, as journalists followed his every move and another member of the team took notes.

Among those watching was Mustafa Waziry, the director of antiquities of Luxor. "I'm an archaeologist, I don't know what it means," Mr. Waziry said, speaking of the results of the radar tests. But the implications were clear.

"If we discover something, it will turn the world inside out," he said. "And they will come."

He can only hope. Mr. Waziry and his colleagues have watched in anguish over the last four years as tourism in Egypt collapsed since the uprising against President Hosni Mubarak in 2011.

The year before the uprising, he said, 12,000 people stood in long lines each day to visit the attractions in Luxor. By 2012, the number had plummeted to as few as 300 a day, mirroring a broader disappearance across the country of treasured cultural tourists who spent generously on extended tours of Egypt's temples and museums.

The numbers had recently started to inch upward, until the crash of the Russian plane, which increased security concerns at Egypt's airports and caused several countries to either sever or restrict air travel to Egypt.

"We are plowing in the ocean," Mr. Waziry said, as Mr. Watanabe packed up his equipment. "We need something like this."

Dr. Reeves, who previously worked at the Metropolitan Museum of Art, set off the search with a paper last summer titled "The Burial of Nefertiti?" His starting point was an analysis of high-resolution color photographs of the tomb, published in 2014 by Factum Arte, a Spanish company specializing in art replication.

"Cautious evaluation of the Factum Arte scans over the course of several months has yielded results which are beyond intriguing: indications of two previously unknown doorways," he wrote. One was probably a storeroom, he said, and the other, on the tomb's north wall, was likely a continuation of the tomb containing an "earlier royal internment - that of Nefertiti herself, celebrated consort, co-regent, and eventual successor of Pharaoh Akhenaten."

Dr. Reeves cited other supporting evidence, positing that what is regarded as Tutankhamen's tomb, which was discovered by Howard Carter in 1922, had in fact "been both initiated and employed for the burial of Nefertiti."

When Tutankhamen died unexpectedly at the age of 19 - about a decade after Nefertiti's death - her tomb was reopened, and a portion of it reconfigured to accommodate the young king, according to Dr. Reeves.

At least one prominent Egyptologist believes that the entire project will turn up nothing. Dr. Zahi Hawass, a former Egyptian antiquities minister, who for years was the swaggering, public face of the country's archaeological discoveries and a rainmaker for tourism, ticked off a list of reasons there might be nothing hidden behind the walls - and certainly, he said, not Nefertiti.

"I am an archaeologist for 40 years," Dr. Hawass said. "I can smell a discovery, and this is no discovery at all."

But despite his criticisms, Dr. Hawass acknowledged that "all of us are desperate for good news." Whether a discovery was looming, or not, the search itself had begun to stir hope among the proprietors of Luxor's empty travel agencies and markets.

Bahaa Youssef, who works as a travel manager at Sunrise Tours in the city, said the company was running out of inventive ways to make money. "Egypt needs big events, to make people look at us again," Mr. Youssef said.

With their camera crews trailing, Dr. Reeves and his colleagues were at the very least creating a buzz, perhaps taking a page from Dr. Hawass, with his showmanship and grand pronouncements.

"If we find what I think is there," Dr. Reeves said, "it will be bigger than Tutankhamen."

Please visit the site: <http://www.nytimes.com/2015/11/30/world/middleeast/hope-for-nefertitis-tomb-and-egypts-economy.html>

AN IMPRESSIVE FARMSTEAD AND AN ANCIENT MONASTERY WITH COLORFUL MOSAICS AND INSCRIPTIONS WERE RECENTLY EXPOSED IN ROSH HA-'AYIN

In an excavation conducted by the Israel Antiquities Authority at the initiative of the Ministry of Construction and Housing and the Rosh Ha-'Ayin municipality, prior to the building of new neighborhoods in the city

Impressive archaeological finds are currently being uncovered in extensive excavations the Israel Antiquities Authority is carrying out in Rosh Ha-'Ayin at the initiative of the Ministry of Construction and Housing and the Rosh Ha-'Ayin municipality, prior to the building of new neighborhoods. So far scores of teenagers from preparatory programs and youth villages have participated in the excavation as part of the Israel Antiquities Authority policy of increasing public awareness of our cultural heritage.

During the excavation an impressive 2,700 year old farmhouse (30 × 50 meters) and a 1,500 year old church with colorful mosaics and inscriptions in it were uncovered.

According to Amit Shadman, excavation director on behalf of the Israel Antiquities Authority, "The large farmhouse was preserved to a height of more than two meters. The building is 2,700 years old and included twenty-four rooms constructed around a central courtyard. A large storage compartment (silo) meant to protect the grain was exposed in the courtyard. It seems that carbohydrates were as popular then as now, and the growing and processing of grain were fairly widespread in the rural-agricultural region. This was corroborated by other discoveries in the field that included numerous millstones which were used to grind the grain into flour. In addition, we found simple rock-hewn oil presses used in the production of olive oil". Among the other artifacts that were exposed in the farmhouse remains were two silver coins from the fourth century BCE that bear the likenesses of the goddess Athena and the Athenian owl.

According to Shadman, this farmstead and other similar ones operated for centuries until the region was abandoned in Hellenistic period. Many hundreds of years later, during the fifth century CE, another settlement wave, this being one Christian, arrived in the area and changed the landscape. Among other things, the rapid spread of Christianity at that time is apparent as evidenced by the many impressive rural churches and monasteries that have been exposed.

A monastery dating to the Byzantine period was exposed on one of the hills in the area and included a church, an oil press, residential quarters and stables equipped with mangers and troughs, etc. The floors of the church that was built in the monastery were made of colorful mosaics that included geometric and other designs. In addition, a Greek inscription ascribed to a priest named Theodosius (a common name in the Byzantine period) was revealed in one of the mosaics - "This place was built under Theodosius the priest. Peace be with you when you come, peace be with you when you go, Amen".

Hundreds of years after the monastery ceased to function a lime kiln was established there in the Ottoman period, which destroyed large parts of the monastery.

Given the impressive finds uncovered in the excavations, it was decided that the ancient remains will be conserved in situ, and will be displayed in the communal areas of the new neighborhoods that will be open for the benefit of the public.

Please visit the site:

http://www.antiquities.org.il/Article_eng.aspx?sec_id=25&subj_id=240&id=4172

SON OF HERCULES VS. HYDRA: ALTAR **SHOWING MYTHICAL BATTLE** **DISCOVERED, BY OWEN JARUS**

An ancient marble altar showing a nude warrior battling a serpent monster has been discovered by villagers near the Akçay River in Turkey.

Archaeologists said the altar likely dates to the second century A.D., a time when the Roman Empire controlled the area.

The carved scene on the altar is difficult to interpret, archaeologists said. They think it may show a son of Hercules, named Bargasos, fighting a monster in a battle that would bring forth a beneficial river god named Harpasos, to whom the altar is dedicated. At the time of the altar's creation, the Akçay River was known as the Harpasos River.

"According to [a command in] a dream, Flavius Ouliades set this up to the [river] god Harpasos," the Greek inscription at the top of the altar reads. The altar is 2 feet (0.61 meters) high and 1.5 feet (0.45 m) wide, and is now in the Aydin Museum in Turkey.

The dedication suggests that Flavius Ouliades, the person who created the altar, had a strong belief in the river god, the archaeologists said. "As a result of a communication with the river god Harpasos in a dream, Flavius Ouliades was requested to dedicate an altar," wrote Hasan Malay, a professor at Ege University in Turkey, and Funda Ertugrul, an archaeologist with the Aydin Museum, in an article published recently in the journal *Epigraphica Anatolica*.

Ouliades may have promised to set up the altar if the river god answered the man's prayers "for a good harvest or protection (for himself or his animals) from flooding or falling down the steep slopes or cure from its healing waters," wrote Malay and Ertugrul.

Mythical battle

The nude male warrior is shown wearing a helmet with a crest, holding a dagger in his right hand and round shield in his left. "In the right lower corner is the depiction of a curving snake with many heads, "a mythical beast called a Hydra, wrote Malay and Ertugrul.

In ancient mythology, the god Hercules battled a Hydra serpent in a swamp in a region of Greece known as Lerna. After Hercules killed the monster, the swamp could be drained and cultivated to become something beneficial.

However, researchers say that the warrior shown fighting in the carving is not Hercules. Instead, they said, it could be Bargasos, who, in ancient mythology, was the son of Hercules and a woman named Barge. An ancient town in Turkey was named Bargasa in the son's honor.

In ancient mythology the battle depicted on the altar may have led to the creation of the river god Harpasos, researchers say. "The Harpasos valley, with a zone of sand where numerous arms join the river Harpasos, was comparable to Lerna," wrote Malay and Ertugrul.

The "scene on our altar may be a representation of a local myth telling about Bargasos' fight against the ravaging river with many arms," Malay and Ertugrul wrote. After the warrior defeated this monster, "the river turned into a beneficial deity [the river-god Harpasos], the recipient of our dedication."

Please visit the site: <http://www.livescience.com/53211-altar-showing-mythical-battle-discovered.html>

REMAINS OF STONE AGE HUNTERS FOUND IN WESTERN IRAN

Iranian archeologists found a number of stone tools in the western province of Kurdistan that they believe were employed by Paleolithic hunters.

Archaeological excavations in a number of caves and rock shelters along the Sirwan River, in Iran's western region of Hawraman, revealed stone tools, burned animal bones and remains of hearths left by Stone Age hunters.

The new discoveries suggest that primitive game hunters lived in the region from before 40,000 years ago, until the end of Ice Age, around 12,000 years ago.

"The new finds provide researchers with valuable information about the way of life, game hunting and tool making cultures of the primitive hunting societies and food gatherers," Fereidoun Biglari, Paleolithic specialist and head of the excavation team explained.

"One of the important finds in this field research was discovery of a Middle Paleolithic rock shelter site near Naw village called 'Maro Darai.' This newly found site contains earliest evidence of human presence in the Kurdistan province", he added.

"Primary examination of animal bones indicates that Mousterian hunters were more focused on wild goat herds that lived in the rugged mountains of Hawraman, high above the Sirwan River", Biglari noted.

According to Iran's Cultural Heritage, Handicrafts and Tourism Organization (ICHHTO), two other teams have also found archaeological evidence including two important Iron Age sites near Ruwar village in Hawraman, one of which consists of a large dome-shaped stone tumulus dating back to about 3,000 years ago.

Please visit the site:

<http://www.tasnimnews.com/en/news/2015/12/29/956666/remains-of-stone-age-hunters-found-in-western-iran>

DID EGYPT'S OLD KINGDOM DIE-OR **SIMPLY FADE AWAY?** **BY ANDREW LAWLER**

The end of the great age of pyramid building in Egypt was long thought to be a traumatic collapse that plunged the Nile Valley into a long era of chaos. New research is changing that view.

As world leaders celebrate a new agreement to limit the impact of greenhouse gases on human society, archaeologists have been taking a fresh look at one of the most dramatic instances of a civilization confronted with devastating climate change.

For nearly a millennium, Egypt's early pharaohs presided over a prosperous and wealthy state that built countless temples and palaces, enormous public works, and the famous Giza pyramids. Much of that prosperity depended on the regular inundations of the Nile River in a country that otherwise would be only desert.

Then, around 2200 B.C., ancient texts suggest that Egypt's so-called Old Kingdom gave way to a disastrous era of foreign invasions, pestilence, civil war, and famines severe enough to result in cannibalism. In the past decade, climate data revealed that a severe and long-term drought afflicted the region during this same time, providing evidence of an environmental trigger that led to what has long been considered a dark age of Egyptian history.

But a number of Egyptologists argue that the simple story of a drought resulting in an abrupt societal breakdown doesn't hold water. "The majority view today is that the Old Kingdom did not come to an end all of a sudden," says Thomas Schneider, professor of Egyptology at the University of British Columbia. Instead, he and others say that climate stress affected different parts of Egypt in different ways-and not always for the worst. "We need to move away from this idea of collapse," he says.

Much of the 20th-century view of the period between the Old Kingdom's demise and the start of the Middle Kingdom-what Egyptologists call the First Intermediate Period-is based on a text called the "Admonitions of Ipuwer" that tells the story of a society in turmoil. "Everywhere barley has perished and men are stripped of clothes, spice, and oil," reads one passage. "Everyone says: 'There is none.' The storehouse is empty and its keeper is stretched on the ground."

Ipuwer laments that instead of an all-powerful and wise pharaoh dominating the land, commoners assert their authority with impudence, and chaos reigns.

But Schneider notes that the earliest known version of this text dates to about 800 years after the events it purports to describe. Yet another text mentions foreign invasions, but this was written six centuries later.

Ancient Egyptians Fascinated with Collapse Many scholars believe that these texts were part of a genre devoted to upholding the power of Middle Kingdom pharaohs by

frightening subjects with stories of the terrible consequences of life without firm central control—a theme that echoes to today in modern Egypt. "The Egyptians themselves were fascinated by the concept of collapse," says Barry Kemp, an archaeologist at Cambridge University. But the texts, he adds, don't appear to be records of actual events.

There is no doubt that the latter years of the Old Kingdom were marked by economic decline and a breakdown in the centralized system of government, and that changes in the flow of the Nile likely were an important factor. Monumental buildings such as large pyramids and temples, for example, cease to be constructed for about two centuries.

Tomb paintings and inscriptions hint that the environment became more arid toward the end of the Old Kingdom, as some plants disappeared and sand dunes crept close to river settlements. Data drawn from cores in the Nile basin confirm that the climate began to dry around 2200 B.C.

But Schneider argues that the impact of the drought was gradual enough that society adapted without major disruptions. Power slowly devolved from the pharaoh and his capital at Memphis to provincial leaders. Local officials could respond to farming crises faster and more effectively than a distant ruler. "The situation required people to be ingenious," says Schneider, who spoke at the recent American School of Oriental Research meeting in Atlanta.

A Time of Prosperity for Parts of Upper Egypt There is no sign of civil war during this time in the archaeological record, adds Nadine Moeller, an archaeologist at the University of Chicago. She notes that "there is evidence that the country remained politically unified" long after Pepi II, traditionally considered the last Old Kingdom pharaoh. Schneider notes that the fiscal system remained in operation and that the pharaoh's power was still acknowledged from the Nile Delta to Aswan a century or so after Pepi II—even if that control was nominal.

In Upper Egypt, Moeller has found that the era following the Old Kingdom's decline was a "culturally very dynamic" time in which towns and cities such as Tell Edfu and Dendera expanded and flourished. There may even have been an overall increase in population.

There also is no physical evidence for widespread food shortages. Corinne Duhig, a Cambridge University archaeologist, says that her studies of skeletons from the First Intermediate Period "do not show signs of famine; neither do those from the Old Kingdom." Nor did she find an increase in violent death among the human remains that she examined.

Kemp says there is some evidence of fighting between neighbors in Upper Egypt as power became more decentralized, "but the scale might have been modest." Rather than a collapse, he sees a change in the way people were governed.

And new dating analyses suggest that the interlude between the two kingdoms was perhaps little more than a century—much shorter than Egyptologists once thought, says Schneider. The break between kingdoms, in other words, may have been briefer and less traumatic than previously believed.

A missing piece to the puzzle of the Old Kingdom's fall is the lack of information from Lower Egypt, the region closer to the Nile's mouth that would have been more affected by changes in the annual flood than Upper Egypt. Sarah Parcak, an archaeologist at the University of Alabama at Birmingham, notes that "lack of good settlement data for all of Egypt" makes it difficult to judge the impact of the drought.

Parcak complains that "some Egyptologists don't seem to like environmental factors causing collapse," adding that "you cannot argue with hard scientific data." But she acknowledges that understanding just how that climate change affected a society as large and complex as ancient Egypt remains hard to judge. "We need to think a lot more about the role the environment played in ancient Egypt," she says. "And we need a lot more data."

Follow Andrew Lawler at www.andrewlawler.com.

Please visit the site: <http://news.nationalgeographic.com/2015/12/151224-egypt-climate-change-old-kingdom-archaeology/>

GREEK AND DANISH ARCHAEOLOGISTS **EXCAVATE THE ANCIENT GREEK** **HARBOUR TOWN LECHAION**

UNDERWATER ARCHAEOLOGY In Greece, underwater excavations of Lechaion, ancient Corinth's partially submerged harbour town, reveal the infrastructure of more than a thousand years of flourishing maritime trade. Researchers from the Greek Ministry of Culture and Sports and the University of Copenhagen are using cutting-edge methods to uncover the configuration and scale of the harbour.

Corinth ranked among the most economically and militarily powerful, and enduring, cities of the Greek, Roman and Byzantine periods. The city had an exceptional geographical advantage in the North East corner of the Peloponnese and controlled the Isthmus that facilitated land travel between Northern and Southern Greece, and travel by sea between the Western and Eastern Mediterranean.

Corinth, which lay some three kilometres from the sea, built on this natural advantage by constructing two harbour towns - the main harbour Lechaion on the Corinthian Gulf to the West, and Kenchreai on the Saronic Gulf to the East (see map to the right).

"According to ancient sources, most of the city's wealth derived from the maritime trade that passed through her two harbours, eventually earning her the nickname 'Wealthy Corinth'," says archaeologist Bjørn Lovén from the University of Copenhagen and co-director of the Lechaion Harbour Project (LHP).

The moles and warehouses of Lechaion saw vibrant maritime activity for over a thousand years, from the 6th century BC to the 6th century AD. Ships and fleets departed from here laden with cargoes, colonists and marines destined for ports all over the Mediterranean and beyond.

Lechaion's extensive underwater ruins lie nearly untouched, but that picture is changing. The Lechaion Harbour Project (LHP), a collaboration between the Ephorate of Underwater Antiquities in Greece, the University of Copenhagen, and the Danish Institute at Athens, has undertaken an exploration of the submerged main harbour of ancient Corinth.

The research team has initiated full-scale excavations and a digital and geophysical survey of the seaward side of the harbour using various innovative technologies, including a newly-developed 3D parametric sub-bottom profiler. To date they have uncovered two monumental moles constructed of ashlar blocks, along with a smaller mole, two areas of wooden caissons, a breakwater, and an entrance canal that leads into Lechaion's three inner harbour basins.

The 2015 excavations focused on two areas. The first is a unique, early Byzantine mole constructed of six well-preserved wooden caissons together stretching 57 meters in length. The second is the stone-lined entrance canal to the little-explored Inner Harbour of Lechaion.

"We have found and documented several monumental architectural structures, built at great expense, showing that Lechaion was developed as a grand harbour to match the importance of her powerful metropolis, Corinth," says Bjørn Lovén.

The discovery of well-preserved wooden caissons, however, caught everyone off guard. The wooden caissons acted as single-mission barges, built for the express purpose of being sunk together with their concrete cargoes, all of which were designed to form a solid foundation to hold back the force of the sea along this highly exposed stretch of coast .

Roman imperial engineers employed a similar technology on a large scale at Caesarea Maritima in Israel in the late first century BC, but these are the first of their kind ever discovered in Greece with their wooden elements still preserved. A preliminary C-14 carbon date places the caissons in the time frame of the Leonidas Basilica, the largest Christian church of its time. Construction of the basilica began in the middle of the 5th century AD. It was 180 meters long - about the same size as the first building phase of St. Peter's Basilica in Rome. Scholars generally assume that harbour facilities in the Mediterranean were built in the Greek and Roman period, then simply repaired and maintained during the Byzantine period. The discovery of the mole constructed of wooden caissons challenges this picture.

The mole is a rare example of major harbour construction in this later era, but it may be indicative of a larger pattern of more ambitious harbour construction in this period, such as the Theodosian harbour (modern Yenikapi) at Constantinople which has recently been excavated. Is it possible that the construction of this immense edifice coincided with renewed buildup of the harbour, thereby facilitating the arrivals and departures of visitors and pilgrims? At all events, the benefit of these innovations was short-lived, as Lechaion and its basilica were destroyed by a massive earthquake in the late 6th or early 7th century AD.

Vestiges of the ancient entrance canal have been exposed on the modern beach for years, so there has been little doubt of its location. The scale, however, was surprising. So far, the team has uncovered some 55 meters of its sides, which protected ships coming into and exiting the three inner harbours of the town. And the team has also found evidence that the ancient harbour was likely located much farther to seaward, perhaps as far as 45 meters from the modern shore. A geophysical study is underway to understand how the site has evolved over time as a result of sea-level change and possible coastal subsidence.

According to Bjørn Lovén, the Lechaion Harbour Project is endeavouring to advance our understanding of how this bustling harbour evolved over time and enabled the development of Corinth as a major economic and military power during the Greek, Roman and Byzantine periods.

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Please visit the site: <http://humanities.ku.dk/news/2015/greek-danish-team-of-archaeologists-investigates-one-of-the-most-important-harbour-towns-of-the-ancient-mediterranean/> [Go there for pix and for video]

ARCHAEOLOGISTS STUDY SCYTHIAN NOMAD GRAVES

A necropolis consisting of over 100 mounds, in which Great Steppe nomads were buried 2500 years ago, has been studied by a Russian-Polish team of archaeologists in the vicinity of Mangerok in the North Altai in Russia.

"This year we conducted excavations within three mounds covered with stone embankments. Each mound contains a single skeletal grave. Unlike most objects surveyed in previous seasons, this time the graves almost completely lacked equipment" - said Łukasz Oleszczak of the Institute of Archaeology, Jagiellonian University in Kraków, who heads the Polish team in the project led by Prof. Andrei Pavlovich Borodovsky of the Siberian branch of the Institute of Archaeology and Ethnography of the Russian Academy of Sciences in Novosibirsk.

Barrows studied by an international team in Chultukow-Log form the largest ancient necropolis in the North Altai explored to date. Until now, scientists have studied more than 100 barrows. Buried in the tombs are nomads who inhabited the belt stretching from the Altai to the steppes of Eastern Europe from the fifth to the third century BC. According to the researchers, it is the cradle of Scythian, militant and nomadic cultural model. The Scythians terrorized eastern Europe 2.5 thousand years ago - traces of their invasions in the form of burnt settlements and characteristic three-cornered arrowheads made of bronze, are clearly visible also during excavations carried out in Poland.

"Just a few metres from one of the studied mounds we have found a fallen stone stele, oblong boulder with the function of a monument, referred to as balbal by Russian archaeologists. This type of installation often accompany sepulchral objects from the Iron Age in the Upper Altai" - said Oleszczak. In this cemetery they are located atypically - on the west side of the burial mounds, while balbals known from cemeteries located in the southern Altai were set on the eastern side of the mounds.

Archaeologists have also carried out minor excavations in the settlement accompanying the mounds. The settlement, however, is later than the mounds - it was inhabited by the representatives of the Maima culture approx. from the second century BC. It is difficult to determine their ethnicity, but it is assumed that this community was under the influence of the Huns. During the excavations, archaeologists found several hundred fragments of pottery and bone tools. They also came across a hearth characteristic of this culture, built of stone slabs that form a square-shaped box.

A Polish team of archaeologists also ventured into the alpine terrain of the Altai, on the slopes of the Kurai ridge to verify the reports of geologist - Dr. Yewheniy Deyev from the Institute of Geology and Geophysics of the Russian Academy of Sciences, Novosibirsk, about barrows supposedly present in the area. The scientist stumbled on mounds during geological prospecting.

"We recorded 16 mounds with perimeters reinforced with stone wreaths, some of which had slumped" - explained Oleszczak. Interestingly, the destruction occurred only during the last centuries, due to earthquakes - believes Dr. Deyev. Based on the construction and

layout of the mounds archaeologists speculate that the mounds date back approx. 2500 years and were erected by the same community as the mounds near Mangerok.

"We hope that next season we will more precisely date the cemetery and through collaboration with geologists reconstruct the history of the alpine landscape of this area" - concluded Oleszczak.

This year's research, conducted in July and August, was funded with the Prelude grant from the National Science Centre. As part of the grant, researchers perform a series of absolute C14 dating (i.e., in calendar years), which will allow to more precisely determine the arrangements chronology of burial sites in Altai. They also plan to perform palaeobotanical research - the study of oxygen isotopes from bones of the dead buried in the cemetery, which may allow to determine the birthplaces of the dead. Financial support has also been provided by the Jagiellonian University Students and Alumni Foundation BRATNIAK and the State Pedagogical University in Novosibirsk.

Material provided by PAP

Please visit the site:

<http://www.pasthorizonspr.com/index.php/archives/12/2015/archaeologists-study-scythian-nomad-graves>

EGYPTIAN PHAROAH TUTANKHAMUN'S WET NURSE MIGHT HAVE BEEN HIS SISTER

Carvings on the wall of the tomb of Maia, the boy king's wet nurse, have led archaeologists to suspect she may have been his sister Meritaten

Archaeologists believe Maia, Egyptian pharaoh Tutankhamun's wet nurse, may have actually been his sister Meritaten.

On Sunday, Egyptian officials and French archaeologist Alain Zivie unveiled Maia's tomb to journalists ahead of its opening to the public next month.

The tomb was discovered by Zivie in 1996 in Saqqara, a necropolis about 20km (12 miles) south of Cairo.

Maia was the wet nurse of Tutankhamun, whose mummy was found in 1922 by renowned British Egyptologist Howard Carter in the Valley of Kings in Luxor along with a treasure trove of thousands of objects.

DNA tests have proven that the pharaoh Akhenaten was the father of Tutankhamun. The identity of his mother has long been a mystery, although she is not believed to be Akhenaten's Queen Nefertiti. Some theories suggest the boy king's mother was one of his aunts.

"Maia is none other than princess Meritaten, the sister or half-sister of Tutankhamun and the daughter of Akhenaten and Nefertiti," Zivie said.

He said his conclusion was based on the carvings of Tutankhamun and Maia on the walls of Maia's tomb.

"The extraordinary thing is that they are very similar. They have the same chin, the eyes, the family traits," he said.

"The carvings show Maia sitting on the royal throne and he is sitting on her", said Zivie, director of the French Archaeological Mission of Bubasteion.

Similar carvings were in Akhenaten's tomb at the Tel el-Amarna archaeological site in modern-day Minya province where the pharaoh had his capital city, he said.

Archaeologists believe Maia's tomb it could lead to new revelations about the boy king.

A DNA analysis in 2010 revealed that Tutankhamun was the son of Akhenaten, who temporarily converted ancient Egypt to monotheism by imposing the cult of sun god Aton.

The tomb of Akhenaten has carvings showing the death of princess Maketaten - the second daughter of Akhenaten and Nefertiti, Zivie said.

"In these scenes there is a woman who is breast-feeding a baby, and this woman shown as a wet nurse is princess Meritaten, the eldest daughter of Akhenaten," he said.

The mummy of Meritaten has not been found, but antiquities minister Mamduh al-Damati said on Sunday it could be in a secret chamber in Tutankhamun's tomb.

Archaeologists are currently scanning Tutankhamun's tomb in the Valley of Kings after British archaeologist Nicholas Reeves claimed that it has a secret chamber.

Reeves says the chamber could be the burial site of Nefertiti, whose mummy also has not been found.

"All these possibilities exist. Step by step we will be able to better understand the time of king Tutankhamun," Damati said.

Tutankhamun died more than 3,000 years ago aged 19 in 1324 BC after reigning for nine years.

Agence France-Presse contributed to this report

Please visit the site: <http://www.theguardian.com/culture/2015/dec/21/egyptian-pharaoh-tutankhamuns-wet-nurse-might-have-been-his-sister>

ANCIENT EGYPTIANS DESCRIBED ALGOL'S ECLIPSES

Summary:

The Ancient Egyptian papyrus Cairo 86637 calendar is the oldest preserved historical document of naked eye observations of a variable star, the eclipsing binary Algol -- a manifestation of Horus, a god and a king. This calendar contains lucky or unlucky prognoses for each day of one year. Researchers have performed a statistical analysis of the Cairo Calendar mythological texts.

Their analysis revealed that the periods of Algol (2.85 days) and the Moon (29.6 days) strongly regulate the actions of deities in this calendar.

"Until now, there were only conjectures that many of the mythological texts of the Cairo Calendar describe astronomical phenomena. We can now unambiguously ascertain that throughout the whole year the actions of many deities in the Cairo Calendar are connected to the regular changes of Algol and the Moon," says Master of Science Sebastian Porceddu.

This research confirms that the first variable star, as well as its period, were discovered much earlier than was previously thought. These two "classical" milestones in the history of natural sciences need to be shifted three millennia backwards in time to 1244 -- 1163 BC.

This also confirms the two "modern" astrophysical results reported by the Helsinki group in the year 2013: The first direct observation ever of the expected increase of Algol's period and the accurate long--term estimate for the mass transfer in this binary system.

"I would have serious doubts, if someone claimed, for example, that the Bible contains information about water in Mars. We claimed that Ancient Egyptian religious texts contain astrophysical information about Algol. It was no surprise to us that there were, and there still are, skeptics," says docent Lauri Jetsu.

The research also confirms that the brightest phases of Algol and the Moon had particularly positive meanings for the Ancient Egyptians.

Journal Reference:

Lauri Jetsu, Sebastian Porceddu. Shifting Milestones of Natural Sciences: The Ancient Egyptian Discovery of Algol's Period Confirmed. PLOS ONE, 2015; 10 (12): e0144140
DOI: 10.1371/journal.pone.0144140

Please visit the site:

<http://www.sciencedaily.com/releases/2015/12/151217151651.htm> [Go there for image]

ARCHAEOLOGISTS ARE STUDYING THE CRADLE OF THE SCYTHIANS

Necropolis consisting of over 100 mounds, in which Great Steppe nomads were buried 2500 years ago, has been studied by Russian-Polish team of archaeologists in the vicinity of Mangerok in the North Altai in Russia.

"This year we conducted excavations within three mounds covered with stone embankments. Each mound contains a single skeletal grave. Unlike most objects surveyed in previous seasons, this time the graves almost completely lacked equipment" - said Łukasz Oleszczak of the Institute of Archaeology, Jagiellonian University in Kraków, who heads the Polish team in the project led by Prof. Andrei Pavlovich Borodovsky of the Siberian branch of the Institute of Archaeology and Ethnography of the Russian Academy of Sciences in Novosibirsk.

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"Just a few meters from one of the studied mounds we have found a fallen stone stele, oblong boulder with the function of a monument, referred to as balbal by Russian archaeologists. This type of installation often accompany sepulchral objects from the Iron Age in the Upper Altai" - said Oleszczak. In this cemetery they are located atypically - on the west side of the burial mounds, while balbals known from cemeteries located in the southern Altai were set on the eastern side of the mounds.

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PAP - Science and Scholarship in Poland

Please visit the site:

<http://scienceinpoland.pap.pl/en/news/news,407651,archaeologists-are-studying-the-cradle-of-the-scythians.html>

ARCHAEOLOGISTS DISCOVER 3,000-YEAR- OLD ANCIENT THRACIAN NECROPOLIS WITH GOLD FINDS DURING RESCUE DIGS NEAR BULGARIA'S DRAGOMAN

An Ancient Thracian necropolis which is more than 3,000 years old, and contains gold decorations has been discovered by archaeologists during rescue excavations in Western Bulgaria.

The rescue digs near the town of Chukovezer, Dragoman Municipality, located to the west of Sofia, near Bulgaria's border with Serbia, are being conducted because of the construction of the Bulgaria-Serbia Gas Interconnector, a long-anticipated natural gas pipeline.

The newly discovered Ancient Thracian necropolis dates back to 1400-1000 BC, lead archaeologist Assist. Prof. Dr. Borislav Borislavov from the National Institute and Museum of Archaeology of the Bulgarian Academy of Sciences has told Offnews.

The Thracian necropolis has yielded rich finds from the Late Bronze Age and the Early Iron Age.

These include a decoration with at least 11 golden beads which is yet to be cleaned up and thoroughly studied.

Another intriguing find from the Thracian necropolis is a bronze amulet in the shape of a head with what are said to be African features.

According to an anthropologist from the National Institute and Museum of Archaeology, the skeleton found in the grave with the gold belonged to a woman.

The discovery of the Thracian necropolis near Chukovezer and Dragoman has been seen as especially exciting because no such rich funerals had ever been found by the archaeologists in this part of Bulgaria.

(The richest Ancient Thracian tombs have so far been discovered all over Southern, Northeast and Northwest Bulgaria.)

In addition to the remains from the Thracian period, the rescue excavations have exposed the ruins of buildings from the 3rd-4th century AD, i.e. the Late Roman period.

Inside one of the Roman buildings, the archaeologists have come across an earthenware jar containing 18 coins which are yet to be studied and dated.

The rescue digs along the route of the Bulgaria-Serbia Gas Interconnector have not been completed yet, and are continuing.

Lead archaeologist Borislav Borislavov is quoted as saying that the finds from the rescue excavations will probably be shown to the public for the first time during the annual "Bulgarian Archaeology" exhibition at the National Institute and Museum of Archaeology

The exhibit in question starts every year on February 14, and puts on display the most interesting artifacts discovered during the previous year.

Background Infonotes:

The Ancient Thracians were an ethno-cultural group of Indo-European tribes inhabiting much of Southeast Europe from about the middle of the second millennium BC to about the 6th century AD on the territory of modern-day Bulgaria, Romania, Moldova, Greece, Turkey, Macedonia, Serbia.

Please visit the site: <http://archaeologyinbulgaria.com/2015/12/13/archaeologists-discover-3000-year-old-ancient-thracian-necropolis-with-gold-finds-during-rescue-digs-near-bulgarias-dragoman/>
