



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

**ΟΙΚΗΤΙΚΟ
ΣΥΜΒΟΥΛΙΟ:**

Β. Κυλίκoglou (πρόεδρος),
Ι. Μπασιάκος (αντιπρόεδρος),
Ε. Φιλίππακη (γραμματέας),
Ι. Καρατάσιος (ταμίας),
Ν. Ζαχαριάς (μέλος),
Α. Hein (μέλος),
Γ. Φακορέλλης (μέλος)

Πληροφορίες:

Γ. Φακορέλλης (σύνταξη,
επιλογή ύλης)

E-mail: yfacorel@teiath.gr

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

BOARD:

V. Kilikoglou (president),
J. Bassiakos (vice-president),
E. Philippaki (secretary),
I. Karatassios (treasurer),
N. Zacharias (member),
A. Hein (member),
Y. Facorellis (member)

Information: Y. Facorellis
(editor)

E-mail: yfacorel@teiath.gr

Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

- Νοέμβριος 2015 -

Οι καλοί άνθρωποι δεν χρειάζονται τους νόμους για να μάθουν πώς να ενεργούν με υπευθυνότητα.

Οι κακοί άνθρωποι ψάχνουν τους νόμους για να βρίσκουν τρόπους να κρύβονται από πίσω τους. (Πλάτων)

Newsletter of the Hellenic Society of Archaeometry

- November 2015 -

Nr. 176

ΠΙΝΑΚΑΣ ΠΕΡΙΕΧΟΜΕΝΩΝ – TABLE OF CONTENTS

ΣΥΝΕΔΡΙΑ – CONFERENCES/WORKSHOPS

IAQ2016, Heritage Research to Conservation Practice, Indoor Air Quality - in
Heritage and Historic Environments, 12th International Conference,
Birmingham, Thinktank, 3 - 4 March 2016 **page 5**

41st International Symposium on Archaeometry (ISA), May 15-20, 2016,
Kalamata, Greece **page 7**

36th Annual Association for Environmental Archaeology Conference 2015:
registration deadline **page 8**

ΠΡΟΓΡΑΜΜΑ ΟΜΙΛΙΩΝ ΕΜΑΕΤ - Νοέμβριος 2015 – Φεβρουάριος 2016 ... **page 9**

LAC 2016 - 4th International Landscape Archaeology Conference, Department
of Archaeology and Ancient History, Uppsala University, 23-25 of August,
2016 **page 10**

ΒΙΚΕΛΑΙΑ ΔΗΜΟΤΙΚΗ ΒΙΒΛΙΟΘΗΚΗ - ΕΡΓΑΣΤΗΡΙΟ ΕΛΕΥΘΕΡΩΝ
ΣΠΟΥΔΩΝ - ΧΕΙΜΕΡΙΝΟΣ ΚΥΚΛΟΣ ΣΕΜΙΝΑΡΙΩΝ 2015, *Μινωικός*
Πολιτισμός - Σύγχρονες προσεγγίσεις, διευρυμένες προοπτικές **page 11**

4th International Congress "Chemistry for Cultural Heritage", Musees royaux
d'Art et d'Histoire - Koninklijke Musea voor Kunst en Geschiedenis
MRAH-KMKG, Brussels, Belgium, July 6-8, 2016 **page 13**

Practical Knowledge and Medical Practice in Ancient Mediterranean Cultures,
International Conference, Berlin, 2-3 November 2015 **page 14**

Education and Research in Conservation-Restoration, ENCoRE Conference,
Cambridge, UK 13. April, 2016, Call for Papers **page 19**

InArt 2016 Conference, Ghent (Belgium), 21-25 March, 2016 **page 21**

ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ – JOB VACANCIES/FELLOWSHIPS

2016 Interdisciplinary Post-Doctoral Fellowship in Stable Isotope Sciences,
Smithsonian Museum Conservation Institute **page 22**

Fellowships in Conservation of Museum Collections Smithsonian Institution ... **page 23**

Archaeological Conservation Summer Internships (2 positions) Agora
Excavations, American School of Classical Studies at Athens (ASCSA) **page 24**

The Malcolm H. Wiener Laboratory for Archaeological Science Announces
Funding Opportunities **page 25**

Shohet Scholars Fellowship for 2016-2017 **page 27**

AHRC Midlands3Cities funding for UK/EU students **page 28**

The Pedersen Family Grant for Student Research **page 30**

THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS,
STUDY, IN GREECE 2016-2017, ASCSA PROGRAMS AND
FELLOWSHIPS **page 31**

Senior University Lecturer in Quaternary Sciences / Head of the ¹⁴C Laboratory **page 36**

GOVERNMENT OF IRELAND POSTDOCTORAL FELLOWSHIPS 2015 ... **page 37**

Self-Funded PhD in salt resistant mortars for the repair of historic structures,
Sheffield Hallam University **page 38**

Postdoctoral Fellowship - Research on parchment, University of Namur **page 39**

ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS

Announcing SPARC Opportunities, Spring and Summer 2015 **page 41**

The COTSEN Institute of Archaeology at the University of California, Los
Angeles announces The Second Triennial International Competition for THE
LLOYD COTSEN PRIZE FOR LIFETIME ACHIEVEMENT IN WORLD
ARCHAEOLOGY US \$55,000 **page 42**

INTERNET SITES

Mysteries of the Kylix from JHU Archaeological Museum on Vimeo **page 43**

ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS

Decoding the Star Charts of Ancient Egypt - Scientific American Volume 313,
Issue 4 **page 44**

A Late 13th Century BC Fortified Settlement in Cyprus: Excavations
2010-2011. Vassos Karageorghis, Athanasia Kanta, Pyla-Kokkinokremos,
Studies in Mediterranean archaeology, Vol 141 **page 45**

ΕΙΔΗΣΕΙΣ - NEWS RELEASE

A Rare 1,500 Year Old Mosaic was Discovered that Depicts Ancient Streets
and Buildings in Egypt **page 50**

The “Garden of Eden” in Iraq now internationally protected as Wetlands of
International Importance **page 52**

Greek tomb was 'for Alexander the Great's friend Hephaestion' **page 53**

The World's Oldest Papyrus and What It Can Tell Us About the Great
Pyramids Ancient Egyptians leveraged a massive shipping, mining and
farming economy to propel their civilization forward, by Alexander Stille **page 55**

Scientists Hope to Learn How Pompeians Lived, Before the Big Day, by

Elisabetta Povoledo	page 61
Parts of King Nakhtanebu I's shrine uncovered in Cairo	page 64
12 gladiator tombs to be displayed in Muğla	page 65
Archaeologists unearth more of the history of Cartagena Cartagena may have been a large Roman weapons factory	page 66
The antique city of Sagalassos carries traces of ancient Anatolia	page 68
Spear injuries show worker life in ancient Egypt, by Traci Watson	page 70
Ancient 'water law' unearthed in Laodicea	page 72
Ancient Repairs at Ur and the Power of Bitumen, by Tessa de Alarcon	page 74
Biblical city of Sodom 'found in Jordan' - Archaeologists have been excavating the ancient site of Tall el Hammam, by Victoria Richards	page 75
Plato's stave: academic cracks philosopher's musical code - Historian claims Plato's manuscripts are mathematically ordered according to 12-note scale, by Julian Baggini	page 76
Shroud of Turin DNA Indicates Global Origins Genetic material suggests the shroud may have been created in India, by Lee Spiegel	page 78
The earliest known abecedary	page 80
Archaeologists discover secret tunnel in ancient Hittite castle, by Jeva Lange ...	page 81
Grave of 'Griffin Warrior' at Pylos Could Be a Gateway to Civilizations, by Nicholas Wade	page 82
University of Cincinnati team discovers rare warrior tomb filled with Bronze Age wealth and weapons	page 86
Ancient shipwrecks found in Istanbul's Yenikapı shed light on ancient ship production	page 92
22 Shipwrecks Found in Single Location in Greece, by Rossella Lorenzi	page 94

ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS

IAQ2016, HERITAGE RESEARCH TO CONSERVATION PRACTICE, INDOOR AIR QUALITY - IN HERITAGE AND HISTORIC ENVIRONMENTS, 12TH INTERNATIONAL CONFERENCE, BIRMINGHAM, THINKTANK, 3 - 4 MARCH 2016

The list of presentations for the upcoming IAQ2016 Conference (3-4 March 2016) is now published, please see below.

Please be aware of the deadline for early bid conference fee (before 31 October 2015): GBP 164.

Conference fee after 01 November 2015: GBP 200.

Booking is available on-line via:

[https://uk.patronbase.com/ BirminghamMuseums/Productions](https://uk.patronbase.com/BirminghamMuseums/Productions)

List of presentations:

Alexandra Schieweck: After 50 years of pollution research - Where do we stand today?

Dave Thickett: Unexpected dangers in emission testing.

Alexandra Schieweck: Emission testing – an unsolvable mystery?

Paul Lankester: Pollution measurement – designing representative measurements and interpreting the results

Giulia Bertolotti et al: Investigating the performance and suitability of various coatings as barriers to off-gassing from medium density fibreboard (MDF)

Fabienne Meyer et al: Volatile organic compounds in collections of drawings and prints – an assessment with reference to the collection of Karl Friedrich Schinkel at the Kupferstichkabinett Berlin

Constantina Vlachou-Mogire et al: Tudor tapestries environmental protection project: when risk mapping and analysis informs innovative mitigation measures

Joseph Grau-Bové et al: Simulation of visitor-induced dust deposition in Hampton Court Palace

Ludmila Mašková: Behaviour of indoor coarse particle in the library

Allyson Smith: Patterns of soiling in the Old Library, Trinity College Dublin

Alison Lister et al: A Preliminary Investigation into the Environmental Conditions in Coventry Cathedral Associated with the Preservation of the ‘Christ in Glory ‘ Tapestry

Marcin Strojcki: Particle deposition and sources in the indoor environment of historic churches

Derek Brain: Engaging with demolition and construction companies whose activities threaten a museum collection

Jean Tetreault: Evaluation of moisture sorbents and guidelines for optimizing their use

James Crawford & Mark Dowsett: Evaluating & increasing the airtightness of passive display cases with sorbent compartments: a collaboration between academia & industry

Willemien Anaf et al: A promising monitoring kit to evaluate air aggressiveness

Johanna Diehl et al: Preventive conservation strategies in the reopened collection of the Kunstkammer of the Kunsthistorisches Museum Vienna: Theory versus Practice

Helen Ganiaris: Hazing on display case glass: a review and progress on prevention

Mark Ormsby: Experiments with reducing energy usage at National Archives and Records Administration

Rukshala Anton et al: Monitoring beacon for early or hidden fungal development detection dedicated to heritage conservation

Naomi Luxford: Inherent pollution risk: Darwin daguerreotypes and their travelling cases

Christian Baars & Jana Horak: Corrosion of specimens and equipment in a Mineral Store

Ciaran Lavelle et al: A Study of the Environmental Conditions in Birmingham Museum and Art Gallery’s Civic Silver Store

Anne-Laurence Dupont: Degradation of paper under adverse environmental conditions: modelling considerations and calibration with experimental data

Marianne Odlyha et al: Effectiveness of damage assessment and novel nano-particle based conservation treatment of collagen based artefacts, in particular leather.

In addition to the oral presentations a number of posters will be presented.

Conference flyer can be downloaded here: <http://iaq.dk/iap/IAQ2016-advert.pdf>

41ST INTERNATIONAL SYMPOSIUM ON
ARCHAEOLOGY (ISA), MAY 15-20, 2016,
KALAMATA, GREECE

Dear Colleagues,

This is a friendly reminder about the 41st International Symposium on Archaeology (ISA), which will take place in May 15-20, 2016 in Kalamata, Greece.

ISA is a most welcome forum to present the latest data and updates of research on archaeological sciences, covering the full spectrum of topics, materials, techniques, time span and global applications.

Abstract submission and grant application are now open through the conference website: isa2016@uop.gr

The submission deadline for both abstracts and student grants is December 15, 2015.

Early registration will be available until February 15, 2016. The discount fee is 170 € (90 € for students).

We encourage conferees to take advantage of the special prices provided by a number of hotels in Kalamata. More detailed information is available on our website.

For further information please contact us at isa2016@uop.gr

With regards,

The ISA2016 Organising Committee

**36TH ANNUAL ASSOCIATION FOR
ENVIRONMENTAL ARCHAEOLOGY
CONFERENCE 2015: REGISTRATION
DEADLINE**

Dear all

Please note the following.

The **final deadline** for registering for:

From Anthrosphere to Lithosphere (and back again): A Celebration of the Career and Research of Terry O'Connor

Friday 6 November, 5.00pm to Sunday 8 November 4.30pm is less than two weeks away:
Friday 23 October 2015.

For further details, including a draft programme, and to register, please go to:

<http://www.york.ac.uk/archaeology/news-and-events/events/conferences/aea/>

Many thanks

Eva

On behalf of the organising team

Contact: envarch2015@gmail.com

ΠΡΟΓΡΑΜΜΑ ΟΜΙΛΙΩΝ ΕΜΑΕΤ - **ΝΟΕΜΒΡΙΟΣ 2015 – ΦΕΒΡΟΥΑΡΙΟΣ 2016**

Δευτέρα, 9 Νοεμβρίου 2015

Κ. Γιαννακός

«Τεχνολογία αιχμής των Μυκηναίων κατά την ΥΕΧ και πιθανά συμπεράσματα για τη χρονολόγηση του Τρωικού Πολέμου».

Δευτέρα, 30 Νοεμβρίου 2015

Κ. Παλυβού

«Οι απαρχές της τεχνολογίας της λαξευτής πέτρας στο Αιγαίο και την Ανατολική Μεσόγειο»

Δευτέρα, 7 Δεκεμβρίου 2015

Μ. Λυκιαρδοπούλου

«Τεχνολογία Κατασκευής Αρχαίων Νομισμάτων»

Δευτέρα, 11 Ιανουαρίου 2016

Θ.Π. Τάσιος και Δ. Καλλιγερόπουλος

«Κινούμενη αυτόματη θεραπείες του Φίλωνος»

Δευτέρα, 1 Φεβρουαρίου 2016

Ι. Τζαχίλη

«Το ύφασμα της Λυκόσουρας Αρκαδίας. Μια τεχνική και εικονογραφική ανάλυση»

Οι διαλέξεις πραγματοποιούνται στην αίθουσα του Συλλόγου των Αθηναίων (Κέκροπος 10, 10558 Πλάκα) σε συνεργασία με το Μουσείο της Πόλεως των Αθηνών - Ίδρυμα Βούρου-Ευταξία

Ωρα έναρξης 18.30

Η είσοδος είναι ελεύθερη για το κοινό

Η παρουσία Μελών και Φίλων της ΕΜΑΕΤ είναι χαρά για όλους-μας, ανεβάζει δε και τη στάθμη των παραγωγικών συζητήσεων που επακολουθούν κάθε ομιλίας.

ΕΤΑΙΡΕΙΑ ΜΕΛΕΤΗΣ ΑΡΧΑΙΑΣ ΕΛΛΗΝΙΚΗΣ ΤΕΧΝΟΛΟΓΙΑΣ

ΤΕΕ, Νίκης 4, 10562 Αθήνα, γρ. 408

emaet.tee@gmail.com

www.emaet.tee.gr

νεο τηλ. 6949 829158

τ/α 2103291298

LAC 2016 - 4TH INTERNATIONAL
LANDSCAPE ARCHAEOLOGY
CONFERENCE, DEPARTMENT OF
ARCHAEOLOGY AND ANCIENT HISTORY,
UPPSALA UNIVERSITY, 23-25 OF AUGUST,
2016

The 4th International Landscape Archaeology Conference will be hosted by the Department of Archaeology and Ancient History. It will be held at Uppsala University, the oldest university in Scandinavia - founded in 1477 - on 23-25 of August, 2016.

Further information is now available at:

http://www.arkeologi.uu.se/LAC_2016+/?languageId=1

Call for session proposals – deadline 1st December 2015:

http://www.arkeologi.uu.se/digitalAssets/447/447246_1lac_2016_call_for_session_proposals.pdf

On behalf of the Local Conference Organising Committee,

Erika Weiberg, PhD, Researcher

Inst. för arkeologi och antik historia
Uppsala universitet, Box 626, 751 26 Uppsala

Dept. of Archaeology and Ancient History
Uppsala University, Box 626, SE-751 26 Uppsala

Tel. +46 (0)18 471 20 77

Fax. +46 (0)18 471 75 50

erika.weiberg@antiken.uu.se

ΒΙΚΕΛΑΙΑ ΔΗΜΟΤΙΚΗ ΒΙΒΛΙΟΘΗΚΗ -
ΕΡΓΑΣΤΗΡΙΟ ΕΛΕΥΘΕΡΩΝ ΣΠΟΥΔΩΝ -
ΧΕΙΜΕΡΙΝΟΣ ΚΥΚΛΟΣ ΣΕΜΙΝΑΡΙΩΝ 2015,
ΜΙΝΩΙΚΟΣ ΠΟΛΙΤΙΣΜΟΣ - ΣΥΓΧΡΟΝΕΣ
ΠΡΟΣΕΓΓΙΣΕΙΣ, ΔΙΕΥΡΥΜΕΝΕΣ ΠΡΟΟΠΤΙΚΕΣ

Στο πλαίσιο του Εργαστηρίου Ελευθέρων Σπουδών, η Βικελαία Δημοτική Βιβλιοθήκη διοργανώνει τον χειμερινό κύκλο σεμιναρίων, με θέμα «**Μινωικός Πολιτισμός. Σύγχρονες προσεγγίσεις, διευρυμένες προοπτικές**».

Τα σεμινάρια απευθύνονται στο κοινό του Ηρακλείου και ιδίως στους νέους ανθρώπους της πόλης μας, και η συμμετοχή σε αυτά είναι ελεύθερη. Θα πραγματοποιηθούν από τις 26 Οκτωβρίου έως τις 16 Δεκεμβρίου 2015, το πρώτο στην Αίθουσα «Ανδρόγεω» και τα υπόλοιπα στο Πολιτιστικό Κέντρο (Μικρό θέατρο).

Όσοι και όσες επιθυμούν να συμμετάσχουν στο Εργαστήριο μπορούν να εγγραφούν, και να λάβουν βεβαίωση παρακολούθησης στο τέλος του σεμιναριακού κύκλου (υπεύθυνη κ. Στεφανία Τερζάκη, γραφείο Βικελαίας, Χορτατσών & Κυδωνίας 23, τηλ. 2810 301543, katalog@heraklion.gr - καθημερινά 8.00-14.00).

ΠΡΟΓΡΑΜΜΑ

Σέβη Τριανταφύλλου

Επικ. καθηγήτρια Προϊστορικής Αρχαιολογίας & Οστεοαρχαιολογίας

Τμήμα Ιστορίας & Αρχαιολογίας, Αριστοτέλειο Παν/μιο

Οι Μινωίτες μέσα από τον θάνατό τους.

Οστεολογικές μαρτυρίες για τη μεταχείριση των νεκρών στην Κρήτη της 3ης και των αρχών της 2ης χιλιετίας π.Χ.

Δευτέρα 26-10-2015, 8:00μμ, Αίθουσα Ανδρόγεω

Δήμητρα Μυλωνά

Διδάκτορας Παν/μίου Southampton – INSTAP. Κέντρο Μελέτης Ανατολικής Κρήτης

Ζωο-αρχαιολογικές προσεγγίσεις στον Μινωικό Πολιτισμό.

Όψεις της οικονομίας και της ζωής στην Κρήτη της 3ης και της 2ης χιλιετίας π.Χ.

Δευτέρα 16-11-2015, 8:00μμ, Πολιτιστικό Κέντρο, Μικρό θέατρο

Νεκτάριος Καραδήμας

Διδάκτορας Παν/μίου Bristol – «Αιγύς. Εταιρεία Αιγαιακής Προϊστορίας»

Αναζητώντας το χαμένο ανάκτορο του Μίνωα.

Από τον Cristoforo Buondelmonti στον Arthur Evans (1415-1900)

Τετάρτη 25-11-2015, 8:00μμ, Πολιτιστικό Κέντρο, Μικρό θέατρο

Γεωργία Φλούδα

Διδάκτορας Παν/μίου Αθηνών, Αρχαιολογικό Μουσείο Ηρακλείου

Εικόνα και ύλη.

Μια αρχαιολογική προσέγγιση στις προϊστορικές γραφές της Μινωικής Κρήτης

Δευτέρα 7-12-2015, 8:00μμ, Πολιτιστικό Κέντρο, Μικρό θέατρο

Γιώργος Φακορέλλης

Επικ. καθηγητής, Τμήμα Συντήρησης Αρχαιοτήτων & Έργων Τέχνης Τ.Ε.Ι. Αθήνας

Η συμβολή της μεθόδου χρονολόγησης με άνθρακα-14 στη μελέτη του Μινωικού Πολιτισμού

*Τετάρτη 16-12-2015, 8:00μμ, Πολιτιστικό Κέντρο, Μικρό θέατρο*___

4TH INTERNATIONAL CONGRESS
"CHEMISTRY FOR CULTURAL HERITAGE",
MUSEES ROYAUX D'ART ET D'HISTOIRE -
KONINKLIJKE MUSEA VOOR KUNST EN
GESCHIEDENIS MRAH-KMKG, BRUSSELS,
BELGIUM, JULY 6-8, 2016

Deadline for submission of abstracts: January 31, 2016

The Royal Institute for Cultural Heritage (KIK-IRPA, Brussels, Belgium) and the University of Antwerp (Belgium) are pleased to announce the 4th International Congress Chemistry for Cultural Heritage (ChemCH2016), which will be held in Brussels on July 6-8, 2016.

Contributions for oral presentations and posters are welcome on any aspect of chemistry for Cultural Heritage, including alteration of pigments, organic materials, development of techniques, etc.

During the six sessions of the conference, international experts will be invited to share the latest developments and experiences in the field of chemistry for Cultural Heritage.

A conference excursion with a guided tour of the Ghent altarpiece conservation studio and St Bavo's Cathedral in Ghent will be organized on July 9, 2016.

Information on registration, abstract submissions or conference-related matters can be found at: [URL:http://org.kikirpa.be/chemch2016/index.php](http://org.kikirpa.be/chemch2016/index.php)

Please direct all questions to chemch2016@kikirpa.be

PRACTICAL KNOWLEDGE AND MEDICAL PRACTICE IN ANCIENT MEDITERRANEAN CULTURES, INTERNATIONAL CONFERENCE, BERLIN, 2-3 NOVEMBER 2015

On behalf of the heads of the research unit A03, Prof. Philip van der Eijk and Prof. Markham J. Geller, of the Collaborative Research Center (SFB) 980 "Episteme in Motion" I would like to inform you about our upcoming international and multi-discipline conference in November.

The Project A03 ("The Transfer of Medical Episteme in the 'Encyclopaedic' Compilations of Late Antiquity"), as part of the SFB 980 "Episteme in Motion", is organizing an international conference on the topic of practical knowledge and actual practices in medical traditions of different ancient cultures.

The heads of project, Prof. Philip van der Eijk and Prof. Markham J. Geller, welcome speakers from the US, the UK, Europe and Germany who will address in multi-discipline presentations the different healing practices (diagnosis, bloodletting, surgery and other forms of treatment, incantations) and the role of the "practitioners". Furthermore, the papers will shed light on the ways in which this practical medical knowledge was gained and transferred via experts, institutions and procedures.

A detailed description and the conference programme are published online at the SFB webpage:

http://www.sfb-episteme.de/en/veranstaltungen/Vorschau/2015/tagung_a03_practical-knowledge.html

Conference Programme

Practical Knowledge and Medical Practice in Ancient Mediterranean Cultures

International Conference, Berlin, 2-3 November 2015

Convened by

Philip van der Eijk (Humboldt-Universität zu Berlin) and Markham J. Geller (Freie Universität Berlin)

Organised by

Christine F. Salazar (Humboldt-Universität zu Berlin) Lennart Lehmhaus (Freie Universität Berlin) Franziska Desch (BerGSAS Berlin Graduate School of Ancient Studies, TOPOI Excellence Cluster Humboldt-Universität zu Berlin)

on behalf of

Collaborative Research Center (SFB 980) Episteme in Motion, Research Project A03 The Transfer of Medical Episteme in the 'Encyclopaedic' Compilations of Late Antiquity

Heads: Philip van der Eijk and Markham J. Geller www.sfb-episteme.de/en/teilprojekte/sagen/A03/index.html

The conference is funded by SFB 980 "Episteme in Motion"

supported by
Alexander von Humboldt Stiftung/ Foundation

and with the support of
'Zentrum Alte Welt' of Berlin-Brandenburgische Akademie der Wissenschaften

Practical Knowledge & Medical Practice in Ancient Mediterranean Cultures

Monday, November 2, 2015

Humboldt-Universität zu Berlin, Institut für Klassische Philologie Marmorsaal, Room 2249a, Unter den Linden 6, 10099 Berlin-Mitte

Contact: Sekretariat Prof. Philip van der Eijk Dr. Friederike Herklotz and Katharina Bordiehn Room 3050, +49 (0)30.2093-70426

9.30
Registration

SESSION I, 10.00 – 12.00

10.00
Conference Opening
Welcome by Philip van der Eijk

10.15
Karl-Heinz Leven (Erlangen)
„... auch die Ärzte konnten zunächst nicht helfen“ – Pest-Therapien in der Antike und in byzantinischer Zeit, followed by discussion.
Chair: Christine Salazar (Humboldt-Universität zu Berlin)

(This lecture will also count as the Monday Colloquium for 2 November.)

Lunch break (A list of restaurants in the neighbourhood will be available.)

SESSION II, 14.15 – 16.50

14.15 – 15.25
Matteo Martelli (Humboldt-Universität zu Berlin) Recipes and therapies ascribed to the prophet Esdras in the Byzantine and Syriac tradition.
Chair: Francesca Corazza (Excellence Cluster Topoi, Berlin)

Short break

15.40 – 16.50

Dan Levene (Southampton)

Interdigitation of heterodox and orthodox in the living medical tradition of Ethiopia – stimulating thoughts about earlier Near Eastern magico-medical traditions.

Chair: Lennart Lehmhaus (Freie Universität Berlin)

Afternoon tea at Foyer Marmorsaal, then we walk over to the Berlin-Brandenburgische Akademie der Wissenschaften together (ca. 15 minutes' walk).

SESSION III, 18.00 – 19.30

Berlin-Brandenburgische Akademie der Wissenschaften, Einstein-Saal Jägerstraße 22-23, 5th floor, 10117 Berlin-Mitte.

Keynote lecture

Ralph Jackson (British Museum, London)

Medical Instruments in Late Antiquity: Continuity and Change.

Chair: Roland Wittwer (Berlin-Brandenburgische Akademie der Wissenschaften)

Tuesday, November 3, 2015

Freie Universität Berlin, TOPOI-Haus, Vortragssaal Hittorfstraße 18, 14195 Berlin-Dahlem

Contact: Sekretariat Prof. Markham J. Geller: Sabine Büchner, Professur für Wissensgeschichte Room 108, +49 (0)30.838-58041

from 9.15 Morning coffee at TOPOI Wintergarten

9.45

Welcome address on behalf of SFB 980

Gyburg Uhlmann (Freie Universität Berlin)

SESSION I, 10.00 – 10.45

Strahil V. Panayotov (Freie Universität Berlin) What do we know about Mesopotamian surgery – and what would we like to know? Chair: M. Ossendrijver (Humboldt-Universität zu Berlin)

Short break

SESSION II, 11.15 – 12.15

Keynote lecture

Nils P. Heeßel (Würzburg)

The domiciliary visit of the Babylonian healer – what do we actually know about the practical side of Babylonian diagnostics?

Chair: J. Cale Johnson (Freie Universität Berlin)

Lunch (for speakers/ chairs only), served at TOPOI-House

SESSION III, 13.45 – 15.00

Ronit Yoeli-Tlalim (London)

On the practice of bloodletting in the Hebrew medical work Sefer Asaf.

Lennart Lehmhaus (Berlin)

“Red for Red” – bloodletting between medicine and lifestyle in Talmudic sources.

Chair Session IV: Almut Renger (Freie Universität Berlin)

Coffee / tea

SESSION IV, 15.30 – 17.00

Shulamit Ch. Shinnar (New York)

Rabbinic Techniques for Examining Parturient Tissue: Considering the Place of Graeco-Roman Medical Traditions within the Rabbinic Textual Corpus.

Chair: Ulrike Steinert (Freie Universität Berlin)

Stefanie M. Rudolf (Freie Universität Berlin) The Syriac Medicine man – medical science according to Bar Bahlul. Chair:

Lucia Raggetti (Freie Universität Berlin)

Concluding remarks by Markham J. Geller

High tea / refreshments

SESSION V, 18.15 – 19.45

TOPOI-Haus, Vortragssaal

Keynote lecture

Paul U. Unschuld (Charité Berlin)

What Is (Chinese) Medicine?

Chair: Gerd Graßhoff (Humboldt-Universität zu Berlin)

Wednesday, November 4, 2015

Workshop, 9.30 – 14.30

Freie Universität Berlin, TOPOI-Haus, Kaminzimmer, Hittorfstraße 18, 14195 Berlin-Dahlem

‘Practical Medicine in Jewish Scriptures and Adjacent Traditions’ Chair:

Franziska Desch (Humboldt-Universität zu Berlin) Participants include among others: Shulamit Shinnar (New York), Igor Itkin (Berlin), Lucia Raggetti (Berlin), Lennart Lehmhaus (Berlin).

Brief Conceptual Outline

To focus this meeting on the theme of Medical Practice will serve as a reminder that – whatever elaborate theories ancient experts might have held – this was not all that mattered in the day-to-day needs of their profession. Yet, the paucity of written evidence and archaeological remains frequently tell us more about the intellectual underpinnings of ancient medicine than about actual medical procedures. Since theory and practice were of equal importance in the constitution and transmission of medical knowledge, it is worthwhile to try and tease out whatever information is available about the reality of medical treatments. The conference presentations will address the different healing practices (diagnosis, bloodletting, surgery and other forms of treatment, including incantations) and the ways in which this practical medical knowledge was gained and transferred via experts, institutions and procedures. The multi-perspective comparative approach to Mesopotamian, Greek, Byzantine, Jewish-Talmudic, Chinese, Persian and Syriac medical traditions will help to sharpen the understanding of practical medicine in the Mediterranean across different periods and in varying socio-cultural contexts.

Christine F. Salazar and Lennart Lehmhaus Conference Organisers SFB 980/A03

EDUCATION AND RESEARCH IN CONSERVATION-RESTORATION, ENCORE CONFERENCE, CAMBRIDGE, UK 13. APRIL, 2016, CALL FOR PAPERS

ENCoRE, the European Network for Conservation- Restoration Education, was officially constituted in 1998. Its aim is to promote research and education in the field of conservation-restoration of cultural heritage [ENCoRE Statutes § 2]. Developing education for conservator-restorers being one of main goals of ENCoRE, the Board decided to organize a one day international conference dedicated to Education and Research in Conservation- Restoration, prior to the 11th General Assembly of ENCoRE 14-15 April 2016 in Cambridge (UK). Both meetings will be hosted by the Hamilton Kerr Institute, Cambridge.

The conference will be supported by the digital C-R periodical CeROArt.

Please remember that ENCoRE offers stipends for students from your program to attend the meetings !

The conference **Education and Research in Conservation-Restoration** will focus on a variety of subjects, not exclusively, but in particular as listed below:

Significance of research in conservation-restoration curricula (e.g. Bachelor, Master, PhD)

Relation of conservation-restoration research to neighboring fields of research

Relation of research and practice

Impact of education based conservation-restoration research on professional practice

any other related topics

The abstract must be sent to conference@encore-edu.org

Deadline for abstracts: 27 November 2015

Abstracts should describe original, unpublished work.

Abstracts must be written in ENGLISH and contain the following information:

Author(s) full name

Contact author

Affiliation

Telephone number

E-mail address

Title of the paper

Key words

Abstract (max. 500 Words)

Abstracts must be submitted in Word Format. After the evaluation of the proposed contributions and the selection of papers the program will be announced January 2016.

We hope to receive interesting papers demonstrating the various approaches and strategies academic research based teaching may take, dealing with integrated teaching of practical topics (“practice”) and theory as well as with rather theoretical topics.

You are kindly asked to distribute this call for papers amongst interested colleagues – thank you in advance for your support.

The Board of ENCoRE

INART 2016 CONFERENCE, GHENT **(BELGIUM), 21-25 MARCH, 2016**

Dear Colleague,

Please be informed that the deadline for abstract submission for the **inArt 2016** conference has been extended until **9 November 2016**.

You are invited to submit Abstracts for inArt 2016 via the [Abstract Submission page](#)

For submitting your contributions to the inArt 2016 Conference, you are kindly invited to use the [Abstract Template](#) that can be found on the General Guidelines page.

For more information on Abstract Submission and On-line registration, please contact the organizers at inart2016@ugent.be or visit the inArt2016 Conference website at <http://www.inart2016.ugent.be/>.

On behalf of the Organizing Committee,

Peter Vandenabeele,

Chair of inArt2016.



<http://www.inart2016.ugent.be>

www.facebook.com/inart2016



ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ –
JOB VACANCIES/FELLOWSHIPS

2016 INTERDISCIPLINARY POST-
DOCTORAL FELLOWSHIP IN STABLE
ISOTOPE SCIENCES, SMITHSONIAN
MUSEUM CONSERVATION INSTITUTE

The Office of Fellowships and Internships is offering an Interdisciplinary Postdoctoral Fellowship in the area of stable isotope sciences. Research proposals must integrate the use of stable isotopes ($2\text{H}/1\text{H}$, $13\text{C}/12\text{C}$, $15\text{N}/14\text{N}$, and $18\text{O}/16\text{O}$) into their specific research questions. Stable isotope analysis must comprise a significant portion of the research. The successful applicant will conduct analyses at one of the two Pan-Institutional isotope facilities (OUSS/MCI Stable Isotope Mass Spectrometry Facility in Suitland, MD or at the Smithsonian Tropical Research Institute, Panama City, Panama).

Applicants must have completed or be near completion of the Ph.D.

Recipients who have not completed the Ph.D. at the time of application must provide proof of completion of the degree before the fellowship begins.

For more information:

[URL:http://www.si.edu/mci/english/professional_development/2016PostDocFellowshipStableIsotopeSciences.html](http://www.si.edu/mci/english/professional_development/2016PostDocFellowshipStableIsotopeSciences.html)

FELLOWSHIPS IN CONSERVATION OF MUSEUM COLLECTIONS SMITHSONIAN INSTITUTION

The Smithsonian's Office of Fellowships and Internships has announced one-year fellowships for recent graduates of masters programs in art and archaeological conservation (or the equivalent) to conduct research and gain further training in Smithsonian conservation laboratories for conservation of museum collections.

Researchers in conservation science topics, including those at the postdoctoral level, are also encouraged to apply.

The fellowship begins in the fall of 2016. A stipend of \$37,700 is being offered at the postgraduate level and \$48,000 at the postdoctoral level, plus a research allowance up to \$4,000.

While 12-month fellowship proposals are preferred, applications for projects of shorter duration (between 3-12 months) are acceptable, with a commensurate reduction to the stipend amounts.

The prospective fellow must first contact the conservator or scientist with whom he or she would like to work. If the potential supervisor confirms that candidacy is suitable, application must be made through the Office of Fellowships and Internships by December 1, 2016.

Program guidelines and instructions for application are available at:
[URL: http://www.smithsonianofi.com/fellowship-opportunities/smithsonian-postgraduate-fellowships-in-conservation-of-museum-collections-program/](http://www.smithsonianofi.com/fellowship-opportunities/smithsonian-postgraduate-fellowships-in-conservation-of-museum-collections-program/)

As one of the conservation laboratories in which a fellowship is offered, the Smithsonian's Museum Conservation Institute (MCI) offers postings for treatment and research projects benefiting Smithsonian collections that make use of MCI's excellent analytical capabilities ([URL: http://www.si.edu/mci/](http://www.si.edu/mci/))

For more information:

[URL: http://www.si.edu/mci/english/professional_development/2016-2017PostgraduateFellowships.html](http://www.si.edu/mci/english/professional_development/2016-2017PostgraduateFellowships.html)

ARCHAEOLOGICAL CONSERVATION
SUMMER INTERNSHIPS (2 POSITIONS)
AGORA EXCAVATIONS, AMERICAN
SCHOOL OF CLASSICAL STUDIES AT
ATHENS (ASCSA)

The ASCSA Agora Excavations are offering 2 Archaeological Conservation Internships for the 2016 summer excavations. The internships will give students an opportunity to treat freshly excavated archaeological finds and to participate in an active on-site conservation laboratory. An introduction to the re-treatment, preventive and long-term care of archaeological collections will also be provided. For more information about the excavations please visit the Agora Excavations' website on [URL:http://www.agathe.gr](http://www.agathe.gr) and the website of the American School of Classical Studies at Athens on [URL:http://www.ascsa.edu.gr](http://www.ascsa.edu.gr)

Applicants must currently be enrolled in a graduate or equivalent conservation program. Successful candidates enrolled in North American programs and American citizens enrolled in foreign programs may be eligible for funding from the Samuel H. Kress Foundation. Interns who do not qualify for or do not receive a Kress award are required to provide their own funding. All successful candidates are responsible for arranging their own accommodation and are required to obtain their own medical insurance for the duration of their internship.

Applications must include: a signed letter of interest, a curriculum vitae, and two letters of reference. Internships may vary in length from 6 to 8 weeks and are undertaken from early June to early August, 2016. Applicants should indicate in their letter their approximate preferred dates within this time frame. Referees are requested to write letters of recommendation on letterhead and give a signed copy in a sealed envelope to the applicant. All application materials should be sent as hard copies, *together in a single envelope*, to the address below. Received applications will be acknowledged by email.

Application deadline: Monday 7 December 2015

Maria Tziotziou
Head of Conservation
Agora Excavations
American School of Classical Studies at Athens 54, Souidias St.
GR-10676 Athens, Greece
Fax: +30 210 33 10 964

THE MALCOLM H. WIENER LABORATORY **FOR ARCHAEOLOGICAL SCIENCE** **ANNOUNCES FUNDING OPPORTUNITIES**

The Malcolm H. Wiener Laboratory for Archaeological Science of the American School of Classical Studies at Athens offers three different types of Fellowship funding: Post-Doctoral (3 year term), Pre-Doctoral (2 year term), and Senior (5-10 months), as well as shorter duration, more focused Research Associate positions. Applicants are welcome from any college or university worldwide. Independent scholars are also welcome to apply.

Priority will be given to question-driven research projects that address substantive problems through the application of interdisciplinary methods in the archaeological sciences. Laboratory facilities are especially well equipped to support the study of human skeletal biology, archaeobiological remains (faunal and botanical), environmental studies, and geoarchaeology (particularly studies in human-landscape interactions and the study of site formation processes). Research projects utilizing other archaeological scientific approaches are also eligible for consideration, depending on the strength of the questions asked and the suitability of the plan for access to other equipment or resources not available on site.

Senior Fellowship

- o Current competition begins in fall of 2015 for the 2016-2017 academic year (January 15 deadline for applications)
- o 5 to 10 month terms
- o Eligibility limited to individuals who received their Ph.D.s at least 5 years previous to application
- o Stipend: \$15,000 for a 5 month term, \$30,000 for a 10 month term

Research Associate

- o Current competition begins in fall of 2015 for the 2016-2017 academic year (January 15 deadline for applications)
- o Term variable, up to 9 months
- o Eligibility limited to individuals actively enrolled in a graduate program and individuals with a higher-level degree in a relevant discipline
- o Stipend: variable up to \$7,000

Post-Doctoral Fellowship

- o Next competition begins in fall of 2016 for the 2017-2020 academic year
- o 3 year term
- o Eligibility limited to individuals who have received their Ph.D. within the last 7 years.
- o Stipend: \$35,000 per annum

Pre-Doctoral Fellowship

- o Next competition begins in fall of 2016 for the 2017-2019 academic year (January 15 deadline for applications)
- o 2 year term

- o Eligibility limited to individuals actively enrolled in a graduate program who have passed all qualifying exams and have an approved Ph.D. proposal
- o Stipend: \$20,000 per annum

For more information and instructions on how to apply:

<http://www.ascsa.edu.gr/index.php/wiener-laboratory/wlfellowships>

The American School of Classical Studies at Athens does not discriminate on the basis of race, age, sex, sexual orientation, color, religion, ethnic origin, or disability when considering admission to any form of membership or application for employment

6-8 Charlton Street,
Princeton, NJ 08540-5232
Telephone: 609-683-0800
Fax: 609-924-0578

54 Soudias Street,
GR-106 76 Athens, Greece
Telephone: +30-213-000-2400
Fax: +30-210-725-0584

SHOHET SCHOLARS FELLOWSHIP FOR **2016-2017**

Please visit the site: <http://www.catacombsociety.org/shohet-fellowship/>

Funding up to \$30,000.00 for projects in archeology, art history, classical studies, history, comparative religions, or related subjects.

Deadline is January 15, 2016.



Jessica Dello Russo

Executive Director

International Catacomb Society

Contact Information:

International Catacomb Society

71 Prince Street, Suite 21

Boston, MA 02113

Website: www.catacombsociety.org

Email: internationalcatacombsociety@gmail.com

Skype: CatacombSociety

Social Media:

Academia: catacombsociety.academia.edu

Google+: <https://plus.google.com/u/0/>

LinkedIn: www.linkedin.com/in/catacombsociety

Facebook: facebook.com/internationalcatacombsociety

Twitter: <https://twitter.com/CatacombSociety>

Tumblr: <http://catacombsociety.tumblr.com/>

AHRC MIDLANDS3CITIES FUNDING FOR UK/EU STUDENTS

The Midlands3Cities doctoral training partnership is a collaboration between the universities of Nottingham, Nottingham Trent, Leicester, De Montfort, Birmingham and Birmingham City. The DTP is in the third of five years, awarding up to 89 PhD Arts and Humanities Research Council (AHRC) studentships for UK/EU applicants for 2016 entry. M3C provides research candidates with cross-institutional mentoring, expert supervision (including cross-institutional supervision where appropriate), subject-specific and generic training, and professional support in preparing for a career.

The **Department of Archaeology at the University of Nottingham** is inviting applications from students whose research interests include:

- Archaeology of Childhood
- Archaeology of Death
- Archaeology of Food
- Archaeology of Human Origins
- Archaeology of Ritual
- Archaeology of Standing Buildings
- Archaeological Science
 - Ceramics
 - Scientific analysis and the production, trade and use of glass
- Archaeological Theory
- Bioarchaeology
 - Zooarchaeology/ Social Zooarchaeology
 - Archaeobotany/ Social Archaeobotany
 - Environmental Archaeology
- British Archaeology (from prehistory to industrial)
- Cave Archaeology
- Medieval Archaeology
- Roman Archaeology
- Historical Archaeology
- Industrial Archaeology
- Landscape Archaeology
- Mediterranean Archaeology (from prehistory to Late Antique)
- Prehistoric Archaeology
 - Aegean Archaeology
 - British Prehistory
 - Early Mining and Metallurgy
 - Italian Prehistory
- Underwater and Maritime Archaeology
 - Freshwater Archaeology and Crannogs
 - Submerged or partially submerged settlements
 - Coastal and maritime-oriented societies

The deadline for AHRC M3C funding applications is **12 January 2016**, by which time students must have applied for a place to study and have provided two references to a university within the DTP.

For full details of eligibility, funding and research supervision areas (including use of the supervision search tool) please visit: www.midlands3cities.ac.uk or contact enquiries@midlands3cities.ac.uk

Information and proposal-writing workshops will be hosted in each of the three partner cities. Register for the workshop in Nottingham (taking place on 21st November) through eventbrite: <http://www.eventbrite.co.uk/o/midlands3cities-doctoral-training-partnership-6326720187>

THE PEDERSEN FAMILY GRANT FOR STUDENT RESEARCH

The Red Sea Institute for Anthropological Research is pleased to announce a granting opportunity for students studying aspects of the human interaction with the Red Sea.

This privately-funded grant, administered by the institute, is open to all students studying at the master's degree level in anthropology, archaeology, and ethnography. The grant is intended to aid students in their thesis research for travel and accommodations or other expenses related to their field, library, or museum research. The grant is not intended to cover costs for students to participate in other's research projects.

All applications must be made via regular post or express mail and be post-marked no later than 15 December 2015. No electronic submissions will be considered.

The total grant amount will be US\$500.00 (five hundred dollars).

For further details please see: <http://www.redseainstitute.org/grants.html>

THE AMERICAN SCHOOL OF CLASSICAL S **TUDIES AT ATHENS, STUDY, IN GREECE** **2016-2017, ASCSA PROGRAMS AND** **FELLOWSHIPS**

www.ascsa.edu.gr

The American School of Classical Studies at Athens, one of America's most distinguished centers devoted to advanced teaching and research, was founded in 1881 to provide American graduate students and scholars a base for their studies in the history and civilization of the Greek world. Today, over 130 years later, it is still a teaching institution, providing graduate students a unique opportunity to study firsthand the sites and monuments of Greece. The School is also a superb resource for senior scholars pursuing research in many fields ranging from prehistoric to modern Greece, thanks to its internationally renowned libraries, the Blegen, focusing on all aspects of Greece from its earliest prehistory to late antiquity, and the Gennadius, which concentrates on the Greek world after the end of antiquity.

Membership application to the ASCSA must be made online at <http://www.ascsa.edu.gr> at the same time you apply to any outside funding organization for work at the School.

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 ten 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. \$50 application fee. DEADLINE: JANUARY 15.

STUDENT ASSOCIATE MEMBERSHIP: Advanced graduate students in the same fields as Regular Members who plan to pursue independent research projects, who do not wish to commit to the full Regular Program. DEADLINE: JANUARY 15.

ADVANCED FELLOWSHIPS: Several 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. DEADLINE: FEBRUARY 15.

FULBRIGHT FELLOWSHIPS: Contact the Institute of International Education, at 809 United Nations Plaza, NY 10017 or <http://us.fulbrightonline.org> for application and stipend information. Candidates must submit ASCSA application for Student Associate Membership by due date for Fulbright application. Note the program change this year that Student Associate membership is only eligible membership for the Fulbright grants. DEADLINE: OCTOBER 13.

SUMMER SESSIONS: Two six-week sessions explore the sites and museums in Greece for graduate and undergraduate students and secondary school and college teachers. Fee of \$5,000 includes tuition, travel within Greece, room, and partial board. Scholarships available. \$25 application fee. DEADLINE: JANUARY 15.

MEDIEVAL GREEK SUMMER SESSION AT THE GENNADIUS LIBRARY (Future program for summer 2017): Graduate students and post-doctoral scholars in any field of late antique, post-antique, Byzantine, or medieval studies at any university worldwide. Month-long program in intermediate level Medieval Greek language and philology at the Gennadius Library, with site and museum trips. Next competition to be announced in the fall 2016.

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. DEADLINE: JANUARY 15.

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. DEADLINE: JANUARY 15.

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. Next competition to be announced in the fall 2016.

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

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. DEADLINE: JANUARY 15.

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. DEADLINE: JANUARY 15.

MEDITERRANEAN REGIONAL RESEARCH FELLOWSHIP PROGRAM (CAORC): US citizen: Ph.D. candidate or recent Ph.D. researching in the humanities and related social sciences in countries bordering the Mediterranean and served by American overseas research centers. Fellowship program funded by the Mellon Foundation. Consult CAORC website for application and deadline. www.caorc.org/

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. DEADLINE: JANUARY 15.

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. DEADLINE: JANUARY 15.

WIENER LABORATORY RESEARCH ASSOCIATE APPOINTMENTS: Short-term funding for Ph.D. candidates and postdoctoral scholars from colleges and 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. DEADLINE: JANUARY 15.

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. Funding program to be announced. DEADLINE: MARCH 15

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. DEADLINE: MARCH 15.

MULTI-COUNTRY RESEARCH FELLOWSHIPS (CAORC): Ph.D. candidates and postdoctoral scholars with research requiring travel to several countries with an American overseas research center. Consult CAORC website for application and deadline: www.caorc.org. DEADLINE: JANUARY 15.

THE PAUL REHAK MEMORIAL TRAVELING FELLOWSHIP: Regular members and Student Associate members already are attending the School for the entire 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 during the current academic year from September 1, 2015 to July 1, 2016. DEADLINE: MARCH 1.

FUNDING FOR SENIOR SCHOLARS FOR STUDY AT THE ASCSA

KRESS PUBLICATIONS FELLOWSHIPS: Postdoctoral scholars working on a Corinth or Agora publication. Grants for at least three months (up to \$10,000) to a maximum of nine months (up to \$30,000). DEADLINE: JANUARY 15.

NEH FELLOWSHIPS: Awards for postdoctoral scholars and professionals in the humanities. Terms: Two to four fellowships, five to ten months in duration. Maximum stipend for a five-month project, \$21,000; for a ten-month project, \$42,000. School fees are waived. U.S. citizens or foreign nationals being U.S. residents for three years before application deadline. Applicants must hold their Ph.D. or equivalent terminal degree. DEADLINE: OCTOBER 31.

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. Next competition to be announced in the fall 2016.

WIENER LABORATORY SENIOR FELLOWSHIP: Fellowship 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. DEADLINE: JANUARY 15.

ASCSA programs are generally open to qualified students and scholars at colleges or universities in the U.S. or Canada; restrictions may apply for specific fellowships and programs. The American School of Classical Studies at Athens does not discriminate on the basis of race, age, sex, sexual orientation, color, religion, ethnic origin, or disability when considering admission to any form of membership.

Ms. Mary Darlington
Executive Associate
American School of Classical Studies at Athens
6-8 Charlton Street

Princeton, NJ 08540
med@ascsa.org
TEL 609-454-6811 - direct dial
FAX 609-924-0578



SENIOR UNIVERSITY LECTURER IN **QUATERNARY SCIENCES / HEAD OF THE** **¹⁴C LABORATORY**

Lund University in southern Sweden was founded in 1666 and for a number of years has been ranked among the world's top 100 universities. The Department of Geology has a long and successful history of research with an international reputation throughout the entire geological field and offers nationally leading undergraduate programmes at Bachelor's and Master's levels. The department consists of two sub-departments: Quaternary Sciences, and Lithosphere and Biosphere Sciences.

The position is in connection to the Lund 14C laboratory (<http://www.geol.lu.se/c14/en/>). ¹⁴C measurements in Lund have a 50-year long tradition and are presently performed with a Single Stage Accelerator Mass Spectrometer (SSAMS). Sample preparation is aided by a new automated graphitization equipment. Presently the staff includes seven people working for the laboratory to a varying percentage (equivalent to about three full-time positions).

The successful candidate will be the leader of the ¹⁴C SSAMS laboratory at the department that serves internal and external customers. The successful candidate's responsibility is quality assurance of ¹⁴C sample preparation and measurements, analysis of ¹⁴C AMS results, support in customer contact, oversight of the running of the laboratory including personnel, equipment and economy. Responsibilities in connection to the 14C laboratory are expected to be around 30-40% of a full time position.

The successful candidate is expected to build up an active research profile within Quaternary Sciences, strengthening any of the existing research areas at the department. The applicant is, therefore, expected to present his/her present research and a research plan for the coming years.

Those qualified for appointment as a senior lecturer are persons who have demonstrated teaching expertise and have been awarded a PhD degree or have corresponding research competence, or some other professional expertise that is of value in view of the subject matter of the post and the duties that it will involve. We expect that the lecturer will contribute to bachelor and master student supervision. He/she should be able to develop course material and teach within Quaternary Sciences, preferably including Quaternary climate and glaciation history, applied geology or statistical methods in geosciences. Teaching and supervision within basic education are estimated to about 20-30% of a full time position which may change over time depending on the work load in connection to the ¹⁴C laboratory. More information regarding current courses can be found on the Department's web site (<http://geology.lu.se>)

More detailed information and instructions for applying to this position can be found here: <https://lu.mynetworkglobal.com/en/what/job/jobID:73191/where:4/>

GOVERNMENT OF IRELAND **POSTDOCTORAL FELLOWSHIPS 2015**

The call for the 2015 Irish Research Council Postdoctoral Fellowships is now open for one or two-year fellowships. Applicants must be supported by an academic mentor at an eligible higher education institute in the Republic of Ireland. TCD Classics has hosted four IRC Postdocs in the past two years (two of them in archaeology) and the Department welcomes enquiries from suitably qualified, outstanding candidates for this new call.

"The Council funds excellent researchers across all disciplines and encourages interdisciplinary research and engagement with enterprise. The Council facilitates the career development of researchers by funding those at an early stage of their research career to associate with established research teams who have achieved international recognition for their work.

This scheme is intended to support suitably qualified applicants at an early stage of their postdoctoral career to associate with established research teams who have achieved international recognition for their work.

These Fellowships can be held for either one or two years."

Full details of the scheme at:

<http://www.research.ie/scheme/2016-government-ireland-postdoctoral-fellowship>

TCD Classics: Dr Christine Morris (cmorris@tcd.ie)

Dr Christine Morris

Andrew A. David Associate Professor in Greek Archaeology and History Department of Classics School of Histories and Humanities Trinity College Dublin phone 00353 1896-1424 (internal x 1424)

Website: www.tcd.ie/classics

Facebook: <http://www.facebook.com/TrinityCollegeDublinClassics>

<http://tcd.academia.edu/ChristineMorris>

Unlocking Sacred Landscapes Network:

<http://www.ucy.ac.cy/unsala/>

SELF-FUNDED PHD IN SALT RESISTANT MORTARS FOR THE REPAIR OF HISTORIC STRUCTURES, SHEFFIELD HALLAM UNIVERSITY

Applications are invited for a self-funded PhD project titled "High porosity salt resistant mortars for the repair of historic structures" based in the Materials and Engineering Research Institute at Sheffield Hallam University.

Repair mortars to be applied on wet and salt loaded substrates within a historic structure should both be compatible with the original materials and suffer no deterioration following the movement and crystallisation of salts in the mortar.

The aim of this project is to develop a salt resistant mortar where the salts crystallise throughout its pore structure without causing damage to the mortar or the host material. This is to be achieved by fine tuning of the pore structure of hybrid mortars comprising two different types of binders and at least three admixtures.

This project will expand on existing research and also include extensive experimental work for investigating the influence of different parameters such as aggregate and substrate characteristics on mortar properties.

This is an unfunded PhD project, for candidates who are sponsored or who have their own funding.

Students will normally need to hold, or expect to gain, a First or Second Class Honours degree in Materials Science, Engineering, Building, Conservation Science, Architecture, Physics or related discipline.

General information about the Materials and Engineering Research Institute can be found at: [URL:https://www.shu.ac.uk/research/meri/](https://www.shu.ac.uk/research/meri/)

For informal enquiries about the project, please contact Dr Vincenzo Starinieri v.starinieri@shu.ac.uk

For instructions on how to apply, please email our direct student services on meri-student@shu.ac.uk

Vincenzo Starinieri

POSTDOCTORAL FELLOWSHIP - RESEARCH ON PARCHMENT, UNIVERSITY OF NAMUR

The University of Namur offers a full-time position for post-doctoral research on parchments. The candidate must be in mobility condition and submit an application to a post-doc fellowship. (MOVE-IN Louvain Incoming postdoc Fellowships, application deadline: 4 January 2016) It is a condition of the job position that the fellowship be obtained.

The candidate will develop experimental techniques for characterizing parchments, with a focus on non-invasive, portable, easy-to-use techniques to be used in conservation and restoration. The candidate will work in a trans-disciplinary research group and will have access to collaborations with international experts. Among investigated techniques, optical polarizing microscopy imaging will be developed for evaluating the impact of repairs on parchment book bindings. Other techniques such as fluorescence microscopy will be explored. Analysis of anatomical changes occurring in animal skin will be carried on in situ during parchment fabrication.

Description

The candidate should show strong motivation and experience working in cultural heritage science. The candidate will develop experimental techniques for characterizing parchments, with a focus on non-invasive, portable, easy-to-use techniques to be used in conservation and restoration. The candidate will work in a trans-disciplinary research group on the Pergamenum21 project.

Pergamenum21 is a trans-disciplinary research project of the University of Namur which aims at developing experimental characterization techniques for ancient parchments, with a focus on non-invasive, portable, easy-to-use techniques to be used in conservation and restoration. See [URL:http://www.pergamenum21.eu](http://www.pergamenum21.eu)

Special attention is paid to historical parchment bindings and the materials and methods used for their restoration. The project involves a panel of investigators in science and humanities, including physicists, chemists and biologists, historians, curators and restorers.

Besides historical parchments and parchment bindings which are made available by university library upon request, samples of fresh parchment are manufactured from different animal skins according to traditional recipes by persons collaborating to the project.

The candidate will develop experimental techniques for characterizing parchments, with a focus on non-invasive, portable, easy-to-use techniques to be used in conservation and restoration. Dialog with curators/restorers and historians will be an important part of the methodology as it will help identifying most relevant parameters to be characterized. The candidate will have access to on-going collaborations with internationally recognized experts, for instance Prof. Matthew Collins at the University of York, UK.

Among techniques already investigated by the group, optical polarizing microscopy imaging will be developed further, especially in view of its applicability for evaluating mechanical constraints induced by repairs on precious historical parchment book bindings. Other optical techniques such as fluorescence microscopy will be explored as well. Based on preliminary results obtained by the group, systematic analysis of anatomical changes which take place in the animal skin will be carried on in situ at different stages of the parchment fabrication process.

Number of positions available: 1

Research Fields:

Anthropology - Cultural anthropology
Biological sciences - Biology
Chemistry - Analytical chemistry
Chemistry - Instrumental analysis
Chemistry - Instrumental techniques
Chemistry - Physical chemistry
History - Archaeology
Philosophy - Epistemology
Physics - Chemical physics
Physics - Optics
Physics - Surface physics
Technology - Laboratory technology
Career Stage

Career stages: Experienced researcher or 4-10 years (postdoc) Research Profiles:
Recognised Researcher (R2)

For additional job details see: [URL:http://www.unamur.be/recherche/adre-service-chercheurs/recherche-financement/financement-projet/federation-wallonie-bruxelles/fsr-cofund-2014-en](http://www.unamur.be/recherche/adre-service-chercheurs/recherche-financement/financement-projet/federation-wallonie-bruxelles/fsr-cofund-2014-en)

Catherine Charles
Restauration / Preservation
Bibliothèque universitaire Moretus Plantin
Fax: +32 81 724 645
Université de Namur ASBL
Rue de Bruxelles 61
5000 Namur
Belgique
+32 81 724 643

ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS

ANNOUNCING SPARC OPPORTUNITIES,

SPRING AND SUMMER 2015

We are now taking applications for SPARC (Spatial Archaeometry Research Collaborations) Awards for projects to take place March-August 2016.

SPARC is an NSF-funded program at the Center for Advanced Spatial Technologies (CAST) of the University of Arkansas dedicated to promoting geospatial research in archaeology. SPARC offers direct support to archaeological projects through awards in three categories:

- Fieldwork: On-site data collection
- Data & Analytics: Preparation, processing and analysis of geospatial data
- Publication: Presentation, publication and archiving of complex geospatial datasets

In addition, you can learn about the latest technologies and their archaeological applications through residencies at CAST or through our online resources and occasional webinars. You can also connect with potential collaborators or develop projects in partnership with SPARC.

SPARC supports projects led by faculty, graduate students, and archaeologists working in the public sector.

Deadline for Submission: 6 November 2015

More Information: sparc.cast.uark.edu

Contact us to discuss your project or with any questions at: sparc@cast.uark.edu

Rachel Opitz
SPARC Executive Director
Center for Advanced Spatial Technologies
Visiting Assistant Professor
Department of Anthropology
University of Arkansas
e: ropitz@cast.uark.edu
skype: rachel.opitz
m: 479-305-4591

**THE COTSEN INSTITUTE OF
ARCHAEOLOGY AT THE UNIVERSITY OF
CALIFORNIA, LOS ANGELES ANNOUNCES
THE SECOND TRIENNIAL INTERNATIONAL
COMPETITION FOR THE LLOYD COTSEN
PRIZE FOR LIFETIME ACHIEVEMENT IN
WORLD ARCHAEOLOGY US \$55,000**

Established by Mr. Lloyd Cotsen as a permanent endowment at UCLA, this prize will be awarded every three years to an active senior archaeologist for lifetime achievement in archaeological research and mentorship. The prize includes an unrestricted cash award of US \$50,000 to the senior laureate and US \$5,000 to one of his or her students who is currently engaged in fulltime research and teaching in the field of archaeology.

Nominations may be submitted by individual scholars and/or by established research institutions from any country. Nominations will be accepted up to February 28, 2016. A jury formed by the Cotsen Institute of Archaeology at UCLA will select the awardees. The decision will be announced in April 2016. The awardees will receive their prize and deliver one lecture each at a ceremony to be held at UCLA in May 2016.

Nomination forms and additional information about the Lloyd Cotsen Lifetime Achievement in World Archaeology is available at <www.ioa.ucla.edu>.

INTERNET SITES

MYSTERIES OF THE KYLIX FROM JHU ARCHAEOLOGICAL MUSEUM ON VIMEO

Ancient vessels. Apprentice ceramicists. Master teachers. All come together in "Mysteries of the Kylix", a short film that documents "Recreating Ancient Greek Ceramics," a Johns Hopkins University course taught by Sanchita Balachandran, curator/conservator of the university's Archaeological Museum. The 18-minute film, directed by Bernadette Wegenstein, director of the university's Center for Advanced Media Studies, with cinematography by Allen Moore and editing by Maxwell Anderson, debuted at Johns Hopkins' Homewood campus in September. The film features 13 undergraduate students, one graduate teaching assistant, one curator/conservator, two potters, and the ancient Greek potters and painters who inspired all of the work of this project. Funding from the film comes from the Program in Museums and Society directed by Elizabeth Rodini at JHU's Krieger School of Arts and Sciences, and the Andrew W. Mellon Foundation. Additional sponsors of the film include the Johns Hopkins Archaeological Museum and the Center for Advanced Media Studies.

For 13 weeks in spring 2015, the students in Balachandran's class undertook a distinctly different type of apprenticeship. Throughout the hands-on course in experiential archaeology, they consulted the work of experts and practiced throwing clay pots. They designed images and experimented with slip and with various tools used to paint the substance onto clay. And they built a kiln, fired their pottery, and examined it under a portable x-ray fluorescence instrument-all to understand the world of the ancient Greek potters and their apprentices who made kylikes, the red-figure pottery drinking bowls created by the ancient Greeks between the 6th and 4th centuries BCE.

"The idea is to be thoughtful at every stage," says Balachandran. "To look at clay, make shapes, to choose images and paint, to go through the fire and kiln process, and to consider the final product. This leads to a deeper understanding of both the art and the object, because when you go through the process, you get a visceral sense of how things got there."

Please visit the site: <http://archaeologicalmuseum.jhu.edu/the-collection/object-stories/recreating-ancient-greek-ceramics/film-mysteries-of-the-kylix/> [Go there for 18+ minutes video] [go there for embedded links]

ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS

DECODING THE STAR CHARTS OF ANCIENT EGYPT - SCIENTIFIC AMERICAN VOLUME 313, ISSUE 4

Mysterious tables of astronomical information have been found in 4,000-year-old coffins. What in the world was their purpose? By Sarah Symons and Elizabeth Tasker

The Egyptian town of Mallawi is not on the main tourist beat, given its location 260 miles and a seven-hour train ride north of the temple complexes at Luxor. But one of us (Symons) traveled there in May 2013 with Robert Cockcroft, a postdoctoral researcher in her laboratory, hoping to see one of the oldest astronomical records in the world. The record, which had been described only vaguely, was indeed there, but to their astonishment, it was not the only one.

"I can see writing!" Cockcroft exclaimed. At that moment, he was crouched beside a display case that enclosed a coffin in the central room of the Mallawi Monuments Museum, craning his neck to peer at the underside of the propped-up wood lid. Symons flicked the beam of her flashlight to illuminate a thin batten—a cross piece—that held the flat panels of wood together. The batten's surface was painted with graceful hieroglyphics representing star names, and Symons and Cockcroft immediately realized that the cross piece was part of yet another ancient astronomical record. Until that moment, no one had recognized the batten's significance; it had been attached to this particular coffin by mistake [...]

Please visit the site: <http://www.scientificamerican.com/article/decoding-the-star-charts-of-ancient-egypt/> [Go there for full purchasable full story, with charts].

**A LATE 13TH CENTURY BC FORTIFIED
SETTLEMENT IN CYPRUS: EXCAVATIONS
2010-2011. VASSOS KARAGEORGHIS,
ATHANASIA KANTA, PYLA-
KOKKINOKREMOS, STUDIES IN
MEDITERRANEAN ARCHAEOLOGY, VOL
141**

Bryn Mawr Classical Review 2015.10.31

Vassos Karageorghis, Athanasia Kanta, Pyla-Kokkinokremos: A Late 13th Century BC Fortified Settlement in Cyprus: Excavations 2010-2011. Studies in Mediterranean archaeology Vol 141. Uppsala: Åströms Förlag, 2014. Pp. xxv, 260, 5 plans. ISBN9789198153507. €80.00.

Reviewed by Krzysztof Nowicki, Institute of Archaeology and Ethnology, Polish Academy of Sciences (erganos@hotmail.com)

[The Table of Contents appears at the end of the review.]

Pyla Kokkinokremos on Cyprus, first examined by archaeologists in the early 1950s,¹ then briefly excavated in the early 1980s,² is a site which deserves much more attention and fieldwork than it has hitherto received. It certainly deserves a long-lasting and systematic excavation project, which might clarify several key problems concerning the dramatic character of the end of the Bronze Age in Cyprus and shed light on the so called "Sea Peoples" problem, an issue still very controversial in the archaeology of the East Mediterranean. A new research project is thus needed, especially one which can cover a much larger area by survey or excavation, and allow reconstruction of the full extent of the settlement and its organization. The new excavations, reported in this book, are welcomed in this context, though the scope and future are not quite clear. The project was directed by two scholars who have contributed a vast number of publications regarding the problem of the 1200 BC collapse in two regions: Cyprus and the Aegean. The involvement of an Aegean expert on the period (Athanasia Kanta) is especially appreciated, considering the reservations about Mycenaean involvement in the events around 1200 BC on the part of many scholars dealing with the issue on Cyprus. The book under review reports comprehensively on the results of two excavation seasons, 2010 and 2011, directed by the both authors, and gives a brief and preliminary report on the work directed by Kanta in 2012. The main aim of this new project is to fill some of the aforementioned gaps in our knowledge of the site, and to enrich the volume of evidence for further analysis. We can only hope that the work will be continued and that in a short time we will receive the next publication(s), which will help to clarify the essential questions concerning the site itself, as well as the historical background of its foundation. Among the most intriguing problems, still waiting to be resolved, are the social and ethnic character of the community of Kokkinokremos, the size of the settlement and its topographic plan, which might allow us at last to analyze the inner topography of the

settlement with differentiation between private, communal and public spaces, and the circumstances of its abandonment. Chapter 1 presents the results of the 2010 and 2011 excavation seasons during which four architectural complexes were unearthed immediately southeast of the area excavated by Demas and Karageorghis in 1981–82. Of these four units only Complex G seems to be uncovered completely, Complex F is probably missing its front part, Complex H may extend more to the southeast of the excavated area, and Complex I may consist of two or three house units, which are, however, very eroded. These four excavated complexes are described room by room, with comprehensive data for stratigraphy, architecture and selected finds, mostly pottery. This part is very generously illustrated with photographs and plans. The photographs indicate careful digging procedures and show the problem of the site's preservation, with deposits usually not exceeding 0.5 m in thickness. This part of the book will be an important source of information for archaeologists who are interested in the detailed analysis of a particular house or room use, and for further studies of the distribution of finds in an abandoned versus destroyed settlement. Chapter 2, which presents the results of the 2012 season, gives the impression of being written in a rush. There are, for example, no plans of the excavated buildings. Considering, however, that the first results of work in the western part of the plateau was released only two years after excavation, we should be grateful to the excavators for including this report in the present volume. The decision to expand the work to another part of the plateau comes from the excavators' search for the settlement's full extent. The aim of this strategy, explained in ten points (p. 103), suggests a long-lasting project. The short 2012 season shed light only on a few of the targeted questions. Nevertheless, the identification of a gate, the first so far unearthed at Kokkinokremos, and the discovery of clay tablets with the Cypro-Minoan script should be mentioned as important outcomes of the new phase of this project. We can only hope that the excavation will be continued and more data from this part of the plateau will be soon published. Especially frustrating is the absence of the 2012 structures on the general plan of the site (Fig.2.1). Additionally, the plan, based on the superb map published by Karageorghis and Demas in 1984, is of poor quality, with messy and broken contours and without any scale. It is hoped that the future publications of Pyla Kokkinokremos will use the original 1984 map (and not its 2014 version !) with the location of every excavated area. The title of chapter 3, "The site and architecture of Pyla in their historical settings", by Kanta, suggests that the chapter focuses on 1) the unusual location of the settlement itself in the contemporary historic context, and 2) similarities of some architectural features to other examples from eastern Mediterranean sites contemporary or immediately preceding Kokkinokremos' foundation. Unfortunately, the author has gone in a different direction, looking for comparanda almost exclusively in the Aegean (mostly Crete), comparing Pyla Kokkinokremos (c. 1200 BC) with Afroditi's Kefali (c. 3000/2900BC), and Chamaizi (c. 1800 BC), both on Crete (p. 119). The comparisons of these different sites, representing different concepts, functions, scales, and different historical backgrounds, makes little sense. Searching for other parallels for entrances, hearths, windows, corridors and floors, again in chronologically distant sites of Myrtos, Kato Zakros, Malia, Mochlos, and Monastiraki, all on Crete, is equally misguided. This chapter is disappointing and perhaps some ideas might be developed and properly explained in another book concerning the Aegean and Cypriot architecture through the third and second millennia BC. The next two chapters (4 and 5), written by Karageorghis, include catalogues of finds and a comprehensive commentary on most important groups of pottery and other objects. The author follows here the model of presentation and analysis from his 1984 publication of Kokkinokremos. Many finds are illustrated in high quality drawings and photographs in

22 plates (some in colour). Chapter 6 ("Summary and historical conclusions"), written by Karageorghis, is an especially important contribution to the continuing debate on the causes and character of the changes on Cyprus in the late 13th century BC. Here, the author gives a short review of ideas by other scholars about this problem, and then updates and revises his earlier interpretation of the site, confronting his adversaries with well argued facts and evidence that are often ignored by those who reject any role of immigration and/or invasion in the changes around 1200 BC. The most important revisions of Karageorghis' earlier hypothesis concern two points, 1) the length of the settlement's use and dating, which is extended from 25–30 years, c. 1230–1200 BC, as proposed in 1984, to "about 50 years or less", between the end of the 13th and the beginning of the 12th century BC (p. 162), and 2) the origins of the inhabitants who are seen now by the author as the local people "from the neighbouring settlements" with "a sizeable portion of foreigners" (p. 159). Karageorghis also gives an interesting review of archaeological sites dated to the period immediately before Kokkinokremos was founded. It appears that the area around the site had been well populated and it is plausible that part of the Kokkinokremos' inhabitants came from the neighbouring coastal area. The foundation of a new large defensible settlement would represent, in this scenario, a concentration of local Cypriot population, joined with immigrants from beyond Cyprus, mostly but not exclusively from the Aegean. Karageorghis reconstructs Kokkinokremos as an extensive settlement covering the entire plateau, and inhabited by ca. 200 families (p. 158). Whereas his estimation of population seems reasonable, there are some problems with the settlement size. According to Karageorghis, Kokkinokremos covered the entire plateau, in his estimation about 24 ha. However, my measurement, using the plan from 1984, gives the size between 5 and 7 ha, which is in accordance with the size proposed by Kanta in Chapter 2 (p. 104). Pyla Kokkinokremos was not an ordinary settlement with a historical and environmental background related to the pattern before and after. Its sudden foundation and short life, during the period reconstructed from written and archaeological sources as the "collapse" or "crisis" years, indicate that the community behind the foundation was well-organized, perhaps multi-ethnic, and probably controlled by a strong authority. This community was concerned first and foremost for security and land control, at the price of everyday comforts. Kokkinokremos' location, reminds us of the topography of several Cretan sites founded around the same time, for example Kastrokefala Almyrou and Zakros Kato Kastellas. Elsewhere Karageorghis has given a very interesting interpretation of these sites' origin as being founded by newcomers.³ Although the reality may have been more complicated, as is clearly acknowledged by Karageorghis in Chapter 6 (p. 159), and the local population's involvement with strong external elements seems at the moment the most plausible hypothesis for the sudden construction of such a large settlement at that very place, recent strong criticism of Karageorghis' hypothesis, for example by Steel⁴ and Knapp⁵, is not justified. Steel's and Knapp's argue that the location of Kokkinokremos was determined by control of trade between the interior and coast, but that does not explain why the site was founded at that very moment (and not before or after). Nor do they take into account similar changes in settlement location in neighbouring regions like Crete, which provides an excellent contemporary parallel for Pyla Kokkinokremos (but also for another defensive Cypriot site, that of Maa Palaeokastro). The status of Kokkinokremos among the other neighbouring settlements, with their much deeper roots in the regional settlement history, may have been extraordinary and it is an interesting historical phenomenon that the status of the land where the site is located remains, after more than three thousand years, still extraordinary (within a foreign military base), entirely or at least partly thanks to the same strategic value of the location. A few remarks

have to be addressed about the plans at the end of the volume. It is obvious that the original versions of those were of a superb quality, which matched the standard of the state plan of the excavated houses published by Karageorghis and Demas in 1984. However, their reproduction in a smaller size has made most of the numeral and letter labels unreadable (Plans 1 and 2) or readable only with magnifying glass (Plans 3 and 4). The complexes are not numbered on any of the four plans and the reader must analyze them together with the plans included into the text (Chapter 1) in order to make any sense. Inconsistency is a problem. A complete plan for Complex G is not provided. It is also difficult to understand why many details concerning the finds, elevation, and surface structure were removed from some of the plans in Chapter I, but left in the plans at the end of the volume (which are reproduced in much smaller size). Using the 1984 plan as a model would have been much more helpful to the readers. Despite a few weaknesses discussed above, this book is a very valuable publication of one of the most important archaeological sites in the region. It must be carefully read and referred to by everybody studying the "Crisis Years" around 1200 BC, but it should also be ready by other scholars interested in more general aspects of the settlement history in the eastern Mediterranean. Let us hope that the project will be continued and more of the site will be unearthed before it is completely destroyed by nature and human activity.

Table of Contents

1. Pyla-Kokkinokremos 2010, 2011. The excavation and architecture, by Athanasia Kanta

1.1 The excavations of 2010 and 2011

1.2 The complexes uncovered in 2010 and 2011

1.3 Stratigraphy and architecture

1.4 The excavated complexes and individual rooms

2. Pyla-Kokkinokremos 2012, by Athanasia Kanta

2.1 Problems needing clarification

2.2 The excavations of 2012

3. The site and architecture of Pyla in their historical setting, by Athanasia Kanta

4. Inventory of objects, diagnostic sherds and sherd trays, by Vassos Karageorghis and Artemis Georgiou

5. Commentary on the objects, by Vassos Karageorghis and Artemis Georgiou

6. Summary and historical conclusions, by Vassos Karageorghis

Appendix I. Late Helladic IIIB and Late Minoan IIIB amphoroid kraters from Pyla-Kokkinokremos, by Vassos Karageorghis

Appendix II. Marked pottery at Pyla-Kokkinokremos, 2010-2011, by Nicolle Hirschfeld

Appendix III. The 'Canaanite jars', by Artemis Georgiou

Appendix IV. Petrographic analysis of Late Cypriot cooking pots and Late Minoan pottery from Pyla-Kokkinokremos, by Maria Dikomitou-Eliadou, Evangelia Kiriatzi and Athanasios K. Vionis

Appendix V. Chemical analyses of copper alloy artefacts from Pyla-Kokkinokremos using portable X-Ray Fluorescence, by Andreas Charalambous and Vasiliki Kassianidou

Appendix VI. A bronze plaque from Pyla-Kokkinokremos decorated with a nude female figurine of the Qadesh type, by Jacqueline Karageorghis

Appendix VII. Ground stone tools from Pyla-Kokkinokremos, by Alison McCaig

Appendix VIII. The Quaternary environment of the Pyla-Kokkinokremos area, by Zomenia Zomeni

Appendix IX. Neutron Activation Analysis of no. 60, by Hans Mommsen

Notes:

1. Dikaio, P. Enkomi: Excavations 1948–1958, vol. II, Mainz, 895–907.

2. Karageorghis, V. and Demas, M. 1984, Pyla Kokkinokremos: A Late 13th Century B.C. Fortified Settlement in Cyprus, Nicosia.

3. Karageorghis, V. 2001, Patterns of Fortified Settlements in the Aegean and Cyprus c. 1200 B.C., in Karageorghis, V. and Morris, C.E. (eds.), Defensive Settlements of the Aegean and the Eastern Mediterranean after c. 1200 B.C., Nicosia, 1–10.
4. Steel, L. 2004, Cyprus Before History: From the Earliest Settlers to the End of the Bronze Age, London, 188.
5. Knapp, A.B. 2008, Prehistoric and Protohistoric Cyprus: Identity, Insularity and Connectivity, Oxford, 238.

Please visit the site: <http://bmcr.brynmawr.edu/2015/2015-10-31.html>

ΕΙΔΗΣΕΙΣ - NEWS RELEASE

A RARE 1,500 YEAR OLD MOSAIC WAS DISCOVERED THAT DEPICTS ANCIENT STREETS AND BUILDINGS IN EGYPT

A 1,500 year old mosaic, depicting a map with streets and buildings, was exposed about two years ago in archaeological excavations the Israel Antiquities Authority conducted together with school children and employees from the Qiryat Gat Industrial Park. The excavation of the mosaic was generously underwritten by the Y.S. Gat Company–Qiryat Gat Industrial Park Management Company. This extraordinary mosaic served as the floor of a church dating to the Byzantine period. It was removed from the site for the purpose of conservation and was recently returned to its permanent location in the industrial park. The mosaic will be revealed to the public for the first time at the “Factories from Within” festival to be held October 1, during the Sukkot holiday.

According to archaeologists Sa’ar Ganor and Dr. Rina Avner of the Israel Antiquities Authority, “The appearance of buildings on mosaic floors is a rare phenomenon in Israel. The buildings are arranged along a main colonnaded street of a city, in a sort of ancient map. A Greek inscription preserved alongside one of the buildings exposed in the mosaic indicates that the place which is depicted is the settlement *ἡ πόλις τῆς Αἰγύπτου*. In Jewish Christian tradition, the prophet Habakkuk was buried in *בית חבקוק*. The appearance of this Egyptian city on the floor of the public building in Qiryat Gat might allude to the origin of the church’s congregation”.

The mosaic pavement was part of the floor of a church that did not survive. Two sections of the mosaic were preserved; animals such as a rooster, deer and birds and a special goblet with red fruits are portrayed on one part of the pavement. According to Ganor, “The artist utilized tesserae of seventeen different colors in preparing the mosaic. The investment in the raw materials and their quality are the best ever discovered in Israel”. A Nile River landscape in Egypt consisting of a boat with a rolled-up sail, streets and buildings is depicted on the second carpet. The buildings are portrayed in detail and in three dimensions, and they have two–three stories, balconies and galleries, roofs, roof tiles and windows.

The “Factories from Within” festival will be held this year for the first time in the Qiryat Gat Industrial Park during the Sukkot holiday, in what will become an annual tradition. On October 1 the Qiryat Gat Industrial Park will be turned into an event-filled arena of one-time performances in unconventional locations, with rare visits inside some of the best known factories in Israel. The children will enjoy performances of Adon Shoko with songs by Arik Einstein, “Shukhnat Hop” and a variety of creative activities. A unique offering of events awaits adults with appearances by Shalom Hanoch and Moshe Levi in a performance of “Exit” that will be held in a printer factory, the singer Dikla will appear in the park, and Hemi Rudner will hold a fascinating master’s class in the Negev Beer brewery.

The project will give the general public a rare opportunity to peek into the hidden world of the factories in one of the country's most modern industrial areas. The "Factories from Within" festival is the inaugural event slated to launch the 60th anniversary of Qiryat Gat, and the public is invited to enjoy the unique musical and visual experience.

Please visit the site:

http://www.antiquities.org.il/Article_eng.aspx?sec_id=25&subj_id=240&id=4149

[Go there for pix]



THE “GARDEN OF EDEN” IN IRAQ NOW INTERNATIONALLY PROTECTED AS WETLANDS OF INTERNATIONAL IMPORTANCE

The Government of Iraq has recently designated Central Marshes and Hammar Marsh in the southern part of the country as Wetlands of International Importance ("Ramsar Sites") under the Ramsar Convention on Wetlands. These two marshes, together with the existing Hawizeh Marsh Ramsar Site, form the last remnants of the once extensive, lush and richly diverse Mesopotamian Marshlands in southern Iraq.

The marshes are also referred to as the “Garden of Eden”, or the “Cradle of Civilization”, since their history goes back as far as the 4th millennium BC when the first literate societies appeared. The Mesopotamian Marshes were once entirely populated by the Marsh Arabs, who used to build their floating islands and reed houses in the marshes, developing entire villages linked by a network of channels. Not only is the area of extraordinary historical and cultural value, but it also provides a range of internationally and regionally important ecosystem services.

The marshes serve as an important staging and wintering site for a number of globally threatened birds such as the Basra reed warbler (*Acrocephalus griseldis*), the marbled duck (*Marmaronetta angustirostris*), and the greater spotted eagle (*Aquila clanga*). The marshes also support the endangered Euphrates softshell turtle (*Rafetus euphraticus*) and the vulnerable smooth-coated otter (*Lutrogale perspicillata*).

In the past, the important services provided by the marshes were disrupted or degraded by extensive draining that began in the 1950s and accelerated in the 1990s because of land reclamation and war. Restoration has been carried out since 2003, but has not been able to completely re-flood the marshes to their original extent due to declining rainfall and the construction of dams. As a result less water has been entering Iraq through Tigris and Euphrates rivers. In the recent years the conditions of marshes have worsened also due to severe droughts.

By adding all the major wetlands that form the Mesopotamian Marshes into the List of Wetlands of International Importance, the Government of Iraq has signalled its long-term commitment to restore the marshes and the vital ecosystem services they provide to the communities and the world.

Click here for more information about the Central Marshes Ramsar Site and here for more information about the Hammar Marsh Ramsar Site.

Please visit the site: <http://www.ramsar.org/news/the-%E2%80%9Cgarden-of-eden%E2%80%9D-in-iraq-now-internationally-protected-as-wetlands-of-international>

GREEK TOMB WAS 'FOR ALEXANDER THE GREAT'S FRIEND HEPHAESTION'

The archaeologist investigating an ancient Greek tomb from the era of Alexander the Great has suggested it was a funeral shrine for his closest friend Hephaestion.

Greeks have been enthralled for months by the mystery surrounding the Amphipolis monument.

Now Katerina Peristeri has revealed that fragmentary inscriptions link the tomb to Hephaestion.

Hephaestion died less than a year before the Macedonian leader.

After his death in 325BC, Alexander was said to have ordered that shrines be constructed throughout the empire.

Ms Peristeri's team believe the site at Amphipolis may have been designed by one of two architects, Dinocrates or Stesicrates, and built by Antigonos, another of Alexander's generals.

They also believe that tiny inscriptions found at the site show Hephaestion's monogram (two initials from his name).

However, not everyone was convinced by the team's revelations.

Prof Panayiotis Faklaris of Aristotle University of Thessaloniki told Greek radio on Thursday that there was no indication that the tomb had any connection to Hephaestion or that Alexander had ordered it to be constructed.

There had earlier been speculation that the tomb may be linked to Alexander the Great's mother Olympias or his wife Roxana.

And earlier this year bones were recovered at the site that belonged to at least five individuals, including an elderly woman, a newborn child and two men, one of whom had been stabbed.

As well as 550 fragments of bone, animal as well as human, archaeologists have uncovered three vaulted chambers behind a facade decorated with two big marble sphinxes.

Within the chambers were a pair of caryatids - larger-than-life statues of young women - and a mosaic pavement depicting the abduction of the goddess Persephone by Hades, king of the underworld.

Alexander, who built an empire from modern Greece to India, was buried in Egypt although the precise location remains a mystery.

As his generals fought over his legacy, his mother, widow, son and half brother were all killed, most of them near Amphipolis.

Please visit the site: <http://www.bbc.com/news/world-europe-34417796>

THE WORLD'S OLDEST PAPYRUS AND WHAT IT CAN TELL US ABOUT THE GREAT PYRAMIDS ANCIENT EGYPTIANS LEVERAGED A MASSIVE SHIPPING, MINING AND FARMING ECONOMY TO PROPEL THEIR CIVILIZATION FORWARD, BY ALEXANDER STILLE

Following notes written by an English traveler in the early 19th century and two French pilots in the 1950s, Pierre Tallet made a stunning discovery: a set of 30 caves honeycombed into limestone hills but sealed up and hidden from view in a remote part of the Egyptian desert, a few miles inland from the Red Sea, far from any city, ancient or modern. During his first digging season, in 2011, he established that the caves had served as a kind of boat storage depot during the fourth dynasty of the Old Kingdom, about 4,600 years ago. Then, in 2013, during his third digging season, he came upon something quite unexpected: entire rolls of papyrus, some a few feet long and still relatively intact, written in hieroglyphics as well as hieratic, the cursive script the ancient Egyptians used for everyday communication. Tallet realized that he was dealing with the oldest known papyri in the world.

Astonishingly, the papyri were written by men who participated in the building of the Great Pyramid, the tomb of the Pharaoh Khufu, the first and largest of the three colossal pyramids at Giza just outside modern Cairo. Among the papyri was the journal of a previously unknown official named Merer, who led a crew of some 200 men who traveled from one end of Egypt to the other picking up and delivering goods of one kind or another. Merer, who accounted for his time in half-day increments, mentions stopping at Tura, a town along the Nile famous for its limestone quarry, filling his boat with stone and taking it up the Nile River to Giza. In fact, Merer mentions reporting to "the noble Ankh-haf," who was known to be the half-brother of the Pharaoh Khufu and now, for the first time, was definitively identified as overseeing some of the construction of the Great Pyramid. And since the pharaohs used the Tura limestone for the pyramids' outer casing, and Merer's journal chronicles the last known year of Khufu's reign, the entries provide a never-before-seen snapshot of the ancients putting finishing touches on the Great Pyramid.

Experts are thrilled by this trove of papyri. Mark Lehner, the head of Ancient Egypt Research Associates, who has worked on the pyramids and the Sphinx for 40 years, has said it may be as close as he is likely to get to time-traveling back to the age of the pyramid builders. Zahi Hawass, the Egyptian archaeologist, and formerly the chief inspector of the pyramid site and minister of antiquities, says that it is "the greatest discovery in Egypt in the 21st century."

Tallet himself is careful to speak in more measured terms. "The century is at the beginning," he says at one of his digs along the Red Sea. "One must not enlarge this kind of find." Was he very emotional when he came upon the cache of papyri? "You know,

when you are working like that all the day for one month you cannot realize at once what happens."

Tallet has been toiling quietly on the periphery of the ancient Egyptian Empire-from the Libyan Desert to the Sinai and the Red Sea-for more than 20 years without attracting much notice, until now. He finds it both amusing and mildly annoying that his discoveries are suddenly attracting attention in the scholarly press and popular media. "It's because the papyri are speaking of the Pyramid of Khufu," he says.

We are standing in an encampment in a desert valley a couple of hundred yards from the Red Sea near the modern Egyptian resort town called Ayn Soukhna. Tallet and his crew-part French, part Egyptian-sleep in rows of tents set up near the archaeological site. Above the tents is a steep sandstone hillside into which the ancient Egyptians carved deep caves, or galleries, in which they stored their boats. Tallet leads us up the hillside and clambers on a rocky trail along the cliff face. You can see the outlines of a set of ancient Egyptian hieroglyphs carved delicately into the stone. There is the royal seal of Mentuhotep IV, a little-known pharaoh who ruled for just two years in about 2,000 B.C. And right below there are three lines of a hieroglyphic inscription proclaiming the achievements of the pharaoh, which Tallet translates: "In year one of the king, they sent a troop of 3,000 men to fetch copper, turquoise and all the good products of the desert."

On a clear day you can see the Sinai Desert about 40 miles away across the Red Sea from where we stand. Before these recent excavations, the ancient Egyptians were not widely known to be notable sea travelers, and were thought to confine themselves to moving up and down the Nile or hugging the Mediterranean coast. The work that Tallet and others have done in the last two decades has shown that the ancient Egyptian Empire was as ambitious in its outward reach as it was in building upward in its colossal monuments at Giza.

Tallet, a short, almost bald man of 49, wears wire-rimmed glasses and, on this day, a tan wool sweater vest. He looks like someone you would be more likely to encounter in a Paris library or office than in a desert camp. Indeed he is soft-spoken, choosing his words with scholarly scruple and carefully citing the contributions of other scholars, and he likes working in remote locations far from the hubbub at the monumental sites, royal tombs and palaces and necropolises that have generally captured the world's attention. "What I love are desert places," he says. "I would not like to excavate places like Giza and Saqqara." (Saqqara is where early Egyptian pharaohs built some of their tombs before beginning the pyramid complex at Giza.) "I am not so fond of excavating graves. I like natural landscapes." At the same time, he has professional reasons for preferring remote sites over famous monuments. "Most new evidence is found in the periphery," he says.

Tallet's taste for the periphery goes back to the beginning of his career. Tallet grew up in Bordeaux, the son of a high-school French teacher (his father) and a professor of English literature (his mother). After studying at Paris' famous École Normale Supérieure, Tallet went to Egypt to do an alternative military service by teaching in an Egyptian high school; he stayed on to work at the French Institute, where he began his archaeological work. He scoured the edges of the Egyptian world-the Libyan desert on one end, the Sinai Desert on the other-looking for, and finding, previously unknown Egyptian rock inscriptions. "I love rock inscriptions, they give you a page of history without

excavating," he says. In the Sinai he also found abundant evidence that the ancient Egyptians mined turquoise and copper, the latter essential for making weapons as well as tools. This, in turn, fit with his discovery of the harbor at Ayn Soukhna that the Egyptians would have used to reach the Sinai. "You see," he says, "there is a logic in things."

The area was not recognized as an ancient Egyptian site until 1997 when the cliffside hieroglyphs were noted by an Egyptian archaeologist. Ayn Soukhna has gradually become a popular weekend destination, and since the construction of a larger, faster highway about ten years ago, it is now only about a two-hour drive from Cairo. Across the road from Tallet's site is an older Egyptian hotel closed for renovation, which allows his crew to work in peace, sifting through the area between the boat galleries up in the hillside and the sea. They are finding the remains of ovens for smelting copper and preparing food as well as quotidian objects such as mats and storage pots.

Sixty-two miles south of Ayn Soukhna, along the Red Sea coast, is Tallet's second archaeological site, at Wadi al-Jarf, and it's even more obscure. Among the only landmarks in the vicinity is the Monastery of Saint Paul the Anchorite, a Coptic Orthodox outpost founded in the fifth century near the cave, which had been inhabited by their hermitic patron saint. The area is almost the definition of the middle of nowhere, which is probably why it long failed to attract the attention of either archaeologists or looters. The remoteness also helps explain why the papyri left in the desert there survived for thousands of years. Precisely because administrative centers like Memphis and Giza were occupied and reused for centuries-and then picked over or looted repeatedly in the intervening millennia-the survival rate of fragile papyri from the early dynasties there has been close to zero.

Among the few people to take note of the place before Tallet was the British explorer John Gardner Wilkinson, who passed by in 1823 and described it in his travel notes: "Near the ruins is a small knoll containing eighteen excavated chambers, beside, perhaps, many others, the entrance of which are no longer visible. We went into those where the doors were the least obstructed by the sand or decayed rock, and found them to be catacombs; they are well cut and vary from about 80 to 24 feet, by 5; their height may be from 6 to 8 feet."

Perhaps associating the area with the monastery, Wilkinson took the gallery complex to be a series of catacombs. But the description of this series of carefully cut chambers carved into the rock sounded to Tallet exactly like the boat storage galleries he was busy excavating at Ayn Soukhna. (They also looked like the galleries at another ancient port, Mersa Gawasis, then being excavated by Kathryn A. Bard of Boston University and Rodolfo Fattovich of the University of Naples L'Orientale.) Moreover, two French pilots who were based in the Suez Gulf in the mid-1950s had noted the site, but didn't associate it with the harbor. Tallet tracked down one of the pilots and, using his notes, Wilkinson's description and GPS technology, figured out the location. It was two years later that Tallet and his crew began clearing out a small passageway at the entrance to the boat galleries, between two large stone blocks that had been used to seal the caves. Here they found entire papyrus scrolls, including Merer's journal. The ancients, Tallet says, "threw all the papyri inside, some of them were still tied with a rope, probably as they were closing the site."

Wadi al-Jarf lies where the Sinai is a mere 35 miles away, so close you can see the mountains in the Sinai that were the entry to the mining district. The Egyptian site has yielded many revelations along with the trove of papyri. In the harbor, Tallet and his team found an ancient L-shaped stone jetty more than 600 feet long that was built to create a safe harbor for boats. They found some 130 anchors-nearly quadrupling the number of ancient Egyptian anchors located. The 30 gallery-caves carefully dug into the mountainside-ranging from 50 to more than 100 feet in length-were triple the number of boat galleries at Ayn Soukhna. For a harbor constructed 4,600 years ago, this was an enterprise on a truly grand scale.

Yet it was used for a very short time. All the evidence that Tallet and his colleagues have gathered indicates that the harbor was active in the fourth dynasty, concentrated during the reign of one pharaoh, Khufu. What emerges clearly from Tallet's excavation is that the port was crucial to the pyramid-building project. The Egyptians needed massive amounts of copper-the hardest metal then available-with which to cut the pyramid stones. The principal source of copper was the mines in the Sinai just opposite Wadi al-Jarf. The reason that the ancients abandoned the harbor in favor of Ayn Soukhna would appear to be logistical: Ayn Soukhna is only about 75 miles from the capital of ancient Egypt. Reaching Wadi al-Jarf involved a considerably longer overland trip, even though it was closer to the Sinai mining district.

After visiting Wadi al-Jarf, Lehner, the American Egyptologist, was bowled over by the connections between Giza and this distant harbor. "The power and purity of the site is so Khufu," he said. "The scale and ambition and sophistication of it-the size of these galleries cut out of rock like the Amtrak train garages, these huge hammers made out of hard black diorite they found, the scale of the harbor, the clear and orderly writing of the hieroglyphs of the papyri, which are like Excel spreadsheets of the ancient world-all of it has the clarity, power and sophistication of the pyramids, all the characteristics of Khufu and the early fourth dynasty."

Tallet is convinced that harbors such as Wadi al-Jarf and Ayn Soukhna served mainly as supply hubs. Since there were few sources of food in the Sinai, Merer and other managers were responsible for getting food from Egypt's rich agricultural lands along the Nile to the thousands of men working in the Sinai mine fields, as well as retrieving the copper and turquoise from the Sinai. In all likelihood, they operated the harbor only during the spring and summer when the Red Sea was relatively calm. They then dragged the boats up to the rock face and stored them in the galleries for safekeeping until the next spring.

Ancient Egypt's maritime activities also served political and symbolic purposes, Tallet argues. It was important for the Egyptian kings to demonstrate their presence and control over the whole national territory, especially its more remote parts, in order to assert the essential unity of Egypt. "Sinai had great symbolic importance for them as it was one of the farthest points they could reach," Tallet says. "In the Sinai the inscriptions are explaining the mightiness of the king, the wealth of the king, how the king is governing its country. On the outer limits of the Egyptian universe you have a need to show the power of the king."

In fact, their control of the periphery was rather fragile. Distant and inhospitable Sinai, with its barren landscape and hostile Bedouin inhabitants, represented a challenge for the

pharaohs; one inscription records an Egyptian expedition massacred by Bedouin warriors, Tallet says. Nor were the Egyptians always able to hold on to their camps along the Red Sea. "We have evidence from Ayn Soukhna that the site was destroyed several times. There was a big fire in one of the galleries....It was probably difficult for them to control the area."

Apparently all parts of Egypt were involved in the great building project at Giza. Granite came from Aswan far to the south, food from the delta in the north near the Mediterranean, and limestone from Tura, about 12 miles south of Cairo on the Nile. The burst of maritime activity was also driven by the monumental undertaking. "It is certain that the shipbuilding was made necessary by the gigantism of the royal building projects," Tallet writes in a recent essay, "and that the great majority of the boats were intended for the navigation of the Nile and the transport of materials along the river, but the development of Wadi al-Jarf exactly in the same period allows us to see without doubt the logical extension, this time toward the Red Sea, of this project of the Egyptian state."

Working on the royal boats, it seems, was a source of prestige. According to the papyri found at Wadi al-Jarf, the laborers ate well, and were provisioned with meat, poultry, fish and beer. And among the inscriptions that Tallet and his team have found at the Wadi al-Jarf gallery complex is one, on a large jar fashioned there, hinting at ties to the pharaoh; it mentions "Those Who Are Known of Two Falcons of Gold," a reference to Khufu. "You have all sorts of private inscriptions, of officials who were involved in these mining expeditions to the Sinai," Tallet says. "I think it was a way to associate themselves to something that was very important to the king and this was a reason to be preserved for eternity for the individuals." Clearly these workers were valued servants of the state.

The discovery of the papyri at such a distant location is significant, Tallet says: "It is not very logical that [the writings] should have ended up at Wadi al-Jarf. Of course [the managers] would have always traveled with their archives because they were expected always to account for their time. I think the reason we found [the papyri] there is that this was the last mission of the team, I imagine because of the death of the king. I think they just stopped everything and closed up the galleries and then as they were leaving buried the archives in the area between the two large stones used to seal the complex. The date on the papyri seems to be the last date we have for the reign of Khufu, the 27th year of his reign."

The work that Tallet and his colleagues have done along the Red Sea connects with Lehner's work at Giza. In the late 1980s, Lehner began a full-scale excavation of what has turned out to be a residential area a few hundred yards from the pyramids and the Sphinx. For centuries, travelers had contemplated these amazing monuments in splendid isolation-man-made mountains and one of the world's great sculptures sitting seemingly alone in the desert. The paucity of evidence of the substantial number of people needed to undertake this massive project gave rise to many bizarre alternative theories about the pyramids (they were built by space aliens, by the people from Atlantis and so forth). But in 1999, Lehner began uncovering apartment blocks that might have housed as many as 20,000 people.

And many of the Giza residents, like the boatmen at the Red Sea, appear to have been well-fed. Judging by remains at the site, they were eating a great deal of beef, some of it

choice cuts. Beef cattle were mostly raised in rural estates and then perhaps taken by boat to the royal settlements at Memphis and Giza, where they were slaughtered. Pigs, by contrast, tended to be eaten by the people who produced the food. Archaeologists study the "cattle to pig" ratio as an indication of the extent to which workers were supplied by the central authority or by their own devices-and the higher the ratio, the more elite the occupants. At Lehner's "Lost City of the Pyramids" (as he sometimes calls it), "the ratio of cattle to pig for the entire site stands at 6:1, and for certain areas 16:1," he writes of those well-stocked areas. Other, rather exotic items such as leopard's teeth (perhaps from a priest's robe), hippopotamus bones (carved by craftsmen) and olive branches (evidence of trade with the Levant) have also turned up in some of the same places, suggesting that the people who populated Lehner's working village were prized specialists.

Sailors may have figured among the visitors to the pyramid town, according to Merer's papyrus journal. It mentions carrying stone both up to the lake or basin of Khufu and to the "horizon of Khufu," generally understood to refer to the Great Pyramid. How did Merer get his boat close enough to the pyramids to unload his cargo of stone? Currently, the Nile is several miles from Giza. But the papyri offer important support for a hypothesis that Lehner had been developing for several years-that the ancient Egyptians, masters of canal building, irrigation and otherwise redirecting the Nile to suit their needs, built a major harbor or port near the pyramid complex at Giza. Accordingly, Merer transported the limestone from Tura all the way to Giza by boat. "I think the Egyptians intervened in the flood plain as dramatically as they did on the Giza Plateau," Lehner says, adding: "The Wadi al-Jarf papyri are a major piece in the overall puzzle of the Great Pyramid."

Tallet, characteristically, is more cautious. "I really don't want to be involved in any polemics on the building of the pyramids at Giza-it's not my job," he says. "Of course it's interesting to have this kind of information, it will deserve a lot of study." Tallet believes that the Lake of Khufu, to which Merer refers, was more likely located at Abusir, another important royal site about ten miles south of Giza. "If it is too close to Giza," Tallet says, "one does not understand why it takes Merer a full day to sail from this site to the pyramid." But Tallet has been persuaded by Lehner's evidence of a major port at Giza. It makes perfect sense, he says, that the Egyptians would have found a way to transport construction materials and food by boat rather than dragging them across the desert. "I am not sure it would have been possible at all times of the year," he said. "They had to wait for the flooding, and could have existed for perhaps six months a year." By his estimate the ports along the Red Sea were only working for a few months a year-as it happens, roughly when Nile floods would have filled the harbor at Giza. "It all fits very nicely."

Alexander Stille is a professor at the Columbia School of Journalism and the author of five books including *Benevolence and Betrayal*, *The Future of the Past* and his latest, *The Force of Things*. Stille has worked as a contributor for *The New Yorker* magazine, *The Atlantic Monthly*, *The New Republic* and the *Boston Globe*.

Please visit the site: <http://www.smithsonianmag.com/history/ancient-egypt-shipping-mining-farming-economy-pyramids-180956619/>

SCIENTISTS HOPE TO LEARN HOW POMPEIANS LIVED, BEFORE THE BIG DAY, **BY ELISABETTA POVOLEDO**

When Mount Vesuvius erupted in 79 A.D., many of its victims in Pompeii were buried under mounds of pumice and ash that hardened over them like a mold, freezing them in time.

During more than two centuries of excavations, plaster casts were made of scores of those long-ago victims, making them a famous and poignant reminder of the unpredictability of death and the boundless power of nature.

But if the way Pompeii's residents perished is well established, far less is known about how they lived. Now a team of scientists hopes to change that.

In September, an array of specialists - archaeologists, restorers, radiologists, anthropologists and others - set up a sophisticated field hospital of sorts here, complete with a computerized tomography scanner. Better known as a CT scanner, it will be used to peer beneath those opaque, improvised tombs.

"We're the antidote to an unscientific approach," said Estelle Lazer, an Australian forensic anthropologist who has researched Pompeian bones for 30 years, publishing a study, "Resurrecting Pompeii," in 2009.

"Spurious evidence" had given the casts names that stuck, like "the beggar" or "the slave," diminishing the victims into mere "props to tell a story," Ms. Lazer said. She criticized the romanticized notion of the Pompeian tragedy promulgated by literature and Hollywood films.

"Now we have a chance to get to know who they really were," she said.

There was the supposition, for example, that the victims were mostly the very old, the very young, the infirm and women, "on the assumption that they were not fast runners," Ms. Lazer said.

What has emerged from the data so far is that the victims consisted of a "random sampling of normality" typical of any catastrophe. "Disasters don't tend to discriminate," she said.

Almost as soon as the ancient city was discovered in the 18th century, excavators began to make casts of Pompeii's victims, seeking to preserve their remains by pouring liquid plaster into the cavity that had been left under the hardened ash as the bodies decayed.

The scientific tests, which also include laser imaging and DNA sampling, are part of a larger restoration project on most of the known Pompeian casts, 86 in all, that began in April.

The casts had been "in a precarious condition" and required fresh conservation, said Massimo Osanna, the Culture Ministry official in charge of Pompeii, as he showed reporters the work in progress.

"I want to underscore that this was an interdisciplinary effort because archaeology now takes a global approach," he added. "It was a scientific enterprise, not to make a show out of death."

Initially, the radiologists in charge of the CT scan had to grapple with the difficulties presented by the density of the plaster, "which made it difficult to explore," said Dr. Giovanni Babino, the radiologist who coordinated the CT scan project.

Though CT scans have already been carried out on mummies, the Pompeian plasters had never been examined. "There were no protocols for this in the world," Dr. Babino said.

So the team had to come up with its own. The CT scanner was set up on the site, in an area off limits to the public, and the casts were transported to be examined, one by one.

The CT scans were carried out on the plasters in the same way they would be on a live person, Dr. Babino said, the only restriction being that the cast had to fit through the 70-centimeter bore in the scanner.

The data was then elaborated to create three-dimensional models, recomposing the skeletons like a puzzle.

One consistency among the victims so far is that most "had all their teeth," said Roberto Canigliula of Philips Spa Healthcare, which designed and lent the scanner.

The finding suggested a "healthy diet with few sugars," said Elisa Vanacore, a specialized dentist. The scans also showed that teeth wore away because they were used for cutting, she said. The dental records will help to determine the victims' ages.

The archaeological site of Pompeii, with Mount Vesuvius in the background. New research shows some at the site died when the roof of their lodgings collapsed because of the weight of the ash and rock. Credit Gianni Cipriano for The New York Times Already the tests are calling into question some assumptions about the victims.

For example, one cast, found in the Forum in 1963, has been known as the "pregnant woman" because of the protuberance of the belly. The CT scan revealed the person was probably not pregnant, and may not have been a woman.

"Any woman with a bit of a stomach is said to be pregnant," Ms. Lazer said.

Between the restoration, which included the reattachment of limbs, and the scientific testing, "we've tried to analyze the victims from A to Z," said Stefano Vanacore, the chief curator in charge of restorations at the ruins, and the dentist's cousin.

The DNA testing could "determine the degree of kinship between some of the victims," he said, like the two girls found hugging each other in the so-called House of the Cryptoporticus.

The new findings could also help validate some theories. Some casts scanned so far showed the existence of fractured bones, suggesting that some died when the roof of their lodgings collapsed because of the weight of the ash and rock that rained down from Vesuvius.

The examination of one cast evinced that the victim was wearing a thickly woven cloth, suggesting that the eruption did not take place in the summer, on Aug. 24, the established eruption date, but rather later in the fall, as Grete Stefani, the site director of Pompeii, has long posited.

In all, 16 victims and two animals have been examined in the CT scanner, but Dr. Babino hopes to carry out more. To develop the three-dimensional images, those casts not able to pass through the CT scanner are being analyzed with X-ray machines and laser scanners.

"From this we will be able to make comparisons on the state of conservation in the future," Mr. Vanacore said. The scans will also be used to make copies of the casts in plastic, for exhibitions.

The data extracted by the CT scans will now be analyzed by the specialists, who will try to answer many questions, chief among them: Who were these people? The findings will be published this year, officials said.

"These people had lives," Ms. Lazer said, "real stories that deserve to be told, not those superimposed on them over time."

Please visit the site: <http://www.nytimes.com/2015/10/06/world/europe/scientists-hope-to-learn-how-pompeians-lived-before-the-big-day.html>

PARTS OF KING NAKHTANEBU I'S SHRINE **UNCOVERED IN CAIRO**

Basalt blocks of King Nakhtanebu I's shrine were unearthed today in Matariya area in Ain Shams, Cairo

Blocks of King Nakhtanebu I's shrine were unearthed during excavation works carried out by an Egyptian-German archaeological mission in the area known in ancient times as Oun city, now Ain Shams

Minister of Antiquities Mamdouh Eldamaty told Ahram Online that the mission also uncovered small limestone blocks of a number of columns and the ceiling of the temple of 30th Dynasty King Nakhtanebu I. The ceiling is decorated with stars.

Parts of Kings Meneptah and Nakhtanebu I statues were also found along with a collection of mud bricks used in the fence that once surrounded Oun.

Mahmoud Afifi, head of the Ancient Egypt Department at the antiquities ministry, explained that the sizes of the newly discovered blocks of the shrine range between 75cm and 1.25 cm, carved in Basalt and engraved with the different names of Egypt's regions at that time.

Other blocks are decorated with scenes depicting the god Hapi holding offerings. Further excavation is now in full swing in an attempt to unearth more of the shrine's blocks, in order to restore it to its original form.

Oun is one of the oldest cities of ancient Egypt, the capital of the 13th Lower Egyptian nome. Today, it is mostly destroyed, its temples and other buildings used for the construction of medieval Cairo.

Please visit the site:

<http://english.ahram.org.eg/NewsContent/9/40/152055/Heritage/Ancient-Egypt/Parts-of-King-Nakhtanebu-Is-shrine-uncovered-in-Ca.aspx>

12 GLADIATOR TOMBS TO BE DISPLAYED IN MUĞLA

Built over 1,800 years ago, 12 gladiator tombs will be on display for visitors at the entrance of the ancient city of Stratonicea, which is situated in Muğla's Yatağan district, also known as "the city of gladiators." Speaking to an Anadolu Agency (AA) reporter, Professor Bilal Söğüt, the head of the excavations team, said the archaeological team has conducted excavations in many parts of the ancient city.

"The ancient city is famous for its gladiators. We already know the names of 12 gladiators. Their tombs were excavated in previous years. The funerary steles are currently on display at Muğla Museum," he said. Pointing out that the archaeological project is important for promoting the city, Söğüt said many parts of the tombs will be extracted using cranes after special holes are dug around the ancient city's entrance.

Please visit the site: <http://www.dailysabah.com/history/2015/10/09/12-gladiator-tombs-to-be-displayed-in-mugla>

ARCHAEOLOGISTS UNEARTH MORE OF THE HISTORY OF CARTAGENA CARTAGENA MAY HAVE BEEN A LARGE ROMAN WEAPONS FACTORY

It sometimes seems that Cartagena has so much history that it's hard to know what to do with it all, and more prime examples of the wealth of archaeological heritage in the city are currently being unearthed in the Plaza de la Merced.

The second dig in the Plaza de la Merced is only in its early stages, but already the Decumanus Maximus (the main east-to-west street) has been located and a possible monument to nymphs has been found. Below the nymphaeum are the remains of a Punic home, whose destruction is thought to date from the time of the Roman conquest of the city by Scipio Africanus in 209 BC.

Among the surprises found by archaeologists are a portico on the left-hand side of the Decumanus and what may have been a monumental fountain on the western side of the excavation, and it is believed that these may have been part of a public square. The fountain includes sculpted representations of nymphs, and the theme of water is neatly connected to the alternative name of Plaza de la Merced: Plaza del Lago.

The Punic house was first located four metres below ground level last year and was a large home, including a kitchen and a food storage room.

Archaeologists unearth more of the history of Cartagena

The term Punic is often used to describe remains dating from the period just before the Romans invaded: this word refers to the Carthaginians who were engaged in the Punic Wars with the Romans. Their ancestry was the Phoenicians, a great trading nation which had been forced out of its homeland and had re-settled in Carthage on the African coast, gradually mixing with African nationals in a multicultural trading melting pot to become a culture called the "Carthaginians" by outsiders.

The word Punic is the Latin word for Phoenician. It can be a bit confusing for visitors to start with, but briefly, the Carthaginians were engaged in a major battle over a many years with the Romans for control of shipping and trade routes right around the Mediterranean. (A good place to find out more about this part of Cartagena's history is the Punic Wall Interpretation Centre)

Gradually the Romans forced them back away from Italy and then along the French coast, until finally they were squeezed into the lower southern corner of Spain, south of the Ebro River through a prolonged series of wars, split into two major sections: the Punic Wars. Part of the occupied area included Cartagena, and it was only once Hannibal marched down the coast and sacked Sagunto, before heading off across the Alps to attack Rome directly, that the second phase of the Punic Wars began, the final result being that Scipio marched up the coast and took Cartagena and ultimately the Carthaginians were crushed.

This year more amphorae and crockery dating from the Carthaginian settlement (227 to 209 BC) have been discovered, helping the archaeologists to build up a better picture of the way of life in Cartagena before the arrival of the Romans.

Archaeologists unearth more of the history of Cartagena Luis García, the archaeologist leading the dig, believes that when Scipio entered the city of Cartagena he found approximately 10,000 Carthaginian slaves, among them around a thousand who were responsible for making weapons for the Carthaginian troops. The Romans spared their lives in return for a promise that they would continue to manufacture arms, effectively turning the city into an important munitions factory. This theory is backed up by the discovery of relatively advanced metal-working equipment such as grinders and files.

Visiting the site on Monday José López, the Mayor of Cartagena, recognized the importance of the findings in Plaza de la Merced and explained that his intention is for trees to be transplanted in order for further digs to be possible in order to expose the breadth of remains below the plaza. Eventually, he added, the idea is to adapt the current layout of the plaza in order to preserve the archaeological heritage while at the same time allowing the square to be used for other events during the year.

Please visit the site: http://murciatoday.com/archaeologists-unearth-more-of-the-history-of-cartagena_27437-a.html

THE ANTIQUE CITY OF SAGALASSOS CARRIES TRACES OF ANCIENT ANATOLIA

Nestled in the Taurus Mountains, the ancient city of Sagalassos in the southwestern province of Burdur takes tourists on a journey back to 333 B.C. Seven kilometers away from Burdur's Ağlasun district, the ancient city provides a look back in time with ruins of baths, theaters, libraries, ceramic workshops, assembly buildings and fountains

The written history of Sagalassos goes back to 333 B.C, the year Alexander the Great conquered the city. Sagalassos flourished after it was taken by the Roman Empire. The ancient city, which is on UNESCO's Temporary World Heritage Site List, had one of the five ceramic production workshops of Rome. Sagalassos is generally referred to as "the favorite city of emperors" and "the city of love and desire." This year the city was visited by 22,000 people.

The antique city of Sagalassos carries traces of ancient Anatolia

Locals think that Ağlasun and Burdur can get more tourists if the ancient city is properly promoted and access to the city is made more convenient. Speaking to Anadolu Agency (AA), Ali Yemenli, a tourist visiting the ancient city, said that he has worked as a tourist guide for years, yet he only heard about Sagalassos and came there on a friend's recommendation. Yemenli could not hide his astonishment of the city's heritage as a tourist guide. "The city needs an influential promotion plan and tour operators should be encouraged to organize tours. Sagalassos has much to offer tourists from all around the world," he said. Yemenli said that the main reason why the city does not attract that many tourists is that it lacks promotion. He said that local administrations should work more to provide easy access to the city as well as create necessary promotion.

Belgian Professor Jeroen Poblome has been carrying out excavations in Sagalassos for 25 years and is another person amazed by the city's beauty. Excavations in Sagalassos began under the supervision of March Waelkens in 1989. When Waelkens retired two years ago, Poblome from Leuven Catholic University was assigned the position. Poblome told AA that when he was doing his military service he participated in the excavations of Sagalassos with a special permission granted from NATO in 1991. He holds a doctorate in ancient ceramics. When he was working with the excavation team he received higher positions and became a professor. "I worked with Waelkens for years. When he retired, he published some books on Sagalassos and we continued excavations with new projects," he said. Poblome expressed his satisfaction with his research on Sagalassos. "I can say that Sagalassos is a part of my life. Archeology is the most important thing in my life and the ancient city offers research opportunities. This is why I am here. I am not a Turkish citizen, I come from Belgium, yet I would be deeply affected if something bad happened in Sagalassos. I grew old here," he said.

The antique city of Sagalassos carries traces of ancient Anatolia

Situated on the northwestern part of Ağlasun, the ancient city of Sagalassos was the capital of Pisidia, a region in ancient Greece. The ancient theater is one of the most well-preserved structures in the city. A significant part of the city remains intact. Discovered

by French traveler Paul Lucas in 1706, the city has been under excavations since 1989. In August, the Telegraph named Ağlasun among the 10 must-see places in Turkey.

Human settlement in the area goes back to 8,000 B.C., before the actual site was occupied. Hittite documents refer to a mountain site of Salawassa in the 14th century B.C. and the town spread during the Phrygian and Lydian civilizations. Sagalassos was part of the region of Pisidia in the western part of the Taurus Mountains. During the Persian period, Pisidia became known for its warlike factions.

In 2007 the discovery of a finely detailed, colossal statue of Roman Emperor Hadrian, which is thought to have stood 4 meters to 5 meters in height, was reported in the press. The statue dates back to the early period of Hadrian's reign and depicts the emperor in military dress. It was carved in sections that were fitted together with marble mortise and tenons on the site, called "tharmae" by the Romans.

Please visit the site: <http://www.dailysabah.com/features/2015/10/10/the-antique-city-of-sagalassos-carries-traces-of-ancient-anatolia>

SPEAR INJURIES SHOW WORKER LIFE IN ANCIENT EGYPT, BY TRACI WATSON

An ancient wall carving spells out the bloody punishment for stealing animal hides: 100 lashes and five wounds. Egyptologists have long wondered whether that was a literal description.

Now skeletons showing evidence of that sentence have been found in a humble cemetery in the ancient Egyptian capital of Amarna.

Five middle-aged men buried in Amarna's cemetery for commoners seem to have been stabbed in the shoulder blade by a spear, scientists report in the International Journal of Paleopathology.

The misdeeds and names of the five men are unknown. But the researchers do know that many people with such injuries can quickly get back to work - a benefit to bosses in a city employing legions of laborers in stone-finishing workshops and quarries.

The lives of the everyday folk at Amarna "were filled with hardships that included heavy labor and often dietary insufficiency," study author Gretchen Dabbs of Southern Illinois University says via email from Amarna, where she's examining more skeletons. "We know that life in this place was physically taxing. This is another example of that."

It took especially taxing toil to build Amarna, a desert capital constructed some 3,300 years ago and dedicated to the sun god Aten. A grand city of stone palaces and temples, Amarna rose hurriedly from the desert at the command of the "Heretic King" Akhenaten.

Those put to rest in the commoners' cemetery suffered from high rates of joint disease, potentially caused by carrying heavy loads. Many bear signs of scurvy and other conditions linked to malnutrition.

Starting just under a decade ago, Dabbs and her colleagues noticed that some of the bodies had a mysterious slot-shaped gash in the bone of the shoulder blade. The gashes had been inflicted from an assailant standing behind the victim, making them unlikely to be battle wounds. Accidental falls couldn't explain the injuries either.

But the gashes turned out to be a good fit for a punishment described in the ancient texts. One ancient Egyptian fable tells of a thief who steals an ox and is punished with 100 blows and five wounds. A royal decree describes a similar fate for officials who commandeer workers for a construction project, and ancient Egyptian tax dodgers were beaten while lying facedown on the ground, just as those in the Amarna cemetery were stabbed from behind.

The researchers make "a pretty solid case here," says bioarchaeologist Brenda Baker of Arizona State University, who has also worked on ancient Egyptian skeletons. She says the study's explanation makes sense. The ancient Egyptians "didn't have jails the way we do today, so public lashing of this sort was probably prescribed."

Even more brutal punishments were handed out to some wrongdoers in ancient Egypt, says historian Joseph Manning of Yale University. Tomb robbers were put to death, and those accused of "high state crimes" such as tax evasion might have their ears or noses lopped off. But such harsh justice is "a little bit unusual," he says. He'd like to see more evidence from other sites to be sure that this treatment wasn't unique to Amarna.

Dabbs responds that there's a chance that this regimen was applied only in Amarna, but plenty of texts from outside the city describe corporal punishment. She hopes other researchers will go back to their skeleton collections and examine the shoulder blades - bones that are often overlooked -- for evidence of the backstabbing punishment carried out in the city of the sun.

Please visit the site: <http://www.usatoday.com/story/news/2015/10/13/egypt-cemetery-punishment-lashes-wounds/73688038/>

ANCIENT ‘WATER LAW’ UNEARTHED IN LAODICEA

A marble block unearthed in the ancient city of Laodicea reveals the use of water in the city was managed by law 1,900 years ago, just like today

A marble block, considered the “water law” from 1,900 years ago, has been unearthed in the ancient city of Laodicea in the western province of Denizli.

The block, which is 90 centimeters in length and 116 centimeters in width, has revealed the use of water in the city had been managed by law, which involved a penalty ranging from 5,000 to 12,500 denarius.

The “water law” marble block dating back to 114 A.D. included strict measures regarding the use of water coming from the Karşı Mountain through channels to the city, as well as the use of a fountain dedicated to Roman Emperor Traianus. The rules were prepared by Anatolian State Governor Aulus Vicirius Matralis.

The excavation works, led by Pamukkale University and supported by Denizli Municipality, have continued on Stadium Street in the ancient site. Excavations head Professor Celal Şimşek of Pamukkale University, said, “The Laodicea Assembly made this law in 114 A.D. and presented it to a pro council in Ephesus for approval.

The pro council approved the law on behalf of the empire. Water was vital for the city. This is why there were heavy penalties against those who polluted the water, damaged the water channels or reopening the sealed water pipes. Breaking the law was subject to a penalty of about 12,500 denarius - 125,000 Turkish Liras.”

Penalty for polluting the water

Şimşek said the 1,900-year-old rules to prevent water pollution had a very special place, adding, “The fine for damaging the water channel or polluting the water is 5,000 denarius, nearly 50,000 Turkish Liras. The fine is the same for those who break the seal and attempt illegal use. Also, there are penalties for senior staff that overlook the illegal use of water. They pay 12,500 denarius. Those who denounce the polluters are given one-eighth of the penalty as a reward, according to the rules.”

Some of the rules, written in the Greek alphabet, included the following:

“Those who divide the water for his personal use, should pay 5,000 denarius to the empire treasury; it is forbidden to use the city water for free or grant it to private individuals; those who buy the water cannot violate the Vespasian Edict; those who damage water pipes should pay 5,000 denarius; protective roofs should be established for the water depots and water pipes in the city; the governor’s office [will] appoint two citizens as curators every year to ensure the safety of the water resource; nobody who has farms close to the water channels can use this water for agriculture.”

Thousands of artifacts

In the last seven years, excavation work in the ancient city of Laodicea has unearthed some 2,300 artifacts as well as the Laodicea Church, the monumental columns of North

Sacred Agora and Central Agora and half of Stadium Street, along with others. The Laodicea site's excavation work was also known as the largest systematic excavation organization in Turkey and has hosted thousands of tourists in the last seven years, in addition to inspiring hundreds of scientific articles along with six scientific books.

Please visit the site: <http://www.hurriyetdailynews.com/ancient-water-law-unearthed-in-laodicea-.aspx?pageID=238&nID=87259&NewsCatID=375>

ANCIENT REPAIRS AT UR AND THE POWER OF BITUMEN, BY TESSA DE ALARCON

One thing that we all love to find on objects in the Museum collections are ancient repairs. These are repairs made to an object during its period of use. So, imagine that mug you use every day for your morning coffee. One day that mug breaks and you fix it with Super glue and go on using it until one day you decide it's really too broken and not worth keeping anymore and get rid of it (i.e. leave it in the garden, throw it in the trash, etc.). The mug at that point has now entered the archaeological record. Then years from now (let's say 5,000 years later give or take) people dig it up and examine, analyze, and research your mug. They may even put it back together again using fancy futuristic methods (i.e. not Super glue). The ancient repair in this case would be that repair you did with Super glue when you were still using the mug.

Now to get back to Ur and Mesopotamia, for the people of Ur, their Super glue was bitumen. Bitumen is a naturally occurring viscous mixture of hydrocarbons (including petroleum). In ancient Mesopotamia it had many uses. For example, we have model boats such as this one (B17706) that were made from a bituminous paste. It was also used to make the handle for the copper alloy tool featured in these posts.

For this post though, I want to show how it was also used to repair ceramic materials. Here for example you can see it was used to repair this drainpipe (30-12-251). The bitumen would have sealed the join or crack and as an oil-based material it would have been water resistant allowing the drainpipe to continue to function.

Similarly, you can see it here with this bowl (31-16-339), where again the water resistant nature of the repair would make sense for the continued use of the object.

Finally, some of the figurines also show evidence of bitumen having been used for repairs. 35-1-127 is my favorite example, although there are other examples as well (see below). As you can see, the bitumen paste was used to reattach the foot to the leg (unfortunately we don't have the rest of this figure).

What I find so particularly interesting is that no attempt was made to wipe off the excess bitumen or hide the repair. What clearly mattered was not that they be beautiful but that they be complete.

This entry was posted in Conservation, Iraq, Museum, Research and tagged Ancient repair, ceramic, Conservation, Iraq, ur, Ur Digitization Project. Bookmark the permalink. Trackbacks are closed, but you can post a comment.

Please visit the site: <http://www.penn.museum/blog/collection/conservation/ancient-repairs-at-ur-and-the-power-of-bitumen/>

BIBLICAL CITY OF SODOM 'FOUND IN JORDAN' - ARCHAEOLOGISTS HAVE BEEN EXCAVATING THE ANCIENT SITE OF TALL EL HAMMAM, BY VICTORIA RICHARDS

Sodom, the ancient Biblical "city of sin", may have been discovered by a team of archaeologists working on a site in Jordan.

Dr Steven Collins, a professor of Biblical studies and apologetics at Trinity Southwest University, says that the "monstrous" Tall el-Hammam site in the southern Jordan Valley, which lies eight miles northeast of the Dead Sea, matches the descriptions of the Bronze Age city-state.

He told Popular Archaeology that it meets "every criterion" of Sodom - which, according to the Old Testament, was destroyed by fire and brimstone along with its neighbour, Gomorrah.

Mr Collins, who began working on it in 2005, said: "I concluded that if one wanted to find Sodom, then one should look for the largest city on the eastern Kikkar that existed during the Middle Bronze Age, the time of Abraham and Lot.

"When we explored the area, the choice of Tall el Hammam as the site of Sodom was virtually a no-brainer since it was at least five to 10 times larger than all the other Bronze Age sites in the entire region."

The site, which is believed to date back between 3500 and 1540 BC, is marked by a large mound that may have once been two cities - lower and upper - where the rich and elite lived, according to Sky News. Researchers have found defensive walls 10m high and 5m thick, gates, towers, plazas and ramparts, as well as a 'Red Palace' in the upper city.

"It was a huge undertaking, requiring millions of bricks and, obviously, large numbers of labourers," Mr Collins said. He added that the defensive structures - which appear to have been 30m high from the surrounding terrain - would have been used to protect wealthy residents and the king's palace.

Life in the city, the researchers said, looks to have come to a halt near the end of the Middle Bronze Age before being abandoned for 700 years.

Please visit the site: <http://www.independent.co.uk/news/world/middle-east/biblical-city-of-sodom-found-in-jordan-a6693576.html>

PLATO'S STAVE: ACADEMIC CRACKS **PHILOSOPHER'S MUSICAL CODE -** **HISTORIAN CLAIMS PLATO'S** **MANUSCRIPTS ARE MATHEMATICALLY** **ORDERED ACCORDING TO 12-NOTE SCALE,** **BY JULIAN BAGGINI**

The research appears to support a previously discredited symbolic, rather than literal, way of reading Plato's great works. Photograph: Greek/Getty Images/The Bridgeman Art Library

It may sound like the plot of a Dan Brown novel, but an academic at the University of Manchester claims to have cracked a mathematical and musical code in the works of Plato.

Jay Kennedy, a historian and philosopher of science, described his findings as "like opening a tomb and discovering new works by Plato."

Plato is revealed to be a Pythagorean who understood the basic structure of the universe to be mathematical, anticipating the scientific revolution of Galileo and Newton by 2,000 years.

Kennedy's breakthrough, published in the journal *Apeiron* this week, is based on stichometry: the measure of ancient texts by standard line lengths. Kennedy used a computer to restore the most accurate contemporary versions of Plato's manuscripts to their original form, which would consist of lines of 35 characters, with no spaces or punctuation. What he found was that within a margin of error of just one or two percent, many of Plato's dialogues had line lengths based on round multiples of twelve hundred.

The *Apology* has 1,200 lines; the *Protagoras*, *Cratylus*, *Philebus* and *Symposium* each have 2,400 lines; the *Gorgias* 3,600; the *Republic* 12,200; and the *Laws* 14,400.

Kennedy argues that this is no accident. "We know that scribes were paid by the number of lines, library catalogues had the total number of lines, so everyone was counting lines," he said. He believes that Plato was organising his texts according to a 12-note musical scale, attributed to Pythagoras, which he certainly knew about.

"My claim," says Kennedy, "is that Plato used that technology of line counting to keep track of where he was in his text and to embed symbolic passages at regular intervals." Knowing how he did so "unlocks the gate to the labyrinth of symbolic messages in Plato".

Believing that this pattern corresponds to the 12-note musical scale widely used by Pythagoreans, Kennedy divided the texts into equal 12ths and found that "significant concepts and narrative turns" within the dialogues are generally located at their junctures. Positive concepts are lodged at the harmonious third, fourth, sixth, eighth and ninth

"notes", which were considered to be most harmonious with the 12th; while negative concepts are found at the more dissonant fifth, seventh, 10th and 11th.

Kennedy has also found that the enigmatic "divided line" simile in the Republic, in which Plato describes a line divided by an unstated ratio, falls 61.7% of the way through the dialogue. It has been thought that the line refers to the golden mean, which expressed as a percentage is 61.8%.

Copies of the paper have been circulating among senior scholars, who believe Kennedy's argument should be taken seriously.

Professor Andrew Barker, a leading authority on ancient Greek music, said that "the results he's come up with look too neat to be accidental" and that if scholars confirm them, "he will have shown something quite startling about Plato's methods of composition".

Kennedy believes his findings restore what was the standard, mainstream view which held for 2,000 years "from the first generation of Plato's followers, up through the renaissance". This held that "he wrote symbolically and that if you worked hard and became wise you could understand the symbols and penetrate his text to his underlying philosophy." Only in the last few hundred years has an emphasis on the literal meanings of texts led to a neglect of their figurative meanings.

It also explains why it is that Aristotle, Plato's pupil, emphatically claimed that Plato was a follower of Pythagoras, to the bafflement of most contemporary scholars.

The secrecy was because Plato's was "a dangerous idea", claims Kennedy. "It meant that mathematical law governed the universe and not Zeus." Given that Plato's teacher, Socrates, had been executed for sowing impiety among the youth he would have been "very cautious about revealing doctrines that threaten the gods of Olympus".

For once, Alfred North Whitehead's description of western philosophy as "a series of footnotes to Plato" looks like being an understatement. "We've got some 2,000 pages of Plato," says Kennedy. "We now know that underneath all of those genuine dialogues there's another layer of symbolic meaning. This is the beginning of a big debate. It will take years to make sense of all this."

Please visit the site: http://www.theguardian.com/world/2010/jun/29/plato-mathematical-musical-code?utm_content=buffer81c41&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer

SHROUD OF TURIN DNA INDICATES GLOBAL ORIGINS GENETIC MATERIAL SUGGESTS THE SHROUD MAY HAVE BEEN CREATED IN INDIA, BY LEE SPEIGEL

There's a surprising new wrinkle in the story of the celebrated Shroud of Turin.

A group of Italian researchers have found that the 14-foot-long garment -- believed by some to be the burial cloth of Jesus Christ, even though science has proven that's not the case -- contains DNA from plants found all over Earth.

"Here we report the main findings from the analysis of genomic DNA extracted from dust particles vacuumed from parts of the body image and the lateral edge used for radiocarbon dating," Dr. Gianni Barcaccia, a plant genetics and genomics professor at the University of Padova in Italy, wrote in a paper co-authored with his colleagues about the DNA results.

After sequencing the DNA of pollen and dust found on the shroud, the researchers discovered several plant groups native to the Mediterranean, RealClearScience.com reported. Other groups were linked to Asia, the Middle East, or the Americas, but must have been introduced at a time later than the Medieval period, according to the researchers.

An overview of the various plant DNA found on the shroud and their centers of origin. (Click caption for larger image) The findings, published in the journal Scientific Reports on Oct. 5, suggest that the cloth may have been manufactured in India and then was transported from the Near East to its current home in Turin, Italy.

The linen shroud appears to show a double image of a bearded man "who suffered physical trauma in a manner consistent with crucifixion after being beaten, scourged and crowned with thorns," the researchers wrote. But whether this man was the historic Jesus Christ has been the subject of decades of scrutiny, speculation and controversy over its authenticity and origin.

In 1988, carbon-14 testing performed on the cloth by an international team of researchers, dated shroud fibers back to between 1260 and 1390. (That's a bit more than 1,000 years after the crucifixion, which means, of course, that the shroud can't be the relic that some Christians claim it to be.)

But a 2005 study by a retired chemist from Los Alamos National Laboratory dismissed that finding, arguing that the material tested in 1988 came from a patch applied to the shroud in medieval times. The 2005 study put the age of the shroud at 1,300 to 3,000 years.

This story has been updated with more information about the age of the shroud.

Please visit the site: http://www.huffingtonpost.com/entry/turin-shroud-global-dna_561d252de4b028dd7ea52ccd

THE EARLIEST KNOWN ABECEDARY

A flake of limestone (ostrakon) inscribed with an ancient Egyptian word list of the fifteenth century BC turns out to be the world's oldest known abecedary. The words have been arranged according to their initial sounds, and the order followed here is one that is still known today. This discovery by Ben Haring (Leiden University) with funding from Free Competition Humanities has been published in the October issue of the Journal of Near Eastern Studies.

The order is not the ABC of modern western alphabets, but Halaḥam (HLHM), the order known from the Ancient Egyptian, Ancient Arabian and Classical Ethiopian scripts. ABC and HLHM were both used in Syria in the thirteenth century BC: cuneiform tablets found at site of ancient Ugarit show both sequences. Back then, ABC was still 'b-g ('aleph-beth-gimel). This sequence was favored by the Phoenicians who passed it on to the Greeks, together with the alphabet itself. Thus a-b-g found its way to the later alphabets inspired by the Greek and Latin ones.

The ostrakon was found over twenty years ago by the British Egyptologist Nigel Strudwick in an Ancient Egyptian tomb near Luxor. The text has never been understood, however, until it was deciphered by Ben Haring, a Dutch Egyptologist working at Leiden University. Haring made his discovery in the context of a research project on Ancient Egyptian identity marks funded by the Netherlands Organization for Scientific Research (NWO). The text is an incomplete list of words written in hieratic, the cursive script used in Ancient Egypt for some 3,000 years. To the left is a column of individual signs that appear to be abbreviations of the words. Very possibly they even render the initial consonants of the words, which would make them alphabetic signs.

The hieratic script and the related hieroglyphic script were not alphabetic themselves. Yet the Ancient Egyptian scripts had an important position in the earliest known stages of the alphabet. Inscriptions in the Sinai Desert and in Southern Egypt show signs that are thought to be the earliest known alphabetic characters, and the forms of many of these characters were clearly inspired by Egyptian hieroglyphs. Most of these inscriptions still resist decipherment. Some of their characters also figure in the left column of the word list deciphered by Haring. The list is therefore a key piece for the reconstruction of the earliest history of the alphabet.

This ancient Egyptian word list of the fifteenth century BC is the earliest known example of a list arranged according to their initial sounds. It gives a vital insight into the earliest known stages of the alphabet. Explore further: Egyptologist unravels ancient mystery

More information: Ben Haring. Halaḥam on an Ostrakon of the Early New Kingdom? , Journal of Near Eastern Studies (2015). DOI: 10.1086/682330

Please visit the site: <http://phys.org/news/2015-10-earliest-abecedary.html>

ARCHAEOLOGISTS DISCOVER SECRET TUNNEL IN ANCIENT HITTITE CASTLE, BY JEVA LANGE

The excavation of a mountain castle in central Turkey has revealed a secret tunnel, built by the Hittites around 4,000 years ago. Geval Castle, on Takkel Mountain in Central Anatolia, sits over 5,500 feet above sea level and once offered a strategic 360-degree vantage point for a population that regularly faced assaults from the Egyptians, Assyrians, and Thracians throughout their history. As a result, Hittites were master underground builders, although the exciting discoveries at Takkel Mountain appear to be the first of their kind.

"We have discovered secret tunnels in the castle. We have cleaned there and revealed a [328-foot to 492-foot] part of the tunnel. We believe that it is almost [984 feet long]. This tunnel becomes integrated with the cistern [...] This tunnel is connected to the cistern through a secret way," Necmettin Erbakan University History of Arts Prof. Ahmet Çaycı told Hurriyet Daily News.

Geval Castle has many such cisterns, which were used to supply water to the fortress. Researchers can make assumptions about the population of the area by measuring the sizes of the cisterns and calculating how many people lived at the castle based on the available water supply. However, the tunnel notably established a connection with the outside world. "It is closed with a vault that looks like part of the land," Çaycı said. "But when you go deeper, you understand that it is a tunnel."

Please visit the site: <http://theweek.com/speedreads/584415/archaeologists-discover-secret-tunnel-ancient-hittite-castle>

GRAVE OF ‘GRIFFIN WARRIOR’ AT PYLOS **COULD BE A GATEWAY TO** **CIVILIZATIONS, BY NICHOLAS WADE**

Archaeologists digging at Pylos, an ancient city on the southwest coast of Greece, have discovered the rich grave of a warrior who was buried at the dawn of European civilization.

He lies with a yardlong bronze sword and a remarkable collection of gold rings, precious jewels and beautifully carved seals. Archaeologists expressed astonishment at the richness of the find and its potential for shedding light on the emergence of the Mycenaean civilization, the lost world of Agamemnon, Nestor, Odysseus and other heroes described in the epics of Homer.

“Probably not since the 1950s have we found such a rich tomb,” said James C. Wright, the director of the American School of Classical Studies at Athens. Seeing the tomb “was a real highlight of my archaeological career,” said Thomas M. Brogan, the director of the Institute for Aegean Prehistory Study Center for East Crete, noting that “you can count on one hand the number of tombs as wealthy as this one.”

The warrior’s grave belongs to a time and place that give it special significance. He was buried around 1500 B.C., next to the site on Pylos on which, many years later, arose the palace of Nestor, a large administrative center that was destroyed in 1180 B.C., about the same time as Homer’s Troy. The palace was part of the Mycenaean civilization; from its ashes, classical Greek culture arose several centuries later.

The palaces found at Mycena, Pylos and elsewhere on the Greek mainland have a common inspiration: All borrowed heavily from the Minoan civilization that arose on the large island of Crete, southeast of Pylos. The Minoans were culturally dominant to the Mycenaeans but were later overrun by them.

How, then, did Minoan culture pass to the Mycenaeans? The warrior’s grave may hold many answers. He died before the palaces began to be built, and his grave is full of artifacts made in Crete. “This is a transformative moment in the Bronze Age,” Dr. Brogan said.

The grave, in Dr. Wright’s view, lies “at the date at the heart of the relationship of the mainland culture to the higher culture of Crete” and will help scholars understand how the state cultures that developed in Crete were adopted into what became the Mycenaean palace culture on the mainland.

Warriors probably competed for status as stratified societies formed on the mainland. This developing warrior society liked to show off its power through high-quality goods, like Cretan seal stones and gold cups — “lots of bling,” as Dr. Wright put it. “Perhaps we can theorize that this site was that of a rising chieftom,” he said.

The grave was discovered this spring, on May 18, by Jack L. Davis and Sharon R. Stocker, a husband-and-wife team at the University of Cincinnati who have been excavating at Pylos for 25 years.

The top of the warrior's shaft grave lies at ground level, seemingly so easy to find that it is quite surprising the tomb lay intact for 35 centuries.

"It is indeed mind boggling that we were first," Dr. Davis wrote in an email. "I'm still shaking my head in disbelief. So many walked over it so many times, including our own team."

The palace at Pylos was first excavated by Carl Blegen, also of the University of Cincinnati, who on his first day of digging in 1939 discovered a large cache of tablets written in the script known as Linear B, later deciphered as the earliest written form of Greek.

Whether or not Blegen's luck was on their mind, Dr. Davis and Dr. Stocker started this season to excavate outside the palace in hope of hitting the dwellings that may have surrounded it and learning how ordinary citizens lived. On their first day of digging, they struck two walls at right angles. First they assumed the structure was a house, then a room, and finally a grave.

"I was very pessimistic about this," Dr. Davis said, thinking that the grave was probably some medieval construction, or that even if it was prehistoric it would almost certainly have been robbed. But a few days later, he received a text message from the supervising archaeologist saying, "I hit bronze."

What he and Dr. Stocker had stumbled on was a very rare shaft grave, 5 feet deep, 4 feet wide and 8 long. Remarkably, the burial was intact apart from a one-ton stone, probably once the lid of the grave, which had fallen in and crushed the wooden coffin beneath.

The coffin has long since decayed, but still remaining are the bones of a man about 30 to 35 years old and lying on his back. Placed to his left were weapons, including a long bronze sword with an ivory hilt clad in gold and a gold-hilted dagger. On his right side were four gold rings with fine Minoan carvings and some 50 Minoan seal stones carved with imagery of goddesses and bull jumpers. "I was just stunned by the quality of the carving," Dr. Wright said, noting that the objects "must have come out of the best workshops of the palaces of Crete."

An ivory plaque carved with a griffin, a mythical animal that protected goddesses and kings, lay between the warrior's legs. The grave contained gold, silver and bronze cups. The warrior seems to have been something of a dandy. Among the objects accompanying him to the netherworld were a bronze mirror with an ivory handle and six ivory combs.

Photo

Because of the griffins depicted in the grave, Dr. Davis and Dr. Stocker refer to the man informally as the "griffin warrior." He was certainly a prominent leader in his community, they say, maybe the pre-eminent one. The palace at Pylos had a king or "wanax," a title mentioned in the Linear B tablets, but it's not known if this position existed in the griffin warrior's society.

Ancient Greek graves can be dated by their pottery, but the griffin warrior's grave had none: His vessels are made of silver or gold, not humble clay. From shards found above and below the grave, however, Dr. Davis believes it was dug in the period known as Late Helladic II, a pottery-related chronology that corresponds to 1600 B.C. to 1400 B.C., in the view of some authorities, or 1550 B.C. to 1420 B.C., in the view of others.

If the earliest European civilization is that of Crete, the first on the European mainland is the Mycenaean culture to which the griffin warrior belongs. It is not entirely clear why civilization began on Crete, but the island's population size and favorable position for sea trade between Egypt and Greece may have been factors. "Crete is ideally situated between mainland Greece and the east, and it had enough of a population to resist raids," said Malcolm H. Wiener, an investment manager and expert on Aegean prehistory.

The Minoan culture on Crete exerted a strong influence on the people of southern Greece. Copying and adapting Minoan technologies, they developed the palace cultures such as those of Pylos and Mycena. But as the Mycenaeans grew in strength and confidence, they were eventually able to invade the land of their tutors. Notably, they then adapted Linear A, the script in which the Cretans wrote their own language, into Linear B, a script for writing Greek.

Linear B tablets, were preserved in the fiery destruction of palaces when the soft clay on which they were written was baked into permanent form. Caches of tablets have been found in Knossos, the main palace of Crete, and in Pylos and other mainland palaces. Linear B, a script in which each symbol stands for a syllable, was later succeeded by the familiar Greek alphabet in which each symbol represents a single vowel or consonant.

The griffin warrior, whose grave objects are culturally Minoan but whose place of burial is Mycenaean, lies at the center of this cultural transfer. The palace of Pylos had yet to arise, and he could have been part of the cultural transition that made it possible. The transfer was not entirely peaceful: At some point, the Mycenaeans invaded Crete, and in 1450 B.C., the palace of Knossos was burned, perhaps by Mycenaeans. It is not yet clear whether the objects in the griffin warrior's tomb were significant in his own culture or just plunder.

"I think these objects were not just loot but had a meaning already for the guy buried in this grave," Dr. Davis said. "This is the critical period when religious ideas were being transferred from Crete to the mainland."

The Mycenaeans used the Minoan sacred symbol of bull's horns on their buildings and frescoes, and their religious practices seem to have been a mix of Minoan concepts with those of mainland Greece.

Archaeologists are looking forward to studying a major unlooted tomb with modern techniques like DNA analysis, which may shed light on the warrior's origin. DNA, if extractable from the warrior's teeth, may tell where in Greece he was born. Suitable plant material, if found in the tomb, could yield a radiocarbon date for the burial.

This and other techniques allow far more information to be extracted from a rich grave site than was possible with the picks and shovels used by earlier excavators. "We've come a long way from Heinrich Schliemann," said Mr. Wiener, referring to the efforts of

the 19th-century German businessman who excavated Troy and Mycenae to support his view that the events described by Homer were based on historical fact.

Please visit the site: <http://www.nytimes.com/2015/10/27/science/a-warriors-grave-at-pylos-greece-could-be-a-gateway-to-civilizations.html?action=click&contentCollection=undefined®ion=Footer&module=WhatsNext&version=WhatsNext&contentID=WhatsNext&moduleDetail=most-emailed-1&pgtype=undefined>

UNIVERSITY OF CINCINNATI TEAM DISCOVERS RARE WARRIOR TOMB FILLED WITH BRONZE AGE WEALTH AND WEAPONS

An international team of archaeologists led by University of Cincinnati researchers recently discovered a Bronze Age warrior's tomb at Pylos in southwestern Greece filled with more than 1,400 objects: jewels, weapons and armor, as well as bronze, silver and gold vessels. The unusual find is celebrated in today's New York Times.

On the floor of the grave lay the skeleton of an adult male, stretched out on his back. Weapons lay to his left, and jewelry to his right.

Near the head and chest was a bronze sword, its ivory hilt covered in gold. A gold-hilted dagger lay beneath it. Still more weapons were found by the man's legs and feet. Gold cups rested on his chest and stomach, and near his neck was a perfectly preserved gold necklace with two pendants. By his right side and spread around his head were over one thousand beads of carnelian, amethyst, jasper, agate and gold. Nearby were four gold rings, and silver cups as well as bronze bowls, cups, jugs and basins.

The above describes what a University of Cincinnati-led international research team found this summer when excavating what was initially thought to be a Bronze Age house.

Instead, the team made a rich and rare discovery of an intact, Bronze Age warrior's tomb dating back to about 1500 B.C., and that discovery is featured in The New York Times, in an article titled: A Warrior's Grave at Pylos, Greece, Could Be a Gateway to Civilizations.

The find is so extraordinary that UC's Shari Stocker, senior research associate in the Department of Classics, McMicken College of Arts and Sciences, states: "This previously unopened shaft grave of a wealthy Mycenaean warrior, dating back 3,500 years, is one of the most magnificent displays of prehistoric wealth discovered in mainland Greece in the past 65 years."

Stocker co-leads the team that unearthed the undisturbed shaft tomb, along with Jack Davis, UC's Carl W. Blegen Chair in Greek Archaeology. Other team members include UC faculty, staff specialists and students, some of whom have worked in the area around the present-day city of Pylos on the southwest coast of Greece for the last quarter century as part of the Pylos Regional Archaeological Project. That UC-based effort is dedicated to uncovering the pre-history and history of the Bronze Age center known as the Palace of Nestor, an extensive complex and a site linked to Homeric legend. Though the palace was destroyed by fire sometime around 1200 B.C., it is nevertheless the best-preserved Bronze Age palace on the Greek mainland.

It was UC archaeologist Carl Blegen, along with Konstantinos Kourouniotis, director of the National Archaeological Museum, who initially uncovered the remains of the famed

Palace of Nestor in an olive grove in 1939. Located near the present-day city of Pylos, the palace was a destination in Homer's "Odyssey," where sacrifices were said to be offered on its beaches. The king who ruled at the Palace of Nestor controlled a vast territory that was divided into more than 20 districts with capital towns and numerous small settlements.

Explains Stocker, "This latest find is not the grave of the legendary King Nestor, who headed a contingent of Greek forces at Troy in Homer's 'Iliad.' Nor is it the grave of his father, Neleus. This find may be even more important because the warrior pre-dates the time of Nestor and Neleus by, perhaps, 200 or 300 years. That means he was likely an important figure at a time when this part of Greece was being indelibly shaped by close contact with Crete, Europe's first advanced civilization."

Thus, the tomb may have held a powerful warrior or king - or even a trader or a raider - who died at about 30 to 35 years of age but who helped to lay the foundations of the Mycenaean culture that later flourished in the region.

Davis speculates, "Whoever he was, he seems to have been celebrated for his trading or fighting in nearby island of Crete and for his appreciation of the more-sophisticated and delicate art of the Minoan civilization (found on Crete), with which he was buried."

Potential wealth of information

The team found the tomb while working in the area of the Palace of Nestor, seeking clues as to how the palace and its rulers came to control an area encompassing all of modern Messenia in western Greece and supporting more than 50,000 inhabitants during the Bronze Age.

Davis says that researchers were there to try and figure out how the Palace of Nestor became a center of power and when this rise in power began, questions they now think the tomb may help answer.

Given the magnitude of this find, it may be necessary to rethink when Pylos and the wider area around it began to flourish. It may have been earlier than previously thought since, somehow, whether via trade or force (e.g., raiding), its inhabitants had acquired the valuable objects found within the tomb.

Many of the tomb's objects were made in nearby Crete and show a strong Minoan style and technique unknown in mainland Greece in the 15th century BC.

The same would likely have been true of the warrior's dwelling during this lifetime. He would have lived on the hilltop citadel of nearby Englianos at a time when great mansions were first being built with walls of cut-stone blocks (vs. uncut rock and stones) in the style then associated with nearby Mediterranean Island of Crete and its Minoan culture, their walls decorated with paintings influenced by earlier Minoan wall paintings.

The weapons of bronze found within the tomb included a meter-long slashing sword with an ivory handle covered with gold..

It was UC archaeologist Carl Blegen, along with Konstantinos Kourouniotis, director of the National Archaeological Museum, who initially uncovered the remains of the famed

Palace of Nestor in an olive grove in 1939. Located near the present-day city of Pylos, the palace was a destination in Homer's "Odyssey," where sacrifices were said to be offered on its beaches. The king who ruled at the Palace of Nestor controlled a vast territory that was divided into more than 20 districts with capital towns and numerous small settlements.

Explains Stocker, "This latest find is not the grave of the legendary King Nestor, who headed a contingent of Greek forces at Troy in Homer's 'Iliad.' Nor is it the grave of his father, Neleus. This find may be even more important because the warrior pre-dates the time of Nestor and Neleus by, perhaps, 200 or 300 years. That means he was likely an important figure at a time when this part of Greece was being indelibly shaped by close contact with Crete, Europe's first advanced civilization."

Thus, the tomb may have held a powerful warrior or king - or even a trader or a raider - who died at about 30 to 35 years of age but who helped to lay the foundations of the Mycenaean culture that later flourished in the region.

Davis speculates, "Whoever he was, he seems to have been celebrated for his trading or fighting in nearby island of Crete and for his appreciation of the more-sophisticated and delicate art of the Minoan civilization (found on Crete), with which he was buried."

Potential wealth of information

The team found the tomb while working in the area of the Palace of Nestor, seeking clues as to how the palace and its rulers came to control an area encompassing all of modern Messenia in western Greece and supporting more than 50,000 inhabitants during the Bronze Age.

Davis says that researchers were there to try and figure out how the Palace of Nestor became a center of power and when this rise in power began, questions they now think the tomb may help answer.

Given the magnitude of this find, it may be necessary to rethink when Pylos and the wider area around it began to flourish. It may have been earlier than previously thought since, somehow, whether via trade or force (e.g., raiding), its inhabitants had acquired the valuable objects found within the tomb.

Many of the tomb's objects were made in nearby Crete and show a strong Minoan style and technique unknown in mainland Greece in the 15th century BC.

The same would likely have been true of the warrior's dwelling during this lifetime. He would have lived on the hilltop citadel of nearby Englianos at a time when great mansions were first being built with walls of cut-stone blocks (vs. uncut rock and stones) in the style then associated with nearby Mediterranean Island of Crete and its Minoan culture, their walls decorated with paintings influenced by earlier Minoan wall paintings.

Wealth of jewels and weaponry

A remarkable store of riches was deposited in the tomb with the warrior at the time of his death. The mere fact that the vessels in the tomb are of metal (vs. ceramic pottery) is a strong indication of his great wealth.

See the list of gold, silver, bronze, ivory objects and precious stone beads found within the tomb.

"It is truly amazing that no ceramic vessels were included among the grave gifts. All the cups, pitchers and basins we found were of metal: bronze, silver and gold. He clearly could afford to hold regular pots of ceramic in disdain," according to Stocker.

This member of the elite was accompanied in the afterlife by about 50 seal-stones carved with intricate Minoan designs of goddesses as well as depictions of bulls and human bull jumpers soaring over their horns. Four gold rings in the tomb contain fine Minoan carvings. A plaque of carved ivory with a representation of a griffon with huge wings lay between the man's legs. Nearby was a bronze mirror with an ivory handle. Archaeological conservator Alexandros Zokos was essential partner in the removal, cleaning and preservation of the finds from the grave.

The weapons of bronze within the tomb include a meter-long slashing sword with an ivory handle, several daggers, a spearhead, along with the already-mentioned sword and dagger with gold pommels.

Other grave gifts originally rested above the dead warrior atop a coffin of wood which later collapsed, spilling a crushing load of objects down on the skeleton - and making the job of excavation difficult and slow.

The gifts atop the coffin included bronze jugs; a large, bronze basin; thin bands of bronze, probably from the warrior's suit of body armor; many wild boar's teeth from the warrior's helmet.

In combination with this weaponry, the discovery of so much jewelry with a male burial challenges the commonly held belief that these apparently "feminine" adornments and offerings accompanied only wealthy women to the hereafter.

Previously unexplored field

What would eventually become the successful excavation of the tomb began on the team's very first day of its field work in May 2015, conducted in a previously unexplored field near the Palace of Nestor. They immediately found one of the four walls of the warrior's grave.

"We put a trench in this one spot because three stones were visible on the surface," says Davis, adding, "At first, we expected to find the remains of a house. We expected that this was the corner of a room of a house, but quickly realized that it was the tops of the walls of a stone-lined grave shaft."

In the end, the shaft measured about 5 feet deep, 4 feet wide and 8 feet long. It took the team about two weeks to clear the shaft before "we hit bronze," says Stocker. At that point, they realized they might have an exceptional prize: an undisturbed grave shaft, never stripped by looters. She explains, "The fact that we had not encountered any objects for almost a meter indicated that whatever was at the bottom had been sealed for a long time."

Stocker and Alison Fields, a UC graduate student of classics, did most of the actual excavation because their smaller size allowed them to work more easily and carefully around the tomb and its many precious objects.

What comes next

Both Stocker and Davis say it was good luck to discover this intact grave. Given the rarity of the find, it's unlikely to be repeated. "It's almost as if the occupant wants his story to be told," Davis says.

And that story will continue to unfold. The UC team and others are studying the artifacts in detail, with all artifacts remaining in Greece and their final disposition determined by the Greek Archaeological Service. Former UC anthropologist Lynne Schepartz, now of the University of Witwatersrand in Johannesburg, South Africa, will study the skeletal remains.

Research partners and support

The excavation was organized through the Department of Classics, University of Cincinnati, with sponsorship from the American School of Classical Studies in Athens, and with permits from the Greek Ministry of Culture. Research at Pylos by the University of Cincinnati in 2013 was supported by the Institute for Aegean Prehistory, the Louise Taft Semple Fund of UC's Department of Classics and private donors including Phocion Potamianos, a Greek-American; James H. Ottaway, Jr., trustee of the American School of Classical Studies at Athens; and Robert McCabe, president of the Board of Trustees of the American School of Classical Studies at Athens, and his wife, Dina McCabe.

Davis and Stocker also give credit and thanks to their team, the "very helpful local office of the Ministry of Culture of Greece and guards who provided security; Evangelia Militsi, director of antiquities for the Messenia office of the Ministry of Culture, and Evangelia Malapani, curator of antiquities."

Catalogue of objects found within the warrior tomb

Gold

Four complete solid-gold seal rings to be worn on a human finger. This number is more than found with any single burial elsewhere in Greece.

Two squashed gold cups and a silver cup with a gold rim One unique necklace of square box-shaped golden wires, more than 30 inches long with two gold pendants decorated with ivy leaves.

Numerous gold beads, all in perfect condition.

Silver

Six silver cups.

Bronze

One three-foot long sword, with an ivory hilt overlaid with gold in a rare technique imitating embroidery (found at warrior's left chest).

Under this sword was a smaller dagger with a gold hilt employing the same technique.

Other bronze weapons by his legs and feet.

Bronze cups, bowls, amphora, jugs and a basin, some with gold, some with silver trim.

Seal stones

More than 50 seal stones, with intricate carvings in Minoan style showing goddesses, altars, reeds, lions and bulls, some with bull-jumpers soaring over the bull's horns - all in Minoan style and probably made in Crete.

Ivory

Several pieces of carved ivory, one with a griffon with large wings and another depicting a lion attacking a griffon.

Six decorated ivory combs.

Precious Stone Beads

An astonishing hoard of over 1000 beads, most with drill holes for stringing together. The beads are of carnelian, amethyst, jasper and agate. Some beads appear to be decorations from a burial shroud of woven fabric, suggested by several square inches of cross woven threads which survived in the grave for 3,500 years.

MB Reilly

MB is director of public relations at the University of Cincinnati and a contributor to UC Magazine. She can be reached at 513-556-1824; mary-bridget.reilly@uc.edu

Please visit the site:

http://magazine.uc.edu/editors_picks/recent_features/warrior_tomb.html Go there for many pix]

ANCIENT SHIPWRECKS FOUND IN ISTANBUL'S YENIKAPI SHED LIGHT ON ANCIENT SHIP PRODUCTION

Thirty-seven shipwrecks discovered underwater during the Marmaray subway construction in Istanbul's Yenikapı shed light on ship production technology in ancient eras. An inventory of the types of wood used in the production of 37 sunken ships discovered in Istanbul's Yenikapı neighborhood during the construction of the city's Marmaray subway project has been taken, shedding light on ancient ship production techniques.

Associate Prof. Ufuk Kocabaş from Istanbul University's Department of Conservation and Restoration, said scientific study of the shipwrecks had continued after the end of the excavations in Yenikapı, in a written statement.

He said teams from the Istanbul Archaeology Museum were carrying out the documentation and protection of thousands of artifacts which were obtained during excavations between 2005 and 2013.

He said the conservation work for 27 of 37 shipwrecks found in the Byzantine-era Theodosius Harbor was continuing at the Yenikapı Shipwrecks Research Lab, adding the most important findings at Yenikapı were the shipwrecks from various periods.

Kocabaş said the shipwrecks were unique sources to learn about the function of the harbor and ship production technology in the ancient era.

"The recent data shows that among these Byzantine-era ships, the ones from the 5th and 7th centuries were made of needle-leaved trees such as cypress and pine trees, while the ones from the 9th and 11th centuries were totally made of large-leaved trees including oak and chestnut trees, and those between the 7th and 9th centuries were made of both type of trees. There is an evident change in the material of ships between the 5th and 11th centuries. The observations of 27 shipwrecks, which date back for a long time period, shed light on ship construction techniques in the Byzantine era and also the changes in the use of wood through time," said Kocabaş.

He said the third volume of a book series of the Yenikapı shipwrecks' anatomy was about to be finished, adding, "The Yenikapı shipwreck numbered 112 was studied at the university as a doctorate thesis and it was the first shipwreck whose examinations have been fully completed. The next [step] is to work on its details. It will be the first archaeological sample whose construction technology will be examined by Turkish academics.

It takes years to work on the anatomy of a ship and it is hard work. We try to find a sponsor for the books that we write on this issue."

Kocabaş said they had been working on a detailed map showing Byzantine-era trade and products as well as drawings of Byzantine-era artifacts and the locations of harbors. "The

goal is to release 20 academic books on these findings which will bring us the world's largest shipwreck museum in Istanbul," he added.

Restoration may take years

Stating that the variety of shipwrecks provided a unique opportunity to understand the development of ship production technologies in the Mediterranean, Kocabaş said, "I have compared shipwrecks from the 5th and 10th centuries, which are of various sizes and were constructed with different techniques. The galleys, which are very different from trade ships with their long and naïve body structures and wood types, are the first archaeological samples dated back to the Byzantine era. Galley remains are rarely seen in underwater archaeology works. Since the galleys used in the Byzantine fleet have been so far examined in iconographic sources, these first samples provide a unique opportunity for the examination of ship construction technology."

Scientific work on the shipwrecks has been continuing, said Kocabaş, adding the restoration of nearly 1,500-year-old wooden remnants might take many years.

Please visit the site: <http://www.hurriyetdailynews.com/ancient-shipwrecks-found-in-istanbul-yenikapi-shed-light-on-ancient-ship-production.aspx?pageID=238&nID=90256&NewsCatID=375>

22 SHIPWRECKS FOUND IN SINGLE LOCATION IN GREECE, BY ROSSELLA LORENZI

Underwater archaeologists have discovered 22 shipwrecks around a small Greek archipelago, revealing what may be the ancient shipwreck capital of the world.

Hailed as one of the top archaeological finds of 2015, the discovery was made by a joint Greek-American archaeological expedition in the small Fourni archipelago with an area of just 17 square miles. This is a collection of 13 islands and islets located between the eastern Aegean islands of Samos and Icaria.

"Surpassing all expectations, over only 13 days we added 12 percent to the total of known ancient shipwrecks in Greek territorial waters," Peter Campbell, of the University of Southampton and co-director from US based RPM Nautical Foundation, told Discovery News.

Fourni lies right in the middle of the major east-west crossing route, as well as the north-south route that connected the Aegean to the Levant. Ships traveling from the Greek mainland to Asia Minor, or ships leaving the Aegean for the Levant had to pass by Fourni.

"Ikaria and the west coast of Samos have no harbors or anchorages, so Fourni is the safest place that ships could stop in the area," Campbell said.

It was the first time that an underwater archaeological expedition was organized to the islands. Archaeologists from the Greek Ephorate of Underwater Antiquities and RPM Nautical Foundation worked with local sponge divers, fishermen, and free divers, and were more than surprised by the results.

'Byzantine iPad' Found in Ancient Shipwreck

Funding was provided by the Honor Frost Foundation, a UK charity that supports research in the eastern Mediterranean through an endowment from pioneer maritime archaeologist Honor Frost.

"In a typical survey we locate four or five shipwrecks per season in the best cases," Greek director George Koutsouflakis said.

"We expected a successful season, but no one was prepared for this. Shipwrecks were found literally everywhere."

Top Archaeological Finds Expected in 2015

Over half of the wrecks date to the Late Roman Period (circa 300-600 A.D.). Overall, the shipwrecks span from the Archaic Period (700-480 B.C.) to the Classical (480-323 B.C.) and Hellenistic (323-31 B.C.) through the Late Medieval Period (16th century).

"What is astonishing is not only the number of the shipwrecks but also the diversity of the cargoes, some of which have been found for first time," Koutsouflakis said,

The cargoes reveal long distance trades between the Black Sea, Aegean Sea, Cyprus, the Levant, and Egypt in all those periods. At least three ships carried a cargo of amphoras, or jars, that have not been found previously on shipwrecks.

Biggest Shipwreck Finds in History

These are Archaic period (700-480 B.C.) Samian amphoras, Late Roman (3rd-7th centuries A.D.) Sinopean (carrot-shaped) amphoras, and large 2nd century A.D. Black Sea amphoras that carried fish sauce.

The archaeologists mapped each shipwreck using photogrammetry to create 3D site plans. Representative artifacts were raised from each wreck site for scientific analysis and may go on displays in museums once conservation work is over.

According to the team, the volume of wrecks found around Fourni speaks more to the large amount of traffic passing along that route than about the islands being unsafe.

Eerie, Beautiful Shipwreck Photos

"Given the 22 wrecks and the date spread of the finds, it equals about one wreck per century -- a pretty safe bet for sailors," Campbell said.

"These wrecks were likely caught by a sudden storm or equipment failure, such as a broken rudder that prevented to control the ship," he added.

However, the number of wrecks is likely to increase. The archaeologists have only examined about 5 percent of the archipelago's coastline, and are confident that many more wrecks will be discovered.

"We plan to return to Fourni next year to continue the survey," Campbell said.

Please visit the site: <http://news.discovery.com/history/archaeology/22-shipwrecks-found-in-single-greek-location-in-greece-151028.htm>
