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Έτος Ίδρυσης 1982, έδρα:
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Πληροφοριακό Δελτίο της Ελληνικής Αρχαιομετρικής Εταιρείας

- Σεπτέμβριος 2015 -

**My best friend is the man who in wishing me well wishes it
for my sake.**

(Aristotle)

Newsletter of the Hellenic Society of Archaeometry

- September 2015 -

Nr. 174

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ΕΠΙΕΜΒΑΣΕΙΣ ΣΥΝΤΗΡΗΣΗΣ ΚΑΙ ΠΡΟΣΤΑΣΙΑΣ ΤΗΣ ΠΟΛΙΤΙΣΤΙΚΗΣ
ΚΛΗΡΟΝΟΜΙΑΣ», Εθνικό Μετσόβιο Πολυτεχνείο, Ιστορική Πρυτανεία, 28
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- PhD position in radiocarbon applications / isotope geochemistry at
CologneAMS (3 year, 60%) **page 17**
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The 5,000-Year Secret History of the Watermelon - Ancient Hebrew texts and
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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 page 63

Unusual use of blue pigment found in ancient mummy portraits Northwestern-
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Ancient Greek Well Used For Hydromancy Discovered in Athens, by Katerina
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Lost palace of Sparta possibly uncovered, by Tia Ghose **page 69**

ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS

**RE-APPROACHING CYPRUS: A DAY
DEVOTED TO RECENT RESEARCH IN
CYPRIOT ARCHAEOLOGY AND CYPRIOT
COLLECTIONS, FRIDAY 23 OCTOBER 2015**

9.00 – 15.00
FREE

Join the Fitzwilliam Museum's Department of Antiquities for a day looking at research advances in Cypriot Archaeology. Professor Cyprian Broodbank, Director of the McDonald Institute for Archaeological Research, opens the day. Followed by British and international scholars of Cypriot Archaeology and Museum curators, including Dr Thomas Kiely (The British Museum), Dr Pippa Steele (University of Cambridge), Dr Daisy Knox (University of Manchester) and Dr Giorgos Bourogiannis (Medelhavsmuseet, Stockholm). This event is organised under the auspices of the High Commissioner for the Republic of Cyprus Euripides L Evriades.

For more information, and to register your interest, please contact Dr Anastasia Christophilopoulou (Assistant Curator, Department of Antiquities).

Email: ac380@cam.ac.uk or tel: 01223 746643.

Dr Anastasia Christophilopoulou
Assistant Curator, Department of Antiquities
The Fitzwilliam Museum
Trumpington Street, Cambridge CB2 1RB.
direct line: +44 1223 746643

**PROGRAMME FOR THE ORAL
PRESENTATIONS OF THE HMS RESEARCH
IN PROGRESS, BRUNEL, 13TH OF
NOVEMBER 2015**

Dear colleagues,

I am pleased to announce that the programme for the oral presentations of the HMS Research in Progress to be held at Brunel on the 13th of November 2015 is now out:

http://www.brunel.ac.uk/etc/news-and-events/events2/ne_434221

Looking forward to see you all at Brunel University

I wish you all a lovely August

Kind regards

Dr Lorna Anguilano, BSc, MSc, MSc, PhD
Research Fellow

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Brunel University London

Experimental Techniques Centre

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www.brunel.ac.uk/etc

www.brunel.ac.uk/researchlife



ABSTRACT SUBMISSIONS ARE INVITED
FOR THE SESSION “INTERDISCIPLINARY
APPROACHES TO ANCIENT ROMAN DIETS”
TO BE HELD DURING THE 12TH ROMAN
ARCHAEOLOGY CONFERENCE IN ROME
(ITALY) FROM 16 TO 19 MARCH 2016

Session description

Ancient Roman diets have been predominantly investigated relying on information from iconographic and documentary sources. While these sources of information have provided important insights they also present some limitations. Often historical data is biased towards the dietary habits of the upper classes and includes potentially disproportionate references to exotic and imported foodstuffs. Furthermore, the relatively limited historical evidence offers only temporally and geographical localized snapshots while a great diversity in dietary habits throughout the extension and duration of the Roman world may be expected. These limitations may be overcome by adopting an interdisciplinary approach that combines historical sources with the analysis of material remains using different scientific methods. These methods have been applied with great success in the reconstruction of past dietary and culinary habits of diverse historic and pre-historic populations although their use within archaeological research of the Roman world remains comparatively limited.

The aim of this session is to promote interdisciplinary approaches to the study of ancient Roman diets. Welcomed contributions are those that combine dietary information obtained from diverse sources including: historical research, ancient DNA analysis, isotope studies, archaeozoological and archaeobotanical studies, physical anthropology, and pottery residue analysis. The adoption of interdisciplinary approaches to investigate past dietary patterns should serve to address relevant archaeological research questions. These include, but are not limited to, the following examples:

- Potential relationships between access to food resources and forms of social differentiation (e.g. gender, profession, class, ethnicity).
- Framing dietary patterns within the environmental context and the locally available food resources.
- Relationships between nutrition and health.
- Food trade: variety, extension, and intensity.
- Identifying diachronic patterns in regional dietary habits and observing possible links with socio-political trajectories.

Submission instructions: proposals for presentations lasting no longer than 30min should be sent both to the session organiser (rf385@cam.ac.uk) and the RAC executive committee (racrome2016@gmail.com). Contribution proposals should contain the following information: 1) title of paper; 2) name, affiliation, postal address and email of the proposer(s); 3) title of the session “Interdisciplinary approaches to ancient Roman diets”; 4) abstract (not more than 200 words). Deadline for abstract submission: 5th of September 2015

Additional information can be found at the meeting’s website:
http://www.antichita.uniroma1.it/rac/trac_2016

Looking forward to meeting you in Rome!

Session organisers,
Ricardo Fernandes (Kiel & Cambridge Universities) Roksana Chowaniec (University of Warsaw)

10TH ICAANE, 25–29 APRIL 2016, OREA,
AUSTRIAN ACADEMY OF SCIENCES,
VIENNA, AUSTRIA, 3RD CIRCULAR

Registration:

Dear colleagues, as time is flying we would like to remind you all, that registration for the 10ICAANE will change policy of registration fees from 1 September 2015 onwards.

Please, be aware that registering alone does not guarantee the early rate fee of 290€/100€ respectively – monetary transfer has to be completed until 31 August.

To register, please, go to our website (www.orea.oeaw.ac.at/10icaane.html).

Written confirmation will be sent by electronic mail following registration. For payment and modalities please, see there.

Registration fees (until 31 August, 2015, rising from 1 September, 2015)

	until 31 August, 2015	from 1 September, 2015
Participants		
Regular Fee	290 €	360 €
Students	100 €	120 €

Exhibitors' Stalls

please contact: 10icaane@mondial.at

Flyers in conference packs	150 €	200 €
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The registration fee for the congress covers attendance of all congress sessions, social events and congress documents as well as abstract booklet.

A ONE

Day Pass for Participants (100 €) and Students (40 €) will be available at the congress office.

To register as student, please send the number and validity period of your Student ID Card. Please, note that student IDs will be checked during registration.

The Conference Venue:

The 10 ICAANE will be held at the premises of the Austrian Academy of Sciences,

Dr. Ignaz Seipel-Platz 2,
1010 Vienna, Austria

<http://www.oeaw.ac.at/oesterreichische-akademie-der-wissenschaften/>

&

Aula der Wissenschaften,
Wollzeile 27a,
1010 Vienna, Austria

<http://www.aula-wien.at/>

We hope to draw up a Preliminary Program for your information until End of September.

Workshops and Abstracts will be put online accordingly.

Yours,
10th ICAANE
The Organizing Committee
www.orea.oeaw.ac.at/10icaane.html

**INTERNATIONAL SYMPOSIUM ON
OSTEOARCHAEOLOGY AND FORENSIC
ANTHROPOLOGY, 4TH-5TH SEPTEMBER 2015,
PINEDA DE MAR, BARCELONA, SPAIN**

INTERNATIONAL SYMPOSIUM ON OSTEOARCHAEOLOGY AND FORENSIC ANTHROPOLOGY. WHAT BONES TELL US The abstract book can be consulted online now at the Symposium web page: <http://jioaf.pinedademar.org/en/node/31>

Registration deadline 31st of August

JORNADAS INTERNACIONALES DE OSTEOARQUEOLOGÍA Y ANTROPOLOGÍA FORENSE. LO QUE NOS CUENTAN LOS HUESOS El libro de resúmenes ya puede ser consultado a través de la página web de las Jornadas

<http://jioaf.pinedademar.org/es/node/32>

Inscripciones hasta el 31 de agosto

JORNADES INTERNACIONALS D'OSTEOARQUEOLOGIA I ANTROPOLOGIA FORENSE. EL QUE ENS EXPLIQUEN ELS OSSOS El llibre de resums ja pot ser consultat a través de la pàgina web de les Jornades

<http://jioaf.pinedademar.org/ca/node/29>

Inscripcions fins el 31 d'agost

Organizing Comitee

Jordi Nadal, Carme Rissech, Lluís Lloveras

ISA2016 - ABSTRACT SUBMISSION

Dear Colleagues,

This is a friendly reminder that Abstract submission and Registration is now open for the ISA2016, which will take place in Kalamata, Greece on May 15-20, 2016.

You can submit your abstract by December 15, 2015.

For more information please visit our website: isa2016.uop.gr or contact us at isa2016@uop.gr

With regards,

The ISA2016 Organising Committee

ΕΠΙΣΤΗΜΟΝΙΚΟ ΣΥΝΕΔΡΙΟ:
«ΕΠΙΣΤΗΜΟΝΙΚΗ ΥΠΟΣΤΗΡΙΞΗ ΣΤΗ
ΔΗΨΗ ΑΠΟΦΑΣΕΩΝ ΓΙΑ ΔΕΙΦΟΡΑ ΚΑΙ
ΣΥΜΒΑΤΑ ΥΛΙΚΑ ΚΑΙ ΕΠΕΜΒΑΣΕΙΣ
ΣΥΝΤΗΡΗΣΗΣ ΚΑΙ ΠΡΟΣΤΑΣΙΑΣ ΤΗΣ
ΠΟΛΙΤΙΣΤΙΚΗΣ ΚΛΗΡΟΝΟΜΙΑΣ», ΕΘΝΙΚΟ
ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ, ΙΣΤΟΡΙΚΗ
ΠΡΥΤΑΝΕΙΑ, 28 ΚΑΙ 29 ΣΕΠΤΕΜΒΡΙΟΥ 2015

Οργάνωση

ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ, ΠΡΟΓΡΑΜΜΑ «ΘΑΛΗΣ-ΑΕΙΣ»
«Αειφορία και συμβατότητα προηγμένων υλικών και τεχνολογιών για την προστασία μνημείων της Πολιτιστικής Κληρονομιάς: Ανάπτυξη κριτηρίων και μεθοδολογιών ελέγχου»

«ΠΡΟΣΤΑΣΙΑ ΜΝΗΜΕΙΩΝ»

Διατμηματικό Πρόγραμμα Μεταπτυχιακών Σπουδών
Επισπεύδουσα: Σχολή Αρχιτεκτόνων Μηχανικών
Συνεργαζόμενη: Σχολή Χημικών Μηχανικών
Συμμετέχουσες: Σχολή Πολιτικών Μηχανικών
Σχολή Αγρονόμων Τοπογράφων Μηχανικών ΕΜΠ

ΕΜΠ

ΑΠΘ

Παν/μίο Πατρών

Παν/μίο Ιωαννίνων

Πολ/νείο Κρήτης

ΤΕΙ Αθήνας

ΙΗΔΑ-ΙΤΕ

ΕΚΕΦΕ ΔΗΜΟΚΡΙΤΟΣ

Συνδιοργανωτές

ΤΕΧΝΙΚΟ ΕΠΙΜΕΛΗΤΗΡΙΟ ΕΛΛΑΔΑΣ

ΕΛΛΗΝΙΚΗ ΠΛΑΤΦΟΡΜΑ ΕΡΕΥΝΑΣ ΚΑΙ ΤΕΧΝΟΛΟΓΙΑΣ ΓΙΑ ΤΗΝ ΚΑΤΑΣΚΕΥΗ

Marie Skłodowska-Curie Project

“Initial Training Network for Digital Cultural Heritage”

Υπό την αιγίδα

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

ΥΠΟΥΡΓΕΙΟ ΠΟΛΙΤΙΣΜΟΥ, ΠΑΙΔΕΙΑΣ & ΘΡΗΣΚΕΥΜΑΤΩΝ

Με τη συγχρηματοδότηση



Πρόσκληση Υποβολής εργασιών

Κληρονομιάς: ανάπτυξη κριτηρίων και μεθοδολογιών ελέγχου» με επιστημονικά υπεύθυνη την υπογράφουσα, συνδέοντας την Εκπαίδευση και την Έρευνα που παρέχει το Εθνικό Μετσόβιο Πολυτεχνείο, αλλά και όλα τα Πανεπιστήμια της χώρας, για την υποστήριξη της λήψης αποφάσεων για την Αειφόρο Προστασία της Πολιτιστικής Κληρονομιάς.

Το Συνέδριο διοργανώνεται από το ΕΜΠ, το Πρόγραμμα ΘΑΛΗΣ-ΑΕΙΣ - με συγχρηματοδότηση από το ΕΣΠΑ 2007-2013 και το Διατμηματικό Πρόγραμμα Μεταπτυχιακών Σπουδών Ε.Μ.Π. «Προστασία Μνημείων» και τελεί υπό την αιγίδα (έχει ζητηθεί) του Υπουργείου Πολιτισμού, Παιδείας και Θρησκευμάτων. Συνδιοργανώνεται από το Τεχνικό Επιμελητήριο Ελλάδας, την Ελληνική Πλατφόρμα Έρευνας και Τεχνολογίας για την Κατασκευή, και το Ευρωπαϊκό Πρόγραμμα Marie Sklodowska-Curie ITN-DCH “Initial Training Network for Digital Cultural Heritage”.

Στο Συνέδριο θα παρουσιαστούν επιστημονικές εργασίες από Επιστημονικούς και Ερευνητικούς Φορείς Διαχείρισης της Πολιτιστικής Κληρονομιάς, Φορείς Εφαρμογής-Μελετητές – Κατασκευαστές, Φορείς Χρήστες, τη Βιομηχανία των Υλικών και άλλους. Οι εργασίες του Συνεδρίου θα δημοσιευθούν σε ειδικό διεπιστημονικό τεύχος των Επιστημονικών Εκδόσεων του Τ.Ε.Ε. «**Τεχνικά Χρονικά**», μετά από απόφαση της Δ.Ε. του Τ.Ε.Ε.

Στο πλαίσιο του Συνεδρίου θα ανακοινωθεί η ίδρυση «**Στρατηγικού Forum ΑΕΙΣ προώθησης επιστημονικής υποστήριξης στη λήψη αποφάσεων για αειφόρα και συμβατά υλικά και επεμβάσεις συντήρησης και προστασίας της Πολιτιστικής Κληρονομιάς**», με συντονιστές τους υπογράφοντες.

Το Συνέδριο θα ολοκληρωθεί με τη **Συνεδρία του Στρατηγικού Forum**, προκειμένου να μεθοδευθούν βέλτιστες πρακτικές για την αξιοποίηση των αποτελεσμάτων του Προγράμματος ΘΑΛΗΣ-ΑΕΙΣ και να υποστηριχθεί επιστημονικά η λήψη αποφάσεων. Στο πλαίσιο αυτό θα παρουσιαστεί η αξιολόγηση των αποτελεσμάτων του φυσικού αντικείμενου του έργου ΘΑΛΗΣ-ΑΕΙΣ από ανεξάρτητους αξιολογητές που συγκροτούν την **Διεθνή Επιτροπή Αξιολόγησης – International Evaluation Committee**.

Αντωνία Μοροπούλου
Καθηγήτρια ΕΜΠ
Επιστημονικά Υπεύθυνη
ΘΑΛΗΣ ΑΕΙΣ Ε.Μ.Π.

Μανώλης Κορρές
Καθηγητής ΕΜΠ
Δ/ντής Δ.Π.Μ.Σ. Ε.Μ.Π.
«Προστασία Μνημείων»

Θεματολογία Εργασιών

Ιστορικά δομικά υλικά και δομικά συστήματα σε μνημεία και ιστορικές κατασκευές

- Διάγνωση φθοράς και βλαβών σε μνημεία και ιστορικές κατασκευές
- Παθολογία ιστορικών κατασκευών και μνημείων

- Διάκριση των νέων επεμβάσεων κατά την αποκατάσταση μέσω της χρήσης νέων υλικών και τεχνικών .
- Επιλογή υλικών και μεθοδολογιών για την αποκατάσταση και η εικόνα του μνημείου.
- Η επιλογή των υλικών στις παρεμβάσεις στο δημόσιο χώρο ιστορικών πόλεων και οικισμών .
- Νέα προηγμένα υλικά και επεμβάσεις αποκατάστασης.
- Σύνθεση και εφαρμογή προηγμένων υλικών και επεμβάσεων συντήρησης και υλικών ενίσχυσης, πιλοτικά στο εργαστήριο και επί τόπου στα μνημεία
- Κριτήρια και μεθοδολογία αποτίμησης υλικών και επεμβάσεων συντήρησης και αποκατάστασης
- Τεχνικές και μέθοδοι ελέγχου ανθεκτικότητας και αντοχής υλικών και επεμβάσεων συντήρησης/αποκατάστασης στο εργαστήριο και στην κλίμακα του μνημείου
- Έλεγχος συμβατότητας και αειφορίας των υλικών και επεμβάσεων συντήρησης στην κλίμακα του εργαστηρίου και στα μνημεία
- Κριτήρια και μεθοδολογία ελέγχου συμβατότητας και αειφορίας υλικών και επεμβάσεων συντήρησης και αποκατάστασης
- Επιστημονική υποστήριξη στη λήψη αποφάσεων για υλικά και επεμβάσεις συντήρησης και αποκατάστασης
- Σύνταξη προδιαγραφών-οδηγιών εφαρμογής για τη διασφάλιση της συμβατότητας υλικών και επεμβάσεων συντήρησης με τα αυθεντικά υλικά και δομικά συστήματα
- Διαμόρφωση μεθοδολογιών και προδιαγραφών εφαρμογής μη καταστρεπτικών και αναλυτικών τεχνικών αποτίμησης υλικών και επεμβάσεων συντήρησης
- Ανάπτυξη διεπιστημονικής και δι-ιδρυματικής έρευνας στρατηγικής σημασίας στον τομέα της προστασίας των μνημείων της πολιτιστικής κληρονομιάς
- Αξιοποίηση των αποτελεσμάτων της έρευνας του ΘΑΛΗΣ ΑΕΙΣ σε αντιπροσωπευτικά μνημεία και ιστορικές κατασκευές
- Δυνατότητες αξιοποίησης των αποτελεσμάτων της έρευνας για εισαγωγή καινοτομίας από τους φορείς-χρήστες, τη βιομηχανία, τις μικρομεσαίες επιχειρήσεις και την κατασκευή.

Χρονοδιάγραμμα Υποβολής Εργασιών

03/09/2015	Αποστολή τίτλου και περίληψης εργασίας
07/09/2015	Ολοκλήρωση κρίσης περιλήψεων από την Επιστημονική Επιτροπή
14/09/2015	Αποστολή ολοκληρωμένης εργασίας βάσει προδιαγραφών

Προδιαγραφές Εργασιών

- Οι εργασίες θα αποσταλούν σε αρχείο Microsoft Word (αποθηκευμένο σε έκδοση 2003 ή 2007), με μέγιστο μέγεθος (χωρητικότητα) 5MB στο e-mail thalisaeis@central.ntua.gr, απ' όπου και θα σας αποσταλεί απάντηση έγκρισης, βελτίωσης ή απόρριψης, με βάση την εισήγηση της Επιστημονικής Επιτροπής.
- Οι εργασίες μπορεί να είναι ατομικές ή ομαδικές και η γλώσσα συγγραφής μπορεί να είναι ελληνική ή αγγλική.
- Οι εργασίες θα περιλαμβάνουν μία (1) σελίδα ελληνική περίληψη, μία (1) σελίδα αγγλική περίληψη, και δε θα υπερβαίνουν τις επιπλέον οκτώ (8) σελίδες, μαζί με τις εικόνες (σε μορφή jpeg) και τη βιβλιογραφία.
- Η **μορφοποίηση** του αρχείου των εργασιών θα έχει ως εξής:
- Διαμόρφωση σελίδας:
Προσανατολισμός: Κατακόρυφος

Περιθώρια: Επάνω 5 cm, Κάτω: 5 cm, Αριστερά: 4 cm, Δεξιά: 4 cm

Μέγεθος χαρτιού: A4

Γραμματοσειρά:

Στο κείμενο: Times New Roman, Στιλ: Κανονικά, Μέγεθος: 12

Στις επικεφαλίδες: Times New Roman, Στιλ: Έντονα, Μέγεθος: 14

Μετά τις επικεφαλίδες αφήνετε ένα κενό διάστημα

Δε γράφουμε τις επικεφαλίδες με κεφαλαία γράμματα. Κεφαλαίο θα είναι μόνο το πρώτο γράμμα

Παράγραφος:

Στοιχίση: πλήρης

Εσοχές: Αριστερά, δεξιά: 0

Διάστημα: Πριν, μετά: 0

Ειδική: Πρώτη γραμμή. Κατά: 1 cm

Διάστιχο: Μονό

Ενδεικτική συγγραφή βιβλιογραφίας:

Scientific Journal:

Cakmak, A.S., Moropoulou, A., Mullen, C.L., “Interdisciplinary study of dynamic behaviour and earthquake response of Hagia Sophia”, *Soil Dynamics and Earthquake Engineering* 14, 9 (1995) 125-133.

Conference Proceedings:

Delegou, E.T., Moropoulou, A., “Evaluation, Criteria & Decision Making on Cleaning Interventions of Marble Surfaces”, 11th International Congress on Deterioration and Conservation of Stone, eds J.W. Lukaszewicz, P., Niemcewicz, Torun Poland, Vol. II (2008) 1179-1188.

ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ –
JOB VACANCIES/FELLOWSHIPS
PHD POSITION IN RADIOCARBON
APPLICATIONS / ISOTOPE GEOCHEMISTRY
AT COLOGNEAMS (3 YEAR, 60%)

Position: The PhD project has the objective to develop and test methods for the sampling and processing of methane and carbon dioxide samples for AMS radiocarbon analysis. Tasks include the development of molecular sieves and alternative sampling devices, vacuum lines, and participation in the coupling to/improvement of a new AMS gas ion source. Furthermore, the newly established methods will be applied to marine and terrestrial ecosystems characterized by greenhouse gas emissions including hydrothermal systems, gas hydrates, and (permafrost) soils. This will include land or ship based expeditions. The position will be based in the Organic Geochemistry, Radiocarbon group (www.geologie.uni-koeln.de/142.html) and is integrated in the interdisciplinary cosmogenic nuclide dating center CologneAMS (www.cologneams.uni-koeln.de).

Qualifications: We are looking for highly motivated, team-oriented candidates with a strong interest in technical and analytical work (method development and application). Experience in the fields of isotope geochemistry, biogeochemistry or related fields would be a bonus. Participation in field work is required. Applicants should hold a master-level degree in geosciences, environmental sciences, chemistry or related subjects with excellent grades. Good knowledge of spoken and written English is essential. Knowledge in German will be helpful.

Conditions: The position is funded for 3 years starting on Nov. 1 2015. Salary and benefits will be according to German Public Service Sector salary group TV-L 13, 60%.

Application: Please send your documents as a single pdf file (motivation, CV, certificates, names of 1-2 referees) by email to Prof. Dr. Janet Rethemeyer (janet.rethemeyer@uni-koeln.de) until 30. August 2015. Applications will be accepted until the position is filled.

**FULLY FUNDED PHD STUDENTSHIP "MASS
DIGITIZATION AND METADATA
ENRICHMENT OF 3D CULTURAL
HERITAGE ARTEFACTS BY AUTOMATIC
AND USER-BASED METADATA
ACQUISITION" CENTRE FOR DOCTORAL
TRAINING SCIENCE AND ENGINEERING IN
ARTS, HERITAGE AND ARCHAEOLOGY
(SEAHA)**

This research project seeks to develop new methods to improve and speed-up metadata acquisition for digitised 3D cultural heritage artefacts. The work will build on a web-based 3D-centered annotation platform which the Fraunhofer Institute for Computer Graphics Research IGD (Fraunhofer-IGD) has developed alongside a new device capable of supporting a 'conveyor belt' approach to the digitisation of 3D objects. The project will be jointly supervised by Fraunhofer-IGD, the University of Brighton and partner cultural organisations

Application deadline: open until filled.

See: [URL:http://www.seaha-cdt.ac.uk/wordpress/wp-content/uploads/2015/07/P20_Mass-digitization-and-metadata-enrichment-of-3D-cultural-heritage-artefacts-FINAL.pdf](http://www.seaha-cdt.ac.uk/wordpress/wp-content/uploads/2015/07/P20_Mass-digitization-and-metadata-enrichment-of-3D-cultural-heritage-artefacts-FINAL.pdf), [URL:http://www.seaha-cdt.ac.uk/opportunities/](http://www.seaha-cdt.ac.uk/opportunities/)

Corinna Hattersley-Mitchell
PA to Prof David Arnold
Administrative Assistant to Cultural Informatics Research Group
+44 1273 878306

THREE ARCHAEOLOGY POSITIONS IN MELBOURNE

La Trobe University (Melbourne, Australia) is seeking to fill a number of positions in Archaeology.

- Archaeological Heritage Management (Level B);
- Asian Archaeology (Level B);
- Geographic Information Systems (Level B/C)

For further details please visit:

<http://careers.pageuppeople.com/533/caw/en/job/550025/lecturer-archaeology-x3>

La Trobe University's success is driven by people who are committed to making a difference. They are creative and highly motivated, pursue new ideas and create knowledge. La Trobe is among the top 100 universities in the world under the age of 50 (Times Higher Education Rankings 2014), one of Australia's research leaders, and the largest provider of higher education to regional Victoria. Our teaching and research address some of the most significant issues of our time and we're passionate about driving change to benefit the communities we serve.

The positions

Teach a high quality learning experience in either Asian archaeology (Level B); archaeological heritage management (Level B); or Geographic Information Systems in archaeology (Level B/C) and contribute to the undergraduate, honours and postgraduate level in Archaeology. Collaborating with colleagues, you will make a contribution to outstanding research through your professional practice and expertise, obtaining external research funding and publishing your results in international journals. Developing links with colleagues and external stakeholders, you will participate in innovative course level curriculum design, development and review.

The candidate

To be successful in this position you will possess (dependent on the level):

- PhD in Archaeology
- Demonstrated expertise (dependent on the role) in either - Heritage management/Complex societies in Asia/Geographic Information Systems
- Ability to contribute to the teaching of core first-year and more specialised higher year subjects in the archaeology curriculum, including field methods subjects
- Demonstrated competence in teaching and curriculum development and the use of online methods in the teaching of archaeology
- Evidence of high quality/high impact research conducted and published
- Ability to supervise/co-supervise, honours and postgraduate students (dependant on level)
- Demonstrated capacity to provide leadership at course/program level (Level C)

- Ability to encourage intellectual development and career aspirations of students (Level C)
- Record of successful research student supervision relative to opportunity (Level C)

La Trobe University offers a range of benefits. For further information about what it's like to work at La Trobe please visit: <http://www.latrobe.edu.au/jobs/working>

Closing date: Sunday 6 September 2015 (11:55pm AEST)

Position Enquiries: Alycia Keem, Recruitment Consultant, a.keem@latrobe.edu.au; 9479 1324

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President
XVIII World UISPP/IUPPS Congress
International Union of Prehistoric and Protohistoric Sciences
Melbourne, 4-7 September 2017
www.uispp2017.com.au



Postdoctoral associate in computer science Yale Institute for the Preservation of Cultural Heritage (IPCH)

Yale's Institute for the Preservation of Cultural Heritage, established by a transformational gift from Lisbet Rausing and Peter Baldwin, '78, is dedicated to advancing innovative and sustainable practices in the field of heritage preservation. At the crossroads of science and art, the institute is comprised of leading-edge conservation, research, and imaging laboratories

[URL:http://ipch.yale.edu](http://ipch.yale.edu)

A position for a Postdoctoral Associate in Computer Science is open in the IPCH Lens Media Lab (LML). This is a full-time, two-year position, reporting to the Head of the Lens Media Lab.

The research goals of the LML are focused on the preservation and characterization of photographic materials with an emphasis on creating and interpreting large datasets gleaned from reference, archival, and museum collections. Building on this base, collaborations across disciplines in the humanities and sciences will be fostered to assemble and interpret datasets derived from a broad spectrum of cultural heritage materials.

Primarily through image/signal processing and machine learning techniques, the Postdoctoral Associate will pursue data-driven approaches for understanding art and cultural material with an emphasis on preservation and documentation but also touching on vital scholarly questions including issues of attribution, artistic working methodologies, stylistic development and spheres of artistic influence. Other datasets, including those derived from art/artifact storage and display environments (made using conventional and new generation, low power, sensors) are also contemplated. Through the development of data visualization methods, tools, and interfaces, meaning and impact of these data will be communicated to broad constituencies including scientists, conservators, art historians, and curators.

Eligibility: Candidates must have a PhD in computer science or a related field (e.g. signal and image processing, data science) obtained within the last five years. Strong interest in collaborative research as well as the desire and ability to work with cultural heritage and across academic and professional fields.

Requirements: An advanced knowledge of the theory and practice of image processing and machine learning techniques; demonstrated ability to assess large datasets using statistical and visualization tools; excellent written and verbal skills, including English language fluency.

Remuneration: the level of remuneration is dependent on experience according to the policy of the Yale Office for Postdoctoral Affairs

[URL:http://postdocs.yale.edu/postdocs](http://postdocs.yale.edu/postdocs)

starting from \$40,600 plus health benefits with an annual cost of living increase.

Review of applications will begin immediately and applications will be accepted until the position is filled. Applications, including a cover letter, CV, and contact details of two references, should be addressed to:

Laurie Batza
Senior Administrative Assistant to the Director
Institute for the Preservation of Cultural Heritage
Yale University - West Campus
PO Box 27395
West Haven CT 06516
203-737-3159
Fax: 203-737-1407
laurie.batza@yale.edu

ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS

SHEFFIELD ZOOARCHAEOLOGY AND PALAENVIRONMENTS SHORT COURSES

Dear All,

Registration is open for our Understanding Zooarchaeology I and Exploring Palaeoenvironments short courses, which will take place in the Department of Archaeology, University of Sheffield, in September 2015.

These are an ideal introduction or refresher for anyone with an interest in the field.

Understanding Zooarchaeology I: 7th-9th September 2015

Exploring Palaeoenvironments: 10th-11th September 2015

Cost:

£180/£120 (student/unwaged) each course

£220/£330 (student/unwaged) for both courses

The courses will include lectures, discussions and hands on practical classes. Both courses will include a session on the use of stable isotope analysis, with lectures and case studies focussing on past practices of animal exploitation and on palaeoenvironmental reconstructions respectively. Participants will begin to develop the skills necessary to:

- Understand the principles of excavating animal bones.
- Care for and store bones after excavation.
- Identify different species from their bones and teeth.
- Age and sex bones.
- Recognise taphonomy, butchery and pathology.
- Understand how zooarchaeological material is analysed and quantified.

- Analyse faunal remains and understand their value as palaeoenvironmental indicators.
- Investigate the role of pollen and charcoal as indicators of environmental conditions.
- Understand and employ the geoarchaeological evidence in palaeoenvironmental reconstructions.
- Understand the role of traditional and modern archaeological analytical techniques (e.g. stable isotope analysis) for reconstructing past climatic conditions and vegetation.
- Integrate the zooarchaeological, archaeobotanical and geoarchaeological evidence for the reconstruction of environmental conditions faced by past communities.

For further information please see:

<http://www.shef.ac.uk/archaeology/research/zooarchaeology-lab/short-course>

You can contact us at: zooarch-shortcourse@sheffield.ac.uk

We have had excellent feedback from participants on past courses. Andrew Lawson,

Trainee Biological Curator at Manchester Museum, who attended one of our previous courses gives his review in his blog:

<http://traineecurator.wordpress.com/2012/04/23/sheffield-zooarchaeology-training-course/>

Follow us on Facebook at:

<https://www.facebook.com/pages/Sheffield-Zooarchaeology-Short-Course/100619023380021?ref=hl>

Please forward this information to anyone who you think might be interested. Apologies for cross-posting.

Many thanks,

The Zooarchaeology, Archaeobotany and Geoarchaeology Teams, University of Sheffield

SPECIAL ISSUE "SENSORS AND TECHNIQUES FOR 3D OBJECT MODELING IN UNDERWATER ENVIRONMENTS" ON SENSORS — OPEN ACCESS JOURNAL, CALL FOR PAPERS

Deadline for manuscript submissions: **30 September 2015**

Special Issue Information

Dear Colleagues,

Water covers approximately 71% of the planet's surface and human activities have been relying on it since remote times. Many traces of these exist under the "zero level" and will continue to exist in the future. Measuring, positioning, and mapping objects under water have experienced very significant modifications, brought about by advances in technology and also by changed requirements, demands for new products, introduction of new tools, and the modification of existing equipment. The exploration, documentation, and recording of underwater environments remains a difficult task, and is sometimes still unsolved. The research, design, and development of techniques and procedures for correctly validating underwater environments are more than ever important.

This Special Issue originates from the [ISPRS/CIPA Workshop "UNDERWATER 3D RECORDING & MODELING—Experiences in Data Acquisition, Calibration, Orientation, Modelling & Accuracy Assessment"](http://3dom.fbk.eu/files/underwater/index.html) (<http://3dom.fbk.eu/files/underwater/index.html>) and will accept improved and extended selected papers derived from the workshop's proceedings, as well as new contributions from international colleagues.

We invite you to submit articles on the following topics:

- Underwater/Multi-media photogrammetry
- Underwater platforms (ROV, AUV, robot, *etc.*)
- Characterization of underwater passive and active sensors
- Underwater navigation and positioning
- Underwater metrology and inspections
- Geometric modeling in multi-media photogrammetry
- Accuracy requirement and assessment in underwater 3D applications
- Restoration, enhancement and processing of underwater images
- 3D bathymetry techniques
- Data processing and underwater 3D modeling
- Sensors for marine biology and water pollution
- Multi-sensor integration

Info for manuscript submission can be found at the following link
http://www.mdpi.com/journal/sensors/special_issues/3DOM

Best regards,

Dr. Fabio Menna

Dr. Fabio Remondino

Prof. Hans-Gerd Maas

Guest Editors

INTERNET SITES

BABYLON RECONSTRUCTION

At <http://www.kadingirra.com/index.html> you will find images for a reconstructed Babylon.

THE BIG ANCIENT MEDITERRANEAN **(BAM)**

ABOUT

BAM was developed at the University of Iowa by Paul Dilley (University of Iowa), Sarah E. Bond (University of Iowa), and Ryan Horne (UNC-Chapel Hill). The open-access project integrates GIS tools, network analysis, and textual annotation/data mining capabilities in order to allow the exploration and visualization of ancient texts in new ways.

The first individual module within Big Ancient Mediterranean is called Terra Biblica. Terra Biblica is a tool for the geospatial analysis, literary network visualization, and plot mapping of biblical and related texts up to the year 337 CE. BAM also houses the Iowa Canon of Latin Authors. The Iowa Canon of Latin Authors and Works is a catalogue and information repository for all extant Latin authors and their writings, including fragmentary texts, as well as translations into Latin, from the earliest period through the seventh century CE.

Please visit the site: <https://bigancientmediterranean.wordpress.com/about/> [Go there for many links]

THE ANCIENT WORLD ONLINE - NEW INDEX OF ONLINE PUBLICATIONS: THE AWOL INDEX, BY TOM ELLIOTT

With the generous support of a grant from the Gladys Kriebel Delmas Foundation, ISAW has published a new, structured bibliography of ancient-world resources on the world-wide web entitled The AWOL Index. This experimental digital publication, co-authored by ISAW Senior Fellow Charles E. Jones and Associate Director for Digital Programs Tom Elliott, is programmatically extracted from the contents of The Ancient World Online, a blog that Jones has been authoring since 2009. The work represents a much larger collaboration - with the ISAW Library and the NYU Digital Library Technology Services team, for example - and will be used to inform and supply a variety of discovery and digital preservation initiatives now in incubation. The AWOL Index is published under an open license to facilitate the widest possible application and reuse of the data. More information is available on the title page of the publication itself.

Please visit the site: <http://ancientworldonline.blogspot.co.uk/2015/08/new-index-of-online-publications-awol.html>

SCANNING THE TOMB OF TURANKHAMUN

Video on the work of Factum Arte and the scanning of the tomb of the Tutankhamun in Luxor. The resulting high resolution images could lead to a major archaeological discovery.

Please visit the site: <https://youtu.be/hooUlumZQjk>

ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS

MAKING TEXTILES IN PRE-ROMAN AND ROMAN TIMES

Bryn Mawr Classical Review 2015.07.35

Margarita Gleba, Judit Pászókai-Szeőke (ed.), *Making Textiles in Pre-Roman and Roman Times. Peoples, Places, Identities*. Ancient Textiles Series Vol. 13. Oxford; Oakville: Oxbow Books, 2013. Pp. 244. ISBN 9781842177679. \$60.00.

Reviewed by Annette Paetz gen. Schieck, Deutsches Textilmuseum Krefeld (Annette.Schieck@Krefeld.de)

Not too long ago, textile research in archaeology was carried out by a very small group of scholars, spread all over the world. They seldom had the chance to meet like-minded colleagues and work on joint projects. Fortunately, this situation has changed within the past years, triggered by the founding of the Centre for Textile Research (CTR) at the University of Copenhagen, and pan-European research projects such as DressID, funded with the support of the European Commission (2007 to 2012).¹

This volume is one of the many results and part of the great output fostered by these activities. Both editors are members of the CTR and spokespersons of the DressID researchers group dealing with the production and trade of textiles in the Roman Empire. As such, they initiated the international conference on Work and identity: The agents of textile production and exchange in the Roman period at Hallstatt (Austria) in 2009, wherein lies the the origin of this book.² Nine of the papers are published in this volume, supplemented by four articles broadening the scope of the topics.³ Beside the preface by Margarita Gleba, an introduction by John Peter Wild, five maps, and an index, the volume contains 13 papers with individual bibliographies. All of them are in English.

The editors arranged the papers in chronological order, which at the same time allows for a regional grouping. The sections deal with: Pre-Roman Italy (two papers); Pre-Roman and Roman Noricum and Pannonia (three papers); Roman Italy and southern Gaul (two papers); Roman Egypt (three papers); Pre-Roman and Roman Asia (one paper), and Roman Pompeii (two papers).

In his introduction, Wild provides a short history of textile research in archaeology, sums up the contents of selected contributions and sets the overall question: who were the producers and traders of textiles in Roman times? - a seemingly simple question which, in the course of the papers, proves to be difficult to answer.

Pre-Roman Italy

Margarita Gleba's article on "Transformations in textile production and exchange in pre-Roman Italy" starts with transformation processes of pre-Roman societies in Italy. Small villages evolved into urban centers; this change also affected textile production changing it from subsistence production to that of non-essential luxurious goods, demanded by the elites. This caused technological changes in areas such as animal breeding,

standardization of tools, introduction of new tools, techniques and textile qualities (twill, tablet weaves); production modes, labor organization and specialization; and the exchange of material, tools and knowledge. These changes were inspired by expanding intercultural contacts in the 1st millennium BCE.

Sanna Lipkin's paper on "Textile making in Central Tyrrhenian Italy - Questions related to age, rank and status" focuses on Iron Age burials in Latium vetus and Etruria. She investigates large numbers of graves and relates osteological data to grave goods. She is able to determine that females of all ages were textile workers, at least on a basic level. She believes that sets of multiple tools characterize females as skilled textile specialists; tools made of simple materials were mere working items, whereas those made of precious materials marked the high social status of their owners.

Pre-Roman and Roman Noricum and Pannonia

Karina Grömer worked on "Discovering the people behind the textiles: Iron Age textile producers and their products in Austria." She correlates ancient textile finds with textile tools, settlement structures, grave contexts, and pictorial sources of Austrian Iron Age in the Hallstatt (9th to 5th Century BC) and Dürrenberg periods (6th to 1st Century BC). The finds reveal social structures and the division of labor according to gender: spindles and textile tools were found in graves of females of any age; other tools, such as needles and shears that could also have been employed in leather processing, were found in graves of both sexes.

Kordula Gostenčnik writes on "Textile Production and Trade in Roman Noricum" from 15 BC to 600 AD. She focuses on the sites of Old Virunum, Municipium Claudium Virunum, and the Municipium Flavia Solva. Gostenčnik investigates textile tools in settlements, and relates them to a few iconographic sources, textiles, and written sources on lead tags possibly used in a fullery. From the huge amounts of textile tools found at Old Virunum, she concludes that many inhabitants earned their living in textile business, being organized by merchants and traders from Aquileia, Italy. After the town was abandoned and the inhabitants founded the Municipium Claudium Virunum, textile production was of little relevance to them.

Ivan Radman-Livaja deals with "Craftspeople, Merchants or Clients? The Evidence of Personal Names on Commercial Lead Tags from Siscia" by investigating the written records of 1200 lead tags found at Siscia, southwestern Pannonia, dating from the 1st to the early 3rd century AD. The labels were reused several times, being tied to bundles of textiles when handed over to the fullers for cleaning, redyeing or mending. They carry names, most likely of clients and fullers, and instructions for the treatment of the textiles.

Roman Italy and Southern Gaul

Lena Larsson Lovén writes about "Female work and identity in Roman textile production and trade: A methodological discussion." According to epigraphic and iconographic sources, women were involved in all stages of textile production. The industry overall drew on the labor of both sexes; however, wool spinning was exclusively done by women. Comparing these results with pictorial sources, the author shows that men were given attributes defining their profession, while women were depicted with spindle and wool-basket, which was part of a semiotics of the moral values of a good housewife.

Lovén states that modes of commemoration depended on status, gender ideologies, and moral values, and may not depict reality.

Jinyu Liu discusses archaeological, literary and epigraphic sources in order to gain information on "Trade, Traders and Guilds (?) in Textiles: the case of Southern Gaul and Northern Italy (1st-3rd Centuries AD)." She focuses on textile products, on half-finished textiles and finished garments, stating that a medium quality of wool and woolen textiles were produced in the region to supply the city of Rome and the military. Inscriptions by wool-workers attest to the organization of textile workers and traders in guilds, comparable to those in medieval times.

Roman Egypt

In "Textile trade in the Periplus of the Erythraean Sea," Manuel Albaladejo Vivero deals with a document of the mid-1st Century AD written by a ship-owner living in Roman Egypt, who exported tunics, cloaks and textile goods from Arsinoë, Fayum, to eastern Africa, the Persian Gulf, and India. There he purchased spices and pearls, focused on silk textiles from China, and traded them to Rome via Egypt. These luxurious goods flooded the Roman market in Julio-Claudian times.

Kerstin Droß-Krüpe relates the Periplus Maris Erythraei to contemporary written sources: Strabo, Pliny, dedications, graffiti, papyri, and ostraca also originating from Egypt. In her paper on "Textiles and their merchants in Rome's Eastern trade," she focuses on types of traded goods, especially qualities of textiles. She also deals with intercultural contact engendered by the perspective of gaining great profit by trading luxurious goods. The documents tell about mobility fostered by lucrative trade; socio-cultural identity; female Egyptian traders; Egyptian merchants at Aden, as well as those from Aden and India living in Egypt, leaving written messages in Tamil.

The paper by Sophie Gällnö investigates "(In)visible spinners in the documentary papyri from Roman Egypt." On the basis of four Egyptian papyri, she argues that textile production and textile trade were a major economic resource in Egypt. Yet spinners, who produced masses of yarn to be woven, are not mentioned in the documents, which leads her to conclude that it was women who carried out the professional spinning work at home, being hidden from the public eye, since working for money was not accepted in society.

Pre-Roman and Roman Asia

Isabella Benda-Weber's paper "Textile production centers, products and merchants in the Roman Province of Asia" combines archaeological finds and written sources in order to define Asian centers of textile production, their traditions, their products as well as producers and merchants, and their organization in guilds. She stresses the importance of Asian textile traditions such as murex purple dyed wool as being the origin of Roman status symbols. Its use continued into Byzantine times, when it was found in the most noble gowns.

Roman Pompeii

Miko Flohr, in "Ulula, Quinquatrus and the occupational identity of fullones in early Imperial Italy," investigates the building structures of fullonicae in Pompeii and combines the results with information provided by wall-paintings, graffiti and written records. Flohr traces the occupational identity of crafts persons, their religious rituals and the symbols they used to communicate identity, the owl. He takes the frequency of depicting the owl as a marker of the degree of identification. By studying three types of workshops, he suggests different degrees of workman's identification, depending on the size of the workshops, and along with this, occupational specialization.

The final paper was provided by Jens-Arne Dickmann, dealing with "A 'private' felter's workshop in the Casa dei Postumii at Pompeii." It was rebuilt after the earthquake of 62 AD as a fuller's or felter's workshop producing shoes and gloves throughout the year, to be collected and stored in a small shop, which was located in the same building. The shop may have opened seasonally, most likely only in winter.

Comments

Through this collection of articles, the reader gets a wonderful insight into the production and trade of textiles and their sociological meaning in the ancient societies of the Mediterranean and central Europe. The authors present a wide range of archaeological material and most of them draw on further sources, such as textile finds, tools, depictions and written records. The topics of the papers are researched in depth by their authors. In a most convincing way they demonstrate that textile research in archaeology affords interdisciplinary and unconventional approaches when aiming at reconstructing the structures of ancient business activity.

This book is an inspiration to those dealing with sociological aspects of the field, as well as craft and workmanship, trade, and textile research in antiquity. It contains rich empirical materials, but also considers problems of method. It therefore fosters the discipline of textile research in archaeology in a holistic way. The papers make very clear that there is still a lot to be discussed in this field and that further progress will result from collaboration across the international community of textile researchers. For instance, the book inspires to deepen the research on females in textile production throughout antiquity. Several authors discuss the presence and meaning of textile tools in female spheres. Interpretations vary from: markers of status, symbols of moral values, domestic production for family purposes, domestic but professional production in secrecy. These interpretations reflect ancient positions in different regions and times, but they also reflect the research traditions of those who interpret the sources. Another conference would be a perfect occasion to investigate these aspects.

Notes:

1. Clothing and Identities - New Perspectives on Textiles in the Roman Empire (DressID). The project was initiated and managed by the Reiss-Engelhorn-Museums at Mannheim, Germany. Participating institutions were the CTR Copenhagen (Denmark), KIK-IRPA at Brussels (Belgium), the Universities of Sheffield (Great Britain), Valencia (Spain) and Rethymnon (Greece), as well as the Museum of Natural History in Vienna (Austria).
2. See Preface by Margarita Gleba.
3. By Jens-Arne Dickmann, Lena Larsson Lovén, Sophie Gällnö, Ivan Radman-Livaja.

Please visit the site: <http://bmcr.brynmawr.edu/2015/2015-07-35.html>

A MILK AND OCHRE PAINT MIXTURE USED 49,000 YEARS AGO AT SIBUDU, SOUTH AFRICA

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Abstract

Gas chromatography/mass spectrometry, proteomic and scanning electron microscopy with energy-dispersive X-ray spectroscopy (SEM/EDS) analyses of residue on a stone flake from a 49,000 year-old layer of Sibudu (South Africa) indicate a mixture of ochre and casein from milk, likely obtained by killing a lactating wild bovid. Ochre powder production and use are documented in Middle Stone Age South African sites but until now there has been no evidence of the use of milk as a binder. Our analyses show that this ochre-based mixture was neither a hafting adhesive nor a residue left after treating animal skins, but a liquid mixture consisting of a powdered pigment mixed with milk; in other words, a paint medium that could have been applied to a surface or to human skin. The significance of our finds also lies in the fact that it establishes the antiquity of the use of milk as a binder well before the introduction of domestic cattle in South Africa in the first millennium AD.

PLOS ONE | DOI:10.1371/journal.pone.0131273 June 30, 2015

STUDYING ANCIENT ANTHROPOGENIC IMPACTS ON CURRENT FLORAL BIODIVERSITY IN THE SOUTHERN LEVANT AS REFLECTED BY THE PHILISTINE MIGRATION

[Suembikya Frumin](#), [Aren M. Maeir](#), [Liora Kolska Horwitz](#) & [Ehud Weiss](#)

Scientific Reports **5**, Article number: 13308 (2015)

doi:10.1038/srep13308

Abstract

Human migrations across geographic boundaries can facilitate the introduction of new husbandry practices and dispersal of plants and animals, resulting in changes in biodiversity. As previously demonstrated, the 12th century BCE Philistine migration—to the southern Levantine littoral, involved the transportation of pigs from Europe, engendering long term genetic displacement of local Near Eastern haplotypes. Building on this, and combining biogeographical methods of Floral List comparisons with archaeological data, we have elucidated the Philistine impact on Southern Levantine floral ecosystems. We demonstrate that previously unexploited local plants were incorporated into the Philistine milieu, and new species were introduced—from Europe, the Aegean, Egypt and Mesopotamia—resulting in the earliest locally cultivated sycamore, cumin, coriander, bay tree and opium poppy. This research has highlighted the impact of past cultures on the formation of floral ecosystems and their long-term effects on contemporary local biological diversity.

Please visit the site: <http://www.nature.com/articles/srep13308>

THE MYSTERIOUS WALL PAINTINGS OF TELEILAT GHASSUL, JORDAN

In Context by Bernadette Drabsch. x+230 pages; illustrated throughout in black & white with two colour plates. 170 2015 Monographs of the Sydney University Teleilat Ghassul Project 3. Available both in printed and e-versions. Printed ISBN 9781784911706. Epublication ISBN 9781784911713.
Printed Price £34.00 (No VAT). EPublication Price £28.90 (Inc. UK VAT)

Contents:

<http://archaeopress.com/ArchaeopressShop/DMS/54CA84E7CBC74A43B50A372897BF1F21/Drabsch%20contents.pdf>

This volume is primarily concerned with the re-analysis of the wall paintings from the Jordanian Chalcolithic period (ca. 4700-3700 BC) settlement site of Teleilat Ghassul, first excavated in 1929 by scholars from the Pontifical Biblical Institute Rome and latterly by Australians from the University of Sydney. The seven major paintings were re-analysed using a methodology based on contextualisation, digital reconstruction, experimental replication and subject analysis.

A comprehensive theoretical framework was constructed from published and unpublished materials from the site, consisting of geographical and environmental datasets, topographic, settlement-location and structural contexts. These included material/artefactual associations, technological issues and a comprehensive symbolic regional comparative analysis of the artworks themselves.

The interpretive structure, reconstructed and re-evaluated scenes, and replication studies, have revealed numerous insights into the artistic traditions and cultic practices of South Levantine Ghassulian Chalcolithic culture, with considerable relevance to the ongoing debate on such matters as prehistoric societal makeup and art historical scholarship.

This study has provided intriguing glimpses into the lives of a brilliantly artistic and deeply ritualised society, shedding new light on this little-known and still mysterious people.

Please visit the site:

<http://archaeopress.com/ArchaeopressShop/Public/displayProductDetail.asp?id=%7b02DABE09-1DA0-44DD-8C15-5419B9CF0578%7d>

EΙΔΗΣΕΙΣ - NEWS RELEASE

ARCHAEOLOGISTS UNCOVER HUMAN SETTLEMENT DATED TO THE DAWN OF CIVILIZATION

Aşıklı Höyük, a mound near the banks of the Melendiz River in southern Turkey, lies not far from the site of Çatalhöyük. Dated to about 7500 B.C., [Çatalhöyük](#) is famous for being one of the oldest and largest [Neolithic](#) sites ever found.

But Aşıklı Höyük dates back even earlier, to about 8000 B.C. Though less known and considerably smaller than Çatalhöyük, archaeological excavations at Aşıklı Höyük have revealed a richly informative window on small-town life about 10,000 years ago, long before the pyramids, ziggurats, palaces, and other monumental features of the emerging, more expansive ancient cities of Mesopotamia and Egypt emerged on the landscape.

First investigated by Professor Ian A. Todd in 1964, full-scale excavations of the site didn't take place until 1989 under Ufuk Esin of the University of Istanbul. It became one of the largest excavations of the region, and is still the subject of archaeological investigations and research. The site finds included simple adobe house structures for a total of at least 400 rooms and as many as 70 burials beneath the house floors. The 1-to-2-room houses typically featured hearths, some houses with built-in earthen benches. Curiously, the houses were relatively dark inside, built essentially without doors and windows.

“These houses had no door for entry,” stated Heval Bozbay, who has been a member of the Aşıklı Höyük research team since 2009. “To enter a house, they had to ascend an exterior ladder and go inside through an opening in the roof, then descend an interior ladder. The only source of light was the opening in the roof one used to enter, and one or two holes in a wall, far too small to be called a window by modern standards.”

Obsidian stone and other objects made from basalt, granite and tuff were found among the artifacts. Located in an area with a geologic past for volcanic activity, the inhabitants of this community had convenient access to a rich supply of volcanic material to produce their goods, obsidian being a highly valued resource that, according to the researchers, may possibly have been a commodity of trade with far-off communities in Cyprus and Syria.

Perhaps the most notable discovery relates to a peculiar 25-square-meter, square-shaped structure which showed evidence of a plastered interior painted entirely in red ochre. The investigation of the interior also indicated that in each corner there was a large stone upon which was placed a wooden post. “Archaeologists investigating the structure suggest that it was probably used as a ceremonial place, with evidence suggesting that a kind of fluid was poured at these ceremonies,” noted Bozbay.

A temple or important communal building? This question still remains unanswered.

Today, visitors to the site can view modern reconstructions of the houses and view the mound where excavations have been taking place. Research continues at the site and archaeologists hope that Aşıklı Höyük, like the other better-known Neolithic sites such as Çatalhöyük and [Göbekli Tepe](#), will provide valuable insight on how early Neolithic people lived and how their communities formed the foundation upon which the great civilizations that ringed the Mediterranean were built.

A more detailed article about Aşıklı Höyük, authored by Heval Boznay, will be published in the Fall 2015 issue of Popular Archaeology Magazine.

Please visit the site: <http://popular-archaeology.com/issue/summer-2015/article/archaeologists-uncover-human-settlement-dated-to-the-dawn-of-civilization>

HIDDEN SECRETS OF YALE’S 1491 WORLD MAP REVEALED VIA MULTISPECTRAL IMAGING, BY MIKE CUMMINGS

Henricus Martellus, a German cartographer working in Florence in the late 15th century, produced a highly detailed map of the known world. According to experts, there is strong evidence that Christopher Columbus studied this map and that it influenced his thinking before his fateful voyage.

Martellus’ map arrived at Yale in 1962, the gift of an anonymous donor. Scholars at the time hailed the map’s importance and argued that it could provide a missing link to the cartographic record at the dawn of the Age of Discovery. However, five centuries of fading and scuffing had rendered much of the map’s text and other details illegible or invisible, limiting its research value.

A team of researchers and imaging specialists is recovering the lost information through a multispectral-imaging project. Their work is yielding discoveries about how the world was viewed over 500 years ago.

Last August the five-member team visited the Beinecke Rare Book & Manuscript Library, where for years the Martellus map hung from a wall outside the reading room. (It was recently moved to the Yale University Art Gallery for storage while the library is under renovation.) The team, funded by a grant from the National Endowment for the Humanities, photographed the map in 12 reflective colors, including several frequencies beyond the range of visible light. Those images were processed and analyzed with high-tech software.

“We’ve recovered more information than we dared to hope for,” says Chet Van Duzer, a map historian who is leading the project.

The map, which dates to about 1491 and depicts the Earth’s surface from the Atlantic in the west to Japan in the east, is dotted with descriptions in Latin of various regions and peoples. A text box visible over northern Asia describes the people of “Balor” who live without wine or wheat and subsist on deer meat.

Van Duzer says the new images reveal many such descriptions. For instance, text uncovered in southern Asia describe the “Panotii” people as having ears so large that they could use them as sleeping bags.

Newly revealed text in eastern Asian is borrowed from “The Travels of Marco Polo.” From the discrepancies in wording, Van Duzer has determined that Martellus used a manuscript version of the travelogue, not the sole printed edition in Latin that existed at the time.

Perhaps the most interesting revelations, say the researchers, concern southern Africa. By studying visible river systems and legible place names, Van Duzer had previously determined that Martellus based his depiction of the region on the Egyptus

N[MCI] ovelo [BL2] map, which survives in three manuscripts of Ptolemy's "Geography." The Egyptus Novelo used geographical data from native Africans, not European explorations. It is thought that the map was based on information shared by three Ethiopian delegates to the Council of Florence in 1441.

The new images show that the Martellus map's depiction of southern Africa extends further east than the known versions of the Egyptus Novelo do, suggesting that the German cartographer was working from a more complete version of the map that showed the eastern reaches of the continent.

"It's a seminal and tremendously important document of African mapping by the people of Africa, in this case preserved by a western source," says Van Duzer.

The new images also have helped Van Duzer to determine how the Martellus map influenced later cartographers. The map is similar to a world map drawn by German cartographer Martin Waldseemüller in 1507, which was the first map to apply the name "America" to the New World. The multispectral images show many of the same texts on Martellus' map in the same locations as on the 1507 map, confirming that the Martellus map was an essential source for Waldseemüller, says Van Duzer. At the same time, he notes, the cartographers' works are not identical: Waldseemüller borrowed most of his place names in coastal Africa from a different map.

"It puts you in the mapmaker's workshop," says Van Duzer. "It's easy to imagine Waldseemüller at his desk consulting various sources."

Waldseemüller was not alone in contemplating Martellus' work. Van Duzer says it is nearly certain that Columbus examined the Martellus map, or a map very similar to it. Writings by Columbus's son Ferdinand indicate that the explorer had expected to find Japan where Martellus depicted it, and with the same orientation, far off the Asian coast, and with its main axis running north and south. No other surviving maps from the period show Japan with that configuration, says Van Duzer.

In addition, the journal of one of Columbus's crewmembers, who believed the expedition was sailing along island chains in southern Asia, describes the region much as it is depicted in the Martellus map.

Revealing the map's faded details provides a more complete picture of Columbus's perception of geography, notes the historian.

"It's always interesting to learn how people conceived the world at that period in history," says Van Duzer. "The late 15th century was a time when people's image of the world was changing so rapidly. Even within Martellus's own career, what he was showing of the world expanded dramatically."

The discoveries are the result of painstaking effort. The multispectral images are processed using special software that finds the precise combination of spectral bands to enhance the visibility of text. The work involves a lot of experimentation.

The map's text was written in a variety of pigments, which complicates the task of recovering lost letters because individual pigments respond differently to light.

“We’re still finding things,” says Professor Roger Easton of the Chester F. Carlson Center for Imaging Science at Rochester Institute of Technology. “We’re focusing on these difficult cartouches and text blocks. One day last week we pulled out 11 characters. The next day, we got several words.”

Easton estimates the team has uncovered about 80% of recoverable text. Some of the text is entirely invisible before processing. The team is currently at work uncovering details in the region around Java.

Once the project is completed, the new images will be made available to scholars and the public on the Beinecke Library’s website.

Please visit the site: <http://news.yale.edu/2015/06/11/hidden-secrets-yale-s-1491-world-map-revealed-multispectral-imaging>

BAR-ILAN UNIVERSITY ARCHAEOLOGISTS UNCOVER ENTRANCE GATE AND FORTIFICATION OF BIBLICAL CITY FINDINGS UNCOVERED DURING EXCAVATIONS AT THE BIBLICAL CITY OF PHILISTINE GATH (HOME OF GOLIATH)

The Ackerman Family Bar-Ilan University Expedition to Gath, headed by Prof. Aren Maeir, has discovered the fortifications and entrance gate of the biblical city of Gath of the Philistines, home of Goliath and the largest city in the land during the 10th-9th century BCE, about the time of the "United Kingdom" of Israel and King Ahab of Israel. The excavations are being conducted in the Tel Zafit National Park, located in the Judean Foothills, about halfway between Jerusalem and Ashkelon in central Israel.

Prof. Maeir, of the Martin (Szusz) Department of Land of Israel Studies and Archaeology, said that the city gate is among the largest ever found in Israel and is evidence of the status and influence of the city of Gath during this period. In addition to the monumental gate, an impressive fortification wall was discovered, as well as various building in its vicinity, such as a temple and an iron production facility. These features, and the city itself were destroyed by Hazael King of Aram Damascus, who besieged and destroyed the site at around 830 BCE.

The city gate of Philistine Gath is referred to in the Bible (in I Samuel 21) in the story of David's escape from King Saul to Achish, King of Gath.

Now in its 20th year, the Ackerman Family Bar-Ilan University Expedition to Gath, is a long-term investigation aimed at studying the archaeology and history of one of the most important sites in Israel. Tell es-Safi/Gath is one of the largest tells (ancient ruin mounds) in Israel and was settled almost continuously from the 5th millennium BCE until modern times.

The archaeological dig is led by Prof. Maeir, along with groups from the University of Melbourne, University of Manitoba, Brigham Young University, Yeshiva University, University of Kansas, Grand Valley State University of Michigan, several Korean universities and additional institutions throughout the world.

Among the most significant findings to date at the site: Philistine Temples dating to the 11th through 9th century BCE, evidence of an earthquake in the 8th century BCE possibly connected to the earthquake mentioned in the Book of Amos I:1, the earliest decipherable Philistine inscription ever to be discovered, which contains two names similar to the name Goliath; a large assortment of objects of various types linked to Philistine culture; remains relating to the earliest siege system in the world, constructed by Hazael, King of Aram Damascus around 830 BCE, along with extensive evidence of the subsequent capture and destruction of the city by Hazael, as mentioned in Second Kings 12:18; evidence of the first Philistine settlement in Canaan (around 1200 BCE);

different levels of the earlier Canaanite city of Gath; and remains of the Crusader castle "Blanche Garde" at which Richard the Lion-Hearted is known to have been.

Please visit the site: http://www.eurekalert.org/pub_releases/2015-08/bua080315.php [See also <http://www.jpost.com/Israel-News/Article.aspx?id=411004>] [Go there for pix]

HEAD OF MEDUSA FOUND IN ANTALYA

The head of Medusa, a Greek mythological creature who turned all that gazed upon her into stone, has been unearthed during excavations in the ancient city of Antiocheia Ad Cragum in the southern province of Antalya's Gazipaşa district.

"We have found the Medusa figure ... among the marble blocks of a big structure, most probably a temple," said Nebraska University's Michael Hof, who is heading the excavations. "This is a normal human-size head, maybe a bit bigger. It does not belong to a sculpture but a relief located in the front façade of the temple. It was found nearly a week ago. When the excavation is finished, it will be delivered to the Alanya Cultural Directorate."

Uşak University Archaeology Department member Professor Birol Can said the work started in Antiocheia Ad Cragum in 2005 and was continuing with collaboration from Turkish and U.S. officials.

Please visit the site: <http://www.hurriyetdailynews.com/head-of-medusa-found-in-antalya-.aspx?pageID=238&nid=86544&NewsCatID=375> [Go there for pix]

THE BURIAL OF NEFERTITI?

ABSTRACT

Recently published, high-resolution scans of the walls of room J (the Burial Chamber) of Valley of the Kings tomb KV 62 (Tutankhamun) reveal, beneath the plastered surfaces of the painted scenes, distinct linear traces. These are here mapped, discussed, and tentatively identified as the "ghosts" of two hitherto unrecognized doorways. It is argued that these doorways give access to: (1) a still unexplored storage chamber on the west of room J, seemingly contemporary with the stocking of Tutankhamun's burial; and (2) a pre-Tutankhamun continuation of KV 62 towards the north, containing the undisturbed burial of the tomb's original owner -- Nefertiti.

Please visit the site:

https://www.academia.edu/14406398/The_Burial_of_Nefertiti_2015 is posted
Nicholas Reeves paper, "THE BURIAL OF NEFERTITI?" [Many other postings
on this topic, including interviews--just google for it]

HAS TURKEY FOUND WORLD'S OLDEST TEMPLE?

The ancient city of Ephesus and the Diyarbakir Fortress and its surrounding Hevsel Gardens have become the latest historical sites in Turkey to be inscribed on the UNESCO World Heritage List in July. Turkey's next nomination is the Stone Age cult site of Gobekli-tepe, located in Sanliurfa province not far from the turbulent Syrian border.

Tulay Cetingulec

The site's discovery began with a coincidence reminiscent of a movie plot. In 1983, local farmer Mahmut Kilic found a carved stone while plowing his field in the village of Orencik. He took it to the Sanliurfa Museum, where it was to wait a decade for someone to recognize its importance. Visiting the museum in 1993, German archaeologist Klaus Schmidt conducted tests on the stone, marking the beginning of a journey that took him 12 millennia back in history.

In a written response to Al-Monitor's questions, Gokhan Bozkurtlar, director-general for cultural heritage and museums at the Turkish Culture and Tourism Ministry, explained that a joint team from Istanbul University and the University of Chicago conducted the first archaeological work at the site in 1963. The surveys, however, remained limited to the surface. The real work began in 1995 with a joint effort by the German Archaeological Institute and the Sanliurfa Museum. In 2007, the Turkish government gave the green light for excavations, with Schmidt at the helm of the team. By 2011, the site was already on UNESCO's tentative list, an inventory of prospective nominations to the World Heritage List, following startling discoveries that pin it as the world's oldest temple center.

Four layers have been identified at Gobekli-tepe. According to the director of the Sanliurfa Museum, Muslum Ercan, the top layer consists of agricultural surface backfill, while the other three layers have been dated to the Pre-Pottery Neolithic period. He believes at least 20 other monumental structures await excavation at the site.

What has been discovered so far at Gobekli-tepe?

An information sheet the Culture and Tourism Ministry provided to Al-Monitor contains the following information: "Two 5-meter-tall [16 feet], T-shaped limestone pillars stand encircled by 20 round and oval structures of up to 30 meters [98 feet] in diameter. In the interior walls of those structures, there are smaller pillars. The scientific data from Gobekli-tepe contains major findings that require a re-evaluation of the theoretical framework and datings in archaeological studies of the Neolithic period. Based on Gobekli-tepe's location and size, the carbon-dating performed there and the monumental character of the structures, it is understood that the area is a unique Neolithic cult site. The area, which remained untouched for 12,000 years in its natural environment, has provided significant archaeological findings."

The pillars at the site feature carvings of animals — scorpions, foxes, snakes, boars, lions, cranes and mallards — as well as plants and abstract symbols. The temple predates Stonehenge by 7,000 years, the Egyptian pyramids by 7,500 years and the first Mesopotamian cities by 5,500 years.

In a documentary shot before his death in July 2014, Schmidt said, “It’s not a normal settlement site as the sites we know from this period, like Cayonu and Nevali Cori in Turkey or Mureybet in Jerf el-Ahmar in Syria. These are settlement sites, but here it’s very different. We have here mainly installations which have not been used for domestic life. It’s clear they’ve been used for ritual purposes, for religious [purposes]. ... So this site consists mainly of Stone Age temples. ... It was not hidden in the valley or in the plains, but on top of the highest mountain here, visible from all sides.”

The veteran archaeologist went on to describe how the findings astonished the team. “We didn’t expect such a developed architecture in the context of late hunter-gatherer societies. Hunter-gatherer societies dominated human history in the Old Stone Age. ... Farming was not invented,” he said. “The common idea was that from very primitive beginnings, the civilized way of life developed here in the Near East with settled societies, and now we understand that it’s much more complicated.”

The main raw material for the tools of the builders was flint, which is very common in the region, Schmidt explained. The preservation of the structures was “fantastic,” he said, because the site was backfilled and buried deliberately during Stone Age times, using hundreds of cubic meters of material.

One of the temples, which the excavation team calls Temple D, is particularly striking in terms of the symbols carved on it. “Here we have a very, very interesting sequence of motifs, which are in a vertical row and which are much more than just a decoration,” Schmidt said. “This sequence of motifs is reminding us of the Egyptian hieroglyphs. It’s clear we don’t have writing here, but we have symbols which we can understand partially. We have here snakes, for example, it’s clear. But here we have an H-shaped sign, and we don’t know the meaning of this symbol.”

Retired ambassador Numan Hazar, Turkey’s former permanent representative at UNESCO, said it’s now beyond doubt that Gobeklipe is the world’s oldest human-built site and cult center, stressing that many other civilizations remain to be discovered in Anatolia.

Speaking to Al-Monitor, Hazar said only 15 sites on the World Heritage List was too few for Turkey. “We have hundreds of monuments that can make it to the list. Anywhere you dig in Turkey, including the Istanbul subway, history emerges underneath,” he said. “From Hittites and Romans to Byzantines and Seljuks, many peoples have left countless traces in Anatolia, a cradle of civilizations. Catalhoyuk, for instance, figures in every book on the rise and development of humankind. All those monuments will have a positive impact on the international community vis-a-vis Turkey.”

Turkey’s business community is also backing efforts to inscribe Gobeklipe on the World Heritage List. The ONE Association, backed by prominent businesspeople, joined hands with the Culture and Tourism Ministry in January for a conference at the UNESCO headquarters in Paris, “The Birth of Religion and Rise of Civilization:

Gobeklitepe Neolithic Site.” The association’s chairwoman, Demet Sabanci, pledged that from now on the Turkish private sector would invest in the preservation of cultural heritage, while prominent Turkish historian Ilber Ortayli described Anatolia as the “world’s biggest open-air museum.” The undersecretary of the Culture and Tourism Ministry, Haluk Dursun, said the excavations at Gobeklitepe would continue, stressing that the findings were important enough to upend conventional concepts in the field.

Cihat Kurkcuoglu, a history scholar at Sanliurfa’s Harran University, believes tourists will soon flood Gobeklitepe. “For Turkey, Gobeklitepe is what the pyramids are for Egypt. I’m convinced it will soon make it to the UNESCO World Heritage List,” he said. “Millions of people will be coming here to see the place. Planes from all over the world will be taking off exclusively to Gobeklitepe.”

Please visit the site: <http://www.al-monitor.com/pulse/originals/2015/07/turkey-worlds-oldest-temple-discovered-in-south.html>

CURIAE VETERES SANCTUARY IN ROME **ATTRACTS THE CURIOUS,** **BY ELISABETTA POVOLEDO AUG**

Archaeologists working on the Palatine Hill here this summer excavated parts of sixth-century B.C. foundations connected to a sanctuary of a cult that ancient sources trace back to Romulus, Rome's mythic founder - a rare find from such an early period.

The discovery, archaeologists say, will probably lead to further exploration for even more ancient elements of the sanctuary, called the Curiae Veteres. The remains came to light during a continuing dig of the northeast slope of the hill. The most recent phase of the dig ended last month.

Excavations in Rome have not recovered much from the sixth century B.C., though the city was already an important center then, said Antonio Ferrandes, deputy director of the dig, which was led by La Sapienza University of Rome. "Our archaeological knowledge is very limited" regarding the period, he said.

The Curiae Veteres was among the most important buildings of that time, a place where Romans assembled to worship, and one of the points that defined the Romulean city. Ancient sources recount the tradition that Romulus, said to have founded Rome in 753 B.C., divided the population into 30 curiae, or neighborhoods, much like today's boroughs.

Twice a year in Rome's early years representatives of the 30 curiae gathered in a banquet hall at the Curiae Veteres until the sanctuary became too small and a new assembly place, also called a curia, was built. Scholars say that representatives from four, or seven - the debate continues - curiae continued to meet at the old sanctuary, hence it is described in the plural form.

The sanctuary, believed to have its roots in the eighth century B.C., was destroyed when fire swept through the city in A.D. 64. It was rebuilt a few years later by the Flavian emperors, and was used until the end of the fourth century, when pagan cults were banned.

"This is a building that was used continuously for some 12 centuries," said Clementina Panella, an archaeology professor at La Sapienza University of Rome who led the excavation, which this year involved 85 students. The university's archaeologists had already identified the sanctuary as being on the site, but the two-month dig - which ended in late July - was the first time they were able to directly excavate in the archaic portions.

"We're in a city where buildings have undergone continuous modifications," Ms. Panella said. One excavated section, reached by descending two rickety ladders and nimbly stepping around a well from the sixth century B.C., proffered traces of a fourth century B.C. sewer, the foundations of a temple restored in the first century A.D. by the emperor Claudius, and pilasters from the second century A.D. during the reign of Septimius Severus.

"This city lives on itself," she said. "It eats itself."

Ms. Panella has been excavating the Palatine since 1986. Since 2001 the dig has focused on the slope next to the Colosseum, unearthing some of the earliest structures of the ancient city. Four years ago, the team found the remains of a house they believe to be the birthplace of Rome's first emperor, Augustus. "We didn't find a plaque that said so, but we're pretty certain that this is the place, given that ancient sources say he was born near the Curiae Veteres," Ms. Panella said.

Now that excavations have ended for the summer, government archaeologists will secure the site and some parts will eventually be accessible to the public.

Ms. Panella hopes to continue excavating the site next year. "There's still the seventh, eighth, ninth centuries to dig to, as long as we can do so safely," she said. "Will we get to Romulus?" She added, with a smile, "I'll tell you next year."

Please visit the site: <http://www.nytimes.com/2015/08/12/arts/design/curiae-veteres-sanctuary-in-rome-attracts-the-curious.html>

ROMAN GLASS-MAKING FURNACES **DISCOVERED IN EGYPT’S DELTA,** **BY RANY MOSTAFA**

Glass-making furnaces dating back to the Roman Egypt period (30B.C.-395A.D.) have been unearthed in Egypt’s Delta archaeological site of Tell Mutubis, the Antiquities Ministry stated Friday.

The discovery was made during a magnetic gradient survey carried out by a joint mission of the UK’s Durham University, directed by Dr. Penny Wilson, and Egypt’s Mansoura University.

“Several glass shards, mortar and plaster pieces, limestone tiles in addition to glass pots, potsherd, and eroded coins were discovered in the site. These finds indicate that furnaces to manufacture glass existed in this area,” head of the mission Dr. Penny Wilson was quoted in the statement.

The detailed breakdown and the specialized studies, which were conducted on the pots and coins discovered at the site, confirm that it dates back to ancient Egypt’s late Roman era, Wilson said.

A large number of red-brick housing units, storerooms, limestone-tiled floors along with walls covered with lute were also excavated in the area, Wilson said, adding that “the finds are significant as they indicate the cultural transitions during the Roman period to the early Islamic period, which started in the mid seventh century.”

According to Wilson, the site of Tell Mutubis, located in Egypt’s Delta governorate of Kafr el-Sheikh near Rosetta, is strongly believed to have been abandoned during Egypt’s Islamic era (641-1952.)

Please visit the site: <http://www.thecairopost.com/news/164014/culture/roman-glass-making-furnaces-discovered-in-egypts-delta>

IMPORTANT FINDS AT TWO EXCAVATIONS IN LACONIA

A new Mycenaean palace has been found on the Sparta plain during the archaeological surveys which have been going on since 2009 at the Aghios Vassilios Hill near the village of Xirokambi in Laconia. Among the finds were Linear B tablets, a very valuable discovery considering the fact that they come from a Protohistoric period of the Helladic area where written sources are scarce.

The Aghios Vassilios excavations are headed by the Director Emerita of Antiquities, Adamantia Vassilogamvrou and are considered to be among the most important systematic surveys in the Protohistory of the Hellenic world. Another important ongoing excavation is that of the Sanctuary of Apollo Amyklaios on the Aghia Kyriaki Hill in Amykles of Laconia, headed by Professor Emeritus of the National and Kapodistrian University of Athens Angelos Delivorrias. There one of the most important Greek sanctuaries has been revealed, dating back to the Geometric period. The research team slowly but patiently also tries to shed light on the issue of the Apollo temple (Amyklaion Throne), which has engaged many archaeologists over the years. This survey is being conducted under difficult circumstances, as the Sanctuary has been severely damaged in the past.

The Aghios Vassilios excavation

The archaeological investigations conducted since 2009 at the Aghios Vassilios Hill near the village of Xirokambi in Laconia revealed a new Mycenaean palace on the Sparta plane.

By using methods of geophysical survey buried building remains have been located at an area covering 3.5 hectares.

Habitation is believed to have started during the transition period from the Middle-Helladic to the Late-Helladic/Mycenaean period (17th-16th c. BC), based on the dating of the cemetery of stone-built cist graves and simple shafts at the top of the hill. The first building phase of the settlement is also dated to the same period.

According to the evidence found so far, these buildings were destroyed during the LH IIB-III A1 period (late 15th-early 14th c. BC), possibly due to a fire. After this, a new strong and extended palace complex was erected at the site. These buildings were arranged around a big central courtyard, on the south and western sides of which a stoa with a colonnade of pillars has been excavated.

In a room of the Western Stoa storey an archive of the palace was kept. Its excavation hasn't been completed yet. The unbaked clay tablets carved with Linear B texts were preserved thanks to a fire which has however destroyed the new palaces during the LH IIA period (14th c. BC). The archive contains tablets of all the known types found in other palace complexes, leaf-shaped or page-shaped, labels and clay seals. The texts refer to the supply of goods to a sanctuary (or sanctuaries), male and female names, places and the title *ἀναξ* in the genitive case (*ἀνακτος*).

One of the excavated buildings on the east side of the courtyard, Building A, is being associated to cult/religious rituals. The fire has “baked” and preserved part of the brickwork and clay mortar of the inner separating walls. Until now 10 rooms have been investigated. They contained many typical cult objects and vessels, such as clay figurines of bovines and an ivory statuette of a male figure holding a young calf or bull, a big clay rhyton of a bull head, a stone double-rimmed jug, two big Tritons etc.

Furthermore, many decorative objects, seal stones, Egyptian scarabs etc. have been found. In one room, possibly laid in a box made of organic material, 21 Bronze swords were kept, while underneath the floor of another room a dense layer of animal bones, pottery and valuable miniature objects was found. This layer might be related to the fire remains located in the surrounding area, on the eastern side of the building.

The abundance of wall-painting sherds depicting typical Mycenaean era scenes found in the backfill of a second building (Building B) and in a deposit in an unbuilt area suggest that the palaces were decorated with frescoes.

The Aghios Vassilios palace complex offers a unique opportunity for archaeologists to investigate the creation and development of a Mycenaean palace center and gain a rare insight into the political, administrative, economic and social organization of the area. Also new evidence is expected to come to light about the Mycenaean religion and linguistic and/or palaeographic issues.

The excavations of the Sanctuary of Apollo Amyklaios

The systematic excavation conducted in the framework of the 5-year Amykles Research Programme and completed this month under the direction of the Professor Emeritus of the National and Kapodistrian University of Athens Angelos Delivorrias, Dr. Stavros Vlivos (Ionia University) and the supervision of the Ephorate of Antiquities of Laconia, has revealed the continuation of the precinct on the western side of the Aghia Kyriaki Hill, where the Sanctuary of Apollo Amyklaios is being located, 5 km south of Sparta.

This important find is completing the more than encouraging results of the excavation works so far. From 2009 until 2013, the whole surface of the Aghia Kyriaki Hill, connected with the function and monuments of the sanctuary, has been thoroughly investigated.

Remains of the Early-Helladic/Middle-Helladic settlement were located at the top of the hill and the first monumental phase of the sanctuary was dated back to the Late-Geometric period, based on the discovery of the older precinct.

At the same time though, the location of the foundation trench of the so-called Throne of Apollo has offered new evidence about the dimensions of the building. At the northwestern side there is a monumental portico completing the picture of the Archaic sanctuary.

This year’s investigations also changed the view that the precinct had a horse-shoe form, as it runs through the whole western slope of the hill, reaching a length of 50 meters and

preserved up to a height of 1.20m. On its whole length the wall rests on the natural porous rock of the hill, which has been carved to create two terraces of 2.50m total width. Questions about its further route towards the south and its connection to the known corner of the monumental precinct remain unanswered. In the biggest part of the wall the subfoundation of big rough stones is being preserved, as well as parts of the inner masonry of big breccia stones, limestones and porous stones.

The building of the wall cannot be dated as the layers and movable finds are disturbed. Interventions on its outer side however can be dated to the Late Antiquity and the Early Christian years.

Based on the excavation survey, at the northwestern side of the wall, near the monumental entrance to the sanctuary, a Roman era construction has violated part of it to build a cistern (4x4m). In this building, which is very well preserved, the floor is made of square clay plaques, while the inner wall surfaces are covered with hydraulic plaster.

This room contains a unique find: in the centre of the room an intact Doric capital with hypotrachelium was found. Due to this unusual typology it can be attributed to the Apollo Temple, as a similar one (now in the Archaeological Museum of Sparta) had been found during past excavations in the sanctuary.

Please visit the site: <http://archaeologynewsnetwork.blogspot.it/2015/08/important-finds-at-two-excavations-in.html#.VeAOdJekXCv>

ANCIENT EGYPTIANS FORCED OPEN MOUTHS DURING MUMMIFICATION, BY ROSSELLA LORENZI

Ancient Egyptians were likely to lose some of their front teeth before they could become mummies, says a new research debated at the International Congress of Egyptologists in Florence.

Taking place after excerebration (brain removal) and evisceration (body organ removal) and before final wrapping, the procedure would force open the mouths of the deceased with a knife and iron chisel, breaking and dislocating teeth in the process.

The procedure appears to be in contrast to the delicate and thoughtful steps taken during the mummification process.

The "opening of the mouth" was so far known to Egyptologists as a central yet innocuous ritual in mummification, aimed at restoring the deceased's senses for the afterlife.

The symbolic animation of the finished mummy was achieved through a series of ritual actions that involved the repeated touching of the mouth and eyes with various specialized implements.

"These actions were accompanied by recitation of specific formulae and incantations in order to enable the deceased to breathe, eat, drink, hear, and see, and ultimately survive the afterlife," said Mariam Ayad, associate professor of Egyptology at the American University in Cairo.

Ayad presented a study on the opening of the mouth ritual as seen in scenes from ancient Egyptian mortuary monuments.

But according to mummy expert Frank Rühli, director of the Institute of Evolutionary Medicine at the University of Zurich, parts of the ceremony actually correspond to a physical and sometime probably rather brutal opening of the deceased's mouth.

"Fractures and avulsions of front teeth, which were up to now not sufficiently taken into consideration, are the first evidence for a real physical opening of the mouth procedure during mummification," Rühli told Discovery News.

Rühli and dentist Roger Seiler from the Institute of Evolutionary Medicine at the University of Zurich, investigated 51 mummies from the Swiss Mummy project and more than 100 from the skull collection of the University of Zurich Anthropological Institute and Museum.

It emerged that several mummies suffered postmortem (after death) trauma to the teeth, and CT scans even showed that in some cases broken teeth ended up deep down in the throat.

"One learns from the texts of the ritual of embalming that after the surgical treatment and the dehydration, the dead body was again cleaned and anointed before being wrapped," the researchers wrote in a issue of the journal The Anatomical Record entirely devoted to the study of mummies around the world.

Based on what was written in the papyri detailing the mummification of the Apis bull, which corresponds to embalming of high-status people, the jaws had to be forced apart with instruments as a priest "put his hand in his mouth as far as his hand can reach."

In order to wipe out and anoint the oral cavity with oil and resins, the priest laid two cloths on the opening of the throat, a third on the lower jaw and a fourth inside the mouth.

"These manipulations caused in many cases teeth fractures and dislocations seen frequently in ancient Egyptian mummies," Rühli said.

He noted that the term "opening of the mouth procedure" should now be used to distinguish it from the purely symbolic actions of the opening of the mouth ritual.

Please visit the site: <http://news.discovery.com/history/archaeology/ancient-egyptians-forcefully-opened-mouths-during-mummification-150827.htm>

THE 5,000-YEAR SECRET HISTORY OF THE WATERMELON - ANCIENT HEBREW TEXTS AND EGYPTIAN TOMB PAINTINGS REVEAL THE ORIGINS OF OUR FAVORITE SUMMERTIME FRUIT, BY MARK STRAUSS

To taste a watermelon is to know "what the angels eat," Mark Twain proclaimed.

The angels, however, would have gagged if they had eaten the watermelon's wild ancestor—a bitter fruit with hard, pale-green flesh. Generations of selective breeding, spanning several countries and cultures, produced the sweet red fruit that's now a common sight on picnic tables.

Much of this epic history has been lost to antiquity. But Harry Paris, a horticulturalist at the Agricultural Research Organization in Israel, has spent years assembling clues—including ancient Hebrew texts, artifacts in Egyptian tombs, and medieval illustrations—that have enabled him to chronicle the watermelon's astonishing 5,000-year transformation.

Who's Your Daddy?

Scientists agree that the watermelon's progenitor—the ur-watermelon, if you will—was cultivated in Africa before spreading north into Mediterranean countries and, later, to other parts of Europe.

But, that's where the consensus ends. Did the ancestral watermelon originally grow in Western Africa? Southern Africa? Northeastern Africa? The theories are, literally, all over the map.

"The history has been screwed up from the very outset," says Paris, who places the blame on generations of taxonomists, stretching back to the 18th century, who hopelessly muddled melon classification.

Even the name for the modern watermelon—*Citrullus lanatus*—is wrong. *Lanatus* means "hairy" in Latin and was originally the name applied to the fuzz-covered citron melon (*Citrullus amarus*).

The citron melon, which grows in southern Africa, is one popular candidate for the watermelon's ancient ancestor. But Paris is doubtful. He's found evidence that the Egyptians began growing watermelon crops around 4,000 years ago, which predates farming in southern Africa.

Contestant number two is the egusi melon from western Africa. Again, Paris is skeptical. Egusis weren't cultivated for their flesh, but for their edible seeds—the one part of the modern watermelon that nobody wants.

Paris says the true ancestor of the modern watermelon is indigenous to northeastern Africa: *Citrullus lanatus* var. *colocynthoides*, known as *gurum* in Sudan and *gurma* in Egypt.

"Why go all the way to western Africa, to a country like Nigeria, when you have these watermelons still growing wild in the deserts of Egypt and Sudan to this very day?" says Paris.

Pharaonic Fruit

People have been eating watermelons for millennia. We know this because archaeologists found watermelon seeds, along with the remnants of other fruits, at a 5,000-year-old settlement in Libya.

Seeds, as well as paintings of watermelons, also have been discovered in Egyptian tombs built more than 4,000 years ago, including King Tut's. One tomb painting, in particular, stands out. The watermelon depicted in the image is not round like the wild fruit. Instead, it has the now-familiar oblong shape, suggesting that it was a cultivated variety.

A fair question to ask is why the Egyptians began cultivating wild watermelons in the first place. The fruit was hard and unappetizing, tasting either bitter or bland. Yet somebody at some point said, "Hey, let's grow more of these!"

The answer, according to Paris, is in the fruit's name: water. Unlike other fruits, watermelons could remain edible for weeks or even months if kept in a cool, shaded area. A National Geographic correspondent visiting Sudan in 1924 saw watermelons being collected and stored this way during the dry season, when they would be periodically pummeled to extract their water.

Paris believes the Egyptians were drawn to the fruit for the same reason. And, he adds, it's why we find remnants of watermelons in tombs, "These Egyptian pharaohs, when they died they had a long journey ahead of them so they needed a source of water-and what would that source of water be?" says Paris.

Once the Egyptians began cultivating watermelons, Paris suspects the first trait they sought to change was the taste. Just one dominant gene was responsible for the bitter flavor, so it would have been relatively easy to breed it out of the population.

After that, watermelon growers began selectively breeding for other traits. In that respect, the tomb painting of the oblong melon, which is shown resting on top of a food platter, reveals a clue to how the melon was changing. Since it was being served fresh, it must have been tender enough to cut and eat. Gone was the hard flesh and the need to pound it into watery pulp.

But while the fruit was no longer hard and bitter, it had not yet fulfilled its destiny as the sweet, tender watermelon that we enjoy today.

Hitting the Road

After 2000 B.C., the watermelon's historical trail must be teased out of medical books, travelogs, recipes, and religious texts. By studying and comparing descriptions from several sources, Paris was able to deduce the ancient names for the watermelon and track its many uses.

Writings from 400 B.C. to 500 A.D. indicate the watermelon spread from northeastern Africa to Mediterranean countries. Paris speculates that, in addition to trade and bartering, the watermelon's territorial expansion was aided by its unique role as a natural canteen for fresh water on long voyages.

The ancient Greek name for the watermelon was the pepon. Physicians, including Hippocrates and Dioscorides, praised its many healing properties. It was prescribed as a diuretic and as a way to treat children with heatstroke by placing the cool, wet rind on their heads.

The Roman naturalist, Pliny the Elder, was also a fan, describing the pepo as a refrigerant maxime-an extremely cooling food-in his first century encyclopedia, *Historia Naturalis*.

Paris confirmed that the ancient Hebrew name for watermelons was avattihim. He found a trove of clues in three codices of Jewish Law that were compiled millennia ago in Israel: the Mishnah, Tosefta, and the Jerusalem Talmud. "The rabbis back then didn't sit in the Yeshiva all day," says Paris "They were out with the people. They knew agriculture."

The texts on tithing-the mandated practice of putting aside a portion of crops for priests and the poor-were especially informative. For instance, farmers were instructed not to stack avattihim, but lay them out individually. That's a key indicator that avattihim were watermelons, since the rinds were notoriously fragile.

The most exciting reveal in the Hebrew writings was a tract, written around 200 A.D., which placed the tithed watermelons in the same category as figs, grapes, and pomegranates.

And what do all of those fruits have in common? They're sweet. By the third century, the watermelon had graduated from desert crop to dessert. And if sweet watermelons were in Israel, they had likely spread across the Mediterranean.

Taste the Rainbow

Descriptions from that era describe ripe watermelons as having a yellowish interior. Likewise, a Byzantine-era mosaic in Israel, from around 425 A.D., depicts what appears to be a cut watermelon with yellow-orange flesh.

In subsequent years, the watermelon would take on its familiar red hue. That's because the gene for the color red is paired with the gene that determines the sugar content. As watermelons were bred to become even sweeter, their interior gradually changed color.

The first color sketches of the red-fleshed, sweet watermelon in Europe can be found in a medieval manuscript, the *Tacuinum Sanitatis*. Italian nobility in the 14th century commissioned lavishly illustrated copies of this text, which was a guide to healthy living based on an 11th century Arabic manuscript.

The Tacuinum Sanitatis is rich in horticultural imagery. Some of the illustrations depict the distinctive oblong-shaped, green-striped watermelon being harvested and sold, with a few cut open revealing the red interior. One scene depicts a farmer, a cheerful look on his face, as he drinks out of one end of the melon. Finally, a fruit fit for the angels. Today, 100 million tons of watermelon are grown annually worldwide.

"Have your grandparents ever said to you, 'You never had it so good'? " asks Paris. "They were right. With the progress we've made-5,000 years of watermelon domestication-we've never had it so good."

Please visit the site: <http://news.nationalgeographic.com/2015/08/150821-watermelon-fruit-history-agriculture/>

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 Karcı 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 Matrialis.

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> [Go there for pix]

UNUSUAL USE OF BLUE PIGMENT FOUND **IN ANCIENT MUMMY PORTRAITS** **NORTHWESTERN-HEARST MUSEUM OF** **ANTHROPOLOGY COLLABORATION** **REVEALS HIDDEN COLOR**

Mostly untouched for 100 years, 15 Roman-era Egyptian mummy portraits and panel paintings were literally dusted off by scientists and art conservators from Northwestern University and the Phoebe A. Hearst Museum of Anthropology as they set out to investigate the materials the painters used nearly 2,000 years ago.

What the researchers discovered surprised them, because it was hidden from the naked eye: the ancient artists used the pigment Egyptian blue as material for underdrawings and for modulating color—a finding never before documented. Because blue has to be manufactured, it typically is reserved for very prominent uses, not hidden under other colors.

"This defies our expectations for how Egyptian blue would be used," said Marc Walton, research associate professor of materials science and engineering at Northwestern and an expert on the color blue. "The discovery changes our understanding of how this particular pigment was used by artists in the second century A.D. I suspect we will start to find unusual uses of this colorant in a lot of different works of art, such as wall paintings and sculpture."

The best Roman-era painters tried to emulate Greek painters, who were considered the masters of the art form. Before the Greek period, Egyptian blue was used everywhere throughout the Mediterranean -- in frescoes, on temples, to depict the night sky, as decoration. But when the Greeks came along, their palette relied almost exclusively on yellow, white, black and red.

"When you look at the Tebtunis portraits we studied, that's all you see, those four colors," Walton said. "But when we started doing our analysis, all of a sudden we started to see strange occurrences of this blue pigment, which luminesces. We concluded that although the painters were trying hard not to show they were using this color, they were definitely using blue."

The study was published this month by Applied Physics A, a journal focused on materials science and processing. The research collaboration is part of the Northwestern University-Art Institute of Chicago Center for Scientific Studies in the Arts (NU-ACCESS), for which Walton is a senior scientist.

"Our findings confirm the distinction between the visual and physical natures of artifacts -- expect the unexpected when you begin to analyze an artwork," said Jane L. Williams, a conservator at the Hearst Museum and a co-author, along with Walton, of the study. "We see how these artists manipulated a small palette of pigments, including this unusual use of Egyptian blue, to create a much broader spectrum of hues."

The researchers studied 11 mummy portraits and four panel painting fragments. The 15 paintings were excavated between December 1899 and April 1900 at the site of Tebtunis (now Umm el-Breigat) in the Fayum region of Egypt. They now are housed in the collections of the Hearst Museum at the University of California, Berkeley.

The fragile mummy portraits are extremely lifelike paintings of specific deceased individuals. Each portrait would be incorporated into the mummy wrappings and placed directly over the person's face, Williams explained.

While working on the conservation treatment of these paintings, Williams had many unanswered questions about their materials and techniques, but without a conservation science division at the Hearst Museum, she had limited means to investigate. Working with NU-ACCESS made a comprehensive technical survey of the paintings possible, Williams said.

Walton and his Northwestern team brought expertise in scientific analysis of cultural heritage materials and some of the latest technology for the non-destructive analysis of artworks to the Hearst Museum. The study quickly revealed some surprises.

The researchers uncovered the unexpected uses of Egyptian blue -- the first man-made pigment, inspired by lapis lazuli, the true blue--using a routine battery of different analytical techniques, such as X-ray fluorescence and X-ray diffraction. Six of the 15 paintings have the unusual use of blue, the researchers found.

The skilled painters employed blue for underdrawings, to modulate clothes, the shading on clothing and in other not necessarily intuitive uses of Egyptian blue, a pigment used for millennia before these paintings were made.

"We are speculating that the blue has a shiny quality to it, that it glistens a little when the light hits the pigment in certain ways," Walton said. "The artists could be exploiting these other properties of the blue color that might not necessarily be intuitive to us at first glance."

Research on these paintings, which is ongoing, will contribute to the international collaborative study project Ancient Panel Paintings: Examination, Analysis and Research (APPEAR), initiated by the J. Paul Getty Museum. APPEAR aims to create an international digital database to compile historic, technical and scientific information on Roman Egyptian portraits.

"Our collaboration with NU-ACCESS makes it possible for the Hearst Museum to contribute to this project at the level of much larger museums, like the Getty or the British Museum, that have conservation science divisions," Williams said.

-Megan Fellman, NORTHWESTERN UNIVERSITY

The paper is titled "Investigating the use of Egyptian blue in Roman Egyptian portraits and panels from Tebtunis, Egypt." In addition to Walton and Williams, other authors of the paper are Monica Ganio (first author), Johanna Salvant and Oliver Cossairt, of Northwestern; and Lynn Lee, of the Getty Conservation Institute.

NU-ACCESS is based at Northwestern's McCormick School of Engineering and Applied Science and is supported by a grant from the Andrew W. Mellon Foundation. The

center's mission is to provide scientific support for the investigation of art collections, as well as to develop new technology to look at.

Please visit the site: <http://popular-archaeology.com/issue/summer-2015/article/unusual-use-of-blue-pigment-found-in-ancient-mummy-portraits>

ANCIENT GREEK WELL USED FOR HYDROMANCY DISCOVERED IN ATHENS, BY KATERINA PAPATHANASIOU

The ancient Greek phrase "ΕΛΘΕ ΜΟΙ Ω ΠΑΙΑΝ ΦΕΡΩΝ ΤΟ ΜΑΝΤΕΙΟΝ ΑΛΗΘΕΑ" is written on the mouth of a well that came to light during the latest excavations of the German Archaeological Institute at the archaeological site of Kerameikos in Athens.

The invocation phrase seems to have been addressed to Apollo, the ancient Greek god of prophecy, while the well was probably used in some kind of hydromancy rituals during the early Roman times.

This significant and unexpected discovery was made after an inverted marble was removed from the mouth of the well in the sanctuary's courtyard, south of the famous "burial route."

The well is attributed either to ancient goddess of the hunt, forests and hills, the moon and archery, Artemis, or goddess of magic, crossroads, moon, ghosts and necromancy, Hecate.

According to a Greek Culture Ministry announcement, the identification of more than 20 inscriptions with relevant content highlights the well's connection with the sanctuary of Apollo in Athens, confirming the worship of God along with his sister, Artemis.

The excavation was carried out under the direction of Jutta Stroszcek and the supervision of the Ephorate of Antiquities of Athens.

Please visit the site: <http://greece.greekreporter.com/2015/08/30/ancient-greek-well-used-for-hydromancy-discovered-in-athens/>

LOST PALACE OF SPARTA POSSIBLY UNCOVERED, BY TIA GHOSE

New excavations at a site near historical Sparta may have uncovered the lost ruins of a Mycenaean Spartan palace. Among the treasures found at the site were cultic objects, such as this bull's head rhyton, or ceremonial drinking goblet. (Greek Ministry of Culture). An ancient Greek palace filled with cultic objects and clay tablets written in a lost script may be the long-lost palace of Mycenaean Sparta, one of the most famous civilizations of ancient Greece.

The 10-room complex, called Ayios Vassileios, was filled with striking artifacts, including fragments of ornate murals, a cultic cup with a bull's head, a seal emblazoned with a nautilus and several bronze swords. The palace, which burnt to the ground in the 14th century B.C., also contained several tablets written in Linear B script, the earliest known form of written Greek, the Greek Ministry of Culture said in a statement. The ancient palace was uncovered about 7.5 miles away from the historical Sparta that arose centuries later.

The discovery could shed light on a mysterious period in the history of the Mycenaean civilization, the Bronze Age culture that mysteriously collapsed in 1200 B.C. [See Photos of the Spartan Palace and Artifacts]

Mysterious Greek culture

The Mycenaean, whose culture likely inspired Homer's epics "The Iliad" and "The Odyssey," rose to prominence in 1700 B.C. The civilization left behind gorgeous palaces, tombs laden with treasures and a trove of clay tablets holding text in Linear B, which was deciphered in the 1950s.

In one of history's enduring mysteries, the culture disappeared 500 years later and Greece entered a mini-dark age. Researchers, reporting in 2013 in the journal PLOS ONE, pinned the Mycenaean's downfall on a 300-year drought, whereas other historians have proposed that a massive earthquake destroyed the civilization.

Though archaeologists have a fairly clear picture of the late Mycenaean culture up to around 1200 B.C., they knew relatively little about the centuries beforehand. Then in 2009, archaeologists uncovered the remains of an ancient site that was first erected in the 17th century B.C., according to the statement. The entire complex was likely destroyed in a fire a few hundred years later. [7 Most Mysterious Archaeological Finds on Earth]

Ancient Spartan palace?

The ruins, which are on a low hill on a Spartan plain that is dotted with olive trees, include what is likely the palace archive. At the time, administrators of the political bureaucracy kept temporary records on unbaked clay tablets, which would then be recycled after a short period, such as a year, said Hal Haskell, an archeologist who studies the ancient Mycenaean culture at Southwestern University in Georgetown, Texas.

Though the conflagration destroyed the palatial complex, it also fired the clay tablets, baking the Linear B text into permanence. So far, the team has been able to identify both male and female names, as well as records of financial dealings and religious offerings, according to the statement. The records' complexity reveals a highly sophisticated culture with an intricate bureaucracy, the archaeologists note.

A second structure on the site preserved fragments of ancient murals, while a sanctuary east of the courtyard included cultic religious objects, such as ivory idols and figurines, a rhyton, or drinking vessel, with a bull's head on it, large newts and many decorative gems.

The palatial complex fills a big gap in archaeology, said Haskell, who was not involved in the current excavation.

"Tradition tells us that Sparta was an important site in the Mycenaean period," Haskell told Live Science.

Yet no one had found a palace in the Spartan plain, certainly not one that matched the grandeur of the palaces of Pylos and Mycenae. The new site could be that lost Spartan palace, Haskell told Live Science.

"What's exciting is you do have this middle Bronze Age stuff that suggests it's a site of great significance," Haskell said, referring to the artifacts inside the palace.

For instance, Linear B tablets would only be housed in an administrative center in Mycenaean culture, Haskell said. To really show this is a long-lost Spartan palace, the archaeologists are hoping to uncover the megaron, or the throne room where ancient Greeks held receptions, Haskell said.

The find is "hugely significant," Torsten Meissner, a classicist at the University of Cambridge in England, told Live Science in an email. All of the other famous sites Homer mentioned in his epics have been discovered. "Mycenaean, or Bronze Age, Sparta was the last 'big prize,'" Meissner said.

The early evidence of Linear B tablets at the palace could also force scholars to rethink the time and place where Linear B developed. Historians used to think that Linear B derived from an elusive, still undecipherable text used by the enigmatic Minoan culture known as Linear A, which developed on the island of Crete. The new Linear B tablets at Ayios Vassileios were from 100 years earlier than the next oldest tablets, and given that there is a Minoan settlement near the new Spartan palace, scholars may need to rethink where that language transfer occurred, Meissner said.

Editor's Note: This article was updated to note that the palace complex near Sparta burnt down in the 14th century B.C., not sometime between the 15th and 14th centuries B.C.

Please visit the site: <http://www.foxnews.com/science/2015/08/28/lost-palace-sparta-possibly-uncovered/>
