



# Association for Environmental Archaeology

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**Edited by Wendy Carruthers and Vanessa Straker**

Copy dates for Items for the Newsletter may be submitted by e-mail or on disk. Newsletter: 20th of the following months - January / April / July / October. Short typed manuscripts can be sent to Wendy Carruthers.

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AEA website <http://www.envarch.net/>

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## EDITORIAL

In this edition of the Newsletter we would like to draw your attention to the resurrection of the Archaeobotany Work Group which will be meeting soon (20<sup>th</sup> May) in Portsmouth. We would be grateful for offers to host future work group meetings. The next AEA one-day meeting is also being held in Portsmouth on 26<sup>th</sup> September. Please make sure you register by 21<sup>st</sup> July.

We would like to thank Meriel and David for their useful report on the Exeter conference and would be grateful for volunteers to report on the Portsmouth meeting.

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## NEWS FROM THE COMMITTEE

### NOMINATIONS TO THE AEA MANAGING COMMITTEE

The AEA Managing Committee seeks nominations for **three ordinary committee members** and the **position of Treasurer** (four vacancies altogether, each a four-year position). Elections will be held at the AEA AGM to be held at the one-day meeting conference in **Portsmouth, 26 September 2006**.

The AEA Managing Committee usually meets four times a year (usually in March, June, September and December). The main items of business discussed are the organisation of conferences, and the publication of conference monographs and the Journal, as well as issues relating to the Newsletter, Website maintenance and membership. Nominees must be current AEA members.

### The role of Treasurer (elected officer)

The position of AEA Treasurer entails a number of duties, some of which only take place annually whilst others involve action on a regular basis. On a day-to-day basis the job involves keeping detailed records

of all payments received (membership subscriptions, book sales, etc.) and of all transactions going out (journal and newsletter costs, Webpage maintenance, etc). The Treasurer is responsible for making payments into the bank and for checking monthly statements. All payments by cheque have to originate from the Treasurer and the post involves close liaison with the Membership Secretary, in particular, and other committee members. The Treasurer will also at times have to prepare brief summaries of the financial position of the AEA for Committee meetings when important decisions involving significant expenditure are being discussed. Annually, the Treasurer is responsible for preparing the accounts of the Association and reporting the financial position to the AGM. The post would suit an organised, responsible person with a reasonable feel for finances and good attention to detail.

### **To make your nomination**

Any AEA member can make a nomination, but this must be seconded. A brief personal statement from the nominee (which implicitly indicates the nominee's willingness to stand) should accompany nominations. This can be received by e-mail or regular mail. This statement will be published in the August Newsletter or, if received afterwards, posted at the AGM.

Nominations can be received up to the time of the AGM, although the committee would like to encourage members to submit nominations before the August Newsletter deadline (20<sup>th</sup> July). Nominations and personal statements can be e-mailed or posted to:

Meriel McClatchie, Archaeological Services Unit, Department of Archaeology, University College Cork, Republic of Ireland. E-mail: [m.mcclatchie@ucc.ie](mailto:m.mcclatchie@ucc.ie)

Current committee details can be found at:  
<http://www.envarch.net/aea/committee.html>

The AEA constitution is also on the AEA website:  
<http://www.envarch.net/aea/constitution.html>

### **COMMUNICATION PROBLEMS – AN APOLOGY FROM THE COMMITTEE**

The Committee has been made aware of a number of problems relating to delays in communication between the Membership Secretary and members. These resulted from a changeover in the post of Membership Secretary some months ago. The issues are now largely resolved, and the Committee would like to thank Nicki Whitehouse for hard work in her new role as Membership Secretary. The Committee would like to take this opportunity to apologise to any members that have experienced delays in communication. Any members that have yet to receive a response to any query should contact the Membership Secretary ([membership@envarch.net](mailto:membership@envarch.net)).

### **SUBSCRIPTIONS**

Reminder letters and/or emails regarding subscriptions for 2006 should shortly be arriving with all AEA members who have yet to pay. Subscriptions were due at the beginning of January: £38 (€58) for waged members, £28 (€42) for unwaged and student members (both UK and overseas). Membership renewal forms are available online (<http://www.envarch.net/aea/membership.html>) and forms were also at the back of the November 2005 edition of the Newsletter. Completed forms can be sent to the Membership Secretary: Dr Nicki Whitehouse, Palaeoecology Centre, School of Geography, Archaeology and Palaeoecology, Queen's University Belfast, Belfast, BT7 1NN, UK. E-mail: [membership@envarch.net](mailto:membership@envarch.net).

Members that pay by **standing order** are asked to ensure that they are paying the correct rate (rates listed above). If any paid-up members have yet to receive the 2005 editions of the Journal, they should contact the Membership Secretary ([membership@envarch.net](mailto:membership@envarch.net)) in order to check their membership status.

### **JOURNAL**

#### ***Environmental Archaeology 11.1***

Members will receive the latest edition of the Journal in the very near future, and institutional subscribers will, for the first time, have online electronic access to this volume. Online access is expected to be available approximately one month after the paper publication of the Journal – this is to allow the setting up of new templates. Online publication will thereafter coincide with paper publication of the Journal.

#### **Submission of articles to *Environmental Archaeology***

Please send your new submissions to:

Dr Ingrid Mainland, Co-ordinating Editor of *Environmental Archaeology*, Department of Archaeological

Sciences, University of Bradford, Bradford, BD7 1DP, UK. Tel: +44 [0]1274 23 3541; Fax: +44 [0]1274 235190; E-mail: [i.l.mainland@bradford.ac.uk](mailto:i.l.mainland@bradford.ac.uk)  
Guidelines for authors are available from: <http://www.envarch.net/publications/envarch/infoauth.html>  
Submission is open to everyone but papers from members of the AEA are particularly welcome!

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### AEA BOOKS

Update for members who ordered the new Dutch Seed Atlas earlier in the year: I have now submitted our order (60 copies, so we will secure the higher discount). The publisher says he will send me a copy when the book is produced and at that point we should be able to agree the final cost (including postage) and I will let you all know how payment can be made.

For those waiting for the next batch of ICAZ volumes, I am still waiting to hear from Oxbow that these titles have been published and will distribute them to members who ordered them as soon as they arrive.

Allan Hall, Department of Archaeology, University of York ([biol8@york.ac.uk](mailto:biol8@york.ac.uk))

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### CONFERENCES & MEETINGS

#### **ARCHAEOBOTANICAL WORKGROUP MEETING: SATURDAY 20<sup>TH</sup> MAY 2006 Fort Cumberland, Portsmouth, 10:30 -5:00ish**

Some years ago archaeobotanists working in Britain regularly met informally to discuss the identification of different types of material and have a show and tell session, followed by a field visit. This is the revival meeting with the hope that we will stage another event in the Autumn. There is no charge for the day and tea, coffee etc. will be provided. Everyone is welcome.

We plan to spend the morning looking especially at mineral-replaced remains, followed by lunch (please bring something to share). We will then go to Kingley Vale, Sussex to view the ancient yew trees and check out the chalkland flora.

If you would like to attend please email [DavidEarle.Robinson@english-heritage.org.uk](mailto:DavidEarle.Robinson@english-heritage.org.uk) or [Gill.Campbell@english-heritage.org.uk](mailto:Gill.Campbell@english-heritage.org.uk). You can also phone on 02392 856776 or 02392 856780

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### AEA ONE DAY MEETING

#### **Sea Changes: Environmental Archaeology in the Marine Zone, From Coast to Continental Shelf.**

*Tuesday 26th September 2006 at Portsmouth Historic Dockyard*

In 2002 English Heritage took on responsibility for maritime archaeology in England's coastal waters. As a result of these changes there has been a greater emphasis on maritime archaeology within England, with a number of maritime archaeology projects being funded through the Aggregates Levy Sustainability Fund and the Historic Environment Enabling Programme.

This therefore seems an ideal time to examine the vital part environmental archaeology plays in understanding coastal archaeology, from estuarine landscapes to coastal defences, and underwater sites, such as wrecks and submerged landscapes. It is hoped that this one day meeting will allow us to compare approaches, results and experiences, not only from a British perspective but also from Europe and beyond.

The conference has been organised to run in conjunction with the Maritime Affairs Group Conference "Managing the Marine Cultural Heritage: The Significance" which will take place on 27th and 28th September 2006, also at Portsmouth Historic Dockyard (see AEA Newsletter 90, November 2005). A field trip is offered on the 27th of September to look at the maritime archaeology, cultural heritage and natural history of Chichester and Langstone harbours. The field trip will include an exhibition, buffet lunch and solar-boat tour. The conference will also host the annual general meeting of the Association for Environmental Archaeology.

The provisional programme is as follows:

**Jennie Coy** (Freelance, UK) and **Sheila Hamilton-Dyer** (Freelance, UK): *tba* (Mary Rose animal bones)

**Brad Duncan** (Heritage Victoria, Australia): *tba* (Australian coastal/maritime)

**Greg Campbell** (Freelance, UK): *'From Means to Meaning: Using Marine Invertebrate Measurement Distribution Patterns to Interpret Past Coastal Exploitation Behaviour'*

**Zoë Hazell** (English Heritage, UK): *'Offshore Peat Deposits in English Waters: A Resource Assessment'*

**Simon Mays** (English Heritage, UK): *tba* (Human remains war graves/wrecks/crash sites)

**Peter Murphy** (English Heritage, UK): *tba*

**Paola Palma** (Mary Rose Trust, UK): *tba* (Monitoring the Mary Rose site – wood preservation)

**Aleks Pluskowski** (University of Cambridge, UK): *'Exploiting Aquatic Environments around Medieval Venice: The state of Knowledge and Directions for Future Research'*

**Mark Staniforth** (Flinders University, Australia): *'The Effects of Rising Sea Levels on Jetty Site Archaeology in Australia'*

**Fraser Sturt** (University of Southampton, UK): *tba* (Coastal/maritime)

**Emma Tetlow** (University of Birmingham, UK): *tba* (North Sea submerged landscapes)

**Ingrid Ward** (English Heritage, UK): *tba* (North Sea submerged landscapes)

***Additional offers of presentations are still welcomed and encouraged.***

We are keen for students to attend, and the AEA is offering a prize of £50 worth of book tokens for the best student poster (to be presented in A1 format).

Offers of papers on any aspect of environmental archaeology within the maritime zone are welcomed. A selection of the papers from the conference will be offered for publication in a future issue of *Environmental Archaeology*.

***A registration form is provided at the end of this Newsletter.***

**Abstract submission deadline: 16 June 2006**

**Registration deadline: 21 July 2006**

Please contact Zoë Hazell or Andy Hammon: Research Department, English Heritage, Fort Cumberland, Fort Cumberland Road, Eastney, Portsmouth, PO4 9LD. Tel: 02392 856700. Email: [zoe.hazell@english-heritage.org.uk](mailto:zoe.hazell@english-heritage.org.uk) or [andy.hammon@english-heritage.org.uk](mailto:andy.hammon@english-heritage.org.uk)

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## **INTERNATIONAL WORKSHOP ON ARCHAEOLOGICAL SOIL MICROMORPHOLOGY Basel, 21 - 22 September 2006**

This is the first announcement of our now well established workshop on micromorphology, which this year will take place on 21st and 22nd September, as organised by the Institute for Prehistory and Archaeological Science, University of Basel, Switzerland.

This circular is also a call to participate as a speaker or with a poster presentation. The topic and geographical location of presentation are open to the participant.

As in the past, the workshop will last two days and will be held at the Institute of Geology in Basel. Microscope sessions are planned for the morning sessions (the conference site will be equipped with around 15 microscopes). The afternoon sessions will be reserved for the presentation of projects.

You are requested to make your own hotel reservation.

We would like to know the number of participants as soon as possible, so to help the event run smoothly, please register online (<http://pages.unibas.ch/arch/forschung/workshop06/index.htm>) not later than **15<sup>th</sup> May 2006**. More detailed information will be sent to those who wish to participate at a later date.

For more and updated information please see our workshop-webpage:

**NABO CONFERENCE 2006 :**  
**The View from Here: Cultural History and Ecology of the North Atlantic Region**

A multidisciplinary, international conference on the cultural history and ecology of the North Atlantic Region is planned for **late September 2006** in Québec City, Canada. This call is extended to both researchers and students working in archaeology, historical and cultural geography, palaeoecology, anthropology, and other related disciplines.

For more information see : [www.celat.ulaval.ca/theviewfromhere/](http://www.celat.ulaval.ca/theviewfromhere/)

**Nathalie Gaudreau**  
**The View From Here - NABO 2006**  
**CELAT**  
**Université Laval**  
**Québec, Québec**  
**CANADA**  
**G1K 7P4**

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**ASSOCIATION FOR ENVIRONMENTAL ARCHAEOLOGY ONE-DAY SPRING MEETING,  
SATURDAY, 17TH FEBRUARY 2007, UNIVERSITY COLLEGE CORK, REPUBLIC OF IRELAND**

**FIRST CALL FOR PAPERS**

**'Environmental Archaeology in Ireland: new perspectives and recent research'**

The last decade has witnessed an enormous increase in the number of archaeological excavations being undertaken throughout Ireland. This increase in excavation has been accompanied by a substantial increase in studies relating to environmental archaeology, both in the quantity of work and range of analyses being carried out.

It is envisaged that the Cork one-day meeting will provide a much-needed discussion forum for workers carrying out studies in environmental archaeology throughout Ireland, as well as updating the wider archaeological and environmental communities of latest research. It is also hoped that the meeting will attract people from Europe and beyond in order to compare approaches and results.

Offers of papers on any aspect of environmental archaeology relating to Ireland are welcomed. Papers relating to studies in areas beyond Ireland that may provide useful comparisons are also welcomed, for example studies relating to wetlands and islands. A selection of papers from the conference will be offered for publication in a future issue of Environmental Archaeology, the journal of the Association for Environmental Archaeology. Offers of posters will also be warmly welcomed.

For further information, please contact the meeting organisers: Meriel McClatchie and Mick Monk  
Department of Archaeology, University College Cork, Cork, Republic of Ireland  
Email: [m.mcclatchie@ucc.ie](mailto:m.mcclatchie@ucc.ie) and [mmonk@archaeology.ucc.ie](mailto:mmonk@archaeology.ucc.ie)  
Telephone: +353 21 4904048  
Website: [www.envarch.net](http://www.envarch.net)

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**DEVELOPING INTERNATIONAL GEOARCHAEOLOGY CONFERENCE (DIG 2007)**  
**Department of Archaeology, University of Cambridge, April 19-21, 2007**

The University of Cambridge will be hosting the second Developing International Geoarchaeology Conference in April, 2007. The DIG conferences are a forum for international communication on geoarchaeological topics. Any practitioners, researchers and students interested in this interdisciplinary field are welcome to attend.

Oral and poster presentations will be accepted on any aspect of geoarchaeology, and will be grouped into thematic sessions. Conference delegates will have the opportunity to have their papers published in a peer-reviewed, edited volume. The deadline for registration and for the submission of titles and abstracts is **October 31, 2006**.

DIG 2007 will be held at the McDonald Institute for Archaeological Research and Corpus Christi College. Accommodation is available in Corpus Christi College and in a variety of hotels, guesthouses, and hostels around Cambridge. Information about registration, fees, travel and accommodation are posted on the conference website, at <http://www.arch.cam.ac.uk/dig2007>.

The conference will be preceded by a workshop of the International Archaeological Soil Micromorphology Working Group, which will be held in the McBurney Geoarchaeology Laboratory. Delegates attending the workshop are encouraged to bring their own thin sections.

Please let us know if you are interested in attending the conference and/or the soil micromorphology workshop by June 20, 2006, and we will put you on the mailing list for the second circular.

Charly French and Karen Milek  
Department of Archaeology, University of Cambridge  
Downing Street, Cambridge, CB2 3DZ  
[digarch@hermes.cam.ac.uk](mailto:digarch@hermes.cam.ac.uk)

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#### VENUE FOR THE AEA CONFERENCE AUTUMN 2008

Offers are invited to host the main AEA Conference in the Autumn of 2008. Offers from non-UK hosts are particularly welcome. For further details please contact the AEA Conference Secretary:

Gianna Ayala  
Department of Archaeology  
University of Sheffield  
Northgate House  
West Street  
Sheffield S1 4ET  
UK

email: [g.ayala@sheffield.ac.uk](mailto:g.ayala@sheffield.ac.uk)  
Telephone: (+) 44 (0) 114 22 22 935

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#### CONFERENCE REPORT: AEA SPRING CONFERENCE University of Exeter - 28-30 March 2006

The annual AEA conference was held at the University of Exeter from 28<sup>th</sup>-30<sup>th</sup> March 2006 with the theme "*Novel environmental archaeology: integrating new lines of evidence and rethinking established techniques*". This was a meeting which fully lived up to its ambitious title, attracting more than 130 participants – graduate students, academic researchers, commercial and state archaeologists and private individuals – from all over the world, and bringing together a range of speakers, techniques and approaches which rarely share the same platform. Almost 50 papers were presented in the course of the three-day meeting, supplemented by a good number of linked posters.

The opening session on day one was "Bones, seeds and biomolecules: integrating old and new lines of evidence". Organised and chaired by Anna Mukherjee (University of Bristol), this fascinating collection of papers took us from all the way from the American Southwest to Northern Kazakhstan, with numerous stops on the way, and provided an insight into some of the newer aspects of our discipline. First off was Terry Brown (University of Manchester), who has used ancient DNA preserved in desiccated maize cobs to trace the development and spread of maize cultivation in South America. Remarkably, he has also been able to show that present-day Andean maize land-races are directly descended from the archaeological specimens. The next presentation by Richard A. Marlar (University of Oklahoma) described the use of ultra-sensitive species-specific protein residue analysis (primarily for haemoglobin but also muscle and brain proteins) to demonstrate diet (and cannibalism!) a thousand years ago in the American Southwest. The technique relies on detecting material preserved in the sterile environment of so-called micro-cracks on the surface of artefacts, but was also able to demonstrate the presence of human brain protein in a human coprolite. Brains were apparently cooked in, and eaten from, the skull!

This culinary theme was continued by Hannah Koon (University of York) and co-authors, who have developed an elegant method for identifying bone that has been cooked. This involves microscopic assessment of the degree of disruption to bone collagen. The results are promising, but there is a need to beware the effects of acidic burial environments. Brendan Derham (University of Newcastle-upon-Tyne) provided a shift of emphasis with his intriguing account of the natural toxins and narcotics found in ethnographic and archaeological museum collections. Highly sensitive modern techniques can now detect trace organic residues and provide invaluable insights into the past use of and trade in these high value commodities. The findings are also pertinent to modern health and safety concerns about the handling and curation of collections. Reassuringly, many toxic substances tend to degrade and become less dangerous with time. The final paper before the morning tea break, given by Stephen Buckley (University of York), dealt with chemistry of the embalming processes used in ancient Egypt and the potential sources of the main ingredients in the embalming media. The information available from mummified humans and animals in Egypt is considerable – perhaps telling us more about life than death!

The session re-commenced with a paper by Richard Evershed (University of Bristol) and co-authors who have successfully integrated investigations of prehistoric faunal assemblages from Northern Kazakhstan with data from the analysis of lipid residues in ceramics. This elegant examination of dairying in prehistory was aimed at directly testing the late Andrew Sherratt's "Secondary Products Hypothesis" and illustrated clearly, if any such illustration were needed, the depth of Sherratt's insight. We remained in Kazakhstan for the next contribution, an excellent paper by Natalie Stear (University of Bristol) and co-authors, who have been looking at the early domestication of the horse. The integration of results from molecular and stable isotope analyses with more conventional faunal assemblage data has provided convincing evidence concerning developments in animal exploitation in the region during prehistory. From Kazakhstan we travelled to Southern Africa where Julia Lee-Thorp (University of Bradford) and her co-authors have been using isotopic data (strontium, carbon and oxygen), derived from micro-sampling of livestock teeth, to examine seasonal herd management practices in the face of climatic and cultural changes between AD 900 and AD 1700. Gundula Muldner (University of Reading) brought us back to more familiar territory which her work on 1500 years of marine consumption in York. Isotopic evidence (carbon and nitrogen) has revealed that there was little marine content in the diet during Roman and Anglo-Saxon times. High Medieval times saw a period of transition, and, by the late Middle Ages, marine consumption was firmly established – a situation that continued virtually unchanged into early modern times. The morning session was rounded off by Mandy Jay (University of Durham) who has carried out similar isotopic studies on human remains from the Pre-Roman conquest Iron Age; primarily from Wetwang in Yorkshire, but also from sites ranging from Southern Scotland to Cornwall. A very valuable interpretative dataset has been produced revealing the inherent variation in isotope values even within such a relatively small area as Britain.

The afternoon session, organised by Ralph Fyfe (University of Plymouth) and Chris Caseldine (University of Exeter), focussed on "Quantitative reconstruction of past landscapes from palaeoecological data". The session opened with an introductory lecture on the software package PolLandCal, given by a seasoned PolLandCal exponent, Ralph Fyfe on behalf of Jane Bunting (University of Hull) who was not able to attend due to illness. Ralph explained the basic principles behind PolLandCal and how it aims to digitise and rationalise the interpretation of sub-fossil pollen data, otherwise often seen as somewhat of a "black art". Next came Kari Loe Hjelle (University of Bergen) who has applied PolLandCal techniques to the cultural landscapes of Western Norway, comparing pollen data from modern habitats with fossil data from the Neolithic, Bronze Age and Iron Age, looking in particular at the structure of the vegetation and its degree of openness. She found PolLandCal a good way to test hypotheses and obtain new ideas, but its broad-brush approach is not able to give the degree of detail obtainable through the use of modern vegetation analogues. The modelling exercise was expanded by Edgar Samarasundera (UCL) who has been examining the dynamics of past human-environment interactions. His GIS-based methods were applied to two case studies – one drawing on historical documentary evidence, the other on palaeoecological data – with the model parameters being varied over the course of many simulation runs. Phil Allen and co-authors (University of Exeter) then demonstrated some impressive work from the Nene Valley – one of the centres for gravel extraction in the UK – involving the integration of palaeoenvironmental and archaeological data. The resulting interactive GIS database appears to be an extremely useful tool which deserves wider application. Ralph Fyfe brought us back full circle to PolLandCal, describing and discussing computer-based modelling of pollen dispersal and deposition and the testing of landscape simulations. Building on some of the ideas introduced by Kari Hjelle, Ralph showed how the PolLandCal models can be used to examine sub-fossil pollen assemblages and how theoretical models of landscape use can be tested. The session was rounded off by Chris Caseldine who examined the role of the whole modelling approach – from virtualisation to visualisation. Great advances have been made, but we are not yet ready to make the move from virtual to visual – and we should also beware the output from easy user-friendly software!

The theme of the morning session on day two was “Palaeopathology: social, environmental and evolutionary perspectives”, incorporating papers on both animal and human remains, and providing welcome opportunities for exchanges between the two sub-disciplines. The session was organised by Chris Knüsel (University of Bradford) and James Steele (University of Southampton). It was chaired by Chris Knüsel and opened with a paper by Stephanie Vann (University of Leicester), who examined the development of a standardised recording-system for animal palaeopathology. Stephanie’s paper contrasted approaches to human and animal palaeopathology and underlined the need for a better understanding of bone biology in order to identify and record animal disease. Papers by Marsha Levine and co-authors (University of Cambridge) and Robin Bendrey (University of Winchester) followed, both of which focused on horses. Marsha’s presentation explored the analysis of pathologies associated with traction and riding, comparing horses from a range of ecological and cultural backgrounds. Robin’s paper examined methods for identifying biting damage, demonstrating how the analysis of iron residues on teeth can provide evidence for the use of iron bits on Iron Age horses in Britain.

The first presentation after morning tea-break was by Niels Johannsen (University of Aarhus), who described how environmental factors, such as diet, can be decisive in the health of an animal. Focusing on cattle limbs, Niels’s paper highlighted the need for critical evaluation of the environmental comparability of reference material. Megan Brickley (University of Birmingham) then presented a co-authored paper on scurvy, examining why this disease is so often associated solely with mariners and sailors. Megan demonstrated how scurvy can affect a much wider range of populations, including where there is disruption in groups, where people are unfamiliar with available resources, and, interestingly, societies that are grain-dependent. This was followed by a paper from Rebecca Redfern (Museum of London), who assessed the impact of Romanisation through the study of Late Iron Age and Romano-British adult populations. She focused on multi-factorial diseases such as dental caries and tuberculosis, presenting evidence for changing food-ways and effects on the health of individuals. The morning session came to a close with a stimulating paper by Chris Knüsel and co-author on ‘Little Leaguer’s Elbow’, which is usually associated with youths engaged in strenuous throwing activities. The discovery of this injury in medieval populations prompted Chris to explore how weapons training and combat might affect the body. Technical difficulties resulted in a very animated presentation, complete with audience participation, where we became better acquainted with our elbows in an effort to understand how ‘Little Leaguer’s Elbow’ might occur.

A general session organised and chaired by Alan Outram (University of Exeter) followed lunch. The first paper in this session was by Robert van de Noort (University of Exeter) and co-author, who called for a reconsideration of charred grain in four-post structures. Robert demonstrated how grain sometimes entered post-holes *prior* to the post being put in place (perhaps indicating structured deposition of charred grain), rather than grain entering the deposit when the structure was in use or had been burnt down. A paper by Penny Cunningham (University of Exeter) on nut exploitation in prehistoric Europe followed. Focusing on hazelnuts and acorns, Penny provided interesting results on experimental pit-roasting of the nuts and how roasting was affected by varying the quantity of soil, ash and grass in pits. Gui-Yun Jin (Shangdong University, China) then presented results from analysis of wood remains at an archaeological site in the Shangdong province of eastern China. In a co-authored paper, she demonstrated how different types of wood were selected for moat platform construction and for fuel, as well as detailing evidence for rice phytoliths and plant macro-remains. The final paper before afternoon tea-break was presented by L. Adrien Hannus (Augustana College, USA). He explored the 12,000 year history of the dog in the Americas, with a particular focus on the concept of the dog as a cultural construct rather than just a biological species.

Following afternoon tea-break, Althea Davies (University of Stirling) presented a study on palynological evidence for land-use in the Scottish Highlands over the last millennium. Althea noted the fragmentary evidence for many activities, such as shielings (summer pastures), and she emphasised the need for using multiple sources in the exploration of land-use. This was followed by a paper from John Letts (Historic Thatch Consultants), who provided a fascinating insight into thatched roofs in Britain and Ireland. He demonstrated how analysis of thatching materials and methods can provide an important insight into crop varieties, cultivation, harvesting methods and growing conditions. John also discussed his involvement in growing-trials of old British wheat varieties. The next paper was by Maciej Karczewski (University of Bialystok, Poland), and he employed a range of environmental analyses in the examination of a cemetery in the Great Masurian Lakes district of north-east Poland. Maciej brought the audience back to the study of horses again, this time with a focus on impressive horse burials within the cemetery, and he presented evidence to suggest that a number of the horses may have been buried alive. Steve Davis (University of Exeter) presented the final paper of the day, providing results from a palaeoentomological study on prehistoric burnt mounds in Ireland and Britain. The function(s) of these

burnt mounds has proved to be a contentious issue, with proposed uses including cooking troughs, saunas and textile-production areas. Steve and his co-author suggested that each proposed use should be accompanied by a distinct invertebrate assemblage, and he detailed initial results of his studies on this site type.

Day three of the conference comprised a session on the theme of “The role of environmental analysis in integrated investigations of ritual deposits”. This was organised by James Morris and Mark Maltby (Bournemouth University) and co-chaired by the two organisers. The exploration of feasting and sacrifice was a recurring theme in this session, in particular how these actions could be distinguished and if they should in fact be separated. The first paper of the session was presented by Mark Maltby, in which he explored environmental deposits from British prehistoric and Romano-British shafts and wells. Mark highlighted how interpretations of ritual deposits within these shafts and wells can be improved by better environmental sampling, more detailed information relating to the distribution of finds and a clearer understanding of how the deposits were formed. Jacqui Mulville (Cardiff University) then presented a paper which questioned if environmental archaeology was bereft of theory, or just a particular type of theory. She focused on the subjectivity of decisions made by environmental archaeologists in the attributes that we value and record, and how this may differ to attributes important to past societies. The next presentation was by Kristin Kozelsky (Florida State University, USA), who examined a faunal assemblage from a Late and Terminal Classic Maya site in Chiapas, Mexico. Kristin introduced the audience to a fascinating range of animals, and she explored concepts of exclusionary and inclusionary feasting that resulted in the accumulation of the assemblage. A paper by Fragkiska Megaloudi (American School of Classical Studies and University of the Aegean) followed, focusing on plants incorporated into Greek sacrificial and funeral deposits during the first millennium BC. She revealed evidence for a similar range of plants being associated with the deposits of the living when compared with deposits of the dead, and some exceptional preservation was encountered, for example in the recovery of charred bread fragments. Michael MacKinnon (University of Winnipeg) also presented a paper examining environmental remains from Greece, this time on bone deposits from Ancient Nemea. Michael explored the relationship between ‘sacred’ and ‘secular’ deposits, and he also suggested that different sacrifices would have been offered to different gods.

After morning tea-break, Elizabeth Jerem (Archaeological Institute of the Hungarian Academy of Sciences) presented a paper on ritual deposits from Iron Age and Early Roman sites in the Carpathian basin. Elizabeth identified special activity areas within settlements, some of which included structured secondary deposition, along with the ritual burial of pigs and horses. Sue Stallibrass (Liverpool University/English Heritage) followed with a paper that used a ‘sleuth’ approach to finding out more about ritual deposits. Sue encouraged us to consider the event, means, opportunity, suspect and motive behind an event, demonstrating her approach with a case study from ancient Nemea, Greece. Richard Thomas (Leicester University) then presented a co-authored paper exploring animal and human deposits from the Neolithic Cotswold-Severn long barrows. He investigated the changing notions of architecture at these sites, encouraging the audience to consider the faunal remains in this context. Richard also suggested that animals may not have been a metaphor for human remains – the two may instead have been associated. The final paper before lunch break was presented by Kate Waddington (Cardiff University), in which she examined Late Bronze Age middens of southern Britain. Kate considered social dynamics of performance and display, as well as the variation that can be encountered through careful study of the midden deposits.

The final part of this session commenced with an account by Pam Crabtree (New York University) and co-workers of the integrated use of archaeological and zooarchaeological data in the interpretation of the Iron Age royal site of Dún Ailinne in Co. Kildare, Ireland. The site was clearly not a permanent residence and the evidence points towards ritual feasting but also with craft activities, leading to the conclusion that periodic fairs and emporia were held here. James Morris then turned the spotlight on ABGs (associated bone groups) and their significance for a society’s ritual framework as opposed to more functional interpretations. Morris’s ambitious project, examining large numbers of ABGs from prehistory and historic times, aims to shed light on this dichotomy. The contrast between ritual and refuse was expanded upon by Clare Randall (Bournemouth University) who has been looking at the formation and taphonomic processes involved in the genesis of Iron Age pit fills in Somerset. Clare has looked at the combinations of artefacts and materials present in the pits in order to characterise each context relative to the ABGs recovered. The session (and the conference) was rounded off by Anna Russell (English Heritage) who has been examining Iron Age features containing human bone and/or faunal remains. Anna has been able to demonstrate that the presence of disarticulated human remains in features tends to be linked with structured deposition of faunal material.

Posters linked to the various sessions were displayed in the area where coffee and lunch were provided during the morning and afternoon breaks. A poster by Aldona Bieniek (W. Szafer Institute of Botany, Poland) examined the hallucinogenic properties of the thorn apple (*Datura* sp.) in medieval Europe, focusing on an example from Central Poland. Geneviève Perréard (University of Geneva) explored past populations through the study of cross-sectional geometrical properties of bone using CT scans and external measurements. Geoffrey Davis and Ingrid Mainland (University of Bradford) demonstrated how investigation of dental development may provide evidence for bovine abortion in archaeology. A final poster by Robin Bendrey (University of Winchester) re-examined an Iron Age burial group from Oxfordshire, comprising a horse, dog and human burial, and in doing so, Bendrey found that the human 'male' skeleton of the group was actually a female.

The conference brought together researchers from a very wide range of sub-disciplines pertaining to environmental archaeology, and the three days provided an excellent opportunity to be brought up-to-date on these new approaches, as well as re-thinking more established techniques. A very full programme encouraged much debate and discussion amongst participants during tea and lunch breaks, and, after dinner each evening, a number of participants continued discussions in a local hostelry. Congratulations and thanks to all at Exeter, particularly the organiser, Alan Outram, for a very enjoyable, timely and well-organised conference.

Meriel McClatchie and David Earle Robinson

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### IDENTIFICATION GUIDE FOR NEAR EASTERN GRASS SEEDS.

This is now available:

**Nesbitt, M. 2006. Identification guide for Near Eastern grass seeds. London: Institute of Archaeology, University College London, 129pp.**

Extracts from the book are viewable at: <http://www.kew.org/scihort/ecbot/papers/grassseed.pdf> although the scan doesn't capture the quality of Jane Goddard's drawings.

The retail price of the book is 45 GB pounds - rather a lot but probably owing to some complex typesetting. It is distributed by:

Archetype Books <http://www.archetype.co.uk/>

Oxbow Books <http://www.oxbowbooks.com/bookinfo.cfm/ID/46925>

and this should be the source for libraries.

Individuals can buy the book at a lower price from me, either in person at the International Workshop for African Archaeobotany in London, or by post. Prices (including postage) are as follows:

UK - 33 GBP

Europe (airmail) - 35 GBP

World (surface) - 35 GBP

If you have a UK bank account, just send me a cheque (made out to Mark Nesbitt) for the relevant amount, and your address. Email me to let me know you have done this.

For those who are resident outside the UK and who are a member of the AEA, other payment options are possible, courtesy of the AEA. Email me for details.

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**AEA ONE-DAY AUTUMN MEETING – REGISTRATION FORM**

**Sea Changes: Environmental Archaeology in the Marine Zone, From Coast to Continental Shelf  
Tuesday 26th September 2006 at Portsmouth Historic Dockyard, Hampshire, UK**

Abstract submission deadline: **16 June 2006**

Registration deadline: **21 July 2006**

**Conference:**

I wish to attend the one day conference on Tuesday 26<sup>th</sup> September (tea and coffee provided) at a cost of £6 (AEA-members/unwaged) / £9 (non AEA-members)\*.

I do / not\* wish to present orally / poster\*.

**Fieldtrip:**

I do / not\* wish to attend the field trip to Chichester Harbour on Wednesday 27<sup>th</sup> September (at an additional cost of £16, including exhibition, buffet lunch and solar boat tour).

I have enclosed total payment for £.....

Please make cheques payable to 'English Heritage'. Credit card payments can be made with the additional form. Send registration forms and payment directly to: Christine Jackman, English Heritage, Fort Cumberland, Fort Cumberland Road, Eastney, Portsmouth, Hampshire, PO4 9LD. Tel. 02392 856700.

Any other queries contact [zoe.hazell@english-heritage.org.uk](mailto:zoe.hazell@english-heritage.org.uk) or [andy.hammon@english-heritage.org.uk](mailto:andy.hammon@english-heritage.org.uk) (tel. 02392 856700).

Signed.....

Name (block capitals).....

\*Delete as applicable

NB. Lunch on 26<sup>th</sup> will not be provided, although there are numerous suitable eateries in the vicinity.

*Contact details. Please complete and return with Registration Form.*

Name	
Institution	
Contact address	
Email address	
Telephone number	
Presentation / poster* title	

**Please note: the AEA one-day conference will be followed by the IFA-Maritime Affairs Group conference "Managing the Marine Cultural Heritage: The Significance" (27-28<sup>th</sup> September 2006).**