

Association for Environmental Archaeology

AEA Newsletter 130

Nov 2015

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Chair's piece

Richard Thomas, AEA Chair

This packed newsletter comes hot on the heels of a successful autumn conference, hosted by the University of York. We are enormously grateful to the local committee and all the presenters and delegates, for making the event such a memorable experience. Focussing on the career of Professor Terry O'Connor provided an occasion to reflect upon the development of our discipline (and Terry's valued contribution) looking to the future and the potential of new developments.



Terry O'Connor was a, at times comic, writer for the forerunner of the newsletter

The AGM also provides a Janus-like opportunity to consider achievements and forthcoming initiatives, what a positive year it has been. Highlights have included the successful launch of our new grant fund, highly competitive dissertation and poster prize competitions, which demonstrate the strength of scholarship by an emergent generation of environmental archaeologists, and a membership that has risen to over 400, marking a 33% increase since 2012. All of these achievements could not have been realised without the dedication and industry of committee members and we are particularly sad to

say goodbye to Richard Madgwick (Publicity Officer), James Morris (Website Officer), Ruth Pelling (co-opted Membership Secretary for the last 5 years), Hannah Russ and Daniella Vos (Student Representative) who have come to the end of their terms.

A particular word of thanks is owed to co-opted members Vanessa Straker and Wendy Caruthers who have overseen the production and development of the AEA newsletter for 28 and 16 years respectively. Their hard work and dedication to the Association are appreciated enormously!

We are delighted to welcome four new members to the committee: Lee Broderick, Ben Geary, Jo Mackenzie and Rhiannon Philp; I am also very grateful to Jacqui Huntley for agreeing to be co-opted as Finance Officer for the forthcoming year. I am greatly looking forward to working alongside the revised team as we launch a new year of activity that will include conferences in Orkney and Rome, a new membership award for archaeology societies (details below), in addition to our research fund, seminar series, and four issues per year of the journal.

Community Archaeology Group Membership Award

We are delighted to be able to offer a 3rd free membership, with hard copy journals, to be awarded to community/local archaeology societies for a period of three years.

Send in your nominations!

We will be administering this award as a prize, with nominations made by AEA members and the winner voted for.

Please email your nominations to the AEA Chair (Richard Thomas rmt12@le.ac.uk) or post a suggestion on our Facebook page. We will open voting through social media in early 2016.

Tabard Square, Southwark: Exploring a natural and urban landscape in the Thames floodplain

Recent work in the commercial archaeology sector at Tabard Square, Southwark has added significantly to our knowledge of prehistoric and Roman vegetation history, fuel use and landscape changes on the southern edges of the Thames floodplain in the vicinity of London (Fig 1). The investigations were carried out by Pre-Construct Archaeology Limited, with environmental archaeological analyses undertaken by Quaternary Scientific (QUEST), University of Reading, and funded by Berkeley Homes. Commercial archaeology across the capital provides frequent occasions for examination of the buried Holocene environment, but such opportunities are dictated by the vagaries of development, with the extent, depth and scope of investigations being dictated by redevelopment proposals and the impact of previous land use. Commercial archaeology is undertaken rapidly, with few, or no opportunities to revisit a site and any sampling strategies employed need to be robust, taking into account every potential eventuality.

The London Borough of Southwark lies immediately south of the river Thames, across the river from the City of London, with the site of Tabard Square situated c. 700m south of the current bank of the river (Fig 1). Buried beneath some 2m or so of alluvium and made ground lie the braided channels and sandy eyots of a wide floodplain, which

were exploited throughout prehistoric times becoming more managed and controlled, through the digging of drainage ditches, revetment construction and reclamation deposits in the Roman period. Archaeologically, the site at Tabard Square is perhaps best known for the discovery of a second-century Romano-Celtic temple complex, an associated dedicatory inscription (which included the word '*Londiniensium*' - the first known to reference the people of London) and a Roman tin-alloy vessel containing a cosmetic preparation (Evershed, et al., 2004; Killock et al., in press; Grew 2008).

The long history of the Thames floodplain is complex (Sidell *et al.* 2002); a single large early Holocene channel would have passed through the area of modern Southwark (Sidell *et al.* 2002, 121). Over time the northwards migration of this main channel deposited sands and gravels forming small islands, or eyots, and creating isolated lakes, which formed a focus for early settlement (Thomas & Rackham 1996). Low-lying fenland environments were dominated by alder carr, whilst oak woodland colonised areas of higher ground (Sidell *et al.* 2002, 33). Periods of inundation associated with a fluctuating tidal head in the early Bronze Age gave way to stronger tidal surges through the middle and later Bronze Ages, resulting in the submersion of peat deposits below alluvial clays and silts, which sealed the sand and gravel eyots. These deposits are in turn sealed by made ground. The tidal head was situated in the vicinity around AD50, with water levels ranging from -0.50m OD at low tide to +1.25/1.50m at high tide; extensive mudflats occupied the intertidal zones (Brigham 2001, 25). Water levels gradually fell by c. 0.50m through the Roman period before beginning to rise once more into the medieval period.

Our understanding of the topography of the wider Thames floodplain generally, as well as in the vicinity of Southwark specifically, is continually being modified and refined as new data become available (compare Cowan *et al.* 2009, 10–37; Heard *et al.* 1996; Yule 1988, fig 3). Refining of the topographic model is complicated by the need to understand the temporal as well as spatial relationship of different stratigraphic units across dispersed and isolated locations, within the context of a shifting tidal head and fluctuating sea levels. The results of commercial archaeological investigations are

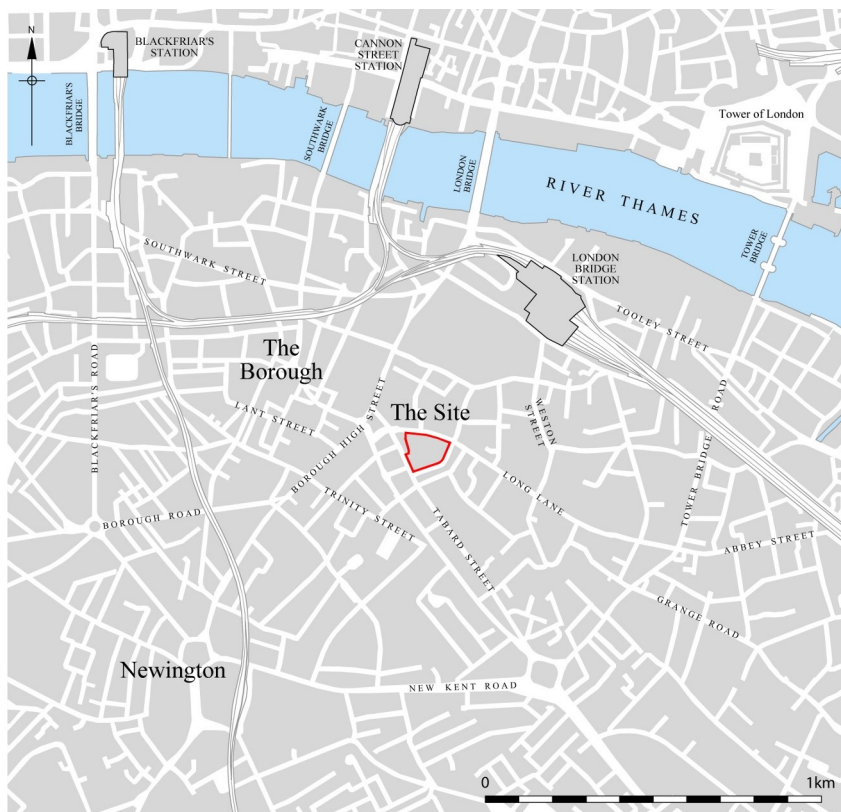


Figure 1: The location of the Tabard Square site in relation to modern topography

being integrated with wider, multi-proxy research programs to further our understanding of the early floodplain landscape (e.g. Batchelor & Green 2014).

In the Roman period, Tabard Square's location would have occupied the southernmost shores of this wide Thames valley floodplain, close to the point where Roman roads leading into London from the south-west and south-east converged, before crossing the islands and river to the north bank. The site was predicted to lie within the intertidal zone at the edges of Roman Borough Channel, if not within the channel itself, yet the excavations revealed that, whilst a relict channel persisted across the north-eastern corner of the site in the early Roman period (Figure 2), falling water levels combined with concerted attempts to reclaim land, resulted in the entire area being habitable dryland by the early second century. Furthermore, it has recently become apparent that Bermondsey Eyot, which lay further to the east, was linked to the mainland by means of a land bridge, throughout most, if not all of the prehistoric and Roman periods of occupation.

During the course of the archaeological excavations, multiple column and bulk samples were taken for detailed lithostratigraphic and pollen analysis. The analysis was led by Dr Chris Green and Dr Naomi Riddiford (QUEST), and aimed to provide insights into the character of the landscape and evidence for human activities during the prehistoric and early Roman periods. The stratigraphy and sediments indicate that the history of the site is broadly consistent with that recorded at other sites in Southwark, albeit with localised differences reflecting site-specific factors (such as topography and distance from the River Thames). The majority of the sediment consists of peat and fine-grained alluvium, resting on Late Devensian gravels or Early Holocene sands. Sands and peat are commonly present within the alluvium suggesting variations between flowing water and semi-terrestrial conditions. In broad terms, the sediments represent part of the infill of the Borough Channel; more specifically, they probably reflect deposition on the southern shore or 'floodplain' margin, or within ephemeral distributary streams developed in the marginal area.

Very rare evidence of early human activity alongside the

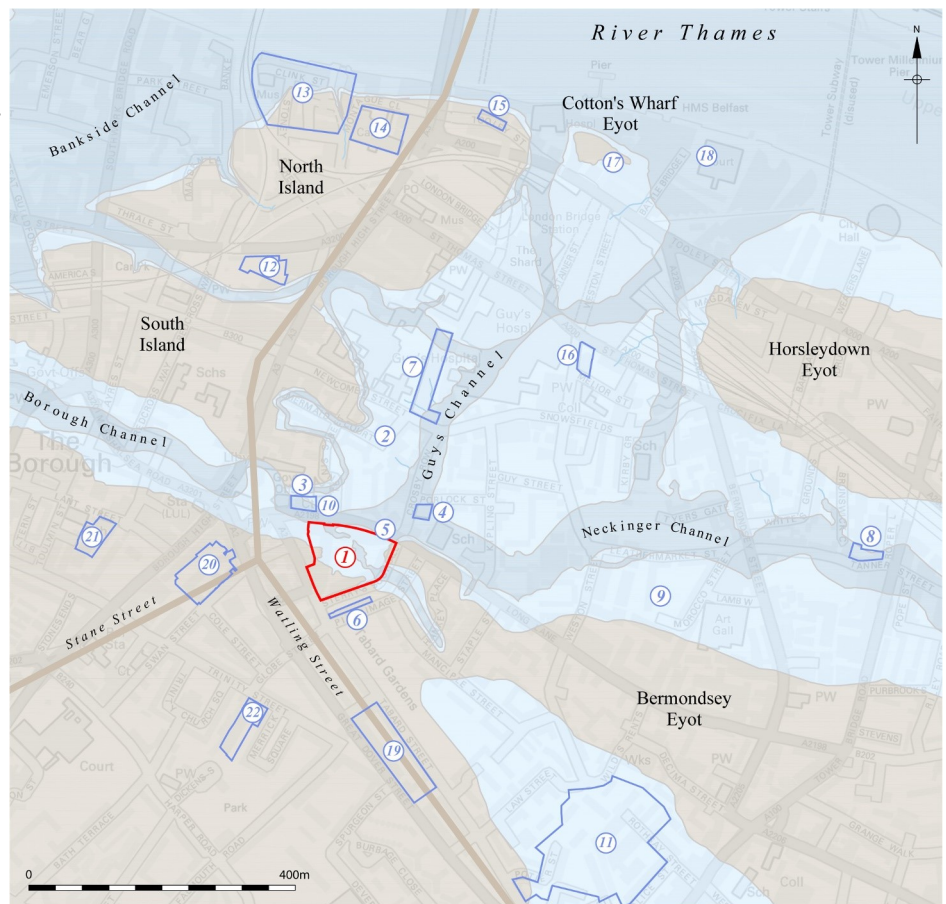


Figure 2: The topography of Southwark c. AD43-70, shown in relation to the modern streetscape. The figure is taken from the forthcoming monograph (see below) and numbers refer to other investigations in the vicinity that have been instrumental in determining the topographic and/or vegetation model. The location of the Tabard Square site (1) is outlined in red.

channel is demonstrated by Late Glacial or early Post-Glacial flintworking and associated hearths, which illustrate the desirability of this location as a focus of occupation. Evidence of persistent, if not intense, occupation from the Mesolithic to Late Bronze Age periods accords with an established pattern of settlement in the vicinity, whilst the recovery of the blade ends of two axeheads might allude to the symbolic or ritual importance of this particular locale from an early date. From the Late Bronze Age through the Iron Age and into the early Roman period there is evidence of periods of increased floodplain inundation, with a corresponding reduction in human activity, woodland regeneration and peatland expansion in the vicinity.

Pollen analysis enabled reconstruction of the vegetation history during the main period of peat formation (ca. 3500 and 2000 cal BP). During this period, the vegetation was relatively open on both the floodplain and dryland. The floodplain environment clearly became wetter over time, and there is evidence to suggest repeated colonisation and abandonment of parts of the floodplain as conditions became more or less favourable. The long history of land-use and vegetation clearance in the surrounding area is likely to have increasingly influenced the hydrology and environment



Figure 3: Timber piles found across the north-western part of site, looking north-west (scales 2m)

of the floodplain, and a regional transition from peat to mineral-rich sediments in the Late Iron Age and Early Roman period reflects the input of eroded sediments as a result of these activities, together with rising sea level. Thus the existing evidence indicates that the prehistoric and Early Roman environmental history of Tabard Square was influenced by a combination of natural and anthropogenic factors.

Intense piling across the north-eastern sector of the site attests to attempts to stabilise, control and ultimately settle this land around AD 80. The closely-set oak piles may have supported platforms from which to access or cross the Thames. The specific source of the oak used is unknown, however, the clearance of land for occupation on the islands of Southwark would have involved the felling of oak woodland which colonised the area. The resulting timber may have been used in part for reclamation purposes, such as the piling seen here, as well as other infrastructure works, such as revetments, the bases of roads, bridge and building construction. In turn, this woodland clearance would have had a localised effect on water run-off, temporarily increasingly periodic inundation and resulting in the deposition of mineral-rich sediments seen in the early part of the Roman sequence.

In addition to the palaeoenvironmental investigations, bulk samples were retrieved from prehistoric and historic contexts for analysis of the archaeobotanical content. This was carried out by Dr Lucy Allott (Archaeology South East) and focussed on: (1) the wood charcoal assemblage to provide evidence for the range of fuel types used within buildings, hearths, oven/furnace features and for funerary activities; and (2) the uncharred macrobotanical remains, to assist in characterising the local vegetation and in particular the

types of marshland, woodland and shrubland represented as well as to establish evidence for food plants and other economic crops. Definitive evidence of anthropogenic activities within the macrobotanical record was relatively rare, with only a limited quantity of cereal (wheat) and non-cereal (pea/bean). This was in stark contrast to a charcoal assemblage strongly dominated by oak, suggesting a heavy selective influence, primarily

for fuel. The majority of the assemblage however, was indicative of local vegetation dominated by wetland plants, together with evidence of weeds from disturbed/waste ground, which increased through time.

A deep ditch, defining the eastern extent of the religious precinct appeared to have formed a focus of deposition for a diverse range of artefacts. The feature penetrated through the water table, allowing for remarkable preservation of its contents. Amongst the more unusual items retrieved from this watercourse were samples from a polypore (bracket) fungus. Collaboration with Dr Martyn Ainsworth at Kew Gardens resulted in these being identified as *Daedalea quercina*, a species which, in Britain, is almost always found on oak heartwood. The samples did not have any wood adhering and one appeared to bear sharp cut marks, suggesting it had perhaps been 'chiselled' from its host. The species is notably used for combing horses' hair, as tinder, or for anaesthetising bees to facilitate collection of honey; although as the pieces were not burnt, the latter two uses cannot be proposed with certainty here and the inclusion of these fragments, if deliberate, is enigmatic.

The results of the archaeological and environmental approaches to this landscape reveal details of the interaction of both natural and environmental factors in landscape transformations within the lower Thames valley. The investigations have involved the collaborations and close interactions of a commercial archaeological organisation and university-based commercial and research team and illustrate the potential of developer funded work to contribute to broad-ranging research aims. A monograph detailing the results of excavation and analysis of prehistoric and Roman levels is due to be published in December 2015.



Figure 4: Artist's reconstruction of the Tabard Square temple complex in the third century, as seen from the north-west. Understandings of the area's topography and vegetation history have helped to inform the reconstruction of the landscape on which this reconstruction has been based.

Temples and Suburbs; Excavations at Tabard Square, Southwark. By Douglas Killock, John Shepherd, James Gerrard, Kevin Hayward, Kevin Rielly and Victoria Ridgeway is currently in press and due for publication in December 2015. It will be available from Oxbow Books (<http://www.oxbowbooks.com>), or directly from Pre-Construct Archaeology Limited (<http://www.pre-construct.com>) ISBN 978-0-9926672-5-2

Victoria Ridgeway & Rob Batchelor

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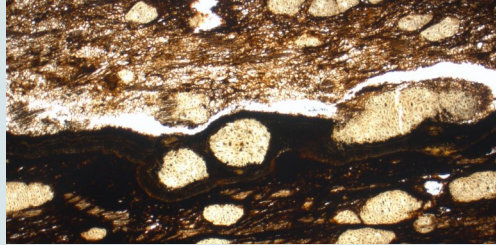
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WORKSHOP ON INTEGRATED MICROSCOPY APPROACHES IN ARCHAEOBOTANY



13th March 2016

Workshop to promote collaborative working between specialists in archaeobotany. This workshop will provide a forum for discussion and practical examination of archaeobotanical assemblages using a range of microscopy techniques, such as thin-section micromorphology, plant macros, phytolith analysis, and palynology.

Participants are invited to bring samples, slides, and to submit an abstract for a poster presentation within the themes:

- *The taphonomy of archaeobotanical assemblages*
 - *Animal management and alimentation*
 - *Land management and agriculture*
 - *The domestic use of plants*
- *Plants as architectural components*

Organiser: Dr Rowena Banerjea, Department of Archaeology, SAGES, University of Reading
Send expression of interest and/or abstract for poster by **Dec 20th** to imaaworkshop@gmail.com
Decision will be made by Jan 5th 2016: Participation fee: **£25**

**The British Archaeobotany Workgroup meeting will also take place
Saturday 12th March at the University of Reading.**

Archaeobotany Working Group Reading meeting, contact Lisa Lodwick l.a.lodwick@READING.AC.UK
For more information or to be included in future Archaeobotany Working Group events contact
Ruth.pelling@HistoricEngland.org.uk

AEA Autumn: From Anthrosphere to Lithosphere (and back again): A Celebration of the Career and Research of Terry O'Connor University of York, November 2015

The 2015 AEA Autumn conference was held at York University between the 6 and 8th November. In all over 100 delegates, from academia, commercial archaeology and the public heritage sector, attended the three day event, which was organised in celebration of the career and research of our esteemed colleague; Terry O'Connor.



Terry with exclusive mug, organisers and volunteers .

Friday

The conference began on the Friday evening with a tag team approach to a keynote presentation from some of Terry's former colleagues and students. After an introduction from [Lee Broderick](#), [Don Brothwell](#), kicked off proceedings describing the early years of Terry's career, which covered near death experiences and the apparent aphrodisiac effects of molluscs. [Mark Maltby](#) talked about how Terry's work in the 1980's was still being used to teach students today and was followed by [Naomi Sykes](#), who introduced us to "The Cats of Terry's Career," a theme that would continue to surface throughout the conference.

A short round table discussion then followed addressing the contribution of Terry to environmental archaeology, which he himself described as a "bizarre and complex subject." Conversations were continued into the evening at the wine reception, which also gave delegates a first look at the research posters.

Saturday

Escaping the drizzle outside, we reconvened on Saturday for a morning session on taphonomic processes. Archaeobotanist and cess-pit specialist [Don O'Meara](#) opened with a thought-provoking and colourful account of his practical experiments into the effects of human teeth and the digestive system on plant remains. The remaining papers concerned animal bones, drawing upon a diverse set of case studies. [James Nottingham](#) reported on his undergraduate work on animal bones from Anglo-Saxon graves at Oaking-

ton, including an articulated duck wing, snapped off and spread to adorn the grave. [Emily Johnson](#), meanwhile, drew upon Neolithic material from continental Europe to demonstrate her perceptive new approach to characterizing bone fractures: Fracture History Profiles. Finally, [Borut Toškan's](#) study of Neolithic Slovenian settlements focused upon the oft-overlooked small mammal taxa as a sensitive proxy for local environmental conditions.

The next session looked at cave sites, one of Terry O'Connor's many specialist interests. [Hannah O'Regan](#) took us to Cumbria's Doghole Cave, named after its prodigious canine assemblage, and home to a remarkably long, complex and mysterious stratigraphic sequence. [Erin Keenan](#) shifted the focus to three Neolithic cave assemblages from Yorkshire, including Thaw Head where wolves may have moved in between human occupation phases. In a change to the planned programme, [Eva Fairnell](#) used her study of Inchnadamph cave in western Scotland as a springboard for discussing overlooked evidence, misidentifications, and other gaps in our zooarchaeological knowledge, from the skinning of cats to the potential of 3D-scanning to enhance reference collections.

The final session on new techniques spanned all afternoon – testament to the pace of progress. We began with population geneticist [Victoria Mullin](#) defying popular wisdom to get blood from a stone: or, more precisely, using stony petrous bones to sequence ancient DNA and reconstruct, for instance, the possible colour of Roman cattle. [Camilla Speller](#) followed with a multidisciplinary search for the extinct Atlantic grey whale, highlighting the great potential of molecular approaches in identifying elusive specimens. [Tom Gardner](#), meanwhile, made a convincing case for re-evaluating the potential of burnt mounds, sometimes classed among the most boring monuments of prehistoric Britain, but in fact deserving of greater attention and interest.



..and the Terry mug itself

Changing tack yet again, ecologist [Rob Jarman](#) reassessed the archaeological evidence for Sweet Chestnut as a Roman introduction: his comprehensive assessment found a surprising lack of evidence behind traditional assumptions. [Julie Hamilton](#) likewise took a new look at old questions, using faunal isotope analyses as a new proxy for landscape use and change in the Thames valley – a presentation bristling with statistics and ideas. [Charlotte Rowley](#) focused her attention on a challengingly ephemeral Mesolithic site in Yorkshire, making thorough use of geochemical, micromorphological and lithic analyses. Finally, two papers brought beetles into the picture. [Geoff Hill](#) used his refined ‘multi-tier functional group’ approach to characterise various landscapes, past and present, from their Coleopteran profiles. Conversely, [Nicola Whitehouse](#) used Environmental Niche Modelling to investigate patterns of Coleopteran habitat



The frugal conference meal at York Brewery

and extinction, across the globe and over time.

A productive AGM followed, reporting on the continuing success of the AEA in its finances, membership, activities and prize-giving. The very local conference dinner was held in the cosy environs of York Brewery. Delegates dined handsomely on pints, pies and ‘Yorkshire caviar’ (mushy peas), and were treated to an entertaining, nose-tingling tour of the micro-brewery. By ‘eck, it were gradely.

The Poster Session:

The twelve posters scheduled in the poster session gave a nice colourful background to highlight important issues in the field of Environmental Archaeology from the eastern (e.g. Mongolia), western (e.g. Jordanian desert), and southern Asia (Sri Lanka), eastern Europe (e.g. Germany and Belgium), northern Europe (e.g. Baltic Sea area), western Mediterranean (e.g. north-eastern Spain), Great Britain and Croatia.

[Oula Seitsonen](#) (University of Helsinki), [Sanna Seitsonen](#) and [Lee G. Broderick](#) (University of York) were awarded the prize for the best poster presentation. In this poster, the evidence from folklore tradition, historic, ethnographic and zooar-

chaeological context suggest that seal hunting methods (e.g. harpoon and charming), currently available around the Lake Ladoga, the largest European lake, had been more widespread in the past.

Overall contributions to the Environmental Archaeology from all other posters aimed to draw a picture of the ethnographic approach relevant to the study of human used fuel ([Danielle de Carle](#), [William Linder](#), [Jean-Luc Houle](#) and [Lee G. Broderick](#)), understanding human-animal relationships (e.g. animal husbandry and size variation of domestic cattle) from prehistoric to historic ages, taphonomic issues (e.g., preservation, hunting techniques, butchery, consumption, meat and nutrient storage and deposition patterns) relevant to the study of zoological and botanical materials from archaeological contexts, understanding human use of rainforest in the late Pleistocene ([Rathnasiri Premathilake](#) and [Christopher Hunt](#)), as well as the effects of newly developed methodological constraints in the field of Environmental Archaeology.

New issues that came through in the poster presentation can also be linked to improve methodological approaches further. In the line of zooarchaeology, taxon determination just using morphological diversity in a comparative base is not as easy as generally thought, but a solid knowledge of animal bone osteology provides a strong foundation to work from ([Tajana Trbojević](#), [Ivan Alić](#) and [Snježana Kužir](#)). Modern analogue studies provide a base to recognize the differences between recent and ancient ways of butchering. Evidence for meat and nutrient storage in a well-dated prehistoric context (Epipalaeolithic) was described using a multi-proxy approach (e.g. bone, taphonomy, spatial distribution of bone and ethnographic studies) ([Anna Spyrou](#)). Another multi-proxy approach included analysis of fish bone, human carbon-nitrogen isotope records, place names and cultural materials from archaeological contexts, suggesting that changing patterns of fish consumption occurred from early to late Anglo-Saxon periods ([Rebecca Reynolds](#)). Trace element analysis (i.e. strontium content on archaeological cattle bones) and biometric records indicated that size variation of domestic cattle in the western Mediterranean and Southern England, from the Neolithic to Roman period, appears to have been linked with human landscape modification. The author ([Silvia Valenzuela-Lamas](#) from University of Sheffield) suggested that genetic (aDNA) analysis will be important for future research. Biometric records of bones from the medieval town of Emden, Germany indicated that calves up to eight weeks old appeared to have been used for meat consumption ([Louisa Gidney](#)). Well-dated archaeobotanical records from a cave site clearly suggested that lowland rainforest in Sri Lanka seem to be one of the oldest and more complex land-based ecosystems in South Asia ([Rathnasiri Premathilake](#) and [Christopher Hunt](#)). Detailed analyses of bone fragments from archaeological contexts were used to highlight deposition patterns, changes in butchery methods and meat consumption, as well as the

domestic species (cattle, sheep/goat, pig and horse) used during the Roman and Medieval periods ([Emmy Nijssen](#)), while site-specific preservation conditions at Star Carr were discussed in relation to bone and antler artefacts ([Becky Knight et al.](#)). Finally, the methodological constraints, e.g. oxygen and strontium isotope analysis from archaeological bones, provide new insight into the context of the presence of non-caballine domestic equids in Roman Britain ([Richard Chuang](#)).

Sunday

A slightly drier morning began with a quick fire round of *IGNITE* papers. Each speaker had just 5 minutes to introduce us to their current research, which was impressively adhered to. [Pam Crabtree](#) kicked off the session with an overview of the archaeological, insect and faunal remains from the earliest phases of Medieval Antwerp and how they can inform on the environment and economy of the time. This was followed by the investigation of plant based activities areas at Songo Mnara in Tanzania by [Hayley McParland](#), who highlighted the importance of using a multi-scale approach to obtain a comprehensive understanding. Next came [Edouard Masson-MacLean](#), who talked about furthering biometric methodology in the study of Pacific salmon and trout in order to create a new standard for identification, when DNA analysis is too expensive. [Marta Fiacconi](#) then gave an update on the ongoing research at Shanidar Cave in Kurdish Iraq, suggesting that the presence of pollen clumps in the cave does not necessarily reflect specific placement of flowers by Neanderthals with their dead, as had been previously suggested. Finally [Fay Worley](#) presented findings from *The Sheep Project*; an experimental project, which looked to gain data about epiphyseal fusion and tooth eruption/wear in sheep of a known age in order to investigate the economy and husbandry of sheep in the past through archaeological assemblages.

Proceedings then moved swiftly on to the first session: Directions in Environmental Archaeology. With the second reference to cat skinning of the conference, [Suzi Richer](#)

began with a critical assessment of the restraints within commercial archaeology, highlighting the fact that there are many different ways to arrive at the same answer and asking whether we do enough to challenge our assumptions/interpretations. Next [Lisa Lodwick](#) reassessed the early work of Clement Reid and Arthur Lyell at Silchester, exploring the reasons it took so long for their techniques to become standard practice. In another change to the programme, [Carol Lang](#) then introduced us to the AAREA project in Northern Tanzania, investigating archaeological agricultural resilience and how it can inform on modern agricultural management systems. As it was remembrance Sunday, the session ended with a minutes silence in respect of all those who had lost their lives during wartime.

The second session of the day addressed environmental archaeology of urban sites; another of Terry O'Connor's specialist interests. Beginning with a video presentation by [Andrew Jones](#), highlighting Terry's involvement in the development of public archaeology in York, we then moved on to the first of the papers from the Chicken Project team, where [Tyr Fothergill](#) introduced us to urban poultry-keeping practices in post-Medieval Belfast. Next came [Lee Broderick's](#) application of a *chaîne opératoire* to zooarchaeological deposits from Medieval Exeter to understand the social organisation and industrial activities that go towards forming an assemblage in an urban Mediaeval setting. The session was concluded by [Barbora Wouters](#), who demonstrated that an integrated approach to microanalysis of sites, including Micromorphology, MicroXRF and Phytoliths can successfully provide a much greater environmental context in urban sites.

The final session of the conference investigating human/animal relationships commenced after lunch. [David Orton](#) kicked off with his investigation into herd demographics in zooarchaeology; testing the effect of sample size on the ability to distinguish between mortality models under ideal conditions. [Elizabeth Kerr](#) then talked about how human interaction with the environment can lead to changes in biodiversity, particularly focussing on whether or not micro-mammal mandibular evolution can be attributed to hu-



Delegates and the man of the weekend Terry, showing of the bone based fashion on a blustery day in York.

man activity. Zooarchaeological data, documentary sources and place name evidence were then used by Kristopher Poole to investigating human relationships with foxes and badgers in Anglo Saxon England. The first half of this session ended with a humorous, but touching exploration of emotion through the zooarchaeological record, with James Morris questioning whether burial placement can be seen as an emotional act.

After coffee, the final three papers began with Julia Best looking at the integration of zooarchaeological and scientific analysis techniques such as ZooMS and SEM to investigate egg use and avian-human relationships in the past. A joint paper by Clare Rainsford and David Roberts followed, investigating long term social practice in the landscape through the exploration of zooarchaeological evidence from two late Roman shrines in south-west Wiltshire. The final paper of the conference was delivered by Richard Madgwick, who highlighted the potential of using histological analysis to inform on post mortem treatment of both human and animal remains.

conference fund generously subsidised our attendance. Thanks should also be given to the conference sponsors: The AEA, BAR, Zeiss, Olympus, OXBOW books, Beta Analytic and The University of York.

Last, but not least, the organisers Lee Broderick, Clare Rainsford, Eva Fairnell, Carol Lang, Julie Bond and Matthew Collins, along with all the volunteers should be congratulated on such an enjoyable and interesting conference and a fitting tribute to the extensive career of Terry O'Connor.

Report by: Mark McKerracher, Rathnasiri Premathilake and Rhiannon Philp

... and for Terry's take on it <https://osteocorner.wordpress.com/2015/11/09/what-a-strange-weekend/>.

The authors would like to thank the AEA committee whose

News from the AEA Autumn Conference Committee

Islands: Isolation and connectivity The AEA Spring Conference, April 2016

Hosted in Kirkwall, Orkney by the Archaeology Institute, University of the Highlands and Islands

Followed by meetings of the Professional Zooarchaeology Group and the Archaeomalacology Working Group
(conference web-page - <https://www.uhi.ac.uk/en/archaeology-institute/events/association-for-environmental-archaeology-conference-2016>)

CALL FOR PAPERS

ISLANDS: ISOLATION AND CONNECTIVITY

The call for papers for the 2016 AEA Spring Conference is now open.

Deadline for abstract submission 30th November 2015.

To contribute to this conference please submit an abstract of no more than 300 words studyarchaeology@uhi.ac.uk and put "AEA conference" in the subject line.

METHODS IN OUR MADNESS APPROACHES IN ARCHAEOMALACOLOGY

The call for papers for the 2016 AMWG Workshop – Methods in our Madness - is now open.

Deadline for abstract submission 30th November 2015.

To contribute to this workshop please submit an abstract of no more than 300 words (PDF or DOC format) to amwg2016methods@gmail.com by the 30th November 2015.

XIX INQUA Congress 2015, Nagoya, Japan

Cultural Responses to Late Glacial-Middle Holocene Palaeoenvironmental Changes in Europe

Conveners: Erick Robinson (University of Wyoming, USA), Felix Riede (Aarhus University, Denmark)



Report by Nicki Whitehouse

The XIX INQUA Congress took place in Nagoya, Japan from July 26-August 2, 2015. The congress had 1,790 participants from 68 countries. This makes it the second largest next to the Bern Congress for

total participants, and tied with the Bern Congress for number of countries represented. The session was one of 33 sessions organized under the Humans and Biosphere Commission (HaBCom). HaBCom had the second highest number of sessions behind the Palaeoclimate Commission (PALCOMM). This illustrates the prominent role being played by interdisciplinary archaeological and palaeoenvironmental research within INQUA as a whole.

The session showcased the INQUA HaBCom Project 1404p, *Cultural and Palaeoenvironmental changes in Late Glacial to Middle Holocene Europe—Gradual or Sudden?* The impetus for the project came from recent advances in palaeoenvironmental research that have highlighted the diverse magnitudes and tempos of different environmental changes on inter-regional scales. Specifically, a consideration of the variability of human responses to palaeoenvironmental changes of differing durations and magnitudes such as gradual and cumulative ecosystem changes in different regions, abrupt cooling events caused by glacier meltwater outbursts, and extreme events such as volcanic eruptions and tsunamis warrant much greater and more systematic attention. This forces archaeologists to reconsider traditional models for human-environment interaction during this period; we can start to move from simple determinism to a more thorough understanding of the dynamics of human resilience.

The project brings young archaeologists and palaeoecologists together across Europe in order to integrate regional archaeological and palaeoenvironmental records. This data integration will provide a continental-scale dataset that will be used for developing a multiple model approach (chronological, species distribution, and agent-based modelling) to the investigation of the diversity of human-environment interactions during the Late Glacial and early

Holocene.

The session was very well attended, with standing room only throughout much of it. The President of the INQUA HaBCom commission, Nicola Whitehouse, was in attendance throughout the entire session.

Project 1404p co-leaders Erick Robinson and Felix Riede gave the opening presentation, introducing the project aims and preliminary results. The project members have isolated three time-slices that enable a focus on the variability of human responses to different kinds of environmental change: 1) the late Allerød to first half of the Younger Dryas, 2) the second half of the Younger Dryas to the 11.4 ka event, 3) the 9.3 ka event to the 8.2 ka event. Robinson and Riede presented an example of initial species distribution modelling work on the first time-slice. Species distribution modelling enables the development of empirical, quantitative, testable, and regionally comparative models of human-environment interactions by hindcasting palaeoclimatological and human communities for particular time-slices of focus. This presentation emphasized the importance of developing quantifiable units of measurement in archaeology, which are necessary for integration with palaeoenvironmental data to make robust inter-regional comparisons.

Seren Griffiths (Manchester Metropolitan University, UK) and colleagues presented on “The 8.2ka event: evidence for human-environment interaction in north-west Atlantic Europe”. This presentation highlighted how addressing the potential influences of abrupt climate change on humans requires archaeological studies to focus on more than just the span of the actual event, but in the several hundred years before and after the event in order to examine possible lead-lag relationships. A geo-referenced chronological database was developed for Britain, Ireland, northern France, Belgium, the Netherlands, and Luxembourg. A Bayesian statistical analysis was carried out on these data. The results highlighted the lack of evidence for devastating impacts on humans in the region, such as population collapse. In some regions there were changes in social organization/mobility and lithic technology. The different evidence for changes in the archaeological record enable further investigations of the different adaptive strategies employed to make societies resilient to this event across the region.

Marc Vander Linden (University College London, UK) and colleagues presented “A long hard road...: Assessing evidence for environmental and population history in the Eastern Adriatic and western Balkans during the Late Pleistocene and Early/Middle Holocene”. This is a particularly interesting region for research on human-environment interaction during the Late Glacial and early Holocene be-

cause it has been argued that this region serves as a Late Glacial refugium, for plants, animals, and humans. They note how, despite this region being central to discussions of the spread of agriculture into Europe from the Near East, consideration of abrupt climate changes such as the 9.3 and 8.2 ka events has been generally overlooked, due mostly to a lack of data. Vander Linden's recent ERC project has changed this situation, with the collection of new data on hundreds of sites from the Final Palaeolithic to the Neolithic/Eneolithic. This presentation noted that there is more data available in this region than expected, but it is still a patchy regional record. They note that, in the Bølling-Allerød to Younger Dryas, there were some slight fluctuations in site numbers, but there is little evidence for changes in behavior. Regarding the relationship of early farming and climate change events, they note that farming appears in the region before the 8.2 ka event, and that, despite having evidence for changes in population structure and in the use of certain landscapes, there appears to be no association with climate forcing.

Heikki Seppa and Mikael Tallavaara presented, "Did the mid-Holocene environmental changes cause the boom and bust of hunter-gatherer population size in eastern Fennoscandia?" They test the assumption that hunter-gatherer population sizes are constrained by climate and environmental forcings by investigating the co-variation of the summed probability distribution of radiocarbon dates, which is used as a proxy of population change, with locally available high-resolution environmental records. The key point is made that we can only test these possible relationships by using local records and focusing on biotic proxies that would have been relevant to hunter-gatherer food availability and population dynamics at the time of investigation. They find that major population growth occurred during a period of high summer temperature and terrestrial productivity of terrestrial, lacustrine, and marine ecosystems from 7500-7500 cal. BP, followed by a major decline 5500-4000 cal. BP during period of cooling and forest decline. An interesting result from this research is that, after the transition to agriculture, long-term population growth was less constrained by environmental forcing.

Keiko Kitagawa (National Museum of Natural History, France) and colleagues presented on "Subsistence practice and mobility of hunter-gatherers during the Late Upper Palaeolithic and Mesolithic of the steppe of Eastern Europe". They presented zooarchaeological and stable isotope analyses from multiple open-air sites spanning the period 20,000-8000 cal. BP in order to test the hypothesis that hunter-gatherer populations underwent shifts in their subsistence strategies around the Pleistocene-Holocene transition.

These kind of analyses are very important because, in general, there has been little research on human responses to environmental change during this period on the Eastern Europe steppe, and more specifically, zooarchaeological data provide a direct proxy for how specifically hunter-gatherers adapted to change. Furthermore, in the regions of Western Europe where there is a longer tradition of research into human responses to different kinds of environmental change during this period, taphonomic processes have limited the preservation of bone in many areas.

Nathaniel Kitchel (University of Wyoming, USA) and colleagues expanded the geographical scope of the session by presenting on "Abrupt climate change events and the Paleoindian period in the northeastern US". They compiled a radiocarbon dataset for all Paleoindian and Early Archaic period sites from the northeastern US. Bayesian modelling was carried out to test the chronological relationships between different typological groups and sub-phases of the Paleoindian, and whether changes in these phases possibly occurred around periods of abrupt climate change. The results suggested that the only major cultural change that might have occurred in response to climate change was the initial human colonization of the region. This initial modelling work suggests the hypothesis that the human colonization of the northeastern US occurred after caribou populations were bolstered by rapid but brief cooling during Greenland Interstadial-1b (GI-1b). They note that the earliest colonization of this region provides evidence for different typological groups living contemporaneous with each other, possibly suggesting different cultural adaptive strategies to these newly encountered landscapes.

Rebecca Wragg-Sykes (University of Bordeaux, France) and colleagues presented an introduction to the newly funded INQUA HaBCom project 1502p, "Reconstructing hunter-gatherer mobility: building new inter-disciplinary frameworks in the Quaternary". The impetus for this project has been the lack of critical discussion around how to build common analytical frameworks to examine hunter-gatherer mobility across different specialist boundaries. For example, specialists in zooarchaeology, stable isotopes, and lithic analysis often ask similar questions that concern hunter-gatherer mobility, but there has been little attempt to focus on the intersection of the different data generated and how the integration of these data might help to test different models of mobility. This project creates an international working group to promote integrative approaches of best practice that balance the disadvantages of single methods. It develops online resources and databases focusing on the most promising regions and periods that will enable comparisons among multiple forms of data. Because mobility is

one of the main ways that hunter-gatherers buffer impacts caused by environmental changes, project 1404p and 1502p have are developing means for knowledge exchange between projects.

The session closed with presentations from two invited speakers. Ana Moreno (Pyrenean Institute of Ecology, CSIC, Zaragoza, Spain) and INTIMATE (INTEgrating Ice-core, MA-rine, and TERrestrial records) working group colleagues presented, "Reconstructing Western Europe climate since last deglaciation and Early Holocene: an INTIMATE compilation of records." The impetus behind this working group was that, unlike marine and ice core records, terrestrial palaeo-data are often not available in databases that are easily accessible to the non-specialist, and are therefore left out of comparisons and modelling exercises. The compilation presented here comprised 50 archives that included lake records, speleothems, ice cores, and terrestrial proxies in marine records. The aim was to provide the wider palaeo-community with a consistent compilation of high-quality terrestrial records, to facilitate model-data comparisons, and to identify key areas of interest for future investigations of last deglaciation and Early Holocene climates. The compilation showed how, during deglaciation, changes in atmospheric and ocean circulation affected the global distribution and fluxes of water and heat, resulting in a series of abrupt climatic changes (GI-1a to GI-1e, GS-1), which have broadly similar trends in palaeoclimate records from many sites throughout the North Atlantic region. This compilation enabled this working group to investigate the latitudinal gradients in response times at the onset of deglaciation, the characterization of temperature changes and precipitation variability during GI-1, and the evidence for response of ecosystems to early Holocene abrupt events. This emphasis on different responses of regional ecosystems and leads-and-lags in their responses, viewed through multiple proxies, provides a key influence to INQUA project 1404p, because its aims to add archaeological data in order to consider different human responses

Lawrence Guy Straus (University of New Mexico, USA) closed the session by discussing the changes in research on human responses to environmental change in recent years. He emphasized the increasingly important role of high-resolution radiocarbon chronology and critical assessment of taphonomic problems if we are to ask potentially answerable questions regarding the relative impact of climate and environmental changes on human societies. He questioned just how bad a minor cold snap would be for hunter-gatherers, compared to a longer, more intensive cold period: "How much slack or margin for error did hunter-gatherers have with these kind of changes, particularly in the mid-latitudes where more flexibility would be afford-

ed?" He made the important point that population density would determine the relative impact that a climate change event would have on a particular hunter-gatherer society. Furthermore, culture would have been the important determinant of whether a particular change would impact a particular society. His central message is that we are only starting to really investigate these problems with the interdisciplinary vigor and multi-scalar data that they deserve, for which he saluted the efforts of 1404p.

Overall, this session highlighted the bright future ahead of research on human and ecosystem responses to different environmental changes during the Lateglacial and early Holocene. This session highlighted the many challenges that face this kind of research, namely the very basic challenge of integrating disparate archaeological and palaeoenvironmental data that was often recorded years ago, before the advent of high-precision AMS dating and critical assessments of site stratigraphy using Bayesian statistics. Furthermore, this data was collected, interpreted, and published according to different kinds of research questions, many of which were based in culture historical descriptions, rather than the investigation of behavioral and adaptive change in the face of a range of different environmental factors. Project 1404 takes on this challenge by isolating an area of research on which different regional specialists can come together to develop a theoretical and methodological framework for integrating this different data and making it more amenable to quantitative and comparative research questions.

University of Reading AEA Seminar

Dr Michelle Alexander

(University of York)

Diet, economy and mobility in medieval Islamic and Christian Valencia: an isotopic approach

16.15 , 10th Dec,

Sorby Room, Wager Building, University of Reading, Whiteknights, Reading, RG6 6UR



TAG 2015 14-16th December

Just some two of the sessions that might be of interest to members

- ◆ ["Humming with cross fire and short on cover..."? Revisiting and reflecting on *Environmental Archaeology: Meaning and Purpose*](#)
- ◆ [Pits and the Diversity of Depositional Practice](#)

Full details at <http://tag2015bradford.org/>



Cifa 2016 Annual conference and training event - Archaeology in context

Dates: **20-22 April 2016** Venue: **University of Leicester**

Session that may be of interest to members: **The archaeology of brewing**

Training sessions CPD:

- ◆ Going solo: self-employment in an archaeological context (Seminar)
- ◆ Starting out; professionalism for beginners (CPD Workshop)
- ◆ Funding for collaborative research (CPD Workshop)

Full details at <http://www.archaeologists.net/conference/2016>



European Geosciences Union General Assembly 2016 Vienna | Austria | 17–22 April 2016

At the interface of nature and culture, reflected in soil horizons, the wider landscape setting, as well as in geoheritage interaction. The EGU General Assembly 2016 will bring together geoscientists from all over the world to one meeting covering all disciplines of the Earth, planetary and space sciences. The EGU aims to provide a forum where scientists, especially early career researchers, can present their work and discuss their ideas with experts in all fields of geoscience. The EGU is looking forward to cordially welcoming you in Vienna.

GM6.2/SSS3.10 **Geoarchaeology: Human adaptation to landscape changes, landscape resilience to human impact and integrating palaeoenvironmental and archaeological records** <http://meetingorganizer.copernicus.org/EGU2016/session/20750>

SSS3.4 **Soil between humans and nature: Landscape evolution by natural and cultural processes** <http://meetingorganizer.copernicus.org/EGU2016/session/20443>

SSS3.6/EOS7 **Geoheritage and Geodiversity Matter: Themes, Links and Interactions** <http://meetingorganizer.copernicus.org/EGU2016/session/20473>

SC17/GM13.5/SSS0.5 **Short course: Soil as a Record of the Past; Reading Soils from the Past** <http://meetingorganizer.copernicus.org/EGU2016/session/20765>

Deadline for Receipt of Abstracts: 13 January 2016 at 13:00 CET, Financial support applications (1st December 2015), Registration opens December. <http://www.egu2016.eu/>

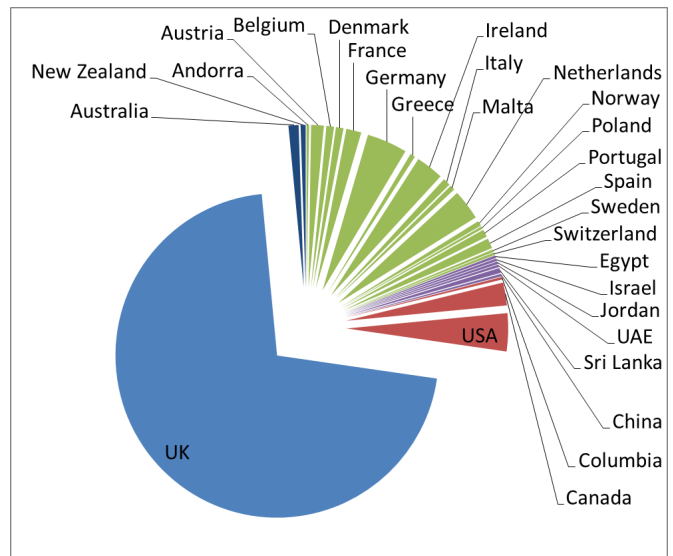
News from the Committee

The Annual General Meeting was held at the conference in York on Sat 7th November 2015. At total of 45 members attended, including 8 committee members. The meeting was chaired by Fay Worley (AEA Secretary) and minuted by Fay and Suzi Richer (Publicity Officer). No AOB items were raised.

Report on Committee Activities

Membership

Membership for 2015 is very healthy, standing at 406, including 59 new members this year. However 32 individual members from 2014 have not renewed their membership in 2015. A social media initiative offering 2016 & 2017 membership at a 20% discounted price, had attracted 8 new members prior to the conference, with 11 more signing up over the conference weekend.



Membership breakdown (October 2015)

Membership	#
Honorary	9
Retired	6
Unwaged	7
Student	75
Ordinary	309
TOTAL	406

Payment type*	#
Cash	1
Cheque	6
IBAN	21
Standing Order	184
Worldpay	184
'other'	4

Breakdown by membership type

*Breakdown by payment method. * excludes honorary members*

Two three-year membership awards have been taken up in 2015. The individual membership recipient is Dr Premathilake Rathnasiri of the Postgraduate Institute of Archaeology, University of Kelaniya, Sri Lanka, with the Institutional Award going to the library of the same institution. We look forward to reading about their work in forthcoming newsletters and welcomed Dr Rathnasiri to the conference. We announced a third prize to be awarded to a community [archaeology group](#).

Ruth Pelling, co-opted Membership Secretary, will be stepping down in 2015-6, once a new Membership Secretary is in place. Thanks to Ruth for her work on the committee since 2009 and as Membership Secretary since 2010.



Journal

Our journal *Environmental Archaeology* moved to four issues this year, with volumes 20(1)-20(3) already distributed and 20(4) expected in November. In forthcoming years we can look forward to Special Issues on storage (2016), fish (2016), 'From Isoscapes to Farmscapes' (2017) and identifying anthropic activity markers (2017). This year our publishers Maney Publishing were acquired by Taylor & Francis. We continue to work with the same publishing team and the new publishers will allow *Environmental Archaeology* to now reach over 2000 institutional libraries online. They report that institutional subscriptions are rising and that interest and content are becoming increasingly international. We are working towards getting an impact factor for the journal and its editor (Tim Mighall) and publisher's Managing Editor (Rachel Young) will be applying for inclusion in the index in 2016. The AEA thanks Tim Mighall for the continued expansion and success of the journal under his editorship.

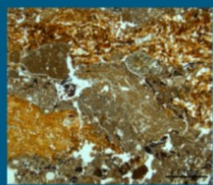
In 2015 we have produced new leaflets



Association for
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AEA sponsored seminars since last AGM

Publicity

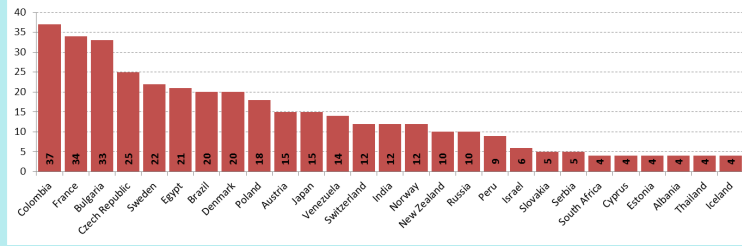
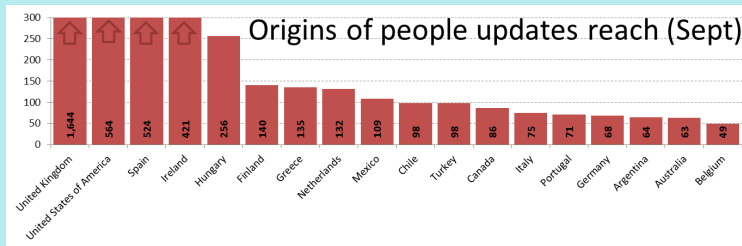
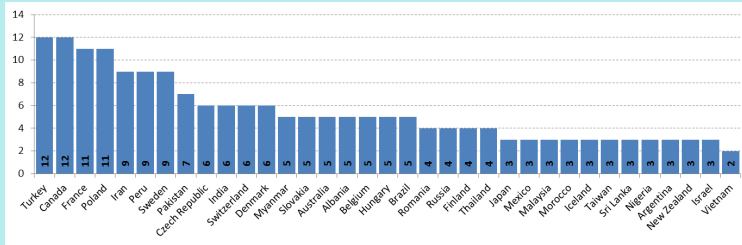
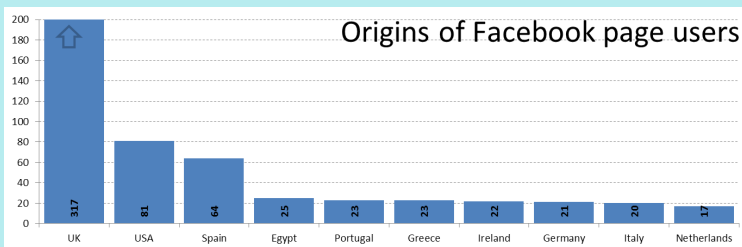
Publicity for the Association continues to operate through leaflets, displays, sponsorship of events and social media presence. New fliers were published in 2015 and new banners are on their way. We have sponsored nine seminars since the last AGM (Table 1), including a continuation of the series in Italy. one more seminar is scheduled for the end of 2015:

Dr Michelle Alexander (University of York): *Diet, economy and mobility in medieval Islamic and Christian Valencia: an isotopic approach.*

10th Dec 16.15, Sorby Room, Wager Building, University of Reading, Whiteknights, Reading RG6 6UR

The Association's social media presence continues to grow with 850 Facebook likes, including 300 new likes in the last year. Our page regularly reaches 2500 users a week, including a broad international community, although, like our membership, still dominated by the UK. Our Twitter account was started much more recently than Facebook, but momentum has built substantially with 367 followers and 581 tweets. The Association's publicity has been overseen by Publicity Officer Richard Madgwick. His term of office concluded at the AGM and the Association thanked him for his hard work over the last four years as Publicity Officer and preceding term as Student Representative. Suzi Richer has taken over the Publicity Officer role following the AGM. Suzi should be contacted with ideas for publicity initiatives and sponsored seminars.

Speaker	Title	Date and venue
Dr Margarita Gleba (University of Cambridge)	<i>New Spin on Fibre Revolution: Plants, Textiles and Technology in the Ancient Mediterranean.</i>	12/11/14 American University of Rome
Dr Emma Jenkins (Bournemouth University)	<i>Phytoliths, geochemistry and ethnography: a new approach to understanding Neolithic building construction and use in the Levant.</i>	26/11/14 Bournemouth University
Dr Ben Gearey (University College Cork)	<i>Aspects of Peatland Archaeology in Britain and Ireland.</i>	02/12/14 University of Central Lancashire
Dr Annalisa Christie (University of the Highlands and Islands)	<i>Marine resource use in the Mafia Archipelago, Tanzania: Archaeological perspectives.</i>	28/01/15 Orkney College
Prof Michael Petraglia (U. of Oxford)	<i>Out of Africa and the Greening of the Arabian Desert.</i>	03/02/15 Queen's University Belfast
Dr Richard Madgwick (Cardiff University)	<i>Reconstructing the Feasts of Late Neolithic Britain.</i>	11/02/15 University of Leicester
Professor Soultana Valamoti (Aristotle University of Thessaloniki)	<i>A sip of Neolithic wine: recent finds from the north Aegean.</i>	02/03/15 University of Oxford
Professor Kevin Edwards (University of Aberdeen)	<i>People, pollen and the past: the Norse in the North Atlantic.</i>	25/03/15 University College Cork
Professor Mark Macklin (University of Aberystwyth)	<i>The rivers of civilization: the influence of changing hydromorphic regime on floodwater farming.</i>	30/04/15 Cardiff University
Dr Suzi Richer (University of York)	<i>Into the woods we go: how do we really understand historic woodland usage?</i>	19/11/15 Bangor University



Newsletter

Members will note that the editorial team behind the Newsletter has changed for this issue. The AGM saw Vanessa Straker and Wendy Caruthers step down after in excess of 29 and 22 years respectively as editors (their impressive terms corrected since the AGM). The committee and membership thanked Vanessa and Wendy for their immense contribution to the Association over such a considerable time. Forthcoming newsletters, including the current edition, will be edited by Rob Batchelor and Danielle de Carle, together with the senior Student Representative, currently Laura Green.

Conferences and meetings

The last 12 months of meetings included the 2014 autumn conference in Plymouth, 2015 Spring meeting in Nottingham and sponsored meetings and conference sessions at TRAC (University of Leicester, 28th March), Environmental Archaeology of European Cities (Royal Belgian Institute of Natural Sciences, 27-29th May) and Professional Zooarchaeology Group 10th anniversary meeting (Historic England, Portsmouth, 8-9th August). Turning to the 2015 autumn conference, it was announced that a total of

£1423.60 was offered in bursaries to attend the meeting, and that these funds supported attendance internationally and from the UK. The the conference poster prize was announced by Harry Kenwood, acting as one of three esteemed poster judges alongside Terry and Sonia O’connor. Going to Oula & Sanna Seitsonen with Lee Broderick for ‘Of seals and Men Laminal prey-hunter relationships in the eastern Baltic sea region in Prehistory and History’.

The collage displays several issues of the newsletter, including:

- Issue 11 (February 1986):** The first issue, edited by Vanessa Straker, featuring a cover with a tree and the title 'Association for Environmental Archaeology Newsletter 11'.
- Issue 72 (May 2011):** Edited by Wendy Caruthers and Vanessa Straker, featuring a cover with the AEA logo and the title 'Association for Environmental Archaeology Newsletter 72 May 2011'.
- Issue 93 (August 2006):** Edited by Wendy Caruthers and Vanessa Straker, featuring a cover with the AEA logo and the title 'Association for Environmental Archaeology Newsletter 93 August 2006'.
- Issue 134 (May 2014):** Edited by Rob Batchelor and Danielle de Carle, featuring a cover with the AEA logo and the title 'Association for Environmental Archaeology Newsletter 134 May 2014'.

Internal pages show various articles, including 'Chair's piece', 'Inside this issue', 'ISSUES', 'PEOPLE - SASH', and 'THE COMMITTEE'. The text discusses the history of the newsletter, the transition of editorial roles, and the activities of the Association.

Development of Newsletters from No 11 (February 1986, the first to cite Vanessa as an editor) through to the current format.

2016 Spring meeting

2016 meetings were also announced. The Spring meeting will be 1-2nd April in Kirkwall, Orkney 2016 on the theme *Islands: Isolation and Connectivity*. It is being organised by Ingrid Mainland, Jen Harland, Annalisa Christise and Scott Timpany and hosted by the University of the Highlands and Islands. See the conference website <https://www.uhi.ac.uk/en/archaeology-institute/events/association-for-environmental-archaeology-conference-2016> for further details and for funding opportunities. **Abstract submission is extended until 30th November, registration will open later in the year and is currently scheduled to close by 15th January**

2016 Autumn conference

The 2016 autumn conference will be 29th September to 1st October in Rome, Italy, with the programme of papers on 30th September and 1st October. The conference is being organised by Robyn Veal and Giulio Lucarini (University of Cambridge) and hosted by the American University of Rome. Robyn provided advance information for the AGM. On the evening of Thursday 29th September Prof Graeme Barker, former director of the McDonald Institute for Archaeological Research, and former director of the British School of Rome, will give a plenary presentation at the American Academy in Rome. A small reception sponsored by the Academy will follow the presentation. All conference papers, posters, morning and afternoon tea breaks will be held in the beautiful Villa Sciarra, home of the Istituto Italiano degli Studi Germanici, and located within a public park five minutes from the University and Academy. The conference dinner will be held in a local restaurant on the Friday evening and excursions to central Rome, and/or Etruria are being arranged for Sunday October 2nd. Calls for sessions and papers will be made shortly.

Small research grants

Small research grants were a new initiative for 2015, and were administered by Committee Member Julia Cussans. The 26 applications received were of a high standard and totalled £14,737. Applications were submitted from the UK, USA, Spain, Belgium, Ireland and Germany, from various sectors: PhD/academic (23), commercial sector (1), independent researchers (2). Successful applicants are listed in the table below. Please see the call for applications for next year's grants .

Name	Affiliation	Title
Lee Broderick	U. York	Tragelaphus Identification Project, Edinburgh (TIPE)
Shawn O'Donnell	U. Cambridge	Quantitative comparison of an alternative pollen processing technique with traditional HF/acetolysis - based protocols
Edouard Masson-MaLean	U. Aberdeen	Subsistence and settlement patterns during the Little Ice Age on the Bering Sea coast: an interdisciplinary approach integrating ecology, foraging theory and zooarchaeology
Meriel McClatchie	Consultant; UCL & UCD Hon. Res. Associate	Late prehistoric farming in southern Britain: a comparative study of archaeobotanical data from five Iron Age sites
Scott Timpany	U. Highlands and Islands	SEM investigation of microscopic animal hairs and their potential use as proxy-evidence for palaeograzing activity

John Evans prize

Prior to the announcement of the 2015 winners, members were shown a brief video from Sarah Oas, 2014 Masters prize winner, in which she described her dissertation project and her current research.

The 2015 prize winners were announced at the AGM, and are also presented along with their dissertation [abstracts](#) in this newsletter . We are grateful to Alex Livarda for administering the prize.

Twitter policy

Current debate surrounds live tweeting at conferences. The AEA encourages audience discussion and engagement however, the AEA also seeks to protect the ability of speakers to control the dissemination the details of their research prior to publication, whilst maintaining open dialogue within conference settings. Therefore, we are trailed a simple twitter policy at the conference, whereby speakers included a standard symbol to indicate whether the content of presentations could be shared on social media. Information regarding the policy was circulated to speakers in advance and presented in conference packs.

Contacts and info

Members were reminded that they can stay up to date with Association news and events through our webpage (www.envarch.net), Newsletter and members’ discussion list (env-arch@jiscmail.ac.uk).

The Committee contacts AEA members through the email list AEA@jiscmail.ac.uk.

Members can contact the AEA through the following emails, with all committee members contact details available on the website:

AEA Secretary (Fay Worley) fay.worley@HistoricEngland.org.uk

AEA Membership Secretary (Ruth Pelling) membership@envarch.net

AEA Newsletter editorial team newsletter@envarch.net



Election of new committee members

The AGM saw the completion of terms of office of four elected members, Richard Madgewick, James Morris, Hannah Rus and Daniella Vos. They were thanked for their contribution to the Association. Treasurer Jacqui Huntley’s term also concluded, but in the absence of any candidates to take on the role, she was co-opted for a further year. Members are asked to consider nominations for Treasurer at for the 2016 elections and to contact Jacqui or the committee to discuss the role.

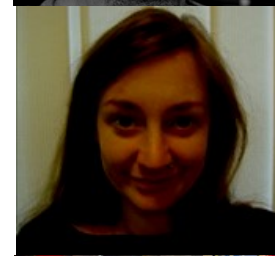
Co-opted Newsletter editors [Vanessa Straker and Wendy Carruthers](#) stepped down from the committee at the AGM. Co-opted Membership Secretary Ruth Pelling will shortly be stepping down, and co-opted Conference Officer Robin Bendrey is to continue for a further year.

Four new committee members were elected at the AGM: Lee Broderick, Ben Gearey and Jo McKenzie as Ordinary Members, and Leslie Bode as Student Representative. We thanked all those who stood for election and welcomed the new Managing Committee members.

New Committee members Lee, Ben, Jo and Rhiannon

2015-2016 Committee structure

Name	Term
Rob Batchelor	2014-2018
Robin Bendrey	Co-opted Conference Officer
Lee Broderick	2015-2019
Julia Cussans	2013-2017
Danielle de Carle	2014-2018
Ben Gearey	2015-2019
Laura Green (Student Representative)	2014-2016
Jacqui Huntley	Co-opted Treasurer
Emma Jenkins	2013-2017
Alex Livarda	2012-2016
Jo McKenzie	2015-2019
Tim Mighall	Co-opted Journal Editor
Don O’Meara	2012-2016
Ruth Pelling	Co-opted Membership Secretary
Rhiannon Philp (Student Representative)	2015-2017
Suzi Richer	2014-2018
Richard Thomas (Chair)	2013-2017
Nicki Whitehouse	2013-2017
Fay Worley (Secretary)	2014-2018



Treasurer's report

The following accounts were presented and accepted by attending members

Sterling Account

Assets at start of year	2013	2014
Bank – current account	£17,454.07	£19,621.25
Bank savings accounts	£333.55	£20,335.08
Fixed term deposit account	£20,000.00	0
	£37,787.62	£39,956.33
Income		
Subscriptions	£11,942.75	£13,201.75
Books	£558.75	£1,209.00
Interest earned	£1.53	£7.08
Interest on fixed term deposit	-	£350.41
Maney Royalties and Editorial income	£4,017.69	£2,709.96
Income sub-total	£16,520.72	£17,438.38
Initial total assets excluding books in stock	£54,308.34	£57,434.83
Expenditure		
Office stationery, stamps, poster, flyers	-	£710.22
Web page	£500.00	£177.08
Journal production & postage (inc. back numbers)	£10,122.00	£10,276.00
Committee meeting travel related	£557.94	£1,172.28
Book purchase	£979.03	£1,607.75
Seminars	£94.43	£144.33
Conference support	£290.00	£1,594.10
Conference prizes	£450.00	£160.00
Standard bank charges	£190.06	£114.57
Credit card charges (Streamline)	£761.21	£255.37
Worldpay charges	£263.34	£287.28
Newsletter software	£68.00	-
Subscriptions reimburse	£76.00	£10.00
Expenditure subtotal	£14,352.01	£16,478.98
Total Assets minus expenditure	£39,956.3	£40,955.85
Assets at end of year		
eoy current	£19,621.25	£20,270.06
eoy savings	£335.08	£20,685.79
eoy term deposit	£20,000.00	0
	£39,956.33	£40,955.85

Euro Account

Assets at start of year	2013	2014
Bank- current account	€2,685.60	€3,869.80
Income		
Subscriptions	€1,243.56	€2,564.75
Books	€147.95	
<i>Income sub-total</i>	<i>€1,391.51</i>	
Initial total assets	€4,077.11	€6,434.55
Expenditure		
Standrd bank charges	€-22.31	€-25.60
Committee expenses	€-185.00	
<i>Expenditure sub-total</i>	<i>€-207.31</i>	
Total assets minus expenditure	€3,869.80	€6,408.95
Assets at end of year		
Bank- current account	€3,869.80	€6,408.95

Vote on subscription fee increase

A proposal to accept an increase in fees from 2017 was circulated to members via email in advance of the meeting and put to vote following the Treasurer's Report. Including a number of proxy votes submitted in advance, **the motion was carried by 49 in favour and 9 opposed.**

Individual membership fees will increase from 2017 to **£45** waged, **£35** student/unwaged/retired. Members paying in non-Sterling currency through Worldpay will be charged based on the Sterling fee, at an exchange rate that is updated daily. This is the first increase in individual membership fees since 2004, despite an increasing range and value of membership benefits.

Call for Grant Applications: AEA Research Fund

(Fund administrator: Julia Cussans)

Research Fund Overview: For the second year the AEA is offering a number of small grants to fund specific aspects of research projects concerning any area of environmental archaeology. Grant applications are open to all AEA members including students and unwaged members.

Grants will normally be up to £500 but applications for larger amounts may be considered. Grants cannot cover the cost of equipment or conference attendance or costs that should normally be covered by developers or larger funding bodies (eg AHRC, NERC) funding other areas of the same research project. Costs that may be covered include travel and accommodation for visits to research facilities, scientific analyses or time buy-out for those working in the commercial sector and wishing to carry out research beyond that funded by developers. Grants may also be used for research start-up or pilot projects.

Annual Application Deadline: 31st January. Apply online <http://envarch.net/grants/>

JOHN EVANS DISSERTATION PRIZE

John Evans (1941-2005) was an inspirational environmental archaeologist, responsible for advancing the discipline and fostering many of today's top researchers in the field. His many books continue to make a contribution to practical and theoretical aspects of environmental archaeology. To honour the memory of John and his achievements within environmental archaeology, the Association for Environmental Archaeology (AEA) has an annual competition for the best undergraduate and Masters dissertations in any aspect of environmental archaeology.

Winners 2015

Undergraduate Award: Blessing Chidimuro BSc in Bioarchaeology, Archaeology, University of York

Assessing the Effectiveness of Using Bone Apatite in Palaeodietary Reconstructions: Bone Mineral Stable Isotope Analysis of Individuals from England, Spain and Italy

Stable isotope analyses of skeletal remains have become significant within the field of archaeology in investigations of diet. This dissertation employs stable isotope analysis of bone apatite using $\delta^{13}\text{C}$ measurements to reconstruct diets of past individuals from Spain, Italy and England. With the broader aim of reconstructing diet, this study is an attempt to determine a suitable criterion to evaluate digenesis before stable isotope analysis of bone apatite. The study demonstrates the reliability of utilising Fourier-Transform Infrared Spectrometry-Attenuated Total Reflection (FTIR-ATR) in assessing digenesis. Furthermore, the pre-treatment protocols used in this study were ideal in enabling the removal of contaminants while minimising the isotopic composition of carbonate or introducing additional carbonate material. In addition, results confirm the necessity of evaluating digenesis before stable isotope analysis of bone mineral. Finally, results indicate that collagen alone does not provide reliable reconstructions of past diet, rather, it is essential to use both apatite and collagen $\delta^{13}\text{C}$ in order to get dependable results.

Some comments from the markers: Very impressive integration of published datasets from Europe to support interpretations of this limited dataset... Clearly novel and full of original thought

Postgraduate Award: Lisa Phan, Fitzwilliam College, University of Cambridge

Late Pleistocene lithic technology at Hang Trống cave, Vietnam: climate change and Hoabinhian lithic organization

A model of the impact of the Last Glacial Maximum on the lithic technological organization of Pleistocene Southeast Asian hunter-gatherers is tested using an attribute analysis of Hoabinhian lithic artifacts from Hang Trống, a late Pleistocene cave site in north Vietnam. The analysis suggests that behaviours related to raw material economy were influenced by the severe climatic changes of this period. The study demonstrates the utility of attribute analysis for studying behavior and technological variability in the amorphous stone tool industries of Pleistocene Southeast Asia.

Some comments from the markers: Stresses importance of the research that potentially could overturn, perhaps outdated views... Aware of the limitations of the study – does not try to hide them! The consideration of linking toolkit diversity and the management of risk is innovative.

The next call for the John Evans prize will open in spring 2016



Alice sorting animal bones at Tel Bet Yerah, Israel, during the 2013 summer season.

Alice Berger

12 October 1986 - 21st September 2015

We are greatly saddened to hear of the death of Alice Berger earlier in September, who passed away after losing consciousness during an evening with friends. Alice was a gifted student of environmental archaeology and an active member of the AEA, presenting at a number of AEA conferences and winning the John Evans dissertation prize for her MA thesis in 2013.

She completed her Masters at the Department of Archaeology and Ancient Near Eastern Cultures at Tel Aviv University where her thesis focused on “Plant Economy and Ecology in Early Bronze Age Tel Bet Yerah”. She later began her PhD in zooarchaeology at the Institute of Archaeology, UCL, where she was awarded UCL’s Overseas Research Scholarship and Graduate Research Scholarship.

Alice had a fierce intellect, and with her background in archaeobotany and zooarchaeology, she sought to develop integrated approaches in environmental archaeology within her research. Her doctoral research centred on the “Social arrangements of subsistence economy in Early Bronze Age Tel Bet Yerah”, which dealt with the environmental aspects of urbanisation and migration in the southern Levant. She was skilled in laboratory techniques and was conducting pilot studies in stable isotope analysis.

Alice was an intensely independent researcher and exuded enthusiasm about her own work. However, she was not merely proficient in the lab, but she was also an experienced excavator who loved working in the field. She worked as an environmental specialist at the yearly summer seasons at Tel Bet Yerah, Israel, and was responsible for organising and implementing systematic environmental sampling at the site. She was also a natural born teacher and leader and excelled as a teaching assistant, both at UCL and out in the field, helping and inspiring many undergraduate students.

Alice was due to commence the next phase of her research at the University of Kiel. It is a terrible tragedy that this young life with such a promising academic career was cut short. She will be sadly missed, but her unique and quirky personality will be fondly remembered by all who knew her.



Alice as the John Evans postgraduate dissertation prize winner in 2013, beside previous AEA chair Andy Howard (centre) and poster prize winner Andrey Mitusov (left).



[http://
www.envarch.net](http://www.envarch.net)

The AEA

The AEA promotes the advancement of the study of human interaction with the environment in the past through archaeology and related disciplines.

We hold annual conferences and other meetings, produce a quarterly newsletter for members, and publish our conference monographs, as well as our journal 'Environmental Archaeology: The journal of human palaeocology'.

Key Dates

AEA Spring Conference 2016:

University of York, 1st-3rd April (registration deadline 15th January 2016)

AEA Research Grants application deadline:

31st January 2016

AEA Membership Renewals

Have you updated your details?

January 2016

Notes from the Newsletter Editors

Please note that thesis submission forms can be found on the website which gives AEA members an opportunity to publish abstracts of their postgraduate thesis.

We are always keen to receive newsletter content, especially from our non UK members. To submit an article, please email word documents and images to;

newsletter@envarch.net

Rob Batchelor, Danielle de Carle, Laura Green

We would very much like to thank the hard work, over many years, of the retiring editors Wendy Carruthers & Vanessa Straker (may your text forever flow between the boxes).