

Association for Environmental Archaeology

AEA Newsletter 132

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From one of the editors This edition of the newsletter includes, like many good projects, a recurring theme of multidisciplinary research: news from the [Silchester Enviroms Project](#) draws on a wide team of specialists (many not explicitly 'enviro' but essential to the overall understanding for which the environmental data is integral); a report from the professional working group of [Environmental Archaeology in Ireland's](#) conference, which looked back over 70 years and forwards to data and questions both multi-scalar and multi-disciplinary; Harry Robson's [PhD abstract](#) eludes to the varied information and techniques he drew upon, while just before Easter the Reading meetings of Archaeobotanists and the workshop on integrated microscopy approaches in archaeobotany were a great opportunity to share and learn between specialists, sometimes even looking at the same slide, in a very present and hands-on way.

There still remains, though, the question as to what extent are we truly integrating research and findings as opposed to merely being multi-stranded? A vivid, if tongue in cheek, [illustration](#) from Terry O'Connor's keynote talk (AEA conference Orkney) suggested that we may still be [stuck] wedded to our own little disciplinary 'islands' as much now as at the beginning of Terry's career. While some crossings may be easier than others, taking this idea forward, presumably somewhere

out there is the greater continental mass of the wider academic community. How good are

we at working and communicating with them? Yet again, if voles, deer and who knows what else, seem to have made it from somewhere in the region of continental Belgium all the way to remote Scottish islands, perhaps even in a single boat load, as demonstrated by our sneak preview of exciting genetic results that the next day made [international news](#), there is hope for us isolated researchers yet.

Perhaps you feel you can help the AEA in this mission? In news from the committee section we have a call for [nominations](#) for elections that will be held at the Autumn conference in [Rome](#), (abstract deadline 15th June—[bursaries](#) available) as well as a call for submissions to the [John Evans Dissertation Prize](#), which last year was won by a project that made the committee question again where the boundaries of the association and 'Environmental archaeology' more generally are drawn.

Ok, perhaps in archaeology and particularly Environmental archaeology we are actually one of the most interdisciplinary of subjects but there should always be room to grow and cross fertilise.

Danielle de Carle



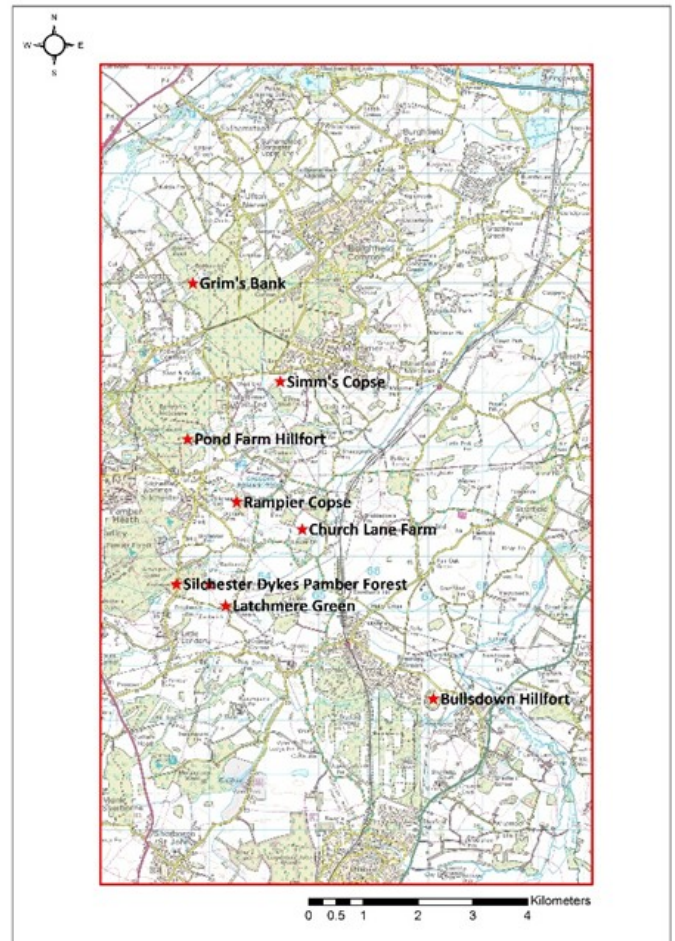
THE SILCHESTER ENVIRONS PROJECT

The Project

The Silchester Environs Project is a five-year research undertaking to 2018 led by Professor Mike Fulford and managed by Dr Catherine Barnett at the University of Reading. It seeks to explore the later prehistoric use of the c.100km² landscape around Silchester Roman Town and its underlying Late Iron Age *oppidum*. The project team is aiming to provide a context for the origins of the town and for changes that occurred during the transition to Roman urbanised living through examining settlement, agricultural activity, and landscape in the wider area. It builds on the exceptional body of information available for the town itself gained over nearly 20 years of annual excavations led by Mike Fulford and Amanda Clarke.

While there is something of a focus on the Iron Age, we're not biased and have already found that our investigations can add to the understanding of longer term landscape use and evolution in the area, with Neolithic right through to Early Medieval features and sequences discovered so far. The starting point has naturally been a huge desk-based assessment, incorporating Historic Environment Records, Portable Antiquity Scheme data, geological, topographic and OS mapping data into a project-wide geographical information system. Aerial photographs, both historic and modern, and lidar imagery are being systematically examined for the study area by Krysia Truscoe. So far, half of the area has been covered and archaeological monuments have been mapped for all periods right through to the end of the Second World War. Already this exercise has identified a number of poorly understood or previously unknown sites, features and areas of interest worthy of further investigation.

We have approached a selection of these sites using fluxgate gradiometer, resistance and ground penetrating radar geophysical surveys (with 75ha of coverage achieved so far and plenty more planned), earthwork surveys and coring



Map of the Environs Study Area to Show Key Sites Surrounding Calleva

exercises. A small number of the really interesting or enigmatic ones will be investigated through excavation. We have already completed one season of digging, with trenches opened at Pond Farm Hillfort in the summer of 2015, and are about to embark on coring and excavation of the Silchester Dykes, a series of poorly understood, large-scale bank and ditch monuments.

Who are we?

A number of other specialists are called on when required but the core team and their areas of expertise shown in Table 1 reflect the wide ranging nature of the investigations. The majority are based at the University of Reading but a substantial contribution of aerial, earthwork and geophysical expertise has been made by Historic England, for which we are very grateful. The opportunity to work in close partnership with them and in consultation with the West Berkshire and Hampshire archaeological services has greatly benefitted the project and ensures that we are engaging with wider matters such as local and national planning policy, designation and feeding knowledge across the sectors.



Pond Farm Hillfort Interior

Professor Mike Fulford	Univ. of Reading	Principal Investigator
Dr Catherine Barnett	Univ. of Reading	Research manager, geoarchaeology, dating, archaeobotany
Dr Emma Durham	Univ. of Reading	Finds manager
Nick Pankhurst	Univ. of Reading	Project officer
Dan Wheeler	Univ. of Reading	Project supervisor, graphics
Rory Williams-Burrell	Univ. of Reading	Project assistant
Jenni Eaton	Univ. of Reading	Project assistant
Dr Rob Fry	Univ. of Reading	Geophysics, GIS
Dave Thornley	Univ. of Reading	Geophysics
Drs Neil and Paul Linford	Historic England	Geophysics
Krystyna Truscoe	Univ. of Reading	Aerial interpretation
Helen Winton	Historic England	Aerial interpretation
Dave Field	Univ. of Reading	Earthwork reconnaissance
Mark Bowden & Olaf Bayer	Historic England	Earthwork survey
Kevin Williams	Quest, Univ. of Reading	Coring
Dr Nathalie Marini	Quest, Univ. of Reading	GIS
Dr Lisa Lodwick	Univ. of Reading	Archaeobotany (plant macrofossils)
Dr Rob Batchelor	Quest, Univ. of Reading	Palynology
Dr Rowena Banerjea	Univ. of Reading	Micromorphology
Dr Sam Cook	Univ. of Leeds	Geochemistry
Dr Claire Ingre	Consultant	Animal bones
Dr Jane Timby	Univ. of Reading	Ceramics
Sarah Lambert-Gates	Univ. of Reading	Graphics

Table 1: The Silchester Environs Project Team

Excavation and Coring of Pond Farm Hillfort 2015

The first case study site investigated within the Environs project using intrusive methods has been Pond Farm univallate hillfort, also known as The Frith 1.2km north west of *Calleva* within Benyon’s Inclosure, Mortimer West End, North Hampshire, at SU 62678 63078. Its close proximity to the *oppidum* and the likelihood of it having been constructed during the Iron Age was of interest, in particular whether it preceded the *oppidum* or was in use at the same time and what was the nature of its use. The site had not been



Magnetometer survey

excavated or dated previously and so, guided by the results of preliminary earthwork survey of the surviving standing parts of the monument, and geophysical survey on the levelled portion, and with the kind permission of the Englefield Estate and Dr Richard Massey, four 20x20 metre trenches were opened by a team of staff, students and volunteers under the supervision of our project officer Nick

Pankhurst. Trench 1 was placed over a ploughed out stretch of bank and ditch to the southeast, Trench 2 over the known causewayed entrance and extant bank and ditch termini, Trenches 3 and 4 in the interior of the monument. In addition; more inaccessible or deep areas of the monument such as the extant bank and ditch and on the slope and floodplain below the hilltop were drilled using a Cobra TT powered auger, allowing 21 sediment sequences of up to 5 metres depth to be recovered as cores.

Post-excavation analysis is ongoing but highlights of the findings so far include the following:

Neolithic to Bronze Age Activity and Clearance for Agriculture Evidence for the earliest local activity comes from a series of cores taken at the base of hill just above the floodplain to the east of the hillfort. Geoarchaeological description has revealed an old soil buried under a



Coring the ramparts at Pond Farm



Coring the floodplain east of Pond Farm



Excavation of Pond Farm 2

substantial layer of colluvium eroded from the upper slopes. Alder twig wood from that soil has been radiocarbon dated to the Later Neolithic at 2890-2660 cal BC (4179+/-26 BP, SUERC-65361). The deposits indicate that following relative landscape stability under wooded conditions during early prehistory, deforestation and agriculture commenced at the end of the Neolithic or Beaker periods, allowing soil erosion and hillwash down slope during heavy rain events. Analysis and dating of the charred contents of tree-throws which stratigraphically underlie the monument higher up the slope is planned.

Construction and First Use of the Fortified Monument in the Late Iron Age It appears therefore that the site was already at least partially cleared and in use by the Iron Age but the

construction of the hillfort ditch and rampart would still have been a major undertaking in terms of time and labour. The defences are c.575m long and encircle an area of 2.1ha hectares. Three slots placed through the ditch in Trench 2 showed the cut to be up c.6m wide and c.2m in depth. The rampart still rises some 2.5m over the ditch today, coring indicates that local gravel was used to build it up in layers, with each dump compacted before laying the next. Potentially also topped with a fence, the ditch and rampart together would have formed a substantial boundary. Outside the main entrance is a second, smaller length of bank and ditch, clearly shown on the earthwork survey, which seems to have formed a further complex element of the entrance, restricting the size and direction of approach and further adding to the impressive nature of the monument.



Although the causewayed entranceway to the hillfort was over 12m wide, access into and out of the monument would likely have been controlled and restricted by a gatehouse or similar wooden structure. Evidence for this was seen beneath the rampart in Trench 1, where a line of dark circles proved to be the remnants of large timbers that formed a palisade across the entranceway. Charcoal within the foundation cut of the palisade has been radiocarbon dated to the (late) Middle-to-Late Iron Age date at 200-30 cal BC (2083 +/-29 BP, SUERC-65355); a date supported by a piece of Late Iron Age pedestal beaker within the contained slumps. This piece was one of only a

Kite Photo of the Pond Farm Hillfort Excavations © Mark Household 2015



The Bank Terminus to Show Palisade and Causeway Entrance



Pedestal Beaker Fragment from the Bank Terminus

very small number of pottery fragments found within any of the four trenches.

A small concentration of Silchester ware pottery was found within the upper fill of an earlier tree throw hollow close to the entranceway. Birch charcoal from this same fill has been radiocarbon dated to 240-410 cal AD (1710+/-29 BP, SUERC-65356), this Late Roman result shows that there was continued activity at Pond Farm during the period of Roman occupied *Calleva*.

Overall, the scarcity of material culture across the whole site is quite remarkable given the size of monument, with little evidence of any substantial occupation or domestic activity. To the delight of the environmental archaeologists in our team, the main evidence of use comes therefore in the form of plant remains, particularly charcoal. If the palisade was constructed, as we believe, at the same time as the fortification of the defences, the monument would be contemporary with, rather than a precursor to, the *oppidum* at *Calleva*, with local domestic activity focussed there. Also the earthwork survey by Mark Bowden and team indicates that the defences were never entirely completed. We suspect instead that whatever the original plan during construction, the monument was used predominantly for livestock management, used repeatedly seasonally over a long time to graze and protect these valuable assets, with temporary occupation and use of small shelters by the accompanying herders rather than any substantial long term settlement. The huge defensive earthworks were there to protect valuable livestock, quite at odds with the traditional view of a hillfort as a settled site heavily defended for its human inhabitants.

Early Medieval Reuse of the Monument Evidence of a phase of substantial reuse of the monument was found in Trench 2, where a substantial dump of wood charcoal within a

probable recut of the ditch significant re-cutting of the defences and clearance of secondary re-established tree cover to enable re-use of the monument. Identification of the tree and shrub types represented and further dating of the deposit is planned, but a single radiocarbon date on elm twig wood at 1.72mBg/ 90.18mOD is of 610-680 cal AD (1377+/-29 BP, SUERC-65360), within the Early Medieval/ Early-to-Mid Saxon period. The lack of any associated material culture from this time indicates that it was again probably not used as a settlement but rather for seasonal grazing and agriculture.

Due to the acidic nature of the soils at the site, no bones or Mollusca have been preserved at Pond Farm, apart from rare fragments of calcined bone. However, plant remains are plentiful and analysis is underway. This includes identification of the pollen from Iron Age and Early Medieval layers preserved in the ditches and in the deep, waterlogged sequences in the floodplain to the east which will inform us on the wider landscape and whether there was any arable cultivation close by. Identification of the substantial wood-charcoal assemblages and any associated plant macros from features of all ages at the hillfort will provide information on the nature of the local landscape, how it was cleared, exploited and managed by people over the millennia and will provide further material for radiocarbon dating to further refine the site interpretations presented.

The results of our earthwork and geophysical surveys, coring and excavation of 8% of the monument (excavation of 1747m² of the total monument area of c2.1ha), coupled with these detailed post-excavation analyses have provided a better understanding of the construction and use of the hillfort and its chronological relationship to other nearby foci of human activity. The research aims we originally set have been fulfilled and there is no need to disturb the monument with further holes in the ground. Instead we are moving on



Charcoal Dump 2053 in Hillfort Ditch

this year to examine features possibly representing late prehistoric land division and agricultural layout, including the Silchester Dykes and a series of linear cropmarks and enclosures to the north east of *Calleva*, near Mortimer, we'll keep you posted on progress.

Further Information on the project can be found on the Silchester website <http://www.reading.ac.uk/silchester/> Facebook <https://business.facebook.com/Silchester> or Twitter <https://twitter.com/silchexcavation>. The Silchester Environs project findings, including the case study sites will be published as a monograph, due out 2019.

Acknowledgments

Our thanks to the *Calleva* Foundation and also the Englefield Estate and Dr Richard Massey who were generous with their help, time and access to sites and to all the staff, students and volunteers who dug with us or who have helped with post-excavation processing and sorting.

**Cathie Barnett, Department of Archaeology,
University of Reading (c.m.barnett@reading.ac.uk)**

AEA Mailing Lists

We would like to make the following reminder about the scope of the AEA mailing lists:

The **AEA@jiscmail.ac.uk** list is a moderated list for use by the committee to contact members about committee news, membership initiatives and reminders about subscriptions etc. as well as the newsletter. IF members unsubscribe from it they will no longer receive important notices or the newsletter. Messages to this list require approval by the moderator.

The **Env-arch@jiscmail.ac.uk** list is an open discussion list for non-AEA matters, or between members. Messages on this list do not require approval by the moderator.

“Looking back, moving forward: 70 years of environmental archaeology in Ireland”: conference report

Written by Meriel McClatchie

Images by Orla Peach-Power and AEA

Conference background

A recently established professional workgroup, “Environmental Archaeology in Ireland” (EAI), organised a conference on 19th February 2016 at the National Botanic Gardens, Dublin. The EAI workgroup provides a forum where practitioners of environmental archaeology in Ireland can discuss and share results, promote professional standards, and raise awareness of environmental archaeology. **The conference (sponsored by the National Monuments Service) celebrated the 70th anniversary** of an early paper on environmental archaeology by Frank Mitchell: “Evidence of early agriculture”. We sought to explore how environmental archaeology developed in Ireland, where we are now, and how we can move forward. What are the strengths and expertise in Irish environmental archaeology? Where are the gaps in knowledge and skills? What are the challenges in practice? Through a day of lectures and interactive discussion, we aimed to set out a vision for environmental archaeology in 21st century Ireland.



Chair of the AEA, Richard Thomas, presenting the prize for best student poster to Susan Lyons

Conference review

During the morning session of the conference, a series of lectures highlighted exciting discoveries from recent years. Ireland is well known for its extraordinary wetland archaeology. Ellen OCarroll integrated analysis of wood, pollen and other remains from wetlands to provide a detailed understanding of past environments and societies. Scientific analyses of bog bodies enabled Isabella Mulhall to provide amazing insights into the personal stories of these people, including how they managed their appearance (some wore hair gel!), what they ate, and how they were treated in their final hours. Gill Plunkett also drew upon wetland and other archaeological evidence to investigate if we can measure



A break-out discussion group in action

how climate impacted past societies. She demonstrated the importance of multi-scalar frameworks in tackling these ‘big questions’ and how we need to recognise limitations in current approaches.

Eileen Reilly and Lorna O’Donnell’s new investigations from old excavations showed how archived material can be used to re-examine the sights, smells and textures of daily life in Viking/Hiberno-Norse Dublin. Staying with the early medieval period, Orla-Peach Power reviewed the unusually rich evidence for agriculture in Ireland, drawing upon zooarchaeological and archaeobotanical remains to examine changes in agricultural strategies over time and space. Mick Monk – who has been to the forefront in teaching and promoting environmental archaeology in Ireland over several decades – wrapped up the morning session by providing a review of ‘lessons learnt’ from the morning papers. Posters were on display during the morning session, and Susan Lyons’ poster on medieval landscapes was the winner of best student poster, awarded by the Association for Environmental Archaeology.

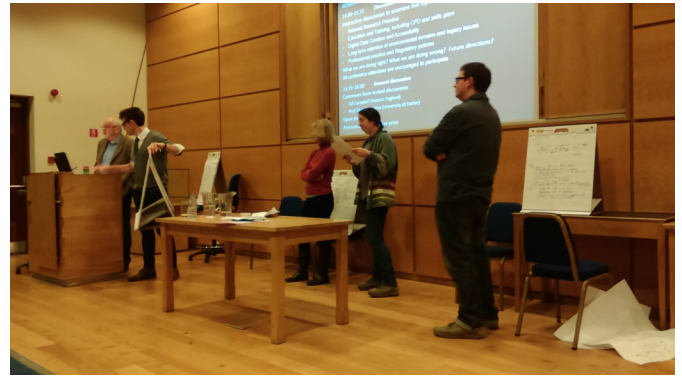


Mick Monk giving considerable thought to the issues being discussed in his break-out group

Pathways to the future

The afternoon session examined future directions for environmental archaeology in Ireland. Break-out groups were formed to discuss various themes, and their findings were reported back to the conference. Two invited discussants – Gill Campbell and Chris Caseldine – presented a view from Britain, highlighting what they perceived as the strengths and challenges in Ireland. Their useful insights were followed by more general discussion of the big issues, chaired by Michael Ryan. Several issues emerged.

We have good connectivity amongst the environmental community, and we are working with amazing material in Ireland, but there are challenges. We need to develop an advocacy strategy to attract the interest of colleagues in archaeology, funding bodies and the wider public. The importance of training the next generation was highlighted, and we should explore mentoring opportunities to assist the transition from student to professional. Much of our work is self-regulated, which may not be sustainable, and we need to work more closely with regulators. We should establish research frameworks that are workable and flexible. Robust national policies relating to the retention of environmental remains for future analyses must be developed. Finally, we



Group leaders present the 'big issues' from each of their break-out groups

need to ensure that digital data will be accessible into the future, and we should explore the potential for standardised records and national research archives.

The conference provided an excellent opportunity to achieve consensus on future directions. Many issues were highlighted, and the EAI workgroup will now devise strategies to meet these challenges.

Science and multidisciplinary in archaeology

European Association of Archaeologists (EAA) conference session

31st August - 4th September 2016; Vilnius, Lithuania

- Investigating Geochemical and Petrographic Methods for Flint Identification in Archaeology
- Unravelling the formation processes of the archaeological record by integrating environmental archaeology and traditional field excavation
- Biogeochemical approaches to archaeological diet, mobility and disease
- Cremated remains in archaeology: new methods, findings, and interpretations
- Plague in diachronic and interdisciplinary perspective
- New Knowledge About Past Societies Through the Use of Advanced Remote Sensing Techniques
- Food for thought – interdisciplinary responses to dietary studies in bioarchaeological research
- Understanding trade dynamics through computational approaches
- Genetic, physical and chemical methods in archaeological fish bone analysis
- Geoarchaeology of Prehistoric settlements: new insights into use of space, dwellings, household activities and land use
- "Gnu directions in R-archaeology": innovations in the use of Free and Open Source Software (FOSS) to achieve an open archaeology
- Methods of metal detecting survey in archaeology
- Novel approaches to understanding palaeoenvironmental and palaeoclimatic change, and their impact on past human and animal behaviour
- Human land use and subsistence history over the Holocene
- New developments in isotope and trace element analyses
- Multiproxy Wetland and Lake Environmental Archaeology: From Niche Construction Theory to Ancient DNA
- Archaeology, Language and Genetics: In Search of the Indo-Europeans

For full details visit: <http://eaavilnius2016.lt/5-science-and-multidisciplinarity-in-archaeology-th5/>

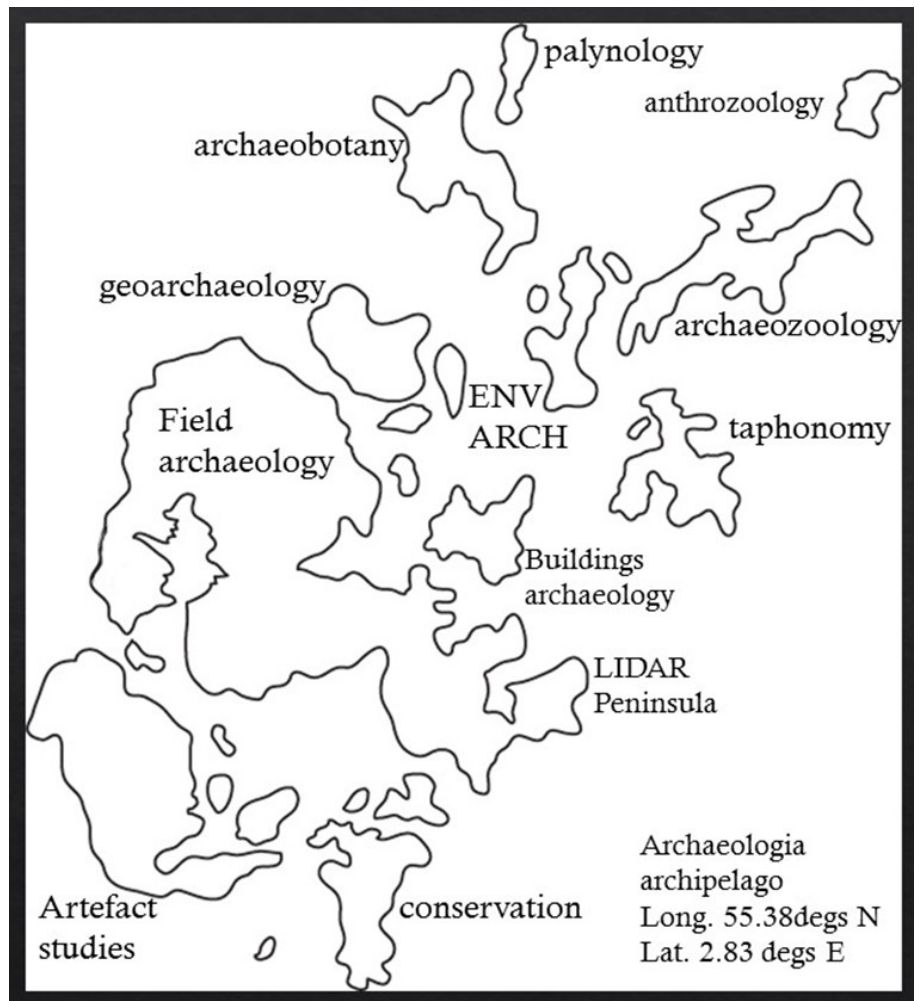
(full details at: <http://eaavilnius2016.lt/wp-content/uploads/2015/12/123.pdf>)

Islands: Isolation and connectivity

AEA Spring Meeting, Orkney, April 2016

1st April AEA Spring Meeting Day 1: Stacey Adams

There could have been no better setting than Orkney for the AEA Spring Conference 2016 with the fitting theme of "Islands: Isolation and Connectivity". The first day of the conference island hopped across the archipelagos of the Balearics and Canaries of Spain and the Western Isles and the Inner and Outer Hebrides of Scotland then explored the islands of Cyprus, Malta and Sardinia. The conference even transported us as far as the golden coasts of South Africa. The themes explored over the course of the day were as vast as the geographical areas that were covered. The papers presented discussed everything from diet and subsistence in an island environment to environmental change and human impact on landscapes. The introduction of new plants and animals to island environments by humans was addressed with the appearance of domesticated species in the Canaries and Sardinia, and how could we forget the evolutionary unique Orkney vole. The day really did provide an impression of what living on these islands would have been like in the past along with their social, environmental and cultural evolution over time.



Terry O'Connor's islands of archaeology slide from keynote (reproduced by kind permission) – humorous but oddly true?

The evening not only brought us local Orcadian cheese, whisky and music but also an illuminating talk by Terry O'Connor which presented new ways of thinking about island archaeology. His depiction of environmental archaeology as an archipelago of disciplines and specialisms really reflected the interdisciplinary approaches of the conference papers. These individual islands certainly came together with discussions from zooarchaeologists, archaeomalacologists, anthracologists, archaeobotanists, ichthyologists, geoarchaeologists and even a landscape archaeologist. Exciting results were presented from old and new archaeological techniques such as radiocarbon dating, isotopic analysis and genetic studies in what can be described as nothing less than an extremely informative and exciting opening day to the AEA Spring Conference.

2nd April AEA Spring Meeting Day 2: Mauro Rizzetto

The second (sunny) day of the conference focussed on the islands of Northern Europe, with a geographical range spanning from Greenland to the Baltic Sea. The poster session reflected the wide geographical range of interest of the delegates, and included studies from as far afield as

Sicily, the Balearic Islands and the Shetlands. Island biology and the role of humans in shaping the ecology of island landscapes were integrated and contextualised, with studies dealing with both archaeological material and modern animal populations and vegetation. The introduction of domestic and wild species, whether deliberate or involuntary in the latter case, were the topic of several presentations, while other researchers focussed on fish, seabird and marine mammal exploitation as well as on palynology and sediment geochemistry. The degree and effect of isolation on different conceptual islands were explored through a wide range of methodological approaches (from zooarchaeology and archaeobotany to proteomics and stable isotopes), which proved once again how invaluable multi-disciplinarity has become to our research fields.

The Conference meal took place at the Linfield Hotel, Kirkwall, in the shadow of Highland Park distillery. The whiskey selection was certainly a draw but the chance to sample some of the famous Seaweed eating mutton of North Ronaldsay was an opportunity not to be missed.

3rd April Professional Zooarchaeology Group**'Marine Faunas': Adrienne Powell**

The morning session began with a series of interesting papers illustrating the benefits of combining ecological and archaeological knowledge, for example, the impact of past climate events or of human exploitation on resource populations. I will be less jaded in future when sorting sample residues overflowing with limpets! Followed by (and continuing after a splendid lunch!) a series of papers on aspects of that fundamental issue for zooarchaeologists, identification: whether building a skeletal reference collection from scratch, sourcing suitable reference material when the relevant species are not easily obtainable and specimens in historic collections may be misidentified, or making collections and guides accessible. Lisa Yeomans' almost herculean labour has resulted in a guide which should be of immense use to anyone working on Arabian Gulf fish.

After coffee came the hands-on session - as one of the demonstrators I was busy demonstrating my own work-in-progress manual and can honestly say that the session was marvellous in terms of gaining feedback. It is always good to be reassured that the effort you are putting in is worthwhile and to receive helpful comments. The practical information exchange among fellow zooarchaeologists is one of the

great benefits of this forum to non-university based practitioners.

The evening reception at Stromness Museum was a definite success, the museum is a small gem of a place, devoted to Orcadian natural history, the maritime travels and explorations of Orcadians. As an Australian, I was intrigued to discover that Captain Cook's ship Resolution had stopped in Stromness on its way home after his fatal final voyage. Certainly fulfils its mission statement: 'to promote natural science, to preserve local history and to offer an enjoyable educational and informative experience to as large a range of people as possible'. A fine end to a day full of stimulation.



A sheltered (?) spot at Skara Brae (picture - Michael O'Connell)



14C & Archaeology

8th International Symposium | Edinburgh | 27 June-1 July, 2016

Sessions will include:

- * Freshwater radiocarbon reservoir effects in archaeology.
- * Problems with radiocarbon dating in coastal and island environment.
- * Statistical approaches to modelling regional archaeological chronologies.
- * New approaches in the Bayesian modelling of archaeological sites.
- * Precision in radiocarbon dating: getting the best possible answer.
- * Rigour in sampling: both in the field and the laboratory.
- * Dating the Neolithic transition.
- * Human / environment interactions.
- * Radiocarbon dating in wetland environments.
- * Radiocarbon dating in arid environments.

Early bird discount available until 31st January 2016

To register, or for more information, visit: www.c14archaeology2016.com

3rd/4th April Field trips: Danielle de Carle

From the farthest west to eastern tip of Orkney's mainland the first field trip lead by Scott Timpany took in a range of the islands' threatened coastal archaeology, peats, submerged trees, and a settlement and churchyard eroding right out of the banks onto the beach. A wet but enthused group joined the rest of the zooarchaeologists in the dry at Stromness Museum.

On the second day a larger group piled on to a coach and were treated to a tour of monuments in the spectacular world heritage site, Mark Edmonds and Ingrid Mainland's insights ranged from possible marital collections of cattle tibia to the way the light tends to fall at the Ring of Brodgar and Stenness. As the rain returned participants could experience the shelter provided by the reconstructed Neolithic houses at Skara Brae, moving on to the warmth of the open fire and smoke blacken thatch of the traditional Orcadian long house Kurbuster Museum.

5th-9th April Archaeomalacology Working group 'Methods in our Madness': Greg Campbell (The Naive Chemist)

The meeting about things chlorophyll-ous and vertebral was followed by three days' discussion of shellfish archaeology's present state, by a large proportion of the researchers concerned, from around the world. Things we think we know better now: Ancient fabrics showed Tyrian purple (yes, one of ours) starts with the Phoenicians, not the Minoans, and was based on one principal species, although others could be in the mix (Koren). Using shells for tools, containers and pot-temper can separate otherwise indistinguishable cultures (McTavish). There is a faint

hint that Picts preferred limpets but Vikings preferred periwinkles (Law). Our 'chaînes opératoire' are as long as anybody else's: waste from making one thing from shells can be transported vast distances to make something else (Ktalav). The chain can also be short: shells from food-waste make excellent under-floor drainage and fillers for tricky spaces in walls (Dilaria). Tusk shell beads were exclusive 'bling' in Harrapan Gujarat (Despande-Mukerjee); European Neanderthals introduced them fashionable to the early prehistoric Levant (Danni Bar-Yosef). Symbolic shell use in Sardinia lead up to Pacific cowries (Wilkins), an international favourite (Christie), but the Orcadian native cowries ("groaty-buckies") eluded us all on our field-trips (the other shells on the beach were great, and the archaeology wasn't half-bad).

We are closing in on sampling protocols for shells (Campbell), meat yields (Garcia Escazaga, le Goff) and harvest season (Bosch), especially in South Africa (Nelson-Verjoin), where ethnography warned that most shellfish food becomes archaeologically invisible (Moore). Micro-structural change needs roasting, not boiling (Milano), but more actualistic studies are needed to distinguish natural from anthropic effects, and to find archaeologically relevant ways to species. We plan to talk again an ICAZ Ankara in two years, and hopefully India in four.

For now AEA meeting paper abstracts are available on the [UHI website](#). Our heartfelt thanks go to organisers (Ingrid Mainland, Jen Harland, Scott Timpany) plus all their welcoming, guides and helpers.



The spectacular stones of Stenness, but the archaeologists were more interested in the grey seals in the opposite direction (picture - Michael O'Connell)

A note on the archaeobotany workshops at the University of Reading 12-13th March 2016

**Catherine Barnett, University of Reading
& Hayley McParland, Historic England**

We were delighted to welcome 50 delegates from 5 countries and 17 institutions to two very different but complementary practical archaeobotany weekend workshops at the School of Archaeology, Geography and Environmental Science in March. The first was a gathering of the Archaeobotany Working Group, led on this occasion by Lisa Lodwick. Following on from the first training focussed workshop in York in October, the focus this time was on mineralised plant remains. Wendy Carruthers led a discussion of the environmental conditions required for mineralisation to take place –which are somewhat varied: an aerated environment, presence of calcium phosphate and a throughput of water. Yet there are still lots of unknowns – how long does the process of mineralisation take? What are the optimum conditions for mineralisation? Are there species more or less likely to be preserved by mineralisation? Mineralisation of plant remains does not always occur in association with human faeces, any calcite or phosphate rich environment can produce mineralised remains e.g. animal manure or tanning pits.

Mineralised plant remains can be challenging to identify, and for most, they are less often encountered in archaeobotanical samples than charred or waterlogged plant remains. Preservation of these macrofossils can be through individual cell replacement, interior cast, exterior cast or part mineralisation. Armed with this knowledge, enthusiasm and an abundance of microscopes, we set to work attempting to identify seed assemblages put



together by Lisa using our collective knowledge and experience. This experience was very useful, and provided the opportunity to examine and identify a diversity of well-preserved mineralised plant remains.

In addition, Lisa Lodwick provided an excellent overview of Don O'Meara's digestive experiments in seed preservation and taphonomy and an introduction to the archaeobotanical aspects of the Roman Rural Settlement Project. The archaeobotanical review of the Roman Rural Settlement Project is due online in December 2016. The project has highlighted aspects of archaeobotanical method and practice, sparking a discussion about the inclusion of data in reports, as data is often not included in publication reports.

The following day, Rowena Banerjea and a team of willing helpers including PhD students and members of Quaternary Scientific, hosted a workshop on Integrated Microscopy Approaches in Archaeobotany. Attendees had brought remains from sites of all ages and from all over the world for everyone to take a look at. These included scraps of textile embedded in mortar from Çatalhöyük, Turkey, thin sections of 10,000 year old animal pens and middens at Sheikh-e Abad, Kermanshah, Iran (Central Zagros Archaeological Project) and from Medieval features at Lyminge and the Napatan temple at Usli, Northern Sudan. We looked at wood charcoal from an Iron Age hillfort near Silchester, macros from Insula IX and from Draper's Garden, a Roman site in the City of London and a myriad of spores, parasites, plant remains and dung from Crusader sites at Elbląg castle, Poland, and Karksi castle, Estonia. People took the chance to learn new



To assess the change of consumption and culinary practices at the transition to agriculture: a multi-disciplinary approach from a Danish kitchen midden.

Harry K. Robson, University of York

Due to the excellent conditions for preservation of anthropogenic materials, the introduction of domesticated fauna and flora into southern Scandinavia, ca. 3950 cal BC, has been debated for over 165 years. In order to test questions relating to the nature and timing of this cultural change, the Mesolithic-Neolithic transition, a number of archaeological and biomolecular techniques have been applied in recent decades. The carbon and nitrogen stable isotope analyses of human bone collagen is one such method that has been regularly performed. Interestingly, every study has argued for a dramatic or sudden dietary change (Tauber 1981) despite evidence to the contrary (Milner et al. 2004). However, there has not been a single study that has employed a range of techniques to materials derived from one site in order to evaluate the change of consumption and culinary practices across the Mesolithic-Neolithic transition.

This thesis uses a combination of stable isotope analyses (carbon, nitrogen and sulphur) and radiocarbon dating of human bone collagen to reconstruct long-term dietary practices, and place these individuals into context. In order to provide an indication as to when the site was occupied, incremental growth line analysis of the European oyster (*Ostrea edulis*) was undertaken. In addition, organic residue analysis of ceramic vessels was performed to explore food consumption as well as culinary practices. Furthermore, an archaeoichthyological analysis was carried out to reconstruct the subsistence economy. This marks the first large-scale application of these methods to materials derived from one kitchen midden. Furthermore, it includes materials derived from 32 additional contemporaneous sites. The combined results demonstrate a degree of complexity: some things changed, others remained the same and there was variation both between sites and regions.

Since March 216 Harry is Post-doctoral Research Associate in Archaeological chemistry on The Innovation and Development of Pottery in East Asia Project at University of York



identification skills from each other and ask questions of colleagues in other areas about their samples.

Most of the day was taken up by a whirlwind of practical microscopy sessions but there were also some excellent poster presentations and plenty of opportunities for everyone to chat and get to know each other. All agreed that the integrated approach brought people from different disciplines together to exchange information and techniques in a new and

exciting way, and we're now hoping we could make this an annual event.

The knowledge exchange afforded by these workshops is incredibly important, enabling the participants to develop and maintain their existing skill set, and providing a forum in which to ask questions or share challenging material. A key aspect of the workshops was the opportunity to understand how less commonly used microscopic techniques e.g. faecal parasites or phytoliths might be used in a research or commercial setting, and what potential research questions these methods might address.

The Archaeobotanical Work Group (AWG) provides the opportunity for archaeobotanists working in Britain to meet, share ideas and discuss issues related to the field, facilitating an informal support network and bringing together freelance, academic and commercial archaeobotanists. For more information about the AWG visit <https://historicengland.org.uk/research/current-research/heritage-science/archaeobotanical-work-group>.

Synthesis and Change in Palaeo-Environmental studies in the Mediterranean The 37th AEA Conference, 29th Sept—1st October, 2016, Rome

CALL for Papers

The discipline of environmental archaeology is approaching a number of cross roads that will challenge its existence and relevance in a world where funding is shrinking, while archaeological scientific method is expanding. How environmental archaeologists respond to these challenges from both research and policy/strategy viewpoints in the next few years will be very important. To this end, the Association for Environmental Archaeology annual conference will be devoted to these issues.

20 minute papers (and posters) are invited. *Geographical range: the Mediterranean. Time Scale: any.* Papers relating to Italian archaeology will be particularly welcome.

Plenary Speaker: Professor Graeme Barker (Thursday, 29th September, 6pm at the American Academy in Rome)

Synthesis - the major difficulties (theoretically and practically), of combining and synthesizing environmental, archaeological, scientific, and (where appropriate) historical data of different levels of reliability, and representativeness.

Change – this part of the program will look at changes evolving in ancient studies that environmental archaeology needs to embrace to survive and prosper, in particular: a special focus on the rise of **heritage studies**; funding and international co-operation; and the need to overcome cultural disciplinary issues.

Languages: English and Italian, (administration, lunch at the American University of Rome), papers, posters and coffee will be presented at the Istituto di Studi Germanici. Plenary session at the American Academy in Rome.

OUTLINE PROGRAM can be found at <http://www.aea2016rome.com/overview.html>

Abstracts of 250-300 words should be sent to aea2016rome@gmail.com (by way of attachment). Please include your name, institution, contact information, and the title of your abstract in the body of the email as well.

Deadline: 15th June, 2016.

Costs

Conference fee - AEA members €75 (2 days), €40 (1 day)
 Conference fee - AEA member: student, unwaged €45 (2 days), €25 (1 day)
 Conference fee - non-members €80 (2 days), €45 (1 day)
 Conference fee - non-member student/unwaged €50 (2 days), €25 (1 day)

Excursion and dinner costs

1. Conference dinner Friday night (optional). Restaurant - €40 per head including water, some wine; antipasti (mixed), pasta dishes, meat dishes, and dessert (final costing will be confirmed depending upon numbers)
2. Field trip 1 Guided tour of Cerveteri, (30 people) €35 (lunch cost not included but will be at a local restaurant ca €25)
3. Field trip 2 Palazzo Valentini (central Rome), Renaissance Palace and archaeological remains of two Roman Domus, laser reconstructions, finds, (20 people), €15/head (in English)

Robyn Veal, Charlene Murphy, Valerie Higgins, Giulio Lucarini, Ferdinando de Simone
 Joint convenors, aea2016rome@gmail.com

AEA Autumn Conference Fund

The AEA is delighted to announce the availability of the Conference Fund to members of the AEA to assist attendance at the Rome conference (29th September – 1st October 2016). Prioritization of applicants for funding will be based on the following criteria: 1) those presenting papers or posters; 2) those with limited alternative sources of funding (particularly postgraduate students and those in the private sector); 3) members of at least six months standing. Applications from students must be accompanied by a letter of support from their supervisor. An application form is provided at the end of this Newsletter.

Successful applicants will be required to provide a statement of expenditure and activities undertaken within 3 months after the event has taken place in order to receive reimbursement. Moreover, successful applicants will be requested to provide a report on the conference for the AEA Newsletter or website.

The deadline for applications is Friday 15th July 2016. Any queries should be directed to the AEA Conference Officer: Robin Bendrey (r.bendrey@reading.ac.uk)

17th conference of the International Work Group for Palaeoethnobotany (IWGP)

4-9th July 2016

National Museum for Natural History (*Muséum national d'Histoire naturelle*), Paris

Full details at: <http://iwgp2016paris.sciencesconf.org>

NEWS FROM THE COMMITTEE

Seeking nominations for the AEA Managing Committee

Each year the AEA committee is refreshed as standing members come to the end of their terms of office. This year we are seeking nominations for:

Treasurer (a four year term; one nomination received)

Three **Ordinary Member positions** (each a four year term; no nominations received to date)

One **Student Representative** (a two year term; no nominations received to date)

There is more information about these positions below.

The 2016 elections will be held during the **AGM at the Autumn conference in Rome** (29th September to 1st October 2016, see <http://www.aea2016rome.com/overview.html>). Nominations can be received at any time up to the AGM, but we would like to encourage members to **submit nominations by 19th July 2016**, so that we can share candidates' statements in the August Newsletter.

For any queries, please email the AEA Secretary, Fay Worley (fayworley@HistoricEngland.org.uk).

(continued on the following page)

General Committee information

Serving on the Committee allows AEA members to help determine the future direction and priorities of the Association, and to promote environmental archaeology to a diverse global audience. The current committee structure can be found on our [website](#).

The Committee usually meet four times a year. The main items of business at meetings include the organisation of conferences and events, *Environmental Archaeology* journal matters, responses to new policy documents and frameworks that impact upon environmental archaeology and its practitioners, as well as issues relating to the Newsletter, website, social media, membership, finances, grants, awards and new initiatives.

We welcome nominees from all countries, but please note that meetings are conducted in English. There is funding available to assist with travel to meetings and we use video and tele-conferencing to allow members to participate where travel is prohibitively expensive or not possible.

Further information on the available roles***The role of Treasurer (one position available, four year term, one nomination received)***

The AEA Treasurer's regular duties involve keeping detailed records of all payments received (membership subscriptions, book sales, etc.) and of all transactions going out (journal and Newsletter costs, prizes and grants etc.). Subscriptions are increasingly received through WorldPay online payment, reducing the Treasurer's workload. The Treasurer is responsible for making payments and checking statements, and importantly, for preparing the annual accounts and reporting the financial position to the AGM.

The post involves close liaison with other committee members, in particular the Membership Secretary and Website Officer. Contact the current Treasurer (jacqui.huntley@HistoricEngland.org.uk) for further information about the role.

The role of Ordinary Member (three positions available, four year term)

The committee includes 12 elected Ordinary Members, whose role is to contribute to committee activities and the management of the Association, through active participation in committee meetings and additional tasks as required. Ordinary committee members may take on additional specific responsibilities, such as Conference Officer, Publicity Officer, Web Officer, Grants or Prize administrator, etc., for some, or all of their term of office.

The role of Student Representative (one position available, two year term)

The committee includes two Student Representatives, with one new Student Representative elected each year, and their term of office lasting two years. The post is open to both undergraduates and postgraduate students. During their first year of office, the newly elected Student Representative will 'shadow' the student completing their second year of office. During their second year of office, the student representative will take a more active role in the Committee, as well as guiding the newly elected student representative. The Student Representative will be expected to promote the AEA within the undergraduate and postgraduate communities, and also encourage the establishment of student-led meetings/seminars.

Submitting a nomination

All nominees must be AEA members in good standing. Any AEA member can make a nomination, but this must be seconded by another AEA member. Nominations should be accompanied by a brief personal statement from the nominee (that implicitly indicates their willingness to stand), which will be published in the Newsletter and/or circulated at the AGM.

Nominations and personal statements can be [emailed](#) or posted to the AEA Secretary, Fay Worley, who should also be contacted with any queries. For the postal address see <http://envarch.net/committee/>.

Call for submissions - John Evans Dissertation Prize 2016 (AEA)

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.

2016 competition

A choice of prizes of £75 (please note that international students may be liable for the transfer costs) or 3-year membership subscriptions to the AEA will be awarded to the best undergraduate and Masters dissertation, which may be on any aspect of environmental archaeology worldwide. Abstracts from the winning dissertations will be published in the AEA newsletter (this is a condition of entry that all entrants will be agreeing to on submission of their dissertation). The John Evans Dissertation Prize winners will also be encouraged to submit an abridged version of their dissertation for publication in the Association's journal, *Environmental Archaeology*, subject to the usual review process.

We invite each Department of Archaeology (or other relevant department) to submit the dissertation of their best candidate by **31st July 2016**. Submissions from individual students are not accepted. English is the preferred technical language of submission although the committee will also accept submissions in other languages, but these must be accompanied by an English summary (max. 2 pages) to conform to the submission rules. Departments wanting to submit in languages other than English should contact the prize administrator (Dr Alex Livarda) to determine whether the submission can be accommodated.

The results will be announced at the AEA autumn meeting in Rome, Italy, 29th September – 1st October 2016 (<http://www.aea2016rome.com/overview.html>). Please note that only digital copies (pdf) of dissertations will be accepted, and these should be sent to Dr Alex Livarda, who should also be contacted for further information at:

Alex Livarda
Department of Archaeology
University of Nottingham
University Park
Nottingham, NG7 2RD
UK
Alexandra.Livarda@nottingham.ac.uk





Musings from Social Media



AEA Retweeted



Daisy Spencer @daisypollinator · Apr 5
Thanks for having me @Envarch #Orkney! A great conference, great whisky and great sites :D !!



3 retweets 10 likes

AEA Retweeted



Jane Sidell @InspectorSidell · Apr 1
And we're off! #AEA2016 @Envarch in the glorious Orkney Islands, discussing Island Ecologies with @UHIArchaeology



3 retweets 6 likes



AEA @Envarch · Apr 3
One for the PZG group - cows on the beach! #AEA2016



4 retweets 7 likes

AEA Retweeted



Suzi Richer @EnviroSuzi · Feb 19
Gill Plunkett: Just because climate change could have caused societal change in past - doesn't mean it did. #EAI2016

1 retweet 2 likes



Association for Environmental Archaeology

19 February · 🌐

Half of the AEA committee are in Dublin today for "70 years of environmental archaeology in Ireland". It has given us the excuse to air our new banner!

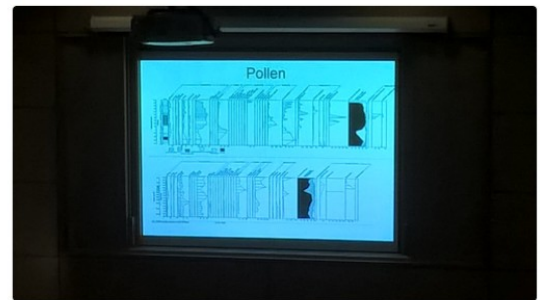


News Feed Requests Messenger Notifications More



AEA @Envarch · Feb 19

And relax....we have our first pollen diagram :) @Env_Arch_Ire



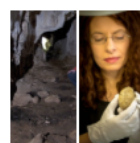
1 retweet 4 likes



AEA Retweeted



Terry O'Connor @osteocconnor · Mar 20
"@archaebears: Exciting news from Ireland - butchered Palaeolithic bear bone. @RuthFCarden twitter.com/irarchaeology/..." Yes, headline stuff!



Irish Archaeology @irarchaeology
Really exciting news, the first definite evidence for Paleolithic human activity in Ireland
irisharchaeology.ie/2016/03/new-di...

10 retweets 9 likes



[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 palaeoecology'.

Key Dates

**AEA Committee nominations by 19th July 2016,
for inclusion in Next Newsletter**

* * * * *

**John Evans Dissertation Prize 2016
(Association for Environmental Archaeology)
Submission deadline, 31st July**

* * * * *

**AEA Autumn Conference 2016
Rome, 29th September-1st October**

Abstract deadline, 15th June 2016

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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

Conference Fund Application Form Autumn Conference 2016 - Rome

Deadline: Friday 15 July 2016



Association for
Environmental
Archaeology

Name:	Occupation:
Address:	E-mail:
Date you joined the AEA:	
I am presenting a Paper/ Poster (please delete as appropriate) entitled:	

Please provide full breakdown of costs

Registration:	Cost:
Mode of transport (rail/air etc):	Cost:
Type of accommodation:	Cost:
Meals included:	Cost:
Other (Please specify):	Cost:
Total	Cost:

Have you attempted to obtain funding from other sources?	Yes / No
If not, why not?	
If yes, how much have you requested?	
How much have you obtained?	
If other applications are still pending, when do you expect to hear the outcome?	
How much do you request from the AEA:	

I certify that the information I have given is true.

Signature:

Postgraduate applicants should include a letter of support from their supervisor.

Please return completed forms via email or post to: Dr Robin Bendrey, AEA Conference Officer,
Department of Archaeology, University of Reading, Whiteknights Box 226, Reading, RG6 6AB, UK.
r.bendrey@reading.ac.uk