Chair’s piece  Not a week goes by when I am not reminded of how pivotal environmental archaeological is to wider historical debate, which in turn has resonance for our contemporary society. Prior to sitting down to write this piece, I had been reading a news article on the BBC website highlighting the research of Professor Vince Gaffney and colleagues claiming to have found evidence for a pit alignment in Scotland that functioned as a ‘time-reckoner’ and provided basic calendrical functions (the full article is published in Internet Archaeology 34). Earlier archaeological investigations at the site by the National Trust for Scotland and Murray Archaeological Services Ltd had used radiocarbon techniques to date the pits securely to the 8th Millennium BC and thus the potential implications of this new research for both the organisation and sophistication of Mesolithic society are considerable. I must confess to knowing about this work in advance of publication since critical to the hypothesis is an appreciation of vegetation dynamics, which govern the potential visibility to the horizon during key astronomical events such as the mid winter Solstice. The detailed, high quality palaeobotanical work undertaken earlier at the site by Richard Tipping provided the basis for considerable discussion and debate amongst the project team (myself and Emma Hopla included).

In turn, the AEA provides an important support network and framework within which all our activities can be promoted and members of the committee have been working particularly hard behind the scenes over the last year to bring a number of initiatives to fruition. For those of you who have been online within the last few weeks, you will have noticed that we have undertaken a major revamp of the website, guided by the technical expertise of James Morris. I hope that you enjoy the new design and content and if you are a digitally minded member, I would encourage you to get involved via our ‘facebook’ and ‘twitter’ links. Furthermore, thanks to the perseverance of our treasurer (Jacqui Huntley), the introduction of ‘WorldPay’, a secure on-line payment system means joining the AEA or renewing your membership has never been easier, especially if you reside outside the UK. Under the co-editorship of Ingrid Mainland and Tim Mighall, the expansion of the journal to three issues per year together with the introduction of new editorial software that allows accepted articles to be published on-line in early view (with DOI) provides an exciting new era for rapid publication. The series of AEA sponsored seminars, to which any member of the association is welcome, continues to expand and are usually delivered within an appropriate venue such as a University department or research institute, either in the UK or overseas. Finally, the AEA spring meeting in Cardiff was a great success and our thanks go to the organizing committee. I hope to see many of you at our autumn meeting in Kiel in late September.

In the meantime, enjoy the rest of your summer.

Andy Howard
AEA Chairman 2009 – 2013

Cat stomach contents: News from CAT

Enid Allison, Canterbury Archaeology Trust, reports on page 4
On-going zooarchaeological research at Rubayqa and Ruwaydah, northern Qatar

Hannah Russ, Oxford Brooks Archaeology

In March 2013 I returned to sunny Al-Shamal in northern Qatar for a second season to continue my work on faunal remains recovered during excavation of two Islamic Period sites; Rubayqa and Ruwaydah. Directed by Dr. Andrew Petersen, University of Wales Trinity Saint David, excavations at Rubayqa and Ruwaydah have yielded substantial animal remains including mammals, birds, reptiles, fish, marine molluscs, and crustaceans.

One of the main challenges in working in Qatar has been gaining access to and collecting modern comparative specimens. As yet, there is no national collection of skeletal material that can be used in archaeological analyses, though small collections are being developed by the Al Zubarah Archaeological Project, Qatar National Historic Environment Record and the Wales Qatar Archaeological Project (which is the team I work with). Much of my time during both seasons was dedicated to the collection of specimens that could be prepared for the collection (much to my team mates’ disgust!). The collection is looking quite healthy now (especially in the fish department), but is still far from being completely adequate. Promises of an adult and juvenile ostrich, and the location of a camel dump towards the end of this season hold promise that the collection will continue to grow. The intention is that these specimens will, along with those prepared by the other project teams working in Qatar, be eventually curated in the natural history section of the National Museum of Qatar, to be used by researchers for years to come.

Rubayqa is a Late Islamic period settlement site located on the west side of the Ras Ushayriq peninsula in northern Qatar. Rescue excavations were carried out at this site prior to its expected destruction through the construction of the Bahrain–Qatar Friendship Causeway. Excavations at Rubayqa ceased in the 2010/11 season, but post-excavation analysis on all materials recovered continues in preparation for the publication of a site monograph. I completed my initial analysis of all the faunal remains from Rubayqa during my first season working in Qatar (2012), but returned to the assemblage this season to take some additional measurements on the mammalian and avian remains – work that had not been time to complete during my first season. The assemblage contained a diverse range of mammalian fauna, including camel, horse, donkey, cattle, gazelle, sheep, goat, dog, cat, lagomorphs and rat. The bird assemblage was much less diverse, with the majority of remains representing cormorant (both great and Socotra appear to be present). The fish remains included taxa from fifteen families, including both cartilaginous and bony fish. The final report on the faunal remains from Rubayqa is currently being prepared for the site monograph, however, a preliminary report on the fish remains is due to be published shortly in the *Proceedings of the Seminar for Arabian Studies* journal (Russ & Petersen 2013) and a discussion of the turtle remains proposed for a poster presentation at the upcoming Seminar for Arabian Studies conference, Friday 26th-Sunday 28th July 2013 at the British Museum, London.
Ruwaydah is a much larger scale settlement, located on the north east coast of Qatar. Ruwaydah was occupied for a much longer period of time than Rubayqa, with evidence for occupation extending back into the earlier part of the Islamic period. (Petersen & Grey 2012). Excavations at Ruwaydah began in 2009 and are ongoing. The excavation of midden deposits and a well in the 2013 season have yielded substantial faunal remains, dominated by fish remains. Although analysis of the faunal remains from Ruwaydah is not yet complete, it is already clear that it is quite different from that recovered from the excavations at Rubayqa, with comparatively fewer examples of wild animal use, and so far, an absence of horse, donkey and camel. The fish bone assemblage appears to be more diverse than the one from Rubayqa, remains of fishes from the families Teraponidae (Terapon sp. – various terapon species occurring in the region), Rachycentridae (Rachycentron canadum – cobia), Echeneidae (Echeneis naucrates – sharksucker), Gerreidae (Gerres sp. – silver-biddy), Pomacanthidae (Pomacanthus maculosus – yellowbar angelfish) and Scombridae (including, Euthynnus affinis – little tuna/kawakawa, Thunnus sp. (most likely Thunnus tonggol – Longtail tuna, but possibly Thunnus albacores - Yellowfin tuna), and Scomberomorus sp. - narrowbarred Spanish/Indo-Pacific king mackerel) are all new additions.

A highlight of the 2013 season for me was the opportunity to go to Abu Dhabi and stay with Dr. Mark Beech to use his extensive library and impressive fish bone reference collection. Mark very kindly put me up and we talked fish ALL weekend. Bliss. Amongst other specimens, we managed to identify a caudal vertebra from a sharksucker (Echeneis naucrates), a mystery bone appearing in the Ruwaydah assemblage. Sharksuckers are certainly not targeted as a dietary resource, and potentially came to the site attached to a shark. Interestingly in some cultures shark suckers are collected and used to fish for sharks and other large fish (up to 10kg). They are tied to a line and allowed out to sea until they attach themselves to a larger fish then they are pulled back so that the larger fish can be retrieved (Hornell 1950).

I will now analyse and interpret data to produce the monograph report for Rubayqa and an interim report for Ruwaydah, and look forward to the next season!

Excavation of a date press at Ruwaydah

Links:
Wales Qatar Archaeological Project:
http://www.trinitysaintdavid.ac.uk/en/archaeologyhistoryandanthropology/research/walesqatararchaeologicalproject/

Seminar for Arabian Studies:
http://www.thebfsa.org/content/seminar-arabian-studies

Acknowledgements
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References


Environmental Archaeology at Canterbury Archaeological Trust (CAT)

CAT mainly undertakes fieldwork in Kent. Although developer-funded work was very thin on the ground throughout much of 2012 and early 2013, the situation has now improved considerably and at time of writing a number of excavations are running concurrently. Alex Vokes and myself are the resident environmentalists, sometimes assisted by Hazel Moseley. Alex is mainly responsible for bulk sample processing, while I co-ordinate sampling and analysis, and carry out specialist work on insects and bird remains. We rely on external specialists for other post-excavation analyses. This brief report summarizes some recent highlights.

Over the last decade or so, a spate of development in Canterbury has generated a considerable amount of archaeological work. Soil conditions are ‘dry’ on most sites, but anoxic waterlogging is encountered occasionally, most recently at St Mildred’s Tannery where marshland deposits were mainly recorded by boreholing, and at the Marlowe Theatre.

A disabled cat was an unusual find from sitting at the bottom of a late Anglo-Saxon/early medieval pit in St Dunstans, Canterbury. The cat’s left femur was considerably shorter and thicker than the right, with pathology indicating displacement of the knee. A slight distortion of the distal femur shaft could be a very well-healed break (X-rays required). The right hip socket was thinned, presumably due to extra wear on the animal’s good leg, but it was not possible to see if there were compensatory changes below the knees since the lower parts of both back legs were not retrieved. The skeleton was collected as a ‘spot’ sample and eroded bones thought to be from the cat’s gut were recovered (there was no evidence the pit having contained refuse at this stage). Some were punctured or crushed indicating damage by the cat’s teeth. The remains represented several wing tips and a ‘parson’s nose’ from chickens, the gill/throat region of several fish, and a small cloven-hoofed animal’s foot, suggesting that the cat was not only well-fed, but may have eaten specially selected tit-bits.

Excavations in St George’s Place, Canterbury revealed numerous medieval and later refuse pits containing a variety of materials including well-preserved fish, bird and mammal bones. Cattle horn cores were common, with smaller numbers from sheep and goats, many bearing knife marks where they had been removed from skulls or indicating removal of the outer horn. One early medieval pit produced a lower jaw of a porpoise adding to records of small cetaceans from the city. By this period they had become a high status food (Gardiner 1997), and most finds in the south-east have an ecclesiastical connection. In Canterbury, porpoise was recorded from early medieval deposits on two sites within the cathedral precincts (Driver et al. 1990; Sabin et al. 1999), and porpoise and two species of dolphin from the Whitefriars excavation, including from the Augustinian friary itself (Bendrey forthcoming). Elsewhere, remains have been found at Lewes Priory (Lyne 1997) and Westminster Abbey (Locke 1976). Caudal vertebrae of at least two porpoises, some showing butchery marks, were also recovered from early medieval beachside tenements in Dover, probably representing animals caught with fish or stranded on the shore (Bendrey 2006).

Outside Canterbury, work included the excavation of a Neolithic henge and large Anglo-Saxon cemetery in Sittingbourne, and smaller sites in Maidstone, Broadstairs, Margate, Faversham, and at Port Lympne zoo. CAT has also been involved with the re-excavation of a Roman villa at Folkestone, as part of a three-year community project. The work revealed that stratified deposits had survived the original 1920s excavation, and that the villa was superimposed...
**Harbour porpoise mandible fragment**

on an earlier building. Iron Age activity on the site included the production of greensand querns. Processing of samples from Iron Age pits and early Roman features was carried out by volunteers.

Meanwhile, post-excavation work included analysis of material from New Romney and Northfleet excavated in 2005 and 2007 respectively. The range of bird remains from New Romney suggested that some wild-fowling was occurring on the coast and local marshland in the medieval and post-medieval periods, and also that young rooks were eaten. Separation of rooks and crow bones is problematic, particularly since the bones recovered were all from juvenile approximately full-sized birds and in the final stages of ossification. Knife marks on one individual indicated that they were not simply casualties from local populations. It is most likely that rooks are represented rather than crows: they typically eat invertebrates rather than carrion - there is a widely-held taboo against the consumption of carrion-feeders - and they nest colonially presenting a more convenient target than more solitary crows. Traditionally in rural areas rook pie was a spring dish for the poorer classes. Fledglings taste better than older rooks and mid May is the best time to catch them when they have left the nest but remain on branches close by until they are able to fly. The New Romney remains fit into this age bracket. Most bones were from the distal wing or lower leg, parts that bear little or no meat. A group probably from the same individual included an ulna with knife marks and several vertebrae. The presence of the latter may be significant since recipes for preparing rooks recommend removing the vertebral column because it has a bitter taste.

At Northfleet the archaeology included a large tank-like feature cut in the Roman or early Anglo-Saxon period. The lower fills contained little organic material but overlying these were peats dated to the 7th to 12th centuries. Plant macrofossils and pollen provided convincing evidence that the tank had been used for retting flax, and beetles suggested that it had been occasionally flushed with water from a clean, clear water channel. There was good evidence for saltmarsh surrounding the feature from both plant and insect remains.

Current CAT excavations include an Iron Age settlement on the site of a new college at the University of Kent, prehistoric and Roman features just outside the city walls of Canterbury, and an ongoing project now into its sixth year at Claxfield Farm, Lower Lynsted where features of Bronze Age to medieval date are being excavated prior to brickearth extraction. Analysis of material from 25 sites excavated between 1983 and 2007 on the main campus of Christchurch University, Canterbury is ongoing, some of the archaeology relating to St Augustine’s Abbey. Post-excavation work is also in progress for a very large multiperiod site on the Isle of Thanet, excavated in 2007-8 in advance of the construction of a huge greenhouse complex known as Thanet Earth. A wide range of biological remains were recovered and although the site was generally ‘dry’, substantial insect assemblages were preserved in the waterlogged bases of several deep early medieval wells. Large deliberately-made holes were noted in some oyster valves from medieval deposits (usually the flat right valve). Any ideas??

For details of current and past fieldwork visit the CAT website at [http://www.canterburytrust.co.uk](http://www.canterburytrust.co.uk)

Annual summaries of palaeoenvironmental work at CAT can be found at [http://www.canterburytrust.co.uk/publications/annual-reports/](http://www.canterburytrust.co.uk/publications/annual-reports/)

**Bibliography**

Bendrey, R, (forthcoming) [Mammal remains from the Whitefriars excavation, Canterbury]


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*Oyster valve with hole from the Thanet Earth site*

*The site at the University of Kent overlooking Canterbury cathedral and the city*
Report on the 16th Conference on the International Work Group for Palaeoethnobotany

Lisa Lodwick (University of Oxford) and Ruth Pelling (English Heritage)

Several hundred archaeobotanists descended on Thessaloniki, Greece for a week in June for the 16th triennial meeting of the IWGP. Five full days of papers and posters, an excursion and several trips on the rum boat provided the perfect atmosphere for the debate of recent developments in archaeobotany. The conference was hosted by the School of History and Archaeology at the Aristotle University of Thessaloniki and was held in Venue KEDEA.

The conference opened with a session on methodological developments, including inter-rachis measurements (Snir and Weiss), animal diet at Çatalhöyük (Filipovic et al.) and dealing with contamination in the archaeobotanical record (Pelling et al.). The afternoon saw the first IWGP session on stable isotopes showing the recent methodological developments and archaeobotanical applications of this evolving science. Various papers in a session on ‘Food Globalisation in Prehistory’, organised by the FOGILP research group at the University of Cambridge, revealed that whilst the early western spread of Panicum miliaceum into Europe has previously been based on incorrect dates, new areas of investigation such as central Asia are clarifying the spread of crops in other directions. The conference welcome reception was held at the municipal hall of Thessaloniki, where delegates were treated to locally sourced food and wine kindly donated by the city mayor from his family vineyard.

Stefanie Jacomet presenting an interactive session on free-threshing wheat identification

Conference session at the Aristotle University of Thessaloniki

Tuesday was dedicated to the ‘Integration of different lines of Archaeobotanical Evidence’. A wide geographical and chronological spread of papers highlighted the continued importance of taking a multi-proxy approach. The inclusion of microfossils was notable, such as ancient starch analysis in Guatemala (Cagnato), starch and phytoliths at Labrador Inuit sites (Zutter), phytoliths and charred macrofossils from Amarna West (Ryan and Cartwright) and pollen at Oedenburg (Vandorpe and Wick). Whilst the majority of papers focussed on European studies, the final session was dedicated to multi-proxy studies of Harappan settlements.

Wednesday morning featured the most debated session, ‘Origins of Agriculture’. A mix of archaeobotanists and geneticists were unable to agree on the importance of any single domestication trait, but rather the need to look at multiple traits and centres of origin as well as the importance of human taste. The occurrence, evidence for and recognition of pre-domesticated cultivation was debated. The theme of crop adoption was continued in the ‘Dispersal of cultivated plants’. Several regional synthesis were presented from central Europe, including the Michelsberg culture (Kreuz et al), the Iron Age Clermont Ferrand basin (Cabanis et al.) and northern Catalunya (Ros and Ruas). In contrast to the focus on food plants, a paper by Ruas et al. synthesised the evidence for the introduction of Cupressus sempervirens (Mediterranean cypress) to Roman Gaul. The abundance of studies on central Europe was contrasted by a session dedicated to ‘Overseas plant exchanges in East Asia’.

Thursday was a day of firsts, with the first IWGP sessions dedicated to both the ‘Contribution of Ethnobotany to Ar-
The second session presented updated methodological approaches in DNA studies including developments in the recovery of DNA from ancient plants. Some success has been achieved with charred grain from the Greek site of Assiros (Brown and Jones), and while we are not quite at the stage of placing an ancient grain in a machine and retrieving its genetic code, the developments are exciting and will presumably become more so. Also of significance in this session was the confirmation that bottle gourd in the American continent is derived from African precursors (Kistler et al) adding enormously to our understanding of the domestication of this crop. An afternoon session on the New Glume Wheat included short summaries of posters detailing the increasing recognition of this new cereal crop across Europe. The second afternoon session returned to the ever present problem of separating tetraploid (durum) from hexaloid (bread) free-threshing wheats. Whilst the identification criteria defined by Gordon Hillman are widely used, a short paper by Ferran Antolín highlighted the continued challenges of identifying free-threshing wheat rachis, especially when dealing with basal and compact rachis forms. In another welcome break from podium presentations, Stefanie Jacomet and her team displayed a number of charred rachis segments from modern collections and landraces of free-threshing wheats, asking members of the audience to decide the ploidy level. The conference dinner was held in the Museum of Byzantine Culture, where a feast of Greek food was accompanied by traditional music and dancing.

The final day of the conference commenced with a session on the utilization of wild foods by late foraging and early farming communities, with papers focusing on individual case studies, such as the latest results on Boncuklu Hoyuk, central Turkey (Fairbairn) and Dikili Tash, N Greece (Valamoti), alongside synthetic papers on prehistoric Britain (Stevens and Fuller) and the Neolithic Near East (Lucas and Murphy). Contrastingly, the afternoon session included papers focusing on cultivated food remains, with Alex Livarda et al. presenting a new ‘flavourscapes’ methodological approach to analyse the distribution of exotic plant foods in Roman Britain, and Tao Chen et
al. presented multiproxy data from astonishingly well preserved desiccated foodstuffs from the Astana cemeteries in Turpan, China.

The conference excursion took delegates to some of the most iconic archaeological sites in Macedonia, starting off with Pella, capital of Philip of Macedon before a visit to the School of Aristotle. Following a light lunch, we visited Vergina, the site of the old capital of Macedonia, Aegae. The wonderful museum built within the reconstructed Great Tumulus of Aegae displays, in situ, the four royal tombs including that of Philip II, and the fabulous treasures found within. Botanical interest was provided by the beautiful gold myrtle and oak leaf wreaths. The museum showcased the quality both of Ancient Greek art and archaeology and innovative museum design.

Whilst numerous papers highlighted the importance of direct AMS dating of plant macrofossils and the utilisation of multi-proxy techniques, other papers highlighted the continued importance of new archaeobotanical datasets in investigating past human societies, ranging from hunter-gatherers at 77000 BP South Africa (Sievers) to modern millet cultivation in north Iberia (Moreno-Larrazabal et al). The programme of oral and poster presentations can be found online and the proceedings of the conference will be published in a future issue of Vegetation History and Archaeobotany.

Following the closing of the conference by members of the IWGP committee, it was announced that the next meeting of the IWGP will be held in Paris in 2016. The discipline of archaeobotany is clearly thriving and we look forward to catching up with AEA members again in three years time. Many thanks to Soultana Valamoti and her team for organising a highly successful conference, and to the city of Thessaloniki for its warm welcome and wonderful food. Full detail of conference programme and abstracts are available on the conference website: http://iwgp-2013.web.auth.gr/
Soil Micromorphology Workshop

Helen Williams (University of York)

This year’s International Soil Micromorphology Workshop was located in the beautiful University City of Cambridge. The event was hosted in the Charles McBurney Laboratory for Geoarchaeology, in the Department of Archaeology, University of Cambridge and the McDonald Institute for Archaeological Research. Leading the assembled micromorphologists was resident expert and head of the McBurney laboratory, Professor Charles French. The festivities kicked off on Thursday with a tour of the local archaeological attractions including a Bronze Age to Romano-British landscape that was excavated by The Cambridge Archaeological Unit to the north west of the city, a large exposed section in the lower Ouse valley showing a plethora of geological features including Holocene palaeochannels, peat and alluvial sediments. And no trip would be complete without a stop off at the Flag Fen basin to marvel at the Bronze Age remains of a wooden platform and a series of Bronze Age wooden boats from Must Farm (the latter in the processes of being conserved). The day was rounded off with a hospitable meal for delegates at the local Polish club.

The conference was well attended and had a good cross section of career stages and countries represented, with work from the UK, Europe, the US and Korea. After a welcome address by Charly French, the organiser, the talks were opened by a trio of micromorphologists from the InterArchive project based in the University of York. Rai monda Usai, Carol Lang and Helen Williams presented a project overview and the latest findings from their innovative application of micromorphological techniques to human burials, with talks focusing on the World War One grave site of Fromelles and the Neolithic site of Çatalhöyük.

This was followed by a group of presentations centred upon the interpretation of buildings and urban landscapes. Barbara Wouters and Karen Milek spoke of their joint project with Charly French that looked at the re-interpretation of Viking Age built environments in Kaupang, Norway, through the reassessment of the original buildings plans and adjoining plots, throwing new light on the use of space and movement within a Viking age town.

Delegates viewing the Must Farm Bronze Age wooden boats under conservation

It was interesting to hear about the many ethnoarchaeological and experimental studies being conducted on vernacular building materials. Research themes included the identification of changes and continuity between modern and archaeological buildings in Ghana, presented by Melissa Goodman-Elgar. The study of degradation processes on contemporary abandoned mud structures in Israel, was presented by David Freeman, whilst Rowena Banerjea’s study of modern building reconstructions and the effect of known activities on indicators of trampling, provided an insight into the utilisation of the buildings at Silchester.

After lunch there were two activities highlighting the need for the standardisation and calibration of techniques within micromorphology and it supporting sciences. The first was an excellent talk by Melissa Goodman-Elgar reporting on experiments that evaluated the quantitative limitations of hand held XRF devices, the possible pitfalls and solutions to problems of calibration. The second was an ongoing study by Ruth Shahack-Gross who was interested to know the level of variability in the identification of minerals in the micromorphological community. This was a great study consisting of a blind identification test that delegates could either participate in anonymously, or if you provided an email address, be ranked within your cohort. I wait with bated breath for the results!

The afternoon lab session was a chance to swap slides with others and consult eminent micromorphologists (you know who you are!) on a rogue’s gallery of unidentified slide features. A great opportunity to have a look at what other researchers were doing and get a flavour for the wide range of different contexts and studies within micromorphology.

The afternoon was rounded off by what could only be described as a profound key note speech by Prof T. R Kidder presenting his work on the establishment and magnitude of anthropogenic influences on the Holocene or
‘Early Anthropocene’. The study focused particularly on environmental change from the Neolithic to the early dynastic period in the middle and lower reaches of China’s yellow river. Kidder’s talk conveyed the potential power of geoarchaeological studies, to answer real world questions, and the need for researchers to address the big and relevant issues of today in order to make a true contribution to world economy, health and sustainability, and was one of the highlights of the conference. The conference then adjourned to a rather lively Greek dinner at the Varisty restaurant.

Day two commenced with Mareikle Stahlschmidt’s presentation on the lower Palaeolithic site of Schöningen, the study looked at the nature of possible fireplace features and the depositional environments within the sites. Susan Mentzer presented on the wide open spaces at Aşıklı Höyük looking at the pedogenic processes that occur on living surfaces in activity spaces within the oldest levels of occupation, thus far excavated at the site.

Peter Eze spoke about his recent work in the west coast of Africa, where he had looked at palaeosols using micromorphological techniques to identify pedogenic features, in order to understand soil formation processes, on the micro scale. Africa was also the subject of Federica Sulas’ presentation on the Limpopo River Basin, using both micromorphology and ICP-AES techniques to investigate the environmental history of the Mapungubwe landscape. Lenka Lisá’s presentation turned our attentions once again to Europe, with a presentation on some innovative research into the maintenance practice of horse stables in medieval central Europe, through the study of stabling deposits. Arnald Puy and Andrea Balbo presented on their recent work in al-Andalus on 8th Century AD agricultural land reclamation, discussing significant investments that had occurred in converting marginal areas into a new agricultural landscape. Heejin Lee was also investigating agricultural practice, this time in Neolithic Korea.

The final talk of the conference was given by Richard Macphail, on prehistoric to Viking age sites in Vestfold, Norway, looking at multi-proxy evidence for farming activities including macro and micro fossil studies, soil micromorphology, wet chemistry and magnetic susceptibility.

This was then followed by a second chance to swap slides in the practical part of the workshop and an opportunity to take a tour around Cambridge’s micromorphological processing lab. I’d like to take this opportunity, on behalf of all of the participants to thank the organisers for a wonderful conference, with some great topics that showcased the excellent research being undertaken in the field of micromorphology.

*Pictures kindly provided by Charles French*

Micromorphology practical workshop delegates in the McBurney Laboratory left to right: Helen RS Williams, Rowena Banerjea, Ruth Shahack-Gross, Hoan Oates and Wendy Matthews.
Now that the conference is fast approaching full details can be found at http://www.aea-conference.uni-kiel.de/. The final program is as follows;

**FRIDAY SEPT 27th; Registration 9.00-10.00 ; Welcoming remarks 10.00-10.20**

**SESSION 1: SOCIAL SPACE AND FARMING COMMUNITIES**

10.20 | Henrik Röhrs, Almuth Alsleben, Wiebke Kirleis - The Economy of the Northern European Bronze Age in Schleswig-Holstein

10.40 | Jutta Kneisel and Helmut Kroll Social Space in a Bronze Age Settlement in Greater Poland

11.00 | Jordi Ravelles, F. Antolin, M. Berihuete, R. Buxó, F. Burjachs, L. Caruso, O. López, A. Palomo, R. Piqué, X. Terradas Social Space, Economical Practices and Landscape Transformation Among First Farming Societies at the Lake of Banyoles (Girona, Spain)

11.20 | Wiebke Kirleis System Change? Agriculture during the Southern Scandinavian and Northern German Neolithic in the 4th Century BC

11.40 – 13.00 Lunch

13.00 | Stefanie Klooss, Elske Fischer, Wiebke Kirleis Neolithic Causewayed Enclosures of Funnel Beaker Societies in Light of an Archaeobotanical Investigation

13.20 | Sarah Diers Local to Regional Scale Funnel Beaker Landscape(s) in the Altmark, Germany

13.40 | Michael O’Connell Early Prehistoric Farming Impact in Western Ireland; what do we really know?

**SESSION 2: SOCIAL CONSEQUENCES OF ENVIRONMENTAL RESTRICTIONS**

14.00 | Nicki Whitehouse, Rick Schulting, Phil Barratt, Meriel McClatchie, Rowan McLaughlin, Amy Bogaard, Rob Marchant, Sue Colledge, M. Jane Bunting Neolithic Agriculture on the European Western Frontier: Bayesian Chronologies Reveal the Boom and Bust of Early Farming in Ireland

14.20 | Walter Dörfler Salt as a Limiting Factor in Neolithic Nutrition

14.40 | Tim Mattis Schroedter Aktopraklik – First Signs of Exploitation Versus a Closed Forest

15.00 – 15.30 Coffee Break

15.30 | Marta Dal Corso Botanical Microfossils from the Ditch of Fondo Paviani: New Environmental Data at the Edge of the Terramare Culture (Northern Italy)

15.50 | Michèle Dinies, Reinder Neef, Harald Kürschner Change of Land Use in Northwestern Saudi Arabia: Tracing the Beginning Cultivation of the Tayma Oasis

16.10 | Corinna Hoff Development of Lycian Burial Customs from the 6th to 4th Centuries BC as a Consequence of Environmental Restrictions

16.30 – 17.30 | AEA Annual Meeting

18.00 | Conference Reception Accompanied by the Musical Ensemble for Early Music "Angli Clamant"

**SATURDAY, SEPT 28TH:**

**SESSION 3: NOVEL METHODS AND PROXIES TO ASSESS SOCIETAL AND ENVIRONMENTAL CHANGE**

10.00 | Welmoed Out, Marco Madella Cereal Phytoliths: Reconstructing Socio-Economic Aspects of Former Societies

10.20 | Isabell von Holstein Indicators of Environment and Farming Practice in Sheep Isotopic Data

10.40 | Niels Bleicher Tree Rings as Sources for Palaeoeconomic Studies

11.00 – 11.30 | Coffee Break

11.30 | Doris Jansen Influence of Sampling Methods and Fragmentation on Charcoal Data

11.50 | Hannes Knapp, M. Liptova, A. Lücke, N. Kühl, R. Moschen, W. Kirleis, O. Nelle Environmental Changes during the Last 2300 Years Revealed by Novel Stable Isotope Analyses on Sphagnum Cellulose and a Pollen Record from the Harz Mountains, Germany
**AEA Conference, Kiel (contd)**

12.10 | Marco Zanon, Basil Davis, Jed Kaplan A Quantitative Reconstruction of Tree Cover for Europe during the Holocene Based on Pollen and Remote Sensing Data

**12.30 – 13.30 | Lunch**

**POSTER SESSION**

13.30-14.30 Poster Presentations

Otto Brinkkemper; Özgür Cizer; Daniel Contreras; Andrés Currás; Susanne Jahns; Sabine Karg; Monica Luca; Andrey Mitusov; Anna Elena Reuter; Anton Stefan Schwarz; Margareta Simina Stanc; Magdalena Wieckowska-Lüth

SESSION 3 (contd.)

14.30 | Ingo Feeser The 4th Millennium BC in Pollen Diagrams from Eastern Schleswig-Holstein and Western Mecklenburg – Evidence for a 1000 Year Cultural Adaptive Cycle?

14.50 | Jessie Woodbridge, Ralph M. Fyfe, Neil Roberts, Sean Downey, Kevan Edinborough, Stephen Shennan The Impact of the Neolithic Agricultural Transition in Britain: Comparison of Pollen-Based Land-Cover and Archaeological Date-Inferred Population Change

15.10 | Camille Butruille, Mara Weinelt, Nils Andersen, Dieter Garbe-Schönberg Mid-Holocene Multi-Decadal Climate Change in the Skagerrak Area and Its Potential Influence on Resource Availability

**SESSION 4: QUANTIFICATION AND MODELLING OF ENVIRONMENTAL AND ECONOMIC PROCESSES**

16.00 | Jeff Blackford Multiproxy Reconstruction of Landscape Openness during the Mid-Holocene

16.20 | Ralph Fyfe Getting Nearer to Local Landscape Histories: The Application of the Landscape Reconstruction Algorithm to Multiple Pollen Sequences

16.40 | Johannes Müller Harvest, Subsistence and Gender Differences: Social Roles in Neolithic Economies

17.00 | Concluding Remarks

19.00 | Conference Dinner

**SUNDAY, SEPTEMBER 29TH**

8.30 – 13.45 | Excursion to Haithabu

8.30 – 17.00 | Excursion to Eastern Holstia

**AEA and Conchological Society**

**Joint Conference on**

**Molluscs in Archaeology**

**Spring 2014 (date to be confirmed)**

The subject of Molluscs in Archaeology has not been dealt with collectively for probably 3-4 decades. Next year’s one-day Spring Conference (April 2014) will be dedicated to Molluscs in Archaeology. It is proposed that the conference will include speakers talking on all aspects of molluscs. Possible topics could include the following:

- **Marine molluscs; Middens - composition - food waste or bait waste; Isotopes; Trade; Jewellery; Dyes; Palaeo-ecology - long landscape/site histories - the chalklands, sand dunes etc; Experimental ecology; Ecology; Species studies; Regional perspectives; Period perspectives; Theoretical frameworks; Interpretational frameworks; Future research directions**

I am currently still researching a suitable location but this will be announced, along with the date in due course.

It is also proposed to publish a book on Molluscs in Archaeology with Oxbow, covering aspects of Method, Theory and Interpretation, Diet and Economy, Landscape and Seascapes.

Please contact Mike Allen for any further information or expressions of interest.

Mike Allen

Allen Environmental Archaeology
aea.escargost@gmail.com
Greening the gods: ecology and theology in the Ancient World

18th - 19th March 2014
University of Cambridge

A seismic shift in thinking about the environment from the 1960s onwards can blind us to the fact that inhabitants of the ancient world (c. 800 BCE - 400 CE) - were also acutely aware that they existed as part of an ecological system. Yet for these thinkers it was not rapidly melting icecaps which made examining their relationship with the environment so urgent, but the theological questions it raised. This conference will embrace pagan, Jewish and Christian thinking about the intersection of theology and ecology, whether expressed in sources we might now label philosophy, scripture, natural history, science, liturgy or folklore... At the same time, the conference will not lose sight of our current ecological crisis.

Deadline for paper submission: 31st October 2013
More information is available at http://envarch.net/call-for-papers-greening-the-gods

ICAZ 2014
The 12th International Conference of Archaeozoology is taking place in San Rafael, Argentina, 22nd - 27th September 2014.

SAP 2014
Anthropological Society of Paris
Annual Conference
Montpelier, France
28th-31st January 2014
Including a session on Diversity and changes of food regimes

Culture, Climate and Environment Interactions at Prehistoric Sites

11 – 14 June 2014, University of Bern, Switzerland

Organised by The University of Bern, Institute of Archaeological Science IAW and the Oeschger Centre for Climate Change Research OCCR, and the IGBP Past Global Changes PAGES program.

JOBS

Director of the Malcolm H. Wiener Laboratory of Archaeological Science

Location: Athens, Greece
Deadline: November 15, 2013

For more information and to submit applications online see https://ascsa.wufoo.com/forms/director-of-the-wiener-laboratory/ (ASCSA, 6-8 Charlton Street, Princeton, NJ 08540; application@ascsa.org). Applications must be received by November 15, 2013. Interviews will be held at the APA/AIA meetings in Chicago (January 2-5, 2014).

For more information about the WL link to: www.ascsa.edu.gr/index.php/Wiener-Laboratory/
NEWS FROM THE COMMITTEE

AEA AGM AND ELECTIONS 2013

The Annual General Meeting will be held on Friday 27th September 2013 during the autumn meeting in Kiel (http://www.aea-conference.uni-kiel.de).

Draft agenda:
1. Report on the committee’s activities and John Evans Prize Result
2. Treasurer’s report including summary of the Association’s accounts
3. Election of new committee members
4. Any other business

AEA MANAGING COMMITTEE ELECTIONS 2013

Elections for five positions will be held, including Chair, Student Representative and three ordinary members. Biographies of nominated candidates can be found below and will be circulated at the AGM.

Current Committee details can be found on the website (http://envarch.net/committee/), along with the AEA constitution (http://envarch.net/the-aea/constitution/). The elected terms of the following committee members will end that the AGM:

- Dr Andy Howard (Chair)
- Dr Rebecca Nicholson (Conference Officer)
- Dr Ruth Pelling (Membership Secretary). Ruth has agreed to be co-opted onto the committee as Membership Secretary for 2013-2014
- Lisa Lodwick (Student Representative)

How to stand for election

New candidates can come forward at any time up until the start of the AGM, although if candidates are proposed in good time, their statements can be circulated to AEA members. Any new candidates must be AEA members in good standing and supported by two further AEA members (to propose and second them). Just contact a member of the committee if you would like to stand. The current committee and their terms of office can be found on our webpage (http://envarch.net/committee/).

How to vote in the election

Every AEA member is entitled one vote in the election. Members can vote in person at the AGM, or by proxy. To vote by proxy, you must provide a signed or emailed statement appointing your proxy to any member of the committee before the AGM. Your proxy will then be given your voting slip in addition to their own. Your proxy can be any other member of the Association who is attending the AGM, including members of the committee. If you need help to find a proxy, please contact the Secretary Fay Worley (fay.worley@english-heritage.org.uk, for postal address see http://envarch.net/committee/).

CANDIDATES STANDING FOR ELECTION

As Chair (a four year term)

Dr Richard Thomas

Nominated by A Howard, Seconded by J Huntley

I am Senior Lecturer in Archaeology at the School of Archaeology and Ancient History at the University of Leicester, where I have been based since 2003. I am a Fellow of the Society of Antiquaries of London, Fellow of the Linnaean Society, ICAZ liaison officer for the Animal Palaeopathology Working Group (which I co-founded in 1999) and Associate Editor of the International Journal of Paleopathology.

My research interests are wide-ranging but can be distilled into two strands: (1) understanding the complicated relationships that existed between animals and people in medieval and early modern England; and (2) palaeopathology – the study of animal health and disease in the past. Much of my research is concerned with the connections that exist between the environment and human-animal interactions at different spatial and temporal scales. To offer up just two examples: I have explored the impact of landscape change in the wake of the 14th-century livestock and human plagues on husbandry practices; and I have examined the entangled relationships that exist between people, animals, and micro-environments on animal health. As a consequence, throughout my research I have been a strong advocate and practitioner of inter-disciplinary approaches, combining zooarchaeology with documentary evidence, biomolecular analyses, and veterinary pathology.

My teaching to undergraduate and postgraduate students at university (both campus based and distance learning) is underpinned by my research and thus emphasises the integration of multiple strands of evidence. I teach dedicated modules in zooarchaeology and environmental archaeology, but also deliver sessions highlighting the value of environmental evidence in a range of period-specific courses.

I have been a member of the AEA for over 15 years and I was privileged to serve on the committee as Publicity Officer between 2004 and 2008. During my tenure as Publicity Officer, I introduced the new logo and branding, and initiated the seminar series, which has continued to develop from strength-to-strength. I believe I have many of the skills required of the role as chair. I have extensive administrative and management
experience from various roles that I have held within my own institution at departmental, college and university level. I have also represented archaeology at a national level during my tenure on the Research Information Network panel for Arts, Humanities and Social Sciences (2005 -2011) and the Higher Education Academy Archaeology Subject Centre Advisory Panel (2005-2011).

It is a huge honour to be nominated as chair. If successfully elected, I would be committed to strengthening the student and international base of membership, facilitating connections between environmental archaeologists working independently, in commercial units, and academia, particularly through day meetings and conferences, and continue to explore the possibility of open-access publication.

More information about my research and teaching can be found at:

http://www2.le.ac.uk/departments/archaeology/people/thomas

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As Ordinary Member (three positions available, each a four year term)

Dr Julia E M Cussans

Nominated by U Albarella, Seconded by F Worley

I gained my undergraduate degree BSc Bioarchaeology in 2001 from the University of Bradford. Following this I undertook a part time PhD entitled ‘Changes in the Size and Shape of Domestic Mammals across the North Atlantic Region over Time’ also at the University of Bradford, which I completed in 2010. Throughout my PhD I worked part time as the Archaeozoologist for the North Atlantic Research Unit (NARU) in the Division of AGES, University of Bradford, where I was part of a research team investigating the site of Old Scatness Broch, Shetland. Whilst with NARU I also worked on the Viking Unst Project (Shetland) and the Heart of the Atlantic Project (Faroe Islands). During my PhD and following its completion I also worked as the Archaeozoologist for the soon to be published Broxmouth Project (East Lothian) and as a part time lecturer in the Division of AGES, University of Bradford. Towards the end of my PhD I was commissioned by the Society of Antiquaries of Scotland to write a review of the Iron Age economies of Scotland for the recently published Scottish Archaeological Research Framework (ScARF), my work specifically covering ‘Farming and Feeding’ and ‘Cooking and Consumption’.

For the past two years I have worked as an archaeozoological specialist for Archaeological Solutions, Bury St Edmunds, where I have investigated numerous vertebrate and mollusc assemblages from Iron Age, Roman and medieval sites in the east of England. Alongside my work in the commercial sector I have continued my academic research, particularly into the Iron Age economies of Scotland and have several papers planned for the near future. I have been a member of the AEA since 2006 and feel it is high time I got more deeply involved. I am also an active member of the Professional Zooarch Group and ICAZ.

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Dr Emma Jenkins

Nominated by M Maltby, Seconded by E Hambleton

I am currently a Senior Lecturer in Archaeology at Bournemouth University and have been a member of the AEA since 2009. I completed a Ph.D. at the University of Cambridge in 2004 which was focused on microfaunal analysis from two Neolithic sites in Turkey, Çatalhöyük and Pınarbaşı. I then moved to the Institute of Archaeology, UCL to take up a post-doctoral position with Prof Arlene Rosen on the Ecological Footprint of Early Agriculture in Southwest Asia project which involved the analysis of phytoliths from a range of Neolithic sites. From there I moved to the University of Reading to work on the Water, Life and Civilisation project with Prof Steve Mithen which entailed experimental crop growing in Jordan to determine the effect that irrigation has on phytolith production in wheat, barley and sorghum. This then led into a further post-doctoral position at the University of Reading, this time as Data Manager on the Excavation of WF16 project.

My research interest are focused on the origins of agriculture and sedentism in southwest Asia and I use two specialisms to address this topic namely microfaunal and phytolith studies. I am part of the research teams at Çatalhöyük and Bocnuklu Höyük and recently I was fortunate enough to be awarded an Early Career Research Grant by the AHRC in collaboration with Dr Carol Palmer, Prof John Grattan and Dr Helen Smith to conduct phytolith and geochemical analyses on a range of ethnographic and Neolithic sites in Jordan.

I have a great deal of respect for the AEA as an organisation and feel that the work you do as a committee is of great importance for the development of Environmental Archaeology. I would be very honoured to become a part of this, and if voted in as an ordinary committee member, would show every commitment to the position.

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Karen Stewart

Nominated by J Morris, Seconded by A Davis

I completed my BA in Archaeology and Greek and Roman Civilisations at University College Dublin in 2004 and worked as a field archaeologist on a variety of excavations in Ireland after graduating. I completed my MSc in Environmental Archaeology and Palaeoeconomy at the University of Sheffield in 2006, during which I specialised in archaeobotany.

I have worked as an archaeobotanist in commercial archaeology for 7 years, joining MOLA in 2009, and where I continue to work today as a Senior Archaeobotanist. I specialise in the analysis of macroplant remains and in identifying timbers and wood artefacts to species. Working in London, the analysis of deeply stratified urban deposits comprises much of my work.

My personal research interests are varied. I am particularly interested in the use of plants in foodways. I am also interested in how international trade in the postmedieval period is reflected in the changing character of the plants consumed and utilised in the British Isles.

I hope that by joining the committee of the AEA I can ensure that the Association continues its good work in supporting and publicising the work of archaeobotanists. I also hope to represent those environmental archaeologists working in commercial archaeology, a sector with its own issues and challenges for practitioners.

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Dr Nicki Whitehouse, BA, MSc, PhD, FRES, FSA,
Nominated by A Bogaard, Seconded by R Pelling

I am an environmental archaeologist who works on the application of environmental and climatic proxies (in particular, fossil beetles) and chronological methodologies to describe human-environment relationships. I currently work at Queen’s University Belfast as a Senior Lecturer in Palaeoecology; from the 1st September I shall be joining Plymouth University as a Reader/Associate Professor in Physical Geography.

My research over the last 19 years has been focused on the complex relationships between humans, animals, climate and the environment/landscape. I have developed a deep understanding of these lines of evidence through working on these individually and in multi-disciplinary lines of enquiry, within strong chronological frameworks. Working at the interface between the humanities and science, I seek to not only describe the climate, environment, biodiversity of the past through scientific methods, but to integrate and compare these lines of evidence with the archaeological record in a meaningful, non-deterministic way. My research has covered diverse topics from high latitude glacial and interglacial rapid climate change in the northern and southern hemisphere; changes in landscape structure and biodiversity during the Holocene and Pleistocene as a consequence of human and animal activities; examining niche stability of species and their responses to climate over the Quaternary.

An important focus in recent years has been examining the development of the cultural landscape during the transition to agriculture in Ireland and how this compares with Britain and elsewhere across the North Atlantic seaboard. This latter work has focused on the relationships between humans and their environment through the application of targeted 14C dating, Bayesian modeling and palaeoenvironmental reconstructions and spatio-temporal understanding of the archaeological record and Neolithic economies.

I have been a member of the AEA since I was an MSc student at the University of Sheffield (1993) and have been a regular attender of meetings over the years. I have previously served on the AEA Committee as Ordinary member (2003-05), Conference Officer (2006-07), Membership Secretary (2006-07) and then Chair (2007-2009). I thus have a strong history of supporting the AEA. Other roles that may provide additional international insights to the AEA include my current position as President of the INQUA Humans & Biosphere Commission (2011-2015), which has clear synergies with the AEA, and which provides useful insights of a number of recent international initiatives (e.g. Future Earth) that may be of interest to AEA members. I serve as a reviewer for a variety of journals and funding bodies and sit on the editorial Board of Quaternary International. I thus feel I have a useful role to play in the continued growth and internationalization of the AEA and have a wide range of experience to assist the Committee’s activities.

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As Student Representative (one position available, two year term)

Daniella Vos

Nominated by M Maltby, Seconded by E Jenkins

I completed my Bachelor and Research Master degrees in Archaeology at Leiden University, the Netherlands. During my studies I specialised in zooarchaeology, gained experience in the identification and use of microfaunal remains and created an ecological reconstruction for the site of Tell Sabi Abyad, Syria, based on bird bone analysis. I moved to the UK this year after starting my doctoral studies at Bournemouth University, where I will perform a phytolith and geochemical analysis of Bedouin camps and Neolithic sites in Jordan. I am currently in the process of creating a unique Jordanian phytolith reference collection, which will aid future phytolith studies in the Levant.
Student Representative nomination—Daniella Vos (contd)

My research interests include human interaction with the environment during a critical phase in the history of the relationship between man and nature, when people started settling down and exploiting their habitats significantly different then beforehand, around the Neolithic. I would like to get more involved in environmental archaeology in the UK and contribute to promoting the knowledge of past affairs between humans and their environment in all periods. In addition, this role will benefit from and allow me to develop skills gained during my previous roles as committee member of the Prehistory and Science Based Archaeology study association and student organiser of a lecture series on Mediterranean Archaeology at the Faculty of Archaeology at Leiden University.

Environmental Archaeology: the Journal of Human Palaeoecology

*Environmental Archaeology* is Maney Publishing’s journal of the month this September. A video introduction, review of the archive and feature articles will be found at http://maneypublishing.com.

Maney Publishing are also launching their new platform, Maney Online, in September. Online submission is now available for Environmental Archaeology and the submission process for authors and reviewers will be online. Papers accepted to Environmental Archaeology will now also be fast-track published online ahead of being available in the printed journal. More information can be found at http://www.envarch.net
Notes from the Newsletter Editors

We hope that you have enjoyed reading the revamped newsletter (apologies for its late appearance). We will continue to develop the new format over the next few issues, so you are welcome to send in comments and suggestions.

We are always keen to receive newsletter content, especially from our non-UK members. James Greig’s Bibliography can now be found on the AEA website.

A thesis submission form will soon be provided on the website to allow AEA members to publish abstracts of postgraduate theses.

To submit an article for the Newsletter, please email Word documents and images to:

newsletter@envarch.net

Lisa Lodwick, Wendy Carruthers & Vanessa Straker