



# Annual Review 2014

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# BRITISH ASSOCIATION FOR BIOLOGICAL ANTHROPOLOGY AND OSTEOLOGY ANNUAL REVIEW

*EDITOR*

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WELCOME TO THE ANNUAL REVIEW  
FOR 2014

*Ronika K. Power*  
*University of Cambridge*

It gives me great pleasure to welcome you to the Annual Review of the British Association for Biological Anthropology and Osteoarchaeology for 2014. This is my first Review as Editor, and I would like to extend heartfelt thanks to my predecessor, Jo Appleby, for her many years of service, as well as her advice and support as to how I may best approach the role. I would also like to thank our president, Piers Mitchell, for sharing his wisdom and characteristically good humour regarding all-things-BABAO in the months since my appointment.

Most importantly, I would like to thank all of you, the members and contributors, who have made this such an enjoyable maiden voyage for me. I have greatly enjoyed all our correspondence and it has been a sincere pleasure getting to know you better.

I have been ceaselessly impressed by the passion and dedication with which you all approach your work and research, as well as the generosity and enthusiasm you all demonstrate towards sharing your stories. On reflection, perhaps this is something inherent to our profession, in that we so often called upon to represent the lives and experiences of those who can no longer speak for themselves. I believe that this sensibility is one of the many things that makes BABAO so great: our readiness to share amongst ourselves and the greater community.

These characteristics echo strongly through this year's Review, when one considers the substantial efforts that we, as an organisation, and you, as individuals, organisations and departments, are all doing to reach out to the community and share the stories of our discipline and the individuals and communities whom we seek to represent. The impact case studies being undertaken by our members at both national and local levels should be a great source of pride and inspiration for us all. Similarly, the extent to

which our organisation and members are represented in the online sphere is exceedingly impressive. In combination, these fora enable us to reach out further and wider than ever before, to share our accomplishments, demonstrate the importance of our work, and capture the imaginations of future generations of biological anthropologists and osteoarchaeologists.

In speaking of future generations, I would like to sign off my first editorial column with a special acknowledgement to all our postgraduate members. I cannot overstate my excitement upon reading through all the Masters and Doctoral titles and abstracts peppered throughout various sections of this review. Your research questions, designs and incorporation of cutting-edge technologies are exceedingly impressive. Congratulations to all of you who submitted theses in 2014; and to those of you continuing in 2015: keep up the good work! When I was a Masters student, a very wise person taught me that the health of the youngest members of a population provide a proxy for the ambient conditions within their broader community. If we apply this framework to BABAO, then our students are showing us that we are a healthy, thriving community, indeed.

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ASSOCIATION NEWS

**President's Column**

*Piers Mitchell*

Over the course of 2014 the BABAO committee has been striving to support our substantial membership, and also enhance public awareness of biological anthropology in the UK. This overview shows the range of ways in which we have been spending your membership fees, and demonstrates how the association continues to develop and improve itself.

Our public outreach activities included the London Anthropology Day and British Science Festival. The London Anthropology Day is an event held at the British Museum where 17 and 18 year olds considering their

career options come to learn more about biological anthropology before applying for higher education places at university. For the last 3 years BABAO has held a workshop providing impartial information on the different fields within biological anthropology, and we also ran a stall where we can give advice and answer questions. This July our museums representative Becky Redfern was joined by Jelena Bekvalac, Madeleine Mant and Ben Perry-Mason for the day.

The British Science Festival is held in a different university each year, and acts as a place where academics can present their field to the general public and the media using approaches that are both fun and educational. In September our grants officer Jo Buckberry, publicity secretary Tim Thompson, Kirsty McCarisson, and Martin Smith ran a debate entitled Britain's Bloodiest Time Period. At its conclusion, the audience voted for the medieval period. I think Richard III may agree with that one.

We continue to support our members with an ever-expanding range of information sources, grants, and publications. Gradual progress is being made by our publicity secretary Tim Thompson in setting up the BABAO Grey Literature Database with ADS (The Archaeology Data Service). Our aim is to establish a searchable database of site reports about human skeletal remains in Britain, so that all such information will be easily accessible to everyone. The keyword facility will mean that we can focus on those reports whose contents are relevant to our needs, regardless of how much detail may be given in the report title. The BABAO Database of UK Skeletal Collections is being organised by Tina Jakob. While some of the content is still undergoing double-checking to ensure accuracy, we hope that access to much of the information will be available to members soon.

The winner of this year's grant for the commercial sector was Jelena Bekvalac of the Museum of London, for her project *The Impact of Industrialisation on Female Health:*

*Understanding the Aetiology of Hyperostosis Frontalis Interna.* Academic grants were awarded to Jason Nadell for the project *Skeletal Development with Reference to Ontogeny and Behaviour: a Cross-sectional Study of Primate Limbs* and also to David Errickson for the project *Rapid Prototyping of Osteological Trauma for Conservation and Education: an Accurate Alternative to Forensic Casting?* We look forward to hearing their results at next year's annual conference.

The first volume of the *Trends in Biological Anthropology* series of conference papers should be out soon, containing articles from both the Edinburgh and Bournemouth conferences. We now have a range of guidance documents on the website to help those with queries relevant to biological anthropology, covering ethics and standards for good practice, reburial and repatriation issues, and ensuring unwanted skeletal collections can find an appropriate home. *The Cambridge Studies in Human Bioarchaeology and Osteoarchaeology* book series now has 5 books commissioned, and BABAO members will receive a discount when they buy a copy.

The 2014 Annual Conference was held in September in Durham, hosted (alphabetically) by Anwen Caffell, Becky Gowland, Tina Jakob, Andrew Millard and Charlotte Roberts. A report on the conference is given later in the *Annual Review*, so all I need to do here is to thank the organisers for a great job done. The 2015 conference will be held in Sheffield, and I am sure we are all looking forward to that.

For the first time, BABAO co-hosted a symposium with the Society for the Study of Human Biology on the topic of Age Estimation. Our committee members Nicholas Marquez-Grant and Jo Buckberry worked with Helen Liversidge of the SSHB to put on a great 3-day event in Oxford. A volume of key articles will be published in the journal *Annals of Human Biology*. The committee are in the process of setting up another collaborative symposium with the SSHB on a topic of mutual interest to both organisations.

BABAO was awarded charitable status this year by The Charity Commission, following the hard work of our Treasurer, Gundula Müldner. We have applied for tax exemption by the HMRC and hope to have this come through in the next few months. This will allow us to use PayPal once again, making it easier for our foreign members to pay their subscriptions.

In September the following stepped down from their positions on the BABAO committee: Linda Fibiger (secretary), Nicholas Marquez-Grant (commercial sector) and Tina Jakob (non-executive member). I would like to thank them all for their hard work and dedication during their posts. The following were elected to the committee: Nicholas Marquez Grant (non-executive Member), Tina Jakob (secretary) and Sharon Clough (Commercial Sector). The fact that Nick and Tina stood for the committee once again clearly shows how much they enjoyed working with the rest of the team, and how satisfying it can be to make progress in setting up projects that benefit biological anthropology in the UK.

This September at the Sheffield AGM I step down as president, having completed my term in office. I am sure some of you with a few grey hairs will want to stand for election, so you can take the organisation in new directions, and set up exciting projects of your own.

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### **Report from the Membership Secretary**

*Stefanie Vincent*

Membership numbers stood at 477 at the end of 2014, which is a small drop from our 500 registered members at the end of 2013. The breakdown of our membership is broadly the same as previous years, with 243 waged members to our 187 student member, a reversal of 2013's ratio. A detailed breakdown of our membership can be obtained from the list below (please note, members can be in more than one category).

### **MEMBERSHIP CATEGORIES**

Students: 244 (51%)  
Academics: 69 (14.5%)  
Work in commercial sector: 32 (6.7%)  
Anthropologist/archaeologist: 30 (6.2%)  
Osteologist: 36 (7.5%)  
Unemployed: 35 (7.3%)  
Forensic specialists: 16 (3.3%)  
Work in Museums: 7 (1.5%)  
Medical: 4 (0.8%)  
Retired: 7 (1.5%)  
No information supplied: 3 (0.8%)  
Other occupations: 11 (2.3%)

'Other occupations' covers a varied range of professions providing us with a dynamic and interesting membership. I would like to take this opportunity to encourage members to use the 'change of details' form available on the membership section of [www.babao.org.uk](http://www.babao.org.uk) to track changes in job titles, positions and affiliations in addition to personal details.

We recruited 85 new members during 2014, in comparison to 61 during 2013. The majority of these were UK residents (75.3%), with the remaining 24.7% representing overseas members.

We currently have 111 overseas members who make up 24.9% of our total membership. The majority of our overseas members come from Europe (n=65), but we also have members from the Americas (n=34) and other areas including Australia, New Zealand and Japan (n=12).

During 2013 and 2014 we were unfortunately unable to accept online payments via our PayPal service. This method of payment has been popular in the past (77% of members paid online in 2012), especially with our members who do not have a UK based banking. We are working on this issue and hope to get it resolved soon, but in the meantime we request that all members attempt to pay using another method where possible.

Please do not hesitate to contact me if there are any questions regarding BABAO membership; either at the address inside the

front cover of the Annual Review or through our website at [www.babao.org.uk](http://www.babao.org.uk).

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## **Report from the Student Representative**

*Simone Lemmers*

Exciting things are going on in the BABAO student community. I'm really happy that many of you got in touch with me over the last year which led to interesting discussions and the forging of plans for the future. Just before last year's BABAO conference, we had a small Pre-BABAO student pub gathering. We're thinking of making this into a tradition, since it was a great moment to chat with fellow student members before the whole conference madness started. I'm going to see how the Sheffield crew feels about that for the upcoming year, and will keep you posted.

For those of you who have missed it, we now both have a facebook page as well as a student forum (<http://babao.proboards.com>) The facebook page we use for quick and short messages, jokes and update. The forum has several sections where jobs, workshops, conferences and field schools will be advertised, and where postgrad students who are already further on in their degrees can serve as a platform for younger students to ask for advice. The forum also serves as an archive, since it's much easier to retrieve information than it is on the facebook page. To be able to use the forum, you need to make an account. See the step by step guide below.

Also something worth mentioning in this year's report, is that although we are a British organisation, we are becoming more and more international as well. I've had many lovely chats with students who travelled to Durham for last year's BABAO conference from among others Denmark, the Netherlands and Germany. Our international BABAO members have contributed significantly to our community with poster and oral presentations and the research quality has not gone unnoticed. Recently, we even received requests from international osteological research groups to get involvement in the

organisation of BABAO events in the future, which I think is a great idea. Speaking of colleagues and research groups abroad, I hope the members of our student community realise the privileges of being part of such an international society. Please grab the chance to explore research and schooling opportunities and collaborations with our international colleagues. Once you start looking into it, you'll be surprised to learn about all the opportunities there are! In any case, I will keep you posted on new developments, and I am looking forward to seeing all of your contributions. As always, do not hesitate to contact me with any questions or suggestions regarding any student-related matters.

## **Quick guide to the BABAO student forum**

For the forum to run better, you may want to install yourself an ad block.

### *Registering and your account*

- Go to website of the forum <http://babao.proboards.com>

### *Create your forum account*

- Go to the top right corner of the webpage and click register.

- Enter your email address; this is the email where you will be sent a confirmation email to.

- Once you've created your account, go to profile. Here you can edit your personal information. It is essential that you enter your field of study. For example, 'forensic anthropologist'. You can also add a profile picture.

- Let us know who you are! There is a subsection called 'Chit-Chat' – Talk to Me! Here, we ask people to give a short introduction to themselves.

### *Posting*

- Once you click on a specific board (where you want to post) in the top right hand corner is 'create thread'. This is where you can start a new topic.

- Using the icons you can format the text (just like MS word) and add pictures, links etc...



You can also add attachments or create an opinion poll.

- To submit, at the bottom is 'create thread' where your post will be sent to the board.
- To reply to someone's post, you can either, 'quick reply' which is typing a response in the box at the bottom of the page and hitting, 'post quick reply' or hit 'reply' and you'll have more formatting options.
- To remove your post, click the drop down arrow next to Actions, go to moderate, and then delete.

We all encourage you to start posting, any ideas, tips, advice, questions you might have, share it with us. Go and have a look and browse around, any suggestions for additional subsections are always welcome. We hope this forum will be of use to all of us, and we are looking forward to hearing from you!

Many thanks to those who have been helping out with the forum, being in the first place Dave Errickson., but also Alison Atkin, Claudia Caldeira, Shelley Farrar, Hannah Haydock, Jason Nadell, Sanita Nezirovic, Sarah Stark and Carole Turner.

See you online!

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## PEOPLE

### **Allen Archaeology Ltd.**

In October, Natasha Powers joined Allen Archaeology Ltd (AAL) as Senior Manager. This change comes after nearly 15 years at MOLA, the last seven spent as Head of Osteology. Natasha continues to carry out and oversee osteological work (see Project Updates, below) whilst her other duties include responsibility for post-excavation reporting, publication and processes and for the development of AAL's staff training plan. AAL are at an exciting time in their development and in February will be moving to bespoke offices with facilities enabling greater employment of in-house specialists. BABAO members Emily Wilson and Alistair Byford-Bates have joined AAL's processing team in London, cleaning and packaging

human remains excavated from a post-medieval cemetery.

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### **Department of Archaeology, Bioarchaeology Research Group Durham University**

We were very pleased to welcome Professor Jane Buikstra, School of Human Evolution and Social Change, Arizona State University, on July 4th to be awarded an Honorary DSc in Durham Cathedral for her outstanding contributions to bioarchaeology.

Vitale Sparacello also joined us for 2 years in October as a Junior Research Fellow working with Charlotte Roberts and Paul Pettit on biological evidence for pathologies and trauma, skeletal functional adaptations, and funerary treatment in Late Paleolithic "Epigravettian" burials - 20-11,000 years ago (PhD University of New Mexico, but originally from Italy).

Charlotte Roberts was elected a Fellow of the British Academy in 2014 in recognition of her contributions to archaeology through her bioarchaeological research. Fellows are scholars who have 'attained distinction in any of the branches of study which it is the object of the Academy to promote' – i.e. the humanities and the social sciences. Election is a mark of distinction, as only a very small number of scholars in any field are elected. It is good to have bioarchaeology now represented in the Fellowship of the British Academy. Charlotte also was invited by Dr Sian Halcrow to visit the Biological Anthropology Research Group at the University of Otago, Dunedin, New Zealand to give lectures and talk about research via the Matariki Network.

Becky Gowland is currently enjoying some research leave! She is working on a British Academy funded project with Alysa Levene (Oxford Brooks) and Anwen Caffell, which examines childhood health in the industrial revolution. Becky is also collaborating with the Washburn Heritage Centre in Fewston, Yorkshire and staff at York University, on a

Heritage Lottery Funded grant examining life in the Washburn Valley, Yorkshire, during the post-medieval period. Becky continues to work with Teesside and Southampton Universities on a taphonomy project with an attached PhD studentship (Samuel Griffith).

Anwen Caffell is currently a Teaching Fellow at Durham University, assisting with laboratory teaching on the MSc in Palaeopathology course. She has carried out contract work for York Osteoarchaeology (see York Osteoarchaeology) and Archaeological Services, Durham University, and is also working for Becky Gowland as a research assistant on the 'Children of the Revolution' research project funded by the British Academy small grants.

Tina Jakob has taken over the temporary post of Archaeological Science Technician in the Department and continues to teach bioarchaeology to undergraduate and postgraduate students. Tina is working on the final publication of the skeletal analysis of the multi-period site of Al Khiday 2 in central Sudan.

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**Department of Archaeology  
University of Exeter**

There have been a number of new appointments in the Department of Archaeology this year: Dr Catriona McKenzie has recently joined the department as a Lecturer in Human Osteoarchaeology, Dr Laura Evis has joined as a Lecturer in Physical Anthropology and Dr Iain Watts has joined the department as an Honorary Professor.

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**School of Anthropology and Conservation  
University of Kent**

*New Staff*

Dr Geraldine Fahy joined the School from the Centre for Archaeological Sciences, UK, Leuven. Geraldine is a lecturer in Biological Anthropology, with research interests in the biological aspects of forensic anthropology,

and human evolution and behaviour. Geraldine specializes in the use of stable isotope analysis to answer questions related to diet, disease, and identification.

Dr Matthew Skinner joined us as a Senior Lecturer in Biological Anthropology from University College London. Matt is a paleoanthropologist. His primary research interests are the taxonomic diversity and evolutionary history of humans and apes, dental tissue development in the present and past, and the form-function relationships in the primate skeleton.

Dr Brandon Wheeler joined us as a lecturer in Biological Anthropology from the German Primate Center. Brandon is a primate behavioural ecologist. His research investigates the costs and benefits associated with group living among primates, especially in terms of predation risk, feeding competition, and infanticide by males.

*New Honorary Research Associate*

We are pleased to announce that Professor Bernard Wood (Center for the Advanced Study of Human Paleobiology, The George Washington University) has joined us as an Honorary Research Associate.

*Promotions*

Dr Tracy Kivell was promoted to Reader in Biological Anthropology. Dr Patrick Mahoney was promoted to Senior Lecturer in Biological Anthropology.

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**MOLA  
(Museum of London Archaeology)**

After more than a decade at MOLA, Head of Osteology Natasha Powers left London in October 2014 to take up a new position as Senior Manager at Allen Archaeology. As well as managing and contributing to several important MOLA projects, including Royal London Hospital, *Digitised Diseases*, St Marylebone Old Churchyard and the Roman Walbrook and Spitalfields burial grounds, Natasha oversaw the development of the osteology team, introducing standard

recording procedures and protocols. This included the expansion of the team's forensic work. Her work on the London Hospital provided the inspiration for the hugely successful Museum of London exhibition *Doctors, Dissection and Resurrection Men*.

Natasha will be much missed, both for her energy, her support of her fellow team members and her work as internal Research Grant Co-ordinator. Her parting gift to MOLA was the securing of hard won Independent Research Organisation (IRO) status. We wish Natasha all the best for the future.

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### **Department of Archaeology University of Sheffield**

This year we welcomed two new people to the department. Kris Poole has taken the post of Lecturer in Zooarchaeology in place of Umberto Albarella, who is taking 12 months' research sabbatical. Jacqueline Towers has also joined us as a post-doctoral researcher. Lizzy Craig-Atkins has become course director for our MSc Human Osteology and Funerary Archaeology. Congratulations are due to Pia Nystrom, who has been promoted this year, and to two of our current doctoral students, Jennifer Crangle and Alison Atkin, for taking podium and poster prizes respectively at the recent Day of the Dead conference in Belfast. Alison also won the Bill White prize in Durham this year. Two new doctoral students began osteological projects: Emma Green (archaeoethanatology and early medieval cemeteries) and Laura Baiges Sotos (DJD in non-human primates).

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### **PROJECT UPDATES**

#### **Petriplatz: The First Berliners**

*Natasha Powers  
Allen Archaeology Ltd*

This international project involves partners from Allen Archaeology Ltd, Landesdenkmalamt Berlin, MOLA, Humboldt-Universität zu Berlin and the

University of West Florida. The project is centred on 3717 individuals excavated by a team led by Claudia Melisch, from the cemetery of St Petri-Kirche between 2007 and 2009. In 2014, work focused particularly on the detailed osteological analysis of three men buried in highly unusual circumstances in the earliest (12th century) phase of the cemetery. The middle-aged men died as the result of a violent assault, each attacked with different weapons. Their possessions, grave goods and their prominent position within the cemetery suggest that they were of some social significance or status, but they had been interred together in a wooden box, perhaps a container used to return them from a distant battlefield. Genetic analysis is underway to establish if there is a familial relationship between the three, and investigation of the historical resources may yet provide further insight into the motivation for the burial. Laser scanning of these unfortunate men is being carried out by Michael Assig of Laserscan Berlin, to aid facial reconstructions by Hilja Hoevenberg from Berlin criminal Police. This will form part of the presentation in the visitor centre which is planned for the site.

Also examined were a group of five children from a multiple burial which has been the subject of extensive and innovative DNA analysis by Jessica Rothe of Charité-Universitätsmedizin Berlin, the results of which are currently in press. Other findings include a child whose highly unusual burial position indicates that they were in tetanic spasm when they died. As a whole, the early sample has low caries rates and rates of stress indicators and infectious disease, and there are relatively few examples of trauma. Additional information on burials assessed in the 2013 season indicates that a tall adult male who had suffered from a popliteal aneurysm, gout, gross caries, degenerative joint disease in his spine and who had a linear injury on his left parietal, had been interred in a neat, prone position. An adult female appears to have been tightly wrapped in a shroud with a neonate. The discovery of a number of elements which had been separated from the individuals from whom they

originated has established the development and incidence of venereal syphilis in medieval Germany as a future research question. The radiographic examination of some individuals will be taking place and will aid in the diagnosis of certain conditions.

Dr Peter Rauxloh of MOLA has employed the methods used to phase St Mary Spital to the Berlin sample. With the completion of assessment by Allen Archaeology in 2015, the assemblage will be ready for direct comparison with the burials from St Mary Spital. The next phase of work will involve Don Walker of MOLA in the creation of the comparative dataset.

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## MUSEUM REPORTS

### **Centre for Human Bioarchaeology, Museum of London** *Jelena Bekvalac*

It has been another exciting year for the Centre for Human Bioarchaeology and we have again been able to welcome over 40 researchers to the Centre, to study the skeletal collections covering a variety of interesting topics for undergraduate, masters, doctoral and post-doctoral projects. The subjects covered a wide range from dental health and stress indicators, trauma, peri mortem trauma, joint disease, pelvic morphology and metrics. Those coming to study the collections came from universities and institutions near and far, all of whom worked diligently in collecting the data they needed and it was a pleasure for us to have them all with us in the Centre learning about their research projects. We were pleased to welcome back Gina McFarlane, PhD student from Auckland University, New Zealand for her to continue her studies from last year on selected Medieval and Post Medieval collections and Madeline Mant, now a PhD student at McMasters University, Canada who was based at the Centre for six months while she carried out her research on the Post Medieval collections. Her examination of the collections was aided with a high powered microscope shipped over from Canada, that

had a distinctive hum when switched on that became a familiar sound to alert us that there was something of particular interest being scrutinised. The images when displayed on the screen were incredibly clear and we look forward to seeing how much they will further enhance information on the collections. The microscope was also the source of much excitement with visitors to the Centre and Maddy was always very kind in spending time demonstrating how it worked with the most popular sight at close quarter under the powerful lens the wonders of fingers and finger nails!

The Post Medieval collections were again a useful source of research material for the forensic students and we welcomed again students from Kingston University to study several of those curated sites and once again Cranfield Forensic Institute students headed to the crypt at St Bride's church to continue the research project of scanning the pelves of the known named individuals. The individuals at St Bride's were also part of a number of other research projects with the benefit of having biographical details significantly aiding the projects. I continue to carry out research learning more about the St Bride's individuals' life histories and working in collaboration with Gaynor Western and Mark Farmer exploring the potential factors causing Hyperostosis Frontalis Interna. Having been fortunate in being awarded the BABAO commercial grant the project can expand its scope for comparison and will be able to incorporate selected individuals from the Christ Church Spitalfields collection made possible with the kind assistance of Margaret Clegg and colleagues at the Natural History Museum. Rebecca continues with research on the Roman collections and working on a number of collaborative projects, some that have already produced some fascinating results. Of great interest was the information revealed from the work carried out by Rhea Brettell who as part of her PhD research was able to enlighten us that the Roman Spitalfields lady had been treated with resins.

In February, as part of the Subject Specialist Network Human Remains Group, Rebecca

organised in conjunction with Carina Philips, Royal College of Surgeons, Hunterian Museum, a training day at the Hunterian to present, discuss and demonstrate the best practice for care and curation of human remains.

New assemblages recorded on the Wellcome Osteological Research Database (WORD) have been deposited to the Centre but unfortunately are currently not available to download from the website as the other cemetery sites. When making an application to study at the CHB, if there are any sites that could be of assistance to the researcher's project but are not available to presently download, we will provide information on them for the researcher and can assist with any necessary data information. For certain sites permission is needed from MoLA until the complete archive is fully deposited to the London Archaeological Archive Research Centre (LAARC), of which the Centre is a part, and we would identify these sites. For the Spitalfields collection any researchers wishing to access the data can contact the CHB and we will be able to send on the data in Excel format to assist with research projects. At the end of last year we were very pleased to accept in to the rotunda store the Greenwich Sailors, excavated by Oxford Archaeology and the basis of Ceri Boston's tremendous PhD. They are available for further research and we can offer information on the collection but not in the Excel format of data from WORD.

The future looks set to be exciting for the museum as we move into a period of change with the strategic plan moving ahead. This has the potential to mean in the next two-to-five years quite considerable upheaval in the museum for all collections, notably the skeletal collections being large, with their physical location and accessibility. Not wishing to cause any alarm but just to give forewarning to those venturing in the near future towards PhDs and any longer term research projects to bear in mind we may be faced at a certain juncture with problems in being able to support access to the collections. We will keep BABAO updated as the Centre

is informed on the proposed plans that will impact for a temporary period on the Centre. For now we look forward to welcoming more researchers to the Centre and learning about all the many innovative and exciting projects that we are delighted to be able to support with incorporation of the curated collections.

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## **Museums of the Royal College of Surgeons of England**

*Hayley Kruger and Carina Phillips*

2014 saw the start of a collections and significance review of the museums, archives and library at the RCS. The review is looking at how collections at the RCS are used, stored and managed and the potential of them for teaching, research and public engagement. Funded by the Arts Council the review is due to end in 2016.

### **The Hunterian Museum**

In 2014, the Hunterian welcomed just over 84,000 visitors. Across the museum and gallery sector, exhibitions and events have taken place to mark the centenary of the outbreak of the First World War. The Hunterian commemorated this with our exhibition *War, Art and Surgery*. Alongside all 72 of the RCS' holdings of Henry Tonks' pastel portraits of wounded servicemen who were operated upon by WW1 plastic surgery pioneer Harold Gillies are also hung a selection from 150 pieces drawn by reportage artist Julia Midgley who focused on the training of military medical staff and the treatment and rehabilitation of those injured in the line of duty.

2014 also marked the anniversary of the birth of Andreas Vesalius so in addition to a number of talks focusing on war and conflict medicine, Professor Vivian Nutton provided a talk looking at recent discoveries made about Vesalius' life and work. The Hunterian Museum worked closely with BAPRAS (British Association of Plastic, Reconstructive and Aesthetic Surgeons) to deliver an evening event that included military surgeons across specialities as well as a patient who spoke of their own experiences of battlefield injury and

their subsequent rehabilitation. Finally the two-day conference 'From Hunter to Helmand: 250 years of Military Medicine' brought together speakers from both the academic and the military world in a cross-disciplinary event that attracted over 140 delegates from across both spheres. This event was generously funded by the Wellcome Collections small grants scheme.

We continue to offer UK schools opportunities to engage with our collections through free guided tours, *Medicine Through Time* sessions to support the history GCSE module, and our *Cutting Edge Careers* Surgical Skills sessions for students planning to study medicine. These sessions enable us not only to support the next generation of medical students, but also connect with the current generation who generously volunteer their time to teach basic surgical skills at these workshops.

We also continue to work with our fellow colleagues from the engagement team at the Royal College of Pathologists who provide pathologists and microbiologists to deliver family sessions on microscopy, ethics workshops for schools on the concept of medical consent and a new session *Where's My Biopsy?* based in the Wellcome Museum that provides medical students with an insight into the processes involved from taking a sample to eventual diagnosis.

Find out more about our activities at: [www.hunterianmuseum.org](http://www.hunterianmuseum.org)  
Hayley Kruger, Learning and Events Officer;  
[hkruger@rcseng.ac.uk](mailto:hkruger@rcseng.ac.uk)

### **The Wellcome Museum of Anatomy and Pathology**

The Wellcome Museum of Anatomy and Pathology displays specimens of human tissue dissected to demonstrate anatomical and pathological structures. A majority of the collections are of modern date and therefore covered by the Human Tissue Act. The museum is an important resource for those studying the human body. Over the last year it supported the training and research of many

osteologists, as well as various other scientific and medical trainees and professionals.

In June 2014 a new human dental pathology display was launched in honour of Beryl Murray Davies, a dental surgeon. It exhibits specimens which had previously been in storage for many years and will be of particular interest to researchers studying dental anthropology. It displays various examples of dental abnormalities and pathologies including of enamel pearls, taurodontism, gemination and fusion, congenital syphilis and *dens in dente*.

For more information or to book a visit to the Wellcome Museum of Anatomy and Pathology see:

[www.rcseng.ac.uk/museums/wellcome](http://www.rcseng.ac.uk/museums/wellcome)

### **The Odontological Collection**

The Odontological Collection is composed of over 11,000 specimens, both human and animal, which demonstrate a wide variety of dental development and pathology. It comprises largely of cranial remains, but has a smaller number of post-cranial remains and skeletons. Approximately 3,000 of these specimens are archaeological in origin. The collection can be viewed using our online catalogue Surgicat: [surgicat.rcseng.ac.uk](http://surgicat.rcseng.ac.uk)

With the dental display in the Wellcome Museum of Anatomy and Pathology, the human specimens in the odontological collection are now more easily accessible for those wishing to study them. The last year has also seen various researchers making use of the collections, of particular popularity have been teeth and casts from individuals with congenital syphilis, which have been studied by a few researchers.

The non-human specimens continue to be of interest to researchers, with the primate specimens being used most heavily. Studies have included research into the androgen levels in primate species via the 2d:4d ratio and evolutionary craniofacial variation. Other researchers have studied specimens of camels, bats, wombats and other marsupials and various African carnivores.

Please contact Carina Phillips via [cphillips@rcseng.ac.uk](mailto:cphillips@rcseng.ac.uk) if you would like further information about using any of the collections at RCS for study and research.

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## EXCAVATION AND ANALYSIS OF HUMAN REMAINS IN 2013

**Allen Archaeology Ltd.**  
*Natasha Powers*

*St Georges' Church, Brentford, London  
Borough of Hounslow, HHS14*

St. George's Church replaced an earlier chapel which was built sometime between 1762 and 1766. The chapel fell in to disrepair in 1863, and was demolished in 1886 to enable the construction of the Church. St. George's was closed in 1959 and used as a musical museum from 1963–2008. Prior to alterations for residential use, a programme of historic building recording and archaeological excavation was required. Historical research suggested that the church was not used for burials, rather the preceding chapel. Records indicate a total of 2299 individuals were interred between the 1760s and 1868. Archaeological excavation of all graves from within the footprint of St Georges Church, plus those within certain other areas which will be impacted upon by the development is ongoing. A small number of brick tombs have been found, one of which had been badly damaged by the construction of the church tower. The remains are generally well-preserved and in stacks. The recording of biographic details from a large number of memorial slabs and gravestones which had been reused as flooring in the later church is also taking place.

*Newport, Lincoln, LINP 14*

Located adjacent to Ermine Street and to the north of the city of Lincoln, trial trenching and excavation identified Romano-British ditches and quarry pits containing a large and unusual assemblage of Romano-British pottery made on, or very near, the site in AD140–200. A small group of inhumations and cremation burials was also discovered,

whilst a rectangular, dry stone structure, which contained disarticulated human remains may be a robbed Roman mausoleum. Of the eight inhumations, three (male and female) were prone. A tall and robust male had been buried beneath a pile of stones whilst another had been buried in a coffin, a group of hobnails around his feet suggest he was wearing boots. Three individuals in the northeast corner of the site had been buried so closely together that their graves truncated one another. The graves were north-south aligned and staggered in a row, with two of the occupants placed head to head. It is possible that they represent burial in a 'family' plot or the burial of a group of socially-related individuals. Whilst many cemeteries contain a small number of prone burials, the proportion here ( $3/8 = 37.5\%$ ) appears unusual. With a small assemblage, one must be cautious about the statistical significance but as a comparison, at the Eastern cemetery in London, just 14 of the 550 inhumations were prone (2.5%). With analysis ongoing, the final results from this excavation will add much to our understanding of the nature of activity in the suburbs of the walled city of Lindum Colonia.

*International Bomber Command Memorial,  
Canwick Hill, Lincoln, CABC 14*

Geophysical survey, trial trench evaluation and excavation on the site of the International Bomber Command Centre memorial, at Canwick, near Lincoln, are providing us with an insight into Roman life beyond the city walls. Two early Roman corn driers, a group of later Roman burials and pottery kilns containing large quantities of greyware wasters have been uncovered. Twelve individuals were found and a variety of burial practices were observed: two were found head to toe within the same grave; one large male lay prone and had been buried with a small iron knife; and two individuals had been buried on top of each other within the same grave, the lower of the two having been decapitated. We will be returning to the site next year and hope to exhibit our discoveries within a permanent display which is planned for the information centre, due to open in September 2015.



AAL grey literature is uploaded to the ADS and can be found at [www.archaeologydataservice.ac.uk/archives/view/greylit/browse.cfm?unit=AllenArchaeologyLtd](http://www.archaeologydataservice.ac.uk/archives/view/greylit/browse.cfm?unit=AllenArchaeologyLtd) You can keep up to date with our projects, vacancies and other news by following us on twitter @allenarchaeo and via our website at [www.allenarchaeology.co.uk](http://www.allenarchaeology.co.uk)

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### **AOC Archaeology**

*Rachel Ives and Melissa Melikian*

AOC has had a busy 2014. We have acted as consultants for various projects that are proposing developments that will impact on known burial grounds. Following AOC's previous involvement with the archaeological excavation of the liberated African cemetery in Rupert's Valley (2008) and historic building recording/watching brief in Jamestown Wharf (2009), this year we completed a consultation in heritage management working with the St. Helena Government. This included liaison with osteoarchaeologists discussing the recommended guidance documents existing for the excavation, post-excavation investigation and curation in dealing with archaeologically encountered human remains in England and their applicability to future heritage management in St. Helena.

We have also undertaken several evaluations in advance of development schemes. One was in a churchyard in Redhill, Surrey, in order to assess bone preservation and burial distribution ahead of an excavation in advance of the construction of a new vestry and hall. The evaluation identified post-medieval burials in vertically stacked grave shafts with the uppermost burials only 0.5m below existing ground surface. The pattern of identified graves could be mapped against surviving gravestones elsewhere in the churchyard to give an estimated distribution of burial plots.

Osteological assessments were carried out on burnt bone from probable cremation burials from several sites, including Bronze Age landscape of Beverley, East Riding of

Yorkshire, and from burials made on a hilltop overlooking a riverside Bronze Age roundhouse settlement in Bicester, Oxfordshire. An analysis was undertaken on a well-preserved 18th century crouched inhumation burial of an adult male aged 36-45 years found in an earth-cut grave underlying the playground of a school in Newhaven, Edinburgh. Minor vertebral degenerative joint disease was observed together with rotator cuff stress. A probable fracture to the coccyx had occurred with marked lateral displacement. Dental diseases were present together with enamel hypoplasia.

Eight coffined inhumation burials were analysed from Caltongate in the Canongate suburb of Edinburgh. The site was formerly part of the burial ground of the Canongate Kirk or church, and was in use between 1688 and 1761. The burials were partly truncated by the building of the parish 'Charity Workhouse' on the site in 1761. Seven adults and one adolescent aged 15-20 years were identified. Among the adults there were four males, one female and two individuals of undetermined sex. Trauma was present including vertebral and rib fractures as well as a healed fracture non-union through the femoral neck in an adult male, likely the result of a heavy, accidental fall. The adolescent showed evidence of systemic post-cranial infection together with *caries sicca* lesions in the cranial bones indicating a treponemal infection and most likely venereal syphilis. One adult also showed a respiratory infection indicated by maxillary sinusitis. Two adults also showed circulatory changes indicating osteochondritis of the metatarsal heads (Freiberg's infraction).

We have completed the reporting and are progressing with publication plans for the results of the large Victorian cemetery excavated at Peel Grove, Bethnal Green. We will be presenting some of the results at the forthcoming Paleopathology Association Meeting in St. Louis. We have been very fortunate in being awarded a City of London Archaeology Trust research grant running through 2014 and into 2015 to fund the purchase and study of circa 300 death



certificates related to the identified burials excavated from Bethnal Green. This research was also supported by the London Archaeologist and a summary of the findings will appear in this publication over the summer of 2015. The research aims to test the correlation of skeletal manifestations of pathology with the contemporary understanding of illnesses and cause of death as identified on the certificates. The death certificates also supplement the existing data gathered on the occupations and social status of the excavated burials. For further information on any of our sites please contact us at [london@aocarchaeology.com](mailto:london@aocarchaeology.com)

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**MOLA**  
**(Museum of London Archaeology)**  
*Don Walker*

Post-excavation work has focused on a number of small and medium sized sites. Work continued on the recording of 291 post-medieval skeletons from Paddington Street, Westminster. This burial ground, in use between 1771 and 1853, was an extra-mural extension of the previously reported and published Marylebone Old Churchyard. The use of family plots and the survival of some breast plates allowed us to identify several individuals and carry out blind testing of osteological methods. The relative high status of the burial ground contributed to the recovery of a variety of interesting dental prostheses. Amongst skeletons exhibiting significant pathological conditions was an example of metastatic cancer, probably of the prostate, and diaphyseal aclasis with possible secondary malignancy. Nearly a quarter of subadult skeletons had evidence of rickets. Paddington Street will be published as a MOLA study series.

MOLA also carried out the excavation and assessment of 44 burials from the grounds of the Maidenhead United Reformed Church, formerly the Congregational Church, dating from 1785. The burials were stacked, often in family groups, within brick-lined vaults. Two examples of vulcanite dentures were recovered from early 20th-century burials.

Interestingly, one vault contained a single coffin filled chiefly with animal bone.

The analysis of 91 burials from the churchyard of St. Sepulchre in the City of London provided an important sample of skeletons from a medieval parish cemetery. Although most were orientated west-east (with heads to the west), two burials were aligned the opposite way, possibly a sign of 'bad deaths'. Pathological conditions in the sample included severe dental disease, possibly fatal sphenoidal sinusitis and Sever's disease. Of particular interest was an adult individual with an arrow wound showing only initial signs of healing.

Analysis has been completed on 27 cloister burials from St Helens Bishopsgate in the City of London. The high proportion of adult female individuals (11 females, 1 male) may reflect the function of the institution as a nunnery. Some of the individuals have unusual patterns of cranial staining, perhaps from metal fixings for headwear.

Work is currently underway on the assessment of 355 individuals recently excavated from the Baptist burial ground at Mare Street, Hackney.

Following collaborative work between Natasha Powers and Pete Rauxloh of MOLA with archaeologists in Berlin, there will be a project comparing the medieval Spitalfields cemetery with a contemporary assemblage from Petriplatz, Berlin. Further details of the project are provided by Natasha Powers in the Allen Archaeology section of this review.

MOLA's osteology work is publicised through its website and social media:

[www.mola.org.uk/services/osteoarchoeology](http://www.mola.org.uk/services/osteoarchoeology)

[www.facebook.com/MOLArchaeology](https://www.facebook.com/MOLArchaeology)

[twitter.com/MOLArchaeology](https://twitter.com/MOLArchaeology)

### *Teaching and research*

Don Walker contributed a talk on trauma, 'Broken bones. Evidence of non-lethal trauma in medieval London', to a day course at Oxford University Department for Continuing Education: *Living in the Medieval Town; Life, House and Environment*.

Ex-diagnostic radiographer David Allan has been volunteering with the osteology team, reviewing and cataloguing the MOLA digital radiograph collection.

Mike Henderson has carried out osteology workshops in schools throughout London and has just won funding to continue this outreach work, with the workshop *Life and Death in Victorian London*.

### *Conference presentations*

Walker, D. 'Interpreting mass burial in medieval London'. European Association of Archaeologists in Istanbul.

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## **Oxford Archaeology Heritage Burial Services**

*Louise Loe*

The main focus of our work has been on-going large post-excavation projects (for example, the Unitarian chapel and burial ground, Swinton and Stoke Quay, Ipswich – see below). In April, Alice Rose became a full time member of the team, to work alongside Helen Webb, Mark Gibson and myself.

The following is a round up of some of the main projects/activities undertaken over the last year. Current projects include the full analysis of 38 Bronze Age cremations and one Bronze Age inhumation from Fawcett Primary School, Cambridge and the excavation of late Bronze Age-early Iron Age and late Iron Age-Roman burials in Thame, Oxfordshire, in addition to the aforementioned work on the Stoke Quay assemblage.

### **Fieldwork**

#### *Creslow, Buckinghamshire*

Roman casket burial initially discovered by metal detectorists. This late 2nd century wooden box burial comprised an urned cremation, accompanied by a rich assemblage of grave goods, including two Samian ware cups, two Samian ware dishes, a pottery flagon, two glass vessels, a bronze jug with decorated handle, bronze patera, iron open lamp or lamp holder and two unidentified lead objects.

Many of the objects had been completely crushed by modern ploughing and farm machinery, and so a number of objects were incomplete, while others were so fragmented as to make interpretation difficult at this stage. The cremation urn was in particularly poor condition and was block-lifted for excavation in spits back at the office. Within the remains of the cremation urn were found iron hobnails from a shoe, and an intaglio, probably of jasper, depicting two figures: the goddess Minerva on the left facing a smaller figure who holds up a wreath. There was also a moderate quantity of bone, although some was undoubtedly lost to plough truncation. Initial observations indicate that the remains are those of an adult but the deposit will undergo full analysis in the next few weeks.

The burial lies at the western edge of the distribution of a group of relatively rare cremation burials found across south-eastern Britain which contain glass and bronze vessels and lighting equipment. The rich burial at Creslow is an important addition to this body of evidence.

#### *St Mary's Church, Church Walk, Ambrosden, Oxfordshire*

An archaeological watching brief was undertaken during the installation of an extension and the digging of service trenches in the churchyard. Eighteen earth cut graves were revealed within the footprint of the extension and a further 28 were uncovered within the service trenches. From these, 44 skeletons (33 adults and 11 juveniles) were excavated. Iron coffin fittings and two lead coffins indicated that at least 21 of the burials

were of post-medieval date. The remainder (25 burials) were possibly medieval. All of the skeletons were reburied in the churchyard.

### **Post-excavation**

#### *Great Western Park, Didcot, Oxfordshire*

In March, post-excavation assessment was carried out on 18 inhumations, 23 cremation deposits and a quantity of disarticulated bone, recovered from a site being developed for a new housing estate. The remains are provisionally dated from the Early Bronze Age to Roman periods and we are currently awaiting the radiocarbon dating results to refine the phasing of these burials. Initial observations indicate that both adults and juveniles are present within the burnt and unburnt assemblages, and many of the inhumations exhibit pathological conditions pertaining to dental, joint, metabolic and neoplastic disease, as well as inflammation/infection and traumatic lesions.

#### *Unitarian chapel and burial ground, Swinton, Greater Manchester*

The full analysis of 120 adult and juvenile skeletons, many of which are of known identity, was completed in the Summer. The publication report is now in preparation. Details on this project were provided in last year's Review.

#### *Radcliffe Infirmary burial ground, Oxford*

In August an excavation and watching brief at the former eighteenth and nineteenth-century Radcliffe Infirmary burial ground was completed. A total of 370 burial 'units' (including articulated skeletons, isolated limbs and disarticulated bones) and a large quantity of disarticulated bone were excavated. The skeletons are being examined for information on demography, health and medical practices in eighteenth- and nineteenth-century Oxford.

#### *Ridgeway Hill mass grave skeletons in London and Berlin Vikings exhibition*

Viking age skeletons, excavated by OA from a mass grave on Ridgeway Hill near Weymouth were put on display in last year's *Vikings* exhibition, held by the British Museum, and later by the Museum Für Vor-

und Frühgeschichte, Berlin. Both venues required input from OA's osteologists, who laid the skeletons out in reconstructions of the grave.

#### *Past People of Oxfordshire project*

OA has just completed a collaborative knowledge exchange project with Mark Pollard and Ceri Boston of the School of Archaeology, Oxford University, and government planning archaeologists in the county. The six-month pilot scheme, entitled *The Past People of Oxfordshire*, was funded by Higher Education Innovation Funding (HEIF), and aimed to improve the way in which burials are excavated and sampled for biochemical research, and to develop current understanding of the nature, scale and geographic distribution of the many thousands of burials that have already been excavated in Oxfordshire, dating from the Neolithic to Victorian periods.

To this end, a database has been compiled, pulling together much needed information on burial practices, osteological analysis of the skeletons, archival details and publications on each site. This record will be a valuable resource for government planning archaeologists and museum curators, as well as for commercial archaeologists compiling environmental assessments and archaeological site reports, and for academics planning future research.

The database will soon be available to all by open access on OA's website.

#### *Stoke Quay, Ipswich*

Much of the year's work programme has focused on completing the full analysis of over 1000 Saxon and medieval skeletons from Stoke Quay, Ipswich (as previously reported). All of the skeletons are being recorded onto a bespoke database, which will be fully integrated with site context data and plans. One of the skeletons examined this year was a mature adult male, provisionally dated to the 12th-15th centuries and recovered from the centre of St Augustine's church nave. The skeleton had a series of peri-mortem sharp force wounds on the right side of the skull,

down the entire length of the spine and on a number of ribs. Interpersonal violence, execution, anatomisation, or a combination thereof are among the possible interpretations for the modifications which were presented at last year's conference in Durham.

Full analysis of the assemblage is due to be completed by the end of March. This will be followed by the completion of a programme of radiocarbon dating and isotope analysis. Then the task of number crunching will begin in earnest.

#### *Pheasant Wood, Fromelles*

In April, OA reconvened with other subject matter experts at Australia House, London, in a continued attempt to identify 250 allied soldiers who had been killed in the Battle of Fromelles in northern France during the First World War. The meeting, which scrutinised archaeological, anthropological, historical and DNA evidence, concluded with the annual Joint Identification Board, at which it was confirmed that a further 20 soldiers have been identified by name raising the total number of named soldiers to 144.

Of the 106 soldiers still not identified to a name, 75 are considered to have served for the Australian Army, 2 for the British Army and 29 remain 'known unto God'. Future work to identify these soldiers will now revert to being a national responsibility.

These identifications mark the final year of the annual joint UK and Australian board, which has been meeting since 2010. They raise the total number of named soldiers to 144, which far exceeds that which was predicted at the outset of the project, which is the first of its kind.

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**Wessex Archaeology**  
*Kirsten Egging Dinwiddy*

#### *Team*

Jacqueline I. McKinley: Senior  
Osteoarchaeologist

Kirsten Egging Dinwiddy: Osteoarchaeologist

#### **Current Projects**

*Amesbury Down, Wiltshire* (various WA codes; JMcK & KED)

The analysis of the human remains from the excavations at Amesbury Down is now complete. The prehistoric assemblage includes an MNI of circa 57 including the Boscombe Bowmen, and the Amesbury Archer and his companion. The earliest material is of Late Neolithic date (one cremated, two unburnt), whilst most individuals are attributed to the Early Bronze Age (8 cremated, 31 unburnt). Six individuals are represented in the Middle Bronze Age material. Recently discovered remains include those of four Early-to-Middle Iron Age, and four prehistoric individuals (awaiting radiocarbon dates).

The remains of nearly 300 individuals from seven neighbouring Late Romano-British cemeteries (plus a few singletons) have also been analysed. The majority of remains are unburnt (MNI 281); the cremated remains (MNI 15) are derived from four of the cemeteries. All but one of the cemeteries are of similar proportions, some of which were enclosed by shallow ditches. The Wessex Linear – a prehistoric boundary – was apparently a focus for some of the Romano-British mortuary activity. The largest cemetery (MNI 150) includes the previously reported sarcophagus burial, enclosed by a ditch containing multiple cremation-related deposits.

Noteworthy observations were plentiful, and include two cases of probable metastasized prostate cancer and a number of significant traumatic injuries.

*Amesbury Old Dairy, Wiltshire* (79291; KED)

Work is underway on the material from this site. These include the remains of an Early-Middle Bronze Age inhumation burial, an unurned cremation burial, and redeposited unburnt bone, all found in close association with two large inter-connected ring ditch monuments.

Part of an Anglo-Saxon inhumation cemetery (MNI 6), focused on a ditch-encircled grave, was revealed in the immediately vicinity.

*Bishopsdown, Salisbury, Wiltshire* (101630; JMcK)

The Bronze Age to Iron Age landscape revealed at Bishopsdown included a number of mortuary-related elements. The remains of six individuals of mixed demography were derived from a cremation-related deposit and five inhumation burials (one dual).

*Cheeseman's Green, Kent* (77712; JMcK)

More excavations on this mainly prehistoric site uncovered the remains of an unurned burial and two cremation-related deposits (MNI ?). Potential 'cenotaph' deposits were also identified: one ?Late Bronze Age (placed 'empty' vessel) and one Late Iron Age–early Romano-British (placed vessel containing fuel-ash).

*Greentrees, Salisbury, Wiltshire* (105121; JMcK)

On the site adjacent to Bishopsdown a minimum of five prehistoric individuals were found, in two inhumation burials with cairns (plus redeposited unburnt bone), and an urned cremation burial and redeposited pyre debris. A heavily damaged Beaker pit may have once held a burial, though no bone was recovered.

*Harwell, Oxfordshire* (87553; KED)

This archaeologically-dense site, including Early to Middle Iron Age and Romano-British settlement activity, contained the remains of a minimum three Iron Age individuals (mixed demography, redeposited), a slightly later adult inhumation burial, and at least four Romano-British individuals (two adult inhumation burials, rest redeposited).

*Kingsmead Quarry, Horton* (89660 interim assessment; JMcK)

New discoveries during the long-running excavations at Kingsmead – where Late Neolithic, Bronze Age and Romano-British inhumation and cremation burials have previously been recorded – include the remains of two prehistoric adult inhumation burials (one ?prone), and part of a Romano-British linear mixed-rite cemetery. The latter

comprises the remains of seven inhumation burials (mixed demography) and four unurned cremation burials including redeposited pyre debris and a possible bustum.

*Lyde Road, Yeovil, Somerset* (71484, 71486, 71488; JMcK)

Recent excavations on this archaeologically-rich multi-phase landscape revealed the remains of an Early Bronze Age urned cremation burial (infant), three urned and seven unurned prehistoric cremation burials (mixed demography) and an undated cremation-related deposit.

*'Operation Beowulf', Barrow Clump, Figheldean, Wiltshire*, (85370-2; JMcK & KED)

This outreach project for the Defence Infrastructure Organisation and Heritage Lottery Funded *Operation Nightingale* involved the excavation of a heavily badger-disturbed Beaker monument, Bronze Age barrow and Anglo-Saxon cemetery. The remains recovered during seasons 1 and 2 – a ?Bronze Age unurned burial (MNI 3, two adults & a subadult), and c. 47 burials from the Anglo-Saxon cemetery – have now been analysed.

Jacqueline McKinley again joined the excavation team in what was the final season. Two more Bronze Age cremation burials were found, whilst unburnt prehistoric bone was recovered from the backfill of an antiquarian investigation trench. A further dozen or so Anglo-Saxon inhumation burials brings the cemetery population to around 70-75 individuals.

*Poundbury Farm, Dorset* (60027; KED)

More of the multi-phase rural settlement, agricultural and mortuary site at Poundbury Farm was revealed when a previously inaccessible tract of land was excavated. Additional prehistoric human burial remains comprise a probable Early/Middle Bronze age urned 'cenotaph' deposit, and an unurned deposit of unknown date (MNI 2; 11 including previous findings).

The remains of a further 14 Romano-British individuals (unburnt; including a linear group of nine graves) and two cremation deposits were identified. A juvenile decapitation burial and the inclusion of entire young sheep in four of the Romano-British graves are of particular interest.

*Ridgeway Farm, Purton, Wiltshire* (86361; KED)

The assemblage from this site includes the remains of an unexpectedly early inhumation burial of a subadult (early Beaker). Another three individuals are represented in the redeposited material (Iron Age neonate and a subadult/adult; Romano-British neonate).

*Shepherd's Spring, Andover, Hampshire* (103101; KED)

The remains of a minimum of five individuals were found on this predominantly Iron Age settlement site. The remains include those of a neonate burial, as well as redeposited bone from a foetus, two neonates and an adult.

*Symmond's Yat, Herefordshire* (Herefordshire Archaeology; KED)

Weathering and erosion revealed more early Anglo-Saxon human remains near the entrance to Merlin's Cave. Adjacent to the previously reported graves, a small pit was found to contain redeposited bone from a minimum of four individuals, along with various pieces of animal bone and artefacts. A few fragments of skull are charred (dry bone).

## Reports Summary

### *Cremated remains*

*Castle View, Slough, Berkshire* (89360; JMcK)

Early Bronze Age: (MNI 1) intact, upright urned cremation burial. Large quantity of well-preserved adult bone; originally bagged before being placed in the urn.

*Copyhold Quarry, Berkshire* (Berkshire Archaeological Service; JMcK)

Early Bronze Age: (MNI 1) urned cremation burial (young infant).

*Porton Down* (72833, 2nd phase)

Middle Bronze Age: (MNI 2) urned cremation burial (inverted; young infant); ?token cremated deposit (adult). Interesting demographics and rites. Adds to previously reported findings.

*Sea Mills Lane, Bristol* (BSMR 24938; JMcK)

Early Romano-British: (MNI 1) urned cremation burial + redeposited/disturbed (adult male) and immature pig (pyre goods).

### *Unburnt bone*

*A453, Clifton, Nottinghamshire* (86081; KED)

Late Iron Age –early Romano-British: (MNI 1) older adult female.

Romano-British: (MNI 2) older adult male + redeposited.

*OP 19, Tilshead, Wiltshire* (103290; JMcK)

Mid-late Romano-British: (MNI 1) older adult male. Possible hydatid cyst.

*Porton Down Pipeline* (103610 JMcK)

Middle Bronze Age: (MNI 2) redeposited inhumation burial + another individual; disturbed by service trench.

*St Ebba's Chapel, Beadell, Northumberland* (Time Team/89562; JMcK)

Post-medieval: (MNI 29) 21 immature most <1yr, including fetuses (youngest c. 17-21 weeks gestation) and eight adults. Includes a probable Cillini i.e. an area designated for the burial of the un-baptised.

### *Mixed rite*

*Defence Training Estates, Salisbury Plain, Wiltshire* (68045, 79420, 86851; JMcK)

Prehistoric: unurned cremation burial and redeposited pyre debris (subadult/adult).

Early Bronze Age: (MNI 1) urned burial (juvenile).

Middle Bronze Age: (overall MNI 28-30); mixed rite barrow (MNI 5) three inhumation burials (juvenile, mature adult female, older adult male) and two unurned cremation burials + redeposited and redeposited pyre debris (neonate/infant and subadult); cremation cemetery (MNI 23-25) 18-19

graves, four or five with two individuals, and many with redeposited pyre debris. Some redeposited material and probable 'tokens'. Examples of unique clay-structured complex burials. High proportion of immature remains (54%).

Middle Iron Age: (MNI 2) dual inhumation burial in a partially filled pit (mature and older adult females).

*Margett's Pit, Burham, Kent (70760; JMcK)*

Middle to Late Bronze Age (some differentiation achieved): (MNI 24) six adult inhumation burials + redeposited 16 unurned cremation burials including redeposited pyre debris; a small cemetery with mixed demography; low bone weights (congenital absence patella, ?TB, skull trauma). 'Placed vessel' (possible 'cenotaph').

*MOD Durrington, Wiltshire (74411; JMcK)*

Late Neolithic: (MNI 1) unurned cremated burial under knapped flint cairn.

Middle Iron Age: (MNI 5) one neonate inhumation burial; three unurned cremation burials, one ?redeposited + redeposited pyre debris. Sheep and 'token' noted.

?early Romano-British: (MNI 1) redeposited neonate.

Late Romano-British: (MNI 2) two inhumation burials (older adult females). Possible polio and tuberculosis.

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## DEPARTMENTAL REPORTS

### BARC

School of Archaeological Sciences

University of Bradford

Jo Buckberry

In September 2014 everyone in the School of Archaeological Sciences was devastated to hear of the death of John McIlwaine. John's outstanding contribution to Forensic Archaeology, and in particular in the search for The Disappeared, was reported in the national media. John's fabulous contribution to teaching the MSc Forensic Archaeology and Crime Scene Investigation was recognised through a judge's commendation at the 2014 Prospects Postgraduate annual

awards. John has left a huge hole in the heart of our community, we miss him dearly.

Members of the BARC were involved in organising and delivering a number of different symposia, workshops and conference sessions during 2014. Karina Croucher and Jo Buckberry organised the HEA workshop *Intercultural perspectives in the use of human remains for teaching and practicing archaeology* in March. Andrew Wilson and Jo delivered a workshop on *Digitised Diseases* at the Annual Meeting of the Paleopathology Association in Calgary in April. Andrew co-organised the Anatomical Society's *Skin and Bone Symposium* in July. Karina organised a conference on *Is gender still relevant?*, an Early Career Networking Event funded by the British Academy, in September. Finally, Jo supported Helen Liversidge and Nicholas Marquez-Grant organising the *SSHB/BABAO Age Symposium* in Oxford in December.

We have continued with our public engagement work, with the last four osteology workshops as part of *You Are What You Ate*, delivered by Alan Ogden and Jo, taking place in the summer; the Wellcome Trust supported project ended in September. Jo and Michelle Williams-Ward took Alan's modified plastic bones (this time with examples of peri-mortem trauma) on a Scottish trip in May for the *Road to Bannockburn* event at Stirling Castle, where we explained medieval trauma and disease to castle visitors. Behind the scenes, work continues on *Digitised Diseases*, with more content being uploaded over the year; we hope to release more models including CT scans soon.

This year we welcome one new PhD student to the BARC. Laura Castells Navarro will be researching the *Spatiotemporal evolution of Diffuse Idiopathic Skeletal Hyperostosis and its co-morbidity with diet-related pathologies* and is funded by an Institute for Life Sciences Research studentship. AHRC/CDA students Michelle Williams-Ward and Clare Rainsford are spending much of 2015 working at Norwich Castle Museum with co-supervisor Tim Pestell. Artist Karina Thompson has been

working alongside Keith, Jo and others in the BARC producing artwork in response to the collections and our research; these include some very emotive and visually stunning textile art images of several of the clinical leprosy X-rays in the Andersen archive. Currently, plans for public exhibition of her work are in progress.

Julia Beaumont has been continuing her research on isotope analysis of incremental dentine; she is now working alongside *Born in Bradford*, collecting teeth from modern Bradford children. Her tooth fairy was a fun addition to the *Born in Bradford* event in the summer. Jo, Andrew and Rob Janaway have been working with Louise Brown and Matt Town to complete the archaeological assessment of the Bethel Chapel Crypt, Villiers Street Sunderland. Hannah Koon, Andrew and Rob are working with OA on an EH-funded project to investigate the impact of drainage on archaeological remains in churchyards. Karina has recently been awarded an AHRC Early Career Research Grant for *Continuing Bonds: Exploring the meaning and legacy of death through past and contemporary practice*. The project will start in 2016 following Karina's maternity leave.

Patricia Daps, Professor of Dermatology at the Federal University of Espirito Santo, Brazil, has been appointed as Honorary Visiting Researcher for the current academic year. She and Keith are working on a correlative study of leprosy skeletal lesions identified in the Andersen collection. They are planning research on the pathogenesis of proliferative periosteal reaction on tibiae and fibulae in leprosy, using the Chichester leprosy skeletal collection and the Andersen X-ray collection. Jo has recently been awarded funding to assess the human remains from the Udal site, North Uist. Finally, we were all delighted when Hannah Koon's post was made permanent.

#### *Ongoing PhD Research*

Rhea Brettell: Embalming in Late Roman Britain. A molecular-based approach to

identification and an evaluation of significance (AHRC).

Laura Castells Navarro: Spatiotemporal evolution of Diffuse Idiopathic Skeletal Hyperostosis and its co-morbidity with diet-related pathologies (Institute for Life Sciences Research studentship, Bradford).

Pamela Cross: Horses of men and gods: Horse sacrifice and mortuary rituals in 1st millennium AD Britain (AHRC CDA).

Branka Franicevic: Effect of dismemberment on decomposition in contrasting grave soils (part-funded University of Bradford).

Andy Holland: Examining the taphonomic challenges to the digital refitting of fragmented bone (AHRC).

Rebecca Nicholls: Mobility and identity in Iron Age Europe: osteoarchaeological and isotopic analyses of cemetery populations from the East Alpine region (HERA / European Commission).

Clare Rainsford: People and animals in early medieval cemeteries (AHRC CDA).

Marianne Robson: Modelling the long term resilience of a marginal social-ecological system: the historical ecology of Orkney and Shetland (NERC/ESRC).

Genevieve Tellier: A study of the Neolithic and Bronze Age populations of Wales from osteological and contextual data.

Michelle Williams-Ward: Burial and identity in early medieval Norfolk (AHRC CDA).

#### *PhD theses submitted*

Ceilidh Lerwick: Vikings, Picts and Scots: Biocultural identity in medieval Scotland.

*Dissertations Submitted for the MSc Human Osteology and Palaeopathology, 2013/14*

Emerald Beswick: Investigation of Leprosy in Six European Leprosaria.



Matthew Crowther: Assessing the accuracy of osteometric methods: conventional versus 3D laser scanning.

Robyn Dijksterhuis: Exploring inflammatory change at post-cranial muscle attachment sites in juveniles with cranial lesions associated with scurvy.

Jessica Fisher: Cut mark analysis of post-medieval medical instruments on bone.

Antonio Higuero Pliego: Investigating the transition from pre-monastic to monastic diet in medieval male individuals.

Sue Hopkinson: "The lady in lead": An osteobiography of a Roman individual found in a lead coffin.

Allison Hummel: Perimortem or antemortem: assessing post-traumatic time intervals in medieval populations.

Christopher Jones: Observing changes in the structural stability of collagen fibrils in human bone using transmission electron microscopy.

John Kemp: A histological and isotopic study of the correlation between enamel hypoplasia and dentine collagen profiles.

Poiyun Marr: Investigating the effects of heat treated bones and teeth and its effect on carbon and nitrogen stable isotopes.

Owain Wells: Bethel Independent Chapel, Villiers Street, Sunderland: An insight into the people comprising of a discrete post-medieval nonconformist population.

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**Department of Archaeology, Anthropology  
and Forensic Science**  
**Bournemouth University**  
*Nivien Speith*

2014 saw the formation of two new departments out of the former School of Applied Sciences at Bournemouth University, the Department of Life and Environmental

Sciences (LES, joined by Amanda Korstjens and John Stewart) and the Department of Archaeology, Anthropology and Forensic Science (AAFS, joined by Holger Schutkowski, Karina Gerdau-Radonic, Nivien Speith and Martin Smith). Our staff and students, often together with local archaeologists, engaged in several collaborations and outreach events, making anthropology and osteoarchaeology ever more visible in the public eye and presenting their educational values. This included a great 'day out' for our biological and social anthropologists, who joined us from the School of Health and Social Care at BU, at the London Anthropology Day in July, a sunny and stimulating field season at our annual Big Dig near Winterbourne Kingston, our on-going excavation centred on exploring the transition from Iron Age to Roman and Romano-British periods in Dorset, and events showcasing what skeletons can tell us at BU's Festival of Learning in July. For this occasion, Holger and Nivien invited members of the public to our Anthropology Labs to find out everything about *Bones, Germs and Food*, while Martin, Nivien and some skeletons with their stories ventured out to Bournemouth Pier to let visitors catch a glimpse of human remains in the context of Maritime Archaeology.

Supporting this new theme is the expansion of skeletal material curated at BU by the addition of the skeletal remains of 150+ sailors from the cemetery of the former Royal Naval Hospital at Plymouth that joined our collections in May and are now being looked after for future projects.

Throughout the year, various members of the team also continued to provide assistance to Dorset Police and the local Coroner in cases where skeletal remains have been discovered. 2014 was a busy year in this respect with BU staff providing such assistance nine times since last January, four of which proved to be animal bone, three being archaeological human burials and two involving the remains of recently deceased individuals requiring police attention.

With regard to staff activities, Martin Smith continues his interests in experimentation with work on ballistics, medieval archery, cremation and a collaboration with a Masters student involving a replica 16th century cannon. He is currently working on several publications including a book aimed at a general (non-anthropological) readership.

Holger Schutkowski continues his collaboration with Dr Arkadiusz Sołtysiak from the University of Warsaw on the reconstruction of subsistence change in ancient Mesopotamia through stable isotope analysis. The work is funded by the Polish Ministry for Science and Higher Education. Work is also on-going on the unique Middle Bronze Age skeletal collection from Sidon, Lebanon. Holger has been elected as Editor for the Springer Monograph series *Natural Science in Archaeology* - so if you are interested to publish in a successful series with Springer, please contact Holger. In September, Holger was invited to present at a Symposium of the Royal Danish Academy of Sciences on *Food, Population and Health - Global Patterns and Challenges*. Holger also continues to work as a member for the Royal Anthropological Institute Panel for the Accreditation of Forensic Practitioners.

Nivien Speith continues with her role as demonstrator and collections manager, overseeing the BU Anthropology laboratories and skeletal collections, teaching and demonstrating in various anthropology units, and conducting consultancy work for Bournemouth Archaeology and Dorset Police. She is currently processing and analysing the Romano-British skeletons found in a burial enclosure during the *Big Dig* in Summer 2014. In addition, Nivien is continuing her research on skeletal bioarchaeology of identities and skeletal markers of stress and activity, and was awarded the IJPP Early Career Award by Elsevier at the PPA Meetings in Calgary for her paper "Exploring lived identities via bioarchaeological analysis: Local biologies and social identities of the Alamanni".

Karina Gerdau-Radonic and Amada Korstjens continue their research into pre-Columbian populations and Andean mortuary treatment in Peru and primate behaviour and ecology, respectively.

John Stewart is continuing to excavate at Trou Al'Wesse in Belgium with Becky Miller and Marcel Otte of Liege University, a site with Mousterian to Neolithic archaeology, and to collaborate with a range of aDNA scientists on the population history of a number of vertebrate taxa through the Late Quaternary to test various evolutionary biogeographic hypotheses he has published. Monika Knul is progressing well with her investigation of European mammalian faunas in Europe in relation to human occupation through the Late Pleistocene and into the Holocene. PhD student Jacqui Pitt is also doing well working on the palaeoecology of chickens constructing a database of early European finds and using a niche-modelling approach. Finally, Pete Allen, who started in September, is using hypotheses from human evolution, experimental methods from psychology and technology from digital game animation to investigate prey detection in the Palaeolithic. Papers that have appeared this year include work on Norway lemming phylogeography, the development of a method to detect collagen levels in ancient bone and a Mongolian site report.

Last but not least, congratulations are due to all our UG, PG and PhD students who completed this year!

*Ongoing PhD research:*

Pete Allen: Investigating the Effects of Environment on Prey Detection Rates: A Key Variable in Human Evolution.

Hannah Haydock: Stable Isotopes as an Indication of Weaning Age in Post-Medieval to Modern Populations.

Monika Knul: Faunal and Human Biogeography and Terminal Ice Age Climate Change.

Emily Norton: Evaluating Geophysical and Remote Sensing Techniques and Methodologies for the Detection and Location of Mass Graves.

Jacqui Pitt: The Ecology of Chickens Past and Present.

Aralisa Shedden-Gonzalez: Using primates for establishing priority conservation sites in Mexico.

Kyle Waters: Differential patterns of mortality and morbidity. A bioarchaeological approach to childhood in Roman-Britain.

*Completed MPhil thesis 2014:*

Laura Gambaro: Sexual dimorphism of the thoracic vertebrae in a modern Cretan population.

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**Division of Biological Anthropology**  
**Department of Archaeology and**  
**Anthropology**  
**University of Cambridge**  
*Emma Pomeroy*

Biological Anthropology at Cambridge continued to build on its strengths across diverse research themes in 2014, including human biology, palaeopathology, osteology, human evolution, primatology, and genetics. The Division's weekly seminar series featured renowned speakers from across the world, and The Duckworth Collection, curated in the Division under Dr Marta Lahr, welcomed numerous national and international researchers to conduct osteological research on its collections. In addition to existing staff, Drs Robert Attenborough and Kate Faccia joined the Division as new temporary lecturers for 2014-15, whose respective work on human population biology and health in New Guinea and human skeletal biology across the agricultural transition in the Baltic added further dimensions to the Division's wide-ranging activities.

Professor Nick Mascie-Taylor's Human Epidemiology, Nutrition, Growth and Ecology (HENGE) Group

([henge.bioanth.cam.ac.uk/index.html](http://henge.bioanth.cam.ac.uk/index.html)), which includes Dr Rie Goto and 3 PhD students, has continued its major UKAid (DFID) funded research projects in Bangladesh and Nepal. These projects concern monitoring nutritional status and the efficacy of interventions to alleviate poverty and improve health.

Palaeopathology research in 2014, led by Piers Mitchell, involved work on ancient parasites, anatomical dissection, and pathology in King Richard III. The group led an international collaboration to investigate the effects of sanitation and latrines upon intestinal diseases in past populations, and this will be published as a book in 2015. Ivy Yeh has been undertaking a PhD on the topic of intestinal parasites in East Asia and how they may explain past migration events. Jenna Dittmar has been pursuing research for her PhD on the archaeological and textual evidence for how anatomists in the 1700s and 1800s undertook dissection in Britain. The analysis of Richard III's scoliosis triggered considerable media interest, and broadcast of the third TV program showed how the team analysed his parasites, spinal deformity, weapon injuries, and trained up a volunteer with scoliosis to assess their ability to fight on horseback in medieval armour. Piers has recently been elected president of the Paleopathology Association, and will take up this post in early 2015.

Dr Jay Stock's Phenotypic Adaptability, Variation and Evolution Group (PAVE: [pave.bioanth.cam.ac.uk](http://pave.bioanth.cam.ac.uk), @PaveCambridge) saw several exciting developments which further extend the group's varied research program. Jay received an ERC consolidator grant for his *ADaPt Project* ([pave.bioanth.cam.ac.uk/adapt](http://pave.bioanth.cam.ac.uk/adapt)), a major interdisciplinary and international collaborative endeavour combining research in osteology, human biology, and climatic modelling to give novel insight into the roles of climate, natural selection and energetics in shaping global human diversity. The project will see further expansion of the group to include new postdocs in 2015, continued work with collaborators including Dr Lia Betti (temporary lecturer in the Division in

2014, now at Roehampton), and new facilities for peripheral quantitative computed tomography (CT) and whole body laser scanning. With the Zoology and Physiology departments, PAVE has established the Cambridge Biotomography Centre based around a new high resolution CT scanner. Dr Colin Shaw (PAVE postdoc) has been instrumental in developing the centre, and the facility is already central to exciting new work within the group on variation in skeletal microstructure, as well as offering scans on a contract basis (see [cbc.zoo.cam.ac.uk](http://cbc.zoo.cam.ac.uk) for information on how to make use of this new resource). Other grant success included a British Academy International Partnership and Mobility Grant to Dr Emma Pomeroy (PAVE) and Dr Veena Mushrif (Deccan College, Pune, India) for their interdisciplinary project investigating variation in skeletal morphology in India. Jay also continues his collaboration with the Division of Archaeology through the ERC-Funded *FRAGSUS Project* (Fragility and Sustainability in Restricted Island Environments), in conjunction with Queen's University, Belfast (PI: Prof. Caroline Malone; [www.qub.ac.uk/sites/FRAGSUS/](http://www.qub.ac.uk/sites/FRAGSUS/); @fragsus). Here, he is working in the 'Bone Crew' alongside Drs Ronika Power, Tamsin O'Connell and Simon Stoddart towards the construction of a biocultural profile of the Neolithic inhabitants of Gozo, Malta, through detailed examination of the skeletal assemblage of the Xaghra Circle. The Bone Crew's first study season took place in October-November in the National Museum of Archaeology, Valletta, under the leadership of Dr Ronika Power, during which an initial reassessment and sorting of the disarticulated, highly fragmented and comingled remains of circa 700-900 individuals commenced. This work will continue through 2015, with a view to incorporating analyses of demography, pathology, habitual behaviour, congenital variation, biodistance, geographical affinity and diet within the burial population.

Professor Robert Foley and Dr Marta Lahr's Human Evolutionary Studies research group ([human-evol.cam.ac.uk/](http://human-evol.cam.ac.uk/)) continues apace. Both used the opportunity offered by being on

research leave in 2014 to progress their work in the field in Turkana and the Central Rift Valley through Marta's ERC-funded *In-Africa Project* ([in-africa.org](http://in-africa.org)), as well as in Cambridge. The Human Evolutionary Studies Discussion Group continued its active programme of weekly talks and discussions, and the group hosted a highly-successful symposium on the *African Roots of Human Behaviour*, as well as a workshop on the *Archaeology of Modern Human Evolution in Africa*. Amongst their publications in 2014 was a co-authored study in *Science* offering a deeper understanding of the genetic relationships between human populations in Europe over the last 40,000 years.

Primatology at Cambridge continued to be a key aspect of the Division's research activities in 2014. Dr Peter Walsh's research ([apesinc.org](http://apesinc.org), @EbolaGorilla) concerning innovative approaches to great ape conservation continued afoot, and his previous work on modelling the spread of ebola gained renewed relevance. Dr Jurgi Cristóbal Azkarate pursued work on primates in Mexico, particularly the impacts of habitat fragmentation on Black howler and spider monkey physiology and ecology, climate adaptation, and condition signalling, which involves collaboration with fellow department member Dr Jake Dunn. Dr Kat Koops and Professor Emeritus Bill McGrew continued their respective research on primate tool use, while Dr Fiona Stewart and Alex Piel co-directed ongoing research at the *Ugalla Primate Project* research site in western Tanzania, where they investigate chimpanzee, red tail monkey, and yellow baboon behavioural ecology and adaptation to a seasonal savannah woodland habitat. The site is supported by a multi-year award from CARTA (UCSD/Salk Centre for Academic Research and Training in Anthropogeny) and ongoing inter-disciplinary collaborations into primate health & disease, paleoecology, and primate archaeology.

Dr Toomas Kivisild's genetics group continued work on their major ERC-funded project *An inter-disciplinary approach for identifying evolutionary active regions in the*

*human genome* from 2011-2016. The project supports several doctoral and postdoctoral researchers investigating evidence for recent adaptation to lifestyle, environment and diet among human populations across four focal regions: the Andes, Siberia, Southeast Asia and Madagascar. It generated a number of major publications in journals including *PNAS* (2014 111(3):936-41), *PloS ONE* (9(3):e93314, 9(5):e98076, and the *American Journal of Human Genetics* (95:584-589). Dr Charlotte Houldcroft, who works on the genetics of host-pathogen interactions particularly in relation to the Epstein-Barr virus, also joined the Division in 2013-14 as Temporary Lecturer. She holds joint ongoing appointments at UCL Institute of Child Health and as Affiliated Lecturer in the Division of Biological Anthropology at Cambridge.

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**Cranfield Forensic Institute**  
**Cranfield Defence and Security**  
**Cranfield University**  
*Kayleigh Cooper and*  
*Nicholas Marquez-Grant*

This has been a busy and exciting year for Cranfield Forensic Institute. Our MSc courses have continued to attract full-time and part-time UK and international students. Our courses in Forensic Anthropology and Archaeology; Forensic Investigation; Forensic Ballistics; Forensic Engineering and Science; Forensic Explosives and Explosive Investigation and Forensic Computing are accredited by The Chartered Society of Forensic Sciences. Our archaeology and anthropology research often utilizes these additional specializations.

Our MSc in Forensic Archaeology and Anthropology gained a new Course Director in Dr Nicholas Marquez-Grant who has taken to the role with enthusiasm and dedication. We have been privileged to receive a donation of anatomical human remains for our teaching and reference collection from the Oxford University Medical School.

We have also had a fantastic range of MSc projects this past year. Charlotte Willis and Charlotte Osborn travelled to Palermo, Sicily, to study cranial pathology and non-metric traits of mummified remains in the Capuchin Catacombs and thanks go to Dr Dario Piombino-Mascali for his co-supervision and involvement. Additionally, Emily Wilson travelled to Formentera to record anthropological data from 20th century human remains that were recovered as part of a rescue excavation in 2010.

Additional anthropological research projects included ‘An Overview Of How Drugs Affect The Skeleton: Implications For Forensic Anthropology’ by Victoria Richards; ‘Differentiation Of Nutrient Foramina In Human And Non-Human Species: Implications For Forensic Anthropology’ by Vail Johnson and ‘Devising UK Sex Estimation Formulae For Forensic Anthropology Applications’ by Marianne Malo. We have also had projects researching taphonomy and archaeology, including ‘Taphonomic Changes To Wrapped And Unwrapped Porcine Samples Within Concrete’ by Chelsea Parham; ‘Analysis Of The Differentials Between Fleshed And Defleshed Remains In Open Combustion’ by Mary-Jane Harding and ‘The Cemetery At Ogbourne St Andrew: A Geophysical Investigation Of An Archaeological Landscape’ by Tim Fletcher. A number of these projects have been presented at national and international conferences such as those organized by BABAO and the *American Academy of Forensic Sciences*.

We have recently received an influx of new PhD students across our forensic disciplines including Brigida Corrieri and Marco Cummaudo (Co-Supervised by C. Cattaneo) who are researching human versus non-human bone especially with regard to differentiation and identification of fragmented and burned skeletal remains. Vail Johnson is examining decomposition of cadavers in suitcases and Mary-Jane Harding is continuing her Master’s research into the application of archaeological practice at fire investigation scenes.

Existing PhD students have also been busy with their research and attending conferences. Ozgur Gulhan who is developing sex discriminant functions for Turkish populations attended and presented at the ANZFSS conference in Adelaide, Australia, where she won 'Best Poster'. She also presented at the World Forensic Festival, 20th World Meeting of the International Association of Forensic Sciences, Seoul, Korea, and the International Congress of Anthropological Sciences, ICAS2015, Ankara, Turkey. Kayleigh Cooper continues her research into dental calculus and gained samples from the Capuchin Catacombs, Sicily, and Cementiri Vell, Formentera. She presented preliminary results of her dental calculus recording method at BBAO.

With regard to the staff at Cranfield Forensic Institute, Nicholas Marquez-Grant has gained Royal Anthropological Institute, Forensic Anthropology accreditation at Level 1. Dr Marquez-Grant and Dr Karl Harrison also continue to consult in a number of forensic cases from multiple police forces. Roland Wessling organized and hosted the European Meeting of Forensic Archaeologists (EMFA) at Cranfield Forensic Institute in August 2014 and this was the first time the meeting had been held outside of The Netherlands. Our visiting research fellow Mark Viner demonstrated portable radiology equipment for use in the field. Professor Keith Rogers, Dr Peter Zioupos, Dr Sophie Beckett and Charlene Greenwood continue to research bone mineralogy and biomechanics. We are pleased to welcome Fiona Brock to the team as part of our Forensic Laboratory staff and she has already carried out some exciting imaging analysis of artifacts and remains from a number of contexts.

Roland Wessling, Dr Sophie Beckett and Jessica Bolton have been working on the Virtual Skeletal Analysis (ViSA) project aiming to develop quantitative assessments of virtual 2D and 3D bone scan data.

Nicholas Marquez-Grant continues to run a module on osteoarchaeology to

undergraduates at University of Oxford and supervise PhD research there. He was also invited in December 2014 as a visiting scientist in forensic anthropology to the Office of the Chief Medical Examiner in New York City under the direction of Dr Brad Adams. Recently Nick has submitted for publication his Co-edited volume entitled *Forensic Archaeology: A Global Perspective*.

Over the year we have hosted a number of interns, including Almudena Garcia-Rubio who has been researching mass graves from the Spanish Civil War. Visitors include Richard Osgood from the MoD with a group of injured service personnel as part of Operation Nightingale to gain experience of working with archaeological human remains.

This coming year we look forward to welcoming our new PhD students. We are also introducing a new site for our *Practical Archaeological Excavation* module this coming May and are planning to expand our field work abroad as well as continuing to undertake exciting research with our current MSc students.

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**Department of Archaeology  
Bioarchaeology Research Group  
Durham University**  
*Kori Lea Filipek-Ogden and  
Charlotte Roberts*

*News and project outlines*

Charlotte Roberts: NERC funded *Palaeopopulation genomics of Mycobacterium tuberculosis* project based at the University of Manchester (Professor Terry Brown, with Professor Charlotte Roberts, Durham, as Co-I, and Romy Müller, University of Manchester, as postdoctoral research assistant - September 2013-September 2016). It exploits the outcomes of a previous NERC grant awarded to Professors Brown and Roberts (Biomolecular archaeology of ancient tuberculosis in Britain and Europe, NE/E018564/1, 2007– 2011) – see

[www.dur.ac.uk/archaeology/research/projects/all/?mode=project&id=667](http://www.dur.ac.uk/archaeology/research/projects/all/?mode=project&id=667)



Kori Filipek-Ogden: *Diachronic studies of health, diet, and migration in the Roman-Medieval periods in Transylvania*. Based at the Romanian Institute of Archaeology and Art History (Cluj-Napoca), in conjunction with Transylvania Bioarchaeology. PIs: Professor Ioan Stanciu (Romanian Institute), Katie Tucker (Winchester University), Kori Filipek-Ogden (Durham University), and Kathryn Hunt (TED Fellow, Palaeo-Oncological Research Organization) and Kayla Crowder (Durham University) as research assistants. Excavation and analysis of circa 1000 individuals from the multi-period Jucu Necropolis in Transylvania, Romania. Project is ongoing until 2019. – see [www.transylvaniabioarchaeology.org](http://www.transylvaniabioarchaeology.org) for more information.

#### *Impact beyond academia*

Members of the bioarchaeology group at Durham are involved in various ‘impact’ activities, i.e. making our research impact people beyond academics. This includes one of the department’s Impact Case Studies submitted to REF2014 (*Let the dead teach the living*: see

[www.dur.ac.uk/archaeology/research/impact/dead/](http://www.dur.ac.uk/archaeology/research/impact/dead/)). Some further details of our work:

Kirsty McCarrison (Durham Museums) and Charlotte Roberts: the Skeleton Science exhibition, first shown at Durham, moved to the Thackray Medical Museum, Leeds for its second showing (February 2014-February 2015). Alongside the exhibition we also developed a Teacher’s Resource, which has been distributed to teachers to use in their classes. We also have a lot of feedback from visitors to the exhibition that is being processed. Should any BABAIO members like to have a copy for teaching purposes (beyond academia), please let Charlotte know. The only proviso is that you give us feedback on how it is used ([c.a.roberts@durham.ac.uk](mailto:c.a.roberts@durham.ac.uk)!).

Becky Gowland: Becky teaches a public short course *Body Location and Recovery in Forensic Contexts*, jointly with Dr. Tim Thompson (Teesside University) and assisted by Tina Jakob. This past year was its most successful year yet, with delegates attending

from as far afield as Georgia. They are delighted that the course now includes talks and demonstrations from Durham police force’s victim recovery dog handlers.

Kori Filipek-Ogden, Claire Hodson, and Simone Lemmers (Dept. of Anthropology, Durham University): Kori, Claire, and Simone were awarded a British Council Grant as part of the *Science in Schools* initiative in November 2014. They developed specialized bioarchaeology lectures and practical workshops for 9 different secondary schools and the Maison des Sciences in Strasbourg, France, aimed at introducing students to different ways to study bones in the past. They received an overwhelming amount of positive feedback and the British Council has recently offered to extend the grant for their bioarchaeology outreach program to be repeated and extended next year.

#### *Report On The 16th BABAIO Annual Conference 2014: Durham University*

The Annual BABAIO Annual Conference was organized at Durham University and ran from the 12th-14th September. The Organizing Committee was Anwen Caffell, Rebecca Gowland, Tina Jakob, Andrew Millard, Janet Montgomery and Charlotte Roberts, assisted very ably by our student volunteers (Kori Filipek-Ogden, Claire Hodson, Ellen Kendall, Simone Lemmers, Sophie Newman, Elina Petersone-Gordina, Kendra Quinn, Brittney Shields, Sam Tipper-Booth, and Lauren Walther), and the graphics and programme design team (Beth Upex, Jeff Veitch, and Kori Filipek-Ogden). We were also generously funded by many organisations, which made the student prizes well worth having!

One hundred and sixty-six delegates from 17 countries were welcomed and enjoyed very pleasant weather in Durham. Four sessions were organized entitled: *The Body and Society* (Becky Gowland), *Biological Anthropology and Infectious Disease* (Charlotte Roberts), *New Developments in Biomolecular Methods* (Janet Montgomery), and *Open* (Tina Jakob and Anwen Caffell).

A total of 42 papers and 64 posters were presented. There were also three insightful keynote speakers to start the first three sessions (Pamela Geller, University of Miami), Niels Lynnerup (University of Copenhagen), and Matthew Collins (University of York), all of whom stimulated very interesting discussion. A whole range of subject matter dear to the heart of BABAO was presented during the course of the conference, and we benefitted from a Publication Workshop run by the *International Journal of Paleopathology*, the *International Journal of Osteoarchaeology*, and our President, Piers Mitchell.

However, the conference was not only about the academic bits! There was much opportunity to socialize over the weekend, starting with a reception in Durham Cathedral's cloisters on the Friday evening, following by the dinner, a quiz, and a ceilidh (Northern Lights Ceilidh Band) on Saturday evening in St Aidan's College. Some great dancing skills were on show! *NB*: There are still some remaining mugs and T shirts for sale!

#### *MSc Palaeopathology*

Fifteen students completed the MSc Palaeopathology course in 2014, with theses as follows:

Arthur, N.: Coming of age: the timing of puberty in Roman Britain, accessed through newly-developed osteological methods.

Clarke, S: Calculus and SEM analysis: diet in two medieval British populations.

Dodd, L: Strontium, oxygen and lead stable isotopic analysis of 13 individuals discovered at Palace Green Library, Durham.

Green, E: The development and testing of a cast system for the auricular surface method of age estimation.

Layton, E: 'Parasite paradises' – ecto- and endoparasites in two medieval Lithuanian populations.

Loeffelman, T: Health and Diet in an Anglo-Saxon cemetery population from Seaham, Durham.

McCoy, J: A study of the effects of sex, reproduction and age on immunocompetence.

Miller, C: Bending our understanding: discovering the effects of rickets on dietary isotopes using incremental dentine analysis.

Murphy, K: Vaccination in Nineteenth Century London: Infectious Disease and Public Health in an Industrialised Environment.

Reeve, I: Differences in health between early and later medieval populations from London.

Taylor, K: The social status of non-adults in Roman Britain: An analysis of the archaeological data from three late Roman cemeteries.

Teator, A: *Hallux valgus* in medieval Fishergate House, York and post-medieval Coach Lane, North Shields.

Turcic, T: Non-specific stress indicators of the Iron Age population from Vace, Slovenia.

Upham, S: Spinal Joint Disease at Coach Lane: the Relationship between sex and osteoarthritis.

#### *PhD students*

The following PhD students successfully defended their PhDs in 2014:

Michaela Binder: Health and diet in ancient Nubia through political and climate change; supervised by Charlotte Roberts and Andrew Millard.

Ross Kendall: A study of endemic malaria and haemolytic anaemias in past British populations; supervised by Becky Gowland and Andrew Millard.

Lindsay Powell: Childhood health and care in Roman London: the isotopic and



palaeopathological evidence; supervised by Becky Gowland and Andrew Millard.

The following are current PhD students:

#### Year 1

Susan Aylard: Does parasitic infection correlate with stress during childhood? Exploring the impact of poor living environments on the development of skeletal indicators of “stress” and parasitic infection in the bioarchaeological record from the Roman Period to the Post-Medieval (circa 1550–1850); supervised by Charlotte Roberts and Mike Church.

Joanna Moore: Environmental lead pollution in the Roman Empire – characterising its effects on juvenile exposure, health and geographic mobility; supervised by Becky Gowland and Janet Montgomery.

Sean Mui: Facing death: exploring the inhumation process in early and middle Saxon England; supervised by Becky Gowland, Sarah Semple, and David Petts.

#### Year 2

Kori Filipek-Ogden: Immunity and Isolation: Assessing leprosy susceptibility and stigma in Medieval England (11th-15th centuries AD), and its subsequent impact on contemporary society; supervised by Charlotte Roberts, Janet Montgomery and Becky Gowland.

Claire Hodson: Stressed at birth: metric variation in infants to determine whether stress affects skeletal dimensions; supervised by Becky Gowland and Charlotte Roberts.

Kendra Quinn: The impact of mobility on tuberculosis in England: a bioarchaeological and stable isotope approach; supervised by Charlotte Roberts and Andrew Millard.

Aryel Pacheco: Tuberculosis in Andean communities from the Tarapacá area (North of Chile) between 900 BC to 1450 AD; supervised by Charlotte Roberts and Andrew Millard.

Elina Petersone-Gordina: A bioarchaeological study of a complex urban cemetery from 15th - 17th century Riga, Latvia; supervised by Charlotte Roberts, Andrew Millard and Janet Montgomery.

Samantha Tipper-Booth: A bioarchaeological approach to the analysis of vertebral fractures amongst the Ancient Nubians from 5000B.C to 1500 A.D.: supervised by Charlotte Roberts and Penny Wilson.

Joe Walser III (joint with University of Iceland): In between breaths: respiratory disease, skeletal pathology, volcanism and environmental health in historical Iceland.’ – supervised by Becky Gowland, and Steinunn Kristjánsdóttir, Agnar Helgason and Claire Horwell (National Museum of Iceland and deCODE Genetics).

#### Year 3

Sophie Newman: The perils of industrialisation: child health in post-medieval England; supervised by Becky Gowland, Pam Graves and Mike Church.

Ariadne Schulz: Long bone morphology and its relationship to osteoarthritic patterning among archaeological populations; supervised by Becky Gowland and Una Strand Vidarsdottir (Anthropology).

Brittney Shields: The outcast dead: health and diet of the post-medieval poor of England; supervised by Becky Gowland and Pam Graves.

Lauren Walther: Stature, body proportions and environment in England; supervised by Becky Gowland and Andrew Millard.

#### Year 4

Davina Craps: Contextualising osteoarthritis and rheumatoid arthritis in post-medieval England; (recently submitted) supervised by Becky Gowland and Pam Graves.

Ellen Kendall: Milk matters: The effects of environment on breastfeeding practices in two Early Medieval English cemetery populations; supervised by Andrew Millard and Becky Gowland.

Jo Matias: More than male and female: gender in western Iron Age Europe; supervised by Tom Moore and Becky Gowland.

Veronica Tamorri: The semiology of tomb arrangement in predynastic and early dynastic Egypt; supervised by Penny Wilson and Becky Gowland.

Maria Lahtinen: Diet, migration and the beginning of cultivation in the Medieval site Iin Hamina Northern Finland; supervised by Peter Rowley-Conwy and Janet Montgomery.

Samantha Neil: Patterns of social mobility during the Early Neolithic and the development of the Neolithic in the British Isles; supervised by Chris Scarre and Janet Montgomery.

Year 5

Zahra Afshar: Mobility and economic transition in the 3rd millennium BC in the population of southeastern Iran, Shahr-i Sokhta; (recently submitted) supervised by Charlotte Roberts, Andrew Millard and Tony Wilkinson.

Marieke Gernay: Health and diet in late medieval Belgium, France and the UK: A comparison.

Julie Peacock: Disability and traumatic brain injury (TBI) in Britain: AD 1066-AD 1800.

William Southwell-Wright: 'Disability and difference? Assessing social perceptions of physical impairment in Roman Britain; supervised by Becky Gowland and Sarah Semple.

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**School of History, Classics and  
Archaeology  
University of Edinburgh**  
*Linda Fibiger*

*Word of Mouth: Talking about how we interpret skulls*

Elena Kranioti and Linda Fibiger participated in a collaborative project between the

University of Edinburgh, Surgeons' Hall Museum and Craigmillar Community. The Word of Mouth project involved the examination of an unidentified skull found in Edinburgh College of Art's teaching collection followed by an interactive installation. The installation was part of the ASA 2014 conference, where attendees and members of the public were asked to build displays around the skull. A number of stills were produced during the conference, and work began to turn the information into a public exhibition and wider engagement project. As part of Surgeons' Hall Museums outreach programme, a 3D print of the skull was taken to Craigmillar Community Arts during the Craigmillar Arts Festival. Here members of the community used the model to arrive at their own interpretations of the cultural and personal significance of the skull. For more information see [www.surgeonshallmuseum.wordpress.com/2014/08/14/word-of-mouth-talking-about-how-we-interpret-skulls/](http://www.surgeonshallmuseum.wordpress.com/2014/08/14/word-of-mouth-talking-about-how-we-interpret-skulls/)

*Field School*

The department will start a new field school this year. Elena Kranioti's project in Crete aims to document the biological identity of different populations from the Venetian Period that were buried in the Agios Nicolaos Cemetery in Lasithi, Crete. This project is collaboration with the Ephoria of Antiquities in Crete and the archaeologist Eleonora Semelidou.

*Edinburgh Unit for Forensic Anthropology (EUFA)*

Members of the Edinburgh Unit for Forensic Anthropology (EUFA) have been presenting at a number of conferences over the course of last year, including invited presentations at the 6th Archaeological Conference of the Balearic Islands in Formentera, Spain, the 3rd Congress of the International Society of Forensic Radiology and Imaging in Marseille, France, and the Scottish-Hellenic Society meeting at the University of St Andrews.

EUFA also hosted two forensic anthropology/oste archaeology workshops during July for the Lothian Equal Access Program for Schools (LEAPS). LEAPS is a

successful, unique and expanding participation programme, funded by higher education institutions and local council partners, to promote higher education in South East Scotland. The program aims to promote social inclusion and equality of opportunity by bringing late Primary/early Secondary level school children from disadvantaged areas that have a low chance of going into secondary education to the University.

In November, EUFA was also invited to participate in Skills Scotland, an interactive careers and skills exhibition for local schools which had over 2,500 visitors.

Patricia Prado from the Department of Anatomy of Bahia, Brazil, joined the research group in Forensic Anthropology in June 2014 and she will be working at Edinburgh for one year. Her project involves the study of cranial non-metric traits in modern populations and she has already studied modern collections from Greece, Cyprus, Portugal and Brazil.

#### *Ongoing PhD Research*

Angela Boyle: An osteoarchaeological study of peri-mortem trauma in Medieval Britain.

Annamaria Diana: No winter lasts forever...? A human-osteoarchaeological study of populations from Romania during the Little Ice Age (University of Edinburgh Teaching Scholarship).

Anna Evatt: A bioarchaeological investigation of European Mesolithic burial practices and taphonomy.

Sheena Frazer: An archaeozoological study of the Links Of Noltland, Orkney (Historic Scotland).

Laura-Kate Girdwood: A comparison of medieval dental health in Scotland and Spain.

Julieta Gomez Garcia-Donas: Age estimation using thin sections of ribs from a modern Greek autopsy sample.

Zuzana Hukelova: Changes in lifestyle from the Neolithic to the Bronze Age in Central Europe.

Mara Karell: Identifying the Disappeared: Testing a Novel Method for the Sorting of Commingled Human Remains.

Mandan Kazzazi: Dental metric standards for sex estimation in archaeological populations from Iran.

Helen Langstaff: The heritability of facial morphology.

Caroline Lille: Decreased bone mineral density related to chronic alcohol abuse and its effect on histological ageing methods.

Phillip McMath: An osteoarchaeological investigation into Byzantine human health on the Black Sea Coast of Bulgaria.

Catherine Shupe: Juvenile health in skeletal remains from Islamic Andalucía.

Nicole Thiemann: Facial soft tissue thickness in modern Greeks using advanced medical imaging techniques.

Marlo Willows: Health in Medieval Scotland.

#### *Completed PhD Research*

Dawn Gooney: The human skeletal remains from Berst Ness, Westray (Historic Scotland).

#### *Dissertations Submitted for the MSc Osteoarchaeology, 2013/14*

Nieves Sanchez Castillo: Vaccean and Celtiberian Views on Animals: Faunal Remains and Animal Iconography.

Anne Tuominen: Analysis of Mammal Remains from Medieval Cromarty.

David Blauvelt: Look Upon My Teeth and Know Me: The Excavation and Analysis of the Domestic Irish Horse Burials of Achill Island.

#### *Dissertations Submitted for the MSc Human Osteoarchaeology, 2013/14*

Nicole Coscolluela: Sex and Gender Differentiated Patterns of Health and Nutrition of the Greek and Hellenistic Populations at Nessebar, Bulgaria.

Hannah Smith: A Bioarchaeological Study of the Relationship Between Health and Socio-Economic Status in a Classical Greek and Hellenistic Skeletal collection from Ancient Messembria (Nessebar), Bulgaria.

Rachel McMullan: Paleopathological Evidence at Messembria.

Abby Cooper: A Biocultural Approach to Interpreting the Experience of Congenitally impaired individuals from Medieval London.

Aida Romera Barbera: A Bioarchaeological Approach to the Social, Economic and Cultural Context of the Early Byzantine Population of Nessebar.

Natasha Osing: Human Sacrifice in the Royal Tombs from the Shang Dynasty.

Viviane Mee: Methodology Testing on Sorting Commingled Subadult Remains From a Mass Grave in an Archaeological Context from 12th - 18th Century Ibiza.

Harriet Broomfield: The Link Between DISH and Obesity in the Archaeological Record.

John Baber: Analysis of age at death and stature at the Nesebar site in Bulgaria.  
*Dissertations Submitted for the MSc Forensic Anthropology, 2013/14*

Jack Portwood: Simulation of a Mass Grave for Forensic Identification Purposes.

Pongpon Traithepchanapai: Age Estimation Based on the Metamorphosis of the Clavicle in a Modern Thai Population.

Yi-huaTang: Cranial Blunt Force Trauma Analysis with an Experimental Model.

Anne Hice: Postmortem versus. Antemortem Fracture Patterns on Long Bones.

Ashley Capps: Profiling of an Archaeological Skull Collection from Ibiza, Spain.

Monika Lay: The Use of Three Dimensional Modelling of the Temporal Bones in the Sorting of Commingled Human Skeletal Remains.

Ciara Mannion: Manual Three-Dimensional Facial Approximation: A German Case Study  
Elizabeth Murray: Assessing the Validity of Scoring Cranial Suture Closure to Estimate Age at Death, Through 3D Reconstruction of CT Scans.

Hannah Morris: Methods for the Identification of Deceased Individuals.

Tamara Guizán: The Influence of Diet on Histological Structure of the Bone.

Lukas Albietz: A systematic geometric morphometric facial analysis of anger proneness: Exploring forensic applications.

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**Department of Archaeology**  
**University of Exeter**  
*Catriona McKenzie*

*Postgraduate Research Students*

Cynthia Bradley continues her doctoral research on *Remaking the Mazeway: Skeletal and Mortuary Evidence from the Ancestral Pueblo site of Wallace Ruin*, southwestern Colorado, USA. During the past year, she evaluated and rejected the hypothesis that the selection of at least 30 corpses for deposition within a long-abandoned Chaco great house was based upon paleopathological identity, or a shared physical condition. This research is the first to document the occurrence of scurvy in prehistoric populations of the Mesa Verde Region.

Belinda Tibbetts has been working on her project *Foetal and infant skeletal palaeopathology as an indicator of maternal health and population stress*, which is supervised by Dr Catriona McKenzie. The first year of her research has involved the preliminary analysis of archaeological collections in the UK and Turkey, as well as the detailed description of non-viable skeletal

pathology from medical collections. Belinda spent the summer at Çatalhöyük as a member of the Human Remains team which she thoroughly enjoyed. She has successfully passed her upgrade to a PhD and is looking forward to the forthcoming year.

Mandy Kingdom is working on a project titled, *The past people of Exeter* which is supervised by Dr Catriona McKenzie. This project will examine the demographic profile and health status of individuals from medieval Exeter. The first year has involved curating the skeletal collections and a detailed analysis of the individuals is due to commence shortly. In addition, Mandy has been busy developing links with the local community through the delivery of five local talks and three public engagement sessions. These have been very successful and many people are looking forward to seeing Mandy's work progress. Mandy has also recently successfully passed her upgrade to a PhD.

Sarah Cuthbert has just commenced an AHRC funded project, *Enriching the Neolithic: The forgotten people of the Barrows*, which is supervised by Prof. Anthony Harding. This project will provide an osteological analysis of human remains excavated between 1700 and 1970 from Neolithic tombs in the south of Britain. The project will analyse collections that have either never been analysed before, or have not been analysed using the benefits of modern techniques. She is collecting demographic data and information on palaeopathology. The project also aims to use stable isotope analyses to provide additional information.

#### *Other Research News*

Catriona McKenzie and Dr Eileen Murphy (Queen's University Belfast) are currently completing the final manuscript for *Life and Death in Medieval Gaelic Ireland: The skeletons from Ballyhanna, Co. Donegal*, which will be published this year by Four Courts Press, Dublin. The book details the osteological and palaeopathological results of the analyses of 1269 skeletons from Ballyhanna, Co. Donegal.

*MSc in Bioarchaeology, Dissertations Completed in 2014*

Malorie Coble: A multidisciplinary approach to understanding tarsal coalition in Medieval Exeter.

Hannah Gautrey: Life on board an East India Company Ship.

Holly Hunt-Watts: Health, Wellbeing and Status in Medieval Exeter.

Helena Ryan: Early Horse Domestication: A Zooarchaeological and Geometric Morphometric Investigation.

Iain Watt: Inflammatory Erosive Arthritis: Diagnosis, Antiquity and Bioarchaeology.

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**School of Applied Sciences**  
**University of Huddersfield**  
*Anna Williams*

Forensic Anthropology at Huddersfield continues to gain momentum, since the appointment of Dr Anna Williams as Senior Lecturer in 2013. The BSc/MSci in Forensic and Analytical Science continues to thrive, and the newly created suite of Forensic Science MScs, including Forensic Entomology, Forensic Anthropology, Forensic Toxicology and Forensic DNA/Body Fluids is underway, with good cohort numbers.

[www.hud.ac.uk/sas/forensicandanalytical/courses/](http://www.hud.ac.uk/sas/forensicandanalytical/courses/)

The newly formed Forensic Anthropology Research Group (FARGo) now has 11 members, since its inception in early 2014. Research is varied, and currently covers a range of topics, including the effect of water submersion on skin colour; location of clandestine burials using amino acid detection; and further work on identification of VOCs from aged blood stains for comparison to the performance of blood-scenting dogs. Three new, fully funded PhD students are expected to be joining the group in April 2015, investigating bacterial colonisation of cadavers for PMI estimation,

and recognition of evidence of torture on bone after burning. Many of these projects involve the use of the new 'HuddersFIELD' outdoor forensic laboratory for decomposition and taphonomy experiments.

Lorna Irish is nearing the end of her PhD entitled *The identification and quantification of gaseous products in relation to victim recovery (VR) dog efficiency*. She has presented her research at the National Crime Agency (May 2014), the Police Service of Northern Ireland (Oct 2013), the Irish Civil Defence (Dec 2014) and the National Search and Rescue Dogs Association (Oct 2013), and will present at the prestigious Impact Police and Canine Training Conference in Loughborough in June this year. We have hosted several police VR dog training events so far in 2014 and we intend to do more next year.

The University of Huddersfield hosted the Annual Student Conference of the Chartered Society of Forensic Sciences, focused on career progression for budding forensic scientists, in December 2014. It was entitled *How to Get Ahead in Forensics: Career Pathways in Forensic Science*, and by all accounts, was very well received. Huddersfield was also the venue for an International Symposium focused on the question of 'Is a Human Taphonomy Facility Feasible in the UK?', hosted by Dr Anna Williams and Professor John Cassella, at the request of the Home Office Forensic Pathology Unit. This brought together academics, government officials and representatives of organisations such as the Human Tissue Authority, DEFRA and the Cemetery Research Group. The symposium stimulated important debate, and a summary of the findings of the group will be circulated shortly.

For more information, or to use the HuddersFIELD facility, please contact Dr Anna Williams, at [a.williams@hud.ac.uk](mailto:a.williams@hud.ac.uk)

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## School of Anthropology and Conservation University of Kent

*Chris Deter*

2014 saw many changes for Biological Anthropology at the University of Kent. We gained new staff, bringing the Bio Anth team to eight members of staff. We secured promotions, developed new research centers, and continued to publish extensively in leading peer-reviewed journals. Kent is now one of the UKs leading centers in Biological Anthropology. The 2016 BABAO annual conference will be held in the School of Anthropology and Conservation at the University of Kent. Keep an eye on the BABAO web site for more information.

### *PhDs Awarded*

Justyna Miskiewicz: Ancient Human Bone Histology and Behaviour. Supervised by Patrick Mahoney.

Kerstin Schillinger: From psychology lab to the artefactual record: An experimental approach to the effects of social learning on material culture. Jointly supervised by Noreen Von Cramon Taubadel and Stephen Lycett.

### *Ongoing PhD Students*

Kelly Greenway: Threat and Display: Reproductive competition in wild male western gorillas (*Gorilla gorilla*).

Alastair Key: Form and Function in the Lower Palaeolithic: An experimental assessment of the performance attributes and behavioural consequences of stone tool forms in the Lower Palaeolithic.

Sarah Myers: Maternal investment and postnatal depression - an evolutionary approach.

Johanna Neufuss: Hand use during locomotor and non-locomotor behaviours in African apes.

Martin Wood: Does milk drinking have an effect on enamel growth in humans?

Jakob Villioth: Aggressive interactions in wild chimpanzees (*Pan troglodytes*) - demographic and ecological causes and consequences.

#### *New Research Centers*

The Skeletal Biology Research Center was co-founded by Tracy Kivell and Patrick Mahoney. Sarah Johns, Nicholas Newton-Fisher and Oskar Burger were all involved in the launch of the University of Kent, Centre for Interdisciplinary Studies of Reproduction. Another center, The Living Primates Research Unit is being developed (coming soon).

#### *Conferences and seminars*

This summer the School of Anthropology and Conservation hosted a series of public talks entitled, *Questions in Human Evolution*. Speakers included Susan Alberts, Duke University; Robert Walker, University of Missouri; Isabelle De Groote, Liverpool John Moores University; Claudio Tennie, University of Birmingham.

In July, we hosted a special double seminar, which featured Kornelius Kupczik from the Max Planck Institute for Evolutionary Anthropology and Viviana Toro-Ibacache, from the Hull-York Medical School.

The School hosted a bi-monthly research seminar series. Invited guest speakers included: Christina Moya, London School of Hygiene and Tropical Medicine; Tom Booth, Natural History Museum; Matthew Skinner, UCL (now University of Kent); Justyna Miskiewicz, University of Kent.

#### *KORA*

Our commercial osteology unit remains busy. We have had five new commercial contracts from regional archaeology units. These included a Bronze Age burial from Kent.

#### *Other news*

Tracy Kivell and Mathew Skinner attended the *Rising Star Workshop* at The Evolutionary Studies Institute, University of Witwatersrand Johannesburg, South Africa.

## **Department of Archaeology University of Sheffield**

*Lizzy Craig-Atkins*

2014 saw the development and initiation of some exciting new projects at Sheffield. This year we have also been pleased to welcome a new cohort of students from across the world onto our MSc and doctoral research programmes. Our core teaching team remains unchanged: primatology/human osteology (Pia Nystrom), palaeoanthropology (Kevin Kuykendall), human osteology (Lizzy Craig-Atkins, Katie Hemer), zooarchaeology (Umberto Albarella, Paul Halstead).

Several collaborative projects have begun or been completed this year. December saw the publication of the *Medieval Childhood* volume edited by Dawn Hadley and Katie Hemer, with several contributions by both current staff and alumni: Lizzy Craig-Atkins (eaves-drip burial), Katie Hemer (childhood migration), Kirsty Squires (cremations of infants and children) and Sally Smith (late medieval peasant childhood). We continue activities to promote osteology to the public, which this year have included fairs, festivals, museum events and courses for children and adults with learning disabilities. Much of this great work is undertaken by our graduate research community.

#### *New project outline*

*The Role of Weaning History in Medieval Infant Identities*. PIs: Lizzy Craig-Atkins (Sheffield) and Julia Beaumont (Bradford), PDRA Jacqueline Towers. Funded by a University of Sheffield Early Career Researcher Scheme grant awarded to LC-A.

This project employs incremental dental isotope analysis to test the hypothesis that infants buried in special locations around the walls of early medieval churches were yet to be weaned.

During the latter part of the early medieval period, c. A.D. 700-1100, many babies who died before their second year were buried in special places, including around the walls of churches in what has become known as 'eaves-drip' burial. Several hypotheses have



been presented to explain why only the youngest children were treated in this unique way, including the suggestion that only infants who had not been weaned were provided with 'eaves-drip' burial. By recording nitrogen and carbon isotope ratios in multiple, incremental layers of tooth dentine this project will, for the first time, produce experimental data to test this hypothesis. Analysis of these data will provide the most detailed possible record of dietary history from the archaeological skeletal remains of 80 children and thus enable investigation of weaning practices, the identity and autonomy of the infant and the role of dietary status in the earliest medieval Christian communities in England.

#### *News and Projects*

Congratulations are due to those who completed their doctorates in 2014: Tom Booth and Conrad Brimacombe. Another excellent Masters cohort this year produced some of our most exceptional overall marks and research projects: Ioannis Kontopoulos, Marisa McKane, Eoin Parkinson, Joke Sommers and Rebecca Watson all received Distinctions.

This year, Lizzy Craig-Atkins received two research grants as part of support offered by the University of Sheffield to early career researchers and teaching staff. The first project, *The Role of Weaning History in Medieval Infant Identities* appears above. At the time of writing, data collection and analysis is being undertaken by Jacqueline Towers. The second project is to develop the ongoing *Rothwell Charnel Chapel Project* into a web resource to facilitate teaching, ongoing research and public engagement and begins in the next few months. Permission having recently been obtained for sampling, she is also applying for support for radiocarbon dating of the Rothwell ossuary.

Kevin Kuykendall's current research focuses on revisiting dental aging in chimpanzees. A series of papers are in progress to re-analyse both existing and new datasets for dental development in chimpanzees to improve age estimation, to better understand the nature and

magnitude of the 'wild effect' on dental developmental schedules in captive and wild populations, and to work toward innovative methods to apply this information to aging immature fossil hominids.

During the summer of 2014, Diana Mahoney Swales directed the two-week Human Osteology Field School as part of the larger Thornton Abbey Field School run by Hugh Willmott, also of the Department of Archaeology. Diana is currently undertaking analysis of medieval human skeletal remains recovered from that excavation, the very preliminary findings of which were presented at the European Association of Archaeologists meetings in Istanbul. Furthermore, Diana is working on the analysis and interpretation of the human skeletal assemblage from the Oakington early Anglo-Saxon cemetery excavated by Duncan Sayer from the University of Central Lancaster.

#### *Ongoing Doctoral Research Projects*

Alison Atkin: Identifying the 'lost' Black Death burial grounds in Britain: a palaeodemographic approach.

Vanessa Campanacho: The influence of skeletal size in bone degeneration rate, of the pubic symphysis, auricular surface and acetabulum, in two identified skeletal collections (19th to 21st centuries).

Kyle Billington: The implication of a grasping hallux for structure and function of the lower limb of early hominids and evolution of bipedalism.

Jennifer Crangle: An Examination into Post-Depositional Disturbances of Human Remains during the English Medieval Period, In Terms of Their Ideological & Physical Fate.

Jane Ford: Hyaenas and Neanderthals in the British Middle Palaeolithic.

Rebecca Haywood: The perennial or occasional 'Nutcracker Man'? Does dietary adaptation explain the derived craniofacial morphology of *Paranthropus*?



Isabelle Heyerdahl-King: Middle Pleistocene hominid geographical variation and cranial trait comparison.

Stacey Massey: Investigating the lifestyle and activity of the communities discovered at Fishergate Bar, York (The Barbican).

Jonquil Mogg: Refining locomotory style in the fossil record through the use of muscle attachment sites.

Kinsey Oleman-Grace: *Homo erectus* life history: revisiting regressions in the light of recently recovered smaller-brained individuals.

Hannah Plumer: Paleopathologies among the Maya sub-elite: Comparisons between two sites in northwestern Belize.

Valasia Strati: The effects of Industrialization on the state of health and disease of a Victorian Urban Population: A case study from St. Hilda's Church, South Shield (Newcastle).

Marit Van Cant: Analysis of human skeletal remains from medieval rural sites in northwest Europe (Erasmus).

#### *Facilities*

This year saw the refurbishment of the human osteology lab which now boasts a bright blue 'feature wall' alongside more practical considerations like new furniture and AV equipment. The new lab is a brilliant asset for our taught course students and helps us continue to provide a first-class learning experience.

#### *Online activities*

Aside from personal and project pages on our departmental website, Sheffield have an active group of bloggers and tweeters. Staff and project blogs include: <https://southafricanpalaeocaves.wordpress.com/>; <http://thorntonabbey2014.blogspot.co.uk/> and [www.historymatters.group.shef.ac.uk/](http://www.historymatters.group.shef.ac.uk/). Personal blogs by alumni and current students: Alison Atkin (current PhD): <https://deathsplaining.wordpress.com/>; David

Mennear (MSc HOFA 2012) <https://thesebonesofmine.wordpress.com/>; Alexandra Ion (MSc HOFA 2011): <https://bodiesandacademia.wordpress.com/>; James Kendrick (MSc Palaeoanth. 2013): <https://jkendrickensis.wordpress.com/author/jamiekendrick/>. Alison Atkin, Katie Hemer and the Thornton Abbey project all tweet. Also find our department on both Facebook and YouTube!

We look forward to seeing you all in Sheffield at BABAO conference 2015 from 18th-20th September!

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### **Department of Archaeology University of Southampton**

*Sonia Zakrzewski*

2014 has been another busy and successful year for staff and students at Southampton. Eleanor Williams successfully completed her PhD and has now started teaching in medieval archaeology and bioarchaeology at Canterbury Christ Church University. Together with Jaco Weinstock, Ellie has started a zooarchaeology research project studying the faunal remains from Amara West in Sudan (with Neal Spencer, British Museum).

Teaching and research collaborations have continued to develop across the university, most notably with the Faculties of Social & Human Sciences, Medicine and Engineering. The Archaeology department has started a new Archaeology & Anthropology undergraduate degree programme – with biological anthropology so far appearing very popular. Together with Medicine and Anthropology, Jo Sofaer has been teaching a new *Body and Society* module.

Sonia Zakrzewski's collaborations with Engineering are continuing with Alex Dickinson and Martin Browne, studying stress and structural integrity in parts of the skeleton through microCT ( $\mu$ CT). This research has developed as a result of engineering developing implants and joint replacements. Recent work has been focusing

on the development of reconstructing models of tooth crowns from root fragments and on the structural variation in long bones from the civil war site of Basing House. Alistair Pike's isotopic studies with Geochemistry have flourished – most recently studying Neanderthal dietary patterns.

#### *Current Research Students*

As noted earlier, Ellie Williams successfully defended her PhD thesis, entitled: Fresh cadaver to skeletal matter: text, practice and the Cluniac death-course.

Sarah Stark started her doctoral research studying patterns of morphological change in juveniles, using GM after  $\mu$ CT, laser scanning and other methods (co-supervised by Sonia Zakrzewski, Jo Sofaer & Simon Mays).

Steph Evelyn-Wright started her doctoral research, funded through the AHRC SWW DTP (co-supervised by Sonia Zakrzewski, Lena Isayev [Exeter] and Hella Eckhardt [Reading]), looking at attitudes to and recognition of disability in Roman bodies and their representation and burials in cemeteries.

Richard Chuang, Brittany Hill, Louise King and Carolyn Felton continued their doctoral research.

#### *Continuing PhD students*

Richard Chuang: Genetic and isotopic analysis of Roman equids.

Carolyn Felton: Markers of occupational stress in the spine.

Brittany Hill: Regional differences in cremations and burials with animals in Roman Britain

Louise King: Variation in auditory ossicles: an evolutionary and palaeopathological evaluation.

#### *Dissertations Approved for the MA in Osteoarchaeology 2013-4*

Christianne Fernee: Changes in tooth form between Roman, Anglo-Saxon and modern

periods in Britain: a study of differences in size, morphology and wear.

Kathleen McLaughlin: Execution Cemeteries in Context: Anglo-Saxon Barrow and Non-Barrow Execution Cemeteries.

Jessica Norman: Reduction in mandibular corpus height due to molar tooth loss and its potential as an age indicator in populations subsisting on a coarse diet: A test of Mays' age estimation method on the Medieval village of Wharram Percy.

Megan Seehra: Bare Bones: An examination of the osteological indicators of combat in medieval Europe.

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### **School of Science & Engineering Teesside University *Priscilla Ulguim***

The last year saw a number of exciting developments and ventures for the Teesside University biological anthropology research group, spanning conferences, publications, workshops as well as digital technology.

We continued our involvement in short courses and outreach events, including another successful *Body Location and Recovery Course* in conjunction with Durham University: our thanks to the team and participants. David Errickson also conducted a forensic anthropology workshop with Teesside Archaeological Society in November allowing the public to become forensic anthropologists for the day. We hosted a crime scene, as well as lab and courtroom sessions. For 2015 we have more exciting events planned, such as the international outreach festival *Pint of Science* which our team is delivering in pubs in May.

There were several conference presentations from our group across the UK: Newcastle, Leicester, Bradford, and some further afield, including papers at the American Academy of Forensic Sciences (AAFS) meeting in the USA. We will continue our strong representation at the AAFS with bookings

already made for 2015. Our team also gave presentations at the Teesside Archaeological Society and Teesside University Research forums.

We published throughout the year, with topics ranging from head-mounted cameras and 3D visualisations to osteometric analyses. Books, chapters and articles were also completed and move to press in 2015, including several chapters in the eighth volume of Oxbow's Studies in Funerary Archaeology series: *The Archaeology of Cremation: burned human remains in funerary studies*, edited by Dr. Tim Thompson, for release in March 2015, and articles in the *Journal of Forensic Science*, among others.

Our research continues to span both the globe and the breadth of forensic and biological anthropology and archaeology. This year we welcomed Sanita Nezirovic as a new PhD researcher working on aspects of dealing with commingled remains in Bosnia. In addition, we now have several researchers working on one of our favourite topics: burned bone, as most recently, Priscilla Ulguim joined us to continue her research on such remains from archaeological sites in the southern Brazilian highlands, following her Masters degree under Dr Christopher Knüsel.

Congratulations to Mark Butler, who completed his PhD, entitled: Using eye-tracking technology and verbal protocol analysis to understand volume crime scene investigator practice. We also congratulate Dr. Tim Thompson, twice! Firstly, for his fellowship from the National Teaching Fellowship Scheme (NTFS); few of these are awarded to educators each year to celebrate outstanding achievement in learning and teaching in higher education. Secondly, on becoming a Professor at Teesside University. Tim also took up the Chief Editors' role at the journal *Science and Justice*, and he's looking forward to paper submissions from BBAO members.

Our group also has a growing digital presence. We run a research blog at [www.blogs.tees.ac.uk/anthropology/](http://www.blogs.tees.ac.uk/anthropology/) and

maintain a Twitter feed @TU\_Anthropology alongside our individual blogs and twitter accounts. Some of our research projects have shiny new webpages, such as the *Jê Landscapes of Southern Brazil*, scheduled for release early in 2015. Our team is also behind *Anthronomics* (MD Tim Thompson), which successfully launched the Dactyl app to the Apple Store. This is an exciting advance in the use of modern technology in our field: scanning 3D images of skeletal collections and making them available for teaching and research on tablet devices.

#### *Current PhD Students*

Chrysostomou, P. Morphoscopic and morphometric methodological approaches for sorting commingled human remains.

Ellingham, S. Advanced analysis of burned bone from forensic and archaeological contexts.

Errickson, D. The application of surface scanning in a forensic anthropological context.

Griffith, S. Understanding the effects of water submersion on human bone modification.

Nezirovic, S. The effect of misidentification of remains from commingled graves on science and society in Bosnia.

Olakanye, A. Microbial forensics: the application to grave location.

Ulguim, P. F. Understanding the funerary practice of cremation within the southern Brazilian highlands: Applying advanced methods to burned bone in an archaeological context.

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POSTGRADUATE RESEARCH  
ABSTRACTS

**Mobility and economic transition in the 5th  
to the 2nd millennium B.C. in the  
population of the Central Iranian Plateau,  
Tepe Hissar**

*Zahra Afshar*

*Durham University*

*PhD Abstract (completed)*

Iranian archaeology has had a keen interest in exploring unexplained events occurring during the 5th to the 2nd millennium B.C. on the Central Iranian Plateau. This is represented by transformations in material-culture, a differentiation in mortuary practices, and site abandonment and reoccupation, and has traditionally been explained by the influx of new populations into Central Plateau sites. The site of Tepe Hissar, the subject of this research, located in the north-east region of the Central Plateau and appears to have undergone these changes during its existence (late 5th to the early 2nd millennium B.C.). This research uses a bioarchaeological approach to tests the hypotheses that the socio-cultural-economic changes that occurred at Tepe Hissar over time, accompanied by influxes of new people into the site, particularly in Hissar periods II and III; ultimately impacted on subsistence economy, diet, and general health, and also resulted in a rise in tension and interpersonal violence.

The biological affinity data suggest that the changes at Tepe Hissar were not accompanied by large scale population replacement/immigration/or invasion. Rather, there was more small scale population replacement over time, although these changes were accompanied by interpersonal violence. These changes did not greatly impact on the general health of people over time, although people in each period experienced different frequencies of stress and disease, and periods of malnutrition; both females and males were affected equally in each period.

The dental disease data showed that changes during Hissar II and III had a significant impact on the oral-health, and Hissar I

experienced better oral-health compared to later periods; this may be due to changes in subsistence economy and diet, food preparation techniques, and how the teeth were used as tools. The data indicate that males possibly suffered poorer dental health compared to females at this site; they may have had a different diet, or possibly used their teeth as a third hand more than females. The isotopic data (C/N) showed that the inhabitants had access to similar food resources across all periods; individuals from each period, both sexes from different age categories, had a similar diet based on C3 plants and animal protein, as well as a small contribution from fresh water resources.

Overall, this research suggests that the society who lived at Tepe Hissar overall may have had an appropriate social structure and adequate food resources to withstand socio-cultural-economic changes, enabling the community to be more centralised socially, economically, and politically such that the changes and events they experienced did not markedly affect their health or nutritional status.

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**Does parasitic infection correlate with  
stress during childhood? Exploring the  
impact of poor living environments on the  
development of skeletal indicators of  
“stress” and parasitic infection in the  
bioarchaeological record from the Roman  
Period to the Post-Medieval  
(c. 1550 – c. 1850)**

*Susan Aylard*

*Durham University*

*PhD Abstract*

Helminthiasis, infestation with intestinal worms, is still one of the most common childhood infections worldwide and is currently considered a neglected tropical disease. The World Health Organization estimates that more than 880 million children currently require treatment for infection with roundworm (*Ascaris lumbricoides*), whipworm (*Trichuris trichiura*) and/or hookworm (*Ancylostoma duodenale* and *Necator americanus*); the majority of these

children are between the ages of one and fourteen years (WHO, 2013). Impact of infection varies depending on the species of worm(s) present, intensity of infection, and nutrition of the host. Although these intestinal helminth infections are rarely the direct cause of death, they can negatively impact the host's nutrition, growth, physical fitness and cognitive abilities.

This study will combine the microscopic analysis of soil samples from sub-adult burials and the macroscopic analysis of skeletal remains from the same burials to determine if there is a correlation between the presence of human intestinal parasites, as seen in soil samples associated with burials of sub-adults, and non-specific nutritionally and environmentally related "stress indicators" observed on skeletal remains. The focus of the study will be on sub-adult individuals, because it is during childhood that the majority of the non-specific "stress indicators" develop on the skeleton; this is also the age group most likely to have intensive infections with *Ascaris* and *Trichuris*, the two species of intestinal worms most commonly found to infect people (WHO, 2013) and also most commonly identified from archaeological sites.

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**Degenerative joint disease in non-human primates and its relationship to locomotor adaptation and substrate use**

*Laura Baiges-Sotos*  
*University of Sheffield*

*PhD Abstract*

Degenerative joint disease (DJD) has repeatedly been recorded on postcranial skeletal remains among primates. Several researchers have worked in identifying the disorders and in giving plausible causes for their appearance.

As a new approach to the phenomenon, this study evaluates the influence that different locomotor strategies and substrate use can have on the prevalence of DJD. Non-human primates are good models for this investigation, given their phylogenetic

proximity with humans but, most importantly, for the wide range of locomotor behaviours they perform. Therefore, all weight bearing joints are evaluated for a set of non-human primate species chosen to exemplify all locomotor strategies observed in this order, but also to provide variation on the preferential substrates, which implies different biomechanical inputs for the joints.

Degenerative processes are assessed and quantified by the observation of different osteological features on the articular surfaces of the joints (porosity, osteophytosis and eburnation) using a numerical scale ranging from 0 (absent) to 3 (severe), following Hukuda *et al.*, 2000. The proportion of articular surface affected is recorded, as well as trauma. Age, sex and body mass are either recorded or inferred to control for possible bias.

DJD is expected to be more prevalent in those joints that deal with more stress during locomotion but also in those species that preferentially use stiff, non-deformable substrates, as the impact on the joint from the interaction between the primate and the substrate is greater than that resulting from the interaction with a compliant substrate.

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**Health and diet in ancient Nubia through political and climate change**

*Michaela Binder*  
*Durham University*

*PhD Abstract (completed)*

The aim of my doctoral thesis is investigate the impact of political, cultural and climatic change on health and living conditions of a past human population. The research is based on an examination of evidence of disease and dietary habits on human remains excavated in the two cemeteries associated with the site of Amara West, in Northern Sudan. The settlement served as the administrative capital of the province of Upper Nubia during the second half of New Kingdom Egyptian colonial rule (1250-1050BC) over the region. Occupation of the site continued for at least 300 years after the breakdown of Egyptian

colonial rule, a time period, which also coincided with a significant climatic deterioration which would have severely affected the amount of arable land available. Due to its excellent preservation and well grounded excavation records, the settlement and cemeteries represent a well suited case study in order to test whether and in what way the changes in political rule associated with the breakdown of colonial control and the climatic changes affected people's living conditions.

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**Morphoscopic and morphometric  
methodological approaches for sorting  
commingled human remains**

*Popi Chrysostomou  
Teesside University*

*PhD Abstract*

The commingling of human remains is a scientific challenge commonly encountered in both medicolegal and bioarchaeological settings. The term "commingled remains" refers to the intermixing of body parts or skeletal elements of one or more individuals and is typically attributed to human activity or other taphonomic processes. Reported cases of commingling often relate to mass executions in armed conflicts, aircraft accidents, terrorist attacks, dismembered homicide cases, animal scavenging, archaeological ossuaries and museum collections. Despite the frequent occurrence of commingled remains, research on sorting methodologies remains relatively limited, even though the segregation of elements to form complete or nearly complete individuals is an unquestionably important component not only for the analysis, but also the identification and return of human remains. Unfortunately, the heavy reliance on observer experience for the visual segregation of remains has produced a method that is currently as much an art as it is a science. The present study aims to investigate both visual and metric methods for segregating human remains. The main hypothesis of the research is that the visual segregation of remains – that to the present day remains an experience-based approach – can be formulated into a

scientific method within a statistical framework. The research objectives are to provide standardised, replicable, and validated methods for the macroscopic reassociations of human remains. In addition to the visual sorting methodologies (that also explore skeletal relationships never previously investigated), this research also aims to develop new osteometric sorting models. The overall outcome of the study will be the development of coherent, scientifically-based visual and metric sorting techniques in accordance with the post-Daubert forensic science best practices.

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**Exploring new research avenues for  
osteoarthritis and rheumatoid arthritis in  
palaeopathology: an interdisciplinary  
approach with a focus on methodological  
techniques**

*Davina Craps  
Durham University*

*PhD Abstract (completed)*

This project sought to examine and critically evaluate current methodologies for the analysis and interpretation of osteoarthritis and rheumatoid arthritis within palaeopathology, with reference to clinical research. A compartmental recording method was developed for osteoarthritis and a distinction between degenerative joint changes and osteoarthritis was maintained. This method was applied to the analysis of five Post-Medieval skeletal populations from both rural and urban sites from northern England. An analysis of the pattern and distribution of osteoarthritis and DJC between the sites, including rural versus urban differences, age and sex-specific comparisons, and, where possible, a comparison with contemporaneous sites from southern England was undertaken. A working diagnosis for rheumatoid arthritis was developed, applied, and tested on potential cases of rheumatoid arthritis within the archaeological record. Given this condition's scarcity within the palaeopathological context, a wider geographical and temporal analysis was conducted. Results, based on clinical research and differential prevalence

rates, indicated that DJC and osteoarthritis should be assessed separately. General rural-urban patterns were similar for DJC, even when compared with age or sex, which was not the case for osteoarthritis. The compartmental approach indicated differential distributions between mobile and stable elements of ball-and-socket and between skeletal elements in hinge joints respectively, which was explained through osteophyte-development and biomechanical analysis. The results were compared with clinical research to explore the impact of degeneration on the daily lives of past individuals, while not relying on activity reconstruction.

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### **The application of surface scanning in a forensic anthropological context**

*David Errickson  
Teesside University*

#### *PhD Abstract*

In homicide cases, skeletal trauma can provide evidence for the specific conditions of an individual's death. Forensic anthropologists can use skeletal trauma to reconstruct the final sequence of events for an individual. Photography is then utilized as a way of interpreting and presenting this evidence in a court of law. Photography is the standard for documenting forensic evidence. Images are important as they act as a permanent record even after evidence has changed, degraded or disappeared. Recently, imaging techniques from interdisciplinary research are being adapted to record evidence at the scene of a crime. Surface scanning can be used to create three-dimensional (3D) digitisations. Thus, a 3D image can be taken into a courtroom and visualized live in front of a judge and jury. This research uses a series of surface scanners, and focuses on the visualisation techniques of traumatic osteological evidence for the courtroom as well as developing these standards.

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### **What are we missing?**

### **The importance of archaeoethanatology for revealing funerary practices**

*Emma Green  
University of Sheffield*

#### *PhD Abstract*

Investigations into funerary practices applying a detailed analysis of bone positions and their relationship to the grave environment are seldom contained within published reports for burials in the Middle to Late Anglo-Saxon period in England. This has resulted in a situation where potentially valuable evidence for funerary practices is being overlooked. There is the possibility that graves are frequently determined to be plain earth burials due to the absence of direct archaeological evidence indicating to the contrary, even where in many cases we would not expect this direct evidence to survive. This has implications for identifying aspects of social identity based on variation in burial form.

An approach known as archaeoethanatology could present an opportunity to resolve this issue by using detailed observations of the differences in the positioning of skeletal remains to provide a proxy for the presence of a burial container in cases where there is no direct evidence of the container itself. The question arises; are archaeoethanatology methods accurate and reliable in providing reconstructions of original burial form? My research aims to evaluate the principles underlying archaeoethanatology. Firstly by testing the principles on burials where the form of the burial has been established via a high level of organic preservation. Secondly by developing and applying an archaeoethanatology methodology to sites containing burials with poor organic preservation and no direct archaeological evidence remaining for the original burial form leading to burials designated as 'plain earth', in order to ascertain whether the use of archaeoethanatology should have a prominent place in funerary archaeology. This project is funded by the AHRC through a White Rose College of Arts and Humanities Scholarship.

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**Understanding the effects of water  
submersion on human bone modification**

*Sam Griffith  
Teesside University*

*PhD Abstract*

The recovery of skeletal remains, both modern and archaeological, from water sources is relatively common. However, there is currently an incomplete understanding of how different physical, chemical and biological processes modify remains during submersion, which affects the reliability of data drawn from bone. This research project therefore aims to gain a more nuanced understanding of diagenetic alterations to submerged bone. Research is investigating the application of quantitative imaging techniques to the analysis micro-wear propagation on submerged bone caused by sediment-induced abrasion. Scanning electron microscopy and laser scanning are being used to image wear on bone's surface with the aim of establishing whether these methods will allow remains' submersion times, transport distances and durations of exposure to abrasion to be determined with a higher degree of resolution than is possible through gross morphological analysis. Laboratory and field based experiments are also investigating the effects of different diagenetic processes on DNA survivability and trace element uptake in submerged bone.

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**Stable isotopes as an indication of weaning  
age in Post-Medieval to Modern  
populations**

*Hannah Haydock  
Bournemouth University*

*PhD Abstract*

Current medical literature indicates the impact of infant feeding practices in the first months of life on the short and long-term of an individual, and therefore on overall population health. Changing infant feeding practices in the post-Medieval period will therefore be a contributing factor in population growth and change in London leading into the industrial revolution of the 19th century.

Previous work has examined breastfeeding and weaning practice in the Anglo-Saxon, Medieval and Victorian periods using stable isotope analysis, however little has been done to examine post-Medieval populations, particularly within the context of contemporary medical and anecdotal literature. The review of contemporary literature is important to include as without it the reasons for any distinct change in infant care cannot be understood. By incorporating stable isotope analysis alongside evidence from osteological analysis and the contemporary literature the impact of social change on infant feeding practices can be observed and understood. Simultaneously, changes in infant feeding practices with the associated change to health at the population level help answer questions on the motivations behind socio-economic change of the post-Medieval period. Here breastfeeding and weaning patterns at post-Medieval sites in London will be identified and discussed.

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**The perennial or occasional 'Nutcracker  
Man'? Does dietary adaptation explain the  
derived craniofacial morphology of  
*Paranthropus*?**

*Rebecca Haywood  
University of Sheffield*

*PhD Abstract*

Conventional explanations of morphological variation focus on adaptive differences, such as those relating to dietary ecology. In this context, the highly derived craniofacial morphology of *Paranthropus* has long been regarded as a specialist dietary adaptation to aid with the consumption of hard foods, and the striking differences in morphology between *Paranthropus* and *Australopithecus* interpreted as a reflection of significant differences in the masticatory requirements of diet. However, evidence from stable carbon isotopes and dental microwear analyses challenge this interpretation, and are consistent with the conclusion that the species of both hominid genera exploited more similar but varied omnivorous diets. Consequently, other evolutionary scenarios need to be considered to further our



understanding of potential mechanisms involved in the evolution of the *Paranthropus* masticatory morphology. This project is a comparative study of extant nonhuman primates, exploring a variety of underlying processes that include diet/ fallback foods, habitat variation and sexual dimorphism as factors suggested to affect morphology. A series of metric variables of the dentition and mandible will be used to describe and compare morphological variation among different *Catarrhine* and *Platyrrhine* primate species.

To date, research has been completed at the Powell-Cotton Museum, Birchington, the Royal Museum of Central Africa, Tervuren, and the Museum für Naturkunde, Berlin, yielding a preliminary dataset of 478 specimens. Preliminary analysis indicates that variations in diet and the degree of sexual dimorphism are important factors that affect the masticatory morphology of nonhuman primates. These factors will be further analysed in the context of *Paranthropus* and *Australopithecus morphology*.

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**Stressed at birth: investigating metric variation in infants to determine whether subjection to stress during early development affects skeletal dimensions.**

*Claire Hodson  
Durham University*

*PhD Abstract*

The aim of this PhD is to examine the correlation between intrauterine growth and exposure to stress through the analysis of perinatal skeletal populations of different time periods and geographic locations. Assessment of multiple skeletal populations will enable the identification of skeletal element(s) and measurement(s) that indicate exposure to stress and whether such changes are consistent within and between populations. Stressors are limiting and detrimental influences, thus maternal health, diet, exposure to disease, and social and environmental changes will all be considered in relation to growth. All individuals assessed are between circa 30 gestational weeks and 1

year of age as this is when growth is at its peak and thus the skeleton is most sensitive to stressors. By developing innovative new methods of metric assessment, to determine stressor impact on intrauterine growth, the project will further our understanding of the relationship between infant health and growth in past and present populations.

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**Food and nutrient intake in low income families: a comparative study**

*Holly J. Hunt-Watts  
University of Leeds*

*PhD Project Summary*

Funded by the White Rose University Consortium, this project is part of the *Faith in Food, Food in Faith* network, which approaches the study of food and dietary practice in the past using multidisciplinary methods. This studentship, 'Food and Nutrient Intake in Low Income Families', aims to use techniques from bioarchaeology, history, and nutritional epidemiology to explore food poverty in modern and historical working-class populations.

With rising demands on food banks and an estimated 2 million people said to be malnourished in the UK, modern Britain is facing growing food poverty. The causes behind this are frequently debated by politicians and charities, suggesting issues such as a lack of health education or government welfare cuts. The reality is likely to be a number of complex factors, but what is clear is that poor nutritional health seems to be associated with low-income.

By examining the historical wealth-health gap, causes behind food poverty, and social attitudes towards low-income communities, this project intends to reveal the underlying factors which both worsened and improved nutritional health in the past. Using modern data from national nutrition surveys, the project aims to identify similarities and differences in food poverty through time, and to make historically informed observations on the root causes of the problem.

**Milk matters: the effects of environment on breastfeeding practices in two early medieval English cemetery populations**

Ellen Kendall  
Durham University

*PhD Abstract*

Early childhood diet is known to have significance in both childhood morbidity and long-term health. Many studies have attempted to characterize the pattern and duration of infant feeding practices in the past, while acknowledging the complex array of factors which determine these: cultural tradition, familial structure, fertility, and environment. The last of these has rarely been deconstructed, despite having a significant effect on all other factors, heavily influencing disease ecology and life expectancy. This study attempts to examine the influence of environment on breastfeeding and weaning patterns at two early Anglo-Saxon (5th-6th century AD) cemetery sites in Cambridgeshire through high-resolution sequential sampling of first permanent molar dentine for carbon and nitrogen stable isotope analyses. Littleport was a Fen island community which would have faced significant threats to health from waterborne diseases inherent to living in a marshy environment, as well as “ague” (malaria), which was known to be endemic to the Fens during the pre-drainage era. The second site, Edix Hill (Barrington A), was a non-Fen upland site. Comparison of skeletal “indicators of stress” supports the identification of these sites as differing in state of health and environmental pressure. This data will contribute to our understanding of early childhood diet during the early Anglo-Saxon period, a timespan for which there is currently a paucity of childhood palaeonutrition data.

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**A study of endemic malaria and haemolytic anaemias in past British populations**

Ross Kendall  
Durham University

*PhD Abstract*

Global warming and wetland restoration projects have recently increased concerns about the return of indigenous malaria to the UK. Studies of past disease are becoming important to future health predictions in areas under threat of potential disease re-emergence resulting from climatic and environmental changes.

*Plasmodium vivax* is the most widely distributed human malaria species, occurring across many global regions. Over 2.5 billion people currently live at risk of infection. 16th to 19th century documents and burial records suggest the presence of temperate *vivax* malaria in Britain, but its prior existence is debated. Symptoms of *vivax* malaria include high fever, severe anaemia, and malnutrition; in the past, it would have been recurrent, debilitating, and often fatal if contracted alongside other common marshland diseases (e.g., typhoid fever). Malaria leaves no specific pathological skeletal lesions, but anaemia can influence the development of *cribra orbitalia*, a condition characterized by sieve-like lesions in the orbital roof. It is very commonly encountered in skeletal Fenland populations.

In a unique attempt to identify pre-16th century *vivax malaria*, this study aims to detect surviving anti-malaria antibodies in human bone through the use of Enzyme-linked ImmunoSorbent Assay (ELISA) testing. The clinically-observed longevity of such antibodies in life, combined with the high affinity of antibodies to adhere to protective bone mineral content following death, make highly sensitive ELISA testing a most promising method of detection. 200 skeletal individuals from the Roman, Anglo-Saxon, and medieval periods will be tested. The sample comprises individuals most at risk of succumbing to *vivax malaria*, namely children and young women.

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**Diet, migration and the beginning of cultivation in the Medieval site Iin Hamina Northern Finland**

*Maria Lahtinen  
Durham University*

*PhD Project Summary*

The aim of this PhD project is to use isotope analysis to investigate paleodiet and migration in Northern Finland by analyzing prehistoric skeletal remains. The Site Iin Hamina is a cemetery site with 70 in-situ burials and 160 skulls. It was used between 14th and 17th century AD. Historical documents suggest that the beginning of cultivation occurred during 15th to 16th century AD in Northern Ostrobothnia region. In past research, the progression from hunter-gatherer to farming, was examined through comparing different sites. The value of Iin Hamina is the possibility of seeing this evolution in a single site. In general after the Neolithic Revolution, people settled and thus their diet became more terrestrial. The idea that farmers no longer hunted and gathered food is widely accepted. However near the northern border of cultivation this might not be the case.

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**More than male and female: gender in western Iron Age Europe**

*Jo Mathias  
Durham University*

*PhD Abstract*

Wife, mother, queen, warrior, king, protector – such images, encapsulated in icons from Boudicca to the statue of the Dying Gaul from Pergamum have been integral to visions of Iron Age Europe. Though the period has not been defined or seen as such, such images have rendered it inherently gendered. While gender studies have been examined in archaeology, anthropology, and sociology, the nature and construction of gendered identities have rarely been considered in European Iron Age archaeology. Existing studies associate gender with women, neglecting the fluidity of gender identity beyond sex and ignoring its connection with other aspects of identity. Additionally, classical depictions of Iron Age people continue to mould perceptions of

uniform “Celtic” genders both past and present. The enduring influence of 19th and 20th century attitudes towards gender roles has created simplistic social models of the period, emphasizing the need for clearer concepts of gender identities. Through a multidisciplinary study incorporating osteological and archaeological evidence, classical sources, and anthropological and sociological approaches, this dissertation will use Iron Age Europe as a lens through which to re-conceptualize our approaches to gender identities within archaeology and beyond.

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**Environmental lead pollution in the Roman Empire: characterising its effects on juvenile exposure, health and geographical mobility**

*Joanna Moore  
Durham University*

*PhD Abstract*

This project will investigate the impact of environmental lead pollution on human health and mobility in the Roman Period. It will develop the use of lead isotopes as an indicator of the cultural sphere an individual inhabited using exposure to geographically-determined anthropogenic pollution as a proxy. Lead isotope and concentration analysis will be undertaken on individuals from Roman period cemeteries across the Empire with the aim of:

1. Establishing and comparing the level of lead exposure during childhood;
2. Establishing geographic and cultural variation in Roman Period human lead isotopes;
3. Exploring the link between lead burden and childhood health; and
4. Investigating the possibility of obtaining high-spatial and high-temporal resolution lead isotope data using LA-ICP-MS.

Individuals buried in Roman Britain who have non-English ore lead isotopes raise questions about where such ratios could have been obtained during the Roman Period and offer the potential to identify geographic origins of people on the basis of the

environmental pollution they were exposed to as children. Anthropogenic lead isotopes can, therefore, provide a useful discriminant when other isotopes which derive from natural environmental variation, such as strontium or oxygen, are undiagnostic. Although significant work has been done to characterise modern lead isotope pollution fields, to date there is little comparable work on the lead isotope ratios of individuals outside Britain in different parts of the Roman Empire. This project will address this.

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**Spatiotemporal evolution of Diffuse Idiopathic Skeletal Hyperostosis and its relation to diet**

*Laura Castells Navarro  
University of Bradford*

*PhD Abstract*

Diffuse idiopathic skeletal hyperostosis (DISH) is a bone forming pathology which has been referenced and diagnosed on individuals from Prehistory to the modern times. However due to its relatively recent identification, it is less well understood than other pathologies, in both the palaeopathological and clinical areas. There are numerous DISH diagnostic criteria, though these are only able to identify the advanced stages of DISH, thus the actual prevalence of this condition in past populations is, in fact, unknown. Furthermore, clinical studies suggest that DISH is related to highly calorific diets, social status and certain geographical areas, yet no systematic study with archaeological human remains has been carried out to understand these correlations.

In view of the methodological problem, this project is divided into two parts. The first aims to describe the early stages of DISH by analysing clinical medical collections. This will allow a more accurate calculation of the prevalence of this condition in the past. The second part aims to explore the spatiotemporal evolution of the prevalence of DISH in archaeological human remains from England, France and Catalonia (Spain) from different time periods as well as to explore the relationship between DISH and diet by

studying its co-morbidity with other diet related pathologies.

These parallel studies will shed light on the prevalence and demographic distribution of DISH throughout time and in different geographical areas and, finally will help in the understanding of the aetiology of this condition, features that are still unknown.

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**The perils of industrialisation: child health in Post-Medieval England**

*Sophie Newman  
Durham University*

*PhD Abstract*

This project will undertake a comprehensive analysis of childhood health in Post-medieval England by comparing the morbidity and levels of stress experienced by children growing up in rural and urban (i.e. industrial) environments in the North and South of England. There have been relatively few studies performed on populations from the Industrial Revolution, and the majority of these have focused purely on London-based populations. This study, encompassing populations from Northern England, is therefore of particular interest to establish whether all industrial centres experienced the same deleterious effects to child health, or whether living conditions varied in severity between geographic location.

In addition, with controversy surrounding the reliability of current indicators of stress as markers of poor health, the identification of alternative methodologies is essential. Therefore this research will utilise and evaluate alternative techniques that have recently gained interest, or have previously been overlooked, (cortical thickness, vertebral body height, vertebral neural canal size, and bilateral asymmetry) for the detection of poor health within skeletal remains. The use of these techniques may further our understanding regarding the living environments and health status of non-adults within a population, and could prove to be valuable in future.

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**The effect of misidentification of remains from commingled graves on science and society in Bosnia**

*Sanita Nezirovic  
Teesside University*

*PhD Abstract*

During the war in former Yugoslavia of 1992-1995, tens of thousands of men, women and children tragically lost their lives in genocidal acts across the country. Many perpetrators have been successfully prosecuted in the International Criminal Tribunal of former Yugoslavia. However, twenty years on, the work is still ongoing and victims are still being identified. Despite current anthropological and scientific advances, the number of misidentified cases continues to rise causing emotional and psychological devastation to already grieving families. State officials and case workers also have commented on the notion that family members and societies expect too much from forensic anthropology due to the current day phenomenon known as the CSI-effect. The underlying aim of my research project is to explore this delicate relationship between science and society in order to lessen the strain and emotional mayhem of all involved ultimately through better understanding of this relationship and the fundamental causes of misidentification of bodies from mass graves.

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**Immunity and isolation: assessing leprosy susceptibility and stigma in Medieval England (11th-15th centuries AD), and its subsequent impact on contemporary society**

*Kori Filipek-Ogden  
Durham University*

*PhD Abstract*

Current concepts of leprosy invoke atavistic ideas of social stigma and isolation, inspiring antiquated visions of segregated colonies, destitution and exile, but these notions are not so anachronistic. Contemporary sufferers still carry sentences of social stigma and discrimination, leading to seclusion of those afflicted from their communities and social

interactions (Hyland 2000; Roberts 2002; Goulart & Goulart 2008; Suzuki *et al.* 2012). Moreover, these perceptions are likely based on 19th century misconceptions, derived from misguided biblical references and misinterpretations from medieval texts (Mehta 2002; Rawcliffe 2006; Roberts and Manchester 2005). Given the low virulence of the causal pathogen and the capability to successfully treat the condition today, hidden susceptibility and present-day notions that stigmatise, devalue, and isolate leprous individuals are likely responsible for sustaining its global presence.

My research employs a two-fold experimental design to examine immunological susceptibility and the subsequent extent of societal stigma in response to leprosy in Medieval England, specifically examining stress cues that may have rendered influence over leprosy immunity, and the magnitude and health-impact of segregation of young, leprous individuals from the St. Mary Magdalen leprosy hospital site in Winchester (n=19) and the St. John, Timberhill parish cemetery in Norwich (n=16).

Research questions will be answered using a multi-disciplinary approach, integrating stable isotope methods with archaeological skeletal remains, historical sources, and modern clinical frameworks. The findings from this research will help to better explore a fuller picture of the biological and social impacts of leprosy on past populations, and consequentially, present-day society at large.

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**Microbial forensics: the application to grave location**

*Ayo Olakanye  
Teesside University*

*PhD Abstract*

Cross-subject collaborative research in forensic biology, crime scene science and environmental microbial ecology at Teesside University has resulted in studies in an important field that can be termed molecular microbial forensics. The proposed research project will adopt state of the art molecular

profiling techniques to monitor the changes of soil microbial communities in response to body decomposition. This will allow us to address a key problem in forensic investigation, namely location of sites of body deposition. Thus, the presence of specific biochemical and molecular markers will be investigated as indicators of this process. Key environmental parameters such as time, temperature and moisture, and pH are some of the factors that will be evaluated to determine their impact on decomposition rates, material seepage, and soil microbial community changes. Therefore, this programme will exploit the existing expertise in molecular microbial ecology and archaeological/anthropological forensics to facilitate a greater understanding and accuracy in determining the time of death, particularly in medico-legal investigations.

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**Living outside the city gates: a palaeopathological, isotopic and comparative analysis of the post-medieval St Gertrude Church cemetery population in Riga, Latvia**

*Elina Petersone-Gordina*  
*Durham University*

*PhD Abstract*

The current research is based on the complex site of the St Gertrude Church cemetery (SGCC) in Riga, Latvia, dating from the 15th - 18th centuries AD. This study will analyse health-related stress and diet in the moderately wealthy SGCC population and compare the data between the three main burial contexts: the main cemetery, which serviced Gertrude village, and two mass graves, in which, according to historical accounts, poor rural immigrants from the Vidzeme region (north-east of Riga), might have been interred during the famine of 1602-3 AD. It is anticipated that the analysis will provide unique evidence for overall general quality of life in the population from Gertrude and help to identify whether the people buried in the mass graves represent a different "population" group. To achieve this, both skeletal and isotopic analysis will be used.

To view the SGCC in its regional context, previously published data on skeletal stress markers from contemporary urban and rural cemetery populations in the Baltic countries will be compiled and used for comparative purposes. The resulting dataset should demonstrate whether there are significant differences in general health status between post-medieval urban and rural populations in the Baltic region and explore the reasons for disparities. The scarcity of bioarchaeological research in Eastern Europe and the need for detailed and comparable data from the region makes this project an important contribution for future population health studies.

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**Childhood health and care in Roman London: the isotopic and palaeopathological evidence**

*Lindsay Powell*  
*Durham University*

*PhD Abstract*

Roman London has been extensively excavated, particularly over the last two decades, and much of this work has uncovered substantial cemetery sites within and around the city. However, while much of this evidence (archaeological and skeletal) has been presented summarily it has yet to be the subject of interpretive analysis until now. Interpretations of living environment, population composition and health within Roman London are scarce.

The aim of this project is to develop an understanding of childhood life and death in Roman London through the direct analysis of the physical remains of the children who lived there. This will be achieved by utilizing the Wellcome Osteological Research Database to undertake an osteological analysis of a sample of non-adult individuals: including information on growth, stature, and non-specific indicators of physiological poor health (e.g. *cribra orbitalia*, dental enamel defects, periosteal new bone growth). Skeletal remains will also be examined directly and samples collected and analysed for carbon and nitrogen isotopes in order to elucidate diet and weaning. The results of the isotopic and

osteological analyses will be integrated to examine the relationship between diet and skeletal indicators of health stress and mortality. This project is a NERC funded research studentship in collaboration with the Museum of London.

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**The impact of mobility on tuberculosis in England: a bioarchaeological and stable isotope approach**

*Kendra Quinn*  
*Durham University*

*PhD Abstract*

Tuberculosis (TB) is an infectious disease mainly transmitted to humans by the inhalation of infected droplets (produced when an infected person coughs or sneezes). The disease is caused by bacteria of the genus *Mycobacterium*, several species of which can cause infection in humans. In the early 1990s, the World Health Organisation (WHO) declared tuberculosis a global emergency and this continues to be the case today. We seem to be far from eradicating this killer disease than we have been at any point in our past, and the increase in global travel is thought to be exacerbating its spread.

My PhD tests the hypothesis that people in Roman Britain who were infected with tuberculosis had been mobile at some point in their lives. This research extends previous research funded by the NERC (2007-2011) that has analysed aDNA of *M. tuberculosis* complex organisms from skeletons with bone changes consistent with TB from the Roman period in Britain. Its focus is stable isotopic analysis on the same skeletons. (C, N, Sr, O and Pb) to establish if they were local or non-local to their burial location.

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**Long bone morphology and its relationship to osteoarthritic patterning among archaeological populations**

*Ariadne Schulz*  
*Durham University*

*PhD Abstract*

Human bones change and remodel in reaction to various factors including nutrition, pathology, biomechanical stress, and age. Previous studies have proved varying levels of correlation between the above factors and epiphyseal morphological variation and cortical metrics. However, neither of these methodologies attempt to quantify either surface morphology or cortical morphology. This research will apply 2D and 3D Geometric Morphometrics (GMM) to the diaphyseal surfaces and cortical circumference of archaeological human humeri and femora in order to quantify the morphology and observe any correlation between morphology and age, osteoarthritis, and any other observable phenomena.

Adult male and female human skeletons from Medieval and Post-medieval British collections were fully recorded for estimated age, sex, and pathological load. Complete undamaged humeri and femora were three-dimensionally scanned. Both humeri and femora were selected because in humans, humeri are not weight-bearing. Both sides were selected due to availability and to control for asymmetry. A series of homologous landmarks, semi-landmark curves and a semi-landmark mesh were applied to the 3D scans producing sets of landmarks which could be Procrustes fit, and then compared quantitatively by morphology.

A set of cortical scans from Neolithic, Iron Age, and Medieval Italian populations and Native American populations including humeri, femora, and tibiae originally collected and metrically recorded by Vitale Sparacello underwent 2D landmarking. The previous 3D scans were submitted to a digital slicing technique which allowed their cortical circumferences to be similarly landmarked. All cortices were landmarked with homologous landmarks and semi-landmark

curves. Results were then compared with available information on sex, age, population, and pathology.

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**The outcast dead: health and diet of the Post-Medieval poor of England**

*Brittney Shields  
Durham University*

*PhD Abstract*

Social class is one of the most influential aspects of an individual's quality of life. This study seeks to examine the relationship that exists between health and low socio-economic status in post medieval England. The lives of the wealthy and the middle classes have been examined in some detail but the lowest strata of society, the destitute, vagabonds and pauper, have been largely overlooked.

Throughout English history, there have been many different laws passed to both 'control' and maintain the pauper classes. By the 1500s corporal punishment was being used to brand individuals known as vagabonds and beggars before returning them to the parish of their birth. It was not until the 1700s that workhouses and poorhouses were being built in the parishes to house and care for these members of society. The prisons of post-medieval England were likely debtors prisons, which received little to no governmental funding, forcing the incarcerated to pay for their own food and lodging, while still attempting to pay off the debts that originally put them in prison. By the New Poor Laws of the 1830s, the 'workhouse test' was in effect in which life within the workhouse was required to be worse than that endured by the poorest free labourer. This was a means of discouraging people from entering the relief system. And the diet and healthcare provided inside the institutions for the paupers was just enough to keep them from dying from starvation so that they would be actively looking for employment. This study will examine whether the people whose remains are buried in cemeteries associated with the workhouses or prisons have higher frequencies of skeletal indicators of poor health associated with inadequate care.

**Foetal and infant skeletal palaeopathology as an indicator of maternal health and population stress**

*Belinda Tibbetts  
University of Exeter*

*PhD Project Summary*

My research investigates the skeletal palaeopathology of very young individuals as an indicator for maternal health. The wider scope of the project considers the bioarchaeological evidence for population stress and community response to maternal care and perinatal death. The analysis of human skeletal remains from locations in the UK and Europe that date from the Neolithic to the present provides the basis for my research.

The project investigates the form and etiology of infant skeletal pathology and the connection between foetal skeletal development and maternal health. The research will: (1) identify and describe specific skeletal pathologies using confirmed aetiologies and compare these with normal development and appearance; (2) consider the contributing aspects of maternal health to these pathologies and the capacity for foetal recovery; (3) and investigate the cultural responses to maternal care and infant mortality in past populations.

The preliminary analyses indicate that chronic and acute maternal stress is reflected in the developing foetal skeleton and that there is capacity for in utero recovery in cases where the pathology does not exclude viability. The degree and timing of in utero recovery is examined as an indicator for changes in maternal health during pregnancy, and the responses of past populations to infant mortality are considered through the evidence of cultural buffering in funerary practices.

My project presents one of the first comparative palaeopathology studies of foetal and neonatal individuals from archaeological contexts that span broad temporal and spatial scales. Additionally, it provides some methodological modifications to the analysis of infant skeletal remains and addresses the



under-enumeration of infant remains by developing new identification and recording resources.

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**A comparative study of spinal disease in ancient Nubians during the Medieval to Christian Periods**

*Samantha Tipper-Booth  
Durham University*

*PhD Abstract*

Nubia was an important gateway for trade between Egypt and the rest of Africa. Today Nubia is divided between Egypt and the Sudan, lower Nubia being part of Egypt, whilst Upper Nubia is part of the Sudan. With the building of the first Aswan Dam in 1907 and the second in 1960, which flooded most of what was ancient Nubia, archaeological interest in the area has grown and as more settlements and burials are being discovered and excavated a clearer picture of how these people lived is being created.

From a survey of the bioarchaeological literature on ancient Nubia, it is clear that little research has been carried out on the prevalence of spinal disease. It is the aim of this study to bridge this gap, by conducting a detailed comparative study of spinal pathologies, using populations from across Nubia, during the Medieval to Christian periods to consider frequency rates and interpret their consequences.

The study of spinal disease can potentially tell us a lot about a past populations health and welfare. It may provide information on quality of life, occupational and environmental stresses, as well as provide comparative data for modern clinical studies. This is especially true for ancient Nubia, as a large number of the living population still live in rural areas, and dependent on agriculture and cattle for their livelihood, in much the same manner as the ancient Nubians. Therefore, information gathered during this research could be used to compile an in-depth model from which health and occupational/environmental risk assessments could be developed for the region.

**Understanding the funerary practice of cremation within the southern Brazilian highlands: applying advanced methods to burned bone in an archaeological context**

*Priscilla Ulguim  
Teesside University*

*PhD Abstract*

Recent research into the archaeology of the southern Jê in the highlands of southern Brazil, and northern Argentina, has focused on the significance of earthwork mound and enclosure complexes, which are frequently associated with funerary activity and often present cremated human remains. These structures are interpreted in the literature as evidence for manipulation of the landscape and the presence of increasingly complex societies within the region. However, relatively few detailed studies have been carried out on the human remains, and in general advanced analytical methods have not been regularly applied to cremated archaeological material in the region.

The objective of the study is to employ advanced methods alongside osteological profiling to investigate the evidence of funerary practice from cremated remains at a range of archaeological mound and enclosure sites of the region. These methods aim to understand primary-level change in the bone structure and to provide robust and quantifiable evidence regarding the context and nature of combustion. This study proposes to investigate and apply Fourier Transform Infrared Spectroscopy (FTIR) to analyse the crystalline structure of bone samples; histological analysis to provide evidence of microscopic structural change; and systematically apply colour analysis, with the aim of providing more accurate evidence regarding bone colour change. The development of such analysis will aid in the validation of hypotheses regarding the funerary practices performed by such groups in the past and provide important information about the individuals involved.

Funding: CAPES/Ministério da Educação, Brasil.

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**In between breaths: skeletal pathology, health and the interplay of the environment and genetic conditions in historical Iceland**

*Joe W Walser III*  
*Durham University*

*PhD Abstract*

The aim of this research is to determine the human health impacts sustained by the volcanic environment of Iceland by considering environmental and genetic factors. Disease ecology will be assessed through findings of osteological analysis for infectious disease and non-specific infections, ancient DNA analysis and elemental analysis of cadmium and fluorine compounds. This project plans to explore the significance of the environment on human health in the archaeologically represented population of historical Iceland and deepen the understanding of genetic and environmental factors upon the human body. These findings may also expand upon our current understandings of foreign interaction, migration, disease evolution and geographic range through disease identification and epidemiology.

This study will be multidisciplinary, using clinical, molecular and historical data with the osteological analysis of human remains. The historical prevalence of respiratory conditions, dental disease and related conditions will be recorded and analysed. Macroscopic examination of the visceral sides of the ribs, and CT scans and endoscopy for the internal surfaces of the sinuses will be used to assess respiratory disease. Osteological assessment of the mandibular torus in historical Icelanders will be compared with recent modern studies on the non-metric trait; its connection with sleep apnea and other known symptoms will be discussed. Microscopy and elemental analysis of bone and dental calculus will be used to determine any past evidence of fluorine and cadmium poisoning. Ancient DNA sequencing will attempt to identify organisms causing pathologies and allow this research to differentiate, to some degree, between skeletal changes caused by infectious diseases or

environmental conditions. Lastly, theoretically, this project will be framed within a post-humanistic perspective.

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**All out of proportion? Stature and body proportions in Roman and Anglo-Saxon England**

*Lauren Walther*  
*Durham University*

*PhD Abstract*

The aim of this thesis is to assess the adult stature and body proportions of Romano British (AD 43-410) and Anglo-Saxon (circa AD 400-1100) skeletal populations, throughout various geographical locations in England. Stature has been utilized to indicate health and growth in past populations as it is associated with nutrition and stress experienced during the growth process, whilst body proportions can reflect adaptations to local environments. Previous studies throughout different periods and cultures have assessed stature (Raxter *et al.*, 2008; Sciulli *et al.*, 1990; Steckel, 2004) and body proportions (Giannecchini and Moggi-Cecchi, 2008; Schweich, 2005; Temple *et al.*, 2008), however few have focused on these two time periods. The stature and body proportions of both populations will be determined through the reconstruction of living stature through the use of Raxter *et al.* (2006) revised Fully's anatomical method and through the analysis of a variety of indices. New mathematical regression formulae will be created for each population based on the reconstructed living stature, which will be statistically compared to mathematical regression formulae currently utilized by bioarchaeologists to determine accuracy of each equation. The use of different indices will aid in assessing possible ecogeographic patterns with regards to body morphology. Finally, this study of stature and body proportions will aid in the assessment of temporal or geographical trends with regard to social status, sex and population mobility.

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**Differential patterns of mortality and morbidity. A bioarchaeological approach to childhood in Roman-Britain**

*Kyle Waters*  
*Bournemouth University*

*PhD Abstract*

This research seeks to analyse the differential patterns of mortality and morbidity for Romano-British sub-adults as a contribution to childhood bioarchaeology. Although high levels of infant and child mortality exist in past populations the presence of sub-adult demographics is absent from the archaeological record. In recent years the interest in child archaeology has increased dramatically. This absence can be attributed to cultural, social and environmental conditions however, some authors suggest low levels of sub-adults is reflective of a populations mortality patterns. The sample consists of sub-adults excavated from Poundbury, Cannington and Winchester during the Roman-Britain era and will be analysed using morphological and metric method to formulate demographic profiles. By analysing the differential patterns of mortality and morbidity for sub-adults from the Romano-British period this research seeks to contribute to our understanding of infant mortality and morbidity, including the ratio of males and females, age distribution, growth and development, health and quality of life, social categorisation, environment adaptability and the influence of cultural factors during the Romano-British era.

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REVIEW OF THE 16<sup>th</sup> ANNUAL BABAO  
CONFERENCE

*Jenna Dittmar*  
*University of Cambridge*

The 16th Annual Conference of the British Association for Biological Anthropology and Osteoarchaeology was hosted by the Department of Archaeology at the University of Durham from the 12th to 14th of September 2014. Over 170 delegates were warmly welcomed to Durham by the organisers where over the three-day conference 42 papers and 65 posters,

representing the wide range of scientific inquiry of the membership, were presented.

The conference commenced with a welcome address by Charlotte Roberts, which was sadly followed by a short tribute in memory of Jenny Wakely by Malin Holst. The academic program began with the first session titled: *The Body and Society: Past Perspectives on the Present*, chaired by Natasha Powers (Museum of London) and Holger Schutkowski (University of Bournemouth). The keynote lecture, given by Pamela Geller (University of Miami), was titled *Bioarchaeology and bio-power: past bodies and present challenges*. The presented papers highlighted a wide scope of research being conducted on past societies from many time periods and across the globe including; China, England, Poland, the Netherlands and Venezuela.

Following this session, Ilaria Meliconi (International Journal of Palaeopathology) and Piers Mitchell (BABAO President, University of Cambridge) ran a publication workshop. Friday was concluded with the ever-popular evening wine reception in the Durham Cathedral Cloisters.

On Saturday, the second day of the conference kicked off with the session: *Biological Anthropology and Infectious Disease: New Developments from Bioarchaeological, Palaeoanthropology, Primatology and Archaeozoology*, chaired by Jacqueline McKinley (Wessex Archaeology) and Rebecca Redfern (Museum of London). The keynote was given by Professor Niels Lynnerup (University of Copenhagen), on *Paleopathology and genomics: from diagnostics to informatics*. A very diverse session contained papers and posters on the evolution of leprosy and tuberculosis, the effects of climate change on disease, parasite infection in the past, and interpreting mass livestock mortality in archaeological assemblages.

After lunch and the corresponding poster session, began the third session titled: *New Developments in Biomolecular Methods*

chaired by Andrew Millard (University of Durham) and Jane Evans (British Geological Survey). The keynote was given by Professor Matthew Collins (University of York) who gave his paper titled *BABAO'mics 2024: will new developments in biomedicine really change everything?* This talk was followed by papers and posters that discussed how the use of scanning electron microscopy and geological techniques can be used to advance our understanding of archaeological evidence, as well as how stable isotopes can be used to examine diet, weaning practices and migration, and how incremental dentine may allow for a closer examination of childhood and may answer some of the questions raised by  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$ .

After the conclusion of the third session the AGM was held, presided over by President Piers Mitchell (University of Cambridge). Members who stayed for this heard of all the great things the BABAO committee has been doing over the last year. That evening the conference dinner was held at St. Aidan's College. The now traditional quiz ensued and lively entertainment was provided by Northern Lights ceilidh band which was thoroughly enjoyed by all. I am told all the crushed toes had healed within a few weeks.

The final session, the *Open Session*, commenced on Sunday morning chaired by Megan Brickley (McMaster University) and Pia Nystrom (University of Sheffield). The papers and posters present in this session showcased the variety of research being undertaken by the BABAO membership. Research papers topics included everything from dry-bone manifestations of tumours to sharp-force trauma. Additional papers described research on age at death estimation while others examined sexual dimorphism, linear enamel hypoplasia and bone deformities.

The conference concluded with the highly anticipated announcement of the student prizes. The Jane Moor prize for the best student podium presentation was awarded to Jay van der Reijden (University College London) with her paper titled: *A renewed*

*classification system for cultural dental modification*. The runner-up for the best podium presentation was Maria Lahtinen (Durham University) for her presentation titled: *Use of aquatic resources in the Bothnian Bay, North Baltic Sea – A case study of the Iin Hamina*. The winner of the Bill White prize for best student poster was Alison Atkin (University of Sheffield) with her unique hand-drawn poster titled, *The attritional mortality myth: a catastrophic error with demography*. The runner-up for the Bill White best student poster prize was Jenna Dittmar (University of Cambridge) for her research titled *New criteria for identifying and differentiating human dissection and autopsy in archaeological assemblages*. Generous awards were donated by Elsevier, Oxbow Books, Bone Clones Osteological Products and France Casting Museum Quality Replicas.

As always, this event highlighted some exemplary research within biological anthropology and also provided an excellent forum for the facilitation of knowledge. This conference would not have been possible without the efforts of the conference organisers and volunteers from the Department of Archaeology at the University of Durham and they should be congratulated on their success.

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#### OTHER CONFERENCE REVIEWS

**55th Annual Society for the Study of  
Human Biology Symposium,  
in association with the  
British Association for Biological  
Anthropology and Osteoarchaeology:  
Age Estimation**

*Julia Beaumont  
University of Bradford*

As a member of both SSHB and BABAO, I was delighted to attend this unique event which brought together a wide range of researchers, from the eminent to the undergraduate members, of both groups to discuss the often complex subject of human age estimation. This was a delightful event

held in Oxford where we were fortunate to have a pre-Christmas treat with an academic and social calendar of excellent quality.

Perhaps the most remarkable aspect to the symposium was the range of subjects discussed: for example, age estimation in the living for forensic applications was contrasted with age estimation in archaeological individuals. Some lively debates ensued, and it was apparent that estimating a chronological age for any single person during their growth using their skeletal and dental development is just that: an estimate, and should be applied with caution and caveats when deciding if someone has reached a legal age boundary. Similarly, the difficulties associated with estimating age in any individual who has passed the stage where skeletal and dental development is complete were analysed in some detail.

A wide variety of techniques were discussed, from “old school” methods such as long-bone measurement and counting incremental lines in teeth, through to state-of-the-art digital imaging procedures. Presentations were given from the most experienced to the most junior of delegates with some exciting new ideas put forward.

A panel of distinguished members (Jo Buckberry, Niels Lynnerup, Lyle Konigsberg and Tim Cole) rounded up the proceedings, and recommendations made included: combining the mass data from researchers around the world to make the datasets and skeletal and digital collections freely available and thus improve our ability to estimate ages within given populations: at the individual level, the use of Bayesian statistics offers the chance to combine the results from a range of techniques to produce an age estimation with an assessment of the probability of accuracy. There was also a determination to continue with cross-disciplinary meetings such as this.

Prizes awarded at the conference included: the Tanner prize awarded to Professor Noel Cameron for his outstanding contribution to the field, and student prizes to Charlotte Primeau (University of Copenhagen) for her

presentation of her work on measuring the long bones of medieval subadults, to Sarah Arge (University of Copenhagen) for her poster summarising age assessment of asylum applicants performed at the Institute of Forensic Medicine in 2012, and to Andrew Fulton (Queen Mary University of London, Dental Institute) for his poster proposing an age estimation technique based on the level of root resorption of deciduous teeth.

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**Serbian Archaeological Society –  
Bioarchaeological Session**

*Nataša Miladinović-Radmilović  
Institute of Archaeology, Belgrade, Serbia*

The Serbian Archaeological Society (SAS) was formed in 1883. After modernisation of the organization in 2011, the SAS now encourages the creation of working groups and sections that focus on both chronological periods and archaeological themes. Dr Nataša Miladinović-Radmilović, a biophysical anthropologist, and Dr Selena Vitezović, a bone tool specialist (both from the Archaeological Institute, Belgrade) initiated the Bioarchaeological Section of the SAS at 35th Annual Meeting in Valjevo (Serbia). The main goal of the section was to present and promote bioarchaeological studies in widest sense possible and to gather all specialists working with bioarchaeological remains – physical anthropologists, archaeobotanists, zooarchaeologists and bone tool specialists.

After its first conference session, entitled *Bioarchaeology in the Balkans: Balance and Perspective*, the Bioarchaeological Section has continued to organise annual sessions, both thematic and general, within annual SAS meetings. In 2013, at 36th SAS Annual Meeting in Novi Sad (Serbia), one general session (chaired by N. Miladinović-Radmilović) and one thematic session (*Reconstructing prehistoric food sources and food habits: procurement, preparation and presentation of food in the Neolithic Balkans*, organised by S. Vitezović, D. Filipović and D. Orton) were held. These meetings presented current research and discussed mutual problems of a methodological nature. The

sessions also presented results from archaeologists engaged in other fields and discussed possibilities for future research.

Apart from specialists from Serbia, colleagues from adjacent areas, and all those involved in Balkan archaeology we also had participants at meetings from the UK, France, Germany, Qatar and Canada. The proceedings from the first meeting were published in December 2013, entitled 'Bioarheologija na Balkanu. Bilans i perspektive. Radovi Bioarheološke sekcije Srpskog arheološkog društva' (*Bioarchaeology in the Balkans. Balance and Perspectives. Papers of the Bioarchaeological Section of the Serbian Archaeological Society*, eds. N. Miladinović-Radmilović & S. Vitezović, Beograd: Srpsko arheološko društvo; Sremska Mitrovica: Blago Sirmijuma). The pdf is available at: [www.academia.edu/5451984/Bioarheologija\\_na\\_Balkanu\\_Bilans\\_i\\_perspektive\\_Bioarchaeology\\_in\\_the\\_Balkans\\_Bioarchaeology\\_in\\_the\\_Balkans\\_Balance\\_and\\_perspectives](http://www.academia.edu/5451984/Bioarheologija_na_Balkanu_Bilans_i_perspektive_Bioarchaeology_in_the_Balkans_Bioarchaeology_in_the_Balkans_Balance_and_perspectives), and it may be ordered from Blago Sirmijuma (<http://www.blagosirmijuma.org/>). In 2014, at 37th SAS Annual Meeting in Kragujevac (Serbia), one general session (chaired by N. Miladinović-Radmilović) and one thematic session (*Methodological, comparative and reconstructive studies of life in the past*, organised by N. Miladinović-Radmilović and S. Vitezović) were held. How and in which way bioarchaeological researches can fit into a general study of life in the past, and how their results can contribute to a fuller interpretation of archaeological data, were the main themes of this session.

Anyone interested in participating in meetings and/or contributing to volumes, please contact [miladinovic.radmilovic@gmail.com](mailto:miladinovic.radmilovic@gmail.com) and/or [selenavitezovic@gmail.com](mailto:selenavitezovic@gmail.com).

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## FORTHCOMING CONFERENCES, COURSES AND WORKSHOPS

### **17th Annual Conference of the British Association for Biological Anthropology and Osteoarchaeology** - September 18th through 20<sup>th</sup> - *Department of Archaeology* *University of Sheffield*

The Sheffield planning committee is very much looking forward to welcoming you to the 17th Annual BABAO conference, to be hosted by the Archaeology department at the University of Sheffield. Since we want to mix the old with the new the conference will take place in the old St Georges Church- still surrounded by a cemetery - but also the church is the home of a pair of peregrine falcons that has successfully raised chicks over several years; if we are lucky they will still be about at the time of conference. The refreshment breaks, lunch and viewing of the posters will take place in the Jessop West Exhibition Centre (just a few seconds away from the church).

The scientific programme will be structured around several themes. Focus will be on exploring all aspects of childhood in past societies, treatment of the dead (including what we can learn from thanatology), palaeopathology and knowledge of healing in the past, and of course an open session (e.g., topics pertaining to evolution, animal-human interactions, zoonoses).

We have planned a social programme that we hope you will find exciting and entertaining! For the Friday evening reception we will meet up at the Devonshire Cat, a Sheffield landmark, drinks and a chance to catch-up with old friends and make new ones! The Saturday evening conference dinner will take place in the Millennium Gallery (the Arundel room). The dinner will be preceded by a reception in the museum foyer with the opportunity to explore the Metalworks Exhibition which displays Sheffield's cutlery past among other aspects, and to walk around in the Winter Gardens and explore botanical specimens from all over the world. Of course

the traditional BABAO pub quiz will be part of dinner entertainment of the evening, and who knows what else we will surprise you with.

Dates and details for abstract submission and registration will be posted the BABAO website and via the BABAO email list in the near future.

The Archaeology Department fully supports the Green Impact Scheme, an environmental awards programme run by the National Union of Students! GO GREEN!

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### **The Anthropology of Hands**

- June 2015 -

*School of Anthropology and Conservation  
The University of Kent*

The University of Kent, School of Anthropology and Conservation, is hosting the *Anthropology of Hands* conference in June 2015. This cross disciplinary conference will map what is known of hands, from biological and social anthropological perspectives. This conference was organized by João de Pina-Cabral and Tracy Kivell. Speakers include, among others, Mary Marzke, Arizona State University; Carel van Schaik, University of Zurich, Switzerland; Jean Clottes, Ministry of Culture, France; Gillian Forrester, University of Westminster; Sue Black, University of Dundee; and Kate Robson-Brown, University of Bristol.

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### 2014 PUBLICATIONS

Anastasiou, E., Lorentz, K.O., Stein, G.J. and Mitchell, P.D. 2014. Prehistoric schistosomiasis parasite found in the Middle East. *Lancet Infectious Diseases* 14: 553-4.

Appleby, J., Mitchell, P.D., Robinson, C., Brough, A., Ruttly, G. and Morgan, B. 2014. The scoliosis of Richard III, last Plantagenet king of England: diagnosis and clinical significance. *The Lancet* 383: 1944.

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Walker, D., Powers, N. and Fowler, L. 2014. Resurrection: who is it good for? The price of achievement at the London Hospital. *Post-Medieval Archaeology* 48: 388-97.

BABAO RESEARCH PROJECT GRANTS  
2015 – GUIDANCE NOTES  
*Jo Buckberry*

Wheeler, B.C., Tiddi, B. and Heistermann, M. 2014. Competition-induced stress does not explain deceptive alarm calling in capuchin monkeys. *Animal Behaviour* 93: 49-58.

Widulin, N., Gapert, R. and Tsokos, M. 2014. Electrically-induced heat amputation of the hand in a case of fatal electric shock caused by a faulty table lamp. *Forensic Science, Medicine, and Pathology* 10 (1): 136-138.

Yeh, H.-Y., Pluskowski, A., Kalējs, U. and Mitchell, P.D. 2014. Intestinal parasites in a mid-14th century latrine from Riga, Latvia: fish tapeworm and the consumption of uncooked fish in the medieval eastern Baltic region. *Journal of Archaeological Science* 49: 83-89.

Young, A., Stillman, R., Smith, M. and Korstjens, A. 2014. Scavenging in Northwestern Europe: A Survey of UK Police Specialist Search Officers. *Policing* 8: 156-164.

Young, A., Stillman, R., Smith, M. and Korstjens, A. 2014. An experimental study of vertebrate scavenging behavior in a northwest European woodland context. *Journal of Forensic Sciences* DOI: 10.1111/1556-4029.12468.

Young, A., Stillman, R., Smith, M. and Korstjens, A. 2014. An investigation of red fox (*Vulpes vulpes*) and Eurasian badger (*Meles meles*) scavenging, scattering and removal of deer remains: forensic implications and applications. *Journal of Forensic Sciences* DOI: 10.1111/1556-4029.12554.

Zioupos, P., Williams, A., Christodoulou, G. and Giles, R. 2013. Determining 'Age at Death' for Forensic Purposes using Human Bone by a Laboratory-based Analytical Method. *Journal of the Mechanical Behavior of Biomedical Materials* 33: 109-123.

In October 2004 the BABAO committee approved funding for a series of project grants that are available, by competition, to all members of the association. A copy of the application form is found upon the association website ([www.babao.org.uk/index/awards](http://www.babao.org.uk/index/awards)). All applications must be typed.

Two types of grants are available. One type is reserved for research in the contract sector, up to £1,500 (commercial). The other is reserved for the academic sector, up to £1,000. The higher sum available for the commercial sector is to cover the cost of buying out time from their company, to allow sufficient free time to conduct the research. Applications for more than these sums will not be considered. The number of grants awarded each year will depend upon the quality of applications and the state of the association's finances.

These grants may be used to support research in biological anthropology and osteoarchaeology, both to undertake the research directly, and to commission specialist services required in the course of the research project. They may not be used to fund conference attendance. Specialist equipment required to undertake a project is unlikely to be funded unless it is highly specific to the research project, and, if this is the case, the applicant must also demonstrate that the funds could not reasonably be obtained from other sources (such as the developer). The grant should be for a discrete piece of research or distinct component of a wider research project, and not just a contribution towards general living expenses during a PhD.

If the proposed research includes access to material from a different institution, or destructive analysis, the application should be accompanied with a letter of permission from the appropriate Museum/holding institution. It is the applicant's responsibility to request access and supporting letters in a timely manner. It is also the applicant's

responsibility to gain ethical and H&S approval (where needed) from their own institution.

If students apply they should specifically state how this grant application relates to other sources of funding for their course. If their PhD is unfunded applying for a grant to support discrete, freestanding components of their PhD is reasonable. However, if their PhD is funded, they must specifically state why extra money in the form of this grant is required. If the proposal is not clear on this point it is likely to count against the application.

Applicants must be paid-up members of BABAO by 1st April 2015. It is the applicant's responsibility to ensure that they have paid their subscription, and applications from lapsed members will not be considered.

It is appreciated that an applicant may apply to other funding bodies to fund the same topic as their BABAO grant application. However, it is imperative that they inform the BABAO committee immediately if they receive sufficient funding from another source before the BABAO grant competition is decided. It is unethical and unjust to accept a grant for a research project that has already been fully funded from other sources.

The closing date for receipt of applications for the current year is 8th May 2015, at 5pm. Applications, complete with a 2 page summary CV of the main applicant, and a letter of support where required (*i.e.* access to external material; destructive analysis) must be sent electronically to the Grants Secretary ([j.buckberry@bradford.ac.uk](mailto:j.buckberry@bradford.ac.uk)). All documents must be submitted as pdfs. Please save the files under your surname (*e.g.* JonesApplication.pdf and JonesCV.pdf) and not as BABAOapplication.pdf. Please insert electronic signatures, or scan paper copies to pdf. A maximum of three files (application form, CV and letter of support if required) should be submitted for each application. Please do not include the guidance notes in your submitted application.

Grant proposals will then be reviewed by the committee. Notification will be given to the applicants, the BABAO e-mail list and the BABAO webpage. Successful grants will also be announced at the AGM.

Grant winners are expected to present their research at the BABAO conference in the year following the award (so 2015 grant winners are expected to give either a paper or a poster at the 2016 conference). Grant winners are required to complete a feedback form, giving a clear abstract of the research completed, a summary report of what was achieved and a summary of dissemination and publication by the first of September in the year following the award. BABAO should be acknowledged in all outputs. If the research is not completed within the expected time frame without due cause, applicants may be required to return the grant money.

#### *Specific Guidance Notes*

Please note the maximum word counts where specified. The boxes on the form can be expanded as necessary.

Section 1: To be completed by the applicant. Please give full and complete postal address, and, where applicable, affiliation. You must include your BABAO membership number, to facilitate checking that you are a member of good standing. Your membership number was included in the letter sent to you when you joined BABAO. If you cannot find your number, please contact the membership secretary ([membership@babao.org.uk](mailto:membership@babao.org.uk)) well in advance of the deadline.

Section 2: Please give brief details of current appointment (*e.g.* postgraduate student, lecturer, contract osteologist with XXXX company, freelance osteologist). If the applicant is a student, please provide details of the degree being taken, the name of supervisor (who does not need to be an association member), and the name of the institution.

Section 3 (maximum 15 words): The brief name for the project may be placed upon the BABAO website.



Section 4 (maximum 100 words): Please provide brief outline details of the research project. These details should be suitable for a non-expert audience, and the grant winner should be aware that these details may be placed upon the association's website.

CV: The 2-page CV must be of the applicant named in section 1.

Section 5 (maximum 500 words in each box): This section requires more detailed description and information about the research project being proposed / undertaken. Do not exceed the word limit for each box. The timetable for research is particularly important as the committee requires the projects being funded to be completed within one year. Where possible, sample sizes etc. should be included. A maximum of 3 images may be included as part of the proposal if required, but must be included within the appropriate box in section 5.

Section 6: Some institutions / organisations (e.g. some universities) require ethical permissions for research involving human remains or modern populations. Please complete this section only if this is applicable to the proposed research project. It is the applicant's responsibility to gain ethical (and H&S approval), where required, from their own institution

Section 7: Please provide a breakdown of the budget required from the association. Travel should use the cheapest possible suitable mode. Accommodation may be requested where appropriate. All costs should be included in the application.

Section 8: Students must obtain a signature from their supervisor. Applications without a signature from the students' supervisor cannot be accepted. If you are unable to insert electronic signatures, scan in the signed form and submit it via e-mail. Please send pdf files only, not tiffs or jpegs.

References: Up to one side of A4, appended to the end of the form, may be used for bibliographic references. Each should relate directly to a citation made during the proposal.