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Contents

WELCOME TO THE ANNUAL REVIEW FOR 2010	3
ASSOCIATION NEWS.....	3
Chair's Comment 2010	3
Report from the Membership Secretary.....	3
Report from the Student Representative	4
PEOPLE.....	4
NEWS AND PROJECT UPDATES.....	5
Bill White Obituary.....	5
Poulton Research Project	7
MUSEUM REPORTS	7
Centre for Human Bioarchaeology, Museum of London	7
Museums of the Royal College of Surgeons.....	8
EXCAVATION AND ANALYSIS OF HUMAN SKELETAL REMAINS IN 2010	10
Osteology at AOC Archaeology	10
Cambridge Archaeological Unit	11
University of Leicester Archaeological Services (ULAS): Human Osteological Services. 13	
Oxford Archaeology- Summary of work 2010.....	14
Osteology at Museum of London Archaeology.....	17
York Osteoarchaeology Ltd.....	19
DEPARTMENTAL REPORTS.....	22
Bournemouth University Departmental Report.....	22
BARC, Archaeological Sciences, University of Bradford.....	24
Cranfield Forensic Institute, Cranfield University.....	26
Department of Archaeology, Durham University.....	27
University of Edinburgh	30
News from the Bioarchaeology Laboratory, University of Exeter:.....	32
Department of Archaeology, University of Southampton	33
School of Science & Engineering, Teesside University	34
Institute of Archaeology, UCL	34
Department of Forensic and Molecular Science, University of Wolverhampton.....	36
POSTGRADUATE RESEARCH ABSTRACTS.....	37
CONFERENCE REPORTS.....	43
BABAO 2010.....	43
Symposium Report: Anatomical dissection, autopsy and pathology museums in Britain from 1700.....	46
FORTHCOMING CONFERENCES.....	46

Sixth Annual Workshop in Forensic Archaeology and Anthropology.....	46
British Association for Forensic Anthropology First Meeting	46
20th Annual Meeting of the Paleoanthropology Society.....	46
38th Annual Meeting of the Paleopathology Association	47
American Association of Physical Anthropologists	47
17th Congress of the Spanish Society of Physical Anthropology (Sociedad Española de Antropología Física, SEAF).....	47
Cranial and Postcranial Juvenile Osteology for Medical, Forensic and Archaeological Practitioners	47
BABAO 2011.....	47
10th International Symposium on Forensic Sciences	48
Conflict Archaeology.....	48
MEMBERS' PUBLICATIONS.....	48
BABAO RESEARCH PROJECT GRANTS 2011.....	56

WELCOME TO THE ANNUAL REVIEW FOR 2010

2010 has been a mixed year in osteology. On the one hand, the continuing economic crisis has led to a contraction in the commercial sector and the academic sector is vulnerable to large-scale cuts; on the other hand, many departments and units have continued to thrive, BABAO membership has increased once again and the annual conference in Cambridge was better attended than ever.

On a related note, I would like to extend grateful thanks to Andrea Buck, editor of the Paleopathology Association Newsletter and to Angela Clark of the University of Otago, New Zealand, for their kind permission to reproduce the review of the BABAO Annual Conference that first appeared in the December issue of the Paleopathology Association Newsletter. This kind act of rescue became necessary after it transpired that the original conference review was locked in an inaccessible office for the foreseeable future and therefore wouldn't be available for the Annual Review.

This year's conference will be held in Edinburgh on September 2–4, hosted by Kathleen McSweeney and the School of History, Classics and Archaeology.

Jo Appleby

ASSOCIATION NEWS

Chair's Comment 2010

By Chris Knüsel

Sadly, BABAO observed the loss of one of its stalwart members in William ('Bill') White, who passed away this past year. Amongst many other accomplishments, Bill was instrumental in setting up the

Museum of London's Centre for Human Bioarchaeology, for which he served as its first Curator of Osteology. Bill was a great friend, colleague, mentor, and companion for many in BABAO, and we are all poorer for his loss but thankful for the legacy he helped to create.

Being earth-bound mortals we do not know when an event or undertaking will become truly momentous, but what we can do is provide the basis for the possibility. This is how one might greet the appearance of the new BABAO Codes of Ethics and Practice. This pairing provides the Association with an up-dated professional foundation (building upon an earlier predecessor document prepared by Simon Mays) that acts to direct and inform the disciplinary approach to our work. The Association owes a debt of gratitude to the Working Group, which the BABAO Committee established last year, led by Rebecca Redfern (Museum of London) and including Margaret Clegg (Natural History Museum), Myra Giesen (Newcastle), Louise Loe (Oxford Archaeology), Jackie McKinley (Wessex Archaeology) and Charlotte Roberts (Durham) for their sustained effort in bringing these to fruition. Importantly, these documents also anticipate issues of import today based on past experience, while attempting to provide a working base from which to address future developments. Clearly, one of our targets must be to work to change the Law Commission's ruling on archaeologically excavated human remains. A second is to continue to heighten the profile of the Association through key presentations from members at high-profile venues and to disseminate work through both academic and popular media. The new documents offer advice and provide guidance, though not proscription, in all aspects of the handling of human remains.

Because our discipline sits astride the Arts/Humanities and Science divide (and also imbibes much from the Social Sciences as well), it will require increasingly clear linkages with other disciplines to continue its expansion in this country in view of the increasing actions and promised tendencies of government to divest from its responsibility for the public sphere. Despite successfully responding to repeated blandishments to become more inter-disciplinary, with greater integration of public and private organisations, to be located at disciplinary crossroads exposes us to both opportunity and danger. By definition our discipline abuts many, from the history of medicine to medicine and from the physical sciences to the natural sciences, our discipline is one of the most inter-disciplinary in the academic panoply. When cuts come, though, inter-disciplinarity runs the risk of being viewed as part of the fringe from those at the centres of the many disciplines with which we interact (and more so to individuals in them who are less familiar with these links); far easier to cut or reduce on the margins than at the perceived core of interests.

Over the last two years, two universities, Bradford and Birmingham, have seen staffing radically reduced through lack of replacement for those moving via promotion to other institutions. Megan Brickley's move to a Tier 1 Research Chair at McMaster University, coupled with Professor John Hunter's retirement and the proposed closure of BUFAU (Birmingham University Field Archaeology Unit), means a critical loss of expertise. Birmingham has had a rather discontinuous relationship with biological anthropology, once hosting a very successful group in the 1960s, with subsequent divestment from Biological Anthropology in the 1980s, and a revival with Megan's appointment in the 1990s.

Bradford's continuing problems are more serious, with a once RAE star boasting a buoyant Ph.D. programme and one of the largest Master's contingents in the country losing many of its staff, including nearly the entirety of the Biological Anthropology Research Centre's cohort of colleagues - without replacement. Having witnessed the opening salvos of these actions first-hand, this development poses serious questions for long-promulgated notions of centres of research excellence being found throughout the university sector and wherever they might reside. University department-linked archaeological units have also gone, with Sheffield's ARCUS and Glasgow's GUARD being dispersed and with them opportunities for professional employment and training, including in both field recovery and analysis of human remains. With continued uncertainties over Cambridge's Department of Biological Anthropology, the last of its kind in the country, the past year or two could surely be viewed as 'momentous', a conjuncture of events that pose many questions for our discipline.

One of the best ways to counter-effect these changes is to heighten awareness of the discipline's many avenues to make contributions to knowledge. The Annual BABAO conference, organised and hosted by Piers Mitchell of Cambridge's Leverhulme Centre for Evolutionary Research (LCHES), did just that. The Annual meeting showcased research from across the disciplinary spectrum, from human population genetics and aDNA to evolutionary anthropology, isotopic analysis and palaeopathology. Keynote lectures by Jay Stock (LCHES, Cambridge), Johannes Krause (Max Planck Institute for Evolutionary Anthropology, Leipzig, and Tübingen University), and Charlotte Roberts (Durham) introduced and nicely set the scene for a series of compact and nicely polished sessions. While Charlotte Roberts

provided an incisive and highly amusing review of developments in palaeopathology over the last 30 years, ones that have seen the sub-discipline emerge as a cornerstone for bioarchaeological research on past human groups, Jay Stock emphasised how thoroughly bioarchaeology links with palaeoanthropology to reveal that evolutionary change did not stop with the emergence of Holocene hunter-gatherers, but that rather these groups show considerable regional morphological change linked not only to population dynamics but also to varied ecogeographic location and subsistence pursuits. Johannes Krause's presentation not only discussed the recently revealed Neandertal genome (with evidence that 1-4% of the genome of modern Eurasian peoples are shared with Neandertals) but also introduced the background to the even more recent Denisovans of southern Siberia, who appear to be an Upper Palaeolithic population isolate, with affinities to Melanesia but not to more geographically proximate modern Eurasian populations. Both in its scope and organisation the Cambridge meeting was a model from which the whole Association will continue to benefit in the coming years.

Report from the Membership Secretary

By Stefanie Vincent

Membership numbers increased to 401 in 2010 from 369 in 2009, showing the same steady rise as in previous years. It is anticipated that membership numbers will increase slightly once all outstanding 2010 fees have been collected. Renewal rates remain at around 70%, due in main part to the use of standing orders and online payments.

The number of student members has increased slightly and students now comprise just over 40% of the membership. The number of academic

members (working as lecturers and researchers) has also increased slightly from 69 in 2009 to 80 (20.0%) in 2010. A more detailed breakdown of our membership can be obtained from the table below (members can be in more than one category). The category of 'other occupations', covers diverse professions including administrators, IT consultants, funerary directors, artists and engineers. Our association thrives on this broad range of occupations and affiliations and this provides 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 to track changes in job titles, positions and affiliations in addition to personal details.

MEMBERSHIP CATEGORIES	No. (%)
Students	170 (42.4)
Academics	80 (20.0)
Work in commercial sector	23 (5.7)
Anthropologist/archaeologist	40 (10.0)
Osteologist	39 (9.7)
Unemployed	12 (3.0)
Forensic specialists	24 (6.0)
Work in Museums	11 (2.7)
Medical	13 (3.2)
Retired	8 (2.0)
No information supplied	5 (1.2)
Other occupations	12 (3.0)

We recruited 98 new members during 2010 (99 in 2009). The majority of these were UK residents (77.5%), with the remaining 22.5% representing overseas members. This brings the number of non-UK members to 80 (from 74 in 2009), representing 20% of the membership. The majority of our overseas members come from other European countries (n=46), including the Republic of Ireland, France, Portugal, Germany, Denmark, Belgium, the Netherlands, Greece, Italy, Hungary, Sweden, Finland, Norway and Switzerland. We also have ten members

from the United States, fifteen from Canada and one from Jamaica, as well as four from New Zealand, three from Australia, and one member from Japan.

Online payments are now the chosen method of 30.0% of members with standing orders almost as popular and used by 27.4% of members. I can only encourage you to choose these paper- and hassle-free methods of paying your subscription.

On a personal note, I would like to say how pleased I am to be taking on the role of BABAO Membership Secretary and hope to continue the good work carried out by Tine Jakob in previous years. 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.

Report from the Student Representative

By Evilena Anastasiou

During 2010, the number of students registered in the BABAO Student Members' Facebook group increased to 135. The group serves as a platform that circulates information regarding study opportunities, breakthroughs in the field and upcoming conferences and workshops. Additionally, the group is a host for discussions and comments on a variety of relevant topics, such as museum exhibitions, museum closures and information on dealing with human remains. Moreover, participants share links to newly published blog posts with their fellow members.

It is our hope that the group will grow to become an even more engaging forum where student members can exchange ideas and find advice on various issues on a peer-to-peer basis. Therefore, I would

like to urge our members to keep an active role on the group's page.

If you would like to be a part of our group please search for us at <http://www.facebook.com/group.php?gid=20007038661>. If you do not wish to join the Facebook group but you want to be informed about issues concerning us students, contact me at ea333@cam.ac.uk and I will add you to our email group.

Finally, I would like to take this opportunity and thank on behalf of the student members of BABAO, Kirsty McCarrison for her excellent job as student representative during the past three years.

PEOPLE

In April 2010 Megan Brickley left the University of Birmingham to take up a Tier One Canada Research Chair in the Bioarchaeology of Human Disease, in the Anthropology Department of McMaster University. Her new contact details are:

Dr. Megan Brickley
 Professor and Tier 1 Canada Research
 Chair in the Bioarchaeology of Human
 Disease
 Department of Anthropology
 McMaster University
 Chester New Hall 518
 1280 Main Street West
 Hamilton
 Ontario
 L8S 4L9
 Canada
 Tel: 905 525 9140 Ext. 24256
 Fax: 905 522 5993

Heather Gill-Robinson has recently married and has changed her name to "Heather Gill-Frerking". This year she began working as the Scientific Research Curator and Biological Anthropologist for the German Mummy Project, a long-term

international, collaborative mummy research project based at the Reiss-Engelhorn Museums (REM), in Mannheim, Germany. Through her work with the project she is responsible for the analysis of more than 50 human mummies from Europe, South America and Egypt, and the Project continues to expand and develop. As part of her work, she acts as the REM liaison to “Mummies of the World: The Exhibition”, a large exhibition of human and animal mummies that explains the environmental and cultural process of mummification around the world; the exhibition will tour seven venues in the United States between now and 2013. The research of the German Mummy Project provided the basis for the exhibition. Heather also provides biological anthropology and medical image analysis services for several other projects at the Reiss-Engelhorn Museums, including the new exhibition “Skull Cult”, which opens at the museum on October 1, 2011. Her new address details are:

Heather Gill-Robinson
German Mummy Project
Reiss-Engelhorn-Museen
Museum Weltkulturen, D5
68159 Mannheim
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Heather.Gill-Robinson@mannheim.de

NEWS AND PROJECT UPDATES

Bill White Obituary

The following obituary was originally published in the Guardian, which has kindly permitted it to be reproduced here. It was written by Roy Stephenson, Jelena Bekvalac and Rebecca Redfern.

William James White, organic chemist and osteologist, born 22 April 1944; died 14 November 2010 (Reprinted from The Guardian with permission)

Bill White, who has died aged 66 from complications after a heart operation, was an expert on human skeletal remains who helped found the Centre for Human Bioarchaeology at the Museum of London and became the inaugural curator of osteology for its Wellcome Osteological Research Database (Word) project. He played a pivotal role in establishing the centre as a benchmark of excellence in the field of bioarchaeology and in bringing to fruition the Wellcome-funded project. The database records details of human remains and disseminates this information through a website.

Bill was born in Harlesden, north-west London, and attended Acton County grammar school. While some of his fellow pupils (Roger Daltrey, Pete Townshend and John Entwistle) formed a world-famous rock band, the Who, Bill went on to study chemistry at Salford University and to enjoy a 30-year career as an organic chemist with the pharmaceutical company GlaxoSmithKline, where he had the satisfaction of seeing many of the drugs he had worked on reach the market.

Initially, his interests in history and archaeology had been hobbies, but after leaving GlaxoSmithKline, he went on to study them more seriously. He gained a diploma in archaeology followed by a post-diploma course in human skeletal remains in archaeology at the University of London, which he said made him realise immediately that this was what he really wanted to do with his life.

In the mid-1980s Bill began a long association with the Museum of London. Working as a freelance osteologist on the medieval skeletons from St Nicholas Shambles, a medieval church in the City, led to the first of his publications, *Skeletal Remains from the Cemetery of St Nicholas Shambles* (1988). Bill went on to volunteer in the Museum of London's archaeology environmental section. This led to him

becoming part of the osteology team at the Museum of London Archaeology Service, with which he participated in a number of excavations.

Bill was involved in numerous projects at the museum, many of international significance. One was the opening in 1999 of the sealed sarcophagus of a Roman woman excavated from Spitalfields market. A short time later, he was part of the team involved in the excavations for the Channel tunnel rail link at St Pancras; his work there will form an integral part of the forthcoming publication *St Pancras Burial Ground: At the Site of the New London Terminal of Channel Rail Link, 2002-03*.

Bill was also instrumental in the development and success of two important exhibitions based upon the human remains curated by the Museum of London. The first, *London Bodies* (1998), showcased the "changing shape of Londoners from prehistoric times to the present day" and proved to be one of the most popular exhibitions the museum had shown. The second was an equally successful exhibition held at the Wellcome Trust, *Skeletons: London's Buried Bones* (2008), that highlighted, through the analysis of skeletons from Roman, medieval and post-medieval periods, the changing face and development of London.

Bill was a member of a number of societies including the Paleopathology Association, the Richard III Society and his local archaeology society. He was also a founder member of the British Association of Biological Anthropology and Osteoarchaeology. He was an active correspondent and commentator in journals and newspapers; notably on the Council for British Archaeology website, where he would frequently demonstrate his vast spectrum of knowledge, from human remains to woolly mammoths. Bill was a fellow of both the Royal Society of

Chemists and Society of Antiquaries of London, and contributed to the latter's tercentenary exhibition in 2007.

Bill participated in conferences around the world, presenting papers about his research. His love of archaeology and history, and their often intertwining connections, was evident in his keen interest in the burial of Anne Mowbray, Duchess of York, who was buried in 1481 and reinterred in Westminster Abbey in 1965, and the mystery surrounding the princes in the tower, Edward V and his brother Richard, Duke of York, about which Bill presented his research to the Richard III Society.

During the course of his career, Bill was consulted by, among others, Patricia Cornwell, the crime writer, and the artist Damien Hirst. Bill contributed to the study of the human skull used in the creation of Hirst's 2007 piece *For the Love of God*, a platinum cast of a skull encrusted with diamonds.

Bill was a quiet man, with a sharp sense of humour, who was deeply respected and loved by all who met and worked with him. His intellect ranged across diverse subjects, from mummification in ancient Egypt to popular music, of which he had an encyclopedic knowledge – he was a big fan of the Bonzo Dog Doo-Dah Band. Such a glorious variety of information was put to devastatingly good use on the BBC quiz-show *Eggheads*, when he was captain of the Museum of London team which defeated the resident eggheads.

Although he retired from the museum in 2009, Bill became an emeritus curator and remained very much a part of the Centre for Human Bioarchaeology, where his erudition, sincerity, kindness and passion for his vocation were greatly appreciated.

He is survived by his wife, Jenny, whom he married in 1968, and their children

William (also known as Bill), Eleanor, Frederick, Roland and Richard, and six granddaughters.

Poulton Research Project

By Steve Crane and Ray Carpenter

The research and training excavations at Poulton in Cheshire (<http://www.poultonproject.org>) have continued, with over 50 skeletons disinterred from the area of the medieval chapel during the 2010 season. This brings the total excavated since 1995 to nearly 500 articulated skeletons. The Project has again welcomed students studying a variety of osteology- and archaeology-related courses, who have been able to gain direct experience in both excavation and post-excavation treatment of human remains.

In 2010 we published a report summarising the basic analysis (assessment of sex, age at death and stature) performed on all 362 skeletons excavated prior to 2009 (http://www.poultonproject.org/downloads/Poulton_Skeleton_Report_1995-2008.pdf). As we briefly mentioned in last year's Annual Review, one of the most interesting findings is a statistically significant predominance of females (61%) amongst the adult burials, which we believe is unusual in a medieval rural parish cemetery. Possible explanations include observer bias, the use of sexual dimorphism measures which are inappropriate for the Poulton population, and of course genuine imbalances in the population due to societal factors. Further investigation is required to try to resolve this issue. In all other respects, the Poulton skeletons seem to be drawn from a fairly typical medieval population.

In 2011 we will again try to obtain funding for the radiocarbon dating of a set of carefully selected skeletons, which would

enable us to confirm the period during which the graveyard was in use, and provide valuable contextual evidence for the rest of the archaeological programme. Thanks are due to the School of Natural Sciences and Psychology at Liverpool John Moores University, who have provided considerable help to the Project in this and other areas. We also gratefully acknowledge our other academic collaborators in the School of Archaeology, Classics and Egyptology at the University of Liverpool.

MUSEUM REPORTS

Centre for Human Bioarchaeology, Museum of London

By Jelena Bekvalac

It is with great sadness that the first news from the Centre for Human Bioarchaeology is to inform of the untimely death on the 14th November of our much loved and respected Emeritus Curator Bill White.

Bill had only been retired for a year and was just getting in to the swing of enjoying the benefits of retirement, particularly not having to suffer the interminable so-called improvements to the Metropolitan Line! In his role as Emeritus Curator he remained an important part of the Centre, continuing to come in to the Museum and involved in a variety of interesting projects. He was an inordinately kind and generous man with his time and extensive knowledge, always willing to help and offer support. We were all fortunate at the Centre to have been able to work alongside Bill, learning from him and having his friendship. We will all miss him enormously and will feel his loss keenly both osteologically and personally.

Despite on-going works impacting the rotunda store in the museum, it has been another busy year for the Centre participating in conferences, outreach

events, running an evening course and study days for national and international undergraduates. There continue to be many students and researchers using the data from the CHB website and also coming to the Centre, with one researcher coming from as far afield as Australia, streuth!

I was very fortunate to be able to participate in the PPA conference in Vienna and present a poster of recent work, from a collaborative project based on the St Bride's crypt individuals using a portable digital x-ray machine. It was an excellent conference in the marvellous setting of the Natural History Museum with an interesting variety and scope of papers and posters with practical sessions and trips. Rebecca has presented research based upon her studies and collaborative research of Roman material and played a pivotal role in the formulation of the new BABAO Ethics and Code of Practice.

The outreach events for the Centre have been varied and diverse, with visits sometimes to unexpected places. The Festival of British Archaeology was a busy time for the museum and the Centre was pleased to be able to play a part in its success again this year with the theme of Archaeological Methods. One little boy was particularly excited about seeing the skeletal material and his mother said that ever since he had seen the Skeletons exhibition at the Wellcome Trust he knew he wanted to be, a Bioarchaeologist. He was all of eight years old! But he was most determined and ardent in his pursuit and had a great fondness for one individual in particular from the exhibition, William Wood the butcher and beadle from Chelsea Old Church, who I must confess is also one of my favourites.

Several students are already booked in for January 2011 and so the year looks set to be another busy and interesting year. We look forward to our continued participation in conferences and outreach events and

welcoming more students and researchers to the Centre.

Museums of the Royal College of Surgeons

By Jane Hughes, Milly Farrel and Carina Phillips

The **Hunterian Museum** continues to enjoy record visitor numbers, welcoming over 53,000 people to the museum in 2010. Use of the museum collections for research and study has grown over the past year and the most famous specimen from John Hunter's collection, Charles Byrne, the 'Irish Giant', has been the subject of research just published in the *New England Journal of Medicine*, (2011, 364:43-50). See also the information below about the Odontological Collection and the Wellcome Museum of Anatomy and Pathology.

Engaging the public with our extensive comparative anatomy and pathology collections has also taken a further step forwards. In August we held 'Open Wide' in collaboration with the British Dental Association Museum. Visitors of all ages were able to handle specimens from the Odontological Collection, as well as find out about Victorian dentistry. The handling workshop has been developed further in collaboration with our museum volunteers and we will be holding another family day in February 2011. We plan to make this a regular feature of our public programmes.

In memory of Chas Mifsud, 1940-2010

I would like to pay tribute to Chas Mifsud, a dedicated volunteer and great friend, who worked for the museum for over six years. Chas will be known to many in BABAO as a fun-loving, gregarious and keen osteoarchaeologist. Chas initially trained as a haematologist and worked for Harefield and Middlesex Hospitals and then GlaxoSmithKline until his retirement

in 1995. Retraining in archaeology at Birkbeck and the Institute of Archaeology, UCL, he most recently worked on digs in Sedgford and Malta, with a particular interest in cribra orbitalia. His work on the Breedon collection at the College is a great legacy of his time with us. But it is for his smiling face, optimistic outlook and Maltese biscuits that we will best remember him.

The Odontological Collection has had yet another busy year, with displays of the material being made available to the public and a broad range of researchers making use of the collection. The over 11,000 human and animal cranial specimens display a wide variety of dental development and pathology. The human material places a focus on cranial and dental development from foetus to adult and the various malformations that can ensue. As a proportion of these 3,000 human specimens are archaeological in acquisition, dating from the Roman to late medieval eras, osteoarchaeologists are encouraged to refer to the collection.

Research enquiries made in the past year have centred on the human material. A major theme in bioarchaeological investigation last year appears to have been improving sex and age assessment methods of the skull, through assessing features such as dental root development and revisiting the somewhat controversial issue of cranial suture closure. Specimens from our neonatal teeth collection of known age have proved of use in forming a comparative sample for archaeological material and also in determining cusp development patterns. Furthermore, skull portions showing known pathologies have been referred to in classifying lesions found in archaeological assemblages. Other features such as pipe facets have also been accessed for comparative assessment.

The faunal material has had a significant increase in demand this past year. Skulls from the primate collection in particular have proven popular within the field of evolutionary anthropology. A range of investigations including sinus size variation, venous skull drainage patterns and canine morphology have all been based on the Odontological primates. It is hoped that such an active interest and use of the Odontological Collection will continue into 2011.

The sad passing of our volunteer and friend, Chas Mifsud, has been a big shock to us all. Chas assessed and documented the complete collection of human remains from the Breedon-on-the-Hill excavation carried out in the 1950s. All of these records were uploaded onto the museum catalogue this past year and for this immense amount of work we are solely indebted to Chas. A focus of Chas' research was the aetiology of cribra orbitalia and as such each of the near 200 skulls has been scored accordingly. Chas will be missed very much.

For further enquiries about the Odontological Collection please contact Milly Farrell, Assistant Curator, mfarrell@rcseng.ac.uk.

The Wellcome Museum of Anatomy and Pathology houses over 5,000 specimens demonstrating the important aspects of human anatomy and pathology. The collections include wet fluid preserved specimens, dry skeletal and dental material, histological slides, X-rays and thin body sections. It is an important resource for anyone working with human remains.

In addition to other medical-related professionals and trainees the museum has continued to support the UCL Skeletal and Dental Bioarchaeology and Forensic Archaeology MSc courses, which make

good use of the large skeletal and dental collections housed in the museum.

Over the last year the museum has benefitted from a number of changes and additions. Revision of the museum displays is continuing into 2011. The new reorganisation easily allows users to directly compare normal anatomy with the abnormal. The recent installation of new benching has also allowed a large number of previously unseen anatomical preparations to be brought out of storage.

A number of new specimens have been added to the collections. The museum now has 10 plastinated specimens displaying superficial and deep dissection, of the head and neck, upper and lower extremities, thorax, spinal column and heart in addition to 70 plastinated thin sections of the head and neck, thorax, abdomen and upper and lower extremities. (Plastination is a tissue preservation technique that uses curable polymers to replace water and lipids, resulting in durable dry and odourless specimens¹). The production of a number of bone preparations demonstrating all the muscle attachments and skeletal landmarks is very near completion, with most now on display in the museum. Feedback from both tutors and trainees has praised the additional support these new specimens provide when studying human anatomy.

To book a visit or for more information see:

www.rcseng.ac.uk/museums/wellcome

¹ Weiglein, A. H. 2005. "Overview & General Principles of the Plastination Procedures". *8th Interim Conference on Plastination*. Ohrid, Macedonia. www.uqtr.quebec.ca/plastination/Abstracts-2005.html#Weiglein-01-2005.

EXCAVATION AND ANALYSIS OF HUMAN SKELETAL REMAINS IN 2010

Osteology at AOC Archaeology

By Rachel Ives and Melissa Melikian

During 2010 we undertook several site evaluations that identified burials. In Southwark, London, we identified three Roman graves likely to have originally formed part of the Southern Roman Cemetery of the city. Elsewhere in Sandy, Bedford, part of a known Roman cemetery has been uncovered during an evaluation.

We carried out two evaluations in a school playground in the Bethnal Green, London in order to confirm the presence of post-medieval burials. Burials were found in vertically stacked grave shafts, typical for the period. An empty grave shaft and one filled only with juvenile burials were more unusual findings. A desk-based assessment revealed that the burial ground was privately owned and never consecrated, and originally covered 7.5 acres. The owner, a pawn-broker, officiated over the first 3000 burials himself before hiring an official to act over the subsequent 17,000! Excavations to remove those burials affected by site development are scheduled to begin in the New Year.

The analysis of burials from several prehistoric Scottish sites has continued. At Newbigging Quarry, South Lanarkshire, a probable cremation burial dating to the Middle Neolithic was found. The burnt bone was extremely fragmented and efficiently burnt. Prehistoric field systems, trackways and ditches, together with occupation layers and hearths, indicated an extensive settlement. An east-west aligned long cist housing an inhumation burial was also found on a steep ridge that bordered the south of the site. The burial was extended and supine with the head at the west, which may indicate a later date for

this burial, although this will be confirmed by radiocarbon dating results.

Previous analysis of inhumation burials at the Empire Site in Dunbar identified two near complete adults from a cist. One burial was crouched and found with weaponry, including a sword and spear. The second burial may have been an original burial in the cist and subsequently cleared to make room for the second burial. Further works are investigating the sequence of dating as well as stable isotope analysis to determine if the individuals were local to the area or had migrated to Dunbar. Publications of Bronze Age cremation burials found at Newton Farm in Cambuslang, Lanarkshire and from Easter Langlee, Galashiels have been produced; please contact the authors if you are interested in further details.

Sixteen burials were excavated from the gardens of the Royal Shakespeare Company in Stratford-upon-Avon in advance of landscaping and flood compensation works. The burials date to the Seventh to Ninth centuries AD, predating the earliest known church buildings close to the site. It is possible that the burials support historic reports of an earlier Saxon church and monastery on the site of the existing church. The burials were formally arranged and placed supine, extended and aligned west-east. The articulated burials contained more adults than juveniles and there were more males than females in the sample. The excavated burials form only a small sample of the interments that are likely to have been made in the original burial ground, complicating interpretations of the sex differences in the osteological sample. Disturbance and truncation of the burials resulted in a large quantity of disarticulated remains also recovered. Non-specific infection, probable tuberculosis of the hip and degenerative joint disease were present, together with prominent enthesophyte formation

suggesting repetitive or heavy muscle use. There was very little evidence for trauma as well as metabolic bone diseases and indicators of dietary deficiencies. There were, however, high levels of dental disease.

Cambridge Archaeological Unit

By Natasha Dodwell

The vast majority of the skeletal material excavated by the CAU in 2010 derives from two large-scale excavations, one in the city centre at the Old Divinity School and one on its outskirts adjacent to a Park and Ride site which is currently on-going. Much of my time has been spent working on these two sites both excavating and advising. Osteological analysis to assessment level will be completed this year.

Old Divinity School, Cambridge

Between March and December 2010, excavation of the cemetery of the Hospital of St John the Evangelist, Cambridge, in use c.1200-1511, revealed the *in situ* remains of 390 complete or partial individuals. Rapid on-site scanning of the material showed that with the exception of neonates, all ages are represented, as are both sexes. The burials were typically west-east aligned extended inhumations, largely buried without shrouds or coffins in unlined graves. A number of 'deviant' burials were identified; these included individuals buried on both east-west (4) and north-south alignments (2) and a double burial. Very few objects were found in association with burials but those that were included a copper-alloy brooch, a copper-alloy cross pendant and a jet crucifix pendant. A network of long-lived gravel paths associated with the cemetery was also present and the evidence suggests that the entire cemetery area was filled with burials around six times over c.300 years. On the edges of the cemetery there was evidence for adjacent domestic

occupation; one pit located close to the cemetery contained the remains of four individuals that appear to have been hurriedly disposed of in a single event. There was also an east-west aligned prone individual disposed of in an 11th-century pit prior to the establishment of the cemetery.

Trumpington Meadows, Cambridge

Since 2010 the CAU has been excavating a large (3.9 hectares) open area at Trumpington Meadows, immediately adjacent to Trumpington Park & Ride, a site excavated by CamArch (now Oxford East) in 2001. The excavation is on-going, but to date two Neolithic circular monuments have been recorded, one with four adults in a central cut, two of which may have been manipulated/moved, and the other with a single adult femur shaft at its centre. Two Bronze Age cremations (one urned, the other not) have been excavated. The main area of the site consists of a large Iron Age settlement with 550+ pits, several four-post structures, post buildings and areas of metal and bone working. So far, seven adults and one immature individual have been identified in the pits, which did not originally function as graves, as well as many disarticulated elements. In addition, an isolated Iron Age inhumation wearing an iron bracelet was recorded in a sub-rectangular grave

Sites excavated in 2010 where far smaller numbers of individuals were found include; **Manor Farm, Old Wolverton, Milton Keynes**, where a large prehistoric landscape was investigated and six cremation burials were found in association with three cists and a post circle/hengiform monument; **Glebe Farm, Cambridge**, where a crouched adult male (to be dated) was found in the centre of a ring ditch; **Knobbs Farm, Sommersham, Cambs.**, where a probable Iron Age mature adult female was identified in a circular pit; and **Over, Cambs.**, where

three features containing cremated bone (a pyre site, packing for a central post and a *bustum* type burial showing a degree of skeletal articulation) were found in association with a barrow (see below).

Analysis

Away from site, the majority of work has focused on the final analysis of the skeletal remains (burnt and unburnt) from **Over, Cambridgeshire** prior to publication. Over lies c. 10km NW of Cambridge and the CAU have been investigating this landscape prior to gravel extraction almost every year, including 2010, since 1996.

Excavations in 2008/9 focused on a group of five Bronze Age Barrows (including two pond barrows) where 41 deposits containing cremated human bone were identified. Several burial types have been identified including urned (15), unurned (11), ?bagged (3) and *busta* type pits where the cut edges are heavily scorched suggesting that a pyre may have been constructed above the pit which in turn became the place of burial (6). In addition, vessels containing cremated bone were found placed directly on top of large scorched areas (interpreted as pyre sites which had been cleared of all bone and pyre debris) which have then been covered by small primary mounds. Four dual cremation burials have been identified. The weight of bone from undisturbed, single adult cremation deposits ranged from 698 to 2817g. Burnt arrowheads, bone toggles and pins, pots and a copper alloy awl were identified amongst the cremated bone.

In addition to the cremated material, six Beaker inhumations were identified beneath the barrows, two with Beaker vessels and one with a bead necklace. All were heavily concreted with iron pan which has greatly restricted osteological analysis. Of the six individuals, three were infants.

Of considerable curiosity, and still with no satisfactory explanation, is the crouched inhumation (just meters away from one of the barrows) of an adult male (yet to be dated) with a 'drilled' distal ulna. The perforation passes directly through the bone, is peri-mortem and would have been 'drilled' when the wrist was in anatomical position *i.e.* not in its crouched burial position. We have funding to conduct C₁₄ dating on almost 40 burials (cremations and inhumations), which will hopefully enable Bayesian modelling.

This year analysis has also focused on two areas of high ground in the Over landscape where Neolithic cremations have been found and where partially articulated Iron Age skeletons and disarticulated elements were recovered in or at the edge of the palaeochannels around the high ridges. Several of the disarticulated elements show evidence of chop and cut marks and one of the skulls had four drilled perforations.

It is hoped that the publication of this amazing prehistoric landscape will be produced in 2012. The publication text for the Roman Cemetery at **Babraham, Cambridge** is back from peer review and awaiting corrections by the main author and the publication text for **Bradley Fen, Whittlesea**, close to Flag Fen, is also near to completion.

University of Leicester Archaeological Services (ULAS): Human Osteological Services

By Harriet Anne Jacklin, Project Osteologist, ULAS

Aylesbury

Period: TBC

MNI: One cremation burial

Report: Jacklin, H.A. (2010) Skeletal Report on the Cremated Remains from Aylesbury. ULAS Report No. 2010/007. Commissioned by Albion Archaeology.

Chicheley Hall, nr Newport Pagnell

Period: Medieval

MNI: Six inhumations

Report: Jacklin, H.A. (2010) Skeletal Report on the Human Remains from Chicheley Hall. ULAS Report No. 2010/026. Commissioned by Albion Archaeology.

Cleeve to Hagbourne Hill to Fyfield Water Main, Oxfordshire

Period: Iron Age and Roman

MNI: Four inhumations and disarticulated human remains

Report: Jacklin, H.A. (2010) The Human Remains from Cleeve to Hagbourne Hill to Fyfield Water Main, Oxfordshire. ULAS Report No. 2010/164. Commissioned by Cotswold Archaeology.

Publication: To appear in Hart, J. (forthcoming) 'The Archaeology of the Cleeve to Hagbourne Hill to Fyfield Water Main', Oxoniensia.

Ingham Quarry

Period: TBC

MNI: One cremation burial

Report: Jacklin, H.A. (2010) Skeletal Report on the Cremated Remains from Ingham Quarry. ULAS Report No. 2010/865. Commissioned by Archaeological Solutions.

Mawsely, Northamptonshire

Period: TBC

MNI: Two inhumations

Report: Jacklin, H.A. (2010) Skeletal Report on the Human Remains from Mawsely, Northamptonshire. ULAS Report No. 2010/176.

Merton Hall, Cambridge

Period: Roman

MNI: One inhumation

Report: Jacklin, H.A. (2010) Skeletal Report on the Human Remains from Merton Hall, Cambridge. ULAS Report No. 2010/009. Commissioned by Albion Archaeology.

Ranbury Farm, Ampney St Peter, Gloucestershire.

Period: Neolithic

MNI: One inhumation

Report: Jacklin, H.A. (2010) Skeletal Report on the Human Remains from Ranbury Farm, Ampney St Peter, Gloucestershire. ULAS Report No. 2010/163. Commissioned by Cotswold Archaeology.

Publication: To appear in Mudd, A. (forthcoming) *Transactions of the Bristol and Gloucestershire Archaeological Society.*

Raunds, Wellingborough

Period: TBC

MNI: One cremation burial

Report: Jacklin, H.A. (2010) Skeletal Report on the Cremated Remains from Raunds, Wellingborough. ULAS Report No. 2010/117. Commissioned by Phoenix Consulting Archaeology Ltd.

Staverton, Wiltshire

Period: Roman

MNI: Four inhumations

Report: Jacklin, H.A. (2010) The Human Remains. ULAS Report No. 2009/018 publication text. Commissioned by Cotswold Archaeology.

Stratton, Biggleswade

Period: TBC

MNI: One inhumation and multiple disarticulated human remains

Report: Jacklin, H.A. (2010) Skeletal Report on the Human Remains from Stratton, Biggleswade. ULAS Report No. 2010/093. Commissioned by Albion Archaeology.

St Mary's Churchyard, Park Square, Luton

Period: Post Medieval

MNI: Seven inhumations

Report: Jacklin, H.A. (2010) Skeletal Report on the Human Remains from St Mary's Churchyard, Park Square, Luton.

ULAS Report No. 2010/006. Commissioned by Albion Archaeology.

Publication: To appear in Keir, W. (forthcoming) 'Archaeological investigations on the western edge of the site of Fulk de Breauté's castle, Park Square, Luton, *Bedfordshire Archaeology* 27.

Uttoxeter, Staffordshire

Period: TBC

MNI: Seven cremation burials

Report: Jacklin, H.A. (2010) Skeletal Report on the Cremated Human Remains from Uttoxeter, Staffordshire. ULAS Report No. 2010/035. Commissioned by Phoenix Consulting Archaeology Ltd.

Western Road, Leicester

Period: Roman

MNI: 14 inhumations

Report: Jacklin, H.A. (2010) Skeletal Report on the Human Remains, Western Road, Leicester. ULAS Report No. 2010/190.

Oxford Archaeology- Summary of work 2010

By Angela Boyle

Fromelles, France

Post-excavation analysis of the First World War mass graves in the French village of Fromelles continued through 2010 (the excavation was reported on in last year's issue). To date, out of 250 individuals who were excavated, 205 have been identified as Australian (96 of whom have been named), three as British and 42 as 'Known unto God'. The work of the identification commission will continue this year and it is hoped that further identifications will be made. Work on the excavation report is due to be completed by April 2011.

In February last year the soldiers were reburied in a new Commonwealth War Graves Commission (CWGC) cemetery in Fromelles village, the first CWGC

cemetery to be built in 50 years. The last soldier was buried at a dedication of the cemetery on 19th July 2010, the anniversary of the battle (1916). The service was attended by HRH The Prince of Wales, Her Excellency the Governor-General of Australia Quentin Bryce, hundreds of people from British and Australian families whose relatives were killed in the battle and those who had worked on the project, including from the CWGC, the MoD, Australian Defence and Oxford Archaeology.

Weymouth Relief Road Project. Ridgeway Hill mass burial pit

The assessment of the mass burial discovered during the earthwork operation at Ridgeway Hill was completed during 2010. The pit contained multiple sets of decapitated male individuals as reported in last year's issue. Isotope analysis of the teeth from 10 skulls was carried out by Jane Evans and Caroline Chenery of NERC.

The oxygen isotope composition is consistent with an origin in the Scandinavian countries and one individual is only compatible with an origin north of the Arctic Circle in the most northerly areas of Scandinavia. The range of both strontium and oxygen isotope values shows that this is a group of people that did not have a common geographic origin. The carbon and nitrogen isotope data most closely matches populations from Scandinavian Roman and Viking periods which are typified by a high protein diet. The data are consistent with this being a group of men who originated from a variety of places within the Scandinavian countries. Full analysis of the mass burial is due to begin this year

Demouville, Normandy, France

During April and May Oxford Archaeology Grand-Ouest excavated a prehistoric cemetery at Demouville, near Caen in Normandy. The cemetery has been

radiocarbon dated to the Bronze Age. A total of 45 inhumations were present in 44 graves. The group comprised 35 adults and 10 subadults. Preservation was poor and only nine adults could be sexed (seven males and two females). Four adults had unusual dental wear facets which could relate to use of the teeth as tools. A small number of individuals, including one young child were accompanied by grave goods including amber and glass beads.

St Paul's Church, Hammersmith

In February 2010 the second phase of work was undertaken at St Paul's Church, Hammersmith in advance of the construction of a new community centre building on the west side of the church, and followed a small evaluation carried out in January 2009. The Phase 2 works involved the excavation of skeletons around the outskirts of the new building footprint, to allow for piling to be put in. Phase 3, the largest of the three phases of work, took place from June to August, when the rest of the building footprint was excavated. In total, across the three stages of archaeological work, 649 skeletons were excavated. Documentary records indicate that the burials date between 1828 and 1853. The vast majority had been buried within wooden coffins with iron fittings, typical of the period. A small number had been buried within lead coffins with surviving, legible, breast plates. A total of eight skeletons could be named.

Following the excavations, processing, drying and analysis rooms were set up allowing the post-excavation work to be carried out on site. The osteological analysis of the skeletons has recently been completed, and has produced some interesting findings. The burial population comprised an unusually high number of mature and prime adults and a relatively low number of older adults. The number of neonates was also very low. This interesting biological profile will certainly

require further investigation during the report stages of the project. A wide range of pathologies were observed, including fairly common conditions such as periostitis, cribra orbitalia, rickets and osteoarthritis. Probable cases of tuberculosis, syphilis, scurvy and osteoporosis were also observed. Numerous fractures were present, a number of which were unhealed. These include two cases of projectile injury to the skull. Around 16 skeletons displayed evidence for anatomisation or dissection. Most of these had undergone craniotomies, whilst some had undergone post-cranial dissection, evidenced by peri-mortem cuts through ribs, clavicles and forearm bones. Possible evidence for corsetry wear was noted in a small number of skeletons, and at least two individuals had dental fillings. A gold denture plate was also recovered with one of the skeletons.

This sizeable assemblage of skeletal remains is certainly interesting, and should provide us with valuable information on the health status of the inhabitants of Hammersmith in the early to mid 19th century. The collation of the burial and osteological analysis data is currently under way, and a report will be published in the near future.

Grey literature

Oxford Archaeology has also compiled a number of unpublished assessment and analysis reports. These are summarised below. Entries marked with an asterisk will be published in future site monographs.

**Excavations on the route of the A421, Oxfordshire*

No. of skeletons: 3 (plus disarticulated bones)

No. of cremations: 5

Time period: Iron Age and Roman

The material comprises an early Iron Age cremation burial with a radiocarbon date of 760–680 plus 670–410 cal BC, a single disarticulated femur of middle Iron Age

date, and two late Iron Age disarticulated bones, four disarticulated neonate bones and four cremation burials of early Romano-British date and three late Romano-British inhumations.

**Brooklands, Milton Keynes, Northamptonshire*

No. of skeletons: 1 (plus disarticulated bones)

No. of cremations: 7

Time period: Iron Age, Roman and Anglo-Saxon

The assemblage comprised disarticulated bone of middle Iron Age and late Iron Age/early Romano-British date, a late Iron Age/early Romano-British inhumation, five urned cremation burials of early 1st–early 2nd century AD date and two unurned cremation burials of possible Anglo-Saxon date.

**Dane Court, Kent*

No. of skeletons: 0

No. of cremations: 6

Time period: early Roman

A group of three early Roman urned cremation burials were recovered. In addition, very small deposits of cremated human bone were present in a late Iron Age ditch, a late Iron Age/early Roman pit, three early Roman ditches and an undated tree-throw hole.

Langford Lane, Bicester, Oxfordshire

No. of skeletons: 0

No. of cremations: 1

Time period: Romano-British

An undated and unurned cremation burial was recovered close to a Roman ditch. The remains were those of an adult of uncertain sex. The deposit also contained burnt neonatal pig.

**Gloucester Security of Supply Pipeline, Gloucestershire*

No. of skeletons: 13 (plus disarticulated bones)

No. of cremations: 2

Time period: late Iron Age-early Roman

The human remains comprised five adults, eight neonates, disarticulated bone from two separate contexts and two cremation burials. All are currently believed to belong to the late Iron Age–early Roman (c. 50 BC–120 AD) phase of activity.

St Peter's Church, Wolvercote, Oxford

No. of skeletons: 5

No. of cremations: 0

Time period: post-medieval

There were five inhumations in earth-cut graves. One was associated with post-medieval coffin fittings.

Littlemore Baptist Chapel, Oxford

No. of skeletons: 30

No. of cremations: 0

Time period: 19th century

A total of 31 graves and coffins. The remains of 30 individuals survived. The skeletal evidence indicated a population which suffered nutritional deficiencies in childhood yet longevity in adulthood with the majority of conditions being linked to old age. Evidence of trauma and degenerative change linked to manual labour were largely absent. Two examples of neoplastic disease were identified.

St Hilda's Church, Coronation Street, South Shields, Newcastle

No. of skeletons: 204

No. of cremations: 0

Time period: 19th century

The assemblage comprised 114 adults, three adolescents and 87 subadults who exhibited a wide range of pathological conditions. The majority of the subadults were pre-term or neonates.

Staff at Oxford Archaeology's Heritage Burial Services

Louise Loe began maternity leave at the end of July 2010 so the department is currently being managed by Ange Boyle who originally left in 2005. Louise is due to return at the end of February 2011. Sadly Sharon Clough and Róisín McCarthy are no longer with us. Helen

Webb and Mark Gibson do, however, remain as full time members of the department.

Osteology at Museum of London Archaeology

By Natasha Powers BSc MSc, MIFA, MCMI, Head of Osteology

Post-excavation work has again been dominated by large publication projects. The analysis of 83 burials from Bow Baptist Church, recovered during a second phase of excavation in 2008, resulted in a combined sample of 416 individuals dating from 1820 to 1870. Ten further burials were recovered in September 2010. A thematic monograph comparing this assemblage with two contemporary groups from East London is currently being edited and will be published in the first half of 2011. Recording of c.1800 post-medieval burials from **Marshall Street, Westminster** is also under way. These relate to several phases of burial associated with two of St James' Church, Piccadilly's extramural burial grounds and the Poland Street workhouse and span the 17th to 18th centuries. Osteological work on the **Walbrook Roman cemetery** project has been completed, with the monograph due out next year. One of our more unusual ongoing projects is the recording of the 19th-century skeletal assemblage from the grounds of the **Royal London Hospital, Whitechapel**, which features evidence of autopsy, dissection, specimen preparations and possible surgery. The **City Bunhill burial ground**, Islington, (1833–1853), formed the subject of a Studies Series volume published this year, whilst analysis of remains from **Holywell Priory** has revealed unusual Roman burial practices and a group of burials from within the medieval Priory church. The medieval group included a high status individual who may have undergone post-mortem ablation of the heart.

Meanwhile, MOLA excavations in **Andover** uncovered a substantial prehistoric burial landscape, whilst at **Addlestone, Surrey**, a large group of predominantly Romano-British cremation burials contained within urns were discovered. In August, MOLA undertook a watching brief on the removal and reburial of redeposited remains during the reconstruction of the western gate of **St Luke's Gardens, Islington**.

Internal work has been complemented by reporting on cremated remains for *Essex County Council, Birmingham Archaeology, L-P Archaeology* and a large group of prehistoric and Romano-British inhumation and cremation burials from Bedford for *Albion Archaeology*. Faunal assemblages from King Street and the Heron Tower in the City were also examined and we have been upgrading our fish bone reference collection. The team also responded to 13 forensic call-outs this year.

Finally, the long-awaited publication on the medieval cemetery of **St Mary Spital** is due for publication in the early summer next year. In October, *The Times* interviewed Brian Connell and Don Walker on the significance of the assemblage for discussion of the origins and spread of venereal syphilis, and articles in the national press followed, with a detailed piece on the scientific debate published in *Publico*, a major Spanish newspaper.

Burrell's Wharf, Isle of Dogs, Tower Hamlets (FTH15)

Excavation of a subadult skeleton (c.12 years of age) on the Thames foreshore was initiated by a forensic call received via the Thames Discovery Programme. The work was carried out in a brief window of opportunity at low tide and revealed a supine and extended burial within a grave cut. Associated buttons and radiocarbon dating suggest the individual was interred

in the 17th–18th centuries, at which the time the area was marshland. This burial represents one of a growing number found on the foreshore that indicate how much more we have to learn about the significance of the Thames in later periods.

St-Martin-in-the-Fields, Westminster (SMD01)

Analysis focused on six burials dated to the Roman period (one contained within a limestone sarcophagus dated to c. AD 420); four burials from the 5th–6th century; and eleven burials of 7th-century date, one of which was associated with high-status grave goods. The site demonstrated rare evidence of high-status burials occurring in both the Roman and Middle Saxon periods.

St Peter's Wharf, Maidstone, Kent (KT-SPW06)

Analysis of 55 partially and fully articulated human skeletons from a hospital population believed to be associated with the former medieval hospital dedicated to St Peter, St Paul and St Thomas of Canterbury was undertaken. The burials are of possible 13th-century date. One adult male had suffered multiple sharp force cranial injuries and also had evidence of a previous (healed) wound.

Union Street, Southwark (UNE03 and UNA05)

This small assemblage consisted of just two Roman burials. The first was a subadult who died around six years of age, and had suffered an ante-mortem dental fracture. They had been buried in the top of a drainage ditch aligned with the west wall of a Roman building. Pottery from the grave fill suggested a date in the mid-second century or later. A mature adult male found lying in a grave with a crushed chalk surface demonstrated a healed fracture to the proximal shaft of the left fibula and Scheuermann's disease (juvenile kyphosis).

Teaching and research

Thanks to a grant from the City of London Archaeological Trust, Don Walker has been examining the distribution of lesions in large and well-dated medieval assemblage from St Mary Spital. Results show a rapid increase in the prevalence of treponematosi s in the 15th to early 16th centuries, but little evidence of a change in the distribution of lesions in affected individuals from earlier centuries. This year the Osteology Team have contributed to teaching events at the LAARC and a workshop for the Thames Discovery Programme, Foreshore Recording & Observation Group (FROGs). Natasha Powers was appointed an Honorary Research Fellow of the University of Birmingham and taught on their MA in Practical Archaeology.

The team also facilitated the research of two masters' students from the Institute of Archaeology, and University of Bradford PhD students Pamela Cross, Laura Calderwood and Julia Beaumont.

You can read about new discoveries, unusual pathology and find project updates in our blog: <http://mymuseumoflondon.org.uk/blogs/blog/author/michaelhenderson>

Conference presentations

Grimm, J. and Morris, J. *The zooarchaeological social network; 'If you build it they will come'*. Poster presentation, International Council for Archaeozoology (ICAZ) conference in Paris

Henderson, M. 'Pesthouse, Workhouse and an Urban Cemetery'. London and Middlesex Archaeology Society annual conference

Madgwick, R. and Morris, J. *Maintaining and Developing our Profession: An Early Career Perspective*. International Council

for Archaeozoology (ICAZ) conference, Paris

Morris, J. *Animal biographies*, International Council for Archaeozoology (ICAZ) conference, Paris

Morris, J. *Explorations in anatomy; the faunal remains from the Royal London Hospital*, poster presentation, International Council for Archaeozoology (ICAZ) conference, Paris

Powers, N. (with A. Wilson, J. Montgomery, D. Bowsher, R. Janaway and T. Brown). *No certain roof but the coffin lid: the need for a high level research framework for the post-medieval burial resource*. Engaging the Recent Past, Society for Post Medieval Archaeology, Glasgow

Powers, N., Fowler, L. and Walker, D. *Patients, anatomists and resurrection men: archaeological evidence for anatomy teaching at the London Hospital*. Anatomical dissection, autopsy and medical pathology museums in Britain from 1700, symposium at the Leverhulme Centre for Human Evolution, Cambridge

Walker, D. *Evidence of skeletal treponematosi s from the medieval cemetery of St Mary Spital*. Poster presentation, BABAO annual conference, Cambridge

York Osteoarchaeology Ltd

By Malin Holst, Anwen Caffell and Katie Keefe

York Osteoarchaeology Ltd. undertakes skeletal excavation and analysis. Anwen Caffell and Malin Holst are also Honorary Research Associates at the Universities of Durham and York respectively and are teaching at both universities.

Alcester, Warwickshire, Warwickshire Museum Field Archaeology Projects Group Ltd by Katie Keefe

Two Roman inhumations, including a female aged between 36 and 45 years who suffered from rheumatoid arthritis in both wrists and secondary osteoarthritis. She also had DJD in both shoulders, elbows, wrists, hips knees and ankles, several congenital defects, including border shifting of transitional vertebrae, irregular segmentation of ribs and an asymmetrical manubrium. Evidence of healed infection was present on both fibulae and the visceral surface of two ribs.

Coppergate, York, York Archaeological Trust for Research and Excavation by Malin Holst

Four Anglo-Scandinavian skeletons, excavated between 1976 and 1981, were buried in pits in a variety of positions and orientations. They included a young adult female, a mature adult female, an old middle adult male and a possible male adult. The two older adults suffered from a variety of congenital anomalies, the majority of which affected the spine. The mature adult female also had congenital hip dislocation, which led to secondary problems; a limp, formation of an artificial hip joint with secondary osteoarthritis, inflammation, atrophy of the affected leg and hip, over-use of the opposite leg causing muscular trauma and osteoarthritis and one-sided degenerative joint disease and osteoarthritis of the spine. She may have used crutches and had unusually robust arms and shoulders and degenerative joint disease in the shoulders and right hand.

Edge Hill, Warwickshire, Warwickshire Museum Field Archaeology Projects Group Ltd by Katie Keefe

Two late Anglo-Saxon partial individuals both had evidence of infection; the juvenile suffered from periosteal reactions of the upper jaw, ribs and arms that may have been a result of hypertrophic

(pulmonary) osteoarthropathy or tuberculosis. The adult female suffered from periosteal reaction of the left forearm and sinusitis. The juvenile had *cribra orbitalia* and enamel hypoplasia, while the adult suffered from osteoarthritis of the right shoulder and the spine.

Fewston, North Yorkshire, John Buglass Archaeology by Anwen Caffell

The remains of 145 individuals were excavated from the graveyard of the Church of St Michael and St Lawrence, Fewston in 2009-2010. Most individuals are believed to date to the post-medieval period, although some could be medieval in date. Sixty-four skeletons were analysed in full, with the remaining 81 skeletons briefly assessed. Fifteen named individuals were identified from their coffin plates, with a further 10 more tentatively identified from monument inscriptions. The 64 analysed skeletons included an even number of males and females, who were predominantly of a mature age. A third of the population was made up of non-adults, of which a high proportion were adolescents. Neonates and infants were under-represented. Males were taller than average for the period, whereas females were of average height. Numerous pathological conditions were observed, including evidence for childhood stress (enamel hypoplasia, *cribra orbitalia*, scurvy and healed rickets), infectious disease (non-specific and respiratory), trauma (fractures, soft tissue injuries and a healed blade injury), joint disease, and developmental anomalies. Dental health was poor and suggestive of a high-sugar diet. Other conditions included an individual possibly suffering from Paget's disease, an individual who may have been autopsied or embalmed, possible evidence for corset-wearing, and evidence for pipe-smoking. Further research will be carried out on this population in the forthcoming year.

Heslington East, York, Department of Archaeology, University of York by Malin Holst

A third Roman skeleton was excavated at Heslington East. This individual was a female aged 46 years or older. The skeleton showed evidence for mild muscular trauma and degenerative joint disease in the right foot. Most notable were deep lytic lesions at the right and left hip; the latter had been partly destroyed by post-mortem damage. It is possible that the lesions were caused by brucellosis, though alternative diagnoses, such as tuberculosis or osteomyelitis must be considered.

High Eastfield, Scarborough, North Yorkshire, MAP Archaeological Consultancy Ltd. by Malin Holst

The skeletal remains were recovered from a Romano-British trench and a trackway. The partial remains of three perinates, as well as one small skull fragment of an older infant or juvenile, were found.

Saxby Wold, Lincolnshire, West Yorkshire Archaeological Services by Anwen Caffell

A young adult female and a child aged 11-13 years old had been buried in crouched positions within an inner enclosure ditch. Both had developmental anomalies affecting the skeleton and lesions suggestive of childhood stress. The adult female had suffered an inflammation of her lower legs, left foot and skull, and sinusitis. The dental health of both individuals was relatively good, although the child had some dental anomalies. They are most likely to be Roman or Iron Age in date.

St Mary's Church, Fridaythorpe, North Yorkshire, Matthias Garn Ltd by Malin Holst

A total of 42 partial skeletons were excavated during drainage work at Fridaythorpe by York Osteoarchaeology Ltd and were dated to the 18th and 19th centuries based on the coffin furniture.

The assemblage was a mixed population of both sexes and all ages, though the majority of individuals were mature. The majority of pathology consisted of spinal joint disease and dental disease. A four year old child had suffered from severe rickets.

St. Nicholas Church, Wetwang, North Yorkshire, Geoff Neal Roofing Ltd by Malin Holst

During excavation prior to drainage works at Wetwang church, 62 partial skeletons were excavated by York Osteoarchaeology Ltd. Most notable was a complete late 18th-century Blackware cup that had been included in the coffin by the feet of one of the skeletons. Burial of pottery is not uncommon in the period on the Continent and has been thought to be associated with the last rites, but there are few parallels in Britain. Coffin furniture was present and dated from the mid 18th to the mid 19th centuries. Males and females usually lived to a mature age and few children were represented. Little pathology was seen, though degenerative joint disease was common.

Tiddington, Stratford-upon-Avon, Warwickshire Museum Field Archaeology Projects Group by Malin Holst

Two partial mature adults, one of whom was female and one was male, were recovered from Tiddington. The male was probably of African origin and had a dental abscess, degenerative joint disease in the shoulders, ribs, hips and particularly the lower spine.

Wattle Syke, West Yorkshire, West Yorkshire Archaeological Services by Anwen Caffell

Fifty-seven individuals were excavated as part of the A1 Bramham to Wetherby Upgrading Scheme. Radiocarbon dating of two-thirds of the skeletons demonstrated that the individuals were buried between the middle Iron Age and post-Roman periods. An adult male and

female had been buried at the north of the site in the middle Iron Age. Late Iron Age burials included a double burial of a male and female, an unsexed adult and thirteen neonates/ infants; the latter were mostly associated with settlement features. Ten neonates had been buried in pits, ditches or postholes in the early Roman period. Twenty-seven individuals were dated to the late Roman period, over half of which were non-adults who had died around birth. Most of the twelve adults were female, and mature adults predominated; some of the adults may have been buried with neonates. A mature adult male was buried within a Roman building in the post-Roman period. Pathological conditions had affected all adult individuals from all periods. Joint disease was frequently observed, particularly among the mature adults of the late Roman period. Lung infections had affected individuals of the middle and late Iron Age, as well as a late Roman adult. Non-specific infection and sinusitis were also observed. Fractures and soft tissue trauma were observed in adults of all periods, and a late Roman female had fractured and dislocated her ankle. There was limited evidence for childhood stress. Dental disease was observed in all periods.

Wood Hall Farm, Bubbenhall, Warwickshire, Warwickshire Museum Field Archaeology Projects Group by Malin Holst and Katie Keefe

A single Iron Age cremation burial contained the remains of an adult.

Yorkshire Museum, York by Malin Holst

During excavation for the gents' toilet beneath the Yorkshire Museum, a partial Roman male older middle adult skeleton was found. He was 179cm tall and had Schmorl's nodes, congenital anomalies and degenerative joint disease in his spine and clavicle and a button osteoma. Most notable were six peri-mortem blade injuries that affected two lower vertebrae,

a lower right rib, the right side of the mandible and skull.

DEPARTMENTAL REPORTS

Bournemouth University Departmental Report

By Martin Smith

People

2010 has been a year of continuing growth at Bournemouth, with new facilities, new staff appointments and continued success with expanding taught courses. Karina Gerdau-Radonic, originally from Peru, joined us in 2009 from the University of Bordeaux and is now putting considerable energy into both research and teaching. Karina has particular interests in skeletal taphonomy, post-mortem treatment and/or handling of human remains, disarticulation and decomposition patterns, as well as pre-Columbian burial practices. Marie Louise Jorkov left us in 2009 to return to Copenhagen University where she has been working on a large post-medieval cemetery excavation. We were sorry to lose Marie and wish her every success.

Ian Hanson is currently enjoying a 12 month sabbatical which he is putting to good use finalising various publications and also continuing his work in Iraq for the International Commission on Missing Persons (ICMP). Ian spent time over the last two summers helping to kick start a training program in mass grave excavation and anthropological lab analysis for ICMP in Baghdad, teaching some 40 Iraqi archaeologists, scientists and doctors in new forensic techniques. During Ian's absence we have been pleased to appoint Stephany Leach, who has been a valuable addition to the teaching team in addition to working on her own publications and bringing her recent experience of the Fromelles WWI mass grave excavation for the Commonwealth War Graves Commission.

We have been pleased to appoint a new Demonstrator in Anthropology to replace Patricia Furphy, who has moved on to study for a doctorate at Liverpool John Moores University. Elizabeth Craig joined us from the University of Sheffield in September. Her research interests include bioprofiling, palaeopathology and Anglo-Saxon funerary practices. Elizabeth has been a great asset both in teaching and administering the human bone labs and skeletal collections. She is currently in the process of preparing her doctoral research into identity and funerary practices in northern England c. AD 650-850 for publication.

Most recently, we have been pleased to welcome Holger Schutkowski as Deputy Dean. Holger took up his post at the beginning of January and we have been greatly looking forward to working with him. Amongst other projects, Martin Smith continues his work on Neolithic material, recently completing analysis on the assemblage from Wor Barrow, Cranbourne Chase, which had not been re-evaluated since its iconic excavation by General Pitt Rivers in the 1890s. Amanda Korstjens continues her primatological research, which focuses on several areas and species including studying Ugandan colobine monkeys to investigate the evolution of mating strategies as well as the behavioural ecology of Costa-Rican spider monkeys. As an associate of the British Academy project 'From Lucy to language', Amanda is involved with developing mathematical models to help understand early human social systems and primate distribution patterns in relation to climate. Altogether, the, Forensic Archaeology, Biological Anthropology and Osteology team now numbers seven permanent staff members.

Teaching

The school is now enjoying the benefits of a large new teaching lab with a wide range

of newly purchased casts and equipment, as well as a new human bone store and secure examination room. A grave excavation area has now been developed on campus to assist students in practical. The MSc courses have grown in recent years, with 15 students studying Osteoarchaeology, 25 studying Forensic and Biological Anthropology, 19 studying Forensic Archaeology, and 19 studying Recovery and Identification of Human Remains. Summer short courses run during 2010 were very successful, with over 50 students undertaking the mass grave excavation or temporary mortuary courses.

Research Projects

New outdoor research facilities acquired by the School of Conservation Sciences are now being used for experiments in ballistic trauma to bone, effects of cremation, scavenging patterns, grave excavation methods and entomological studies. Several interesting doctoral projects are currently underway within the school. Study of scavenging behaviour of British mammals is being undertaken by Alexandria Young. This work is making good progress, as is a project focusing on trauma to the skeleton caused by explosions being conducted by Marie Christine Dussault. Whilst this project has a largely modern, forensic focus it also holds relevance for previous periods - during 2010 Marie travelled to Belgium and Lithuania to assist in identification and interpretation of human remains dating from the First World War with blast trauma. Katie Hess is studying the absorption of heavy metal compounds in 19th- and 20th-century skeletal remains as a result of medical treatments and industrial processes. Lastly, in 2010 Sarah Lockyer commenced a doctoral study investigating signs of domestic and urban violence in post-medieval cemetery assemblages.

Excavation of a Romano British 'banjo' enclosure site in Dorset ran throughout the

summers of 2009 and 2010, revealing a well preserved and high status Iron Age and subsequent Romano-British settlement, with a number of adult and juvenile burials being excavated. A large portion of the site remains unexplored and we will be returning over coming years to continue this project as an annual training excavation.

**BARC, Archaeological Sciences,
University of Bradford**

By Jo Buckberry

2010 saw the initiation of some exciting new projects in Bradford. Jo Buckberry is working with Iona McCleery (School of History, University of Leeds, project PI) and Vicky Shearman (Senior Cultural Officer, Wakefield District Council) on 'You Are What You Ate', a society award supported by the Wellcome Trust. The project, which combines historical, archaeological and palaeopathological evidence of diet in the past with modern nutrition and food science, seeks to raise public awareness of healthy eating – both medieval and modern – through a series of festival stalls, public lectures, museum exhibitions, schools events and hands-on workshops. Jo and Alan are hosting the first osteology workshop – on the theme of dental health and diet – at the end of January, and our first exhibition, 'Sugar and Spice and all things Nice' at Wakefield Museum, opens on 5th March. Jo Buckberry, Andrew Wilson and Rob Janaway have been involved in the excavation of a crypt in Sunderland, with North Pennines Archaeology. The skeletal material is currently being assessed by Jo Buckberry and Rebecca Storm. Mike McCarthy, Jo Buckberry, Janet Montgomery and Cathy Batt received funding from the British Academy to investigate a group of Anglo-Scandinavian burials from Carlisle Cathedral. Jo Buckberry, Janet Montgomery, Julia Lee-Thorp (University of Oxford) and Alan

Ogden are undertaking osteological and isotopic analysis of a group of skeletons from Stirling Castle for Historic Scotland. Two of the skeletons featured on History Cold Case back in April. Alan is currently reconstructing the face of the medieval woman, who died as a result of trauma to the head.

Janet Montgomery and Julia Beaumont are continuing with the NERC-funded 'Timelines in Teeth' project. Micro-CT scanning of permanent human teeth at different stages of development continues to produce interesting patterns of enamel mineralization. In collaboration with the Wellcome collection at the Hunterian Museum, Royal College of Surgeons, micro-CT scans have also been carried out on a series of developing deciduous teeth from the Stack collection. In collaboration with Maisoon Al-Jawad, Queen Mary University College, London, some of the teeth were sectioned, and hydroxyapatite crystal texture and development investigated using X-ray diffraction at the Xmas beamline, ESRF Synchrotron facility in Grenoble. The analysis of a sailor from the Franklin expedition of 1845 has continued in Bradford. Lead concentration analysis of the individual's tissues has been carried out to investigate the possibility of lead poisoning. In order to put this data into context, Janet Montgomery is collecting contemporary bone and tooth samples for analysis. These have been sourced from the museum collection at the British Dental Association, and dissected specimens from the Wellcome collection, at the Hunterian Museum, Royal College of Surgeons, London.

Congratulations to AHRC-funded PhD student Nivien Speith, who was awarded the prize for best oral presentation for the talk 'Differential identification of activity-related markers: Possibilities and limitations of tracing entheseal changes in archaeological populations' at the 17th

European Meeting of the Palaeopathology Association, held in Vienna in August 2010. Julia Beaumont has been awarded an AHRC PhD student award (part-time) to continue her research using stable isotope analyses to identify first generation Irish immigrants in a Famine-period London cemetery.

Finally, we wish Holger Schutkowski and Janet Montgomery the very best in their new posts at Bournemouth University and Durham University respectively. We'll miss having both of them as part of our team in the BARC.

New PhD Student:

Ceilidh Lerwick: Vikings, Picts and Scots: Biocultural Identity in Medieval Scotland

Ongoing PhD Research:

Julia Beaumont: Irish names in a London Cemetery: is it possible to identify Irish immigration in 19th-Century Lukin Street? (AHRC)

Emma Brown: The Antiquity of Hallucinogen Use in Coastal Peru (AHRC).

Laura Calderwood: Differential Infant and Childhood Morbidity and Mortality in 19th century London. (AHRC).

Pamela Cross: Horses of Men and Gods: Horse Sacrifice and Mortuary Rituals in 1st Millennium AD Britain.

Victoria Mueller: The end of the world? Famine, plague and climate change in 14th century London (AHRC).

Ben Neil: Osseous remains and cave taphonomy in the Yorkshire Dales.

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

Nivien Speith: Skeletal evidence of the social persona: Life, death and society in early-medieval Alamannic communities (AHRC).

Jacqueline Towers: The significance of cattle birth seasonality in the detection of dairying in archaeology. (AHRC).

Deborah Tunney: Shifting environmental conditions in Britain during the Last Glacial as reflected in isotope ratios in archaeological fauna (School Bursary).

Joseph Warham: Biosphere mapping of strontium isotope ratios in the British Isles (NERC).

PhD theses submitted in 2010:

Jen Wooding: Manifestation, identification and diagnosis of tuberculosis in faunal remains from an archaeological context (AHRC).

Fiona Tucker: The Treatment and Use of Human Remains in the Atlantic Scottish Iron Age (School Bursary).

Sarah King: Engendered violence and trauma in the European Iron Age (ORS).

Amy Dapling: The Archaeology of Infanticide in Anglo-Saxon and Medieval Britain (AHRC).

Dissertations Submitted for the MSc Human Osteology and Palaeopathology, 2009/10:

Abigail Ash: Palaeopathology or taphonomy: Comparison of technologies in distinguishing pre- and post-mortem alterations to joint morphology.

Gemma Burton: Differential mortality and morbidity of juveniles in a post-medieval English population.

Helen Carpenter: Sex assessment using mastoid process measurements: An investigation study of Nagaoka *et al.* (2008).

Lorna Felix: Osteological evidence of judicial mutilation in Anglo-Saxon execution cemeteries.

Jon Gauthier: Assessing tooth cementum annulation (TCA) relative to macroscopic ageing methods in an archaeological population/assemblage.

Jessica Grant: Stable isotope analysis of pathological and non-pathological bone from an archaeological population.

Ellen McManus: An isotopic investigation of the early medieval cemetery of the

Oosterbeintum, Friesland, The Netherlands.

Katie Ruffell: A skeletal analysis of trauma in early Anglo-Saxon England.

Genevieve Tellier: Are enthesopathies useful indicators of past occupation activities?

Jennifer White: Metrical methods of sex assessment on British post-medieval femora.

Cranfield Forensic Institute, Cranfield University

By Sophie Beckett, Andrew Shortland and Anna Williams

Cranfield Forensic Institute (CFI) is involved with research, teaching and commercial work of organic and inorganic materials, with particular expertise in the analysis of bone using a range of physical, chemical, mineralogical and isotopic techniques. CFI collaborates in many projects with other institutions such as Harvard, Melbourne, Leuven, Quinnipiac and Oxford Universities, the Getty Institute of Conservation, the British Museum, the Metropolitan Museum of Art, Bonhams, MOD Estates, the Inforce Foundation and many more.

The Cranfield Forensic Institute Analytical Laboratory is a new facility which accommodates an extensive suite of state-of-the-art equipment. The Laboratory is well equipped for a range of analytical investigations from the macro-scale to the micro-scale. For example, the surface topography and internal structure of an object can be obtained, in addition to the characterisation of the object's bulk and location-specific composition. The Laboratory carries out commercial analysis and is open to other researchers from Cranfield University and from other research institutions. For further information, see www.cranfield.ac.uk/forensics

Cranfield Forensic Institute is also in the process of establishing a new Forensic Fieldwork Facility. This is a secure outdoor laboratory on the Defence Academy of the UK (Shrivenham) site that has been authorised by DEFRA for the use of animal by-products for research purposes. The facility is available to Cranfield Forensic Institute staff and students and their collaborators for detailed taphonomic research into any aspect of decomposition, taphonomy, search and location and excavation. It is for the use of animal analogues only at the moment (mainly pigs, but some wild animals can be used). For further information, contact Dr Anna Williams (a.williams@cranfield.ac.uk).

Dr Karl Harrison, who has been a Fellow of the Cranfield Forensic Institute for several years, has been appointed as a full-time Lecturer in Forensic Archaeology. Kelly Domoney, Catherine Sinnott and Charlene Greenwood have joined Cranfield Forensic Institute as PhD students. Also, several PhD students completed their research in 2010: Nicola Attard-Montalto and Rebecca Scott, who has taken a post-doctoral post at the University of Leuven, Belgium.

The modular MSc Forensic programme continues to be a successful and popular course. Student numbers trebled for the 2010 intake compared to the previous year. The programme enables students to construct their own 'bespoke' course from a combination of a wide range of compulsory and elective modules, within a framework of five forensic streams (*Forensic Archaeology and Anthropology, Forensic Engineering and Science, Forensic Ballistics, Forensic Explosive and Explosions Investigations and, Forensic Investigation*). Also, the modular programme enables many of the MSc modules to be taken as individual short courses. An open day for the MSc

Forensic programme will be held in spring 2011.

The 2010 course prize for the most outstanding student on the MSc in Forensic Archaeology and Anthropology course was awarded to Nicola Flanagan. A poster presentation of MSc dissertation research by Charlene Greenwood was presented at the 2010 Denver X-ray Conference and won an award of best poster (XRD Winning Smiles: Analysis of Dental Calculus in Bioarchaeology).

In February 2011, several staff and students of the Cranfield Forensic Institute will be attending the American Academy of Forensic Science Conference in Chicago, USA. They will be giving oral presentations on a variety of topics, from the excavations at Fromelles and artificial cranial deformation, to understanding the phenomenon of the dominance of women in Forensic Anthropology.

Department of Archaeology, Durham University

By Tina Jakob

2010 has been yet another busy and productive year and we were pleased to welcome a number of new research students to enlarge the already impressive group of bioarchaeology postgraduate students (see below). A warm welcome is also expressed to Janet Montgomery who was appointed senior lecturer in the Department and will begin her work in January 2011.

People

Charlotte Roberts was elected President of the Paleopathology Association for 2011-2013; in addition to being invited as associate editor of the new *International Journal of Palaeopathology*, she is also a member of the advisory board.

Becky Gowland has taken time out in 2010, and we would like to congratulate her and Tim Thompson on the arrival of their second son. Becky's teaching commitments while on maternity leave were covered by Anwen Caffell and Tina Jakob. Anwen and Tina are also assisting with laboratory demonstrating on the MSc in Palaeopathology course. Tina continues her analysis of prehistoric and historic skeletons from El Salha in central Sudan and has presented some of her results at conferences in London, Cambridge and Vienna.

Anwen has carried out contract work for York Osteoarchaeology, Archaeological Services Durham University and Tyne and Wear Museums.

Borras Quarry, Wrexham, for Archaeological Services Durham University

Excavations carried out at Borras Quarry, Wrexham in 2008-2009 revealed the remains of a mid or late Neolithic settlement, as well as evidence for Bronze Age activity. A single undated cremation burial (237.4g of bone) was excavated. The burial probably contained the remains of a single individual, who was most likely an adult or older adolescent.

Chester-le-Street, County Durham, for Tyne and Wear Museums

Analysis was carried out of an urned cremation burial of Roman date (late third/ fourth century AD) excavated near a school in Chester-le-Street, County Durham at some point prior to 1935; contextual information was limited. The bone weighed 1001.1g, and identified fragments included parts of the skull, torso, upper and lower limbs. The individual was an adult of unknown sex, probably aged 35-60 years at the time of death. Lamellar bone was present on tibia fragments, and one tooth had been lost ante-mortem. A single fragment of burnt dog bone was also identified.

Current Projects

Becky Gowland is investigating morbidity and malaria in Anglo-Saxon wetland environments (British Academy Small Grant). Research Assistants are Gaynor Western and Martin Redding.

Biomolecular archaeology of tuberculosis in Britain and Europe - NERC funded project (2007-2011) - Charlotte Roberts and Professor Terry Brown of the University of Manchester as investigators and Abi Bouwman (Manchester) and Darlene Weston as PDRAs – see BABAO review 2008 and webpage (<http://www.dur.ac.uk/archaeology/research/projects/?mode=project&id=353>).

Having completed Years 1, 2, and 3 the initial screening for TB aDNA survival has been completed, and the strain typing is now progressing at Manchester.

The Bamburgh Bowl-Hole Anglian cemetery: a contextual study. AHRC funded project (2006-2010) - Charlotte Roberts with Sam Lucy and Graham Pearson as investigators, and Sarah Groves as PDRA, in collaboration with the Bamburgh Research Project – see BABAO review 2008 and webpage (<http://www.dur.ac.uk/archaeology/research/projects/?mode=project&id=278>).

Recording of the human skeletal material is complete and analysis of the data is providing a picture of life and death in this Early Medieval Northumbrian population. The stable isotopic analyses are also now complete (O, Sr, N and C). The project was completed in June 2010 and is now being written up for publication.

Bioarchaeology of leprosy

Charlotte Roberts' Leverhulme Trust Fellowship funded writing a book entitled: *A bioarchaeology of leprosy: a global perspective on a declining disease* (University Press of Florida); the book continues to be near completion (see webpage:

http://www.dur.ac.uk/archaeology/research/research_environment/major_research_projects/?mode=project&id=279)

Indigenous or incomers? A mobility study of people with pre-Columbian venereal syphilis at Hull Magistrates Court

Charlotte Roberts, Andrew Millard, Graham Pearson (Earth Sciences), aided by Dr Colin MacPherson (Earth Sciences) and Dave Evans (Humber Archaeology Partnership). See BABAO review 2008 and webpage (<http://www.dur.ac.uk/archaeology/research/projects/?mode=project&id=382>). This project is now complete and results were presented at both the Annual Paleopathology Association Meeting in Albuquerque, New Mexico, and the Paleopathology Association European Meeting in Vienna, Austria during 2010, with a paper being in progress.

A Global History of Paleopathology: Pioneers and Prospects (see webpage: <http://www.dur.ac.uk/archaeology/research/projects/?mode=project&id=400>).

Jane Buikstra (Arizona State University) and Charlotte Roberts have now completed the co-editing this volume (Oxford University Press). It involves over 70 contributors, and is now in press.

New research students for 2010

Michaela Binder: Health and diet in ancient Nubia through political and social change. Leverhulme Trust funded.

Devon Kase: Congenital conditions in British populations: a contextual approach.

Ross Kendall: Past endemic malaria and adaptive responses in the fens and marshlands of eastern England. Anthropology teaching bursary.

Lindsay Powell: Childhood health and care in Roman London: the isotopic and palaeopathological evidence. NERC funded.

Will Southwell-Wright: Disability and difference? Assessing social perceptions of

physical impairment in Roman Britain.
AHRC funded

Research students who submitted/had their viva in 2010

Karen Bernofsky: Bioarchaeological study of respiratory disease in Britain.

Jaime D. Jennings: Conflict in the Borders of England and its impact on late medieval populations.

Paola V. Ponce: A comparative study of activity-related skeletal changes in 3rd-2nd millennium BC coastal fishers and 1st millennium AD inland agriculturists in Chile, South America.

Current Research Students

Zahra Afshar: Migration, mobility and economic transition in the 3rd millennium BC in Iran.

Marta Diaz-Zorita Bonilla: Reconstructing social structure through bioarchaeological analysis. Funded by the Government of Andalucía.

Joy Eddy: Burned Human Skeletal Remains and Cremation Practice in Roman Britain.

Marieke Gernay: Urban health in Medieval Belgium, France and England

Kirsty McCarrison: Osteological and biomolecular study of prehistoric tuberculosis in Britain. NERC funded.

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

Kimberley Plomp: Quantifying palaeopathology: developing objective geometric morphometric methods for recording pathological conditions in human skeletal remains. Durham Interdisciplinary Award - with Anthropology.

Jennifer Sharman: Testing age and sex estimation methods on known documented skeletal collections from Portugal, England and Canada.

Ashley Tallyn: A study of monks' and nuns' health using multiple lines of evidence.

The following MSc in Palaeopathology students successfully completed their dissertations in 2009-10

Arnett, J.: The Carolina Algonkian: Pre-contact juvenile health during the late Woodland period.

Blundell, C.: A review and critique of the academic literature concerning ancient trepanations, with emphasis on the methods of recording and the subsequent manner of data.

Bolster, S.: Long-term curation of human remains

Bradley, O.: Metrical vs. morphological: A review of different cranial metrical analyses of sexual dimorphism and a test of the acoustic meatus and petrous portion.

Butler, R.: Public consultation on the use and abuse of human remains in England.

Chinnock, C.: A comparative study on the stature of the Welsh people and their English counterparts in the early medieval period.

George, E.: The remains of Ivan Denisovich: the potential for future bioarchaeology, palaeopathology, and forensic archaeology/anthropology on osteological remains dating from 1917-1958 in the former Soviet Union.

Goodall, K.: An investigation of dental non-metric traits and genetic relationships of a medieval population.

Jedrzejewski, H.: Presence of metabolic disease in Roman London.

Kase, D.: The frequency of congenital defects in late- and post-medieval Great Britain (1050-1850 AD).

LaCoss, E.: A re-examination of skeletal scars of parturition in the Chelsea Old Church population.

Lloyd, B.: Prevalence and patterns of disease in the late-Roman cemetery population of Frilford, Oxfordshire.

Mant, M.: Diet, sex and status in post-medieval London.

Menzel, E.: Aalborg grabrodkloster and gammel grena kirke: A comparative study between urban and rural medieval Denmark.

Moon, C.: Childhood growing in changing times: A comparative study in childhood growth and health between Visigoth and late medieval Spain.

Petersone-Gordina, E.: Nutritional-related health problems in a 17th-18th century German community from Jelgava, Latvia.

Saper, L.: Comparison of traumatic injuries in late medieval urban and rural contexts.

Whitley, L.: The blight of England: the effects of the potato famine on the working class in England.

Events

A one-day conference, 'Moving Goalposts: Innovation and Development in the Study of Human Remains', was held on Saturday 19th June 2010 in the Department of Archaeology, Durham University. This conference aimed to facilitate communication across related disciplines and between different research institutions in the Northeast of England to enable researchers and students to share in the latest innovations in human skeletal and soft tissue analysis. A key outcome of the event was to stimulate further cross-institutional and multi-disciplinary networking events. Forty-nine people attended the conference which had a wide range of presentations from established academic professionals and postgraduate students from Durham University, Teesside University and The University of York. The presentations were most stimulating and provoked much enthusiasm for future annual events and networking between the participants. It is therefore anticipated that another conference will be held in 2011.

A one-day event exploring '5000 Years of Death and Disease' as part of the CBA Festival of British Archaeology took place on 31st July 2010. Aimed at interested members of the public, the event comprised a series of six short talks and two practical sessions discussing health and disease from prehistory through to the

post-medieval period. Between sixty and seventy people attended and enjoyed the event which was organised by Kirsty McCarrison, Anwen Caffell, Tina Jakob and Charlotte Henderson, with assistance provided by PhD and Master's students from Durham University.

Charlotte Henderson is a member of the International MSM Working Group on Methods

(http://www.uc.pt/en/cia/msm/msm_after) which met twice in 2010. In June a meeting in Geneva, Switzerland tested the inter- and intra-observer error for the new method. Secondly, a workshop was run at the 18th European Meeting of the Palaeopathology Association in Vienna to present the new method (<https://www.uc.pt/en/cia/msm/Vienna2010.pdf>), our results, and to introduce the method to a wider audience to enable it to be used more widely. This opportunity was also used to collect more inter-observer error data to test how quickly this method can be learnt.

Becky Gowland co-organised and taught the short course 'Body Location and Recovery in Forensic Contexts' with Dr Tim Thompson (Teesside University) in September 2010. The course was attended by 13 delegates (including emergency planners, CSIs, Scientific Support Managers) and once more received excellent feedback. We plan to run this course again in September 2011. <http://www.dur.ac.uk/archaeology/cpd/forensic/>

University of Edinburgh

By Kathleen McSweeney

Taught MSc Programmes

The University offers three osteologically-related taught MSc programmes: Osteoarchaeology (covers human and animal remains), Human Osteoarchaeology and Forensic

Anthropology. Further information relating to the programmes can be found at:

<http://www.shc.ed.ac.uk/postgraduate/GraduateArchaeology.htm>.

The programmes are principally taught by the following people:

Dr Kath McSweeney: human osteoarchaeology and Director of all three MSc programmes

Dr Elena Kranioti: Forensic Anthropology

Dr Laszlo Bartosiewicz: animal remains

Dr Simon Mays: visiting lecturer

Dr Catriona Pickard: bone chemistry

Professor Clive Bonsall: reconstruction of ancient diets

Dr Gordon Cook: radiocarbon dating

Osteology Masters Students: There are currently 35 students on the three programmes (5 Osteoarchaeology; 16 Human Osteoarchaeology and 14 Forensic Anthropology).

Biopic (Dr Elena Kranioti)

Dr Elena Kranioti joined the staff of Archaeology, University of Edinburgh, in January 2010. She is a Forensic Pathologist trained at the Department of Forensic Sciences of the University of Crete with emphasis in macroscopic and microscopic evaluation of sharp and blunt force trauma (traffic and labour accidents, homicides etc.) and the investigation of skeletal remains. She did her PhD in Forensic Anthropology at the University of Crete and she was awarded a 2.5 years Marie Curie Fellowship in the EVAN (European Virtual Anthropology Network) project in Madrid, Spain. Her research interests focus on the application of geometric morphometrics and virtual tools in Forensic Anthropology, the development of sex estimation methods using advanced image processing equipment, the evolution of interpersonal violence in the Upper Palaeolithic and the application of biomechanics in forensic science.

Current Research (Kath McSweeney):

Prehistoric Populations of the Danube Basin: health, diet and demography.

Bronze Age populations of the Arabian Peninsula.

Early Bronze Age babies from Bulgarian Thrace: a bioarchaeological, stable isotopic, and radiocarbon study.

Osteological analysis of the human remains from Ancient Messembria, a multi-phase site (Ancient Greek, Classical and Byzantine periods) on the Black Sea coast, Bulgaria.

Research students

Supervised by K. McSweeney

Bony, Claire: Infanticide in Britain from the Roman Conquest to the Sixteenth Century AD. Current.

Kyriakou, Xenia-Paula: Interpreting Activity Markers in Medieval Scottish Populations: A lifestyle retrospective. Current.

Rennie, Claire: Evidence of Violent Trauma in Prehistoric Populations. Submitted.

Thomas, Jayne-Leigh: Late Bronze/Early Iron Age Skeletal Populations of Slovenia. Submitted.

Bonsall, Laura: A biocultural perspective on the health and socio-economic status of women in Romano-British communities. Current.

Medina-Pettersson, Cecilia: Cremation technology and ritual in Bronze Age Scotland. Current.

Reginiano, Deborah: Activity markers in Neolithic populations of Scotland. Current.

Gooney, Dawn: The osteological examination of the human skeletal remains from Berst Ness, Westray. Current.

Willows, Marlo: Health Status in Medieval Scotland. Current.

Kelly McCullough: A biometric and biomechanic study of platymeria, platycnemia and squatting facets. Current (commenced 2010)

Suzana Hukelova: Beaker skeletal populations from the Czech Republic. Current (commenced 2010).

Supervised by E. Kranioti

Helen Langstaff: The heritability of facial morphology. Current (commenced 2010)

News from the Bioarchaeology Laboratory, University of Exeter:

By *Chris Knüsel*

Dr. Sébastien Villotte has completed the first year of his two-year project “Activity-related Skeletal Morphologies of Europe’s Last Hunter-Gatherers and First Farmers” (Fondation Fyssen) in which he has recorded enthesal changes in collections of Europe’s first farmers from sites dating from the 7th to the end of the 5th millennium BC, including groups in southwest Germany, Switzerland, France, Romania, and Serbia. This study complements and extends his previous research on Upper Palaeolithic and Mesolithic populations, in which he documented a decrease in mobility through time across these periods through changes in limb entheses. Cynthia Bradley continues her doctoral dissertation research on “Remaking the Mazeway: A Study of Skeletal and Mortuary Evidence from the Ancestral Pueblo Site of Wallace Ruin” on the enigmatic Wallace Ruin site, Colorado, U.S.A. Ceri Boston began her AHRC-funded project “Lobsters and Tars: An Osteological Study of the Origins, Lifestyles and Health of 18th–19th-century Sailors and Marines of the Royal Navy as Reflected in their Remains” (Oxford University, external supervision).

The past year saw the first graduate from the MSc. Bioarchaeology course, Charlotte Webb, with six students involved this year, including the first two on the zooarchaeology pathway, James Gillespie and Thomas Gibson, and the first funded international student, Priscilla Ulguim, from Brazil, through a successful Wenner

Gren Foundation application, “Sacred Places and Funerary Rites: The Longue Durée of Southern Jê Monumental Landscapes (Brazil)” (to Iriarte and Knüsel). Priscilla joins Mandy Kingdom, Siân Smith, and Jamie Toombs on the Human Osteoarchaeology pathway. The Bioarchaeology Laboratory also welcomed the arrival of a collection of human remains on loan from the Gloucester City Museum. This collection and the Exeter Cathedral collection are now undergoing re-bagging and re-boxing with funding from the Institute of Bioarchaeology, which again this year also provided funds for the purchase of new equipment for the Laboratory.

The past year witnessed the completion and publication of two longer-term projects, both in an osteobiographical vein but nicely split between prehistory and historical subjects. *Gristhorpe Man: An Early Bronze Age Log-coffin Burial Scientifically Defined* appeared in *Antiquity* 84, while *The Identity of the St Bees Lady, Cumbria: An Osteobiographical Approach* received the Martyn Jope Award for 2010 from the Society for Medieval Archaeology after publication in *Medieval Archaeology* 54. In a related medieval theme, *The Economist* featured a piece on the Battle of Towton in their Christmas issue, 17 December 2010. In another end of year development, Martin Smith (Bournemouth) and Christopher Knüsel had their edited book proposal *A History of Human Conflict: Osteology and ‘Traumatized Bodies’ from Earliest Prehistory to the Present* accepted by Routledge Publishers. Over the past year, Sébastien Villotte and colleagues contributed two publications to the *American Journal of Physical Anthropology* on enthesal changes, and another to the *Journal of Human Evolution* that documents the re-discovery of the Upper Palaeolithic Ligurian Baouso da Torre remains. The past year also saw the

prestigious publication of Alan Outram and colleagues' seminal work on the earliest horse domestication, in *Science* 323.

Department of Archaeology, University of Southampton

By Jo Sofaer

People

2009-10 was a busy year in Southampton. This was especially the case for Jo Sofaer, Jaco Weinstock and Sarah Inskip as Sonia Zakrzewski was on maternity leave; Congratulations to Sonia who has had a baby girl! Yannis Hamilakis returned to teaching part-way through the year after a period of grant-funded research in the Aegean. Susanne Hakenbeck joined us as a post-doctoral research fellow working on mobility within medieval European populations using archaeological, skeletal and isotopic markers of identification.

Current Research Students

Sarah Green is in the first year of a PhD on the zooarchaeology of Roman Villa sites in southern England.

Sarah Inskip is continuing her PhD research exploring the impact of religious change on social organisation through the analysis of activity modifications and stable isotopes in early Medieval Islamic Ecija, Spain. She also undertakes contract osteological analysis for Northamptonshire Archaeology.

Carolyn Felton is in the first year of a part-time PhD entitled 'Sexual dimorphism in human vertebral morphology: facet orientation and degenerative joint disease'.

Ellie Williams is in the first year of an AHRC funded PhD project looking into monastic burial practice in England and France post Norman conquest (specifically 11th–13th centuries). A particular focus of this work is the relationship between

cross-Channel dependant houses and the extent of the influence of the French mother houses on their English dependencies.

Dissertations Approved for the MA in Osteoarchaeology 2009-10

The use of muscle markers and post-cranial non-metric traits on the human skeletal assemblages from Boscombe Three, Boscombe Sportsfield and Collingbourne Ducis to determine socio-economic and cultural changes in the late Roman to early Anglo-Saxon Transition in Britain – *Megan Claire Stoakley*

The Pathological Appearance of Infectious Middle Ear Disease (IMED) on Human Skeletal remains and its Potential in Identifying Pre- Antibiotic Poly microbial Chronic Otitis media in Past Populations: Inclusive of morphological traits and variations of the middle ear ossicles. – *Louise King*

Observing what has already been there: A perspective on recording human dentition as marker of life reconstruction from the early Anglo-Saxon Great Chesterford Cemetery in England – *Natasha Kalogirou*

Changing Health in Islamic Spain: An Osteological Analysis of Juvenile Metabolic Disease in Ecija, Spain – *Catherine Shupe*

Meetings in the Late Mesolithic of Northwest Europe: An exploration of Human –Whooper Swan relationships at Aggersund, Denmark – *Nicholas James Overton*

Demographics and Associated Interactions in Anglo-Saxon England: Biodistance Analysis of a Cemetery Population from Great Chesterford, Essex – *Bronwyn McNeil*

Violence and interpersonal relations in Islamic Spain: Analysis of the skeletal

assemblage at Écija, al-Andalus, Spain –
Kelsey Lindston

The exploitation of Fur-Bearing mammals during the late Aurignacian of Central Europe: A case study of the faunal remains from Breitenbach (Saxony-Anhalt), Germany – *Tim Matthies*

An osteological investigation into the sexual dimorphism of the Talus and First Metatarsal – *Emma Muspratt*

From Castle to Gaol: Analysis of the animal bones from Klikenny Court House, Kilkenny, Ireland – *Siobhan Duffy*

Sparsholt Roman Villa – The faunal remains – *Richard Stuart Ward*

The Palaeopathology of two Hellenistic Populations in Nea Pahos, Cyprus – *Alexandra Mouski*

An investigation into the life and death of Children in Early Medieval Ireland – *Laura Jane Sayers*

**School of Science & Engineering,
Teesside University**
By Tim Thompson

As ever, the anthropology component of our School remains small but active. We have been busy contributing to the forensic, crime scene and health foundation, undergraduate and postgraduate degrees, and we continued our commitment to workforce development. Our HEFCE Pathfinder funded body location and recovery course (with the Department of Archaeology, Durham University) ran for a second time and we are still consulting on forensic cases in the region (and abroad) too.

Although we are wrapping up our Leverhulme Trust funded project into body

modifications, we have been working on Becas Chile funded study into methods of improving the analysis of mass graves, and British Council funded work on the analysis of burned bone (with the University of Coimbra, Portugal).

We have also welcomed Dr Gillian Taylor, who some of you will have worked with already, to our School with her background in bone chemistry.

Related MSc dissertations submitted for the Forensic & Crime Scene Investigation Pathways

Davidson, A. (2010) Assessing the potential intelligence from stable isotope analysis in mass fatality management and victim identification.

Purdy, K. (2010) Analysis of tattoo inks using FTIR, microspectrophotometry and statistical analysis.

Wilson, S. (2010) Decomposition rates in different variables of water and the implications for human identification.

Wooley, D. (2010) The analysis of saw marks on bone.

Current PhD Research students

Starkie, A. The use of body modification as a tool in human identification (funded by the Leverhulme Trust).

Garrido-Varas C. An investigation into bilateral asymmetry of the skeleton and its use in physical and forensic anthropology (funded by Becas Chile).

Institute of Archaeology, UCL
By Anna Clement

Staff 2010

Roxana Ferllini continued to attract high numbers of students to her Msc course in Forensic Archaeological Science and

Professors Simon Hillson and Tony Waldron's Msc in Skeletal and Dental Bioarchaeology maintained its popularity last year. Dr Anna Clement and Professor Simon Hillson also finalised their work on the

Leverhulme funded research project, 'Teeth and the hunter-gather tool kit'.

Research Students 2010

Emmy Bocaege: Enamel defects as indicators of childhood stress in the Neolithic Near East.

Katherine Griffiths: An investigation of gender in juvenile burials using dental morphometrics to assign biological sex.

Brenna Hassett: Changing world, changing lives: enamel hypoplasia and child health in post-medieval London

Tania Kausmally: The anatomy school of William Hewson at 36 Craven Street (1772-1778): an investigation into the day-to-day running of an anatomy school and the life of an anatomist prior to the 1832 anatomy act.

Carolyn Rando: Human behaviour and the temporomandibular joint.

Nancy Tang: Root translucency as an indicator of chronological age in Human Remains.

Velissaria Vanna: How different was life in a Hellenistic town to 20th century Greek urban life? A biological approach.

Vicki Yorke-Edwards: Obesity in London 1700-1850: the archival evidence and osteoarchaeological evidence.

Short seminar series on human remains research in London

Dr Anna Clement organised a short seminar series held at the Institute of Archaeology during the spring term on human remains research in London. Roxana Ferllini gave a thought-provoking talk on 'Forensic Anthropology Applied to Genocide and War Crime Investigations' using case studies from her work in Rwanda, Syria and Spain. Dr Daniel Antoine and Jelena Bekvalac gave interesting talks on the human remains

collections at the British Museum and the Museum of London, and Dr Margaret Clegg from the Natural History Museum, London gave a fascinating talk on controversial subject of repatriation and humans remains.

The Institute of Archaeology's Human Remains team at the Annual Meeting of the American Association of Physical Anthropologists

The Institute of Archaeology was well represented at the 79th Annual Meeting of the American Association of Physical Anthropologists in Albuquerque, New Mexico. Seven members of the human remains team, both staff and research students, presented papers. Professor Tony Waldron gave an interesting poster on abnormalities of the vertebral artery in cervical vertebrae in collaboration with Dr Daniel Antoine from the British Museum questioning whether aneurysms and tortuosities of the vertebral artery are being overlooked in Palaeopathology. Melanie Nichols and Dr Anna Clement presented a poster in the Forensic Anthropology session evaluating the Miles method of ageing using a quantitative technique. Dr Anna Clement also presented two further posters, one with Professor Simon Hillson on the variation in tooth wear patterns amongst the Chumash of the Santa Barbara Channel Islands, and another with Dr Sabrina Scholts (University of Santa Barbara) and Dr Margaret Clegg (Natural History Museum, London) investigating European skeletal remains buried on San Nicholas Island, California and the new insights this can provide into Early European contact. Professor Simon Hillson gave a poster presentation on growth and development in the children's skeletons and dentitions from the Neolithic site of Çatalhöyük, Turkey. Three PhD students from the Institute of Archaeology also presented their research: Tania Kausmally gave a poster on William Hewson and the Craven Street anatomy school; Carolyn Rando presented on

temporomandibular joint disorders in archaeological populations with a pilot study examining the shifting prevalence of TMJ osteoarthritis between the medieval and post-medieval periods in London, and Brenna Hassett gave a podium presentation in the session on the Bioarchaeology of Teeth, comparing macroscopic, microscopic and metric methods of assessing enamel hypoplasia and suggesting an alternative approach to using a metric assessment of perikymata spacing.

Department of Forensic and Molecular Science, University of Wolverhampton

By Wera M. Schmerer

Postgraduate Research

PhD Project:

Post mortem decomposition of hair, cartilage and bone

Christopher J Rogers (see postgraduate student abstracts)

Supervisors: W.M. Schmerer, R. Sutton, M. Whitehead

Thesis submission: December 2010

Related Research MSc project:

Post mortem decomposition of articular cartilage

(MSc exchange student from University of Amsterdam)

Research MSc project:

Reconstruction of body height from foot-, barefoot print and footwear measurements

Ziryay Othman (MSc exchange student from University of Amsterdam)

Supervisor: W.M. Schmerer

Thesis submission: December 2010

MSc projects:

- The influence of DNA degradation on STR genotyping of human DNA
- Trace DNA analysis: Evaluation and Optimization of DNA extraction from trace material

- Evaluation and optimization of DNA extraction / amplification from difficult materials containing inhibitory substances

Continuing projects (MSc Biotech)

Supervisor: W.M. Schmerer

Undergraduate Research

Taphonomy/post mortem decomposition:

- Fungal succession on mummified remains
- DNA-based identification of post mortem fungal growth on decomposing hair (supervisor: M.P. Whitehead)
- Post mortem degradation of articular cartilage (supervisor: R. Sutton)

Analysis of pristine and degraded human DNA:

- DNA identification from fingerprint residues
- Comparison of DNA extraction methods for a variety of source materials
- Optimization of DNA extraction/amplification from difficult materials containing inhibitory substances
- DNA identification from hair samples (pet and human hair) (supervisor: W.M. Schmerer)
- Identification of STR markers for blood group typing (supervisor: T.J. Bartlett)

Biometry:

Reconstruction of body height from foot- and footprint measurements

(supervisor: W.M. Schmerer)

Learning and Teaching Projects:

Teaching Anthropological methodology (e.g. determination of sex, age from skeletal remains, age determination in living individuals)

Teaching post mortem decomposition / Forensic taphonomy / PMI determination

(supervisor: W.M. Schmerer)

Anthropology/Osteology and DNA analysis:

Osteological and DNA analysis-based sex determination of sub-adult skeletal human remains

This new project starts in 2011

(supervisor: W.M. Schmerer)

News

New international MSc course

Our new MSc “Forensic Genetics and Human Identification” is a comprehensive course on Human Identification and Mass Fatality Incident Analysis incorporating the full methodological repertoire of Forensic Genetics and DNA analysis, Physical Anthropology, Crime Scene Investigation and Human Identification based on biometric assessment of a variety of physical characteristics (www.wlv.ac.uk/mscforensic).

The course is expected to start in 2011.

Skeletal human remains collection

Since the end of 2010 we house part of the skeletal human remains collection of the Gloucester City Museum & Art Gallery, which will be integrated into our undergraduate and postgraduate teaching and research.

POSTGRADUATE RESEARCH ABSTRACTS

PhD Abstract

Ceridwen Boston, Oxford University

Email: ceri.boston@linacre.ox.ac.uk

Lobsters and Tars: an osteological study of the origins, lifestyles and health of 18th-19th century sailors and marines of the Royal Navy

Recent archaeological excavations of the burial grounds of the Royal Hospitals Greenwich, Haslar and Stonehouse, have

revealed approximately 350 skeletons of 18th- to early 19th- century seamen and marines of the Royal Navy (RN). These assemblages represent a rare and valuable opportunity to study the physical effects of a very specific lifestyle on the health and skeletal morphology of this specialist group. Considerable documentary research on the social history of the late Georgian RN has been undertaken, but until now has not been compared with alternative datasets. My study aims to examine such historical narratives on the origins, lifestyles and health of the ‘lower deck’ of the RN in the light of osteological evidence from their remains. In addition, I will compare the palaeodemography and disease patterning observed in these R.N. skeletal assemblages with contemporary non-combatants. Although my research topic is essentially general in its approach, I do plan to concentrate on specific aspects, such as trauma (and subsequent medical treatment) and activity related changes to the upper limb. It is hoped that this research will be of value to military historians, osteologists and medical historians alike.

PhD Abstract

Laura Calderwood, University of Bradford

Differential Infant and Childhood Morbidity and Mortality in 19th century London.

The majority of archaeological evidence for children in the past, from written texts to burials, has been constructed by the adult members of the population. Consequently, research has focused on adult attitudes towards children, rather than on the lives of the children themselves. Yet children are more sensitive to environmental and cultural factors than any other member of society, and the study of health, disease and mortality among children can provide a wealth of information about the cultural

and biological circumstances of a population. For the first time, the research proposed here will examine the physical remains of children to provide a unique insight into gender-related differences in the experience of childhood in the 19th century.

Higher male than female mortality rates have been observed in most non-adult age groups since the 17th century. This male mortality disadvantage is said to begin *in utero*, with a second X chromosome affording some biological advantage to females. However, the strength of the male disadvantage depends on various environmental, social and economic conditions. Current knowledge of infant and childhood morbidity and mortality in 19th-century England is based primarily on Civil Registration data, yet these records are deemed unreliable, particularly regarding age-at-death and disease classification. Moreover, very few studies examining infant and childhood mortality between 1800 and the start of Civil Registration in 1837 exist at all, thus the history of childhood health, disease and mortality in England remains incomplete.

The research proposed here will use the skeletal record, as the primary and most direct evidence available, to investigate sex differences in morbidity and mortality for infants and children in 19th-century London.

PhD Abstract

Angela Clark, University of Otago
Supervisors: Dr Nancy Tayles and Dr Siân Halcrow

Sexual Dimorphism in Adult Skeletal Remains at Ban Non Wat, Thailand, during the Intensification of Agriculture in Prehistoric Southeast Asia.

The overall aim of this thesis is to characterise the relationship, if any,

between the level of sexual dimorphism and health status during the transitional periods to intensified rice agriculture for the prehistoric Ban Non Wat sample. Humans alter their body size and shape as an adaptation to changes in the natural and cultural environments. The level of sexual dimorphism is a population-specific measure of the difference between male and female physical body size and shape, and has previously been used as an indicator of population health status. This thesis uses the large and well-preserved sample of ~350 adult individuals from Ban Non Wat to test the current hypothesis and determine if the level of sexual dimorphism in a prehistoric Southeast Asian population correlates with health status. Health is measured by the presence of non-specific infectious diseases and prevalence of dental enamel defects. The prehistoric community of Ban Non Wat spans the Neolithic, Bronze and Iron Ages, from 1750 B.C. to 300 A.D. Most other studies of health during Southeast Asian prehistory have concentrated on a comparison between different communities, because of low sample sizes. As such, there is insufficient data concerning diachronic changes in health in one specific population over a long chronology. The large Ban Non Wat sample eliminates the potential effects of different natural environments and previous isotopic analysis has demonstrated that they are a homogeneous population. This enables the population to be used as a model to assess health changes associated with the intensification of agriculture in mainland Southeast Asia. The results from this thesis will provide information on the general quality of life and biocultural context of the prehistoric community. Additionally, this research will contribute information on the extent to which body morphology varies between and within the sexes in prehistoric Southeast Asian adult individuals, which has yet not been fully investigated.

PhD Abstract

Cecilia Collins, Department of Archaeology, University of Iceland

Interpreting the prevalence of ear disease and maxillary sinusitis in medieval Iceland: an evaluation of adult and subadult skeletons using computed tomography, microscopy and endoscopy

By evaluating skeletal manifestations of chronic illness in the URT, depicting disease prevalence can inform current understanding of health status and the burden of disease in Iceland (AD1000–1700). Using microscopy, endoscopy and computed tomography (CT), lesions of the cranium will be assessed and the occurrence of these lesions statistically analyzed to determine disease prevalence. The primary objectives are: 1) To examine crania for evidence of chronic upper respiratory disease in the maxillary sinuses and temporals, also identifying the presence and severity of such lesions, and 2) to depict and interpret statistical data as a measure of disease load in medieval and post-Reformation Iceland, and its social and environmental aetiologies. Respiratory disease can cause general illness, and complications of an unresolved infection may lead to debilitating conditions including deafness, partial facial paralysis, septicæmia, and possibly death. Social consequences of these conditions, such as mild or even partial deafness, have been demonstrated to detrimentally affect children during periods of social and physical development, disadvantaging them amongst peers. Those who are unwell also project a burden of care on others in the community, whether it is a nuclear family group or an extended community. Respiratory disease proliferates in conditions that impede the body's natural protective functions. Co-habitation of humans and domesticated animals, crowded living conditions, smoke in the home atmosphere from burning fuel

sources, nutritional insult, and the effects of cold stress, cause physiological impairment and create niches for opportunistic pathogens. These social and environmental factors were common in pre-modern Iceland but the impact of these social conditions on the health of the human population has not been illustrated. The high medieval period and the Reformation are well documented; many sites throughout Iceland from this time have been excavated and are to be included in the study. Geographically, the dataset is quite ideal as it is of a random distribution over all areas of the country and allows comparison between sites of varying social status, *e.g.* farming communities like Þórrarinnstaðir and Stóraborg, and the bishopric of Skálholt. The sites also include Skriðuklaustur, a monastic hospital, Keldudalur, Haffjarðarey, Stóraborg, Skeljastaðir, Hofstaðir, and Hof í Hjaltadal.

The maxillary sinuses, temporals, and the auditory ossicles are examined by CT, microscopy and endoscopy. The maxillary sinuses and the ears are assessed with 0°, 30° and 70°endoscopes, which allow observation in all directions. The ossicles are extracted and studied with a simple microscope at the laboratory of the National Museum of Iceland. The endoscopes are on loan from the Anatomy Department of the University of Iceland and the specimens are taken to Landspítali University Hospital for CT examination. These images are stored on a digital archive and selected images can be saved, and also modeled in 3D. In CT examinations, the scans should prove particularly effective at diagnosing pathology in the auditory canals, and in determining if the roots of the maxillary molars or dental abscesses have breached the sinus floor and could therefore have introduced pathogens to the sinuses. The total expected for study is 500–600 skeletons. The doctoral committee

includes Steinunn Kristjánsdóttir (University of Iceland and director of the Skriðuklaustur Research Project) Mary Lewis (University of Reading), and the CT scans are studied with the help of Ásbjörn Jónsson, radiologist at Landspítali.

PhD abstract

Heidi Dawson, University of Bristol

Supervisor: Dr Kate Robson-Brown

Funding: AHRC

Due for submission February 2011

Unearthing Medieval Children: An osteological analysis on status and burial practice.

This thesis presents an exploration of the status of children in the late medieval period (AD1066–1539) and involves two concepts of the child; biological and cultural. The biological evidence is explored by an osteological analysis of sub-adult skeletal remains, and concentrates on markers related to status, such as age, rates of growth, the presence of stress indicators, and rates of dental wear. The cultural aspect involves an analysis of the archaeological evidence for burial treatment, such as location of burial, position of the body, and grave inclusions.

Two hundred and sixty two sub-adults were analysed from three collections: the priory of SS Peter and Paul, Taunton, the priory of St Oswald, Gloucester, and the priory of St Gregory, Canterbury. All sites were located on the edge of towns and had child burials present in both church and cemetery. Location of burial was assigned to each individual as position around the church and proximity to the church.

A higher incidence of stress indicators appeared to be related to higher status burials. This is in contrast to expected results; however, these indicators may be more likely to appear on high status individuals due to their greater potential for survival during times of stress,

allowing time for these lesions to manifest on the skeleton. Higher status individuals appear to have a less coarse diet as reflected by dental wear on the church burials. The use of deciduous dental wear as a method to aid in ageing young children was also explored with encouraging results.

PhD Abstract

Claudia Garrido-Varas, Teesside

University (continuing)

An investigation into bilateral asymmetry of the skeleton and its use in physical and forensic anthropology.

In the Human Rights context, researchers and practitioners are regularly faced with mass graves, disturbed sites, incomplete and commingled remains. For complex cases of this nature, different approaches to physical and forensic anthropology are essential, and bilateral asymmetry can contribute to the determination of the minimum number of individuals represented as well aiding in the reassembly of the skeletons. Some published formulae useful for determining the most likely number of individuals represented in a sample rely on the initial pair matching of anatomical elements, yet this is itself a subjective process since it is based on general morphology and influenced by external taphonomic and environmental factors. Osteometric sorting of commingled human remains has been attempted in previous studies, but the effects of secular trends, handedness, ethnic origin and sex have not been formally explored.

This research will contemplate two collections, one of them Anglo-Saxon and historic and the other Chilean and modern; neither of them have been studied in depth. The study will look into size and shape variation of the limbs with the goal of constructing population-specific databases

that will help resolve commingling and reassembling issues with a mathematical base.

PhD abstract

Jaime D. Jennings, (Durham University)
Supervisors: Charlotte Roberts, Pam Graves

Stress along the medieval Anglo-Scottish border? Skeletal indicators of conflict-zone health

Health changes experienced by populations living in regions of conflict have come to the forefront of research in light of recent increases in socio-political instability in modern populations. Political and ethnic unrest in modern populations have been shown to instigate a decline in the health of people living within the region of unrest. Population displacement and sabotage of resources associated with violent conflict has led to increased prevalence rates of malnutrition and infectious diseases in addition to increased mortality. The aim of this study was to bridge the gap in literature between modern medical anthropology population studies of the health consequences of living in a conflict-zone and bioarchaeological population studies of demographic and palaeopathological indicators of stress. To achieve the aim, a bioarchaeological survey of four medieval (ca. 900 – 1600 AD) British cemetery populations along the Anglo-Scottish border, described as a conflict-zone in contemporary historical documents, was conducted to calculate rates of mortality and morbidity in a socio-politically ‘stressed’ population. This conflict-zone population was hypothesised to have demonstrated higher rates of mortality, stunting, wasting, non-specific indicators of stress, and metabolic bone diseases when compared to four ‘unstressed’ contemporary skeletal populations from neighbouring cemeteries. Direct

comparison of the two regions did not indicate a difference in overall mortality or morbidity between the two populations. However, the conflict-zone population demonstrated higher prevalence rates of cribra orbitalia, periosteal bone lesions, and vitamin C deficiencies in the few available non-adults along with higher rates of enamel hypoplasia in the young adults. These contradictory results call into question both the documentary evidence regarding the longevity and severity of medieval border warfare and the sensitivity of osteological data to health changes associated with a conflict-zone lifestyle. The focus of future bioarchaeological research on conflict-zones in past populations must focus on refining the relationship between causal factors and skeletal indicators of stress.

PhD Abstract

Iwona Koziaradzka-Ogunmakin, KNH Centre for Biomedical Egyptology, University of Manchester (ongoing)
Email: iwona.koziaradzka-ogunmakin@postgrad.manchester.ac.uk
Supervisors: Prof. Rosalie David, OBE (University of Manchester) and Prof. Andrew Chamberlain (University of Sheffield)
Funding: Leverhulme Trust

Social Stratification and Physical Health in an Ancient Egyptian Population

This research project aims to use a combination of archaeological attributes and skeletal indicators of health in order to explore the nature of social structure and processes of social change in an ancient Egyptian population. The study is based on a biocultural analysis of the funerary customs and human remains from the Saqqara cemetery from the Old Kingdom (2686–2181 BC) and the Late and Ptolemaic Periods (664–30 BC).

The research concentrates on the physical analysis of the human remains to ascertain individual characteristics, including demographic attributes (age, sex, population affinities) and indicators of lifestyle (health status, dietary practice and activity patterns as evidenced from musculo-skeletal markers), and archaeological data collection from the burials that are being uncovered in the Saqqara necropolis. The research aims to establish a health condition of the Saqqara population in two historical periods, and the correspondence of the health status to the social classes represented in the cemetery population. The correct identification of social groups that used the cemetery as a burial ground is crucial for the examination of the relationship of social standing and health.

The results of the research conducted on the Saqqara assemblage will be compared to findings from other funerary materials in the Saqqara region to provide a broader overview and to determine to what extent the results can be generalised to ancient Egyptian society as a whole.

PhD abstract

William Southwell-Wright (Durham University)

Supervisors: Becky Gowland, Sarah Semple

Disability and Difference? Assessing social perceptions of physical impairment in Roman Britain.

This project examines disability as a social concept in Roman Britain through an analysis of the burial treatment of the physically impaired. Recent sociological and anthropological theory has recognised the important split between the reality of physical impairment and disability as a social condition, and has examined the implications of this fruitfully in ethnographic case studies. Such research

has demonstrated common links between different societies' expression of disabling attitudes and the mortuary treatment of the disabled. Even so, disability in British antiquity remains uncharted, with few published studies showing the relevance of such concepts to Roman Britain in particular. Gender, ethnicity, age and social status have been recognised as being both represented and constructed through Romano-British burial treatment, but the social status of ill health and impairment has received little attention in these mortuary contexts. This project therefore combines data on physical impairment and health in Late Roman Britain with an analysis of burial treatment of affected individuals. This will allow for an assessment as to what degree impairment was a social marker in Romano-British funerary provision and to what extent disability is an applicable concept, broadening the range of social identities we can recognise in past contexts.

PhD Abstract

Alex Starkie, Teesside University (continuing)

The use of body modifications as a tool in human identification.

The identification of individuals in forensic contexts is continually being expanded and challenged. The range of contexts and level of proof of identification are also increasing, further stretching the boundaries in which identification scientists and biological anthropologists must work. Body modifications are one resource that remains, as yet, relatively little investigated. This research aims to redress this issue by highlighting the potential aid for identification body modifications present, both in creating general profiles of individuals, as well as being used in more absolute terms of identification. This research is being conducted through a

number of different investigations. To date, chemical analysis of tattoo inks has been conducted in order to determine elemental signatures of different manufacturers, with promising results. Further analysis of the same inks at a later date will be conducted in order for comparison, as well as other manufacturer's inks, to compile a comprehensive database for use in the field. A national survey containing information regarding what body modifications the modern, wider, British public display has also been underway for a number of months. Previously studies focused primarily on sub-sections of society such as convicts and drug-users and their relation to tattoos and other body modifications, creating a biased view of which sections of society engage in body modification. A second, more in-depth survey questioning the motivations behind body modifications has also begun, giving rise to some surprising results. Archaeological plotting of post-mortem jewellery movement has been undertaken and has yielded some interesting results.

CONFERENCE REPORTS

The following review of the BABAO Annual conference is reproduced with kind permission from the Paleopathology Association Newsletter of December 2010.

BABAO 2010

By Angela Clark

The 12th Annual Conference of the British Association for Biological Anthropology and Osteoarchaeology was held at the University of Cambridge, UK, on the 17th to 19th September 2010. This year the conference was organised by Dr Piers Mitchell from the Leverhulme Centre for Human Evolutionary Studies, University of Cambridge. The podium presentations were held in the heart of historical Cambridge at the New Museums Site. The

five session topics included palaeopathology, human evolution, ancient DNA and biomolecules, isotopes and an open session for broader themes. Over 100 participants from all over the UK, Australia, USA, Germany, Canada, India, Austria, Spain, Japan, Romania, Denmark, Belgium, and New Zealand, joined to attend four keynote lectures, 33 podium presentations and 31 posters.

The palaeopathology session commenced with a personal keynote lecture by Professor Charlotte Roberts (Durham University, UK), entitled "Where have we been, where are we now, and what does the future hold? Palaeopathology in the UK over the last 30 years". Professor Roberts highlighted the importance of utilising research from evolutionary medicine with bioarchaeological population analysis, and the significance of examining past people in order to understand present populations. The presentation paid homage to the researchers of palaeopathology in the UK and discussed the contributions that have been made to a world perspective of health and disease. Professor Roberts discussed the Global History of Health Project, of which a report will be published in the first issue of the new *International Journal of Paleopathology*. The accuracy and ability to interpret occupation and activity in the human skeleton was also raised. Professor Roberts demonstrated how varied her life activities have been until now and reflected on the skeletal changes that may be interpreted or, in fact, misinterpreted in bioarchaeological analysis. Additionally, a potential issue was raised for the future of palaeopathology, owing to the large number of newly qualified students from the Master of Science programs currently available in the UK. Questions were asked as to the opportunities available for these people and how many will continue in the field. The presentation concluded with thoughts on the continued development of palaeopathology and the importance of

combining archaeological with modern data for a long-term perspective of the origins and evolution of disease.

Prior to the break on Friday, the afternoon session, chaired by Rebecca Redfern (Museum of London, UK) was comprised of studies on British palaeopathology. Presentations included research on tuberculosis in prehistory, childhood health in the Roman world, osteological evidence of medieval warfare from a social context, and paleoparasitology of 17th-18th Century London. During the break we had the opportunity to view the palaeopathology posters as well as enjoying a social cup of coffee and a slice of cake. Afterwards, presentations on New World palaeopathology included those on palaeopathological analysis on past populations from a Chilean and coastal Peruvian population; additionally, we heard about trophy taking of human body parts in the Western Great Lakes Region of North America. Shortly after the session ended, the early evening drinks reception was held at the Leverhulme Centre for Human Evolutionary Studies. It was a pleasant social evening with plenty of drinks and snacks; the ambience was relaxed with live acoustic guitar music and a photograph slideshow of trophy heads from Papua New Guinea.

On Saturday, the morning session, chaired by Christopher J Knüsel (University of Exeter, UK) encompassed presentations on human evolution. The talks began with the keynote presentation "Human Evolution after the Origin of our Species: Bridging the gap between Palaeoanthropology and Bioarchaeology" by Dr Jay Stock (University of Cambridge, UK). Dr Stock emphasised the differences between evolutionary and biocultural approaches for studies of the continuing evolution of *Homo sapiens*. The presentation focused on human plasticity that is central to the survival of our species, including our unique ability to colonize a large variety of

niches, and the use of culture to buffer our genome against the natural environment. Dr Stock concluded that an integral approach of plasticity, cultural evolution and genetics is needed to more comprehensively understand human variation. Following the keynote lecture the human evolution papers consisted of research examining Neanderthal facial morphology and dental loading, climatic selection and craniofacial pneumatisation, dental modification in prehistoric central Sudan and a standardised approach to spinal degenerative joint disease. The human evolution posters were presented at the break, and afterwards the session continued with long bone cross-sectional morphology, social systems of extinct hominids, evulsion practices of the Iberomaurusian and sexual dimorphism in early prehistoric Southeast Asia.

Lunch followed with the opportunity to view the posters and to purchase books from Cambridge University Press, Elsevier and Routledge. The early afternoon session, chaired by Tina Jacob (University of Durham, UK) started with a keynote presentation entitled "What makes us human: insights from sequencing ancient hominin DNA" by Dr Johannes Krause from the Max Planck Institute for Evolutionary Anthropology, Leipzig. He reported that various groups from the Institute have sequenced the first version of the Neandertal genome. Dr Krause highlighted the importance of comparing the genetic relationship between humans and our extinct relatives to help identify changes in the modern human lineage. The DNA and biomolecules session continued with four more presentations including new ancient DNA approaches proposed by the University of Adelaide in Australia, research from the Indian subcontinent, biomarkers in the diagnosis of ancient mycobacterial disease and diabetes and obesity in South Asian populations.

During afternoon tea break the DNA and isotopes posters were presented. The papers in the isotope session, chaired by Martin Smith (University of Bournemouth, UK), included recent research from Neolithic Southern Italy, Neolithic Orkney, the Beaker People Project, and osteological and isotopic analysis of an Anglo-Scandinavian cemetery in Masham. The Annual General Meeting commenced with the election of the BABAO committee positions; a general discussion of the code of ethics and code of practice; the recent BABAO grant awards; continuing from the presentation Professor Roberts at the opening session, members discussed the future of biological anthropology as a field in the UK; the new International Journal of Palaeopathology; and the arrangements for the Edinburgh BABAO Conference in 2011 was briefly discussed. Later that evening the conference dinner was held at Queen's College, where a delicious silver-service banquet was consumed with much delight and the long-anticipated BABAO pub quiz was held in the hall after desert. Piers composed a very competitive quiz with quite a few difficult questions that resulted in the joint winners of the Stinkbugs and Numbskulls; congratulations to both teams.

John Robb (University of Cambridge, UK) chaired the Sunday morning open session and started with a keynote lecture on "Journal Publishing Workshop – how to write well and how to review well" presented by Ann Corney from Elsevier Publishing Ltd, UK. The presentation incorporated the common pitfalls in article publishing, a detailed explanation of the peer review process, and allowed plenty of time for audience-interaction and question time. The presentation also introduced the recently launched International Journal of Paleopathology to the BABAO audience. Presentations in the open session included various topics from biological and forensic anthropology and osteoarchaeology.

Topics included: gunshot wounds; heat alterations in teeth; dental wear in medieval subadults; enthesal changes and activity patterns; redefining the British Iron Age; stature and weapon burials in early Mediaeval England; a new study for pelvic age determination; skeletal dislocation in a sitting/squatting position from Peru; and the final presentation of the conference told us of a most unusual account of a human skull with preserved soft tissue, thought to be from a witch.

The conference closed with the announcement of the student prizes. This year there was five prizes: the best student poster presentation was awarded to Matthew A Gasperetti (University of Cambridge, UK) for "A biocultural study of diet, health, and behavior in the prehistoric Levant"; second poster prize was awarded to Trisha M Biers (University of Cambridge, UK) for "The bioarchaeology of activity and labor under Inca occupation: a regional analysis of provincial burials from Lima, Peru". The best student podium presentation was awarded to Thomas Davies (University of Cambridge, UK) for "Long bone cross-sectional morphology: at the intersection of behavioural and climatic forces"; and second prize was given to Michael Sandholzer (University of Vienna and Medical University of Vienna) for his podium presentation "Micro-CT evaluation of heat induced alterations in human teeth". The prize for the most outstanding student presentation, given in memory of Jane Moore, was awarded to Sri Raj (University of Cambridge, UK) for "Genetic architecture and population structure of type 2 diabetes and obesity associated loci among South Asian populations". Congratulations to all receivers of the BABAO 2010 awards.

Symposium Report: Anatomical dissection, autopsy and pathology museums in Britain from 1700.

By Piers Mitchell

This symposium was held on 15 May 2010 at the Leverhulme Centre for Human Evolutionary Studies at Cambridge, organised by Piers Mitchell. A number of biological anthropologists, medical historians and pathology museum curators presented research, and over 50 people attended. BABAO members presented the results of excavations of human skeletal remains from the 1700s and 1800s demonstrating evidence for dissection and autopsy in town cemeteries, infirmary burial grounds, and medical school rubbish tips at various institutions in London, Newcastle and Oxford.

Evidence for post-mortem preparation of the body for dissection and autopsy included craniotomies, thoracotomies, and spinal midline transection. Some human remains were buried in coffins having previously been used for anatomical teaching or pathology museum use, as demonstrated by the presence of saw cuts and wires across joints to approximate their articulation. On occasion coffins contained a non-matching combination of limbs and torso parts that appear to have been buried together when their use for teaching was over. In medical schools the remains of other animal species were sometimes found alongside them, such as dissected dogs and monkeys. Articles from the symposium are to come out in a book, edited by Piers Mitchell and published by Ashgate, entitled *Anatomical Dissection in Enlightenment Britain and Beyond: Autopsy, Pathology and Display*.

FORTHCOMING CONFERENCES

Sixth Annual Workshop in Forensic Archaeology and Anthropology
14-18 March, 2011

Venue: Cranfield Forensic Institute,
Cranfield University, Shrivenham.

This week-long residential short course provides an overview of forensic archaeology and anthropology. It covers both practical and theoretical aspects of both sciences and of many related fields, such as ballistics and explosives, entomology, radiography, geology and geophysics. It is an intense short course that closely resembles the way the forensic MSc programme is taught. All lectures and practical sessions are taught and supervised by internal and external experts with considerable experience in their respective fields. For further information, see www.cranfield.ac.uk/forensics

British Association for Forensic Anthropology First Meeting
April 10

Venue: Manchester

Liaison: Kerry Ann Milic at Kerry-Ann.Milic@anglia.ac.uk

Proposed new association: British Association for Forensic Anthropology (BAFA)

Operational: Initially under the umbrella protection of BAHID

Purpose: Focus for the discipline within the UK particularly with regards to accreditation

20th Annual Meeting of the Paleoanthropology Society
April 12 and 13

Venue: Minneapolis

<http://www.paleoanthro.org/2011.html>

**38th Annual Meeting of the
Paleopathology Association**

April 12-13

Venue: Minneapolis, Minnesota

The Conference Organizing Committee invites you to participate in the 38th PPA annual meeting. The scientific sessions will begin with workshop(s) held on Tuesday morning and podium presentations that afternoon. Podium and poster sessions will continue throughout Wednesday. On-site registration and check-in will begin on Monday evening 11th April.

http://www.paleopathology.org/2011_Meeting_Info.html

**American Association of Physical
Anthropologists**

April 12-16

Venue: Minneapolis, Minnesota

<http://physanth.org/annual-meeting/2011>

**17th Congress of the Spanish Society of
Physical Anthropology
(Sociedad Española de Antropología
Física, SEAF)**

June 2-4

Venue: Barcelona

Faculty of Biology – University of
Barcelona

<http://www.seaf17.es/drupal/en/content/second-circular>

**Cranial and Postcranial Juvenile
Osteology for Medical, Forensic and
Archaeological Practitioners**

Venue: Dundee

Module 1: Cranial Juvenile Osteology
1-5 August

Module 2: Postcranial Juvenile Osteology
8-12 August

For Further Information and an
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BABAO 2011

September 2-4

Venue: Edinburgh

BABAO 2011 will be held in Edinburgh from Friday 2nd September to Sunday 4th September.

Accommodation: The conference coincides with the final weekend of the Edinburgh Festival and we have been very lucky to secure a large number of single ensuite rooms in Holland House on a B&B basis at a very competitive rate. Holland House is student accommodation very close to the centre of the city.

Catering will consist of an evening wine reception on Friday 2nd; a sandwich lunch on Saturday 3rd; dinner on the Saturday evening (supplementary charge); a sandwich lunch on Sunday 4th before departure, plus teas/coffees on Friday afternoon, Saturday morning, Saturday afternoon and Sunday morning.

Details of costs, conference sessions and calls for papers will be issued shortly.

**10th International Symposium on
Forensic Sciences**
September 27-30

Venue: Bratislava, Slovak Republic

<http://www.forensicsociety.sk/>

Conflict Archaeology
28-30 October

Venue: Cranfield Forensic Institute,
Cranfield University, Shrivenham.

This intensive three day course provides an overview of the new discipline of Conflict Archaeology. It concentrates on conflict, battles and wars from Prehistoric times through to the archaeology of modern, total war, through lectures, seminars, field-based sessions, case studies and practicals. It features Cranfield University's special strengths in military capability, its unique historic armouries and small arms range. For further information, see www.cranfield.ac.uk/forensics

MEMBERS' PUBLICATIONS

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*Lisa Cashmore received a BABAO Small Research Grant to collect some data for her PhD that were used in the article.

** Emma Nelson received a BABAO Small Research Grant to collect data from macaques used in this study.

BABAO RESEARCH PROJECT GRANTS 2011

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 in the Annual Review and upon the association website.

Two types of grants are available. The first type is reserved for research in the contract sector, up to £1,500 (commercial). The other type 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.

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 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.

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 **15th May 2011**. Applications, complete with a 2 page summary CV, must be sent electronically to the General Secretary (pdm39@cam.ac.uk). Please save the files under your surname (eg JonesApplication.doc and JonesCV.doc) and not as BABAOapplication.doc.

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.

Grant winners are expected to present their research at the BABAO conference in the year following the award (so 2011 grant winners are expected to give either a paper or a poster at the 2012 conference).

Guidance Notes

Section 1: To be completed by the applicant. Please give full and complete postal address, and, where applicable, affiliation.

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: The brief name for the project may be placed upon the BABAO website.

Section 4: 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 will be placed upon the association's website.

Section 5: 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.

Section 6: Some institutions / organisation (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.

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. Scan in the signed form and submit it via e-mail.



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**Grant Award
 Application
 2011**

Compliance with the Data Protection Act 1998
 In accordance with the Data Protection Act 1998, the personal data provided on this form will be processed by BABAO and may be held in a computerised database or in manual files.

RESEARCH PROPOSAL (Academic)

1. Name of applicant

Address for correspondence

Title:
First name:
Surname:

Postcode:
Tel no:
Email:

2. Present position

Present appointment and employer (If student, please indicate degree in progress, name of supervisor and institution)

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3. Details of grant requested

Title of project (not more than 15 words)

Sum requested
 (max £1000)

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4. Project summary

Information on your research project may be placed upon the BABAO website. Please use this space to provide a description of your research in a way that could be used for a general – i.e. non-expert - readership. (Maximum 100 words.)

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5. Project information

Please provide concise details of your planned research project in the following boxes in order that the research validity and potential of your project can be assessed. (Maximum 500 words in **each** box.)

<p>Research question(s) or problem</p>	
<p>Aims & objectives</p>	
<p>Research methods</p>	
<p>Timetable (Research is expected to be presented at the BABAO conference [either paper or poster] in the year following the award.)</p>	
<p>Other Planned Outputs from this Research</p>	

6. Ethical aspects of the proposal

a) Are there any ethical implications arising from the proposed research?

Yes No

If yes, please give details below of what they are and how you intend to address them.

7. Budget summary

a) Give a summary of the total costs that will be incurred; then complete the detailed breakdown below.

Summary	Cost (£)
Travel and subsistence	
Equipment	
Analysis	

b) Please *itemise* and *justify* expenditure requested for travel and subsistence, and equipment and materials.

Description	Justification	Cost (£)

c) State whether you already have any funding for your project, and why extra funding is necessary. For example, if you are a PhD student, please explain how this is funded.

8. Signature and date

I agree to complete the intended research within the BABAO timeframe, and will provide a break-down of my spending to the BABAO committee.

Signature of applicant	<input style="width: 95%;" type="text"/>	Date	<input style="width: 95%;" type="text"/>
Signature of supervisor (for student applicants)	<input style="width: 95%;" type="text"/>	Date	<input style="width: 95%;" type="text"/>

**All applicants must be members of BABAO by 1st April in year of submission.
Closing date for applications: 15th May.**

**Please attach a 2 page summary CV to this application, and e-mail to Piers Mitchell:
pdm39@cam.ac.uk**



BABAO c/o Dr Piers Mitchell,
 Leverhulme Centre for Human Evolutionary
 Studies,
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 Cambridge CB2 1QH, UK.
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Grant Award Application 2011

Compliance with the Data Protection Act 1998
 In accordance with the Data Protection Act 1998, the personal data provided on this form will be processed by BABAO
 and may be held in a computerised database or in manual files.

RESEARCH PROPOSAL (Commercial)

We welcome proposals from individuals working in the commercial sector. Preference will be given to those projects which enable scientific research, such as isotopic analyses, or synthetic site studies beyond the remit of developer funded work. Grants to cover staff time and the subsequent costs to the employer incurred during research or involvement in external projects will also be considered.

1. Name of applicant

Address for correspondence

Title: First name: Surname:	Postcode:
(Empty space for name details)	Tel no:
(Empty space for name details)	Email:

2. Present position

Present appointment and employer (if funding is requested to cover costs incurred to any commercial organisation that is not your present employer, please give details)

4. Details of grant requested

Title of project (not more than 15 words)	Sum requested (max £1500)
<div style="border: 1px solid black; height: 30px;"></div>	<div style="border: 1px solid black; width: 100%; height: 30px;"></div>

4. Project summary

Information on your project may be placed upon the BABAO website. Please use this space to provide a description of your research in a way that could be used for a general – i.e. non-expert - readership. (Maximum 100 words.)

5. Project information

Please provide concise details of your planned research project in the following boxes in order that the research validity and potential of your project can be assessed. (Maximum 500 words in **each** box.)

<p>Research question(s), non-commercial archaeological / osteological project details or problem</p>	
<p>Aims & objectives</p>	
<p>Materials: please give dates of excavation and stage of any associated commercial project (e.g. assessment)</p>	
<p>Research methods</p>	

Please state why this project cannot be covered by PPG16 funding.	
How will this project assist in your personal and professional development?	
How will this project achieve the objective of bridging the gap between commercial work and that of academia?	
How will your results be disseminated to the public at large?	
Timetable (Research is expected to be presented at the BABAO conference [either paper or poster] in the year following the award.)	

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6. Ethical aspects of the proposal

a) Are there any ethical implications arising from the proposed research? Please include issues of client confidentiality which may prove problematic to the dissemination of your results.

Yes No

If yes, please give details below of what they are and how you intend to address them.

--

7. Budget summary

Give a summary of the total costs that will be incurred; then complete the detailed breakdown below.

Summary	Cost (£)
Travel and subsistence	
Equipment	
Services of external specialists	

Please *itemise and justify* expenditure requested and explain why this cannot be covered by developer funding.

Description	Justification	Cost (£)

8. Signature and date

I agree to complete the intended research within the BABAO timeframe, and will provide a break-down of my spending to the BABAO committee.

Signature of applicant

Date

**All applicants must be members of BABAO by 1st April in year of submission.
Closing date for applications: 15th May.**

Please attach a 2 page summary CV to this application, and e-mail to Piers Mitchell: pdm39@cam.ac.uk