

**BRITISH ASSOCIATION FOR BIOLOGICAL ANTHROPOLOGY
AND OSTEOARCHAEOLOGY
ANNUAL REVIEW**

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WELCOME TO THE BABAO ANNUAL REVIEW 2005

Welcome to the seventh edition of the BABAO Annual Review. This year the review contains a wide range of reports of members' activity, including contract osteology, museum and University activities, PhD research and Masters' dissertation titles. The range of research being undertaken by members is very diverse.

The review also contains some very important updates regarding guidelines and changes to government legislation, which are very valuable.

I hope that this review will be both interesting and informative, that as many of you as possible are present at the 8th Annual Conference, to be held in Birmingham in September, and that you all continue to support the association in 2006.

ASSOCIATION NEWS

Report from the Chair

by Holger Schutkowski

It is with great pleasure that I am able to report on a number of significant achievements during the past year. These range from involvement in national consultation exercises that affect policies and the foundations of our academic and professional work to efforts within our Association that have enhanced the attractiveness of BABAO to its members and stakeholders. The respective documents submitted on behalf of BABAO can be found on our website.

BABAO's response to the consultation of the DCMS document 'Care of Historic Human Remains' expressed well-considered views on

whether or not a licensing system for retaining human remains is useful and how a Code of Practice can help facilitate their de-accessioning from museum holdings as and when necessary. Considerations put forward in this contribution found their way into the final document published in 2005 and have enhanced BABAO's visibility as a professional body that takes responsibility for the shaping of policy issues likely to have a long-term effect within the field.

The Association also took part in the consultation about the Advisory Panel on the Archaeology of Christian Burials in England. BABAO is now represented on the panel with two members of the managing committee, Simon Mays and Jacqueline McKinley.

In matters directly related to research, the RAE 2008, BABAO expressed its concerns over the lack of explicit representation of Biological Anthropology in the Unit of Assessment 'Archaeology' where, due to the nature of the university landscape, the majority of academic members are likely to be returned. Even though cross-referral between assessment panels of outputs submitted for the exercise is anticipated, the issue was felt to be of such fundamental importance that an involvement of BABAO in the consultation of panel criteria and working methods was deemed mandatory. Unfortunately, as we now know, there has not been any change to that effect in the descriptor of the Unit of Assessment.

On a more positive note I am pleased to report that, thanks to Fred Spoor, the Jane Moore Prize has been endowed with enough money to continue acknowledging excellent research by our student members for the next 20 years under that name. 2005 also saw the first award of a Small Grant, a scheme that the Association launched last year. The award was made to Caroline Haverkort, University of Alberta. We hope that this is only the start to a lively participation in the scheme, which provides an excellent opportunity to get seed money for research projects.

The BODIES database project seems to develop into an enduring exercise, and Charlotte Roberts and Andrew Millard have kindly agreed to resubmit the proposal to the AHRC. In the hopeful case of a positive outcome BABAO is happy to commit to in-kind support after the grant has expired to ensure that a most useful corpus of data can be maintained and updated for the membership on a long-term basis.

Finally, I would like to extend my sincere thanks to the hard work of the BABAO's Executive Committee. There has been a good amount of re-shuffling this year with members whose term of service came to an end, those who stood for re-election or change of post and those who joined as new members. Under James Steele's Chairmanship BABAO always sailed in clear waters and has left its mark as a professional body which has grown into an association over 200 members strong, formidably helped by Margaret Clegg, our outgoing Membership Secretary. Their service to the Association is greatly appreciated. Simon Mays kindly agreed to stand again for the post of Representative of a Professional Organisation, and Tina Jakob and Janet Hughes joined the Committee as new Membership Secretary and Non-executive member, respectively. Sonia Zakrzewski thankfully switched to the post of General Secretary, and Jo Buckberry took on the editorship of the Annual Review.

Report from the Membership Secretary

by Tina Jakob

As in previous years BABAO membership numbers have increased and to date we have 224 active members. Correspondingly, student numbers have also increased and now almost one-third (n=73) of our members are students, while 23 of you are either retired or

unemployed. Our members come from a wide range of occupations and a more detailed breakdown of our diverse background can be obtained from the table below.

MEMBERSHIP CATEGORIES (%)	
Students	73 (32.6)
Academics	34 (15.2)
Osteologist/bone specialists	30 (13.4)
Anthropologists/ archaeologists	21 (9.4)
Researchers	9 (4.0)
Medical	7 (3.2)
Retired	6 (2.7)
Forensic specialists	4 (1.8)
Work in Unit	4 (1.8)
Work in Museums	3 (1.3)
No occupation supplied	17 (7.6)
Other occupations	16 (7.1)

In the category of other occupations diverse professions such as artist, librarian, publisher, administrator, anatomy technician writer and funeral director are included.

This broad range of occupations and affiliations in the association's membership provides us a dynamic and interesting membership.

We recruited 55 new members during 2005 and so far have had 18 new members joining us this year. Overseas subscriptions stand at 27 representing 12% of the membership; this is a slight drop in our international presence which hopefully can be remedied in 2006. Our overseas members come from Canada (6), Europe (15) including the Republic of Ireland, Sweden, Greece, Germany and Poland. We also have three US members, two Australian members and one from New Zealand.

Twenty-six percent of you (n=59) have chosen to pay their subscription fee by standing order and I can only encourage more people to do so. Regrettably, at the moment it is not feasible to introduce payments by credit cards, as this would raise membership fees to cover costs.

If anyone has any questions regarding BABAO membership then please contact me

at the address inside the front cover of the review, or directly at betina.jakob@dur.ac.uk

Jaco Weinstock has moved to the Department of Archaeology, University of Southampton, on a part-time basis.

BABAO Managing Committee Call for Nominations

by Holger Schutkowski

By the next AGM in September 2006, the post of treasurer on the BABAO managing committee will be available.

The duration of service is five years. Nominations must be proposed and seconded, and contain a personal statement of maximum 100 words by the Nominee. Nominees, proposers and seconders must be BABAO members. Please, send nominations to the General Secretary (email: S.R.Zakrzewski@soton.ac.uk) by Friday, 29th July. A list of nominations will be sent out to the members with the Agenda for the Annual General Meeting.

PEOPLE

Margaret Clegg has moved to UCL to work at the AHRC-funded Centre for the Evolutionary Analysis of Cultural Behaviour.

Dr Mhairi Gibson is now a Lecturer in Biological Anthropology at the University of Bristol.

Heather Gill Robinson is now Assistant Professor of Anthropology, North Dakota State University (Fargo, North Dakota)

James Steele has moved to the Institute of Archaeology at UCL and is Director of the AHRC Centre for the Evolution of Cultural Diversity

NEWS AND PROJECT UPDATES

Advisory Panel on the Archaeology of Christian Burials in England

*by Simon Mays
English Heritage*

In January 2005, English Heritage and the Church of England published a guideline 'Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England' (www.english-heritage.org.uk/upload/pdf/16602_HumanRemains1.pdf). One of its chief recommendations was that a panel should be set up to provide advice on the archaeological treatment of Christian burials in England and related matters. This panel, the Advisory Panel on the Archaeology of Christian Burials in England (APACBE), has now been set up. It is sponsored by the Church of England, English Heritage and the Department of Constitutional Affairs. In addition to representatives from these three bodies, its membership includes osteologists, archaeologists and museum staff. The purpose of the Panel is to provide well-informed advice on the archaeological treatment of Christian burials in England and related matters, with appropriate consideration of relevant religious, ethical, legal, archaeological and scientific issues. The Panel may give advice on specific matters and may also advise and comment on general issues of principle or policy. The Panel will either give advice itself or refer the enquirer to the relevant expert organisation or individual(s). The Panel will liaise as necessary with any other relevant advisory committees which may be set up, and will take account of any

guidance documents or codes of practice which may be promulgated by other organisations, such as the DCMS (see below).

The Panel's advice is free. Enquirers are encouraged to use electronic methods of communication such as e-mails, Word and PDF attachments. Contacts: Joseph Elders (Chair) E-mail: joseph.elders@c-of-e.org.uk or Simon Mays (Secretary) E-mail: simon.mays@english-heritage.org.uk

Further details can be found on the Panel's website:
www.britarch.ac.uk/churches/humanremains/index.html

A New DCMS Code of Practice for Human Remains

*by Simon Mays
English Heritage*

In October 2005, the DCMS published a document 'Guidance for the Care of Human Remains in Museums' (www.culture.gov.uk/NR/rdonlyres/0017476B-3B86-46F3-BAB3-11E5A5F7F0A1/0/GuidanceHumanRemains11Oct.pdf). It was issued as a response to the report of the DCMS Working Group on Human Remains, chaired by Professor Norman Palmer (www.culture.gov.uk/NR/rdonlyres/D3CBB6E0-255D-42F8-A728-067CE53062EA/0/Humanremainsreportsmall.pdf) and the consultation response to that document (www.culture.gov.uk/NR/rdonlyres/0E977E00-9465-4A42-9C1D-4D860A6E9339/0/HistoricHuman.pdf). It is a non-statutory guidance note which recommends best practice for treatment of collections of human remains over 100 years old held by institutions in England, Wales and Northern Ireland (remains under 100 years old are covered by the 2004 Human Tissue Act). The guideline is divided into three parts; Part 1 gives a legal and ethical framework for the treatment of human remains; Part 2 deals with curation, care and use of human remains; Part

3 provides a framework for handling claims for return of remains. The guidance is mainly aimed at museums and other institutions who hold permanent collections, but it is intended that the principals for curation and care of remains should apply equally to organisations such as archaeological units and university departments who may hold remains on a short or medium term basis. Although much of the document, particularly Part 3, was drafted with remains of overseas origin in mind, the advice in this document is intended to apply generally to human remains regardless of whether they are of UK or overseas origin. Nevertheless, it was recognised that different organisations with different types of collections would need to adapt the code (within the principals it outlines) to suit their needs, and for matters specific to English Christian remains, the document refers readers to the English Heritage / Church of England document (see above).

Some of the most thorny issues regarding human remains arise for museums when claims are made for repatriation of collections. Although the DCMS guideline gives a general framework for handling claims, more specific advice may be needed in particular cases. In recognition of this, the DCMS is setting up a Human Remains Advisory Service to make expert advice available to museums to aid them in coming to decisions when claims are made for return of human remains in their care. The Human Remains Advisory Service is aimed at non-national museums as it is anticipated that national museums will have sufficient in-house advice and/or will make their own arrangements for external advice if needed. Although at time of writing (January 2006), details have yet to be finalised, it appears likely that the Human Remains Advisory Service will consist of a pool of advisors from which individuals would be selected by DCMS in each specific case when advice is required.

Burial Law Reform

by Simon Mays
English Heritage

In 2004, the Government issued a consultation report on burial law reform. Among the aspects considered are the regulation of disturbance and exhumation of burials. Specifics under consideration included the re-use of graves and whether disturbance of archaeological burials (however defined) should be subject to the same regulatory regime as more recent burials or whether their disturbance should be more lightly regulated (or even unregulated). The consultation period ended in July 2004. At time of writing, a Government publication of a summary of responses to the consultation report is imminent. The Government aims to make public their plans to bring forward proposals for burial law reform in the late Spring / Summer of 2006. For further information on burial law see: www.dca.gov.uk/corbur/buriafr.htm#2

The Wellcome Osteological Database and the Centre for Human Bioarchaeology

by Bill White
Museum of London

The recording phase of the databasing project has moved into its final year. Alongside the continuing skeletal analysis we are looking at the design of the 'front end' of the database, anticipating the interests and needs of online users. This will provide access to datasets on large samples of human remains from 55 archaeological sites in London, based on c5000 skeletons representative of 2000 years of history. The recording of the bulk of the medieval St Mary Spital individuals onto the same electronic database will mean that by this time next year data on c11000 human skeletons can be presented.

Re-launch of the Museum of London website will allow us to roll out the first papers for the Centre's online publications in the *Research Notes* series by team members Jelena Bekvalac, Lynne Cowal, Tania Kausmally, Richard Mikulski and Bill White. These will be in addition to the site-by-site archaeological and osteological summaries to be provided on the database as guides to users.

A further innovation this year has been an evening class in the Museum's outreach programme. This introductory practical class in handling and analysing human skeletal remains has 16 enthusiastic participants from the public. It will run for two terms and is taught by MoLAS osteologists as well as those from the Wellcome Trust project.

The Museum of London's Hedley Swain, Head of the Department of Early London History and Collections, chaired the DCMS committee that produced the *Guidance for the Care of Human Remains in Museums* in 2005. The Museum of London is widely perceived as being 'neutral' on the repatriation issue as the large assemblage of skeletons curated is entirely composed of people who were buried in London but whose geographical origins are unknown. In truth, members of the Museum staff have widely differing views and both sides are now represented on the Advisory Panel on Human Remains, which was set up in the wake of publication of the *Guidance*.

Meanwhile, the volume of postgraduate and post-doctoral research on the London remains continues to increase. In the past year we have acted as hosts to 15 researchers from 10 academic establishments.

Update on the Spitalfields Market Project

by Rebecca Redfern

Museum of London Specialist Services

The Spitalfields Market Project has now reached its final year and by the end of recording, an estimated 7000 individuals will have been entered onto our relational database. We have continued to identify a wide range of pathologies, such as Paget's disease, scurvy and rheumatoid arthritis. The most significant development concerns the evidence for treponematosi, as more adult and sub-adult individuals continue to be identified, who display a wide range of cranial and post-cranial changes. A selection of the data collected was presented at the 2005 BABAO conference. The evidence for cases of tuberculosis also continues to increase, enabling us to contribute samples to Professor Buikstra's project 'Ancient tuberculosis in the Americas'. The large sample size has also enabled Rebecca Redfern and Piers Mitchell to develop a classification of developmental hip anomalies, which will be published later in the year.

The team will be presenting many aspects of the final results at forthcoming BABAO and PPA conferences, offering a preview of the osteological monograph that will be published in 2008.

Hunterian Museum at the Royal College of Surgeons

by Jane Hughes

2005 has been a truly amazing year for the Hunterian Museum. A record 30,000 people visited the museum during our first year of opening following the refurbishment work. In September the museum and its' collections were highlighted in a BBC Horizon programme on the *Homo floresiensis* skeletons. We also welcomed delegates from

the BABAO 2005 conference. Shortly before Christmas we launched **Surgicat**, the online database of the museum and archive collections and we have just learnt that the museum has been long-listed for the Gulbenkian Prize for Museum of the Year 2005.

Amongst the many visitors coming to the museum we have seen an increase in the use of the collections for teaching and research. MSc students from the Skeletal and Dental Bioarchaeology and Forensic Archaeological Science courses at UCL visit the Hunterian and Wellcome Museums once a week for classes. A student from this course has undertaken research work on hydrocephaly and wormian bones, using the skull in the Hunterian Museum collection.

Undergraduates from Queen Mary, University of London and Roehampton University have used the collections as part of their Human Anatomy and Developmental Biology courses. In addition, staff from Roehampton have undertaken research on the remains of George Grenville, Prime Minister from 1763-5, who demonstrates an extensive case of multiple myeloma.

Other research has included the examination of cases of scurvy, rickets and syphilis in our historical pathology collection and research on sexing and aging using the nineteenth century William Flowers collection of post-cranial skeletons. And, as previously mentioned, the microcephalic specimens in our collections have attracted research by staff from Roehampton University and a post-graduate student from Cambridge University following the *Homo floresiensis* finds in Indonesia.

Work on improving access to the collections has been boosted by the launch of **Surgicat** the online database of the museum and archive collections. To search the collections go to <http://surgicat.rcseng.ac.uk> where you will find around 50,000 records for material housed in the Hunterian and Wellcome Museum collections.

The information contained in the database has been greatly augmented by the work of a Documentation Project Officer, who has fully recorded the Hunterian Collection. A group of dedicated volunteers are working on the rest of the collections; photographing specimens, recording measurements and data, updating descriptions and terminology, as well as researching published references relating to the material.

The Hunterian and Wellcome Museum collections are open for teaching and research at all levels. We can provide hands-on access to the collections in a purpose built teaching space and we have a variety of equipment available to assist students, tutors and researchers.

The Hunterian Museum is open to all, Tuesday to Saturday, 10am to 5pm and admission is free. For further information please call 020 7869 6560 or email: museums@rcseng.ac.uk.

Centre for Human Identification, Victoria, Australia

by Dr Soren Blau

News

In October 2004, the Centre for Human Identification (CHI) was established within the Victorian Institute of Forensic Medicine (VIFM). Funded by the Victorian government, the Centre seeks to increase the VIFM's (and hence Victoria's) preparedness and training capability for disaster victim identification (DVI). In January 2005, Dr Soren Blau took up the position as forensic anthropologist in the CHI. The Centre also employs forensic odontologists and a forensic entomologist.

Forensic odontology, anthropology and entomology all play an important role in the

medico-legal investigation of death. Most Australian states have forensic experts who can be consulted if, for example, skeletal remains are recovered or an odontological assessment is required. But the CHI is unique because forensic anthropologists, odontologists and the entomologist are located in one vicinity and work as a team. Further, Victoria is one of only two Australian states that employ fulltime forensic anthropologists.

DEPARTMENTAL REPORTS

School of Geography, Archaeology and Palaeoecology, Queen's University Belfast

by Eileen Murphy and Rick Schulting

Research projects

Rowan McLaughlin is continuing with his doctoral research on dental microwear across the Mesolithic-Neolithic transition at selected NW European sites. Some preliminary results have appeared, comparing microwear features at the Mesolithic sites of Aveline's Hole (Somerset) and Téviec (Brittany) with the Neolithic site of Belas Knap (Gloucestershire).

Aveline's Hole is by far the largest Mesolithic burial site in Britain, and the publication of the PUBSS paper (see below) provides an overview of this important assemblage with contributions from various specialists.

Linda Fibiger has begun her PhD research through the Leverhulme-funded project 'Violence in Neolithic Northwest Europe', supervised by Dr Rick Schulting. The aim of this project is both to re-examine selected human skeletal assemblages for evidence of interpersonal violence, and to begin the process of collation that will enable meaningful comparisons of the incidence of injuries to be made between broad regions.

Work has recently been carried out on the reassessment of human remains from Iron Age settlement sites in Atlantic Scotland. These reveal a range of non-funerary practices, often associated with the votive deposition of heads and other body parts, and form a parallel dataset to the better known material from southern British Iron Age sites like Danebury. An initial, primarily desk-based survey is being prepared for publication by Dr Ian Armit and Victoria Ginn, and a PhD programme is now being advertised which will develop the research further through detailed osteological, palaeopathological and contextual reanalysis of the remains.

Svetlana Svyatko has commenced research on a CHRONO-funded project entitled 'Palaeodietary analysis of prehistoric populations from the Minusink-Khakass Basin, South Siberia', supervised by Dr Eileen Murphy and Dr Rick Schulting. The project will involve the analysis of dental palaeopathological lesions and isotope signatures of the groups. This data will then be combined with archaeological and palaeoenvironmental evidence for the populations and will enable a clearer understanding of the changing diets and economies of these societies.

A PhD student is about to be appointed to undertake a biocultural analysis of a substantial corpus of Medieval human remains recovered from Ballyhanna, County Donegal. The successful candidate will be working under the supervision of Dr Eileen Murphy and Dr Colm Donnelly. The Ballyhanna Research Project has been funded by the National Roads Authority and it takes the form of a partnership between the NRA, Donegal County Council, Queen's University Belfast and the Institute of Technology in Sligo.

Conferences

A conference entitled 'Warfare and Violence in Prehistoric Europe' was hosted in Belfast in May 2005, with invited papers by speakers from Ireland, Britain, Denmark, Germany and

the United States. A number of papers from this meeting will be published as a group in the next issue of the *Journal of Conflict Archaeology*.

Dr Eileen Murphy organized a session entitled 'Deviant Burials in the Archaeological Record' at the 11th Annual Meeting of the European Association of Archaeologists which was held in Cork in September 2005. The session was very successful and the majority of papers will be published by Oxbow as an edited volume. A review of the session can be found at <http://www.sciencemag.org/cgi/content/full/310/5748/613>

Institute of Archaeology & Antiquity University of Birmingham

by Megan Brickley & Martin Smith

Current Research

Over the last year a number of papers from the NERC funded vitamin D project have been published, and there are quite a few more in the pipeline. The St. Martin's project has also been published and the book is now available from Oxbow. It is now a year since Martin Smith took up a post as Research assistant on a Leverhulme funded project investigating the taphonomy of British Neolithic human bone, and exploring the funerary and forensic implications of these changes. The project design included funding for a programme of radiocarbon dating. This section of the research is now largely complete and has returned a number of exciting results that we are preparing for publication.

Ph.D. Research

Martin Smith was formally awarded his PhD in June 2005, and Rebecca Redfern submitted her PhD thesis in December 2005.

Forthcoming Conferences

Birmingham will be hosting the 8th annual BABAO meeting in September 2006, and information on booking is available in the annual review. Details of the programme that have been arranged to date are available from the BABAO website, however funding has already been obtained from the Wellcome Trust to cover the attendance costs of Anne Herring of McMaster University, Canada and Piers Mitchell, of Imperial, London to speak in the session 'Written in Bone'. An application has been submitted to cover the travel costs of Professor Brian Ferguson, Rutgers University New York, to speak in the session on physical aggression and violence. Overall the plans for the 2006 conference are shaping up well, and following the excellent Chelsea buns provided in London last year we are going to see if we can persuade Cadburys to donate some of their produce for this years conference.

**Biological Anthropology
Research Centre,
Department of Archaeological
Sciences, University of
Bradford**

by Christopher Knüsel

Holger Schutkowski took up the role of Chair of the British Association for Biological Anthropology and Osteoarchaeology, after having served as the organisation's Secretary for the past three years. Marianne Schweich successfully completed her doctoral dissertation, under the supervision of Christopher Knüsel, with Holger Schutkowski and Professor Barry Bogin (University of Michigan-Dearborn) acting as examiners.

Christopher Knüsel and Rebecca Gowland (St. John's College, Cambridge) are presently completing the final manuscript of *The Social Archaeology of Funerary Remains* that will appear this year, published by Oxbow Books, Oxford. This book marries the cultural, social,

and political aspects of burial with the bio-anthropological study of the deceased. Holger Schutkowski finished his book, entitled *Human Ecology – Biocultural Adaptations in Human Communities*, published by Springer.

After the Natural Environment Research Council's recent review of its Master's Course provision, the MSc. in Human Osteology and Palaeopathology was awarded three Advanced Course Studentships for the next three years. Jo Buckberry, Anthea Boylston, and Alan Ogden organised and taught an evening lecture and laboratory on human remains in archaeology for Bradford's Continuing Education Programme.

Jo Buckberry and her research assistant Rebecca Storm are currently working on the British Academy-funded project 'A bio-cultural investigation of social status in late Anglo-Saxon England'.

The Hereford Cathedral project is in full swing, with the analysis of all 1200 skeletons now completed. Anthea Boylston, Darlene Weston and Alan Ogden are now busy compiling their data in advance of writing the full report. Jo Buckberry is working on a much smaller contract – 60 skeletons from the Anglo-Scandinavian cemetery at Riccall Landing, Yorkshire.

Seventh Biennial Palaeopathology Short Course

The Biological Anthropology Research Centre (BARC) at the Department of Archaeological Sciences, University of Bradford, hosted the 7th European Palaeopathology Short Course from Monday 8 August to Friday 19 August 2005, at the University of Bradford. The Course again covered topics in the study of health and demographic characteristics of past human populations, including age estimation and sex determination, estimates of body proportion and stature from human remains, specific and non-specific infectious disease, degenerative joint disease, metabolic disease, congenital abnormality, dental disease, activity-related skeletal change, and the use of

histological techniques in the differential diagnosis of ancient disease. The Course was again organised and convened by Professor Donald Ortner of the Department of Anthropology, Smithsonian Institution, and Dr. Christopher Knüsel of the Biological Anthropology Research Centre, with support from Anthea Boylston, Rhea Brettell, Jo Buckberry, Alan Ogden, Holger Schutkowski, Marianne Schweich, Rebecca Storm, and Darlene Weston (formerly of the BARC and now at the Max Planck Institute, Leipzig). In addition to lectures provided by Anthea Boylston, Christopher Knüsel, Alan Ogden, Don Ortner and Holger Schutkowski, a group of visiting lecturers also contributed, including Megan Brickley (Birmingham), Simon Mays (English Heritage), Charlotte Roberts (Durham), and Michael Schultz (Göttingen). Mike Taylor (Imperial College, London, and now at UCL's Centre for Infectious Diseases and International Health), Janet Montgomery (Bradford), and Andrew Wilson (Bradford) provided evening lectures on aDNA of mycobacteria, isotopic analyses of diet and human movement, and the analysis of ancient and modern human hair, respectively. For the first time this past year, Dr. Morrie Kricun, (formerly of the Department of Radiography, University of Pennsylvania Medical Centre) provided an in-depth workshop on the use and interpretation of radiography in palaeopathology. This past year's participants came from China, Egypt, Argentina, Peru, and Australia, as well as from North America and Europe, with funding providing by the Institute for Bioarchaeology, whose Director, Roxie Walker, also had the opportunity to participate in the Course this year. This Course marked Professor Ortner's last, and all would like to take this opportunity to thank him for his enduring efforts in bringing this Course to fruition over the past 15 years! We are presently discussing the arrangements for the next Course that will take place in 2007.

Ph.D. Students and Titles:

Marianne Schweich (2005): Stature, Body Proportions and Socio-economic Inequality

Rebecca Storm (ongoing): Fluctuating Asymmetry in the Human Skeleton

Katie Tucker (ongoing): Unusual Perimortem Treatment in the Late Roman and Anglo-Saxon Periods

Efrossini Vika (ongoing): Disease and diet in ancient Thebes – a diachronic biocultural study

Jeanette Wooding (ongoing): Migration and the Spread of Disease in the European Iron Age

Jonathan LeHuray (writing up): Dietary Reconstruction and Social Stratification during the Iron Age in Central Europe: An Examination of Palaeodiet Using Stable Isotope and Trace Element Analysis of Archaeological Bone Samples from the Czech Republic

MSc. Human Osteology and Palaeopathology, Dissertations Completed:

Adams, Rachel (2005): The Context of Differential Childhood Mortality at 19th-Century Wolverhampton

Crawshaw, Thomas Saul (2005): An Archaeology of Amputation: "Accommodation", Disability and Care from the Medieval Period to Modern Day (Based on Osteological Evidence)

Davies, Ian (2005): Osteoarthritis in a 19th-century Population from Wolverhampton

Dowling, Áine (2005): A Comparison of Mandibular and Maxillary Dental Development

Freebairn, Carolyn (2005). Dental Disease and Health in an Iron Age Community

Good, Diana (2005): A Palaeopathological Analysis of the Iron Age Cemetery of Wetwang Slack, East Yorkshire

Jones, Vivienne (2005): A Study of Traumatic Injuries in the Burials of Individuals at the Iron Age site of Wetwang Slack

Leighton, Julie (2005): A Craniometric Assessment of Congenital Conditions in Medieval Chichester

Matthews, Arlene (2005): Priestly Burials in Medieval England

Mena, Roxanne (2005): Crime Scene Investigation: A Comparison and Contrast of United States and United Kingdom Applications

Panagiotopoulou, Olga (2005): Status and Dietary Variation at Weingarten (Germany): A Preliminary Analysis Using Stable Carbon and Nitrogen Isotopes

MSc. Forensic Anthropology, Dissertations Completed:

Atkinson, Ross (2005): The utility of tarsal elements for sex determination

Bennett, Caroline (2005): The sore price of piety: kneeling facets in a monastic community

Bowes, Chloe (2005): Diet and status in the early medieval community of Kirchheim/Ries: a stable isotope analysis

Dejong, Jocelyn (2005): Weight determination in males based on the preauricular sulcus

Ramsay, Abigail (2005): Effects of Dermestid beetles on tissue mass removal and bone surface morphology

Sulzmann, Catherine (2005): The Utility of Carpal Bones for Determination of Sex in a Modern British Collection

Weed, Erica (2005): Body Proportions and Geographical Variation

Willard, Veronica (2005): Assessment of the Lamendin Dental Ageing Method using South African and African American samples

Woodhams, Hazel (2005): The soil environment and climate as taphonomic agents acting on the buried body

Departments of Anatomy and Archaeology & Anthropology, and the Bristol Osteoarchaeology Research Group, University of Bristol

by Alice Roberts

Teaching

Archaeology and Anthropology BA Hons.

Biological anthropology is a major pathway, with social anthropology and archaeology, within the Archaeology and Anthropology degree at the University of Bristol. Students may specialise in one or more pathways, or balance two or all three of these interrelated disciplines throughout their degree. The biological anthropology component of the degree includes such major areas of study as human evolution, primatology, human ecology, forensic anthropology and medical anthropology. A characteristic of this degree is its integration of theoretical and practical work, and all students undertake practical fieldwork at home or overseas, as well as producing a dissertation in their final year.

Biological anthropology also finds its way into several other undergraduate programmes at the University of Bristol. Forensic anthropology is taught as an element in the first year of the Anatomical Science degree at Bristol. Forensic odontology is taught in the 2nd year of the dental programme, and palaeopathology is also taught in the 3rd year of the Anatomical Science BSc degree programme. This year, 4 third year 3rd year Anatomical Science students have undertaken

biological anthropology projects, including studies on taphonomy and craniometric analysis.

The Department of Archaeology and Anthropology welcomes applications from research postgraduates in biological anthropology. Recently completed research masters (MPhil) theses supervised by Dr Kate Robson Brown, include topics such as:

The preservation of faunal remains in southern Britain

Predicting the home range of *Proconsul*

The biomechanical implications of a cranio-caudal shift in the spine of Neanderthal Kebara 2

The longevity of fossil species in the hominoid family: How long will modern humans survive?

Maturation schedules in early hominids: Implications for social behaviour

Quantifying trabecular orientation in the pelvis of modern humans, chimpanzees and the Kebara 2 Neanderthal

Dr Kate Robson Brown is also currently supervising 4 PhDs, and recently completed PhD theses include:

The significance of Ban Don Ta Phet in the Prehistoric Landscape of West Central Thailand (Dr Nok Kanjanajuntorn)

An analysis of health and status skeletal markers in the medieval population from Llandough, Wales (Dr Louise Loe)

Locomotion and self-concept: a comparative analysis of gorillas and humans (Dr Marie Bambury)

Research

Bristol Osteoarchaeology Research Group (with members in both Anatomy and

Archaeology and Anthropology) continues to undertake osteoarchaeological consultancy and reporting work, as well as supporting research projects. Current sites under investigation include the medieval cemetery on Priory Avenue, Taunton, and a number of medieval and post-medieval sites in Bristol. The link between the Anatomy and Archaeology and Anthropology departments enables research projects to include anatomical investigations.

Other current funded research projects include:

Fritz-Thyssen-Stiftung Bertemes, F., Robson-Brown, K., Heyd, V., Harrison, R. Verwandtschafts- und Residenzstrukturen in der Spatkupferzeit Süddeutschlands: Ein deutsch-britisches Netzwerkprojekt” “Kinship and residence patterns in the late Copper Age of Southern Germany: A German-British network project. (€120 000).

AHRC: Robson Brown, K (PI) and Collins, M. Predicting the location of hominid sites in Africa and Asia (£39, 520)

News

This year, we were pleased to welcome Dr Mhairi Gibson onto the staff in Archaeology and Anthropology, as a Lecturer in Biological Anthropology, specialising in human evolutionary ecology. Dr Gibson is involved in teaching biological anthropology on the undergraduate courses, and is also continuing her research into evolutionary demography in Southern Ethiopia, where she has been undertaking fieldwork since 1999.

After 37 years in the Department of Anatomy, Dr Jonathan Musgrave retired from his post as Senior Lecturer and Pre-clinical Dean and has returned as a Senior Research Fellow to continue his studies on Greek osteological collections. The Department of Anatomy was also recognised this year by HEFCE as a Centre of Excellence in Teaching and Learning, with BORG member Dr Alice Roberts as one of the core members of the bid. In Archaeology and Anthropology, Dr Kate

Robson-Brown was invited to join the newly formed Human Tissue Authority, and has just completed the building of a new £300k laboratory facility for archaeological science and biological anthropology.

The Unit of Anatomy and Forensic Anthropology, School of Life Sciences, University of Dundee

by Dr Tim Thompson

The Unit has continued to develop and evolve over the past year. Our BSc (Hons) in Forensic Anthropology is progressing well and we have also now begun our 1-yr taught MSc in Human Identification.

The Scheuer Collection of known-age juvenile material is now in Dundee and this will be collated, organised and analysed over the next year with a view to making this valuable resource available for study to those outside the Unit. This project will be undertaken by Dr Becky Gowland, who joins us from the University of Cambridge. We have also been successful in winning a number of grants, and this will help drive our research forward.

We are also delighted to be able to announce the establishment of our new Forensic Art Unit. In September 2005, Dr Caroline Wilkinson and Caroline Needham joined us from the University of Manchester. This is a very exciting development and expands the anthropological services and research that we can now undertake. Furthermore, new staff are set to join us over the coming months as part of our continuing endeavour to develop teaching and research in Anatomy, Osteology and Forensic Anthropology.

Further information on the Unit of Anatomy and Forensic Anthropology, the research that we are undertaking, and the courses that we

offer, can be found at our website: <http://www.dundee.ac.uk/>

Current Postgraduate Research Students:
Maureen Schaefer: Epiphyseal Union in Bosnian Males: analysis from a forensic and biological perspective.

Chris Rynn: An investigation into quantifiable statistical and functional relationships between skull and face morphology, with the aim of improving upon current techniques of forensic and archaeological facial reconstruction.

Craig Cunningham: The analysis of the remodelling of the major internal trajectory pathways of the pelvis.

Helen Robson: The effects of obesity on facial anatomy.

Lucina Hackman: Identification of child abuse. Lucina will also be employed as a Teaching Assistant.

Elinor Mowat: An assessment of the validity of a database of dismembered body parts with a view to aiding identification.

Department of Archaeology University of Durham

by Charlotte Roberts

Current Research: Grants

Leverhulme Trust: Major Research Fellowship for 2 years £64-197 (Charlotte Roberts)

Arts and Humanities Research Council: Standard Research Grant: 'The Bamburgh Bowl-Hole Anglian Cemetery: A contextual study'; £211,597 (Charlotte Roberts)

British Academy (£700) and Royal Society (£1150) for travel to 1st Paleopathology

Association South American Meeting, Rio De Janeiro, Brazil (Charlotte Roberts)

Current Research Students

The following are current research students in the Department:

Alvaro Arce, PhD, The good health of the Anglo-Saxons, self-funded, supervised by Charlotte Roberts and Andrew Millard

Samantha Booth, MPhil/PhD, MPhil/PhD, self-funded, supervised by Charlotte Roberts and Andrew Millard

Francisca Alves Cardoso, PhD, A portrait of gender in two 19th/20th century Portuguese populations: a palaeopathological perspective, Portuguese Foundation, supervised by Charlotte Roberts and Marga Diaz-Andreu/Pam Graves

Sarah Groves, PhD, Status and activity in Anglo-Saxon adults using multiple indicators, AHRB, supervised by Charlotte Roberts

Charlotte Henderson, PhD, A tripartite study of musculoskeletal stress markers, self-funded, supervised by Charlotte Roberts and Andrew Millard

Janet McNaught, PhD, Clinical and archaeological study of Schmorl's nodes, self-funded, supervised by Charlotte Roberts

Paola Ponce, MPhil/PhD, Markers of occupational stress in South American populations, Durham Doctoral Award, supervised by Charlotte Roberts and Andrew Millard

Rosa Spencer, MPhil/PhD, Testing hypotheses about DISH using stable isotope analysis and other methods, NERC, Charlotte Roberts and Andrew Millard

Anastasia Tsaliki, PhD, Investigation of extraordinary human body disposals with special reference to necrophobia, self-funded, John Chapman and Charlotte Roberts

PhD Theses completed

Anwen Caffell 2004: Dental caries in Medieval Britain (c. AD450-1540). Temporal, geographical and contextual patterns

MSc Palaeopathology

The following students completed the MSc Palaeopathology in 2004-5 and undertook the following dissertations:

Rhian Crompton: An investigation into 'degenerative' conditions across the skeleton
Yvonne Heath: Battle of the sexes? Evidence of possible female directed interpersonal violence in Medieval York

Sarah Ingham: Ancient DNA: a critical analysis of published palaeodisease papers with recommendations for future work

Rachel Horn: The neurological and social implications of cranial trauma in the Medieval period

Claire Rennie: An assessment of the health of Post-Medieval Hanging Ditch, Manchester

Gillian Scott: Four mummified heads at the Hancock: an investigation using palaeopathological methods to draw new light on the Hancock Museum's Egyptian human remains collection

Jon Welsh: Naval health and medicine under the Tudors: the palaeopathological perspective

Vasiliki Zygouri: Human skeletal remains from Kafali of Kastelli Pediados, central Crete: a study and comparative analysis of health status

Reports

Roberts, C.A. 2005 Report on the human remains from the County Hospital, Hereford. (35 inhumations). Unpublished

Faculty of Medicine Imperial College London

by Piers Mitchell

The BSc. level course in palaeopathology has had considerable success this year, especially at the BABAO conference in London. The talk by Tessa Greenslade and Neeraj Malhan on wounds from the Napoleonic battle of Toulouse achieved the highest ranked podium presentation in the student prize competition, while the poster by Roshni Patel on congenital syphilis in Victorian London was the second highest ranked student poster. From spring 2006 MA students will also sit the palaeopathology course.

Departmental research continues at multiple sites in the Middle East, and palaeopathological analysis of the new site of Tell es-Safi in Israel began this year. This site was the location of the crusader castle of Blanchegarde in the 12th century. Twenty burials were analysed this season, including a modest mass grave of eleven individuals. The battlefield site of Jacob's Ford castle is to be the focus of a BBC Timewatch documentary to be broadcast in 2006, and filming of the palaeopathological evidence for weapon injuries took place in Jerusalem this September.

Collaborative projects are underway with the Museum of London, The University of Durham and the University of Reading. A study of congenital and developmental diseases of the hip in archaeological specimens is taking place with Rebecca Redfern of the Museum of London Archaeological Service. A project is underway with Gundula Müldner in Reading on the evidence for medieval diet using stable isotope analysis of a range of Middle Eastern populations. A further project with Andrew Millard in Durham is funded by the British Academy. This is to investigate migration between Europe and the Middle East with the crusades, from the analysis of dental isotopes.

Conferences

Piers Mitchell organised the conference Medicine and Disease in the Crusades. This was held at University College London on 28 January 2005. The meeting was funded by a grant from The Wellcome Trust. Guest speakers from Britain, France, Germany, Israel, and the USA discussed the evidence for ill health and medical treatment in the medieval military expeditions and resulting Frankish states established in the east. Papers were presented by medical historians, crusades historians, archaeologists and palaeopathologists. Over fifty people attended, and all appreciated the multidisciplinary approaches employed to investigate this topic.

Department of Archaeology University of Southampton

by Sonia Zakrzewski

Staff Changes

Yannia Hamilakis has been spending the academic year 2005-6 in California as a result of winning a Getty Scholarship (based at the Getty Research Institute, Los Angeles). Jaco Weinstock has joined the department on a part-time basis (spending the rest of his time in Copenhagen). As of 1st January 2006, James Steele and Margaret Clegg have moved to UCL to work at the AHRC-funded Centre for the Evolutionary Analysis of Cultural Behaviour.

Post-Doctoral Research

Margaret Clegg has been with the department as a Research Fellow associated with the British Academy Centenary Project (*From Lucy to Language: The Archaeology of The Social Brain*), studying the comparative morphology of cranial base nerves. The end of Margaret's project has arrived, but the serious number crunching and analysis continues, and hence the results will soon be written up in collaboration with James Steele for

publication and presented at several conferences over the next year.

PhD Research

There are several research students working within the department on osteological and anthropological topics:

Carina Buckley, mainly working with James Steele, has completed her PhD studying the life history of *Homo erectus* and the effects of childhood stresses upon development.

Lisa Cashmore, funded through the British Academy Centenary Project (*From Lucy to Language*), mainly working with Sonia Zakrzewski, has developed a methodology for assessing MSM in the hand, and is currently comparing primate and hominin material.

Kristi Grinde has temporarily suspended her research employing strontium isotope ratios to assess mobility in an early Islamic assemblage from Écija in Spain.

Kerry Harris, partially funded by English Heritage, has been spending a few months in Greece intensively obtaining more faunal material for her analysis of feasting in Bronze Age groups.

Argyro Nafplioti is nearing completion of her PhD, which has been looking at population movements and between the mainland and islands in Bronze Age Greece, combining both osteological and isotopic methods. She mainly has been working with Joanna Sofaer.

Kristin Oma is working with Joanna Sofaer and Yannis Hamilakis, and is continuing her studies of the relationships, including spatial organisation relative to houses, between humans and animals in southern and central Europe.

Dissertations Approved for the MA in Osteoarchaeology 2004-5

Emily Brants: Reanalysis of the Human remains from Guildown Pagan Anglo-Saxon Cemetery and Late Anglo-Saxon Execution

Cemetery, and Comparison with other Similar Assemblages in Surrey.

Alison Carnell: Burying the Past: The Faunal Remains from a Pre-Roman Votive Deposit, near the Temple of Venus, Pompeii

Rachel Carr: Is Stature an Indicator of Status in the Anglo-Saxon Period?

Sarah Inskip: Taphonomic Patterns of Islam: A Test of Knüsel and Outram's (2004) Method of Zonation.

Aoife McCarthy: An investigation of the Impact of Activity on the Human Skeleton: Analysis of Progressing Age Categories, Juvenile to Adult.

Kristopher Poole: Symbolic Scavengers: Corvids in Britain, 500 BC – AD 1500.

Brian Shottenkirk: The Glorious Dead: Nationalism and the Military Burial Tradition.

Melanie Speller: Human-Horse Relationship in the Anglo-Saxon period: The Zooarchaeological Evidence.

NEW COURSES

MSc in Human Identification Unit of Anatomy & Forensic Anthropology University of Dundee

This highly innovative one-year taught Masters course will look at all features of identification and verification from both a theoretical and practical perspective.

The course will examine and discuss traditional aspects of identification pertaining to the deceased. This will include facial reconstruction as well as radiographic, genetic, anthropological, pathological and

odontological analysis. Students will also examine the need for identification procedures both in a national and an international forum by examining various scenarios including: criminal investigations, mass disasters and war crimes. All of this discussion of the application of human identification will be placed within the current legal, ethical and social arena. The combination of these discussions will result in a fuller appreciation of the importance, significance and ramifications of human identification.

Further information can be found on the University of Dundee website:
<http://www.dundee.ac.uk/biocentre/slsbmsccourse.htm>

POSTGRADUATE RESEARCH ABSTRACTS

PhD Abstract

**Samantha Booth, (continuing,
University of Durham)**

**Research into Stress Indicators,
Concentrating on Growth
Retardation, in a Mediaeval
Population from Fishergate, York**

This is a PhD research project on the mediaeval human skeletal remains recovered from Fishergate, York. These remains consist of 244 individuals, spanning age ranges and both sexes. The main aim is to compare mediaeval subadult skeletons with modern standards in terms of growth retardation and stunting, via metric study of longbone lengths compared to dental age for each individual. The results will be used to develop new ageing and growth standards for mediaeval subadults from longbone lengths. These can then be used on other mediaeval archaeological populations with more accuracy than current modern growth standards.

An additional aim is to determine any links between the occurrence of specific stress indicators and disease in both adults and subadults within this population. This research will lead to a greater understanding of the relationships between stress indicators, environment and disease, by examining any correlation between a variety of pathological indicators and the wider social context of the period.

Stress indicators recorded will be porotic hyperostosis, including cribra orbitalia, dental enamel hypoplasia and growth retardation or stunting. All recording and scoring standards used will be according to Buikstra and Ubelaker (1994) and BABAO recording standards.

PhD Abstract

**Jo Buckberry (2004, University of
Sheffield)**

**A Social and Anthropological
Analysis of Conversion Period and
Later Anglo-Saxon Cemeteries in
Lincolnshire and Yorkshire**

This thesis discusses the variety and types of cemeteries and burials used during the late Anglo-Saxon period. The survey of Anglo-Saxon cemeteries in Lincolnshire and Yorkshire reveals that many early Anglo-Saxon burial sites have been successfully identified archaeologically, but that relatively few late Anglo-Saxon cemeteries have been identified or excavated. It shows, contrary to previous interpretations, that many late Anglo-Saxon cemeteries were not located under medieval cemeteries adjacent to extant churches and shows that execution cemeteries dating to the late Anglo-Saxon period and isolated barrow burials attributed to Scandinavian settlers have been identified archaeologically. The present research highlights the importance of searching for late Anglo-Saxon burial sites in the large numbers

of undated burials recorded at Sites and Monuments Record offices and in the relevant literature. It presents a series of identification criteria for late Anglo-Saxon cemeteries and reveals the results of a radiocarbon dating project that successfully dated five previously undated burial sites to the 7th to 11th centuries.

The thesis highlights the range and variation of burial rites used during the late Anglo-Saxon period, stressing that this was not, contrary to popular perception, a period of egalitarian burial practice. Indeed, it shows that high-status cemeteries contained a much wider variety of grave types and grave variations than lower-status cemeteries, and reveals that there was more variation in the types and numbers of different funerary rites between cemeteries of different status than between rural and urban cemeteries. The thesis stresses the importance of comparing osteological and funerary evidence when investigating cemeteries, and shows that late Anglo-Saxon burial practice was not solely determined by the age or sex of the deceased. However, it shows that individuals were increasingly likely to be buried in more elaborate graves with increasing age, and suggests that more elaborate burial practices were used for social display. This differs from the early Anglo-Saxon period, when sex and probably social status were considered when choosing burial rites. This reveals a fundamental change in the way in which social identity influenced the choice of burial practice throughout the Anglo-Saxon period.

PhD Abstract

Anwen Caffell (2004, University of Durham)

Dental caries in Medieval Britain (c. AD450-1540). Temporal, geographical and contextual patterns

This research examines the prevalence of dental caries in Early (c. AD 450-950), Middle (c. AD 950-1150) and Late Medieval Britain (c. AD 1150-1540). Eighty-eight data-sets (for 79 sites, 14,296 skeletons) were compiled from published and unpublished skeletal reports, but due to the limitations of the data available only 53 data-sets (for 46 sites, 9,136 skeletons) could be included in analysis. Sites were distributed across the country, but the majority were located in the south and east of England, and the Late Medieval sites were predominantly in urban areas. Caries prevalence in teeth from adults, males, and females are compared between: the main Medieval periods; chronological subdivisions within the Early and Middle Medieval periods; different Late Medieval cemetery types (church, monastic, hospital and cathedral); non-monastic and monastic samples through time and within each period; different religious orders; coastal and inland sites; and five regions. The data are interpreted using a biocultural approach.

A low caries prevalence was observed in Early and Middle Medieval monastic compared to non-monastic samples, but the Late Medieval monastic caries prevalence was significantly higher than both preceding monastic samples and the contemporary church sample; hospital sites had a particularly high caries prevalence. Early Medieval coastal sites had a low caries prevalence compared to inland sites, but the trend was reversed in the Late Medieval period; these data are discussed in relation to the consumption of marine fish. Changes in the pattern of sex differences in caries prevalence were observed.

The limitations of the data are discussed, together with a critique of the quality of data available in currently available skeletal reports.

PhD Abstract

**Heather Gill-Robinson (2005,
University of Manitoba)**

**The Iron Age Bog Bodies of the
Archaeologisches Landesmuseum,
Schloss Gottorf, Schleswig,
Germany**

The purpose of this research was to provide a complete anthropological assessment of the remains of seven humans from peat in northern Germany. The group of bog bodies at the Archaeologisches Landesmuseum was a unique collection since it included a well-preserved adult male (Rendswühren); two of the “flat” bodies, with completely demineralized bones (Damendorf and Windeby II); a potential adolescent female (Windeby I) and two heads with distinctive hair knots (Osterby and Dätgen). A single bog skeleton, from alkaline peat, Kühsen, was also examined. All of the bodies dated to the Scandinavian Iron Age, approximately 500 B.C. to A.D. 800, with the exception of the bog skeleton, the date of which was unknown. The remains displayed varying levels of preservation but in all cases, except the skull and mandible, extensive soft tissue remained on the bodies. With the exception of the Windeby I body, little previous research had been undertaken with the bodies in this collection. Each body was completely reassessed and reinterpreted based on evidence compiled from multiple sources including archival material; gross anatomical analysis; digital radiography; Multi-slice computed tomography (MSCT); detailed image analysis with both virtual and physical three-dimensional reconstructions and trace element and stable isotope analyses. One body was sampled for ancient DNA analysis. Several of the techniques employed were used with bog bodies for the first time. Data were compared with Iron Age skeletal remains from Denmark and Iron Age cremation burials from Schleswig-Holstein. From this research, interpretations regarding methodological issues of preservation and analysis, and how these individuals might have fit within the archaeological and cultural context of the Iron

Age in northern Germany were made. The data obtained from these analyses contributed substantially to the interpretation of these seven individuals.

PhD Abstract

**Mandy Jay (2005, University of
Bradford)**

**Stable Isotope Evidence For
British Iron Age Diet. Inter- and
intra-site variation in carbon and
nitrogen from bone collagen at
Wetwang in East Yorkshire and
sites in East Lothian, Hampshire
and Cornwall**

Keywords: carbon; nitrogen; stable isotopes; Wetwang; Iron Age; bone collagen; palaeodiet

This thesis reports an investigation of Iron Age diet in Britain using carbon and nitrogen stable isotope data obtained from skeletal material from four locations across England and southern Scotland. Both human and animal bone collagen has been analysed from Wetwang in East Yorkshire and other sites in East Lothian, Hampshire and Cornwall. Animal bone from Dorset has also been included.

The aims of the study were to characterize British Iron Age diet in general isotopic terms and also to provide a contextual base for future analysis which allows an understanding of both inter- and intra-site variation in such data for this and other periods. The comparisons across the locations allowed consideration of geographical variability within England and southern Scotland and included material from coastal sites (Cornwall and East Lothian), from sites with easy access to rivers and estuaries (Hampshire) and an inland site where access to water would have been more difficult (Wetwang).

All human groups were consuming high levels of animal protein and there was very little evidence for the consumption of aquatic resources. There was significant variation in $\delta^{15}\text{N}$ values between the locations, which was reflected both in the humans and the herbivores, such that it could be related to environmental rather than to dietary differences. Intra-site group comparisons at Wetwang showed very little variation within the cemetery population according to age, sex, subjective status category or site phase. The data were very consistent within the populations, although those for Hampshire displayed more variation in nitrogen.

PhD Abstract

**Pam M. Macpherson (Submitted,
University of Sheffield)**

**Tracing Change: An Isotopic
Investigation of Anglo-Saxon
Childhood Diet**

This thesis uses analysis of the stable isotopes of carbon, nitrogen and oxygen of multiple samples from individuals excavated in the Black Gate Cemetery, Newcastle upon Tyne and in cemeteries in North Lincolnshire to investigate the diet of children in early medieval England. The determination of duration of breastfeeding, age of weaning and dietary intake over childhood and into adult life may vary with physiological requirements, social mores and environment. This research is set against a background of blossoming interest in the use of isotope analysis to answer archaeologically important questions.

Whether the onset of adult responsibilities and the process of integration into adult society is marked by a shift in the food resources available to an individual is one such question, addressed by comparing the values of permanent 3rd molars (formed in late childhood) with adult rib values. As the age of legal responsibility (set at 12 in Anglo-

Saxon England) is taken as one of the boundaries between child and adult, this pairing of samples is an appropriate method to address the question posed. That there is neither a statistically significant difference between the paired samples, nor any visually observable pattern of change in $\delta^{13}\text{C}$ or $\delta^{15}\text{N}$ between the third molars of individuals and their rib values indicates that certainly by late childhood individuals had access to the same food resources as they would have as adults.

Analysis of permanent 2nd molars provides data on diet in early to mid childhood; however interpretations of these data must also address the possibility that the uniform depletions in $\delta^{15}\text{N}$ seen in these teeth may be a physiological phenomenon rather than a cultural tendency for childhood diet to contain a lower proportion of animal protein. This depletion in $\delta^{15}\text{N}$ is evident in the published data of other prehistoric and historic samples (Fuller, *et al.*, 2003; Eriksson, 2004), indicating that a physiological cause is more likely than a social. A possible explanation is the preferential incorporation of the lighter ^{14}N over ^{15}N into skeletal tissue during this phase of growth.

The combination of stable nitrogen and oxygen isotope analysis of deciduous 2nd molar crowns and roots and permanent first molars has illustrated the varied nature of the weaning process in early medieval England. Breast feeding was exclusive for the majority of individuals in the first months of their life however after the completion of the deciduous 2nd molar crown, individual experience is more varied. Some experienced an extended period of exclusive breastfeeding while others appear to have been abruptly weaned around the time the deciduous 2nd molar began formation. Most individuals appear to have undergone a gradual weaning process in which breast milk was slowly replaced by other foods. Analysis of oxygen in permanent molars indicates geographically diverse origins in the populations under study. While some individuals have oxygen values consistent with residence in the area where

they were buried, others may have come from the western coast of Britain, Ireland and central or northern Europe. A number of individuals changed their area of residence one or more times over the course of their childhood implying that they and possibly their communities were not sedentary in nature.

PhD Abstract

Nicholas Márquez-Grant (Institute of Archaeology and Wolfson College, University of Oxford. Thesis submitted for the degree of Doctor of Philosophy, Trinity 2005)

A bioanthropological perspective on the Punic period in Ibiza (Spain) as evidenced by human skeletal remains

Supervisors: Professor Andrew Sherratt and Dr. Louise Humphrey (NHM, London)

The Punic period (6th – 2nd century BC) in the island of Ibiza (Spain) has been regarded by historians and archaeologists as a time of flourishing economic wealth and prosperity, as evidenced by its coin production, demographic growth, agricultural exploitation, intensive product manufacturing and its overall importance to Punic trading routes.

From a bioanthropological perspective, this apparent prosperity raises a number of interesting questions. Did such prosperity manifest itself in the biological well-being of the population? What were the morbidity rates like for the inhabitants of Ibiza? Were there differences between urban and rural populations? How might this period compare with a less prosperous era?

These questions led to the following hypothesis being established -

General prosperity in the Punic period in Ibiza should be reflected in the general well-being of the population, as evidenced by human skeletal remains.

To test this hypothesis, morbidity rates in the general population in the Punic period were assessed including an analysis of rural and urban populations. In addition the Punic period was compared to the Late Antiquity – Early Byzantine (4th – 7th century AD) period.

To assess these issues, anthropological data on stature, oral health, infections, trauma, mortality, osteoarthritis and diet was analysed, amongst other indicators. Allied to this, the research attempted to place the analysis in a broader biocultural context.

Whether the above questions could be definitively answered depended on the sample size of material available. A larger sample would certainly have allowed these issues to be explored in even more depth than was possible in this study. Nevertheless, the samples studied have produced a range of interesting results that will aid future research.

This research provides a wider understanding of the Punic period in Ibiza and of the Punic world in the Western Mediterranean; highlights the importance of combining anthropological work with other archaeological data; contributes to the osteological and palaeopathological record for Ibiza; and finally, provides a framework for further research.

PhD Abstract

Paola V. Ponce (ongoing, University of Durham; e-mail: p.v.ponce@durham.ac.uk)

A comparative approach of osteoarthritis and activity-related pathology in Amerindians from South America

Supervisors: Dr. Charlotte Roberts and Andrew Millard

Funding: Durham Doctoral Fellowship Award 2005-2006

Key words: activity-induced pathology, Amerindians, osteoarthritis, enthesophytes

This project will analyse the presence activity-related pathologies such as osteoarthritis, enthesophytes, spondylolysis and osteochondritis dissecans in both sexes and on different ages in order to find differences in their frequencies and a causative explanation for their appearance.

A combination of palaeopathological, archaeological and ethnohistorical evidence will be combined to explain the patterns observed in the Amerindian populations that settled in the Calchaquies valleys of the North-West region of Argentina and the North-East Valley of Azapa in Chile prior to the Spanish contact.

This research will be one of the first palaeopathological studies of Argentinian skeletal samples where biological, archaeological and historical data are combined to test a hypothesis and answer specific questions.

PhD Abstract

Rebecca Redfern, (2005, University of Birmingham)

A gendered analysis of health from the Iron Age to the end of the Romano-British period in Dorset, England (mid to late 8th century B.C. to the end of the 4th century A.D.)

The current thesis presents the first regional analysis of male and female health during the Iron Age and Romano-British period in Dorset

(England), using a medical ecology approach. The study combines palaeopathological evidence, social science theory (age, gender, feminist and masculinity theories) and socio-cultural evidence.

The use of a medical ecology approach created an integrated study, which allowed changes through time to be interpreted at the population and individual scale of analysis. It was achieved using bioarchaeological data for living conditions, diet and the wider environment, socio-cultural evidence such as age transitions and concepts of gender, occupation and daily life. Where datasets permitted, chi-square tests were employed to determine whether significance was present between the sexes and archaeological periods. The study is the first to provide an analysis of Iron Age health in Britain; it also demonstrates the probable continuity of life-ways into the Roman period, as well as the affects of incorporation into the Roman Empire. Principally, it provides the first palaeopathological perspective of male and female life-ways during these periods.

The thesis establishes the importance of human remains in the understanding of these archaeological periods and demonstrates how an integrated approach provides an enhanced understanding of past communities.

PhD Abstract

Marianne Schweich (2005, University of Bradford)

Diachronic Effects of Bio-Cultural Factors on Stature and Body Proportions in British Archaeological Populations.

Keywords: Stature, proportions, BMI, nutrition, health, bio-cultural environment, British archaeological populations.

Humans, like all animal species, are subject to Bergmann's (1847) and Allen's (1877) environmental rules which summarize physical adaptations to the natural environment. However, humans are in addition cultural animals and other bio-cultural factors such as social, economic and political status, general health, and nutrition, have a noticeable influence on stature and body proportions. Importantly, socio-economic status has a powerful influence on stature, which has been used to elucidate status differences in past societies (Bogin and Loucky, 1997; Floud et al., 1990; Schutkowski, 2000a). Furthermore, bio-cultural factors influence all dimensions of the human body, including weight, relative limb length, and relative length of the different limb segments. Given minimal migration and shared natural environments, all populations in this study, coming as they do from the last 2000 years of English history, should demonstrate similar morphology (c.f. Ruff, 1994) if climatic variables were the only influence on stature and body proportions.

In order to assess such bio-cultural factors in individuals from archaeological populations, skeletal populations from sites such as known *leprosaria* and medieval hospitals, rural and urban parish cemeteries, victims from the battle of Towton in A.D. 1461, and individuals from monastic cemeteries were analysed. The osteometric data from these populations were assessed for within and between population variability and indicate effects of bio-cultural factors on attained body proportions and stature. The results indicate a strong relationship between bio-cultural factors and body proportions, body mass index, prevalence of pathologies, sexual dimorphism, secular trend, and general stature from Roman times to the post-medieval period. The usefulness of stature, weight, and physical indices as markers of the bio-cultural environment is demonstrated. The main findings include: a greater sensitivity to external stressors in the males rather than the females of the analysed populations, rendering male statures more susceptible to varying bio-

cultural conditions; a potential for very tall stature has existed in the analysed populations but was only realised in very high status individuals in medieval times, and from the beginning 20th century with better socio-economic conditions for the population at large; a less stratified socio-political environment, as in the late Anglo-Saxon period resulted in taller average male statures than a more stratified one, such as the medieval Nation-States; and medieval monastic institutions could have high status, e.g., the Gilbertines, or lower status, such as the mendicant orders, while *leprosaria* had the lowest status of all.

PhD Abstract

Martin Smith (2005, University of Birmingham)

Picking up the pieces: An investigation of Cotswold-Severn funerary practices via re-analysis of human skeletal material from selected monuments

The Cotswold-Severn group is one of the best known Neolithic monument series in Britain. The human skeletal material recovered from these monuments comprises some of the largest and best preserved assemblages from the period. Due to their high visibility, the majority of monuments were excavated at an early date. Often little attention was paid to human bone, whilst the analyses that were conducted, largely employed methods now considered inaccurate.

Focusing on taphonomy as an indicator of funerary practice, this project re-examines the human bone from a selection of monuments in order to acquire more reliable data, derived via modern methods. Significant new insights have been gained concerning a variety of ways in which these remains were treated, including exhumation, defleshing and selective bone removal. Some popular ideas

have been upheld whilst others are refuted. Funerary practices were found to vary substantially between monuments. Despite this variation, several themes are also identified which are common both to the region and to Neolithic mortuary practice in general. The findings presented are important not only for the interpretation of Cotswold-Severn funerary practices, but also for the way the monuments themselves are viewed. Finally, revised questions and new directions are proposed for further inquiries.

PhD Abstract

Sally Stevens (2005; Evolutionary Anthropology Research Group, University of Durham).

The morphology of the knee joint in *Homo sapiens*: a morphometric study of form variation in the distal femur and proximal tibia

Keywords: Geometric morphometrics; distal femur; proximal tibia; asymmetry; sexual dimorphism; ageing; population specific shape differences.

This project explores form variation in the knee joint of thirteen geographically and economically distinct populations of modern *Homo sapiens* from different ancestral backgrounds. Shape differences are interpreted within the context of the size of the knee joint and against size differences in the femur and tibia. Three dimensional coordinate data are taken from the distal femur and proximal tibia and statistical shape analysis is conducted using geometric morphometric techniques. Results from initial intra-population analyses using a restricted number of samples determine the data that are submitted for inter-population analyses using the full dataset.

Three series of intra-population analyses test for asymmetry, sexual dimorphism and age.

Significant shape asymmetry exists in all samples examined. Results therefore preclude the use of both right- and left-sided specimens within any single sample in subsequent analyses. Results indicate the existence of a significant degree of sexual dimorphism in all samples, and that the nature and degree of variation is population specific. Significant differences also exist with ageing, although again, variation in nature and degree is population specific. For both sexual dimorphism and shape variation with ageing, differences are of lesser significance relative to inter-population variation.

Using the full dataset, results indicate the existence of size and (particularly) shape differences between samples at a high level of statistical significance. Morphological variation between populations arises from a number of influential factors, including climate and more specifically, cold temperature. The powerful influence of additional factors, including working practices, disease and nutrition is examined in greater depth in relation to the Spitalfields sample from London, which shows a distinctive pattern of form variation relative to the other population samples.

EXCAVATION AND ANALYSIS
OF HUMAN SKELETAL
REMAINS 2004-5

**Human Skeletal Remains
Analysed by Sue Anderson
2004-5**

*by Sue Anderson, Project Manager, CFA
Archaeology Ltd*

*St. Osyth's, Essex (for Essex C.C.
Archaeological Unit and English Heritage)*
Cremated bone from four Early Bronze Age burials in a pond barrow, twelve Middle Bronze Age burials associated with ring ditches, and one isolated Middle Iron Age

burial were analysed. The EBA group consisted of three adult males and a young child. The MBA group included two men, two women, three unsexed adults, six young children and two older sub-adults. The MIA burial contained an unsexed adult. A few individuals suffered degenerative disease, and a few had been affected with infections of the teeth and jaws.

Birch Pit, Colchester, Essex (for Colchester Archaeological Trust)

Seventeen groups of cremated bone were examined, fourteen of which were from discrete burials of Middle Bronze Age or probable Bronze Age date. The minimum number of individuals was estimated as fourteen. Several burials contained a few fragments which did not belong to the main occupant, but only one of these (F8) could be considered a double burial on the basis of the osteological evidence. The group as a whole contained at least one infant, two children, two sub-adults, a mature ?female, two adult and one mature ?males, and one young, three adult and one mature unsexed adults. It was possible to record that a few individuals suffered from the degenerative changes which are associated with increasing age, particularly in the spine. At least two people may have suffered from iron deficiency, both from unurned burials.

Handford House, Colchester, Essex (for Colchester Archaeological Trust)

Eight articulated skeletons and seven contexts of disarticulated remains represented a minimum seven men, one woman and three unsexed adults of Roman date. No children were present, and the individuals ranged from young to old age. Pathological conditions included degenerative disease, stress lesions and infection. A possible tuberculous lesion was identified in the spine of a middle-aged/old male. This was the only evidence for any potentially life-threatening illness in the group, and it was healed or healing at the time of death.

This site also produced Roman cremation burials. A total of 69 groups of cremated bone

of varying sizes was analysed. Of these, 39 were urned burials, one was a casket burial, two were possible bustum burials, nine deposits were unurned or pyre debris, and the remainder were from other features or layers. The groups represented a minimum of 55 individuals. Six burials contained fragments of a second individual, but two of these had such small amounts that only four could be considered as 'double burials'. The group as a whole contained three infants, seven children, three sub-adults (two male, one female), twelve adult males, eleven adult females and seventeen unsexed adults. Almost half the adults could not be aged, but of those which were, the majority were middle-aged or older. The four double burials contained two children in one, a child and an unsexed older adult in another, and two contained two adults.

St. Olave's Church, Creeting, Suffolk (for Creeting Churches Research Project)

The remains of at least eight children and three adults were uncovered at the site of St. Olave's Church. One of the adults was from a deep grave in the centre of the chancel and has been interpreted as a priest burial. The other burials were all from the upper levels of the site and had suffered plough damage and long-term exposure which had affected their condition. The high proportion of child graves is likely to be related to the area of churchyard which has been excavated. Children were often buried in relatively shallow graves close to the church walls, presumably to avoid disturbing the foundations too much, and also to offer a degree of 'protection'. The adults consisted of one woman and two men. Pathological changes indicated that some of the children had been affected with vitamin deficiencies or possibly blood disorders, and that the adults had suffered from the typical changes associated with maturity and old age.

St. Andrew's Church, Stratford St Andrew (for Suffolk C.C. Archaeological Service)

Fourteen partial or complete human skeletons were excavated during building work at the church, and a further four were seen in the

ground but not lifted. There were also four groups of disarticulated bone. No time was allowed in the project for a full osteological analysis, but the remains were briefly recorded in terms of age, sex and any notable pathology. Pathological changes included those which represent the usual stresses and strains to the spine (osteophytosis, osteoarthritis, Schmorl's nodes) and other joints (osteochondritis dissecans and osteoarthritis of the knee), evidence for trauma (fractured fibula and tibia in two individuals), a benign tumour (osteoma), and infections (a proliferative and diffuse inflammatory response of unknown aetiology involving most of the bones of one adult male, and mild periostitis of the shin in an adult ?female). The skeletons were all in above average condition, compared with the relatively poor bone preservation which occurs in most of the county, and it is unfortunate that more information could not be collected.

Murrill's Road, Purdis Farm, Ipswich (for Suffolk C.C. Archaeological Service)

The majority of human bone collected from this Middle Saxon site was disarticulated. Only one articulated skeleton was excavated, but several bones of a few other individuals could be recognised amongst the disarticulated contexts. The minimum number of individuals (MNI) represented in this assemblage was difficult to estimate with any certainty owing to the very poor condition of many of the long bones. There were at least 14 children and 43 adults. The spread of age and sex suggests that the group represents a normal population. The children make up 24.5% of the group, which is within the normal range for pre-modern groups. There was no significant difference in the sex ratio of eleven males to seven females. A few common pathological conditions were noted, as well as a few more unusual conditions. The wrist bones of a female hand had several small periarticular cysts and osteophytes, which can be associated with rheumatoid arthritis. Fragments of an adult skull showed signs of a congenital syndrome (such as Down's), including several lambdoid

wormian bones, a short basi-occipital and small frontal sinuses.

St. Margaret's Church, Ipswich (for Suffolk C.C. Archaeological Service)

The remains of as many as 130 individuals were identified amongst the articulated and disarticulated human bone assemblage, although only 13 were articulated. The condition of the bone, together with the high prevalence of dental disease and associated coffin furniture indicates a post-medieval date for most of these remains. Age and sex distribution was within the expected patterns, including individuals of both sexes in roughly equal proportions, ranging in age from perinatal through to elderly adults. In terms of stature and physical appearance, the group was within normal limits for the period. The bones were well preserved but it is unfortunate that so many good examples of pathological conditions were disarticulated. Diseases present in this group included the usual range of degenerative changes; several fractures of the chest area and head wounds which may indicate direct violence; minor injuries and stress fractures of the legs, ankles and feet; inflammatory changes which may be related to trauma; and infections associated with the close contact of urban life such as syphilis. The most unusual find was evidence for surgery in the form of an amputated lower leg, performed due to a chronic ulcerative infection and probably resulting in the death of the patient.

Partney, Lincolnshire (for Cambridgeshire C.C. Archaeological Field Unit)

Of the 43 burials excavated at St. Mary Magdalene Chapel/Hospital, Partney, 33 produced human skeletal remains, two-thirds of which were in poor or very poor condition. The youngest was aged 7-8 years. The majority of individuals were male; only one ?female was identified. Most adults had survived to 'middle-age', although a few younger and older individuals were present. Dental disease was low. Most of the common skeletal pathologies are represented, including degenerative disease, inflammatory changes to

the lower leg bones, and stress indicators in the spine and elsewhere. Only one fracture was noted. Spinal lesions in one skeleton may have been a result of tuberculosis, and osteitis of the sphenoidal sinuses of another probably represented a long-term infection which would have caused severe headaches and respiratory problems. This condition too can be caused by a specific infection such as tuberculosis, but no other evidence for the disease was seen in this skeleton. Where possible, bones of the face, hands and feet were checked for leprosy, but there was no evidence for the disease in this group, despite its status as a medieval hospital.

The Partney bypass excavation also produced four poorly preserved skeletons of Iron Age date. All four were adults, one male, two females and an unsexed individual.

Gladstone Street, Hartlepool (for Tees Archaeology)

A group of largely disarticulated bone excavated in 1964 and thought to be post-medieval was reassessed as part of the Hartlepool Project. The small group represented a minimum of 21 individuals. Of these, nine were female, nine male, two unsexed and one was a child. Recommendations were made for radiocarbon dating and the results have now shown that the burials were Middle Saxon.

St. Mary's Star of the Sea, Leith (for CFA Archaeology Ltd.)

All six individuals excavated at this site, which was within the grounds of the demolished Balmerino House, were probably male, and only one was younger than 18 years of age. One of the older men showed evidence for at least one violent incident which had left him with several broken bones and a mild cranial lesion. Two individuals had periostitis of the shin bones, one of them chronic. Bones from two skeletons were submitted for radiocarbon dating, which indicated that they had been buried between 1440 and 1660. Dental analysis suggested that the date might lie towards the end of this period, as two of the

four main inhumations showed signs of clay pipe wear on the anterior teeth. This would indicate a date later than the mid-16th century, and means that the burials could well have taken place within living memory when Balmerino House was built. Their north-south alignment suggests an unusual burial rite, and the reason for their burial at this site is still a matter for debate.

AOC Archaeology Group

by Melissa Melikian

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AOC Archaeology Group has been involved in a number of projects through Historic Scotland's Human Remains Call-off contract. The contract with AOC is designed to help Council and local Trust archaeologists deal with unexpected finds of human bones.

Auldhame, East Lothian

A programme of archaeological works was undertaken near Auldhame, East Lothian (NGR: NT 6016 8476) between 28th February and 20th July, 2005, following the discovery of human remains as a result of ploughing. Subsequent to the surface collection of these remains the disturbed ploughsoil was stripped and an open area excavation carried out. Those remains deemed at risk from agricultural activity were recovered. This amounted to a total of 260 individuals with, at least, a further 66 individuals identified and left *in situ*. Excavation also revealed the remains of a stone building likely to be a small church or chapel showing three phases of construction. No physical dating evidence was found for these remains but a comparison with other similar structures suggests a date as early as the 9th century. A number of graves were truncated by the building raising the possibility that the burials were of an earlier date. The cemetery appears to be Christian; all the burials were supine and aligned west-east. The majority of burials were within earth-cut graves however a number of stone lined cists

were excavated and coffin burials were seen within the east end of the chapel and outside close to the east wall. A concentration of neonatal burials was located close to the southern side of the chapel. Very little artefactual dating evidence was recovered from the graves, although some pottery recovered suggests 9th or 10th centuries and later.

In addition to the chapel and burials a large ditch ran across the southern edge of the site from north-west to south-east. Sample excavation of this feature showed that the ditch had been altered during its life time. Although no dating evidence was found, it is possible that the ditch had its origins within the Iron Age and was later altered when the site changed to ecclesiastical use during the medieval period.

Post-excavation work on the project has just commenced. AMS C¹⁴ dating of targeted burials is planned in an attempt to date and phase the cemetery.

Lochhead Quarry, Auchterforar, Forfar

In April and July 2004, AOC Archaeology Group undertook an archaeological excavation of an Early Christian long cist cemetery at Lochhead Quarry, Auchterforar, Forfar (NGR: NO 4740 5107). A total of 20 cists were excavated at the site. All the cists were of a similar form; rectangular sandstone cists within rounded rectangular cuts on a north-east/south-west alignment. Where the preservation allowed, extended inhumations were identified with the heads located at the western end. With the exception of a single small amber bead, no grave goods were recovered from the cists. The orientation, near lack of grave goods and the long cist forms suggest an Early Christian date, probably within the 5th to 9th century.

The assemblage consisted of 17 adults and one individual that could not be aged. When sexed, the assemblage represented five males and eight females; a ratio of 1:1.6. It was possible to calculate stature for four individuals. Based

on these small sample sizes the average male height was 1.72m and the average female height was 1.55m. The skeletons were assessed for joint disease, spinal pathology and dental health. Other types of pathology that were noted were periosteal new bone on the right orbit and left femur of the skeleton in Cist 1 and a lesion from a sebaceous cyst on the right parietal of the skeleton in Cist 6.

Parliament House, High Street, Edinburgh, EH1

A programme of archaeological works was undertaken by AOC Archaeology Group, between 1998 and December 2004, in advance of redevelopment at the Parliament House complex, High Street, Edinburgh (NGR: NT 2577 7350). The archaeological evaluation undertaken in the south courtyard of Parliament House in 2004 revealed the remains of a cemetery containing at least 96 burials. Disarticulated human bone was also recovered from a number of contexts. The burials were aligned east-west with the heads generally located to the west; suggesting Christian burial practice. Pottery dating to the late medieval period was recovered from the cemetery deposits, which were sealed by a cobbled surface thought to represent the 17th to 19th century Meal Market of the former lower churchyard of St Giles. St Giles is integral to the history of Edinburgh as it is located in the medieval Old Town and was the parish church for the burgh from the 12th century. For 450 years St Giles served the burial ground for the whole of the burgh. Preliminary interpretation would indicate that the burials formed part of the cemetery that was in use for a relatively short period of time; 1496-1566.

The human bones from Parliament House consisted of 95 articulated inhumations and disarticulated human bone from 60 contexts. The assemblage has just undergone the post-excavation assessment. The demographic profile, at this stage, suggests a high proportion of sub-adults (n.42) and an approximate male to female ratio of 1:1. The assemblage from Parliament House is of local,

regional and national significance and it has been recommended that the material under-go full osteological analysis.

St Thomas Kirk, Hall of Rendall, Orkney

Over several years marine erosion has resulted in human remains being exposed from a graveyard associated with St Thomas Kirk, Hall of Rendall, Orkney (NGR: HY 4249 2102). AOC Archaeology Group undertook an archaeological excavation of the site in February 2005 following a severe storm which had further exposed the human remains. The adjacent site of St Thomas Kirk/Hall of Rendall is a Scheduled Ancient Monument and as such required Scheduled Monument Consent prior to any works proceeding in the scheduled area.

The archaeological excavation revealed 21 individuals, of which 16 were completely excavated and recorded, and five were recorded and left *in situ*. It is thought the remains are early medieval in date. A topographic survey was undertaken on the roundhouse, cemetery and the church remains exposed by erosion. Analysis of the skeletal material will commence imminently. Ten individuals will undergo AMS C¹⁴ dating. An isotopic study will be carried on the material in an attempt to detect childhood origins and carry out dietary reconstruction. The isotopic data will be used for marine reservoir correction of the C¹⁴ dates.

AOC Archaeology Group has been involved in a number of other osteological projects:

London's Transport Museum, Covent Garden, London, WC2

A programme of archaeological works was undertaken by AOC Archaeology Group, between June and October 2005 at London's Transport Museum, Covent Garden (NGR: TQ 3042 8085). The works comprised a watching brief on seven pile holes, followed by the stripping and recording of the remaining post-medieval structures and the subsequent open area excavation of any underlying archaeological stratigraphy. The works

revealed a large number of features in the form of wells, large pits and postholes and layers of general dumping or possible levelling. Two inhumations, and ten cremation deposits, were also recorded cutting the natural deposits. All these features are tentatively dated to the Saxon period *pro tempore*. One inhumation was found with a copper alloy brooch and c.10 glass beads. Several of the cremation deposits were within vessels.

The site of London's Transport Museum is situated in an area which was once, *Lundenwic*, the Saxon settlement of London. No other cremation burials have been found in *Lundenwic* to date and consequently the site is of local, regional and national importance. In addition, Saxon cremation burials tend to be rare in the south of England; suggesting the method of funerary rite may have regional or tribal significance. Cremation was an early (5th to 6th century) Saxon funerary rite up until inhumation became the preferred method of burial in the 7th century. The presumption is that if these cremations are Saxon, they are likely to be early and will possibly pre-date the inhumations on site. The Saxons tended to bury their dead away from their settlements, on higher ground. It is feasible that as the site is the most southerly of excavations where burials have been found, that this may be the area where early burials took place before the settlement encroached northwards. The material is currently undergoing the post-excavation assessment.

Transport for London congestion charging scheme, north-west Southwark, London, SE1

In September 2005 AOC Archaeology Group carried out a watching brief and archaeological recording of 20 sites located throughout north-west Southwark, (centred on NGR: TQ 532656/179915). The sites consisted of trenches, situated on the pavement and road, for the trialling of technology equipment associated with congestion charging. These trenches vary in width from 5.5-15m, excavated to a depth of 2.10m below ground surface. Trench 1 was

the only trench with archaeological features preserved *in situ*. Six east-west aligned inhumations were recovered from the trench. The human bones consisted of six articulated inhumations and disarticulated material equating to a minimum number of individuals (MNI) of two. Due to the small sample size a population based approach was avoided and conclusions could not be made regarding the burial group as a whole. Due to the nature of the works the individuals were largely incomplete and this had implications for the level of analysis that could be carried out on the remains. One individual was sexed as female. The assemblage consisted of one infant aged 9-12 months, one adult aged 17-25 years, two adults aged 45+ years and two adults of undetermined age. Pottery recovered from the grave fills was dated to 1580-1900. Historical research and map regression has identified that the site was located adjacent to the burial ground of St Saviour's Parish Workhouse, established in 1774. The material has undergone osteological analysis and will be archived at the Museum of London (LAARC).

Museum of London Specialist Services (MoLSS) 2005

By Natasha Powers

The year in which the Museum hosted the annual BABAO conference has seen a number of large cemetery excavations carried out by the Museum of London Archaeology Service. The major research project analysing the medieval assemblage from St. Mary Spital also continues with a team of five staff, and is due for completion in the autumn of 2006.

Excavations carried out by MoLAS:

St Marylebone, Westminster (MBH04)

Archaeological excavation of a 20% sample of this high status post-medieval cemetery (c. 1740-1840) resulted in the recovery of just

over 300 individuals, including several for whom biographic data has been obtained. The remaining area of cemetery was cleared by a professional exhumation company (Toops) with whom the archaeologists worked closely allowing location and recovery of numerous coffin plates. Although a small number of brick vaults were present, the majority of the burials were from the open cemetery area, contained within decayed wooden coffins. The most recent (mid nineteenth century) graves were up to 15 feet (4.5m) deep and cut into loose sandy soils. This confirms the relative wealth of the inhabitants, as deeper graves were more costly.

Full osteological recording of a large sub-sample (n=284) is now complete with analysis and publication to follow in 2006. Evidence of dentistry (prostheses, fillings and filed teeth), interpersonal violence, corsetry, surgery and autopsy have all been noted together with a high prevalence of juvenile rickets and a convincing case of smallpox osteomyelitis (Variola). This promises to be an extremely interesting publication project with good potential for integration of osteological and social historical data.

Powers, N. 2005. Assessment of human remains excavated from St Marylebone School. Unpublished assessment report MoLSS ref. HUM/ASS/02/05

The Davenant Centre. 179-181 Whitechapel Road, Whitechapel, E1 (WRA05)

Excavation under watching brief conditions produced a group of 60 lower class burials, possibly associated with the nearby workhouse. Evidence suggests densely packed burials. Further excavation work is to follow, but an assessment has been completed on the first group and indicates that the burials are predominantly adult, that there are numerous fractures and a high rate of vertebral joint disease. Despite the low status population, rates of deficiency diseases appear low.

Powers, N. 2005 Assessment of human remains excavated from the Davenant Centre,

179-181 Whitechapel Road, London, E1.
Unpublished assessment report MoLSS ref.
HUM/ASS/04/05

Cubitt's Yard, Covent Garden (CVC03)

Two heavily truncated Saxon burials were excavated from Cubitts Yard. Both were adult, one a probable male aged between 26-35 years at death.

Powers, N. 2005. Cubitt's Yard, Covent Garden: CVC03 Unpublished archive report MoLSS ref. HUM/REP/01/05

Boughton Monchelsea, Kent (KT-BMS05)

There were five contexts containing burnt human or probable human bone from Boughton Monchelsea. All were believed to date from the late Iron age or early Romano-British periods. Two were contained in ceramic vessels and were probably adult. All bone was highly fragmentary. Quantities of charcoal and burnt earth were noted in several samples. No pyre sites were determined.

Powers, N. 2005. Furfield Quarry, Boughton Monchelsea, Kent KT-BMS05 A Report on the Human Remains November 2005. Unpublished archive report MoLSS ref. HUM/REP/06/05

Payne Road, Bow (PAY05)

Evaluation trenches in the vicinity of a disused, post-medieval Baptist burial ground revealed a small quantity of disarticulated human remains.

Gray Jones, A. 2005 Evaluation of disarticulated human remains recovered from the site of 2-25 Payne Road, Bow London, E3. Unpublished assessment report MoLSS ref. HUM/ASS/05/05

Royal London Hospital, Whitechapel (RLP05)

During evaluation work, disarticulated human remains were recovered from post-medieval contexts within the grounds of the Royal London Hospital. Numerous skeletal elements were present, parts of an estimated three adults one sub-adults and one neonate. Of particular

significance was the large number of dissected elements showing saw and knife marks and several elements that had been fixed together with copper alloy wire, presumably for use in teaching? In addition to the Victorian medical waste deposits, the hospital had a large cemetery, excavation of which is to commence early in 2006.

Powers, N. 2005 Evaluation of disarticulated human remains recovered from the Royal London Hospital Unpublished assessment report MoLSS ref. HUM/ASS/01/05

Spitalfields Roman Cemetery (SRP98 and others)

Analysis of c.150 Roman burials from the Spitalfields market site is due for completion in early 2006. Initial results show a distinct demographic shift over time from an over representation of adult males to a more 'normal' male female ratio. There are a high number of individuals with indications of trauma, including several with multiple fractures and a probable trepanation.

Iford Hill, Essex (IHI05)

A watching brief during renovation work recorded a number of burials surrounding the former medieval leper hospital buildings. These were left in situ and carefully recovered. Disarticulated elements were examined by an osteologist on site and found to represent at least two adults including one probable male with ante mortem tooth loss.

Powers, N. Report on Human remains recovered from Iford Hill. Unpublished archive report MoLSS ref. HUM/REP/03/05

The West London Landscapes Project (CFL94 and NHS97)

Twenty contexts of highly fragmentary burnt bone from Cranford Lane (CFL94) and two contexts from the Norman Hay site (NHS97) were examined. Contexts dated from 2000BC to AD400, the majority falling in the 'Middle Bronze Age' (1400-100BC). There were a minimum of five probable adults and one individual of unknown age, though the latter

consisted of three, small, conjoining cranial vault fragments from a probable posthole and may be considered most likely intrusive. All samples contained relatively small amounts of bone. Burnt animal bone was also identified.

Powers, N. 2005. West London Landscapes: CFL94 and NHS97. A report on the burnt bone. Unpublished archive report MoLSS ref. HUM/REP/05/05

Post-excavation analysis carried out for external clients

St. Pancras (YKW01)

In work carried out for Gifford led by Phil Emery, the analysis of over 700 individuals buried in the later eighteenth and early nineteenth century has been completed and is currently undergoing publication editing.

Powers, N. in review. An eighteenth century porcelain dental prosthesis belonging to Archbishop Arthur Richard Dillon. British Dental Journal

Tollesbury, Kent (TCF05)

A report on a small assemblage of cremated bone was carried out for the members of the Maldon archaeological and Historical Group. This burial of Romano-British date, was found within a large grey ware vessel, with an upturned dish forming a lid. The vessel also contained a small flagon and two beakers. The burial was of an adult of undetermined sex. There were no indications of pathological changes and the cremation process had been an efficient one. No evidence of pyre good or debris was seen.

Powers, N. 2005 Tollesbury – Carrington Farm TCF05. Report on cremated remains excavated by the Maldon Archaeological and Historical Group Unpublished archive report MoLSS ref. HUM/REP/04/05

Current excavations:

Bishop Challoners School, Whitechapel (LUK05)

Due for completion in January 2006, the archaeological excavation of a portion of this post-medieval cemetery has so far resulted in the recovery of several hundred individuals. The burial ground was used for only 11 years in the early nineteenth century for Catholic interments. Virtually all the burials have consisted of deeply stacked graves with infants and neonates placed uppermost. There appears to be a large proportion of infants and about one quarter of the individuals have partially legible coffin plates. There is therefore great potential for examining sub-adult health in a well-defined time period. Assessment is currently expected to occur in the spring of 2006.

St. George the Martyr, Southwark

A watching brief is underway within the church, to be followed in the New Year by excavation of the crypt beneath.

Royal Mint Gardens (RMI05)

Landscaping work in Royal Mint gardens has revealed an unexpectedly large number of seventeenth to eighteenth century burials. Many were within wooden coffins, but an area of mass burial pit has also been excavated and it is possible that this dates to the plague of 1665.

Conference presentations and research

Amy Gray Jones has also given lectures to Kent Archaeological Field School and the Friends of Farthing Down. Natasha Powers was a visiting lecturer on the Advanced Exhibits Officer Course, Hendon. Rebecca Redfern has submitted her PhD: 'A gendered analysis of health from the Iron Age to the end of the Romano-British Period in Dorset, England (mid to Late 8th Century B.C. to the end of the Century A.D.)' to Birmingham University and is currently co-authoring two papers with Piers Mitchell of Imperial College on methods for recording hip dysplasia, based on the Spitalfields collection. A successful application was made to CoLAT for funding of a pilot project examining the skeletal expression of venereal syphilis in post-

medieval London, to be completed by December 2006.

National Archaeology Week

Thanks to funding from English Heritage Amy Gray Jones was employed as on-site osteologist for a research excavation into an Anglo-Saxon barrow cemetery on Farthing Down, Croydon.

Oxford Archaeology

by Ceri Boston

Ferrybridge Chariot burial and other prehistoric burials on the AIM1 road scheme, West Yorks.

NGR: SE 446945 425540.

Clients: RPS, the Highways Agency and RMG(A1) Construction JV

Considerable excitement was generated by the excavation of an Arras culture chariot burial near Ferrybridge, W. Yorkshire, approximately 20 miles west of the Parisi heartland in the Yorkshire Wolds. The crouched inhumation of a 30-40 year old male (RC dated to 374-291 cal BC) was placed in an intact chariot. There were a number of associated objects including an iron horse bit, a partially cooked pig skull and an involuted brooch. The stature of the individual was 5' 9" and the only indication of pathology was some very slight vertebral degeneration. The square ditch of the barrow contained the remains of approximately 300 cattle, most dating to the 1st - 2nd century AD.

Sixteen inhumations and five cremations were also discovered along the route of the road scheme. All human remains underwent radiocarbon dating and inhumations underwent isotopic analysis. The chariot burial was located within an area of Bronze Age round barrows, close to the Ferrybridge henge. The grave of a rich Early Bronze Age beaker inhumation of a 30-40 year old male was also discovered within this area. The crouched individual was buried within a log coffin,

accompanied by a bronze dagger, a beaker, flints and a near-perfect wrist guard. Three urned cremations of middle Bronze Age date within ring ditches and one early Bronze Age inhumation in a pit were excavated nearby.

The chariot burial is contemporary with an interesting group of eight crouched pit burials found within a settlement site several km to the north. A group of four of the pit burials was unusual in being furnished with grave goods (iron brooches, an iron bracelet and a bead). Other human remains of Iron Age and Roman date were found on the road scheme included articulated and disarticulated ditch inhumations and one urned Roman cremation burial within a small pit. A monograph publication is in progress.

Castle Hill, Little Wittenham, Oxon.

NGR: SU 569 924

Client: Northmoor Trust

The excavation of the interior of the hillfort of Castle Hill, Wittenham, revealed five middle Iron Age pit burials; Iron Age and Roman contexts containing disarticulated human bone, and two Romano-British skeletons. Four middle Iron Age pit burials were found within two adjacent pits. A crouched neonate was found in the upper fill of a large storage pit (as featured on Time Team). Three other burials were buried within a single pit of moderate size. A complete crouched adult male inhumation lay on the pit base. Higher in the pit were the partial remains of an adult female, which consisted of articulated thoracic vertebrae and ribs, articulated lower vertebrae and sacrum, articulated left femur and pelvis, and a left tibia. The well preserved bone showed clear signs of cut marks on the proximal tibia and distal femoral epiphyses, providing uncommon evidence of dismemberment. Towards the top of the pit was the crouched prone skeleton of a neonate. Another Iron Age pit contained the heavily truncated crouched remains of an adult female. Two Romano-British extended inhumations were also discovered: an adult in a pit, and an adult female in a grave.

Excavation in 2004 within an early Iron Age enclosed settlement beneath the hillfort revealed two more crouched pit burials within a single pit: a late adolescent male and a late foetus. An unfurnished Roman inhumation was also excavated nearby.

London Road, Gloucester

NGR: SO 842 189

Client: CGgMs consultants on behalf of McCarthy and Stone

A section of the Romano-British cemetery just beyond the Roman fort and settlement of Gloucester was excavated by OA from September 2004 and is still ongoing. To date, 43 inhumations and 6 cremations have been excavated. One interesting cremation together with coffin nails and hobnails had been deposited within a wooden box. An urned cremation of a child (provisionally aged between 3-5 years) contained two bone dice and 42 gaming counters of blue and white glass and bone. These were unburnt and had clearly been placed in the urn after the cremation. Two 1st to early 2nd century inscribed tombstones were also discovered on the site: one commemorating a 14 year old slave boy named Martialis, and the second a soldier named Lucius Octavius Martialis of the 20th Legion, who was a native of Eporadia, now in north-western Italy.

The main undertaking of 2005 was the discovery of a mass burial pit. The feature was square in shape; 3.80m long east-west and 3.55m wide north-south with an overall depth that was varying between 80-85cm and contained the remains of at least 90 individuals. The individuals had been dumped willy nilly into the pit, complicating excavation since limbs and bodies of different individuals were entangled together. A precise MNI will be calculated during the osteological analysis. All age groups were represented among the deceased, and the absence of perimortal injuries suggests that dead were victims of an epidemic. A number of artefacts were found associated with the skeletons, such as two copper alloy trumpet brooch fibulae, a copper alloy bracelet and a bone pin, all dating

to the first and second centuries AD. The mass burial is a completely unique feature, and the osteological analysis will no doubt yield important information.

Pepper Hill, Northfleet, Kent

Client: Union Railways (south) Ltd

NGR: TQ 61907210

The Romano-British cemetery at Pepperhill just outside of Springhead Roman 'small town' was excavated by OA in 1997 and 1998 as part of the CTRL development. Post-excavation analysis is nearing completion. The cemetery was in use throughout the Romano-British period and contained both inhumation and cremation burials. There were coffined and uncoffined inhumations alongside busta, urned and unurned cremation burials, and pyre sites, redeposited pyre debris, redeposited cremated bone and cremation related deposits.

A total of 344 inhumation graves were excavated, but only 79 contained human skeletal remains, due to poor preservation in the acidic soil conditions. These consisted of 6 children and 29 adults of which 6 were females and 5 were male. There were 148 cremation burials, including 23 children and 62 adults of whom 25 were female and 34 were male. A total of 47 inhumations could be aged and/or sexed.

A total of seven busta, or *in situ* cremation burials, were identified. Busta are rare in Britain, and are more typically a Continental phenomenon, most prevalent along the German/Danube frontier. Their presence at Pepper Hill suggests an intrusive element in the local population.

Both pyre goods and grave goods were present. Burnt hobnails and melted brooches suggest that the dead were clothed on the pyre. Burnt small nails, recovered from some graves and pyre-sites, suggest that the dead had been cremated on an upholstered bier. Shoes were additionally placed unburnt in cremation and inhumation graves. Other grave goods include brooches, beads, glass vessels,

and jewellery. Some cremation graves contained boxes or caskets. Pottery was by far the most common grave good. One or two vessels per grave were usual, although one grave yielded seven pots. A number of vessels had been mutilated, or 'killed'.

Lankhills Roman cemetery, Winchester

NGR SU 4787 3037

Client: Hampshire County Council

Excavation of the late Roman urban cemetery site of Lankhills, outside the Roman fort and town of Winchester, revealed 319 inhumations and 24 cremation burials. This excavation builds on the 1960 and 70's work of Clarke, who excavated 451 burials making Lankhills one of the largest excavated late Roman burial sites in Britain. Ostensibly Christian with west-east grave orientation, many skeletons were provided with hobnailed boots, fine wares and jewellery. Hobnailed boots were sometimes worn by the deceased, but more commonly were placed alongside or on top on the coffin. Jewellery was worn principally by subadults. Coinage and brooch styles suggest a very late 4th century date for some burials. A number of male skeletons had been laid out wearing dress ornaments more commonly found in Hungary, raising interesting questions about the provenance of these individuals. The vast majority of inhumations were laid out supine and extended within wooden coffins, but three were prone without a coffin, and four (including an infant) were decapitated. Twenty-four cremation burials were also discovered, several stratigraphically post-dating inhumation burials. Post-excavation assessment is in progress.

Cotswold Community, Cotswold Water Park, Gloucs.

NGR SU 033963

Clients: Hills Mineral and Waste Ltd

This is one of three large-scale excavations in the Cotswolds recently undertaken by OA in advance of gravel extraction. A number of prehistoric and Roman burials were discovered during excavation. One crouched Iron Age inhumation accompanied by an iron knife was found within the fill of an Iron Age

field boundary. An isolated decapitated inhumation was placed within a Roman ditch, and an isolated grave of a coffined late Roman inhumation with hobnails was dug into the side of a boundary ditch enclosing a Roman-British farmstead. A neonate was found placed in a Roman pit nearby. Two clusters of late Romano-British inhumations were discovered slightly further from the settlement: a group of eight west-east orientated graves and a group of twelve north-south orientated graves clustered around a small undated ring ditch. Individuals were of mixed age and sex. Hobnails were found in graves of both groups. These burial groups appear to represent two late-Roman phases of family burial plots, probably of the inhabitants of the nearby farmstead.

Latton Lands, Cotswolds, Wiltshire

Client: Cotswolds Aggregates/ Hills Minerals and Waste Ltd

NGR: SU 085 961

The large-scale excavations at Latton Lands uncovered a small number of burials. The assemblage comprises one early Iron Age neonate burial; two early Roman inhumations, one partially cremated individual and one cremation burial; one late Roman inhumation and one Roman cremated bone deposit. A late Iron Age enclosure ditch contained two crouched inhumations in two corners, an unurned cremation burial at the terminus and an incompletely cremated prone individual along one of the sides. The partially cremated individual appears to be a failed attempt at *in situ* cremation, a *bustum*. A knife and a pottery vessel were contained within the pit. The pattern of burning demonstrated that the bones with little soft tissue coverage had burnt well, having been relatively quickly exposed to the fire, while there had been insufficient time for the soft tissue around those bones with a dense coverage to burn off and expose the bones to the effects of the fire. Osteological analysis is scheduled for this month.

Thornhill Farm, Gloucestershire

Client: Hanson PLC

NGR: SU 183997

The skeletal remains from the large-scale excavation at Thornhill Farm comprised ten very poorly preserved individuals. One dated to the late Iron Age/early Roman period. Four early Roman period inhumations were grouped together, suggesting a family burial plot. A further grave cut within this area contained no bone due to the adverse soil conditions. Five Roman burials were situated alongside an early Roman boundary ditch. All of the burials were supine. Only one contained grave goods - hobnails indicating that the person had been wearing the shoes at the time of burial. The human remains are extremely degraded consequently the majority of the burials are unsexed and aged broadly as adults. The site report is due to be published as a monograph.

*Radstone Technology Development,
Towcester, Northants.*

NGR SP 691 485

Client: John Samuels Archaeological Consultants

In July and October 2004, OA excavated part of a Roman ditched enclosure containing 28 late Romano-British graves. The site was located along one of the Roman roads from the Roman fort of Towcester, and probably served as the one of the burial grounds of the fort and associated *vicus*. Due to damage by previous construction, the skeletons were very poorly preserved and highly fragmented. On site analysis identified 6 subadults and 22 adults, of which 10 were sexed as male or possible male, and 8 as female or possible female. Graves lay in a mixture of alignments, and body position was likewise inconsistent, with six buried prone and one flexed. Two decapitated burials were also present. Grave goods were scarce. One adult female was buried with a copper alloy spoon. Formal osteological analysis is pending.

Great Barford Road Scheme, Beds.

NGR TL 142 541, TL 121 533, TL 112 526,
TL106 516

A number of sites with human remains were excavated by OA in December 2004, in

advance of roadworks. These were two Iron Age inhumations; a 2nd century AD inhumation; a group of later Roman inhumations; two groups of second century cremations, and late Iron Age/early Roman cremation. On Site 4, eight small pits containing cremated remains were found in a straight line, parallel with a boundary ditch. Three pots were excavated fairly intact, whilst others had been severely truncated by ploughing and machine stripping. Some cremation burials were accompanied by ancillary vessels, including samian bowls. A small rural group of six west-east unfurnished Roman inhumations were also discovered on Site 4. The graves were extremely shallow, and it is possible that others have been completely removed by ploughing. On Site 8, another 2nd century AD cremation cemetery of 17 burials was discovered, of which eight were urned. Two other Roman cremations were located separately on the site. Analysis of the human remains is in progress.

Viking burials, Cumwhitton, Cumbria

Client: English Heritage

In July 2004, OA undertook the excavation of six pagan Norse burials (*c* early 10th century) on a hillock overlooking the village of Cumwhitton. These richly furnished north-west - south-east orientated burials are exceedingly rare, and are the first Norse burials to be discovered in Western England for over a hundred years. Skeletal preservation was extremely poor with only a single fragment of cranium surviving. The dimensions of the grave cuts and the position of the grave goods within the graves indicates the inhumation of six adults. The two 'female' graves contained beads, weaving spears, belt clasps, brooches, a jet finger ring and bracelet, and a box with bronze rivets. Glass beads and a large amount of metalwork was recovered from the four male graves: three iron swords, a shield boss, spearheads, a pair of stirrups, possible horse harness, knives, a possible drinking horn, belt buckles and a silver finger ring. Rectangular sand shadows within the graves suggest that the bodies were laid out on an organic base, such as a cloak, fur, or

wooden board. There were no iron nails within the graves to indicate wooden coffins, although it is possible that coffins riveted together with wooden pegs had been used.

The Litten, Newbury, W. Berks.

NGR SU 8469 8665

Client: West Berkshire Highways Dept.

Roadworks within the town of Newbury necessitated the excavation of 59 medieval burials. The excavated area was once part of a large medieval burial ground attached to St Bartholomew's infirmary, historically known as the Litten (in use from the 12th century to 1500). The west-east aligned burials were tightly clustered with much intercutting of graves. Osteological analysis revealed a fairly young population with high levels of pathology and a number of interesting congenital anomalies. For example, a young adult male had tuberculosis of the spine, an internal dental abscess penetrating the maxillary sinus, and causing sinusitis, and marked dental enamel hypoplasia. He also had a number of congenital anomalies of the midline, including an underdeveloped mental eminence, a malformed sternum and a bifid first rib. A case of congenital syphilis was found in one subadult dating to the earliest phase of the cemetery, and appears to be pre-Columbian in date. The site report is in progress.

Thame Park, Thame, Oxon.

NGR SP 719 038

Client: Strutt and Parker

Two sandstone sarcophagi were discovered during the course of restoration of the private stately home of Thame Park, Thame. These date to the 13th-14th centuries when the site was a wealthy Cistercian abbey. The sarcophagi were discovered in an unexplored area immediately to the north of the abbey's infirmary. The first sarcophagus contained the skeleton of an older male, whilst the second contained the articulated skeleton of an older male, and the near complete but disarticulated skeletons of a mature and an older male. The vertebrae of the last displayed florid DISH. The stature of all four was considerably

greater than the average for medieval males. Given the elitist nature of burial within stone sarcophagi and the age, sex and stature of the skeletons, these four individuals are thought to represent high-ranking churchmen of the abbey, possibly even the abbots. One had clearly enjoyed fine living.....

Vancouver Centre, King's Lynn, Norfolk

NGR TF 618 201

Clients: MacAlpine construction

Excavation by OA in advance of urban redevelopment of the Vancouver shopping centre of King's Lynn revealed two late post-medieval burial grounds, one associated with a Quaker meeting house and one with a Baptist chapel. Thirty-five late 18th- to early 19th-century Quaker skeletons were excavated. These were buried within a combination of earth-cut and brick-lined shaft graves. Excellent preservation of skeletons, wooden coffins and one zinc coffin allowed valuable insights into social conditions and funerary practices of this assemblage. Excavation of a small Baptist burial ground revealed 21 skeletons, dating to the first half of the 19th century. Wooden coffins were present but not well preserved. Coffin furniture was simple on these coffins, with only three iron breastplates present. However, one child's coffin was more ornate, being of triple wood-iron-wood construction, and possessing the full set of coffin fittings. Both burial groups were of mixed age and sex, although subadults appear under-represented. Age distribution and pathology suggested that the Quakers enjoyed better health and standard of living than their Baptist counterparts. The skeletons from the two sites have been reburied locally.

Rycote Chapel, Oxfordshire

Client: B Taylor

NGR: SP 668 046

The work at Rycote chapel involved the recording of 26 coffins and associated fittings of 17th-19th century date. The coffins were in a private vault in which several Earls of Abingdon, their wives and children were buried between 1649 and 1880. The coffin

furniture was generally in very good condition and several new types were recorded. The earliest coffin dated to 1649 and was an anthropomorphic lead neonate coffin which was fully moulded with clearly defined facial features, arms, legs and feet. Two coffins had very detailed commemorative plaques detailing their ancestry, lives and achievements. All the coffins were sealed, and no osteological analysis was undertaken.

St Lawrence Primary School, Alton, Hants.

Client: Gifford and Partners

NGR: SU 71765 39650

In August 2005, excavation prior to the extension of school buildings revealed 56 burials. These 12th-13th century and 18th-19th-century burials had originally laid within St Lawrence churchyard. Many of the medieval burials were coffined, and one older woman had been buried holding a spindlewhorl. A large proportion of the post-medieval burials were buried within wooden coffins decorated with iron fittings. A group of six flint marbles had been laid at the feet of a child. Osteological analysis suggests a fairly healthy population, although a very severe case of congenital syphilis was identified in a young child. The report is in progress.

Haslar Hospital, Gosport, Hants.

Client: Ministry of Defence

NGR: SZ 6150 9849

An evaluation of the mid 18th- to early-19th-century burial ground associated with the Royal Naval Hospital, Haslar was undertaken by OA in July 2005. The burials of 20,000 sailors and marines are estimated from historical records. The evaluation revealed 165 graves, some containing multiple burials. On-site evaluation of the skeletons revealed that all were male, many dying in their 20s or 30s. Most were of short stature (mean of 5'2"), and many displayed evidence of childhood stress. Surprisingly little evidence for trauma and infection were noted on the skeletons, but higher prevalence is expected on more formal analysis.

York Osteoarchaeology Ltd

by Malin Holst

York Osteoarchaeology Ltd was founded in December 2004 by Malin Holst. The company specialises in the excavation and analysis of human remains. Since it was founded, York Osteoarchaeology Ltd has worked on 42 different osteological assemblages from Britain and Ireland. We also provide a Bioarchaeology practical module for undergraduates at York University. Other projects include assisting to prepare an exhibit on the skeletal remains from Ferrybridge, West Yorkshire, at Wakefield Museum, mentoring inexperienced osteologists, instructing archaeologists in the excavation and post-excavation processing of human remains, assessment of *in situ* skeletons, assessment of a large skeletal assemblage for storage and advice to numerous organisations on a variety of issues regarding human remains.

We were involved in the analysis of numerous small assemblages, many of which came from Ireland and largely dated to the Bronze Age. We have analysed notable Iron Age assemblages from Gargrave, Kirkby Grindalythe and Nosterfield (North Yorkshire), and Bourton-on-the-Water (Gloucestershire). Three of these groups displayed unusual funerary rituals, including binding and dismemberment, while three young children from Kirkby Grindalythe displayed probable evidence of scurvy (this report was compiled by Anwen Caffell, who now works for the company part-time).

Remarkable Roman burials included those from Mill Mount (York), Holywell Woods and Bramham (West Yorkshire), Ashchurch and Wessex Water (Gloucestershire) and Wilcote (Oxfordshire). Three of the assemblages included sarcophagi or gypsum burials. Two of the sites contained largely infant remains in non-burial features and in two further cemeteries decapitated individuals

were found. The skeletons from two sites containing Roman cist burials are currently undergoing analysis.

Important Anglo-Saxon burials were analysed from Filton (Bristol), Portbury (North Somerset), Heronbridge (Chester) and Easington (East Yorkshire). Two of the cemeteries were unfurnished, and were located on the western periphery of where Anglo-Saxon cemeteries are normally found. A further cemetery contained weapon and horse burials, while the fourth excavation produced a mass grave containing Anglo-Saxon battle victims displaying weapon injuries.

Medieval skeletal remains from Torksey, Lincolnshire, Lincoln and Towton, North Yorkshire, were also examined. The former two sites produced skeletons from a monastic background, while several further phases of excavations at Towton recovered single and additional mass graves containing skeletons who displayed evidence of battle-related trauma, dating to the 1461 Wars of the Roses battle of Towton.

CONFERENCE REPORTS

Review of the Seventh Annual Conference of the British Association for Biological Anthropology and Osteoarchaeology, London 1-3 September 2005

by Andrew Millard

BABAO's been to London! We met some living Londoners and heard about thousands of dead ones — and a few people from elsewhere. First place amongst all those Londoners must go to Bill White, Natasha Powers and their colleagues at Museum of London who very successfully organised this

first BABAO conference outside of a university.

The conference was launched on Thursday evening with a wine reception in the Victorian gallery of the Museum. Although the gallery was open to be viewed, everyone I saw was too busy socialising to take advantage of it. Friday morning saw an early start with 8.30 for registration, and presentations from 9.00.

The academic programme consisted of 23 lectures and 26 posters. There isn't space to discuss them all here, so what follows are the personal highlights of a born and bred Londoner. Hedley Swain launched the programme with a welcome and an update on the DCMS guidelines on human remains, and a little later Simon Mays elaborated on this and discussed the English Heritage–Church of England guidelines as well. Second on was Bill White with an overview of the extensive osteology work currently going on at Museum of London, much of which we heard about in more detail later on. Medieval Londoners in the enormous skeletal collection from St Mary Spital were demonstrated to have syphilis by Rebecca Redfern and colleagues. More medieval Londoners appeared in Barney Sloane's examination of the material culture in monastery cemeteries, which introduced us to 'breche' buckles and the evidence for 14th century suspender belts (worn exclusively by men!). Pip Patrick continued the London monks theme, but this time examining methods to estimate their body-mass index from their bones. Unfortunately the published methods yield results ranging from the plausible to the impossible and unbelievable, so we still have little idea of whether they conformed to the Friar Tuck stereotype. Holger Schutowski and co-workers stayed with Londoners – this time 18th century ones from St Brides, Fleet Street – to show us equally disturbing results on the precision of ageing with the revised auricular surface method, though they do seem to have identified features which distinguish the over 60s. Louise Humphrey departed from the London theme in a methodological study of

Sr/Ca ratios in enamel to investigate weaning practices. This looks very promising but needs a little more work before being applied to archaeological material.

After lunch the prehistoric session took us well away from London to the Neolithic in Italy, the Cotswolds and then the Sahara followed by Bronze Age Crete. Margaret Clegg brought us the only paper with a palaeoanthropological flavour, examining the variation in hypoglossal canal in primates and its link to control of the tongue, and potentially the evolution of speech. Alan Ogden gave us a dentist's view of periodontal disease which led him to a new system for recording it. Then it was back to Londoners with Silvia Bello comparing the age and sex structure of the Spitalfields Crypt population to the general burial population of the parish. We rounded off the day with Richard Mikulski taking us through some spectacular finds from the Moche Period of Peru. After the AGM most of us retired to local hostels to meet a few living Londoners and drink some of their beer before moving on the Wagamama Japanese Noodle Bar where more Londoners served us food in what has been voted London's favourite restaurant.

Saturday morning saw sessions on commercial osteology in London, and on post-medieval studies. Melissa Melikian and Ellie Sayer introduced us to the Londoners buried in Roman Southwark, where the cemetery seems to differ in organisation and patterns of burial from the cemeteries north of the river. Later Natasha Powers stepped in to a gap in the programme and told us about the unusual goings-on on the other side of Londinium where Londoners' remains were disposed of at the head of the Walbrook. Apart from those two papers the two sessions blurred together as all the other presentations were on post-medieval sites. We had accounts of Greenwich Pensioners and Chelsea Pensioners from Annsofie Witkin and from Tessa Greenslade and Neeraj Malahn, with their unusual injuries and surgical interventions from naval and military service. Tania

Kausamally and Jelena Bekvalac reported on investigations at Chelsea Old Church, where the presence of named individuals allowed a lot of historical data to be added to the osteological information. More numerous, but excavated under much more difficult conditions were the Londoners from the St Pancras Burial Ground reported on by Phil Emery. He gave us a remarkable story of preservation in waterlogged conditions, reconstruction of names from registers and neighbouring coffins, and prominent individuals. Even larger in scale, but able to be studied in much more detail, was the St Martin's Birmingham graveyard. Megan Brickley and Martin Smith gave us an insight into one detailed study on this population: patterns of violence and their relation to the changing techniques of boxing. Several of these sites are nearing publication, and it looks as though there will soon be an explosion in available information on post-medieval cemeteries.

Posters were up for much of the conference with opportunity to view them at tea-breaks and during a dedicated poster session on Friday. The range of topics was enormous, from 2nd:4th digit lengths and their relation to mating patterns in primates through a variety of methodological studies to various cases of suspicious deaths with cranial trauma. Full details of all the posters and papers are to be found on the Association's website.

All it was an enjoyable, informative and stimulating conference – especially for us Londoners. No prizes for guessing the overarching theme that emerged for this reviewer!

**Review of Medicine and
Disease in the Crusades
The Wellcome Trust centre
for the History of Medicine at
University College London**

28 January 2005

by Megan Brickley

The audience for the one day symposium was very mixed, containing experts on ancient texts dealing with medicine, historians, archaeologists and paleopathologists. In his introduction, the organiser, Piers Mitchell provided an overview of the crusades and some basic information that would allow delegates to place the papers that followed in context.

The first two speakers, Charles Burnett and Emilie Savage-Smith gave papers dealing with medical texts. The first dealt with past translations of medical texts and contacts that would have existed between different centres and the second with Latin annotations on an Arabic medical manuscript. Both papers dealt with technical aspects of translations of texts, and said little about the actual medical content of the texts concerned. Information given by the speakers in response to questions asked afterwards indicated that these texts contained some very interesting information on medical treatments and as a paleopathologist I would have loved to have heard more about this aspect of the material discussed.

The next two speakers, Piers Mitchell and Jerome Rose, spoke on studies of medicine and disease in the crusades through the investigation of human skeletal remains from archaeological sites. Piers gave examples from a number of sites from which individuals who died at the time of the crusades have been excavated, such as Caesarea, and Vadum. Piers argued that now more information is available from human skeletal remains this should be combined with that available from texts in order to obtain the most information on illness and medical treatment during this period. Jerry Rose spoke on the results of examinations of human bone from Vallis Moysis, Jordan and the possible cases of infantile scurvy that had been found from the site. Possible socio-cultural reasons for the

development of deficiency diseases were discussed.

Following an extended lunch break in which there was plenty of opportunity for delegates to discuss the papers of the morning, papers were presented by Susan Edgington, Benjamin Kedar and Johannes Pahlizsch on the medical orders and healthcare providers in the Latin east. The papers presented information on a variety of aspects of healthcare provided in early hospitals of the region. For example, the hospital of St John in Jerusalem, the charitable work of the early hospitallers and the way in which an elite of medical practitioners were able to cross political boundaries.

The final session dealt with the medical care of leprosy sufferers and the order of Saint Lazerus. Papers were given by Peter Jankrift and Rafaël Hyacinth and covered issues such as the way in which biblical ideas on disease influenced treatment of leprosy sufferers and the way in which ideas on leprosy changed through time.

The symposium provided an excellent opportunity for people interested in a wide range of aspects of the study of medicine and disease in the crusades to come together and learn more about the types of information that different sources can provide.

<p>FORTHCOMING CONFERENCES</p>

**33rd Annual Paleopathology
Association Meeting
7th and 8th March 2006**

Venue: Anchorage, Alaska

The Annual Meeting of the Paleopathology Association will be held in Anchorage, Alaska on Tuesday and Wednesday the 7th and 8th March 2006. This meeting will, as usual, precede the Annual Meeting of the American Association of Physical Anthropologists. The venue is the Hilton Hotel, Anchorage, Alaska.

For further information:

<http://www.paleopathology.org/meeting.html>

**75th Annual Meeting of the
American Association of
Physical Anthropologists
8th to 11th March 2006**

Venue: Anchorage, Alaska

The 75th Annual Meeting of the American Association of Physical Anthropologists will be held in Anchorage, Alaska on 8th to 11th March 2006 at the Hilton Hotel, Anchorage, Alaska.

For further information:

<http://www.paleopathology.org/meeting.html>

**Diet and Migration in
Mediterranean prehistory: a
methodological reappraisal
Rome, 10th March 2006**

**Venue: Aula 'Sergi', Sede di
Antropologia, University of Rome
'La Sapienza', Piazzale A. Moro, 5 -
Roma (ITALY)**

Aims of the one-day workshop

Despite the growth in scientific methods to study diet and migration witnessed over the past ten years, surprisingly little attention has been paid to Mediterranean prehistory. Paradoxically this region has to offer a rich continuum of prehistoric remains which are ripe for investigation but have received scant attention.

The purpose of the conference is to bring together field archaeologists currently working in the Mediterranean and a number of experts in the field of archaeological sciences.

We first aim to identify the key issues involving diet and migration in Mediterranean prehistory. Then we will review current investigations being carried out elsewhere in the world, and assess the potential for similar approaches to be adopted for studying the Mediterranean sequence. This will encompass a comparative assessment of the limitations of organic preservation between southern Europe and other parts of the world.

Finally, we will hear from laboratory-based scientists working on the latest cutting edge methods in this field.

Organisers:

Oliver Craig (University of Rome, Tor Vergata)

Mary Anne Tafuri (University of Rome, 'La Sapienza')

To contact the organisers:

Email: archmed2006@gmail.com

**Paleoanthropology Society
2006 Annual Meeting
24th to 26th April 2006**

Venue: San Juan, Puerto Rico

The annual Paleoanthropology Society meeting will be held April 24-26 2006 in San Juan, Puerto Rico in association with the Society for American Archaeology meetings.

For further information:
<http://www.paleoanthro.org>

**16th Paleopathology
Association European Meeting
28th August to 1st September 2006**

**Venue: Nomikos Conference Center,
Santorini Island, Greece**

The 16th Paleopathology Association European Meeting will be held at Nomikos Conference Center, Santorini Island, Greece. The meeting will be hosted by Dr Sotiris K. Manolis.

For further information:
<http://www.paleopathology.org/meeting.html>

**15th International Congress of
the European Anthropological
Association
31 August – 3 September, 2006**

Venue: Budapest, Hungary

The 15th International Congress of the European Anthropological Association "Man and Environment: Trends and Challenges in Anthropology" will take place in Budapest, Hungary on 31 August – 3 September, 2006

Further info:

Prof. Eva Bodzsar
<http://eaa2006.elte.hu>
Email: eaa2006@elte.hu

**British Association for
Biological Anthropology and
Osteoarchaeology
8th Annual Conference
15th to 17th September 2006**

Venue: The University of Birmingham

The 2006 BABAO conference will run over one whole day and two half days, from the afternoon of Friday 15th to midday on Sunday 17th September. The conference will be held at The Manor House, University of Birmingham.

For further information:
Martin Smith,
Institute of Archaeology and Antiquity,
Arts Building,
University of Birmingham,
Edgbaston,
Birmingham,
B15 2TT

Email: m.smith.6@bham.ac.uk
Tel: (0121) 414 5497
Fax: (0121) 414 3595

MEMBERS PUBLICATIONS

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1383.



BABAO Annual Conference 2006

The 2006 conference will run over one whole day and two half days, from the afternoon of Friday 15th to midday on Sunday 17th September.

The conference will be held at The Manor House, University of Birmingham. The Manor House was formerly the family home of the late George Cadbury, the founder of the chocolate firm and his wife Dame Elizabeth. The Cadbury family owned it until the 1950's when it was sold to the University of Birmingham. Following extensive refurbishment and modernisation it offers excellent facilities, with meeting rooms, accommodation, dining room and bar all on the same site. BABAO have secured sole use of the venue for the annual conference and so our delegates will be the only people using the facilities on offer over the conference weekend.

All rooms are modern, with en-suite facilities and are located in a purpose-built block adjacent to the Manor House, where the meeting rooms and dining room are situated. In addition to the other facilities on offer, the Manor House also has pleasant gardens, terraces, and plenty of parking. The only downside of this beautiful venue is that it is not within walking distance of shops or restaurants, and it is located some distance from Birmingham city centre (approximately £9 by taxi) and Selly Oak where hotels, shops and restaurants are located. However, after some hard negotiating with the University we have managed to secure some very competitive prices for delegates who go for the all-inclusive option. With conference fees typically costing around £38, en-suite accommodation £36 per night, lunches from around £6 and dinner from £20 the all in prices listed below offer excellent value for money.

List of charges*All-inclusive two night residential package*

These prices include conference fees, the wine reception, two nights bed and breakfast in en-suite accommodation, lunch (Saturday and Sunday) and dinner (Friday and Saturday nights, Saturday night's dinner includes half a bottle of wine).

Student members	£125.00
Student non-members	£138.00
Members	£140.00
Non-members	£160.00

A one night residential package

These prices include conference fees, the wine reception, one night bed and breakfast in en-suite accommodation, lunch (Saturday or Sunday) and dinner (either Friday or Saturday nights).

Student members	£90.00
Student non-members	£100.00
Members	£110.00
Non-members	£125.00

Non-residential conference rate

These prices include conference fees, the wine reception, and lunch (Saturday and Sunday).

Student members	£45.00
Student non-members	£50.00
Members	£50.00
Non-members	£60.00

Dinner can be booked separately for £15.00 for Friday night and £25.00 for Saturday night (includes half a bottle of wine).

**A Conference Registration form has been included
loose-leaf with your annual review**



BABAO
Dept of Archaeology
Highfield, Avenue Campus
Southampton
SO17 1BF

**Grant Award
Application
2006**

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

TO BE SUBMITTED TOGETHER WITH A FULL ACADEMIC CV

1. Name of applicant

Address for correspondence

Title:	
First name:	
Surname:	Postcode:
Affiliation:	Tel no:
	Email:

2. Present position

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

--

3. Details of grant requested

Title of project (not more than 15 words)

Sum requested
to the nearest £

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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.)

--

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.)

Research question(s) or problem	
Aims & objectives	
Research methods	
Timetable (Research is expected to be presented at the BABAO conference [either as a paper or poster] in the year following the award.)	
Dissemination of Research (in addition to publication in BABAO conference proceedings)	

6. Ethical aspects of the proposal

a) Are there any ethical implications arising from the proposed research? See instructions in Annual Review.

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	

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

Description	Justification	Cost (£)

8. Signature and date

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

Signature of applicant		Date	
Signature of supervisor (for student applicants)		Date	

All applicants must be members of BABA O by 1st April in year of submission.

Closing date for applications: 15th May.

Applications must also include a full academic CV.

2006 deadline passed, but a potential source of funding for next year!

PARKES FOUNDATION

Parques Foundation Small Grants Fund 2006

The Parkes Foundation Small Grants Fund helps to promote research into the biosocial sciences. Priority is given to the support of research which involves the integrated study of biological and social features of human populations. Relevant disciplines are anthropology, demography and population studies, ecology and environmental studies, nutrition, and population genetics.

Grants are directed particularly towards helping **graduate research students** meet their field work costs, but others may apply. Undergraduate projects, however, are not supported. Grants are small, usually not exceeding £600.

The application form, on which applications **must** be submitted, can be obtained from the Executive Secretary by e-mail (mah44@cam.ac.uk) or by post (Parkes Foundation, Dept of Biological Anthropology, Downing Street, Cambridge CB2 3DZ, UK).

The closing date for receipt of applications is **27 January 2006**; applications will be considered by the Trustees and awards will be made in March/April 2006.

In 2005, grants were awarded to

Rebecca Drury, Dept of Anthropology, University College London
(changing socioeconomic patterns and wildlife trade in rural Cambodia)

Mohua Guha, International Institute for Population Sciences, Mumbai, India
(health consequences of arsenic pollution in West Bengal)

Frances Hansford, Dept of International Development, University of Oxford
(discrimination in intra-household food distribution in rural Brazil)

Tatyana Intigrinova, Dept of Anthropology, University College London
(local resource use practices and economic change in Buryatia)

Pieta Nasanen, Dept of Human Sciences, Loughborough University
(indoor air pollution and respiratory disease in Bangladesh)

Giovanni Orlando, Dept of Anthropology, University College London
(biodiversity conservation policy and livelihood in rural Uganda)

Abhishek Singh, International Institute for Population Sciences, Mumbai, India
(male involvement in reproductive health in Maharashtra State, India)

Chiedra Zingoni, Dept of Human Sciences, Loughborough University
(nutrition transition among adolescents in Soweto/Johannesburg)