



# Annual Review 2023

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# BRITISH ASSOCIATION FOR BIOLOGICAL ANTHROPOLOGY AND OSTEOLOGY ANNUAL REVIEW

## *EDITOR*

Veronica Tamorri  
Leiden University

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**Contributions for the Review should be sent to the Editor:** Veronica Tamorri, Leiden University.

Email: [annualreview@babao.org.uk](mailto:annualreview@babao.org.uk)

**Membership details can be obtained from:** Bennjamin J. Penny-Mason, Natural History Museum, London.

Email: [membership@babao.org.uk](mailto:membership@babao.org.uk)

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## ***WELCOME TO THE ANNUAL REVIEW FOR 2023***

### **Annual Review Editor**

*Veronica Tamorri*

Leiden University

It has been a great year for research within our BABAO community! The quantity and calibre of contributions for this year's Annual Review emphasise how vibrant and dynamic our field is.

We have a new generation of specialists in biological anthropology and osteoarchaeology ready to start working in the field or continue with academic research. Congratulations to all new 2023 Masters and PhD graduates! Good luck to all those who started!

Research and work in academic departments, commercial sector and museums is also thriving. New and well-established local, national and international collaborations are ongoing.

In 2023 we have had our first in-person BABAO conference after the pandemic thanks to the efforts of the UCL team led by Dr Carolyn Rando! We all look forward to the 2024 edition at Keele University.

Charlie, Benn and I have been working hard on the NEW *TRENDS* publication in the hope that it will support all of BABAO members with their research outputs, while enhancing discussion within our field.

I hope you all enjoy the 2023 Annual Review. Thank you all very much for sharing your contributions with the BABAO community!

## ***ASSOCIATION NEWS***

### **President's Column**

*Jelena Bekvalac*

Museum of London

Dear Members,

It is with great pleasure that I write my first report as President of BABAO. I must firstly thank Becky for all of the time she gave to BABAO and the incredible amount of work she did as President, especially at such a difficult time with all of the limitations and restrictions with covid. Becky ably steered and administered BABAO with the inordinate support of the trustees and has passed on a strong association of which it is my privilege to be the next President. My thanks also to all the trustees who stepped down from their roles and for all their hard work in keeping BABAO running – Giselle Kiraly (Secretary), Gina McFarlane (Treasurer), Rebecca Avery (Non-Executive and Data Protection Lead), Charlie Primeau (Annual Review Editor), Summer Courts (Student Rep), and Lily Garnett (Museum Rep). Welcome and thank you to the new Trustees taking up their roles in 2023 Hannah Liedl (Secretary), Charlotte Lawrence (Treasurer), Gaynor Western (Outreach Officer), Ariadne Schulz (Non-Executive Member and Data Protection Lead), Ofelia Meza-Escobar (Communications Officer), Veronica Tamorri (Editor in Chief), Trish Biers (Museum Rep) and Tereza Nesnídalová (Student Rep).

Since taking up the mantle of President there have been letters of support from BABAO for two research project grant applications both of which if successful would have involvement for the membership; a Statement in response to fossil hominin bones being sent to space and the ethical concerns for such an action; responding to a journalists enquiry writing a piece about a site selling human remains with a statement kindly drafted by Dr Lauren McIntyre, a coordinator of the BABAO

taskforce on the Sale and Trade of Human Remains.

The perseverance and determination of the Trends working group have made great strides in bringing together and putting in to place all of the necessary features to be able to bring to fruition the publication of the journal Trends. They have put in a huge amount of work and I hope that their endeavours with Trends are supported by the membership. The EDI sub group have continued with all of their hard work in completing a series of key performance indicators (KPIs) to provide advocacy for EDI within our discipline, raising awareness of issues and ensuring that BABAO is inclusive and welcoming to everyone. In October the EDI sub group hosted the very successful on line panel and Q&A session “Approaching Diversity: Methods for, Thoughts on, and Critique of Ancestry Estimation and Population Affinity within the spheres of British Archaeology and Forensic Anthropology”. I look forward to there being more opportunities for other engaging EDI events.

The Sale of Human Remains sub group continue with their dedicated and tireless work in responding to reports and sale of human remains, which is a major undertaking on their part being alert to such an active trade and I am delighted that following the November Trustee meeting welcoming Dr Damien Huffer, The University of Queensland, as an Honorary BABAO member, who with his experience and skills will assist the sub group in this area of illicit trade in human remains.

There has been splendid work undertaken by Ofelia Meza Escobar, Gaynor Western and Vicky Owen with valuable advice from Antony Hofton in creating and developing the new website for BABAO which will make such a positive difference as an organisation and has a much more professional look, bringing us up to date and providing better ways for connecting with the membership and reaching out to non-members. There has also been excellent work in further developing outreach activities and formulating teaching resources for reaching out to school children

that link in with the key stages of the school curriculum.

Having a BABAO Newsletter was a super idea initiated by Giselle Kiraly and has developed with the creativeness of Lily Garnett and Gaynor Western. Each month I look forward to the latest edition of the Newsletter which is a great way for connecting as a membership and I would encourage you to please send in content for the forthcoming Newsletters. I have also really enjoyed taking part in the Museum Cuppa Catch up and look forward to more in the future.

My thanks to all of the Trustees for generously giving their time to BABAO that enable it to be an active organisation and the help and support they have all kindly given me in my new role as President, it is much appreciated.

Thanks to Dr Carolyn Rando and the conference team for all the effort and work put in to organising the conference held at UCL and for making the first in person conference since 2019 so enjoyable. There was a great range and mix of papers and posters that deftly showed the scope and range of research going on in the field. Congratulations firstly to the winners from the conference for the Jane Moore (podium presentation) and Bill White (poster) prize with Rebecca Reid (University of Dundee) winning for her podium presentation and Tatiana Tondini (Cambridge University) for her poster presentation. Congratulations also to the thesis prize winners with the Don Brothwell Award Winner: Harmony Hill for her thesis on “Brain Evolution and Language: A Comparative 3D Analysis of Wernicke’s Area in Fossil Hominins, Extant Humans and Chimpanzees” supervised by Dr Amelie Beudet and the Holger Schutkowski Award Winner: Etta Coleman for her thesis on “Reassessing the Living Stature of Individuals from Early Bronze Age IA Bab adh-Dhra’, Jordan via the Development of a Population-Specific Method” supervised by Dr Linda Fibinger. For the BABAO Mentorship award winner many congratulations to Dr Sarah A. Schrader, Leiden University. It is a pleasure to be able to congratulate all of the winners and to say thank

you to everyone who took part in the annual conference. It is wonderful also with the skill and ability of the BABAO Treasurer in managing the BABAO funds to have the resource enabling BABAO to continue to support research through its grants.

The BABAO annual conference in 2024 will be held at Keele University and I look forward to visiting Staffordshire. For those who have kindly held and offered to hold the annual BABAO conference this is greatly appreciated and we will be seeking places to hold future conferences, so please do contact me if you would like to host a future BABAO conference. It is I know additional work to already very busy work schedules but there would be help and support from the BABAO trustees.

Thank you again to all of the Trustees past and present, to everyone for their ongoing support of BABAO and Veronica the new Annual Review editor for enabling us to bring together all of the many great things that the BABAO membership are involved with and working on.

I look forward to BABAO continuing to be at the vanguard as a respected voice in the field and supporting its membership. Please do contact me or any of the other Trustees if we can be of help with anything. Best wishes for 2024 and look forward to seeing you at Keele University in September.

*Jelena*

*Museum of London, January 2023*

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

*Bennjamin J. Penny-Mason*  
Natural History Museum

At the end of 2023, BABAO had 515 active members, slightly below the 526 members which the society had at the end of 2022. BABAO recruited 89 new members during 2023 in comparison to 90 new members during 2022 (both figures included re-joining members); this was below the average for the last five years (101.6). The reduction in these 10 members can be attributed to a reduction in

forensic members who registered for the 2022 BABAO conference and were not retained into 2023. The reduced membership numbers are not due to poor student member retention, which is often the reason for a reduction in BABAO membership numbers – as student membership remained healthy in 2023 (see below).

The composition of our membership remained similar to the previous year: over half of the membership comprised of waged members (293, 56.9%), as well as student members (176, 34.2%), unwaged members (22, 4.3%) and retired members (21, 4.1%). A similar level of new student members (66, 12.8%) received a free year of BABAO membership, when compared to 2022 (70, 13.4%).

A quarter of the membership (127, 24.7%) comprised of overseas members: the majority of which represented members from Europe (83, 65.4%), as well as North America (30, 23.6%), the Antipodes (12, 9.4%) and elsewhere in the world (3, 2.4%) – these proportions were similar to those of 2022.

Less than half of BABAO members (234, 45.4%) provided information regarding their area of occupation (individuals were able to select up to two categories). Most reporting members were found to be employed within academia (122, 52.1%), followed by commercial archaeology (71, 39.3%), with smaller proportions in curatorial roles (23, 10.7%), as forensic practitioners (8, 3.4%) and as medical specialists (5, 1.5%). Additionally, some members (11, 4.7%) also declared other forms of occupation (including accountant, assistant, customer services, data steward, finds liaison officer, independent scholar, instructor, intern and teacher).

Of the 176 active student members, over three-quarters (151, 85.8%) provided information regarding their level of study. The reporting students were recorded as being engaged in doctoral (77, 50.1%), masters (63, 41.7%) and undergraduate (11, 7.3%) courses.

More than half of the membership (326, 66.3%) provided information on their areas of

interest. Human bioarchaeology (311, 95.4%) and forensic anthropology (215, 65.9%) were the two most popular areas of interest, followed by medical anthropology (101, 30.9%), human evolution (75, 23.0%) and primatology (11, 3.4%). Additionally, some members (27, 8.3%) also declared additional areas of interest (including archaeological science, archaeology, craniofacial identification, dental anthropology, DNA, ethics, funerary archaeology, gender, geometric morphometrics, mortuary, osteoarchaeology, palaeopathology, palaeo-imaging, mummy studies, and taphonomy).

I would also like to encourage all members who have not completed a 'change of details' form recently to do so – the forms are available from the membership section at [www.babao.org.uk](http://www.babao.org.uk). Please do send me updates on changes in job titles, positions, affiliations, personal details, and postal addresses. Please do not hesitate to contact me if you have any questions regarding your BABAO membership: you can email me at [membership@babao.org.uk](mailto:membership@babao.org.uk).

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### **Report from the Grants Secretary**

*Rachel Schats*  
Leiden University

In 2023, the BABAO Board of Trustees awarded two academic and one commercial research grant. Additionally, we awarded the Holger Schutkowski award for the best master's thesis and two Don Brothwell Awards for the best undergraduate thesis!

### **Project summaries Research Grants**

#### Academic grants

Rachael Hall (Leiden University, NL) - £1000  
*Exploring proteomic analysis for identifying brucellosis in archaeological human skeletons*

Pastoral farming has exposed humans to one of the most pervasive zoonoses through domestic animal vectors. The highly contagious bacterial disease, brucellosis, spreads to humans via close contact with infected animals, or consumption of contaminated

animal products. Skeletal manifestations in infected people are common, however the skeletal lesions are not uniquely distinguishable from other diseases, such as tuberculosis. Consequently, brucellosis is understudied in archaeological populations. This research aims to explore the potential of proteomic analysis as a diagnostic tool to identify brucellosis infection in human bone, enabling future research of this highly contagious disease in past populations.

Heidi Shaw (Durham University, UK) - £1000  
*Exploring Adolescence in Medieval Nubia through Amelogenin Analysis of Dental Enamel*

This study aims to highlight the experience of adolescence in Medieval Nubia by examining non-adult individuals between the ages of approx. 8-18 years old recovered from the Early Christian site of Kulubnarti. In order to do this, the project will identify the chromosomal sex of non-adult individuals through the application of a minimally destructive acid etch technique to recover amelogenin peptides, which will be amalgamated with data related to age-at-death. Results from this study will help to inform research on puberty, growth, and non-adult health in Medieval Nubia.

### **Commercial grant**

Sheridan Strang (Novetus GmbH Archaeological Services) - £2,453.30  
*The bioarchaeological detection of nicotine and its metabolites in tooth dentin: A pilot study*

Drug use has been evident in human populations throughout history and prehistory. However, the identification of drugs, such as tobacco, from human skeletal remains is challenging due to the breakdown of organic material over time. This research attempts to detect tobacco use from dental tissues in skeletal remains from archaeological contexts. Following new methods (Badillo-Sanchez et al., 2023), this study examines teeth from individuals that display evidence of tobacco use during life (pipe wear facets and tobacco



staining) for the first time. These results allow us to better study the importance and impact of tobacco on past human populations.

### **Winner Holger Schutkowski thesis prize 2023**

Etta Coleman (University of Edinburgh), supervised by Dr. Linda Fibiger

*Reassessing the Living Stature of Individuals from Early Bronze Age IA Bab adh-Dhra', Jordan via the Development of a Population-Specific Method*

The skeletal assemblage from Early Bronze IA Bab adh-Dhra', Jordan, was examined and analysed by Donald J. Ortner and Bruno Frohlich of the Smithsonian Institute nearly two decades ago, and the results published in *The Early Bronze Age I Tombs and Burials of Bab adh-Dhra', Jordan* in 2008. These investigations encompassed varied branches of palaeodemography. While incredibly thorough, Ortner and Frohlich notably utilised the Trotter and Gleser (1952) equations for White individuals in their analyses in order to assess the living stature of this population. The application of stature estimation methods calibrated for one regional group onto another has been strongly discouraged due to differing body proportions between geo-temporally distant human groups. The accurate calculation of stature is critical, as these values are informative about evolutionary patterns, as well as changes in diet and social status within and between communities. Hybrid stature estimation techniques have become increasingly popular, as they combine mathematical and anatomical techniques for a more precise estimate. Despite this fact, the infamously poor preservation of skeletal materials in the Near East results in collections that are unsuitable for the development of hybrid methodology. The goal of the present research was to utilise the Early Bronze IA Bab adh-Dhra' skeletal sample, consisting of 578 individuals, to create a hybrid regression equation that will accurately assess the living stature of the population. Of the vast number of individuals belonging to this collection, 13 were sufficiently preserved to allow application of the anatomical method. Thus,

these individuals were employed in the development of a hybrid stature estimation equation for the Bronze Age Southern Levant. These values were compared with a selection of commonly cited stature estimation methods in order to test the applicability of each equation.

### **Winners Don Brothwell award 2023**

Charlotte Procter (University of Reading), supervised by Prof. Mary Lewis and Dr. Gundula Mueldner

*Can skeletal trauma provide evidence of the epidemiological transitions?*

This dissertation aimed to establish if the social changes brought about by the epidemiological transitions can be identified through the study of accidental and non-accidental skeletal trauma. The epidemiological transitions are categorised by significant changes in the patterns of disease, which coincided with the Agricultural Revolution (1st transition), Industrial Revolution (2nd transition) and Globalisation (3rd transition). Data was collected from the Wellcome Osteological Research Database (WORD) for ten cemeteries in London which dated to the period before the second epidemiological transition and to the second epidemiological transition. Data was collected for sexed individuals over the age of 25 and compiled into a database to establish the prevalence of trauma from each site, the trauma type (accidental, interpersonal violence, surgical), and the location. Results demonstrated that overall, males displayed significantly more trauma than females in both periods; however, the increase in accidental trauma and violence related trauma from the pre-second to the second transition in males was insignificant. It is suggested that this may indicate that the risk of injury remained similar in males across both periods, although the change in trauma location may mean a difference in the cause of trauma. Females display more trauma in the second transition, which may indicate that they were more involved in aspects of society outside the home and, in turn, were exposed to more risks. The increase in surgical trauma

saw an increase, likely due to the advancement in medicine in the second transition.

**AND**

Carlos Carvalho (University of Bradford), supervised by Jo Buckberry  
*Does Archery Affect the Anatomy of the Forearm?*

The analysis of activity related changes has revolutionised the study of human remains, bringing a new insight into what people did during life. Previous studies have shown bilateral asymmetry in military populations and significant anatomical differences to non-military populations. These include robusticity, cortical bone thickness, changes to the enthesis and os acromiale. This dissertation has sought to add to this wealth of knowledge by looking at the forearm (an area previously overlooked). To do this, military and non-military forearms were compared through three parameters: robusticity, changes to the enthesis and cortical bone thickness. Robusticity was calculated with the längendicken index, changes to the enthesis with the Villotte (2006) method and cortical bone thickness visualised with the aid of computed tomography. Although, neither bilateral asymmetry or significant anatomical differences between the two populations were concluded from cortical bone thickness and enthesis, robusticity has produced valuable results. This dissertation has shown that the military population does not present normal levels of asymmetry on the forearms which was expected and seen in the non-military group. Also concluded was that the military sample presented significantly more robust ulnae than the control, which is consistent with continuous strain that requires flexion of the arm. The conclusions made in this dissertation support Towton men being involved in a bilateral activity from a young age, such as archery.

### **Update BABAO Research Grants 2024**

The BABAO Grants application round for 2024 will open on February 1st and will close on May 1st 2024. The application forms as well as further guidance and information on

eligibility, how to apply, and what can be funded can be found at the following page <https://www.babao.org.uk/grants-and-prizes/research-grants/>.

In 2021, BABAO started a new grant scheme: the Decolonising and Diversifying Osteology and Biological Anthropology (DDOBA) Grants, which supports the decolonisation of our research, learning and teaching, and diversification of our profession. This grant scheme operates alongside the current research grant scheme. The amount of funding available, application process, general eligibility criteria and deadlines are the same as the research grant scheme. Both academic (for independent researchers, members employed in research/teaching and students) and commercial applications (where members require 'buy-out' from their roles) will be considered. For more information, please visit: <https://www.babao.org.uk/grants-and-prizes/decolonising-and-diversifying-osteology-and-biological-anthropology-grant/>

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### **Report from the Sub-Group for Equality, Diversity and Inclusion**

*Matthew Lee*

Durham University

The past year has been a busy one for the EDI sub-group. Work has continued on the 2021 BABAO Race Review KPIs, which are moving well towards completion, as well as other work. The KPIs that are currently active are KPIs 2, 5, and 14/15.

KPI 2: There should be a clear process for responding to and acting on feedback.

- This KPI had been on pause as the new method of providing feedback to the trustees through the BABAO website would have broken the old website. With the new website in the process of being built through the hard work of Ofelia Meza-Escobar (Communications Officer) and Gaynor Western (Outreach Officer), this KPI is active again and the new reporting system should be able to be put in place in 2024 and members will be notified when this is available.

KPI 5: Identify key pinch points over the career pipeline and related membership stages that can be targeted through racially literate recruitment and advertising campaigns.

- This KPI has produced a set of posters, leaflets, and information booklets that upon finalisation BABAO can start to use to advertise itself and membership benefits at events it hosts or is attending. Additionally, it is hoped that members involved in teaching would be willing to include this information in freshers' week inductions to boost BABAO's student membership and engagement.

KPIs 14/15: To ensure victims of racism are offered culturally responsive support, outsourcing to appropriate external agencies if required/To ensure appropriate consequences are taken when dealing with racism, including strong management support and weight at senior leader/trustee level.

- The work of this KPI has been finalised and signed off. However, out of this it was felt that there was a need for BABAO to have a statement outlining the processes that will occur if a report of harassment, particularly of a sexual nature, is made to the association. This is in the process of being finalised and when it has been done so this statement alongside the results of KPIs 14/15 will be sent to the membership.

Other work that has been undertaken has continued to include the review of applications to the DDOBA (Decolonising and Diversifying Osteology and Biological Anthropology) grants. This review is undertaken to ensure that the EDI sub-group feels a proposed project fits within the ethos of the DDOBA grant scheme of enabling minority ethnic students or scholars to undertake research, osteological research to be undertaken in underrepresented geographic regions or with indigenous/underrepresented communities, and/or specific work on decolonising the field to take place. For more information about this grant please visit <https://babao.org.uk/grants-and-prizes/grants/ddoba-grant/> and please do consider applying to the scheme if you feel you or your work may fit the eligibility.

The first online panel organised by the EDI sub-group took place in October under the title "Approaching Diversity: Methods for, Thoughts on, and Critique of Ancestry Estimation and Population Affinity within the spheres of British Archaeology and Forensic Anthropology" took place with contributions from Dr Joseph Hefner, Prof. Shara Bailey, Dr Aylwyn Scally and Dr Julie Roberts. This panel explored the current state of methods used within ancestry estimation/population affinity research and their pros and cons. This event was well attended and thank you to everyone who provided feedback and suggestions for topics for future panels that could be run by BABAO. The group definitely intends to undertake more panels in the future either as specific EDI panels or in collaboration with BABAO's outreach programme.

Finally, the sub-group is excited to hear that next year's conference at Keele University hopes to have a focus on EDI work within our field. We look forward to working with Drs Chris Aris and Amber Collings on how the sub-group can support them in this and on how we can ensure an inclusive and accessible conference next year.

Membership of the EDI sub-group currently stands at 29 members, inclusive of the BABAO trustees. The sub-group meets roughly four times a year with any active working groups within the sub-group having additional meetings outside of that time. If any members of BABAO are interested in the work that the EDI sub-group is doing and would like to know more or to join the group, then please reach out to Matt Lee (EDI Trustee) or Alice Rose (EDI sub-group secretary) whose contact information can be found on the BABAO website (<https://babao.org.uk/about/our-people/edi-sub-group/>).

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## **PEOPLE**

### **The Saxo Institute, University of Copenhagen** *Felicia Fricke*

On Thursday 16<sup>th</sup> November 2023, Dr. Felicia Fricke (Postdoctoral Fellow at the Saxo Institute, University of Copenhagen) gave the keynote address at the Reuensdagen, the national archaeology conference in the Netherlands. From the information available on the conference website, it is probable that she is the youngest ever keynote speaker at this conference, and one of only two women who have given the address (the previous woman was Professor Carenza Lewis in 2017).

Dr. Fricke's speech entitled 'Archaeology, Ethics, and Society: Exploring Slavery in the Dutch Colonial Context' discussed how the archaeology of slavery is a flashpoint from which the rest of the discipline must learn. A large part of the speech concerned the osteological analyses of two enslaved women buried in the Dutch Caribbean, and showed how archaeology can speak to current socio-political concerns in the Netherlands and beyond.

The full abstract of the speech can be found here:

<https://www.reuensdagen.nl/program/reuenslezing-2023/>

And a recording of the speech is available on YouTube:

<https://www.youtube.com/watch?v=3VS7pnoJ2Zc>

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### **Osteology Volunteering at the Northamptonshire Archaeological Resource Centre** *Dale Munn*

I would like to tell members about my voluntary work at the Northamptonshire ARC. I graduated from University College London in 2022 with a master's degree in Forensic Anthropology and Bioarchaeology. For the last two years I have used my skills to volunteer at

the Northamptonshire ARC which opened in 2021 as the new purpose built publicly accessible repository and research facility for archaeological finds from across the county. The ARC is part of the Chester House Estate heritage site which includes the remains of a Romano-British town and several associated cemeteries. The ARC currently stores the remains of over 1600 individuals from excavations in Northamptonshire dated from the Neolithic to the medieval period. Many of these collections were excavated in the 1960's and have no osteology report. Many of the remains within the collection have also been historically very poorly curated with no attempt to side or bag the bones or provide any osteological analysis.

Under the overall supervision of the ARC curators, I have trained sixteen local volunteers in basic osteological skills and we have made great progress in siding, bagging and re-boxing over 500 individuals. Each individual where possible has been sexed, aged, measured for stature and records made of trauma and pathology. Osteology reports on previously unrecorded collections are being prepared meaning that they can now readily be used by researchers. The volunteers are extremely enthusiastic and keen to learn new skills, often enrolling on on-line courses and reading articles and books on osteology. I have also led a number of hands-on osteology seminars at the ARC for volunteers, local archaeology groups and members of Northamptonshire Fire and Rescue Service engaged in a project aimed at supporting their mental health.

The aim is to provide a well-documented and accessible resource for students and researchers that has been constructed by local volunteers. Anyone wishing to visit or study at the ARC or discuss the volunteering programme should contact the ARC curators (Ben and Georgina) at [arc@northnorthants.gov.uk](mailto:arc@northnorthants.gov.uk)

For further information on my work with human remains collections please contact me on: [dalemunn@virginmedia.com](mailto:dalemunn@virginmedia.com)

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## **NEWS & PROJECT UPDATES**

**DANTE - Diet and Ancient Technology  
Laboratory, Department of Oral and  
Maxillo Facial Sciences,  
SAPIENZA University of Rome**  
*Elena Fiorin*

I am Elena Fiorin, a Researcher Fellow at the Department of Oral and Maxillo Facial Sciences, Sapienza University. This is my second year working on the project 'The bioarchaeology of communal health: infectious diseases, medical care, and funerary practices in medieval and early modern northern Italy' (acronym: BioComm). The European Union and the Italian Ministry of University and Research funded this project.

The project investigates the impact of infectious diseases and plague pandemics in medieval and early modern northern Italy from a bioarchaeological perspective. Adopting a contextual approach, this research also focuses on identifying medical treatments and social responses to such diseases, exploring the 'communal health' concept. The project will focus on two cemeteries in the Verona area: the cemetery excavated in the Arditì d'Italia Square in the city centre and the cemetery of Carlo Ederle Square in Grezzana, north of Verona. I also work on other Italian Roman and early medieval skeletal collection projects.

In 2023, I published two papers collaborating with Durham University, the University of Florence, and the University of Bologna, and I presented the project at the BABAO conference with a paper entitled 'The bioarchaeology of communal health in medieval and early modern Verona, Italy. Preliminary results of the BioComm project'. I am publishing the results of my previous Marie Skłodowska-Curie Fellow (<https://cordis.europa.eu/article/id/442401-ancient-tartar-offers-clues-about-medieval-leprosy-treatment/it>), and I am registering

all the data produced during the project in a repository.

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**Laboratory for Human Osteoarchaeology,  
Leiden University**  
*Veronica Tamorri*

As a Marie Skłodowska-Curie Postdoctoral Fellow at Leiden University, my 2023 has been pretty busy with data collection and outreach activities for my project WOMen-PRO.

WOMen-PRO explores the life course of women in Egypt and Nubia, during the 5th – 3rd millennium BCE transition to complex society. Through a multidisciplinary bioarchaeological approach, I am investigating female health, nutrition, activity levels and burial rituals. I aim to provide a better understanding on how this transitional period shaped the social role, identity and lives of women in the sample compared to men.

During 2023, I visited various museums and research facilities in Europe holding human remains from early Egypt and Nubia. In one of my trips to the Duckworth laboratory in Cambridge, I was accompanied by Luna Beerden, a Research Master student at Leiden University, who is completing her thesis on activity levels through cross-sectional geometry as part of WOMen-PRO.

During the past year, I have also organised outreach activities in schools to talk about my research and the work of bioarchaeologist in general. Maia Casna kindly helped out in some of the events.

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## **MUSEUMS AND OTHER INSTITUTIONS REPORTS**

### **Cotswold Archaeology** *Sharon Clough*



#### **Summary**

A continuing busy fieldwork programme has led to plenty of post-excavation work and numerous human remains.

Sharon presented on some of the results from the work at Gloucester Roman cemetery at the BABAO conference in September. She was also on 'Digging for Britain' discussing the Iron Age skeletal remains from the A417 road scheme 'Missing Link'. She also co-presented the results from the Childrey Warren water pipeline scheme in person and online webinar.

#### **Key Sites of 2023**

Sams lane, Broad Blunsdon, Wiltshire – medium-sized (c.30) Roman cremation cemetery, urned and un-urned, analysis and report. Summary journal article to be published in WANHS.

Land south of south wick road, Wickham - Middle Bronze Age bucket urn; Roman period cremation burial from the top fill of well; rectangular pit feature (possible single event cremation pyre pit) also dated to the Roman period.

Centre Severn, Gloucester – Late Roman inhumation burial. Summary to be published in TBGAS.

Land west of Trinity Lane, Chipping Sodbury – two non-adult (neonate and 1-1.5 years) inhumations thought to be Late Roman.

Roman meadow, Eckington, Pershore – 12 inhumation burials, Iron Age and Roman.

Rugby SUE Phase 1 – Two Roman period cremation burials.

RAF Lakenheath, Suffolk AGL vault – 1 Iron Age and 1 Roman period inhumation.

Redcliff Quarter, St. Thomas Street, Bristol – Unexpected discovery of four Late 15th to early 17th century inhumation burials in the road. Subsequently Wessex Archaeology identified more burials in the road on the same street. No documentary records of a burial ground in this area.

Fordham Road, Isleham, Cambridgeshire – Three deposits containing human remains recovered from pit features all dating to Iron Age. Cranial fragments and shaft of a femur which had been worked and with a pierced hole in the distal end. In addition, three neonates in the same pit.

Catalyst/Faccienda Chicken Farm, Bicester – Located near to Alchester adjacent to the Roman road, a large (c.70) Roman period cremation cemetery, assessment completed with analysis started.

Land west of Northampton – Assessment of the human remains from this excavation, four individual skeletal remains and 22 cremated bone deposits. They are provisionally dated to the Bronze Age, Iron Age and early medieval period.

Lotmead SEV site 5, Swindon – assessment of 21 Roman cremation burials and two inhumation burials.

High Street, Walton, Suffolk - Assessment of c.60 Middle Bronze Age cremation burials.

Basingstoke golf course – Three Bronze Age cremation urns.

#### **Contact and further information details**

Cotswold Archaeology deposit all their grey literature reports with Archaeology Data Service and in their online library <http://reports.cotswoldarchaeology.co.uk/>

Email  
[sharon.clough@cotswoldarchaeology.co.uk](mailto:sharon.clough@cotswoldarchaeology.co.uk)  
with any queries.

Follow our updates on X/twitter  
@cotswoldarch or Facebook & Instagram page  
Cotswold Archaeology

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

**Department Reports**

MOLA information and blogs can be found on the organisation websites:

<https://www.mola.org.uk>

<https://www.facebook.com/MOLArchaeology>

<https://twitter.com/MOLArchaeology>

**Excavation and Contract Work**

*Holborn Viaduct, Farringdon Street, London EC1*

Recent excavations at Holborn Viaduct have revealed 22 late medieval burials from an extra-mural cemetery located on the eastern bank of the Fleet River, thought to be an overflow ground for St Sepulchre parish. Deposits of disturbed disarticulated bone suggest there were at least a further 169 individuals buried here. Burials from the western cemetery of Roman London have also been revealed. Six cremations and 18 inhumations have been recovered to date. These include some richly furnished interments, together with rare examples of a *bustum* burial and a bed burial. The cemetery contains some of the earliest Londoners, but also individuals from the Late Roman period.

*Kingsnorth Quarry, Kent*

Excavations commissioned by Phoenix Consulting Archaeology Ltd on behalf of the client, Tarmac Trading Ltd, in the rural landscape on the Hoo peninsula and on the north side of the Medway Estuary recovered eight contexts of burnt bone, each representing an individual cremation burial. Proposed

radiocarbon dating will allow for comparison with contemporary regional assemblages. Previous excavations to the north-east of the site have identified evidence of Middle and Late Bronze Age cremation burials. An additional context contained multiple elements of unburnt disarticulated bone found at the bottom of a pit fill dated to the Roman period.

*Derek*

*Landmark Court, London SE1*

Osteological assessment is soon to commence on this assemblage of burials from Southwark. Excavations revealed 97 Roman inhumations, some aligned with a probable mausoleum. The cemetery was located near the southern edge of the northern island of Southwark between the two roads running south-west from the river crossing. This work will add to evidence recovered during excavations in 1979 which revealed five burials and a possible *mansio*.

*Lion Green Road, Coulsdon*

Osteological analysis continues on 24 Saxon burials, dating to the 6th–8th century, recovered from Coulsdon, Surrey. Grave goods recovered from some burials included iron blades, probably knives. Two Roman child burials located to the west of the Saxon cemetery also contained artefacts: one had a sand-tempered ware necked globular beaker and one with penannular bracelets and perforated coins. The close grouping of these two children suggests a familial or ancestral connection which is currently under investigation through DNA analysis. The burials from Lion Green join those recovered during previous excavations in the cemetery, now curated at the Natural History Museum and Horniman Museum, London.

*St Bartholomew's Hospital, London EC1*

Archaeological works at St Bartholomew's Hospital, revealed a single inhumation burial, a probable female on the verge of skeletal maturity, lying above a large east–west Roman boundary ditch. This burial formed part of the western Roman cemetery. Enamel hypoplasia was observed on some of the surviving teeth of the individual.

### Sidney Gardens, Bath

Analysis work continues on the human bone recovered from the stone sarcophagus and cremation deposits from Sidney Gardens. The sarcophagus contained an articulated skeleton buried in a prone position and disarticulated remains from a second individual recovered from the foot end of the sarcophagus. The two individuals were both adults, probable females and have been broadly dated to the 4<sup>th</sup> century AD. Joint degeneration and several fractures were observable on the bones of the prone individual. Further post-excavation research, including aDNA and isotope analysis is ongoing.

### Woodcut Farm, Kent

Excavation of a small circular enclosure, likely a Bronze Age barrow, recovered four cremation burials. There were three internal burials, one associated with a potentially rare example of a Bronze Age glass bead. An external cremation burial was contained in an upturned vessel with a flint covering. At least three additional barrows are known to exist in the immediate landscape, one was partially excavated in the 1840s, a time when many similar monuments were subject to destruction and plough damage. These recent burials offer potential to enhance our understanding of the local prehistoric funerary landscape and burial practices in Kent excavated under modern archaeological methods.

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### **Centre for Human Bioarchaeology Museum of London**

*Jelena Bekvalac  
Curator of Human Osteology*

With the Museum of London now having been closed to the public for a year the preparations for the move to the new location at Smithfield have been going full swing with a number of the galleries decanted and the work of auditing and preparing the collections continuing at a pace, including the extensive osteological collection with many months still to be spent in the rotunda store. The move of the museum is a huge undertaking and has teams of people planning and working all of the intricate details to enable the transition of the collections and opening of the new museum in 2026.

In amongst assisting with the decant of the London Before London and Roman galleries and preparation of the osteological collection for the move, I was fortunate to have had opportunities during that time to be able to participate again in a variety of outreach events and activities and enjoyed being able to join in with them. In January I gave a talk to 2<sup>nd</sup> year undergraduate students at Kings College about the osteological collection and research that has been done on the collections with a focus on the work undertaken on the emergency cemetery sites of East and West Smithfield. The careers advisor at Streatham and Clapham High School invited me to speak in February to the 6<sup>th</sup> form students about my career path and my role as a curator in a museum curating an archaeological skeletal collection. It was interesting answering the questions raised by the students who were just at the start of thinking about possible future career paths. For younger students I was very pleased in April to be able to run a session for the Young Archaeologist Club at Fulham Palace to talk about osteoarchaeology and what we can learn from human skeletal remains. They were a super group, full of enthusiasm and already had a good deal of knowledge about the skeleton. Most definitely could see the potential of some budding osteoarchaeologists of the future.

In May I had the pleasure of being invited to speak as part of the Cambridge Heritage Symposium *"Encountering human remains: heritage issues and ethical considerations"* and talked about the exhibitions with archeologically derived human skeletal remains shown at the Museum of London (MoL) and with the Wellcome Trust Skeletons: London's Buried Bones and the regional touring exhibition of Skeletons: Our Buried Bones. It was an excellent symposium and there was a great combination of insightful and thought provoking talks. Although with the museum closed and thus unable to do student workshops on site I was able to speak off site to two groups of students from Brigham Young University, USA and University of Colorado, Canada to share information with them about the CHB and the research that can and has been undertaken with



the skeletal remains. For both the groups the particular focus was the medieval period and plague which complimented well their study programme.

I was delighted to have had the pleasure in June to be the Chair as part of the Oxford Archaeology Research Seminar series for the Seminar VII – ‘*Life and Death in the Industrial Era*’ which focused upon post medieval excavations including Radcliffe Infirmary, Oxford and Trinity Burial Ground, Hull. Following the excellent seminar presentations there was a lively and stimulating discussion. In the summer I was also happy to have been able to be part of the museum Work Experience programme and had two students with me who were very engaged young people. Following on from the programme I was so pleased that the student I had nominated in the category of Work Experience as part of the Marsh Awards was selected as the winner. I was invited to participate again in the programme of talks for the Guildhall Library and was very happy to be able to give a talk at the end of July on the history of St Bride’s church and the known named individuals. The audience for the Guildhall talks come from all over the world being in person and on line and there are always lots of interesting questions to answer.

At the end of August I was very pleased to be able to present a paper in the session *Making an Impact: Developing Research in Applied Bioarchaeology* for the EAA Belfast conference, with my talk *Industrialisation and the changing health of Londoners, a big question and large data sets* based on the Impact of Industrialisation on London Health research project (Western and Bekvalac). It was so good that the conference was hybrid which enabled me to present for the session. Also for the conference I had the great pleasure to be a co-author with Dr Sophie Newman who presented in the session *Advancing a Bioarchaeology of Health Inequality: Recent Developments and Future Directions* the paper *Mapping child health inequality on a local scale: a multidisciplinary case study from St Bride’s parish, London, UK (19<sup>th</sup> century)*.

It was great in September to be able to attend in person the BABAO conference at UCL and to have had the unexpected privilege to be able to participate and represent BABAO as the President. I thoroughly enjoyed the conference and it was so nice to be able to see everyone and to meet new people. During October I was able to again participate in London Month of the Dead giving a talk in the Dissenters Chapel at Kensal cemetery & tours of St Bride’s crypt, I also enjoyed in October taking part in the Roman Live School Stream, with some super questions from the school children and giving a talk for students studying on the 3<sup>rd</sup> year seminar course *Disease, Health and History* at the London School of Economics (LSE) with a focus of the talk on the curatorial role and the different types of diseases observed in archaeological skeletal remains. I was delighted in November to have the opportunity to be at the Reform Club and be an invited speaker for the Science and Technology Group at a joint event with the Thackeray Group, the Reform Club’s literary and historical group. I was lucky to have the chance to look around the amazing building before speaking and to learn about some of the history and establishment of the club.

Over the course of the year it was most interesting to have been an advisor on the academic advisory panel for the research project Skin and Bone. I thoroughly enjoyed the discussions, hearing about the fascinating research, participating to assist with feedback and able to see the development of all of the research teams hard work come to fruition. It was exciting with the publication of the Routledge Handbook *Museums, Heritage, and Death: new ways of examining mortality in the modern world*, Editors: Trish Biers and Katie Stringer Clary and to have very kindly been asked to contribute to the publication and to have included in the book my chapter *A museum archive: an unexpected final resting place but one full of promise*. I was generously asked to be a co-author on the paper *Growing Old in the Industrial Age: ageing, health, and social identity in elderly women (18<sup>th</sup>-19<sup>th</sup> centuries A.D.)*, Newman et al published and was so pleased it was published in the journal Bioarchaeology International.

During the year there were a wide range of interesting enquiries to the CHB and although unfortunately not able to have researchers visit the CHB while the museum works towards the move, I am always happy to offer support and share site information and digital osteological data sets. I am pleased that the digital data sets are readily able to be shared and help students and researchers with their studies. Alongside the ongoing packing preparations for the move I look forward to continuing to assist with research enquiries and please do make contact if you need assistance with osteological data for research projects.

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### Colchester Archaeological Trust

*Megan Baele*



#### Introductions

Hello for the first time from Colchester Archaeological Trust (CAT)! We are a small commercial unit working in and around Essex, with a focus on Colchester's Roman archaeology. We have about 32 employees. We are one of the oldest commercial archaeology companies in the country, founded in 1963 as the Colchester Excavation Committee, and two years later became Colchester Archaeological Trust. CAT has a few in-house specialists; namely animal bone, pottery and CBM, flint, small finds, illustration, environmental and human bone.

#### News

Philip Crummy, after 53 years, stepped down as our Director of Archaeology in October 2023. Philip is very keen to stay active in a voluntary capacity, and will be working on legacy projects in his own time.

We are coming up to the 20<sup>th</sup> anniversary of the discovery of Britain's only Roman Circus. Discovered in 2004, our current office is based just by the starting gates of the Circus, above the visitor centre. We will most likely mark the

occasion with a couple of special events. Stay tuned!

CAT has been working with Hunnaballs Funeral Group for years reburying human remains we've excavated in Colchester, most recently of over 40 Christian burials excavated in 2021. After a short service reburying the remains in 2022, in October 2023 we unveiled the engraved headstone alongside Hunnaballs, memorialising the remains.

We also supported sixteen work experience placements this year, including an osteology Masters graduate.

#### Colchester, Essex

A large Roman site on Lexden Road in Colchester revealed over 100 burials with almost 80 skeletons surviving, as well as four cremations. These burials add to our knowledge of the Lexden/West Cemetery, as defined by Rex Hull in 1958. All age groups have been represented, from foetal to old adult. Most were orientated NE-SW or NW-SW, and had a good range of grave goods, although none particularly rich. A large quantity of individuals appeared to have been buried in timber coffins, with evidence of two lead coffins. Some "deviant" burials noted, as well as some potentially interesting pathologies and ethnicity estimates. X-rays and aDNA results pending. We also uncovered the continuation of the Gosbecks-Colchester Roman road, 19 bread ovens, two horse burials and a temple or mausoleum. Main report will be a while.

An unexpected inhumation was encountered during a watching brief in Colchester city centre. The upper half was exposed only, and is estimated to be a middle adult male. Residual pottery recovered from the burial indicates it is medieval-post-medieval. This burial is important to the area as it is evidence that the current road was much narrower originally, and the limits of the cemetery from this period extended further than previously thought. This is a good reason for radiocarbon dating to be undertaken. Assessment finished.

A quarry evaluation just outside of Colchester revealed a double cremation containing two

inverted Bronze Age bucket urns. The individuals were estimated to be one adolescent and one adult, with evidence of porotic hyperostosis. Report complete but not online yet.

A similar quarry excavation found two urned and one unurned Late Iron Age-Early Roman cremations. One of the urned cremations was also buried with five complete pots and one dish. Two individuals were estimated to be adults, with evidence of periostitis in one individual. Report complete but not online yet.

### **Frinton-on-Sea, Essex**

Four cremation deposits and one inhumation was excavated at a site in Frinton. The inhumation was a crouched burial of a possible adult female, and dated from the mid-2nd century AD due to a coin recovered from the grave. Orientation was NW-SE and in the centre of a ring ditch. Bone preservation was poor. The four cremation deposits had all been truncated, so assessment was limited. No grave or pyre goods were recovered from these deposits. Report complete but not online yet.

### **Little Waltham, Essex**

Excavations in Little Waltham revealed three urned cremations and five unurned cremations, all likely dating to the Late Iron Age-Early Roman. Assessment complete, revealing three infants/children and one female adult. Main report in progress.

### **Further information**

For further information on us please visit our website at <https://catuk.org/>. Colchester Archaeological Trust can be contacted at [services@catuk.org](mailto:services@catuk.org). Digital copies of our grey literature, publications, The Colchester Archaeologist magazine, and previous newsletters can be found at <http://cat.essex.ac.uk/>. We also have Instagram (@colch\_archaeological\_trust) and Facebook (@Colchester Archaeological Trust).

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## **Oxford Archaeology Heritage Burial Services**

*Annsophie Witkin and Lauren McIntyre*

### **Team**

#### ***Oxford Archaeology South:***

Louise Loe (Head of Heritage Burial Services), Mark Gibson (Osteoarchaeologist), Lauren McIntyre (Osteoarchaeologist), Helen Webb (Osteoarchaeologist), Annsophie Witkin (Osteoarchaeologist)

#### ***Oxford Archaeology East:***

Natasha Dodwell (Osteoarchaeologist and Head of Finds and Environmental), Zoe Ui Choileain (Osteoarchaeologist and Finds Assistant)

#### ***Oxford Archaeology North:***

Stephen Rowland (Archaeology Project Manager)

### **Fieldwork**

#### **Berkshire**

##### **Didcot**

The excavated human remains comprised four prehistoric cremation deposits and a juvenile inhumation burial from a pit. The excavation area also contained a small Roman burial ground that contained five inhumations and one cremated bone deposit.

#### **Buckinghamshire**

Newton Longville, Far Bletchley, Milton Keynes

Work on this site is currently ongoing. So far, one urned and four unurned cremation burials and two inhumations, all dating to the Roman period, have been excavated.

#### **Cambridgeshire**

##### **Alconbury KP3 Phase 2**

A single prone inhumation was discovered. Radiocarbon dating shows that the individual was an early Roman. The excavation is now complete, and assessment will commence in 2024.

### Aragon and Sackville Close

The excavation covered a small area of a previously known Roman cemetery. Five inhumations were excavated.

### Essex

#### High Road, Thornwood

A Middle Iron Age boundary and ring ditches were recorded on this site, as well as two Roman urned cremations.

### Gloucestershire

#### A417

Work at this site is ongoing, but so far cremations and inhumations have been found in five different excavation areas. They include, one inhumation and four cremations, all Roman, excavated in Area 1 and Area 25, respectively. One of the cremations, a central burial within a small enclosure, was recovered from a fragmented urn which also contained coins. One inhumation was found in Area 5 and two urned cremations were found in Area 20. All of these are currently undated. Lastly, one Neolithic crouched inhumation with a fragmented beaker pot, flint tools and a jet bead, was excavated in Area 12.

### Kent

#### Land north of Stansted

An evaluation of the site revealed Early and Middle Iron Age remains in the form of pits and ditches. A small assemblage of disarticulated human bone was recovered from a tree throw.

### Lancashire

#### Land off Fleetwood Road, Bourne Hill, Thornton-Cleveleys

Six cremation burials of anticipated Roman date were found during excavation at this site. Five were urned, and one may have been contained within a wooden box.

### Norfolk

#### Beccles Road, Loddon

An evaluation of the site identified scattered Bronze Age remains, alongside Iron Age and Roman agricultural activity. A single urned cremation was identified in one trench. Radiocarbon dating returned an Early Bronze Age date.

### Nottinghamshire

#### Newark Dryland Zone

This is a multi-phase site consisting mostly of Iron Age and Romano-British field systems, but also includes two Iron Age round houses and an Iron Age burnt mound, 72 Roman kilns, and a 7th century sunken-featured building. Burial activity comprised two adult inhumations (currently of unknown date), three neonates associated with activity around the Roman kilns and several undated burnt bone deposits. There is also the potential for a currently unconfirmed barrow cemetery.

### Oxfordshire

#### Drayton St Leonard

A femur shaft was found in the upper fill of a Roman ditch during the evaluation phase.

#### Twelve Acre Drive, Abingdon

Excavations of an Iron Age enclosure system and round houses. Cranial vault fragments were recovered from the main enclosure ditch.

### Suffolk

#### Europa Way, Ipswich

Excavations revealed a small cemetery of 17 pits containing urned burials, provisionally dated by a small amount of associated pottery to the Late Bronze Age. The cemetery was located in the corner of the excavation area to the south-east of what appears to be a contemporary settlement. The cremation burial pits may have formed two clusters, possibly separated by postholes, and perhaps marking family burial plots. Smaller postholes interspersed among the cremation burials may represent grave markers.

#### Sizewell

A damaged urned Bronze Age cremation burial was recovered in an area with

transitional occupational activity, dating from the Neolithic to the Bronze Age. The work is ongoing.

#### Trimley St. Martin

This was primarily a prehistoric site with scattered Neolithic pits, Bronze Age field systems and Iron Age ring ditches. A single pit was found to contain the remains of a human skull alongside an iron knife. Radiocarbon dating of the skull has produced a Middle Saxon date.

#### Wiltshire

#### Stanton Fitzwarren

Evaluation trenching at the site found one unurned cremation of probable Roman date.

#### **Post excavation analysis/reports**

#### Cambridgeshire

#### Ely

One Roman cremated bone deposit and three inhumations, radiocarbon dated to the late Iron Age, were submitted for assessment. The skeletal remains were well preserved with some pathological lesions, including degenerative spinal changes.

#### Luck's Lane, Buckden

A total of 52 burnt bone deposits from a small burial ground dating to the middle Bronze Age were fully analysed and reported on. The remains consisted of 25 urned and three unurned cremation burials. The remaining deposits could not be identified to type due to truncation.

#### Grange Paddocks

The assessment of 64 inhumation burials and one burnt bone deposit associated with a Roman settlement and therefore dated to the late Roman period were assessed. The remains were in a poor condition, and many were therefore fully analysed. Supplementary analysis is required on a small number of individuals that had more complex pathological lesions, such as one individual with multiple blunt force trauma to the cranium.

#### Hinxton

A total of thirteen articulated skeletons, three cremated bone deposits and disarticulated remains from nine deposits were assessed from this multi-period site which includes a substantial worked flint assemblage, Iron Age square enclosures, Roman field systems and evidence of animal husbandry, as well as a Saxon period settlement. One inhumation has been radiocarbon dated to the late Neolithic and one burnt bone deposit is currently undated but is regarded as being prehistoric. Seven inhumations, two cremation deposits and disarticulated remains from two contexts were associated with a round barrow and date to the middle Bronze Age. The remaining five articulated skeletons date to the mid Saxon period. The assessment revealed prevalent spinal degenerative changes and three individuals with trauma which included myostosis ossificans traumatica.

#### Wintringham (site 3)

The assessment of 31 inhumations, nine cremated bone deposits and disarticulated remains from nine contexts is currently in progress. Sixteen individuals were located within two distinct areas, and these are dated to the Roman period. The assessment has revealed that twelve of these had been decapitated with five having associated peri-mortem trauma on the mandible and vertebrae which warrants further investigation. The high number of decapitation burials is unusual for a Roman context and may indicate that the burial grounds do not represent the usual small scale burial grounds associated with a settlement where a small number of decapitation burials form part of normal burial ritual.

The site has previously been featured on [Digging for Britain: BBC iPlayer - Digging for Britain - Series 10: 3. Headless Romans and Anglo Saxon Gold](#)

#### Dorset

#### Dorset Visual Improvement scheme

The assessment of the 196 articulated skeletons has been completed. The remains span all time periods from the late Neolithic through to the early Medieval. Most of the

skeletons are however early medieval. Ancient DNA analysis is currently being undertaken.

### East Riding of Yorkshire

#### Trinity Burial Ground, Hull

Post-excavation reporting on the 19th century burial ground is almost complete. A total of 7208 skeletons were excavated and osteologically assessed. Of these, 1511 were fully analysed. Two additional graves contained an MNI of seven partially articulated, anatomised individuals. Almost five tonnes of disarticulated bone from the site comprised at least a further 1,492 individuals. Results of the aDNA and isotopic analyses were also received. A synthetic publication is planned for 2025.

### London

#### Woolwich Arsenal

On-going assessment of 84 early medieval inhumations. So far, seven individuals have been identified with evidence of perimortem sharp force trauma, consistent with multiple blows to the head, face, and neck region.

### Norfolk

#### Blakeney Point

The analysis of a cranium which was found on the coast during the 19th century was carried out. A sample for radiocarbon dating has been submitted.

#### Bittering Quarry, Dereham

A solitary crouched inhumation of possible late Neolithic-late Bronze Age date was discovered during excavation and comprised a shadow in the sand. This project is in the early stages of post-excavation analysis and reporting, but so far environmental samples have not produced any bone fragments.

### Oxfordshire

#### Gill Mill

Analysis and reporting was completed on cremated bone deposits from seven features that comprised two urned and five unurned burials. At least one of the unurned burials was

likely to be a primary burial. The two urned deposits include a possible female adult and a 16-19 year old adolescent/young adult.

#### Middleton Stoney

The assessment of 129 articulated skeletons dating to the early medieval period, one Iron Age skeleton and three undated burnt bone deposits has been carried out. A total of 45 skeletons have also been sampled for aDNA.

### Oxford

Analysis of 10 medieval Blackfriars skeletons, excavated during the early 1980s, has been carried out ahead of multi-isotope and aDNA sampling and analysis. Among the findings are a probable case of leprosy.

### Somerset

#### Hinkley Connection C

Post-excavation assessment of burials from several sites across this scheme is on-going. The skeletons comprise 21 neonates and one infant from a Roman settlement and four possible late Iron Age adults, all from Max Mill Lane, and one undated individual from land North of Barton. In addition, there are twelve possible Iron Age skeletons from Webbington Farm and five Roman skeletons from the Southern Overheads site.

### Suffolk

#### Land North of Castleton Way, Eye

The excavation had revealed a total of 98 burials dating to the Anglo-Saxon period, many of them furnished. However, having been buried in sand the preservation of the remains was extremely poor and human skeletal remains only survived in 29 of the burials. The assessment of the remains concluded that further work should involve peptide analysis which would potentially provide the sex of 17 individuals.

### **Social Media**

Keep up to date with all the latest news from Oxford Archaeology on our blog (<https://www.oxfordarchaeology.com/blog>), or by following us on social media at:

@oatweet on X (formerly Twitter)  
@oxfordarchaeology on Instagram  
Oxford Archaeology on Facebook.

You can also check out past Burials projects, reports and publications on the brand new Oxford Archaeology Knowledge Hub (<https://knowledge.oxfordarchaeology.com/explore>).

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### **Sedgeford Historical and Archaeological Research Project (SHARP)**

*Sophie Beckett*

#### **Departmental Report:**

It is with great sadness that this year's report marks the passing of Martin Hatton, who was the Human Remains Team lead supervisor for many years at the Sedgeford Historical and Archaeological Research Project (SHARP). Martin has taught and guided so many of us so much over the years, not just in osteoarchaeology and wider aspects of archaeology but also, in kindness, patience, and humility. He was a wonderful friend to many at SHARP and he is so very much missed. Many BABAO members knew Martin and might wish to send a message to his family and/or to SHARP. The Human Remains (HR) team are collating these on behalf of Martin's family. Please contact [drsophiebeckett@gmail.com](mailto:drsophiebeckett@gmail.com) with your message or for details on where to send a card. The Human Remains Team will lead a memorial event during the SHARP summer season at Sedgeford in 2024. Details of this will be made available on the SHARP blog (<https://www.sharp.org.uk/blog>).

In the summer of 2023, SHARP ran their annual excavation season, continuing to focus on the Early Medieval malting complex. This year, members of the HR team were on-site for several weeks, working with volunteers to progress post-excavation recording and analysis of SHARP's skeletal assemblages. A change from 2022 saw the team trialling the use of Sedgeford's church as a working space. This was very successful and SHARP is extremely grateful to the Sedgeford church warden for all their help and support. This year's onsite activities of the HR team and HR

volunteers included the recording of disarticulated bone, checking and updating articulated skeletal records, carrying out re-association investigations and, burial practice and taphonomy research. A refresher training session was introduced at the start of each HR working week and volunteers found this to be beneficial.

A test pit evaluation excavation also took place on Boneyard field this summer, supervised by Dan Cockling from the excavation team and Lucy Koster and Ray Baldry from the HR team. There were also opportunities for several volunteers to take part. Boneyard field is the location of an Early Medieval cemetery and SHARP's previous excavations have resulted in recovery of over 300 skeletons from articulated burials as well as a considerable quantity of disarticulated bone. The aim of the excavations this summer were to explore the boundary limits of the cemetery on the eastern edge of the field, in preparation for funding bids to develop SHARP's on-site facilities. The area we investigated was near to the burial location of a skeleton discovered during SHARP's facilities work during the 2018 season (S2001: articulated lower legs and feet uncovered). The evaluation revealed several burials containing articulated skeletons and also, disarticulated bone resulting from inter-cutting of graves and later features. General lack of grave good finds, body orientations, and positioning were all consistent with burial practice evidence seen within other excavated areas of the field, where articulated burials were found. The newly discovered remains potentially form a row of burials (potentially also including S2001). Radiocarbon dating results for S2001 were within the date range obtained for these other areas (650 – 850 ACE) but at the earlier end of the range. SHARP hopes to gain funding to carry out further analytical testing, including radiocarbon dating of the most recently discovered remains, to confirm chronology. The evaluation has enabled SHARP to establish that S2001 was not an isolated burial, outside of the boundaries of the cemetery. However, it is still unclear whether this 'row' of burials form a separate area of burial within one cemetery boundary or whether this is a separately bounded area.



Previous SHARP evaluations on Boneyard field have revealed disarticulated human remains, but a lack of articulated skeletons. These previous exploratory trenches were located within a region of the field between SHARP's open area trenches (1996 – 2007) and this year's test pit trench. Lucy Koster is carrying out the post-excavation osteological analysis of the remains that were lifted from the 2023 evaluation trench and is contributing to the report that SHARP is preparing for publication.

During the summer season, Dr Sophie Beckett presented a lecture as part of SHARP's Tuesday Evening Lecture Series 'Revealing aDNA Discoveries of Early Medieval Sedgeford'. The talk summarised the results of a major aDNA project that SHARP has recently participated in (published in Nature in 2022 and Science in 2021). It also explained the specific results for Sedgeford, how they are helping to inform our interpretation of the early Medieval Sedgeford population and how SHARP would like to develop this research further. Sophie also presented the talk in March 2023 for the Norfolk and Norwich Archaeological Society (<https://www.nnas.info/activities>).

Postgraduate researcher Summer Courts visited Sedgeford to presented one of the Tuesday Evening lectures with the title; 'Sex, gender, and constructed narratives around female agency and 'victimhood' in early medieval England: the case of the Lowbury lady'. Summer is an AHRC funded PhD researcher who is investigating the archaeology of Lowbury Hill in Oxfordshire (<https://research.reading.ac.uk/mymerian>).

SHARP continues to run an in-person introductory short course on human osteoarchaeology (<https://www.sharp.org.uk/courses>) and has recently launched an online short course on 'Cremation and Cremated Remains in Archaeology' (<https://www.sharp.org.uk/cremation-and-cremated-remains-in-archaeology>). The online course is delivered via SHARP's Digital

Trenches virtual learning environment ([www.sharp.org.uk/digitaltrenches](http://www.sharp.org.uk/digitaltrenches)).

The HR team are collecting photo donations as part of its grant from the National Archives Collaborate and Innovate programme Archives Testbed Fund. This is enabling SHARP to investigate whether photographs of excavations that are donated by volunteers and visitors to help overcome post-excavation challenges. If you have ever worked with SHARP and took any photographs at Sedgeford, please donate them via the Digital Trenches platform ([www.sharp.org.uk/digitaltrenches](http://www.sharp.org.uk/digitaltrenches)) or contact Dr Sophie Beckett for further information ([drsophiebeckett@gmail.com](mailto:drsophiebeckett@gmail.com)).

Human Remains Team supervisor, Lucy Koster presented some of SHARP's research at the 2023 BABAO conference in the form of an oral presentation; 'Sex estimation of early medieval sub-adult skeletons from Sedgeford, Norfolk using tooth measurements' as well as presenting on research she is undertaking as part of her PhD at the University of Aberdeen, 'Investigating migration, kinship, and mobility in prehistoric Scotland using ancient DNA and stable isotopes'.

After many years at Cranfield University, Dr Sophie Beckett has joined the Department of Archaeology and History at the University of Exeter. Sophie is one of SHARP's Human Remains Team lead supervisors. The SHARP team are looking forward to exploring the potential for collaboration between SHARP and the University of Exeter. Human Remains team supervisor Susannah (Zannah) Salter has also taken on a new challenge, as a PhD student at the University of Cambridge, after many years working in pathogen genomics at the Sanger Institute. SHARP wishes both Sophie and Zannah well in their new roles.

In 2024, SHARP will be running a 4-week long summer excavation season at Sedgeford with opportunities for excavation and post-excavation volunteers. SHARP plans to open up a new excavation area, subject to landowner permissions. In addition to its course 'Introduction to Human Skeletal Remains:



Osteoarchaeology Investigations', SHARP offers a range of introductory courses including; 'Basic Excavation and Recording Techniques' (BERT) and, 'Historical Crafts and Skills'. For booking enquiries, please contact SHARP's Booking Manager ([bookings@sharp.org.uk](mailto:bookings@sharp.org.uk)). See also (<https://www.sharp.org.uk/courses>) for more information about SHARP courses, volunteering and excavation opportunities.

SHARP Human Remains team contacts: Dr Sophie Beckett ([drsophiebeckett@gmail.com](mailto:drsophiebeckett@gmail.com)) and Lorraine Horsley ([lorriehorsley@hotmail.com](mailto:lorriehorsley@hotmail.com)).

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### **York Osteoarchaeology Ltd 2023**

*Elina Petersone-Gordina, Jordi Ruiz Ventura, Paola Ponce, Alice Rose and Malin Holst*

This review does not include projects with fewer than three skeletal assemblages. We are working on two sizeable populations, which will be completed in 2024.

*Archaeology Warwick, Perrybrook Gloucester, PP*

Five unurned probable prehistoric cremation burials and two skeletons from the same site likely dating to the Iron Age all consisted of adults.

*Archaeological Services WYAS, Chester Road, Penshaw, Tyne and Wear, EPG*

Four Early Bronze Age cremation burials ranged from 0.4g to 1934.9g. The latter was urned, likely a primary Bronze Age barrow burial, and contained the remains of an old middle adult male.

*Historic England and MoLA Northampton, Great Ryburgh, Norfolk, JRV, PP, EPG*

A total of 88 mid 8<sup>th</sup> century skeletons were buried in log coffins or plank-lined graves around a possible church in west to east and supine extended positions. The preservation and completeness were poor. Non-adults represented 10.2% of the population (older juveniles and adolescents), while 89.8% were adults, with males outnumbering females. Stature was taller than average for the period. Almost all children and half of the adults had

DEH, while a third of skeletons had cribra orbitalia and one had scurvy. There was little evidence of trauma. One mature adult male had healed sharp force trauma to the skull. Evidence for infectious disease was uncommon or lost due to poor preservation. Joint and dental disease was prevalent, with an unusually high rate of calculus, widespread periodontitis and severe dental wear.

*Humber Field Archaeology, North Cave, East Riding of Yorkshire, PP*

Five Neolithic or Bronze Age skeletons in crouched or flexed positions and south to north or inverted orientations included one male and four females. The four females experienced early childhood stress. Three individuals had ectocranial and one endocranial periosteal reactions. One female had sinusitis and a congenital gap in the atlas. Joint disease was observed in two females and a male. Dental calculus were recorded in three and cavities in two skeletons. The urned Bronze Age cremation burial of an adult included a quern fragment and worked flint.

*Phoenix Consulting Archaeology, Bar Pasture Extension, Pote Hole Quarry, Peterborough, AR*

Six skeletons date from the late Iron Age to the early Roman period and were buried in a variety of orientations and positions. The prone flexed burial position of B9 is unusual, with few published parallels. All individuals were adults, including three females and one male. Dental health was poor and trauma and joint disease were prevalent.

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### **Museums at the Royal College of Surgeons of England (RCS)**

*Carina Phillips*

We were very excited to open the newly developed Hunterian Museum in May! Together with the Anatomy and Pathology Museum which opened just a few months earlier, RCS England has been able to welcome both the public and health/science students, trainees and professionals back into the museums again. The beginning of the year was busy with museum installations and collections moves. The 70,000 objects and

specimens that form the museum collections had to be moved various times while the building was being redeveloped. Some of the collections continue to be stored offsite, but we are happy to report that since reopening we have been able to support collections research visits again.

The collections can be searched via the online catalogue: <http://surgicat.rcseng.ac.uk/home>. Please be aware that this does not include Human Tissue Act (2004) licenced material. You can contact us via email: [museums@rcseng.ac.uk](mailto:museums@rcseng.ac.uk) if you do have an HTA specific enquiry or wish to discuss research access to any of the collections.

Should you want to visit the [Hunterian Museum](#) or come and study in the [Anatomy and Pathology Museum](#), please see their websites for more information.

There have been many wonderful people (far too many to name here) that have helped to move the collections and create the new museums, and we are grateful to them all.

In other RCS news, we welcomed Emily Mitchell in December to the post of Digital Curator. Emily is working on the various social media and online engagement that is being developed for the museums. I (Carina Phillips) started back on my part-time PhD (with the RCS, UCL and NHM). After a hiatus while the museum work intervened, I have been able to continue research into the Osman Hill specimen collection which is housed at the RCS museums. This interdisciplinary project investigates both the historical and biological significance of the (mostly) non-human primate specimens, collected by W.C. Osman Hill, who was a founder of primatology.

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## DEPARTMENTAL REPORTS

### **Cranfield Forensic Institute** **Cranfield University** *Nicholas Marquez-Grant*

Cranfield Forensic Institute continues to thrive in forensic archaeology and anthropology. Most of the forensic anthropology teaching staff includes Dr Nicholas Márquez-Grant, Dr Nivien Speith, Dr David Errickson with contributions and other human remains related research and teaching by Dr Fiona Brock, Dr Stephanie Giles and Mr Roland Wessling.

The year started with a great cohort of national and international students, with the Forensic Archaeology and Anthropology MSc being one of our most popular courses. The students were also able to elect modules in mass disasters, fire investigation, radiography, trauma and weapons, ballistics and explosives, amongst others; resulting in some great MSc projects combining anthropology and ballistics, for example.

Excavations continued at a Roman site not far from Cranfield, directed by Dr David Errickson in collaboration with Mr Peter Masters. The CRICC (Cranfield's Recovery and Identification of Conflict Casualties) team was very active in 2023 with a total of 5 recovery missions. Three of these missions took place in Italy, one in Germany; and the other one took place in the UK in partnership with a commercial archaeology company. This year we took most of our 2022-2023 cohort to these missions. In addition, staff members went to the meeting in Portland, Oregon, where partners from the Department of Defense Prisoner of War/Missing in Action Accounting Agency (DPAA) gathered. Work in 2024 will focus on a number of Italian and Germany deployments, and possibly investigating a number of Spanish Civil War mass graves. A limited amount of UK forensic casework was also undertaken by the team. Cranfield University was also involved in the organisation of the European Meeting of Forensic Archaeology in Madrid in September this year.

Dr Nivien Speith arranged the receipt of a 19th century naval skeletal assemblage which will form part of our research for many years to come. She is currently co-Director of the Forensic Archaeology and Anthropology programme with David Errickson. In July 2023, Nivien attended the 'Porous Skeletal Lesions: Achievements and Future Directions' Meeting in Coimbra, Portugal, and presented her research on using porous skeletal lesions for mapping rare bone diseases, which was extremely well received. Together with an international team of colleagues, she will be leading the Working Group on Pathophysiology of PSL.

Dr Stephanie Giles passed her PhD viva entitled 'Post-mortem interval estimations in medico-legal death investigations'.

Dr Nicholas Márquez-Grant was promoted to Reader in Forensic Anthropology. In December 2023, Nick was also elected as Chair of the British Association of Forensic Anthropology (BAFA). Nick also was part of a panel of 4 to examine the first cohort in Forensic Archaeology certification in Latin America.

Dr Dave Errickson became Deputy Head of Cranfield Forensic Institute and has been leading most of the WWII US recoveries on behalf of DPAA. He has also continued to research into 3D printing and imaging and has been invited to give a number of lectures, for example at the British Association of Forensic Anthropology meeting in December 2023.

Our MSc students were engaged in a wide range of topics. This included terminology in forensic anthropology, ballistic trauma to bones, fieldwork in Ibiza (Spain) to examine a 10th century assemblage, the analysis of Rat Island skeletons, the analysis of commingled skeletal assemblages from Lisbon (Portugal), cut marks to bone, and many more.

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## **WMG, University of Warwick**

*Charlotte (Charlie) Primeau*

At Warwick Manufacturing Group (WMG) at the University of Warwick, the forensic department has expended a little, adding to our other staff members. We have had the pleasure of welcoming Charlotte Lawrence (who is also the treasurer of the BABAO) to our team, and are very excited that Charlotte decided to join us. Charlotte started in October and will be involved in further development and validation of using micro-CT imaging for forensic applications, with a PhD partly sponsored by West Midlands Police.

Charlie Primeau has been involved with micro-CT imaging research on sharp force trauma in collaboration with the Institute of Forensic Medicine in Denmark, as well as teaching on courses in collaboration with Anglia Ruskin University. Charlie has continued to be an engaged member of the committee for the International Association of Forensic Radiographers (IAFR), as well as been working with the Trends editorial team for BABAO, on establishing the journal.

Team members have participated in conferences and presented case work on a number of conferences such as the 12th Anniversary Meeting of the International Society for Forensic Radiology and Imaging (ISFR) in Toulouse, France, BABAO in London, British Association of Forensic Anthropology (BAFA) in Coventry, British Association of Human Identification (BAHID), in Moreton-on-Marsh, Tomography for Scientific Advancement (TosCa), and the Chartered Society of Forensic Sciences (CSFS), Leeds.

The department is continuously involved with supporting police forces predominantly in the UK, as a streamlined forensic service provider of micro-CT scanning and 3D printing for case work such as are strangulations, hangings, child abuse, elder abuse, sharp and blunt force trauma, dismemberment cases, 3D printed weapons, traffic accidents and house and car fires. In addition, WMG has also been involved with medical research relating to human

remains and cadavers and continues this with several ongoing projects such as improving hip replacement surgery, osseous tibial implants and failure analysis.

We would like to highlight to the membership of BABAO, that at WMG there is funding available for free access for smaller micro-CT imaging projects such as proof of concepts, feasibility studies or method development, through the National Facility for X-ray Computed Tomography (NXCT). To contact us regarding this, please use:

[Charlie.primeau@warwick.ac.uk](mailto:Charlie.primeau@warwick.ac.uk)

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**Department of Archaeology**  
**Durham University**  
*Tina Jakob*

Since January 2023 Becky has been acting Deputy Provost and is currently undertaking this role alongside directing and teaching the MSc Human Bioarchaeology and Palaeopathology degree as well as contributing to the MSc Forensic Archaeology and Anthropology.

During the summer, our MSc students conducted independent dissertation research encompassing various topics within the field of forensic anthropology, including the analysis of skeletal trauma, forensic taphonomy, and human identification. In June 2023, Dr Daniel Gaudio coordinated the analysis of skeletal remains of soldiers from the Great War discovered in a mass grave in the Italian Alps, excavated in 2022. This allowed the MSc students to apply their knowledge acquired throughout the year. Dr Tina Jakob, Prof Becky Gowland and Prof Tim Thompson (Teesside University) also participated in the analyses.

It was really exciting to see this first cohort of students on the MSc Forensic Archaeology and Anthropology degree graduate. All of the students returned to Durham for the ceremony, and it was fantastic to see how positive they were about their time at Durham and what a tight knit group they became, especially during their fieldwork in Italy. We were impressed by

their professionalism and expertise when analysing soldiers killed in WWI and recently excavated from a mass grave in the Alps.

In September, Dr Daniel Gaudio investigated human remains discovered in an Alpine Glacier (Adamello Glacier) as part of his professional commitments and in connection with his research in glacier taphonomy.

In October, we were delighted to welcome Dr Claire Hodson back to Durham. Claire is supporting our Human Bioarchaeology programmes at Durham and it's great to have her expertise.

We were also thrilled that the Fewston project (in collaboration with the Washburn Heritage Centre and the University of York), which explored the harrowing lives of pauper apprentices in nineteenth century North Yorkshire, was featured in Current Archaeology ('Tired Beyond All Telling') and shortlisted for the Research Project of the Year award.

The work by Prof Janet Montgomery and Dr Alice Rose (PDRA) on the ERC-funded FoodCult project (PI Susan Flavin) (<https://foodcult.eu/>) is now nearing completion. In collaboration with Prof Darren Gröcke and Dr Geoff Nowell (Department of Earth Sciences, Durham University), Janet and Alice have successfully generated a huge amount of new isotopic data relating to diet and mobility across Early Modern Ireland. The project members are now focusing on the development of a series of open-access publications to share their findings.

Dr Joanna Moore has now returned from maternity leave and together with Prof Janet Montgomery is undertaking a diverse range of international isotope projects, with Durham's state-of-the-art facilities providing services to commercial units, companies, councils and academic researchers alongside actively supporting the training and research of undergraduate and postgraduate students.

Dr Eva Fernández-Domínguez remains involved in two major research projects and

she is PI on 'What's in a house? Exploring the kinship structure of the first world's first houses'

(<https://www.liverpool.ac.uk/archaeology-classics-and-egyptology/research/projects/what-house/what-house-background/>) with Dr Jessica Pearson from the University of Liverpool as CO-I. The project aims to decipher biological and social relationships in different burial settings of the first farming groups of the Northern and Southern Levant across the PPNA and PPNB (ca. 9000-7000 BCE) using ancient DNA and isotopes of mobility. This project has two Post-Doctoral Research Assistants: Dr Kelly Blevins, PDRA in ancient human genomics at Durham University and Dr Hannah Plug, PDRA in Bioarchaeology at Liverpool University.

Charlotte Roberts, despite being retired, remains involved in Bioarchaeology. She was invited to a multidisciplinary workshop in Georgetown, Washington, DC, USA (Epidemic Millennium: Interdisciplinary Studies of Disease before 1000) - *Tuberculosis: The Skeletal Evidence for the First 1000 Years CE*. On behalf of the British Academy, she spoke at the Royal Society's Summer Science Festival (*From bones to biomolecules: can the dead teach us anything?*) and was a plenary speaker at the World Anthropology Congress in Bhubaneswar, Orissa, India (*Bioarchaeology: Evolution to revolution in answering the big questions about past health and well-being*). She also continues working with the Natural History Museum, Vienna, Austria on their Scientific Advisory Board.

The Department of Archaeology also has a thriving and engaged MSc and PhD student community. Mocen (Sylvia) Li successfully defended her PhD in 2023 *Health impacts of agricultural intensification and urbanisation in Early China: A bioarchaeological analysis of disease patterns, subsistence economies, and lived environments in Shaanxi from 3000 BC to AD 220* (supervised by Charlotte Roberts and Peter Rowley-Conwy). Julie-anne Birch and Lauren Gill are our latest additions to the bioarchaeology PhD group straight from

completing their MSc programmes (see PhD summaries for their research topics). In addition, Naomi Kilburn, another recent MSc Human Bioarchaeology and Palaeopathology student, returned to Durham on a Northern Bridge PhD scholarship.

### **MSc in Human Bioarchaeology and Palaeopathology dissertation titles**

*Adams, C.\*: Gender Bias Instilled in our Bones? Assessing Sex Estimation Methods and the Potential Impacts of Gender Assumption in an Archaeological Context*  
MSc Bioarchaeology student

*Birch, J.-A: Limb amputation at the Radcliffe Infirmary, Oxford in the Late-eighteenth to Early-nineteenth Century: A Comparative Analysis of Saw-marks and Surgical Procedures at the Dawn of Modern Surgery*

*Bream, L.: Guilt is a Mother: The Social and Legal Consequences of Gender Bias in DOHaD.*

*Buckingham, C.: Not Welcome Here: Using Stratigraphy, Skeletal Analysis and Historical Documentation to Deepen Understanding of the Function of Radcliffe Infirmary, Oxford 1770-1855*

*Da, E.: Detecting the iodine element in human remains*

*Gibson, J.: LEH and other indicators of stress in individuals from Coach Lane in light of the DOHaD*

*Harayama, T.: Multi-Isotope Analysis on Human and Horse Remains from the Viking Ship Burial at Kiloran Bay, Colonsay, Scotland: Investigating Mobility and Diet*

*Hoag, K.: Equity and social determinants of health by generating syndemic vulnerability profiles for the Radcliffe Hospital population*

*Latham, S.: A dietary comparison between two contemporaneous monastic orders*

*Liu, Y.\*:* Isotope analysis of incremental human dentine: dietary reconstruction of a medieval population from Scorton, North Yorkshire\* MSc Bioarchaeology student

*Messana, C.:* Using differential diagnosis and aDNA to investigate TB-like skeletal lesions in a pre-conquest Mesoamerican population

*Mitchell, C.:* Assessing the scale of care networks at European medieval leprosaria using isotopic and aDNA data

*Musgrave, P.:* The Relationship between Palaeopathology and the Healthcare Industry: Informing Policy and Mitigating Emerging Health Consequences

*Oakley, N.:* Social and Health Implications of Women's Bodily Autonomy and Reproductive Management

*Pryce-Rattle, L.:* Trauma and treatment in the 18th-19th century: case studies from the Radcliffe Infirmary burial ground, Oxford

*Severson, S.:* Isotopic and dental non-metric trait analysis for assessing provenance, mobility and kinship of mid-Neolithic individuals from Catalonia

*Shukla, A.:* Effect of Contamination of Bones on the Preservation of DNA and Methods to Effectively Decontaminate the Contaminated Bones

*Stieglitz, A.:* Together in Life and Death: Joint Human-Dog Burials from Rural Sites in Late Iron Age and Roman Britain

*Terpstra, E.:* Craniomandibular morphology and dental health: A geometric morphometric study from post-Medieval Radcliffe Infirmary, Oxford

*White, E.:* Creating diagnostic criteria for Brucellosis using York Fishergate House and the Radcliffe Infirmary collection

*Yates, E.:* Diet, Disease and Deities. A Carbon and Nitrogen Isotope Study of the Sacrificial Victims at Tlatelolco

## **MSc Forensic Archaeology and Anthropology dissertation titles:**

*Baranowska, W.:* Taphonomic Signature of a WWI Mass Grave in an Alpine Context: A Case Study from Tonale Pass, Italy

*Bowmer, E.:* Assessing the Effect of Freezing and Thawing on Bone Tissues and its Relevance in Forensic Anthropology

*Cox, K.:* Lost in a world of cisnormativity – the use of clinical research to enable the identification of transgender individuals in forensic anthropology

*Gill, L.:* Multi-Methodological Analysis of Skeletal Trauma of World War I Soldiers Found in Italy

*Lucas, A.:* An assessment and recording of taphonomic alterations to the Radcliffe Infirmary skeletal collection

*Madigan, S.:* Absence and Abundance: Exploring the Relationship between Geophysical and Biomolecular Data in Western Asia from 12,000 years BP to 4,000 years BP

*Munro, K.:* A preliminary study into the usability of cutting-edge imaging Optical Profilometry and 3D scanning for the analysis of saw marks on bone

*Perkins, S.:* Under Pressure: The Effect of Stage Four Decubitus Ulcers on Skeletal Remains

*Satam, A.:* Recording skeletal changes from gender affirmation surgery

*Sparling, J.-L.:* Context is Key: The Value of Pathology in Bioarchaeological Recidivism Studies

*Vieweg, S.:* Fingerprints on medieval cockspurs: An interdisciplinary approach to fingerprint analysis

*Williams, G.:* The Danger of a Singular Narrative: Osteobiographies and the



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**Department of Archaeology, University of Cambridge**

*Trish Biers*

The Duckworth Laboratory was exceptionally busy this past year with researchers from all over the world. We are also pleased to report a significant amount of activity with Descendant Communities and a robust repatriation programme that continues to grow.

The Department of Archaeology is pleased to welcome PhD Candidate, Margot Serra, who's project is titled, "Exploring Middle Preceramic Lifeways along the Peruvian South Coast: A Comparative Osteobiographical Analysis." The main purpose of this research project is to carry out a comparative osteobiographical analysis of human remains excavated from Middle Preceramic sites (circa 7000-6000 BP) located in the Lower Ica Valley of Peru to reconstruct community health and behaviour patterns and thus gain a better understanding of the lifeways of hunter-gatherer communities living during this period of increasing sedentism. In addition, this project wishes to explore the overall diversity and variability of Preceramic communities' biocultural adaptations to the environment of coastal Peru, specifically within the unique context of the lomas or 'fog oases', and the nearby hinterlands.

Many BABAO members in the Department have published this past year:

"In the Ancient Parasites Laboratory Piers Mitchell and Tianyi Wang published the earliest evidence ever found for *Giardia duodenalis* (which causes diarrhoea), from 7th-6th century BCE Jerusalem. This resulted in plenty of worldwide media interest, such as <https://www.smithsonianmag.com/smart-news/jerusalem-parasite-dysentery-180982278/>."

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**Ongoing projects and News**

The LJMU Anthropology and Archaeology department would like to wish all the members a Happy New Year. The recruitment of students for our Undergraduate and Master courses in Forensic Anthropology, respectively led by Dr Alex Wilshaw and Dr Matteo Borrini, was significant, with the enrolment of several students both national and international. Our osteology labs have been busy with many of them volunteering for the curation of our latest excavated skeletons from the medieval site of Poulton (Cheshire).

Dr Laura Buck has been working on several projects with various institutions. The first is ongoing since 2018, entitled "The morphological consequences of hybridization in primate and human evolution: a macaque model" in collaboration with Tim Weaver (UC Davis), David Katz (University of Calgary), Leslea Hlusko (CENIEH), Rebecca Rogers Ackermann (University of Cape Town) and Sree Kanthaswamy (Arizona State University) (NSF and Leakey Foundation funded). Dr Buck is also PI for the project "A non-human primate model for Neanderthal / *Homo sapiens* hybridization" which sees a collaboration with Tsuyoshi Ito (Kyoto University Museum), Aurélien Mounier (Musée de l'Homme), Chris Stringer (Natural history Museum, London), Tim Weaver (UC Davis), David Katz (University of Calgary), Takeshi Nishimura (Kyoto University), Yoshi Kawamoto (Nippon Veterinary and Life Sciences University) (Daiwa Foundation and Great Britain Sasagawa Foundation funded). And finally, "Human skeletal adaptation to environmental variation associated with the colonisation of the Japanese Archipelago", in collaboration with Jay Stock (Western University), Isabelle De Groote (Ghent University), Lumila Menéndez (Bonn University), Brenna Hassett (UCLAN), Hirofumi Matsumura (Sapporo Medical University), Tsuyoshi Ito (Kyoto University Museum) (ERC-funded).

Dr Mark Grabowski worked with CAS Oslo for the project "The Importance of

Measurement Theory for Paleobiology,” with one associated article published so far.

Prof Joel D. Irish is collaborating with the Polish Centre of Mediterranean Archaeology, University of Warsaw on the project “Muslim women in Fatimid Alexandria: Why did they die young? Biocultural factors in the change of living conditions for people buried at Kom el-Dikka in Mediaeval Alexandria compared to the rural Christian population on the fringes of Fayoum”

(<https://pcma.uw.edu.pl/en/2023/08/11/project-muslim-women-in-fatimid-alexandria/>). Prof Irish is also part of the Combined Prehistoric Expedition to Gebel Ramlah, Egypt.

Dr Julie Roberts was awarded Impact Funding (QR Policy Support Fund) to examine factors influencing DNA preservation in mass fatality incidents where the bodies of victims are disrupted, and recovery operations are often protracted. A pilot project with Alecto Forensic Services and Cellmark Forensic Services used primary forensic data from a mass fatality incident to investigate an apparent decline in DNA success rates over time, identifying intrinsic and extrinsic factors which affected the preservation of DNA. Furthermore, the project explored the correlation between DNA quantification scores and positive identification. Dr Roberts also attended DVI operations, both at the scene and long running mortuary examinations, multiple scenes to record and excavate remains from deposition sites and clandestine graves, numerous post-mortem examinations in the mortuary and laboratory to assist with the identification of the deceased, interpret skeletal trauma, and examine burnt and dismembered remains. Dr Roberts also organised, with the help of Dr Valoriani, the first in-person national meeting of the UK DVI Archaeology and Anthropology cadre that saw several experts networking here at LJMU.

Dr Kevin Cootes, Senior Research Officer and leader of the Poulton Project, reports that in last year’s excavation campaign, 20 skeletons were excavated, bringing the total to an MNI of 810 individuals. From a restricted area within a ditch of Late Iron Age/Roman date,

partial remains of a disarticulated human neonate (probably a single skeleton) were recovered for which we are awaiting the results of radiocarbon analysis. Furthermore, genetic analysis of an additional 28 individuals from the medieval graveyard is being conducted by the Crick Institute as part of the 'Whole Genome Study', bringing the total to 49.

Dr Satu Valoriani has been collaborating, together with Dr Borrini, Dr Eliopoulos and Prof Irish, with Prof Hugh Devlin (University of Bristol) and the University of Manchester, on a project regarding Arsenic and Phosphorus contents in cases of Phosphorus Necrosis of the jaw.

### **Completed PhD projects**

*Adeline Morez:* Reconstructing past human genetic variation with ancient DNA: case studies from ancient Egypt and Medieval Europe.

*Emma Phillips:* Who were the people of the Fourth Cataract? Using dental non-metric traits to explore population history in the middle Nile valley from the Neolithic to Medieval period.

*Abdullah Alawadhi:* The Detection of Simulated Clandestine Graves in an Arid Environment Using Unmanned Aerial Vehicle Remote Sensing

### **Completed MSc Projects (Academic Year 2022/23)**

*Michaella Ace:* Quantitative Analysis of Dental Wear Differences Between Hunter-Gatherer and Agriculturalist Populations: Can Current Methods be Adapted to Both Physical and Digital Collections?

*Roudaina Alzohby:* Genetic Insights into Neolithic Nubians: Preliminary assessment of DNA Preservation in Late Neolithic Human Skeletal Remains from Kadero, Sudan.

*Abbie Andrews:* Human cranial vault thickness in relation to age in juveniles: applications to disaster victim identification



*Hannah Barker:* The potential value of methods of soil mineral suite analysis as a means of detecting the criminal reburial of human remains in the UK

*Jessica Black:* Comparative study of enthesal recording methodologies and developmental influences.

*Amy Cannon:* Sexual Dimorphism in the Zygomatic Bones of Two Medieval British Populations.

*Thomas Dickinson:* An investigation into the intracranial and mandibular relationships of natural symmetry and asymmetry in decedents from the New Mexico Decedent Image Database.

*Ciara Dysart:* SNP rs2424399: A Validation Study into the Association with Nasal Width for Use in a Forensic Context.

*Katie Griffiths:* The Resilience Of Cut Mark Characteristics: An Experimental Study On The Effects Of Fire Exposure.

*Kayla Hummel:* SEEKING THE HIDDEN. An Investigation of Childhood Mortality and Pathology in the Basque Country Through the Analysis of a Commingled Post Medieval Juvenile Sample.

*Maisy Jordan:* The Effect Of Corrosive Chemicals On The Morphology Of Bone And The Resilience Of Cut Mark Characteristics: An Experimental Study.

*Jade Kneen:* A Comparative Study of the Three Age Markers of the Adult Os Coxae on a Medieval British Skeletal Sample.

*Beth Lawrence:* Sharp Force Trauma: The Investigation of Possible Animal Bone Proxies Used for Cut Mark Analysis of a Serrated Knife

*Charlotte Leatherbarrow:* Study Of Sexual Dimorphism In The Femoral And Humeral Head Diameters Of A Late Medieval Population, With Regards To Its Use In The Sexing Of Modern Mass Grave Victims.

*Shannon McGowan:* Up In Arms- Exploring To What Extent Age And Sex Affects Post-Mortem Arm Positions And Burial Positions Of The Deceased At Poulton Chapel.

*Dilisha McHugh:* Thermal Alterations And Cutmarks On Bone: Investigating The Effects Of Varied Heating Conditions On Osteological Material.

*Niamh McIntosh:* An Investigation into the Use of 3D Microscopy and Stereomicroscopy Techniques of Analysis, on Cut Marks in Bone.

*Kate Midgley:* The Osteometric Reassociation of Remains found at Poulton Research Project using Femoral and Humeral Heads.

*Alaine Miller:* Occupational patterns in Medieval Europe: An assessment of musculoskeletal stress markers on archaeological remains from Poulton and Gloucester.

*Ceri Moorhouse:* Using the x-ray machine to assess the cortical bone density of the humeral shaft in comparison to the occupational stress markers and discovering evidence of osteoporosis.

*Michael Nutbrown:* Estimating Shooter Distance Through Analysis of Skeletal Trauma Caused by Low-Velocity Projectiles

*Eve Packer:* How can geophysical surveys be used to detect mass graves and clandestine burials, and how can using multiple surveys improve the accuracy of results?

*Larisa Saracevic:* The Use of Non-clinical Images in the Identification of Human Remains with an Application in Disaster Victim Identification

*Ellen Shakeshaft:* Vertebral Bone Density Variations in Scoliotic VS Non-Scoliotic Juveniles, and its Implications for Schmorl's Node Development: A CT Based Analysis Using The New Mexico Decedent Image Database

*Sookriti Sircar*: From Steppe to Medieval England: Next-Generation Sequencing and Sex Determination of Medieval Gloucester and Detecting Steppe Ancestry in Medieval Genes

*Megan Tuck*: A method to identify the sex of Juvenile Skeletal remains using the ilium

*Aimee Tunstall*: Cadaver dogs: training and success

*Hebe Unwin*: The Accuracy And Accessibility Of Smile Photography Analysis As A Method Of Forensic Identification: A Preliminary Study

*Henrietta Vita*: Testing the validity of the DSP2 sex assessment tool on two European populations

*Sandra Wlodarczyk*: An investigation into the intrapopulation cranial variation of Medieval English Populations

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**Biological Anthropology Research Centre**  
**University of Bradford**  
*Jo Buckberry*

2023 saw the launch of ‘Capability for Human Bioarchaeology and Digital Collections’, with an exposition showcasing recent AHRC-funded infrastructure that was held at the University of Bradford on 13<sup>th</sup> September. This allowed members of the broader community (academics and representatives of collections and heritage organisations) to visit Bradford and see the new equipment in action, and it was fabulous to see so many BABAO members in attendance (although I barely got out of the cone beam CT room all afternoon). Do get in touch if you want any details regarding access to the FujiFilm NewTom 7G cone beam CT, Zeiss MetroTom 1500 micro-CT, stable light isotope or other facilities (ranging from prospection and scanning capabilities that help to place cemetery assemblages in context, to surface metrology/surface imaging, and FT-microscopy and portable XRF analysis, all underpinned by investment in a Dell Powerscale solution for data handling) – please either contact the project

lead Prof Andrew Wilson ([a.s.wilson2@bradford.ac.uk](mailto:a.s.wilson2@bradford.ac.uk)), or our Business & Partnerships Manager Dr Richard Dunn ([R.Dunn1@Bradford.ac.uk](mailto:R.Dunn1@Bradford.ac.uk)).

Dr Jo Buckberry is still working with Gillian Crane-Kramer, SUNY Plattsburgh on ‘Palaeopathology at the Rise of Industry’, currently focussing on data from the burial registers of the Beckett Street cemetery in Leeds, to investigate 19th century mortality and social status. Dr Hannah Koon has been beavering away in the isotope lab refining methods to enable combined CNS isotope measurements on incremental tissues such as hair and teeth, some of which was presented at the SAA conference in Portland. She has also presented initial findings at the EAA conference in Belfast from work with Julie Bond to create a faunal isotope baseline for Swandro. The Knowe of Swandro is situated on the edge of a windswept and boulder strewn beach on the small island of Rousay, Orkney. The site has a long chronology with successive occupancy and is dominated by an Iron Age settlement.

Unfortunately, due to ongoing severe coastal erosion the archaeological features at the site have become truncated. However, careful excavation and sampling of these deposits means it is possible to explore the sequential changing subsistence strategies at this important site. Dr Julia Beaumont has been working on paired deciduous M2 and permanent M1 teeth from 20 modern Bradford children, for whom we have medical and breastfeeding histories. BA/Leverhulme provided a small grant for the collection and comparison of isotope data from Beaumont method incremental dentine collagen and micro-milled samples from these teeth to investigate how well intra- and inter-tooth perinatal/first year of life data matches. Some of this was presented at the AABA conference in Reno and at the EAA in Belfast, and publications are expected in 2024. A new collaboration with Dr Chris Aris (Keele University) yielded a potential match between dentine isotope data and histological patterns in enamel and dentine: this was presented at BABAO and we anticipate further work to evaluate possible applications. Dr Shirley Curtis-Summers has started a new project called

‘Ties That Bind’, in collaboration with The Whithorn Trust, National Museums Scotland, and The Tarbat Discovery Programme, funded by a University of Bradford RIEDA grant. This research will conduct micro-CT analysis prior to destructive sampling for carbon and nitrogen isotope analysis of human incremental tooth dentine collagen from medieval skeletal assemblages at Whithorn (SW Scotland) and Portmahomack (NE Scotland). The aim of this research is to reconstruct diet and identify potential episodes of physiological stress, and correlate with existing osteological and palaeopathological data, to investigate factors that influenced maternal-child diet and health relationships in medieval Scotland. Workshops with local Scottish communities have also been carried out to encourage the public to share their stories and traditions on pregnancy and child-rearing and engage them with archaeological and bioarchaeological approaches to this topic – amazingly one of the first participants was the mother-in-law of our fabulous timetabling officer, Martin! It’s such a small world.

We were delighted when Carlos Da Silva Carvalho won the Don Brothwell Award for his undergraduate dissertation “Does Archery Affect the Anatomy of the Forearm?” – congratulations Carlos. Bradford staff and students have presented at many conferences in 2023, and we are all hoping to catch up with friends and colleagues at more conferences in 2024.

### **Completed PhD Research**

*Ruth O’Donoghue*: Seen but not heard: Reconstructing the early life history of the Industrial child through carbon and nitrogen stable isotope analysis of dentine collagen (AHRC Heritage Consortium).

### **Ongoing PhD Research**

*Corinne Feuillatre*: Bringing up Baby: in search of novel biomarkers for nutrition and obesity risk using stable isotope ratios in incremental tissues in mother/infant pairs (Faculty of Life Sciences)

*Isobel Grimley*: A lost world: assessing frailty from archaeological skeletal remains of

children, adolescents and young adults (School of Archaeological and Forensic Sciences).

*Georgia Holmes* (submitted): The Northern Powerhouse. A Multidisciplinary Study of Disease in Northern English Towns in the Nineteenth Century.

*Chelsea Landon* (submitted): Consanguineous Marriages and Congenital Conditions in English Populations from the 8th to 19th Centuries AD (AHRC Heritage Consortium).

*Dulcie Newbury* (submitted): Beyond the Binary: Funerary archaeology, gendered identity, and its impact on contemporary society (Faculty of Life Sciences).

*Aoife Sutton*: Pathological bodies: specimen preservation, death and display in Britain, 18-19th centuries (NECAH).

*Marie Weale* (submitted): The life course of Vitamin D: the risk of deficiency in British Archaeological Populations (Isle of Man Government).

**Dissertations Submitted for the MA Archaeology and Identity, MSc Archaeological Sciences, MSc Forensic Archaeology and CSI, and MSc Human Osteology and Palaeopathology:**

*Anchi Becker*: Identifying observable differences in disease processes of cribra orbitalia.

*William Buckley*: Analysing Pictish burials to determine visible trends in burial practices and tradition.

*Faye Corbett*: Post-Excavation Analysis of Round Barrow ‘Priddy 40’

*Ademola Fashola*: The impact of indigenous archaeology on the interpretation of the archaeological record.

*Sierra Fields*: Reviving the past: analysing adhesive damage and bringing those remains back into circulation through 3D methods.

*Eleanor Jessiman*: The relationship between os acromiale and humeral robusticity.

Nicolle Riviera Santos: Analysis of the physical and chemical properties of burnt bones.

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**Laboratory for Human Osteoarchaeology,  
Leiden University**  
*Sarah Schrader*

In 2023 the Laboratory for Human Osteoarchaeology was busy with teaching, research, and open science events. As way of a brief introduction, our team consists of two faculty (Sarah Schrader, Rachel Schats), one post-doc (Veronica Tamorri), six PhD students (Maia Casna, Katherine Guerra Cheva, Rachael Hall, Cora Leder, Mélie Louys, Alex Tutwiler), and one laboratory assistant (Marijke Langevoort).

**Research**

We are very happy to have been part of the formulation of [the Dutch Ethical Guidelines on the Treatment of Human Remains](#).

Our laboratory also published a special issue in the International Journal of Osteoarchaeology, entitled [Biostatistical Approaches to Past Physical Activity](#). This was the product of a conference hosted at Leiden in 2021, in collaboration with Jared Carballo-Pérez (Faculty of Humanities, University of La Laguna, Tenerife).

Rachel Schats wrote an article in the International Journal of Paleopathology, entitled [Developing an Archaeology of Malaria: A Critical review of Current Approaches and a Discussion on Ways Forward](#).

Rachael Hall and Sarah Schrader worked with international collaborators and the Dutch Cultural Heritage Agency (RCE) to publish their article in Scientific Reports, entitled [Osteological, multi-isotope and proteomic analysis of poorly-preserved human remains from a Dutch East India Company burial ground in South Africa](#).

Maia Casna, Rachel Schats, and Sarah Schrader wrote an article in the International Journal of Paleopathology, entitled A distant

city: [A distant city: Assessing the impact of Dutch socioeconomic developments on urban and rural health using respiratory disease as a proxy](#).

Sarah Schrader was awarded an Open Competition Grant from the Nederlandse Organisatie voor Wetenschappelijk Onderzoek (Dutch Research Council) to investigate cortisol in human remains.

Veronica Tamorri has been busy carrying out data collection and preparing publications for her MSCA project Women-PRO.

**Current PhD Student Projects:**

*Maia Casna:* Maia is investigating patterns of respiratory disease (sinusitis, otitis, and lung infections) in relation to urbanization and overpopulation in several medieval and post-medieval contexts from the Netherlands. In the year 2023, Maia collaborated with the Otorhinolaryngology and Radiology Departments at Leiden University Medical Center, supported by BABAO's generous financial contribution, to explore the response of the otic capsule to inflammation.

*Katherine Guerra Cheva:* Katherine's research centers around bioarchaeology of the pre contact period in the istmo-columbian area. Currently, Katherine collaborates with the Darién profundo collective doing research focused on the lives and deaths of the ancient habitants of the Darién region in Panamá, integrating modern bioarchaeological methods with collaborative archaeology.

*Rachael Hall:* Rachael is exploring the modern concept of health inequality in past populations. By taking a multidisciplinary approach to archaeological human remains, she will investigate the differences between regional, community, and individual lived experiences through time as they relate to inequalities. Rachael was awarded the BABAO Research Grant in 2023, for her proposed study into the use of proteomics to identify brucellosis in human bone. This research hopes to explore how occupational and environmental inequalities impact the health of pastoralist communities.

*Cora Leder:* Cora started her PhD in 2023 and will be investigating the role of the ulnar digits, the wrist, and the forearm in the production of stone tools among Neanderthals and early *Homo sapiens* in an interdisciplinary project. She will apply digital activity research approaches such as VERA and 3D GM to post-medieval skeletal collections with documented occupations, and test muscle-use during flint-knapping in an experimental setting using surface Electromyography. The insights generated from this data will be used to investigate the muscle synergies at play during stone tool production in fossil Neanderthals and *Homo sapiens*.

*Mélie Louys:* Mélie's research will focus on activity-related stress at the important site of Deir el- Medina (Egypt). This is the final resting place of some of the workers who built the tombs of the New Kingdom Pharaohs. Mélie uses the bioarchaeological record alongside written and iconographic resources associated with the well-documented Deir el-Medina. Mélie started her PhD in 2023 and is currently in Egypt excavating and collecting data.

*Alex Tutwiler:* Alex is researching the impact of industrialization-era child labour practices on skeletal health and development in rural and urban Dutch communities from the post-medieval period (1650-1850 AD). Her preliminary pilot study on individuals associated with the urban industrial community of Arnhem provided insights into the paleopathological implications of participating in manual labor from a young age, the results of which she presented at the most recent BABAO and EAA annual meetings. She will be presenting her research on the biomechanical implications of activity-related paleopathological lesions in non-adult spines at the upcoming annual meeting of the AABA in her home town of Los Angeles!

#### **Conferences:**

There were plenty of great conferences to attend this year; our team presented at the following: International Congress for Egyptologists, European Association of Archaeologists, British Association for

Biological Anthropologists and Osteoarchaeologists, American Society of Overseas Research, and the International Meeting on Porous Skeletal Lesions.

Additionally, Rachael Schats and Ellen Kendall (Durham University) organized a two day hybrid conference entitled "Towards an Archaeology of Malaria" (June 16-17, 2023). It was a huge success and we were very pleased with both in-person and virtual attendance.

Maia Casna, Alex Tutwiler, and Rachael Hall organised a session at the European Association of Archaeologists conference (2023), entitled "Forgotten Bodies, Invisible Histories: Addressing overlooked human narratives in the archaeological record", alongside Leiden University alumni Veronica Jackson (Vrije Universiteit Brussels) and Elena Sandoval (University of Bristol)

Sarah Schrader, Anna Moles (Groningen University) and Rebecca Gowland (Durham University) co-organised a session entitled "Advancing a Bioarchaeology of Health Inequality: Recent Development and Future Directions" at the European Association of Archaeologists conference (2023).

#### **Teaching:**

This year we offered osteoarchaeology courses at the bachelors and masters level, including an intensive five week skeletal analysis internship.

#### **Open Science:**

Our research was featured in the Rijksmuseum Steelingen (Statement) Lecture series. Additionally, Rosetta Rossi Secondary School in Rome invited us to hold an online class on osteoarchaeology for their students.

#### **MSc Graduates:**

*Oriana Schiappa Zugazagoita:* Frailty Among the Non-Survivors: Assessing the Effects of Urban Living on Infant and Maternal Health Through a Comparative Study of Dental Stress Markers Between Two Dutch Post-Medieval Populations"

*Stavroula Papakosta*: Sex Estimation from the Foramen Magnum on a 19th Century Dutch Population.

*Daniëlle van Dieren*: Vertebral Pathology and Social Status: A Comparison Between a Post-Medieval Population from Arnhem and Three Contemporary Populations from London.

*Gabi Perhaj*: To be the Spitting Image of Someone: Estimating Biological Kinship Based on Cranial Non-Metric Traits in the Middenbeemster Cemetery Sample (Netherlands, 17th to 19th Century).

*Martijn Jacobs* “Study of Porous Lesions of the Anterior Femoral Neck (Cribra Femora) through Portable X-ray Fluorescence Spectrometry”

*Tessel de Nijs* “Hips Don’t Lie: A Revision of the Phenice Method on the Post-Medieval Dutch Skeletal Remains of Middenbeemster”

*Laura Vranješ* “Stuck in the Middle Ear: A Methodological Approach to Diagnosing Otitis Media in Human Skeletal Remains”

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**School of Archaeology and Ancient History, University of Leicester**  
*Anna Davies-Barret*

It has been a very busy year for all at Leicester with plenty of new arrivals, the setting up of new laboratory facilities and some goodbyes.

**Projects: Tobacco, Health and History (UKRI-FLF Funded).**

The Tobacco, Health and History project, led by Dr Sarah Inskip, focuses on identifying tobacco-users in past populations and investigating the impacts of tobacco consumption on health and disease in the Post-Medieval period. The project is now entering its fourth year and starting to produce some important results. In 2023, we saw the publication of the early work of the project that demonstrated the feasibility of applying metabolomic approaches to historic tobacco and human bone. These results were published in the *Journal of Archaeological Science* and *Science Advances*, respectively. We have also

recently submitted research on the metabolomic analysis of tobacco-consumption status in British populations, with exciting results. Dr Anna Davies-Barrett worked hard to finish all the osteoarchaeological data collection on approximately 800 skeletons and has begun analysing the pathology data, which can now be correlated to tobacco use. She presented her initial results at the 2023 BABAO Annual Conference. We also ran a session on the interdisciplinary study of tobacco use in the past at EAA 2023. As the project moves on, we said goodbye to Maria Ruber Serrano, who has left the project to take up a PhD at UCD, while Dr Diego Sanchez Badillo has returned home to Columbia to start his own research project. Both will be sorely missed from the project and they are thanked for their important work. However, we welcomed Alex Hirons, whose doctoral thesis will be looking at proteomics and tobacco use.

**Projects: Body politics (ERC Funded)**

The Body-Politics project (2021-2026) is the first large-scale research project that seeks to understand political development in the Scandinavian Iron and Viking Ages through the construction of the person. Now halfway through the project, six publications are out and in press, centring concepts of the body and personhood through first millennium Scandinavia. To date, Dr Emma Tollefsen has analysed and documented 165 sets of human remains deposited in settlement and wetland contexts from across Denmark, and data collection of Swedish and Norwegian material is planned for spring 2024. Where possible, the material is targeted for aDNA, dietary and mobility isotopes and AMS-dating. Preliminary results indicate intriguing patterns of depositional practices involving human teeth and fetal remains incorporated into structural elements of houses. PhD researcher Brad Marshall is exploring infants and children in the Viking Age through stable isotopes and posthumanism, while Renate Larsen is combining archaeology and ethology to explore the lived experience of horses, dogs and sheep in these periods. In 2023, we presented the project through BBC Radio, the Festival of Social Sciences, Swedish TV, podcasts, The Conversation, through invited

talks at EAA, the universities of Nottingham, Cardiff, Linköping, Bielefeld and Oxford, at the Society for Medieval Archaeology, and though our organised session at TAG on the politics of the body, where the team gave four papers. During 2023, we said goodbye to Dr Kate Olley, who has left Leicester to take up the position of Assistant Professor of Viking Studies at the University of Nottingham. We are excited to welcome Dr Alex Wilson, who will be our new postdoctoral researcher in Old Norse Language and Literature.

### **Other activities**

Dr Brian Costello has been busy leading the second year Heritage Skills module group into researching and creating blogs for the identified individuals from the excavation of burial grounds at the Cathedral in Leicester. This was followed up with an interview on BBC Radio Leicester. Ongoing analysis of Post-Medieval individuals from the Cathedral cemetery are being undertaken in our human osteology laboratory, with the help of PhD student Taylor Peacock. Our third year undergraduate Human Skeletal Analysis module had 14 students this year, led by Dr Jo Appleby. Dr Brian Costello also took part as an invited panellist at the Problematic Bodies Conference at the University of Liverpool as part of the UKRI-funded project “The Human Remains: Digital Library of British Mortuary Science and Investigation”, discussing aspects of ethics, display, funerary contexts, theory, government and law, among others.

### **Doctoral students**

Congratulations to Dr Vassilina Louka for completing her PhD “The violent truth: a comparative, long-term study of collective violence from armed conflicts in Europe”. Vassilina has stayed on at the University to teach forensics. We also welcomed the arrival of Alvaro Ortega Gonzalez, a Future50 doctoral student, who will be exploring the transition from the Roman to the Anglo-Saxon period in Northamptonshire using a multidisciplinary approach. PhD Student Elliot Elliott continues his important work on leprosy in squirrels in a thesis titled “Defining the prevalence of leprosy in peri-domestic animals using osteoarchaeology”. Kristy

Henson is continuing her work on the “Biocultural effects on ancient vitamin D deficiency in the United States and their role in spinal pathology”. Dane Magoon is finishing up his thesis “The People of Mussel and Shell: An Isotopic Investigation of Palaeodiet and Mobility at the Hatch Site (44PG0051) during the Late Woodland I Period (AD 900 to 1300)”. The Body-Politics project welcomed affiliate doctoral student Emma Thompson, funded by Midlands4Cities, who will explore how migration and changing religions influence the construction of identities in graves and cemeteries across England and Denmark during the Viking Age.

### **New labs**

We are excited to announce the opening of a number of new labs in the school, including a dedicated biomolecular lab. This marks a step up from our existing facilities and provides generous space for isotope, residue and environmental work in the school. It is part of a larger infrastructure improvement which also sees the opening of a new microscope laboratory, SEM, XRF, and ceramic analysis facilities, and dedicated research project working and office space. New equipment includes 3-D scanning and printing facilities, which we are excited to utilise.

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**School of History, Classics and  
Archaeology, University of Edinburgh**  
*Sophie Newman*

We would like to start this contribution by paying tribute to Andy Barlow who very sadly passed away on the 20<sup>th</sup> January 2023. Andy started at HCA as an MSc in Human Osteoarchaeology student, having left a 20-year career in dentistry to pursue his passion for all things bioarchaeological. After the successful completion of his MSc in 2016 he commenced his PhD on stable isotope analysis of a 19th century cemetery population from Blackburn, Lancashire. From 2018, until his passing, he was the School's lab technician and with his characteristic quiet competency and dry sense of humour ensured the effective running of our research and teaching labs. This seems a very curt summary of his achievements, but Andy played a much bigger role and truly was a



pivotal figure in the Archaeology subject area and beyond. His kindness and his ability to find the positive in whatever work or life threw at him was exemplary. Despite the diagnosis of an often debilitating and ultimately fatal illness, his main concern was always for others. He really loved his work in HCA (as well as his time playing golf at Archerfield Golf Course) and was committed to his job until his final days. He is remembered very fondly by all of us, and next month will see our chemistry laboratory being officially renamed the Andy Barlow Archaeology Laboratory – a fitting tribute.

The teaching and research of human osteoarchaeology at the University of Edinburgh underwent considerable change in the past year. At the time of writing this we are hiring for a teaching fellow position in Human Osteoarchaeology. Our new colleague will work with us for one year, starting in May 2024, and will replace Jonny Geber while he is completing a Leverhulme Trust funded research project. In addition, we have had confirmation that Human Osteoarchaeology teaching in HCA will be permanently supported by three members of academic staff. We have also welcomed a new Archaeology Lab Manager, Kris Walker, while Ruth Gentle is continuing in her post as Archaeology Technical Officer. The ‘One Health Archaeology Research Group’ (<https://www.ed.ac.uk/history-classics-archaeology/research/research-groups/one-health-archaeology>) has continued to host guest speakers for both in person and online events, work in progress sessions, and the Annual Christmas Pub Quiz. In May 2023, we were very fortunate to be able to host Professor Clark Spencer Larsen, Ohio State University, for the Annual Munro Lecture Series (see <https://www.ed.ac.uk/arts-humanities-soci/news-events/lectures/munro-lectures>) who talked about ‘The Past 12,000 Years of Behaviour, Adaptation, Population, and Evolution Shaped Who We Are Today’ to a full lecture theatre.

Jonny Geber is on research leave from January 2024 until June 2025. In the last year, he continued his research on human remains (cremated and unburnt) from Irish passage tombs in collaboration with Dr Jessica Smyth at

University College Dublin. Having completed Knockroe, Co. Kilkenny (which, in the end, amounted to a total of 218kgs of highly fragmented cremated remains), he is now working on the Fourknocks passage tomb remains from Co. Meath that were originally excavated in the 1950s, but never fully analysed. This project was presented at the EAA conference in Belfast in August/September. He was also appointed to the National Museum of Ireland Human Remains Advisory Panel in November last year. In May, he is starting a Leverhulme Trust funded project entitled ‘Harvested Bodies: Biocultural Linkages of Structural Violence and Identity’ that will continue his previous research focus on social marginalisation, and their impact on the human body (skeleton), based on late modern anatomical collections in Sweden and Austria. Some “extra-curricular” adventures in the last year involved giving a lunchtime tour of three exhibitions at the Talbot Rice Gallery in Edinburgh in January 2023, reflecting on three contemporary art installations from an archaeologist’s point of view. In December, he started a project in Grenada, by conducting a LiDAR and photogrammetry survey of Belmont Estate – a former Scottish owned slave plantation – together with colleagues in history (Dr Esther Mijers) and geosciences (Mr Tom Wade). This is a community-initiated project with a lot of potential, and the next phase will be to help the community restore the late 18th and early 19th century cemetery on the Estate.

Sam Leggett is continuing her Leverhulme Early Career Fellowship project ‘ArchaeoFINS: Medieval Archaeology of Fishing in the Irish and North Seas’, as well as other projects including one with Sophie (see more below). She has been involved in the ‘Beneath Our Feet: Archaeology of the Cambridge Region’ exhibition at the Museum of Archaeology and Anthropology, Cambridge where her work on the Trumpington bed burial features (the exhibition has been extended to October 2024 so go check it out). Sam’s also an external supervisor for Brad Marshall’s PhD project based at Leicester on the BodyPolitics ERC project under the work package ‘Children and Personhood’ which includes primary isotope



work on late Iron Age and Viking Age material from across Scandinavia.

Sophie Newman is continuing to work on a project with Sam - the 'Life histories of health and disease: a multidisciplinary approach to assessing the impact of vitamin D deficiency on childhood and later adult health outcomes' funded by the Munro Research Fund. She also presented the preliminary results of a new project 'Mapping Health Inequality' with Jelena Bekvalac at the EAA conference in Belfast. Linda Fibiger is continuing work on her Munro Research Fund supported 'Lambay Lives' project and has recently started supervising the AHRC funded Collaborative PhD Studentship project 'From Empires to Kingdoms'. This collaboration with the British Museum will focus on traumatic injury as an indicator of levels of violence, activity and social complexity in ancient Nubia, Sudan.

### **Ongoing PhD research**

Coskun, G.: Facial Evaluation of a Contemporary Adult Greek Population Sample: Comparison of Two Methods (submitted)

De Pace, M.: An investigation of the survivability and mortality of Medieval Mesembrians through physiological stress markers and dietary reconstruction

Girdwood, L.-K.: A Comparative Analysis of the Evolution of Oral Health Pathologies and Stable Isotope Ratio Dietary Indicators through the Historic Period in Two Contrasting Medieval Populations from Scotland, UK, and Ibiza, Spain.

Harrison, H.: Home is where the heart is: Domestic infant burials in Ancient Egypt's Middle Kingdom (c 2055 BCE – c.1795 BCE)

Hapanova, V: Childhood diet and weaning on Belarusian lands from the Middle Ages to the Modern Times

Narramore, L.: From Empires to Kingdoms: trauma as a gateway to understanding the impact of urbanisation, and cultural and environmental change in ancient Sudan

Reeve, I.: Morbidity and mortality in relation to the environment: a comparison of British urban and rural skeletal populations

Smith, E: The influence of diet and physiological stress on stable isotope ratios

Spencer, E.: Maternal Care and Mortality in Medieval Scotland

Zhang, W.: Violence and conflicts along the ancient Silk Road: A bioarchaeological research on the human remains unearthed from cemeteries in late Bronze Age to Han (1000 BC-200 AD), north-western China

### **Dissertations Submitted for MSc Human Osteoarchaeology programme 2022/23**

Lucia Barnett – Reassessment of the Brothwell method applicability to Scottish populations.

Camille Becker – Stable isotope analysis of human remains from Whitehall Farm, Nether Heyford.

Ben Bressoud – An Index of Human Frailty: Assessing lifestyle and burden through trauma and stress.

Lydia Cahill – Cribra Orbitalia and Porotic Hyperostosis: exploring anaemia in a Medieval Scottish population.

Brea Capello – Old Age at Ballumbie Parish: combining Transition Analysis (TA3) with osteobiographical data to improve estimations and public knowledge in the lived experience of advanced age.

Kyleigh Digiovanni – The Bioarchaeology of Care: the case for compassion in Medieval Scotland.

Póra Hallgrímsdóttir – Observing population variation in Medieval Iceland through dental and cranial non-metric traits.

Alex Howard – A Multidisciplinary Literature Review: the current state of reporting practices for non-adult age-at-death estimation in human osteoarchaeology and forensic anthropology.

Shea Keener – Dental crowding and caries risk assessment in Medieval Scottish remains.

Ari Kocab – Studying calcaneal bone spurs through a clinical and archaeological lens.

Rae Krosky – Utilising Bayesian statistics to evaluate stature estimation methods for a Medieval Scottish Lowlands population.

Emily Miller – Study of oral health and susceptibility to respiratory disease in Medieval Scotland.

Harri New – A metric evaluation of the femoral condyles and tibial plateau to determine whether they can be used to estimate sex.

Courtney Olig – The Bioarchaeology of Activity Patterns in Medieval Scotland: an analysis of activity-related changes to the upper limb.

Olivia Pultorak – Analysis of social disparities in rural versus urban Medieval Scotland through dental caries patterns.

Sarah Schaeffer – Dietary reconstruction in Industrial Revolution England: a case study from St Peters, Blackburn.

Gloria Schidowka – The application and evaluation of methods in parturition scar estimation of the Ballumbie and St Andrews collections.

Laura Scoville – Non-destructive visualisation of internal dental morphology: analysing the efficacy of microCT on microstructural analysis of human dentition.

Kitty Sheridan – The isotopes of dental calculus: a proxy for dietary reconstruction?

Delaney Sigler – Horsemen of the Highlands: a critical application of a method of identifying ‘Horseman Syndrome’ from skeletal activity markers.

Hannah Wilson – Complexity in Origins: a study of migratory individuals in Ketton Quarry through  $d^{34}S$  analysis and statistical modelling.

Emily Zerbe – Establishing a new method for recording cortical bone surface preservation and its potential applications in human osteoarchaeology.

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**Department of Archaeology  
University of Sheffield**

*Nina Maaranen*

**Updates:**

It has been a busy last year for the Department of Archaeology at Sheffield. As staff moves to the Department of History and the School of Biosciences, postgraduate teaching will continue under these units through a collaborative arrangement in 2024. Two programmes, MScs in HOFA and Bioarchaeology, will be based at the School of Biosciences which brings together more than 1,500 undergraduate and 300 postgraduate students and 120 lecturers. We also congratulate Lizzy Craig-Atkins who has been promoted this year to Professor in Human Osteology at the Department of History!

Many congratulations to the 2022-2023 cohort of Masters students, with a notable mention to the following students who graduated with Distinction: Harriette Copley and Matilde Ricciolini from the Human Osteology and Funerary Archaeology program. During the 2023 Autumn Semester we have welcomed in the new cohort of HOFA, Osteoarchaeology, Palaeoanthropology, and Archaeological Science Masters students.

We have welcomed two new osteology PhD students, Harriette Copley and Andreea Toma, while we congratulate the recently completed Doctors Ben Wigley and Ofelia Meza-Escobar! Ben Wigley has since been working on an EPSRC-funded project, assessing os coxae utilising a 3D geometric morphometric approach. The overall aim is to evaluate modularity in shape through patterns of trait independence and correlation and explore how these relate to developmental stress and growth constraint as well as their impact on skeletal sex estimation.

Ofelia Meza-Escobar was elected by the BABAO membership to serve on their Board

of Trustees as the Communications Officer for the period 2023-2026. She's in charge of BABAO's website design, management and maintenance, and manages the social media. She's active on Twitter/X at @ofeliamezae.

#### **Ongoing Doctoral Research Projects:**

*Barlow, A.:* Coming of age: a biocultural investigation of reproductive practices in Industrial Britain. *Ford, J.:* Hyaenas and Neanderthals in the British Middle Palaeolithic.

*Knox, E. L.:* A multidisciplinary investigation into the social impact of foetal and mother mortality during the industrialisation of England.

*Lee, H.:* A social bioarchaeological analysis of collective identities and personhood at Corinth, c. 1050-330 BCE.

*Marino, R.:* The mistreatment of children through the lens of abuse and neglect: how can bioarchaeology better approach these issues?

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

*Watkin, T.:* A comparative three dimensional geometric morphometric analysis of the fourth and fifth carpometacarpal joints in humans, primates and fossil hominins, and its application in hominin early stone tool use.

#### **Conferences and events:**

Meza-Escobar, Ofelia and Lizzy Craig-Atkins. 2023. Exploring the effect of physiological stress on growth disruption in foetal and infant individuals of known age-at-death from Santiago, Chile. 29th Annual Meeting of the European Association of Archaeologists (EAA).

Meza-Escobar, Ofelia and Lizzy Craig-Atkins. 2023. Patterns of physiological stress and survival in among non-adults of documented sex from mid-20th century Santiago, Chile. 15th Annual Conference of the Society for the Study of the Childhood of the Past (SSCIP).

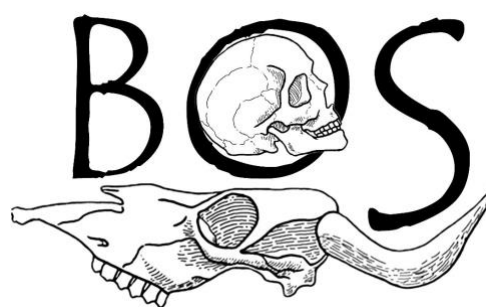
#### **Online Activities:**

You can find regular updates regarding research projects and upcoming events via personal and project pages on our departmental website. The Department of Archaeology is also active on Facebook (<https://www.facebook.com/ArchaeologySheffield>), Twitter (Shef Archaeology @UniShefArch), and YouTube (Archaeology Sheffield). Lizzy Craig-Atkins is on Twitter at @ecraigatkins, Sam Purchase is on Twitter at @SamanthaPurchase1.

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#### **Bioarchaeology & Osteoarchaeology University of Southampton (BOS)**

*Sonia Zakrzewski*



2023 was another interesting year with teaching but for very different reasons than the COVID-affected years. Southampton has started a new cultural heritage course, and many of those students were (loosely) interested in osteology.

Prof Alistair Pike has been continuing his isotopic studies, and spent the second half of the year on research leave, undertaking a lot of laser ablation research. Following on from an interest spiked during the pandemic, Prof Joanna Sofaer has been developing projects that evaluate the importance of heritage and the historic environment in wellbeing. This led to an introductory talk at the Being Well in Ancient Egypt conference in Pisa. Dr Jaco Weinstock has been continuing analysis of the Amara West fauna and has also been studied some enormous Pleistocene megafauna – the students enjoyed having rhino and woolly mammoth bones and teeth in the laboratories! Like Jo Sofaer, Prof Sonia Zakrzewski gave a keynote talk at the Being Well in Ancient

Egypt workshop in Pisa, focussing on understanding and communicating aspects of disAbility. In autumn 2023, the focus of the advisory board of the Naturhistorisches Museum in Vienna was on the anthropology department and so Sonia Zakrzewski was actively involved.

Dr Sarah Stark has continued working at Historic England, but we have been able to develop our links with Historic England (as we already have with Dr Simon Mays), such as through placement students.

Despite Prof Markus Heller currently being in charge of their teaching and programmes, and thus buried under university administration, Bioengineering continues to go from strength to strength. As well as their work on prosthetics, Prof Alex Dickinson, and Prof Martin Browne were part of the Bioengineering and Computed Tomography team that has been looking at reconstructing fingerprints from high resolution CT data, and Dr Charlie Burson-Thomas has recently joined the team there.

Our fifth cohort of MSc Archaeology students has now graduated. Some of these followed a wide curriculum, whereas others followed a Bioarchaeology pathway. Those following the latter pathway were required to take compulsory modules in the Bioarchaeology of Human Remains and the Analysis of Archaeological Faunal Remains, together with optional modules in palaeopathology, themes in osteoarchaeology and molecular archaeology.

### **Current Research Students**

Ferenc Toth, completed his doctoral research on gender and violence in Alba Iulia and passed his PhD viva in the autumn.

Anna Vékony, co-supervised with Dr Simon Mays and Dr Sarah Stark, started her doctoral research into the aetiology, variability and morphological patterning of chronic maxillary sinusitis.

### **Continuing Doctoral Student Research Topics:**

*Elizabeth Aubin* – Variation in Roman and Anglo-Saxon cremation mechanisms

*Jessica Coughtrey* – gender roles and activity patterning in ancient Egyptian populations

*Kaylea-Ann Raczkowski Wood* – Neanderthal mobility and locomotion: a finite element analysis

*Emma van der Velden* – Real Roman Britain: a skeletal and isotopic analysis of rural and urban populations in the south

### **Dissertations Approved for the MSc Archaeology (Bioarchaeology) 2022-2023**

*Gywain Jones* – Mobility during the Middle Neolithic: A case study of the chambered tomb Millbarrow

*Aarya Raje* – Analysis of Faunal Remains from the Late Romano-British site of Clausentum Quay, Southampton

*Rebecca Seymour* – “Making a Pig of Oneself”: A Dietary Analysis of Anglo-Saxon Pigs in Hamwic and an Investigation into their Potential as a Proxy for Contemporary Humans

*Madeleine Smedley* – An Isolated Anglo-Saxon Cremation from Otford, Kent, England

### **Dissertations approved for other Archaeology Masters degrees that were linked with bioarchaeology, zooarchaeology and/or palaeopathology**

*Grace Clark* – A Faunal Report on the Animal Remains from Site SOU 857 at Clausentum, Bitterne Manor

*Mckenzie Sweno* – Devoid of Death: Evaluating the Non-Funerary Intentions of Early Bronze Age Barrows and Ring-Ditches in Southern Britain

## **University of York**

*Paola Ponce, Malin Holst and Michelle Alexander*

Malin Holst, Michelle Alexander, and Paola Ponce are members of BioArCh, a centre for bioarchaeology at the Department of Archaeology at York. We teach themes on osteoarchaeology, palaeopathology, funerary and biomolecular (isotopes, proteins, aDNA, lipids) in our undergraduate and post-graduate programmes (BA, BSc, MA and MSc). We all work in collaboration with colleagues specialised in evolutionary anthropology, archaeobotany, zooarchaeology, material culture and experimental archaeology.

We redesigned and updated all our modules when moving to semesters in September 2023, which has led to the inclusion of a wider range of subjects and increased lab hours for the students, particularly for osteoarchaeology. This was facilitated by our bespoke teaching and research labs with the use of our extensive reference collections of human remains within the Palaeohub. At the beginning of 2023, we acquired a new state-of-the-art radiography system that complemented our teaching and research facilities.

During the past academic year, we supervised jointly a total of thirteen undergraduate dissertations and twelve master's dissertations, and we are currently supervising the following ongoing PhD students:

-Jordi Ruiz Ventura: Metabolic stress markers in non-adult skeletons from medieval England

-Aster Wood: Childhood health in Northern Britain across the Roman-early medieval transition

-Mackenzie Masters: Social Entanglement in Death: Interpopulation isotopic analysis between mass graves and attritional assemblages

-Elisha Meadows: The Melting Pot of Eboracum: exploring diversity and personhood through skeletal and burial evidence in York during the Roman period.

More recently, we have been busy organising the UK Archaeological Sciences (UKAS 2024) conference, which will take place in April in York, where several papers will be presented under the remit of osteoarchaeology/bioarchaeology/biomolecular archaeology.

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## **Cardiff University**

*Ciara O'Brien Butler and Katie Faillace*

2023 was a busy and exciting year for the Cardiff University BioArchaeology (CUBA) lab group. In January we took delivery of a significant assemblage of human remains from Dyfed Archaeological Trust's excavation of the medieval friary of Haverfordwest, Pembrokeshire. These excavations revealed over 300 burials, a metric tonne of disarticulated material, and made local and national news in 2022. A team of CUBA staff, post-graduate students, and undergraduate students have been hard at work conducting osteological and isotopic analyses to explore health and lifeways among the individuals buried at the site, with some fascinating results emerging. This assemblage has also been a great opportunity for master's research, with a project conducted in 2023 focusing on the site and more to come in 2024.

We are also very excited to be working with Cadw, in collaboration with Black Mountains Archaeology and ArchaeoDomus, on the analysis of a recently excavated skeletal assemblage from Tintern Abbey. Excavation began at the site in May 2023 ahead of an ambitious 10-year conservation programme, and almost immediately uncovered burials and charnel pits to the south of the gothic Great Church. These are the first archaeological excavations of the iconic site, and the human remains have great potential to tell us more about the monastic community and the fate of the abbey. The osteological project is being led by Dr Ciara O'Brien Butler and Dr Richard Madgwick, with contributions from other CUBA staff and students. Though work is ongoing, the site and some preliminary osteological analysis was featured on Digging for Britain.

Also featured on Digging for Britain this year was Dr Andy Seaman's excavation at Fonmon Castle, which has uncovered an Early Medieval cemetery. Osteological analysis is expected to start in 2024, with more excavations planned for the coming year as well. Other ongoing projects from the lab include the Leverhulme-funded Feeding the Roman Army in Britain (FRAB) in collaboration with the British Geological Survey and Vianova Archaeology & Heritage Services, the AHRC-funded FEASTNET with BGS, and the ERC-funded ENDURE project. We are also collaborating on research projects with several international universities, including Eötvös Loránd University (MOMENTUM project), the University of Bologna (Dr Carmen Esposito's Marie Skłodowska-Curie project TULAR), and with University College Dublin on the Passage Tomb People project.

With these and other substantial bioarchaeology projects in the department, we are lucky to welcome not one but two new members of staff as Archaeological Science Project Officers. Dr Ciara O'Brien Butler started in September 2023 as part of a UKRI-funded project to commercialise multi-isotope research. Dr Emily Holt will start in February 2024, and we are looking forward to welcoming her back to the department after she completed post-doctoral research at Cardiff in 2022. In 2023, we also welcomed Dr Asta Rand as a Marie Skłodowska-Curie Postdoctoral Fellow. Her project is entitled 'PHEMOR: PostHumous Exhumation and Movement of Osteological Remains,' and investigates Prehispanic Mayan mortuary practices.

In May, post-doctoral researcher Dr Katie French organised a Pint of Science event in Cardiff, entitled 'Archaeology: when data challenges our stories about the past'. The evening was a great success (tickets were completely sold out!), with fascinating talks from Drs Julia Best, Flint Dibble, and Katie French about new research in archaeological science which has challenged existing narratives.

Professor Jacqui Mulville and Guerilla Archaeology led workshops at multiple festivals this summer, including Green Man, Blue Dot, and Glastonbury. Guerilla Archaeology also ran 'Museums SOS' in collaboration with York University, and continued work on the Craftwork project with two visits to the Hebrides. Craftwork uses the crafts and creativity found in archaeological objects to stimulate sustainable economic growth and social regeneration on Scottish islands. Dr Julia Best expanded her work with the Consuming Prehistory project, with excellent engagement at the Festival of Neolithic Ideas.

It was also a great year for the bioarchaeology student community at Cardiff University. Adelle Bricking and Eirini Konstantinidi graduated in July, having successfully defended their PhD theses the previous year. Adelle's dissertation is entitled 'Mortuary practices in the Iron Age of Southwest Britain', while Eirini's thesis is called 'Examining mortuary treatment in the Neolithic caves of south-west Britain: a taphonomic approach'. Ciara O'Brien Butler also completed her PhD dissertation 'Biological Distance Analysis in Early Medieval Wales: an exploration of kinship and mobility c.400 – 1100 AD'. The lab also hosted visiting PhD students Noemi Ruberti (University of Padua), Owen Higgins (University of Bologna), and Santiago Guillamon (University of Cordoba).

#### **MSc Archaeological Science (completed 2022/23)**

*Jessica Corser:* Migrancy in Late Viking Age Kyivan Rus: A Multi-Isotopic Approach.

*Hannah Lycett-Smith:* Dietary reconstruction in Early Medieval South Wales: a comparative analysis of microwear and dental calculus at Llandough Monastic Cemetery, Glamorgan.

*Megan Myers:* Feeding the Northern Frontier: An Isotopic Investigation on the Management of Fauna Provisioned to Vindolanda and Corbridge.



*Thea Plumstead:* An Investigation of Oral Health in the Derry's Cross Population Using Traditional and 3-D Methods.

*Tierney Tudor:* Histological analysis of the remains found at the Neolithic site of Rowiegar chamber cairn, Orkney.

*Kieran Williamson-Coates:* An isotopic dietary reconstruction of Medieval Haverfordwest.

*Isobel Scibona:* An osteological and historical examination of brawling-related trauma in the UK's Napoleonic Royal Navy

*Georgia Wood:* Analysing, interpreting and contextualising the zooarchaeological material from recent excavations at Upper Scalloway, Shetland.

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**Department of Archaeology and History,  
University of Exeter**

*Tereza Nesnidalova*

**New facilities**

Thanks to a £893,000 award from the AHRC Creative Research Capability scheme we have officially opened the Science, Heritage and Archaeology Digital 3D (SHArD 3D) Laboratory. Through a range of scanning and microscopy techniques, SHArD 3D will help researchers to create detailed digital records that help us to develop new understandings of biological and cultural change. Co-Directed by Dr Carly Ameen and Dr Laura Evis the laboratory will work with museum curators, including The Portable Antiquities Scheme and Exeter's Royal Albert Memorial Museum, to upgrade records from 2D photographs to 3D models, as well as provide a powerful national resource for forensic scientists and pathologists in partnership with the Devon and Cornwall Police. This facility includes the South West's first humanities-led microCT facility, with a new scanner that will enable 3D non-destructive imaging of external and internal features of archaeological and forensic materials and is open to collaboration with external users across the heritage and forensic science sectors.

**New staff**

We warmly welcome Dr Sophie Beckett to the team. Sophie joins us from Cranfield University and augments our teaching, research and commercial services. Sophie's interests span Human Osteoarchaeology, Forensic Anthropology and Applied Archaeological and Forensic Sciences, with particular focus on biological minerals, disarticulated human skeletal remains, osteometrics and the application of CT and XRD analysis. Sophie works with a range of heritage organisations on research projects and public engagement. She is a team-lead for Human Remains and Digital Trenches with the Sedgeford Historical and Archaeological Research project (SHARP, [www.sharp.org.uk](http://www.sharp.org.uk)) and has recently developed an online short-course in Cremation and Cremated Remains in Archaeology.

We are also delighted to welcome Sophie's co-supervised PhD student Summer Courts ('The Archaeology of Hidden Identity: The Case of a Female Burial from Lowbury Hill'). Summer's research is funded by AHRC with her home institution being the University of Reading (Professor Amy Smith, Department of Classics) as part of a Southwest and Wales Doctoral Training Partnership, Collaborative Doctoral Award (SWW DTP CDA).

**International collaboration**

In January 2023, Dr Iwona Kozieradzka-Ogunmakin organised and delivered a training workshop for archaeologists and students in Sudan, entitled 'Bioarchaeology and Biomolecules'. The training was a result of Iwona's long-standing collaboration with the National Corporation for Antiquities and Museums and University of Khartoum in Sudan, and aimed to enhance osteological competencies of local staff and students. Currently, Iwona leads a multidisciplinary project at Saqqara in Egypt to investigate the effects of socio-political and climatic changes on the local population in the past, focusing on mobility and physical health (<https://saqqaraburials.pcma.uw.edu.pl/>).

## PhD projects

Tereza Nesnidalová started her PhD in 2022 under the supervision of Dr Catriona McKenzie and Dr Laura Evis. Tereza is developing a new method for ageing British adults from dental wear using digital imaging means, making extensive use of the new SHArD 3D laboratory and its equipment, including the Medit i600 intraoral scanner. Her aim is to generate a large reference sample based on a living population of known age to create a modern population-specific dataset. She is currently in the data collection stage of her research and actively looking for volunteers all over the UK to take part in the project. If interested, please email her at [tn354@exeter.ac.uk](mailto:tn354@exeter.ac.uk) for more information on how to sign up.

Katharina Becker Hayslep is currently in the final stages of her self-funded PhD project, supervised by Dr Laura Evis and Professor Alan Outram, examining human remains from Early Neolithic causewayed enclosures across southern England. The aim, besides comprehensively cataloguing and analysing the remains using up-to-date methods, is to assess the evidence for different kinds of funerary practices, such as exhumation, and compare the results to findings from long barrows. Given the relative frequency of articulated burials at these sites, it was possible to write detailed osteobiographies for every individual, assessing their deposition context, age, sex, pathologies and published isotope analyses. This gives us a rich insight into Neolithic lifeways. Currently, the data on the disarticulated remains is being analysed and then the results will be compared with long barrows. Her first article, on two child burials from Hambledon Hill, will soon be published in the Dorset Museum's DNHAS magazine.

Hollie Calley is a first year PhD student under the supervision of Professor Daniel Williamson (Economics), Dr Victoria Volodina (Maths), and Dr Laura Evis (Archaeology). She is using past homicide cases across the UK to build a statistical model to predict patterns in homicides and forecast when changes in the number of unsolved cases may occur. The model integrates both crime statistics and expert opinion into a single

framework, producing visual and statistical outputs to the end-user which are easy to interpret and do not require knowledge of statistics. The goal is to help the end users to allocate resources pre-emptively to account for triggers/changes identified by the model. At the moment, she is building software in order to capture police inference along with data from different police sources.

Dragos Mitrofan is an active field archaeologist who has continued to work within the commercial sector whilst undertaking his PhD research part-time. He started his project in 2020 under the supervision of Professor Ioana Oltean and Dr Laura Evis and is currently writing up his findings. His project is entitled 'Hybridisation and inequality in Late Antiquity. A meta-analysis of lime, gypsum and chalk deposits in Roman burial contexts', it examines these deposition phenomena at macro (international - distribution and comparative chronology), meso (domestic (UK) - socio-economic and chronological distribution) and micro (plaster burials located in Dorchester and London-based cemeteries) scales. In 2023, Dragos helped to organise the Theoretical Roman Archaeology Conference (TRAC) and has been appointed Treasurer of the TRAC Standing Committee.

Claudia Wingrove started her PhD in 2023 under the supervision of Professor Alan Outram and Dr Laura Evis. Claudia is developing a multi-methodological approach to recording and assessing complex disarticulated human burials in forensic and archaeological contexts. The use of a micro-CT scanner, SEM and EDS shall support her research into taphonomic histories and fracture history profiles to enhance bone reattribution and identification. Four variations of 'bone zones' shall be created using ArcGIS during the data collection stage, following the analysis of fracture and fragmentation patterns from four complex archaeological and forensic assemblages. The development of a numerical scoring method alongside an adaptable digitised recording sheet shall present a revised standardised protocol toward the handling,

identification and processing of disarticulated human remains.

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**School of History Archaeology University  
of Winchester**

*Heidi Dawson-Hobbis*

Another change to the school this year as members of philosophy and religious studies joined us in the enlarged school of History, Archaeology and Philosophy.

'Rural Romanitas: rethinking the role of villas', co-edited by our Professor Emeritus of Roman Archaeology Tony King, has been nominated as Research Project of the Year at the Archaeology Live! Awards. Read more about the project at <https://the-past.com/feature/rural-romanitas-rethinking-the-role-of-villas/>

Dr Heidi Dawson-Hobbis continues to work on the nineteenth century skeletal collection from St George's, Bristol in collaboration with Jocelyn Davis at Avon Archaeology Ltd, and they have contributed a chapter to 'The Material Body: embodiment, history and archaeology in industrialising England, 1700-1850, Edited by Elizabeth Craig-Atkins and Karen Harvey due out in February 2024. This year research assistant Lesley Johnson has contributed to the analysis, and a collaboration with Dr Layla Renshaw at Kinston University London has also been established. Heidi and Jocelyn also presented a paper 'Understanding elderly bodies' as a case study from this collection at a conference held at the Hunterian Museum 'Bridging the Gap: bringing the Human Sciences together with the Humanities' in July 2023. Dr Christina Welch also presented at this conference 'The 'Carib Chief's skull': where was humanity in late-eighteenth century colonial science' focusing on the identity of a skull within the Hunterian collection.

Dr Heidi Dawson-Hobbis and her lab group team have been working on the human remains excavated by Professor King at Meonstoke, these include Roman remains from the context of a mausoleum and a Bronze Age skeleton associated with a ring ditch.

Dr Katy Soar manages our social media presence find us at Winchester Archaeology and Anthropology @UoW\_Archaeology on X (formerly Twitter), with her recent tweet on 3 Jan 2024 focused on our MSc Human osteology and funerary studies graduate Giovanni Calvi finding a beautiful gold pendant in an early medieval cemetery site near Winchester as seen on Digging for Britain.

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**POSTGRADUATE RESEARCH  
ABSTRACTS**

**Trauma Patients and Medical Treatment  
in an 18th-19th Century Hospital**

*Julie-anne Birch*  
Durham University

The aim of this project is to make a detailed study of skeletal trauma, in the individuals buried at the Radcliffe Infirmary, Oxford founded in 1770. The Infirmary burial ground dates from 1770 to 1855 and was used exclusively for the bodies of patients who were unclaimed, or their families could not afford a funeral. They would have been predominantly working-class including canal and railway labourers, servant-classes, and agricultural workers. This period was a time of profound change in England due to developing industrialization, with significant movement of people from rural habitation to urban centres. The increased mechanization of work and insanitary conditions in overpopulated urban areas resulted in increasing levels of poor health for the lower social classes.

An intersectional framework based on the historical evidence from the Radcliffe Infirmary archives and other historical sources will be used to develop a biocultural interpretation of the patients buried at the Radcliffe. The living and working environment of the patients will be investigated in the context of the industrialization in the region, especially in agriculture and the advent of the railways. The working conditions and risks faced by lower-class labourers will be explored in relation to the types of injuries sustained. Secondly, the surgical procedures used to treat the injuries sustained by patients will be analysed to develop a picture of surgical practice and training at the Radcliffe.

**Supervisor:** Professor Rebecca Gowland

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**Human remains in a changing climate:  
exploring the impact of glacial  
environments on human remains and the  
intersection of forensic anthropology with  
global climate change**

*Lauren Gill*  
Durham University

Global climate change is increasing the melting rate of glaciers. This heightened melting has given rise to a new subsection of archaeology: glacial archaeology. Glaciers are not just releasing artifacts but also human remains. The aim of this project is to explore how climate change will affect human remains deposited in glaciers, considering the impacts of glacial motion and freeze-thaw cycles on the taphonomy and trauma of the remains. To achieve this goal, a combination of theoretical, retrospective, and experimental work will be undertaken.

A secondary aspect of this project will consider the implications of climate change, such as temperature variations, extreme environments, and natural disasters, on the discipline of forensic anthropology. The project aims to provide tools for the effective handling of legal cases arising from these circumstances.

**Supervisor:** Dr. Daniel Gaudio

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**Seen but not heard: Reconstructing the  
early life history of the Industrial child  
through carbon and nitrogen stable isotope  
analysis of dentine collagen**

*Ruth O'Donoghue*  
School of Archaeological and Forensic  
Sciences (SAFS), University of Bradford

**Objective:** This project reconstructs the early life history of the child in industrial London using incremental dentine analysis of both adults (survivors) and children (non-survivors) to investigate the effects which changing social and economic conditions during Industrialisation had on their diet, health, and quality of life.

**Materials and methods:** Individuals with skeletal evidence of childhood stress (linear enamel hypoplasia, rickets, residual rickets)

who were suitable for isotopic analysis were identified within the New Bunhill Fields burial ground, Southwark, London (1821-53) excavated assemblage (n=514). Radiographic analysis of the dental pulp chamber was performed on these individuals to identify childhood vitamin D deficiency. A total of 20 adults and 22 non-adults were selected for carbon ( $\delta^{13}\text{C}$ ) and nitrogen ( $\delta^{15}\text{N}$ ) stable isotope analysis. Incremental dentine analysis was performed on the first permanent molar and isotopic profiles were created spanning from birth until tooth completion/death during tooth development.

**Results:** The isotopic data indicated that adult and non-adult diet was consistent with that observed in other 19th century London burial populations. Evidence for breastfeeding was widespread amongst survivors and non-survivors. Radiographic results indicated that vitamin D deficiency during early childhood was much more prevalent within the burial group than skeletal evidence suggested, and it was observed more frequently in those who survived into adulthood (80%) than in those who died during childhood (42%). Concurrent evidence of isotopic physiological stress with linear enamel hypoplasia was observed in some but not all individuals. A pattern of opposing covariance was observed often in early infancy, most frequently in non-survivors. There was a tentative association observed between adult age-at-death and skeletal stress indicators in early childhood, where the average age-at-death was older in those with fewer childhood stress indicators.

**Conclusions and significance:** This research project found that early life stress was common within this urban community and was associated with negative outcomes later in life, especially amongst those who died in childhood.

**Supervisors:** Dr Hannah Koon and Dr Jo Buckberry

**Funding:** AHRC Heritage Consortium

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**Death in the Ottoman Empire: A multimethod bioarchaeological analysis of a Muslim necropolis discovered in Constanța, Romania**

*Andreea Toma*

University of Sheffield

This project will conduct the first analysis of approximately 314 graves from a Romanian Ottoman cemetery (18<sup>th</sup>-19<sup>th</sup> CE). It is groundbreaking in its engagement with the currently neglected archaeology of the Ottoman period in Romania, and will stimulate further study in this emerging academic field. It goes beyond traditional osteology and helps to understand the cemetery community within its geographical location, which was both marginal and strategically important to the Ottoman Empire in the context of constant movement which characterises global empires.

The demographic profile of the population will be established through extensive osteological analysis, including distribution by sex and age, pathology and metric analysis. A focused programme of isotope analysis will be used to investigate diet and mobility. The aim of this study is to describe the lifeways of a marginal community within the Ottoman Empire during its fall by comparing the data with Muslim cemeteries from Anatolia. This will reveal an unexplored part of history that is brimming with struggle and violent contestation. This study raises important questions concerning empire, colonisation and the archaeological role in this activity. It allows for the development of questions beyond archaeology and anthropology, placing this necropolis as part of larger historical processes.

This project is Funded by the White Rose College of the Arts and Humanities (AHRC).

**Supervisors:** Dr Elizabeth Craig-Atkins, Dr. Mirela Ivanova and Dr Jane Rempel

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## **Testing and Refining the Use of pXRF to Study Industrial Morbidity**

*Harriette Copley*  
University of Sheffield

Industrialisation is beneficial to economic and social advancement, but comes at a cost, often shouldered by the industrial working classes. This is demonstrable through the experience of occupants of the industrialising towns of 18-19<sup>th</sup> century Northern England, who lived and worked in environments deleterious to their health. Exposure to industrial chemicals and pollutants was widespread, some giving rise to specific pathologies. The colloquially termed 'Phossy Jaw' for example, linked to phosphorous exposure in match factories.

This PhD project will investigate the extent to which the effects of pollutant exposure on industrial morbidity may be identifiable with pXRF, through its ability to quantify the trace element composition of bone and soil samples, and thus theoretically identify and quantify present pollutants. Comparison of pXRF readings from the skeletal remains of industrial-period burial assemblages with those from associated grave soil samples will allow exploration of the origin of any pollutants present within the former (ante-mortem via work/residential exposure or post-mortem via soil contamination) and inform understanding of the capabilities of pXRF. The data will be interpreted through literature reviews exploring the industrial history of the sites analysed. Assessment of pathology, and investigation of pollutant-related aetiology through previous literature, will allow exploration of possible links between pollutants and pathology, and the contribution that pXRF can make to a fuller understanding of the consequences of life in industrialising towns.

This project will be the first to harness the potential of pXRF to study exposure to industrial pollutants and potential links to pathology, in industrialising populations through analysis of human skeletal remains.

This project is funded by a University of Sheffield doctoral scholarship.

**Supervisors:** Dr Lizzy Craig-Atkins and Dr Hugh Willmott

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## **Lifeways and frailty experience of the population of Santiago de Chile during the 19<sup>th</sup> and 20<sup>th</sup> centuries: the *Colección Osteológica Subactual de Santiago***

*Ofelia Meza-Escobar*

This thesis explored the biological and socio-cultural variability in the experience of frailty of a population that inhabited Santiago de Chile, Latin America, during the late 19<sup>th</sup> and early-mid 20<sup>th</sup> centuries. This population, whose remains comprise the *Colección Osteológica Subactual de Santiago*, lived in low socioeconomic status communities affected by economic rural-to-urban migration and social inequalities. Very little attention has been focused on non-adults and older adults in the sample, in line with the broader context of the bioarchaeological field where early and late life-course experiences are often relegated due to issues with sample size and methodologies.

This study conducted a comprehensive analysis of the morbidity and mortality patterns of non-adult (<21 years of age) and older adult (>40 years of age) individuals, integrating conventional bioarchaeological evidence, documented antemortem data (age-at-death, sex and cause of death of each individual from cemetery documentary sources), as well as biomedical records from that era to enhance our current knowledge of skeletal evidence related to exposure to stressors during different stages of life.

Findings show that the effects of physiological stress on growth and development, pubertal timing, and survival are present within and across the samples. The results suggest that this population suffered from health assaults during the early stages of life, increasing mortality and morbidity during childhood, while also causing deficient immune and frailty phenotypes that marked their skeletal response to environmental and cultural stressors in later life.

This study developed an interdisciplinary biocultural approach to the study of the



lifeways of a modern population of Santiago, increasing our understanding of the health experiences and physiological responses to life events such as migration, social inequality, and urbanisation during this period.

**Supervisor:** Dr Lizzy Craig-Atkins

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**A bioarchaeological examination of the impact of early-life stress on later health outcomes using procrustean assessments of dental fluctuating asymmetry.**

*Ben Wigley*

Early life is a time of heightened vulnerability to stress which, due to the high phenotypic plasticity which characterises the period, shapes life-course trajectories. For dependent offspring, mothers play a crucial role in mediating stress (e.g., by contributing to immunity and nutritional provisioning in utero and in later breastfeeding) and the effects of their influences during development impact later-life outcomes. Investigating early-life stress and the mother-child nexus bioarchaeologically has proven challenging. However, as first permanent molars (M1s) form during early life without remodelling, stress-induced deviations to symmetry, known as fluctuating asymmetry (FA), can be evaluated to explore this critical time.

In this thesis, FA was quantified through geometric morphometric (GM) techniques so that early-life experience could be investigated and relationships with later-life outcomes identified. It was found that skeletally immature remains were associated with significantly higher FA than mature individuals, and within the immature cohort there was a significant positive correlation between FA and age-at-death. Higher FA was linked to markers of active and systemic infection and a proinflammatory physiology, while childhood stress was associated with growth deficits. Thus, stress experience at different periods was connected to specific outcomes. Elevated early-life stress appears to have increased frailty and decreased resilience, contributing to mortality risk and delayed somatic development, but may also have been associated with phenotypic programming that

promoted short-term survival, supporting the Thrifty Phenotype Hypothesis. Despite significant between-site differences in childhood and later-life stress, site-based differences in FA were largely insignificant, suggesting that mothers successfully mediated contextual stressors for offspring in early life and that within-group differences reflect variance in maternal health.

These findings are the first to demonstrate the viability of GM assessed M1 FA as a proxy for early-life stress and successfully reveal connections between formative experiences, maternal influences and life-course trade-offs in past lives.

**Supervisors:** Dr Lizzy Craig-Atkins and Dr Eleanor Stillman

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**Biological Distance Analysis in Early Medieval Wales: an exploration of kinship and mobility c. 400 - 1100 AD**

*Ciara O'Brien Butler*

The early medieval period was a dynamic and formative time in Welsh history, with changes in power structures, settlements patterns, and mortuary practice occurring throughout the period 400-1100 AD. This project investigates the evidence for kinship and mobility through inter- and intra-cemetery biological distance analysis of eight skeletal assemblages from Wales dating to the early medieval period. This method of analysis has never been performed on Welsh skeletal material and has great potential to inform on aspects of social and cemetery organisation about which little is currently known.

Intra-cemetery biological distance analysis conducted in four case study sites revealed complex patterns of biological affinity and its influence on burial practice which varied regionally and chronologically. In sites which showed evidence for kin-structured burial, this was not in the form of small family plots but rather wider kin groups and lineages prioritising areas of burial or variant mortuary rites. Post-marital residence analysis of these sites also revealed regional and chronological variation in patterns of sex-based mobility,

suggesting residence practices and gender relations in early medieval Wales are more complex than previously understood. Inter-cemetery analysis showed genetic similarities between sites in the southeast of Wales sampled for this research, while sites on Anglesey appear to show less biological affinity. Significant differences in population structure between northwest and southeast Wales were evidenced, suggesting gene flow between communities in these areas was not extensive.

The results highlight the complexity of kinship systems and the ways in which kinship identities were translated into the mortuary arena in early medieval Wales. The examination of genetic affinity between cemeteries also underlines the diversity of population histories from this time, emphasising the importance of nuanced interpretations which consider the regional and chronological complexity evidenced in early medieval Wales.

**Supervisors:** Dr Richard Madgwick and Dr Alan Lane

**Funding:** Archaeoleg Brython Archaeology

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**Palaeodemography and palaeopathology of early mediaeval Säben-Sabion, South Tyrol, Italy.**  
*Daniela Tumler*  
LMU Munich

The early mediaeval period in the central Alps, specifically around Säben-Sabiona, was marked by frequent changes in borders, leadership, and socio-economic instability. This location, a vital route connecting Germany and Italy, bore the brunt of these fluctuations. Säben-Sabiona, situated on a hilltop in the Eisack-Isarco valley, witnessed occupations by different Germanic groups from the 7th century onwards.

Archaeological excavations revealed a palaeochristian church dating from the 5th to 8th centuries A.D., featuring 366 to 370 graves. It is regarded as the largest early mediaeval burial site in South Tyrol. Based on

burial context and material culture, the site reflects a mixture of the local Roman and incoming Germanic groups and is believed to be a burial ground for the ruling classes, differentiated into elite (n=107) and non-elite (n=78).

With no previous anthropological investigations on these remains, this research aimed to establish, for the first time, population demography, living conditions, and health of those interred in and around the palaeochristian church. The analysis focused on 185 graves from the most recent excavation, including minimum numbers of individuals, sex, age at death, stature, body weight, and paleopathological examinations.

The analysis encompassed 226 individuals, including 94 males, 39 females, 54 subadults, and 39 adults of indeterminate sex. Males were overrepresented in both subgroups, with a significant absence of female burials, suggesting selective burial practices. Both groups exhibited adaptations to the alpine environment, a nutrient-rich diet, exposure to chronic stress, and physically demanding lifestyles. Osteological disorders were found in both groups, with the non-elite sample more commonly and severely affected.

This research sheds light on the cemeterial population of early mediaeval Säben-Sabiona, offering insights into the socio-cultural values and practices of the interred. The comprehensive analysis enhances our understanding of social stratification during this period, laying a foundation for future research in South Tyrol's anthropological studies.

**Supervisor:** Dr Albert Zink

Thesis available at [Palaeodemography and palaeopathology in early mediaeval Säben-Sabiona, South Tyrol, Italy \(uni-muenchen.de\)](https://www.uni-muenchen.de/Palaeodemography_and_palaeopathology_in_early_mediaeval_Sabien-Sabiona_South_Tyrol_Italy)

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**The violent truth: A comparative, long-term study of collective violence from armed conflicts in Europe**

*Vassilina Louka*

School of Archaeology and Ancient History  
at the University of Leicester

This study explores collective, physical violence during European armed conflicts, specifically the Cretan Arkadi Massacre, and the Spanish and Greek Civil Wars. By examining skeletal trauma, the historical context, and socio-political factors, the study investigates the dynamics of violence and its use by participating groups. The research adopts a methodologically and theoretically interdisciplinary framework combining theories of violence, forensic anthropological analysis of remains, and 3D digitization of trauma using photogrammetry.

The skeletal analysis showed the connection between political violence and physical injury. Considering the background of the victims in each case helped me understand the dynamics of violence. Physical violence was used to dominate or systematically eliminate political threats, as seen in the Arkadi massacre and the Spanish Civil War. Challenges in determining victim and perpetrator affiliation in the Greek Civil War sample limit conclusive insights into the nature of violence in that context.

Demography and skeletal trauma analysis showed indiscriminate violence was perpetrated in all cases, regardless of the sex, age, and condition of the victims and highlighted distinct mechanisms of infliction, i.e., sharp force and blunt force trauma in Arkadi vs ballistic trauma in the two civil wars. It also highlighted cases of antemortem trauma which could be consistent with torture in the Spanish Civil War assemblage.

By integrating socio-political, historical, and osteological data, this study offers valuable insights into armed conflicts, challenging source validity and uncovering violence patterns. Ultimately, this theoretically informed anthropological methodology enhances comprehension of physical violence,

presenting novel perspectives for investigating violence in warfare.

**Supervisors:** Dr Jo Appleby (University of Leicester);  
Prof Richard Thomas (University of Leicester)  
Dr Anastasia Chamberlen (University of Warwick).

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**Biocultural transformations in central mainland Greece during Classical Antiquity**

*Anna Karligkioti*

The Cyprus Institute

Classical Antiquity in mainland Greece was characterized by intense socio-political and cultural transformations. The formation of complex societies, democracy, the rise of semi-autonomous city-states, extensive exchange networks, philosophy and the arts are only a few of these developments. These phenomena have to date been approached almost exclusively through written sources and material culture. Research has focused principally on Athens, leaving much of the periphery of the Classical world unexplored. Furthermore, Classical studies have mainly focused on the lives of the elites. Research exploring information about the people of past societies through their bones is very limited, and focuses mostly on major urban centres.

This research examines the formation of social inequalities through the study of human skeletal remains from Classical Antiquity in mainland Greece by adopting a biocultural approach. Assemblages from two key regions for the history of the Greco-Roman world are studied, namely Attica and Boeotia, combining osteological evidence with funerary and historical information. This thesis aims to explore social divisions diachronically, as these are expressed through differentiations in health, diet, mechanical stress and activity patterns among and within cemeteries. Additionally, biodistances are examined by using dental nonmetric and metric data in order to reconstruct past mobility and kinship patterns spatially and temporally.

People experience life in a variety of ways. Thus, this research aims to shed light on a rather oversimplified and often misleading image we have regarding the people of the Greco-Roman world in mainland Greece. Finally, this study is expected to give voice to the silenced people of Classical antiquity such as women, people from lower social strata and inhabitants outside Athens.

**Supervisor:** Dr E. Nikita

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## ***CONFERENCE REPORTS AND REVIEWS***

### **2nd International Congress on Roman Bioarchaeology (ICORB) review**

**Anna Karligkioti**

The Cyprus Institute

The 2nd International Congress on Roman Bioarchaeology held from the 26th until the 28th of October at the Cyprus Institute, and was co-organized by the ICORB team and colleagues from the institute's Science and Technology in Archaeology and Culture Research Centre (STARC).

This was the first year the conference was held at a hybrid format with both on-line and in-person participation after a successful on-line only mode in 2021. The conference attracted 55 contributions, with 45 oral presentations and 10 posters, including a keynote lecture. The conference saw a strong international presence with over 70 co-authors coming from countries throughout Europe and America, and of course West Asia and the Middle East. This pattern highlights the growing interest in Roman bioarchaeology and the great research that has recently been done throughout the areas the Roman world expanded. This year's aim was to expand in all sub-fields of bioarchaeology and bring together scholars that employ a multitude of approaches and methods, including zooarchaeology, human remains, paleobotany, aDNA, paleoproteomic and isotope analysis.

The conference commenced with the keynote lecture by Dr. Chryssa Bourbou, discussing public outreach in the context of what else, Roman bioarchaeology. During the first day, presentations were organised in three sessions, focusing on Lifeways and Landscapes, Mobility and Identity formation and the bioarchaeology of Childhood and Caregiving. The second day the themes were organised geographically discussing Life on the Limes and offering Insights from the Eastern Empire. Mortuary practices and Postmortem treatment could not be absent from such a gathering, closing the second evening. Finally, the last

day was dedicated to the Bioarchaeology of the Late Roman Empire. Overall, the papers discussed an interesting range of topics including health and living conditions, diet, human-environment interactions and animal exploitation, kinship reconstructions, social dynamics and identities, funerary treatment, as well as rural versus urban aspects of life in the Roman world.

A highlight of the conference was of course the social event. Participants had the opportunity to dine in the traditional tavern of Agios Giorgis in the walled city of Nicosia, where they tried Eastern Mediterranean delicacies followed by local music.

With equally impressive podium talks and poster presentations, the overall quality of the research presented during this three-day conference was very high, while the level of engagement both from in-person and on-line attendees was very good allowing for fruitful discussions. A remarkable feature of the conference was the significant presence of female ECRs that presented high-quality papers, spanning all sub fields of bioarchaeology. Despite its hybrid format, more than 80% of the participants chose to attend the conference in person, adding to its success.

To conclude, the diverse themes presented in the 2nd ICORB managed to bring together a multitude of bioarchaeological methods and approaches that shed more light in areas that were previously neglected, such as the northern and eastern borders of the Roman world.

Many congratulations to the organisers, it was really a great success and an overall delightful conference. We are looking forward to the proceedings that are expected to be published as a special issue through the Journal of Archaeological Science: Reports later in 2024.

If you are interested in joining the team and for future news, please visit:  
<https://www.icorb.org/>

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