Historic England

A report on the use of archaeological material archives in research in England (2010–2020)

University Archaeology UK

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SUMMARY

Archaeological archives are vital resources for research, museum displays, interpretations of our past and as materials for education. This report is a rapid quantification and analysis of the different types of archaeological material archives currently being used in England by PhD researchers and research projects (such as those funded by UKRI and other bodies) in the period 2010–2020/1.

This project is part of a wider survey of the use of museum archaeology collections as part of Historic England's Future for Archaeological Archives Programme (https://historicengland.org.uk/whats-new/news/new-plan-englands-archaeology-archives-challenge/); set up to fulfil the recommendations made to DCMS in response to the Mendoza review of museums in England.

CONTRIBUTORS

The principal authors of this report are Christopher Gerrard (University of Durham) and Alejandra Gutierrez.

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Front cover photograph: Courtesy of Wiltshire Museum / University of Exeter

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Of a total of 590 completed theses within the geographical and disciplinary scope of this project, 438 were available online and analysed. 186 of these were found to have used materials archives held in museums and other repositories (42%) at an estimated cost over 10 years of over £11M at current levels of UKRI doctoral studentship funding.

More than three quarters of a million artefacts were examined in these projects with a marked preference for Iron Age, Roman and medieval materials. Human remains assemblages were the most frequently consulted, followed by metals, ceramics and faunal remains. The importance of Historic Environment Records (HERs) as a point of access to information about suitable sites and collections is emphasised.

The following recommendations are made:

1) that further work is needed to quantify more precisely the specific use in doctoral research of finds from developer-led fieldwork since 1990 as against, for example, university research projects or antiquarian collections,

2) a more detailed exploration of 'avenues to archives' should be considered to investigate why some archives are preferred for further research over others,

3) the naming of archives, their repositories and archive codes is best practice in doctoral thesis writing and should be better standardised. At the same time, researchers should redouble their efforts to make museums aware of their results, acknowledge the contribution of archival collections and to provide copies of their work wherever possible,

4) the names of archives, their depositories and archive codes are inconsistently recorded in UKRI projects, where they are provided at all, and greater (and more consistent) acknowledgement would enable traceability.

SECTION 1 Introduction, Background and Aims of the Project

1.1 Introduction

As part of Historic England's *Future for Archaeological Archives Programme*, the need to understand the current level and character of archive usage was identified as an early priority. In response, this project evaluates the different types of archaeological material archives currently being used in England. To achieve this, those PhD theses and research projects (such as those funded by UK Research and Innovation and other bodies) which have made substantial use of archaeological material archives have been rapidly identified and quantified.

The main findings of the report below are:

1) 42% of all PhD theses undertaken between 2010 and 2020 made use of materials archives held in museums and other repositories at an estimated cost over 10 years of over £11M at current levels of UKRI doctoral studentship funding.
2) More than three quarters of a million artefacts were examined with a marked preference for Iron Age, Roman and medieval materials. Human remains assemblages were the most frequently consulted.
3) The importance of Historic Environment Records (HERs) as a point of access to information about suitable sites and collections was highlighted.

The main recommendations of the report are that:

1) further work is needed to quantify the specific use of finds of different types of fieldwork e.g. post-PPG16
2) a more detailed exploration of 'avenues to archives' is warranted to consider why some archives are preferred for further research over others
3) the naming of archives, their repositories and archive codes should be better standardized in theses and researchers should redouble their efforts to make museums aware of their results, acknowledge the contribution of archival collections and to provide copies of their work wherever possible
4) the names of archives, their depositories and archive codes are inconsistently recorded in UKRI projects, where they are provided at all, and greater (and more consistent) acknowledgement would enable traceability.

1.2 Background

Archaeological archives are vital resources for research, museum displays, interpretations of our past and as materials for education. An important aspect of their role is that they can be re-interrogated in the future as and when new techniques of investigation and analysis develop (for example, radiocarbon dating, peptides,

isotopes, or aDNA). Much of this research, though not all, is undertaken by academic researchers working at postgraduate and post-doctoral levels.

Current best practice is laid out in *Archaeological archives: a guide to best practice in creation, compilation, transfer and curation* (Brown 2011), which in turn builds upon earlier guidance and data gathering projects, namely *Archaeological archives: documentation, access and deposition, a way forward* (Perrin 2002) and *A survey of archaeological archives in England* (Swain 1998). Recent European guidance on archiving archaeological documentation has been published by the Europae Archaeologiae Consilium (EAC) (Perrin et al. 2014).

Finding a sustainable future for archaeological archives is still identified as a significant challenge (Duncan Wilson, Chief Executive of Historic England; historicengland.org.uk/whats- new/news/new-plan-englands-archaeology-archives-challenge/). *The Mendoza review: an independent review of museums in England* (2017) noted a shortage of space for museums curating archives and stressed the need for the archaeological sector to find a sustainable future for archaeological archives. The report suggests an approach that 'maximises their benefit to the public in terms of understanding, learning, participation and enjoyment' (point 1.2) and, in Section 5, specifies the need to 'gain a better understanding of the professional, research and public use of archaeological archives as part of any work to evaluate the public value of museum collections'.

The *Twenty-first century challenges for archaeology* project expanded further, identifying additional questions concerning the relationship of archaeological archives to planning policy, deposition, transfer of title, curation, accessibility and the broad nature of what constitutes a 'useful' archive (Donnelly-Symes 2019). The *Options for sustainable archaeological archives* project, funded by Arts Council England and Historic England, is addressing strategic solutions for the ongoing issue of storing archaeological archives, and this report represents another initiative. In this case the challenge is to quantify the current level and character of archive usage by the academic community in order to characterise the user-base and inform next steps.

1.3 Aim and Parameters

The aim of this project is to measure and document the use of archaeological material archives in England by university-based researchers. Data from the relevant research sources are collated and analysed to produce a quantifiable list of usage in the last 10 years. We ask three main questions: how often are archives visited? what types of materials are being researched? and where are the main archives housed?

Our focus is restricted to research conducted over the last 10 years in England and identifies the types of material archive used (e.g. pottery, tile, bone, wood, etc), the size of the assemblages, their physical location and the period of the material under analysis (prehistoric, Roman, medieval, post-medieval, modern, multi-period).

SECTION 2 Methodology

2.1 Consulting Stakeholders

All 37 Departments of Archaeology in the UK were contacted by email and asked to list postgraduate research and research projects in their organisations which had made substantial use of archaeological archives. Three universities were unable to respond (Bangor, Salford, Sheffield), a further three responded to say they had no such projects.

A total of 12 replied (Table 1), 35% of the members, and 44% of English universities. The full list is as follows (Table 1):

1	Queen's Belfast
2	Birkbeck
3	Bristol
4	Cambridge
5	Durham
6	Kent
7	Lancashire
8	Leicester
9	Nottingham
10	Oxford
11	Reading
12	Worcester

Table 1: Departments who provided details of postgraduate theses and research projects

These replies were useful in several ways. First, they facilitate cross-referencing between institutional lists of recent PhD research awards (Level 8 qualifications) against the list obtained from the British Library (see Section 2.2 below); several new titles were added in this way. Second, details of other research by students, both undergraduate degree dissertations (Level 6 qualifications) and Master's Degrees (Level 7 qualifications), were also provided by some universities. There is currently no collation of Level 6 or 7 details at national or UK level and, although the information received from departments was patchy, it is sufficient to demonstrate the extensive use of material archives at Levels 6 and 7. For example, three members of staff (of 20) at the Department of Archaeology at Cambridge University, named 20 recent student dissertations based on the study of human and faunal remains, and lithics, as well as research on finds recovered on projects undertaken by the Cambridge Archaeological Unit.

Details received from departments are listed in Appendix 4. Durham University, for example, listed 36 student projects that use material from museums (human remains and artefacts). It is clear that research using archives is ongoing, but quantifying student research other than PhD across the UAUK membership is complicated.

2.2 EThOS (E-Theses On-line Service)

A spreadsheet containing a list of theses which mentions 'archaeology' was kindly provided by the British Library upon request, as part of their e-theses online service. This file contained the author, year of submission, institution, title, abstract and the link to the URL of the repository (usually the British Library, but also the original university where the thesis was submitted).

The initial list included 6,645 theses, of which 834 were completed between 2010 and 2020. This list included theses:

- in the fields of anthropology, archaeology, classics, conservation, geography, literature, history, etc.
- it also included theses covering subjects other than England (e.g. Scotland, Wales, Egypt, north America, etc).

Theses dealing with subjects not related to archaeology and those beyond the geographical scope of this report were laid aside, leaving a total of 568 theses. These were supplemented by more recent theses whose details were provided by the Departments of Archaeology (see Section 2.1 above). The total number listed in this way was 590 PhD theses.

Incomplete, ongoing research (as received from the Departments of Archaeology, see Section 2.1) is not included in the totals recorded, but it should be noted that current research continues to make use of finds archives, for example; to name a few examples:

- *Anglo-Saxon diet, society and economy: A multi-isotope investigation* by F. Moore, Nottingham University
- *Furnishing the shop: The material culture of apothecaries in Britain and the Atlantic World (c.1617–1815)* by C. Booth, Nottingham University
- *An impoverished town? An assessment of archaeological and documentary evidence for economic and socio-economic change in Nottingham between 1300 and 1540* by S. Lomax, Nottingham University
- *Imported Roman quernstones in Britain* by L. Banfield, Reading University
- *The material culture of Batavians* by C. Criziban, Reading University
- *Animal architecture: an integrated approach to the built environment of the Early Neolithic in Yorkshire* by E. Shepherd, Birkbeck College,
- *The Thames on the eve of Londinium: exploring a Late Iron Age landscape* by J. Campbell, Birkbeck College
- *Copenhagen, Bristol and their harbours* by S. Whatley, Bristol University
- *Compound-specific radiocarbon dating of Early Neolithic pottery in Britain* by I. Wiltshire, Bristol University
- *The archaeology of hare hunting AD 1600–1800* by E. Kane, Bristol University
- *Boundaries, law and governance: The landscape of the Danelaw boundary* by Thomas, Bristol University

- *Earliest Lower Palaeolithic records in Middle Thames*, by K. Price, Reading University.

Most of these 590 PhD theses are available as open access files and readily accessible either through the EThOS website or directly through the institution at which the research was completed. Out of this total, however, the text of 152 theses (26%) was not available.

Reasons not to post a thesis online may include agreements with publishers and collaborators.

The rest, 438 in total, were accessible and they form the basis for the quantification presented in this report. All of these 438 theses were then checked in more detail in order to identify those that had used finds archives in museums or other repositories. A rapid search through the text was conducted in order to record wherever possible:

—period of material studied,
—type of material,
—archive location,
—sites/projects included,
—size of the assemblage consulted.

This information was added to a database created from the data sent by the British Library. In order to record these new details, each thesis was downloaded, opened and then the acknowledgments were checked for references to museums visited. Further detail/checks were then carried out as necessary, searching for further details in the 'methodology' chapter or 'sampling' section of the text. Appendices or tables where the entire selection of materials was listed were sometimes present and they were checked also; appendices presented originally on CD-Roms or pen drives were normally absent. Given the limited time available, the main aim was to complete a rapid check and to extract the relevant information, but not to read through the entire thesis. In some cases a compromise had to be reached and it should be noted that there is a remarkable inconsistency in the way this kind of information is reported. In a few instances the information was found to be completely absent.
In several cases the text of the thesis could not be opened directly but there was a link to the repository asking for an email to explain why access to a particular thesis was needed.

Sometimes the repository would send a link to the text, sometimes the library offered to contact the author, but if details were not current, no replies were obtained and the text remained inaccessible. This was especially the case when the text had been embargoed by the author. On several occasions the author was contacted directly (if contact details could be found elsewhere) and they then provided the relevant information so that it was possible to add it to the database.

The research compiled in the PhD theses frequently includes a mix of different ways of collating evidence, for example, recording finds first-hand at museums together

with collating data from published or unpublished reports and databases (Archaeological Data Service, Portable Antiquities Scheme, Museum of London Human Bioarchaeology database, British Museum MERLIN database, etc). In a few cases, the number of finds collated in one way or another has not been identified in the thesis and this field has been either left blank in the database or has been estimated where sufficient indirect data was available.

Overall, this data-gathering exercise was successful in identifying PhD research that has used finds archives in England between 2010 and 2020/1. Out of the 438 theses checked, 186 doctoral research projects (42.4%) made use of this material.

2.3 Historic England (HE) Grants

Historic England research grants and publication grants have also been searched through the monographs online at Historic England website. Access to details has proved challenging; most of the texts are not available online and access to libraries has been barred due to the pandemic. A number of publications were consulted through the Archaeological Data Service, but none of the monographs actually listed finds archives.

Only one project is currently included at the end of Appendix 6, but this number could be expanded greatly once there is access to library resources, though it would take time to track down specific products. All HE post-excavation backlog projects, for example, might be expected to appear on such as list (e.g. the 2020 publication of Lawrence Butler's 1960s excavations at the medieval settlement at Faxton, Northamptonshire).

2.4 Research Grants

The major UK Research and Innovation (UKRI) funding research in archaeology is the Arts and Humanities Research Council (AHRC) together with the Natural Environment Research Council (NERC). A search through the awards was conducted using the term 'archaeology'.[1] This search produced a list of projects that also included themes dealing with modern languages, philosophy, geography, media, etc. The list also included geographical areas of research beyond the scope of the present investigation. The initial list of 380 research projects with successful awards between 2010 and 2020 were thinned out to 118 that focus on archaeology and may have included English material.

This list was then appraised to try and identify artefact-based projects in England. Where not enough detail was available, every attempt was made to contact each principal investigator via email to request further details: to confirm if the project had used artefacts, size and date of the assemblage, and museums visited. Projects for which not enough details were obtained are not included in Appendix 6.

[1] http://gotw.nerc.ac.uk/list_short.asp?searchterm= archaeology&Submit=Search.

Another important research funding body is the Leverhulme Trust. A list of awards approved (author, title and year) is available online, but no other details are provided.

A possible list of relevant projects was compiled going through the 'Humanities' section listed between 2010 and 2020 in each category of award (fellowships, research). Contact details for each principal investigator were found online and they were contacted for details. This allowed the compilation of some projects that used finds archives; these are also listed in Appendix 6.

It should be noted that, even when projects of this type did not make use finds archives directly, they sometimes led to further research/development which *did* include the use of finds. For example, *The Viking Diaspora: a monograph*, by Judith Jesch was followed by a project that engaged museums and their finds (https://www.emidsvikings.ac.uk/; https://gtr.ukri.org/projects?ref=AH%2FP013309%2F1).

Another example is a project by Colin Osborne called *Origins of agriculture: an ecological perspective on crop domestication*, which led onto another ERC advanced grant (*Evolutionary origins of agriculture*) that did use a range of archaeological collections.

SECTION 3 Case Studies

3.1 Projects

Eleven projects selected as case studies of research on post-1990 developer-led excavations are listed below. They should be regarded merely as examples of the different ways in which archives are used and the aims and objectives of archaeological research in HEIs.

Author: Poland, James Gerard, 2018

Title: A methodological approach to the identification of duck and goose remains from archaeological sites with an application to Roman Britain

Institution: University of Sheffield https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.758348

Period of material: Roman

Type of material: Faunal remains

Size of the assemblage used: 530 bones

English archive: MOLA, LAARC, Fishbourne Palace Museum, YorK Archaeological Trust, Norfolk Museums Service, Jewry Wall Museum (Leicester)

Assemblage: The use of ducks and geese in Roman Britain is poorly understood and rarely discussed despite the frequent recovery of their osteological remains from archaeological sites. This is because it can be difficult to distinguish between the different genera and species using a comparative reference collection. The main aim of this project was to develop a reliable method of taxonomic identification using morphometry in order to analyse archaeological assemblages and develop our understanding of the use of ducks and geese in the past. Linear measurements were taken from modern reference material to create a database of the different European anatids. Taxon distinguishing criteria was then identified using statistical analysis and the simplest reliable identification criteria are presented here for nine bones of the avian skeleton. The reliable taxon distinguishing criteria were applied to various archaeological assemblages from a range of Roman sites in Britain to discuss which taxa were used and in what way. Sites analysed were (Ch. 6):

—10 Gresham Street, London, excavated in 1997 by Museum of London Archaeology

—Caister-on-Sea, Norfolk, excavated between 1951 and 1955 by Charles Green

—Causeway Lane, Leicester, excavated in 1980 and 1991

—Docklands Light Railway (Monument Street), London, excavated in 1987 by Museum of London Archaeology

—Fishbourne Palace, Sussex, excavated in 1960 by Barry Cunliffe

—Melton, Yorkshire, ongoing excavations

—Owslebury, Hampshire, excavated in the 1960s and 1970s by John Collis

—Plantation House, Chesterfield House (Plantation Place), London, excavated in 1997 by Museum of London Archaeology

—Tanner Row, York, excavated by York Archaeological Trust in 1983 and 1984

—Ware, Hertfordshire, excavated in 1976 and 1978.

Author: Cansfield, Dawn, 2019

Title: A demographic analysis of mortuary practice across time and space in south-east England during the Early Neolithic period

Institution: University of Winchester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.809629

Type of material: Human bone

Period of material: Neolithic

Size of the assemblage used: 136 individuals

English archive: Brighton Pavilion and Museums; Hampshire Cultural Trust; Worthing Museum; Novium Museum; Natural History Museum; Croydon Museum; Reading Museum; British Museum; West Berkshire Museum Service; Sussex Archaeological Society.

Assemblage: The initial stage of the research comprised a detailed search of existing online databases, such as Historic England's *Heritage Gateway*, Bristow's (2001) *Attitudes to Disposal of the Dead in Southern Britain 3500 BC–AD 43*, and the Archaeology Data Service resource, along with a detailed literature search of published monographs, international, national and local journals and unpublished grey literature, and direct contact with museums and Historic Environment Records for database searches of human remains from the Early Neolithic era in south-east England. For the purposes of this research, the full dataset is based upon the counties of Berkshire, Buckinghamshire, East Sussex, Hampshire, Kent, Oxfordshire, Surrey, West Sussex, plus Greater London (p. 49).

Where recent osteological analysis had taken place the relevant reports of this work were obtained where possible and used as a basis for this study, for example the recent reassessment of the Whitehawk archive (Ponce 2015). Where no recent osteological study had taken place, any previous written reports were obtained and reviewed and, where the surviving skeletal remains were accessible and well enough preserved, these were subjected to a full osteological examination by the author (p. 50). If the human remains had not been subject to recent or previous detailed analysis and they were accessible, osteological examination was carried out at their holding institutions. The sites with human remains that were personally assessed by the author are: Nutbane, Hampshire (excavated 1959); Barton Stacey, Hampshire; Itchen Farm, Hampshire (exc. 2006); Offham Hill, West Sussex (exc. 1875, 1878, 1961); Cissbury, West Sussex (exc. 1976); North Marden, West Sussex (exc. 1982); Whitehawk, East Sussex (exc. 1932–35); Blackpatch, East Sussex (exc. 1922–32); Staines, Surrey (exc. 1961–63); Whyteleafe, Surrey (exc. 1896); Farmhill, Berkshire (exc. 1929); Lambourn, Berkshire (exc. 1978–79); Hoveringham, Berkshire; Park Farm, Berkshire; Whiteleaf Hill, Buckinghamshire; Lyneham, Oxfordshire (exc. 1894) (p. 52, 87ff).

During the course of this study, human remains assemblages not currently dated where identified that may provide appropriate samples for future dating. Criteria for inclusion in such a study were those that could be expected to add meaningful data to a particular site or local/regional area and where suitable samples were likely to be obtainable and the number of potential samples was likely to be achievable financially (subject to funding). During the course of this research, a programme of radiocarbon dating was funded by the University of Winchester on samples from eleven individuals (p. 59). The dataset for this research comprises the burials of a total of 136 individuals, 39 articulated and 97 disarticulated/fragmentary (see detailed summary at Appendix 1 of this thesis) (p. 61).

Author: Sibbesson, Emilie, 2014

Title: From content to context: a food residue study of ceramics of the fourth millennium BC in the Upper and Middle Thames Valley, UK

Institution: University of Southampton

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.640741 **Type of material:** Early and Middle Neolithic

Period of material: Ceramics

Size of the assemblage used: 44 pottery vessels

English archive: Oxfordshire Museum Resource Centre; Oxford Archaeology; Thames Valley Archaeological Service

Type of material: Ceramics

Period of material: Early and Middle Neolithic

Assemblage: Sherds were selected for lipid residue analysis from the site archives, focussing on those which were reconstructable and/or diagnostic (p. 121ff). The material culture found in Neolithic pit features have to date been granted little scientific attention. For this reason, the pottery studied in this project was recovered from pits. Each of the four targeted pit sites are located in the Upper Thames region and were excavated during developer-funded investigations in the last two decades (p. 56ff):

—the South Stoke Early Neolithic pit group. It was discovered in 2000 during investigations by Oxford Archaeology along the route of a pipeline between south Oxfordshire and west Berkshire (Timby
et al. 2005),

—the multi-period site at St Helen's Avenue in Benson, Oxfordshire, was excavated by Thames Valley Archaeological Service in 1999 (Pine and Ford 2004),

—Horcott Pit, Gloucestershire. The site at Horcott Pit lies on the second gravel terrace between the rivers Thames and Coln near Fairford, Gloucestershire. It was excavated in advance of gravel extraction in 2002 and 2003 (Lamdin-Whymark et al. 2009),

—Cotswold Community, Gloucestershire. This Neolithic site was found during a programme of excavations that took place between 1999 and 2004 in advance of quarrying (Smith 2010, 1).

Author: Anderson, Arthur William, 2012

Title: Traditions and transitions: later and Roman Iron Age communities in the North-East of England

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.694849

Type of material: Pottery and artefacts (flint, stone, metal, glass, industrial debris, bone)

Period of material: Later Iron Age and Roman

Size of the assemblage used: 1,257 artefacts

English archive: Old Fulling Mill Museum, Durham; Dorman Museum; Tyne and Wear Museums; Archaeological Services Durham University; Headland Archaeology; Pre-Construct Archaeology

Assemblage: The initial list of archaeological sites to be investigated was created as an attempt to make a record of all excavated sites in the study area which date to the later Iron Age or Roman period. This was achieved through consulting all relevant SMRs and HERs in the study area, the National Monument Record, searches of the Archaeology Data Service

and OASIS, full trawls of journals especially relevant to the area, consultation with local archaeological units and occasionally 'word of mouth' for recently excavated or in-progress sites. Appendix 1 of this thesis lists the 187 sites thus identified (p. 29).

In order to re-evaluate the ceramic evidence from the region, all available published and unpublished excavation reports with later Iron Age occupation were consulted, a total of 85. 49 of these sites (58%) produced ceramic material and 22 of these produced sufficiently complete and recorded vessels for use in this chapter. The goal of this study is to consider vessels as objects and for this to be possible, only vessels whose size and form could be reconstructed to a reasonable level are be included in this analysis. This limited the sample to, at a minimum, rim sherds from which a rim diameter and form could be established. Though a dauntingly high standard to apply to this material, a total of 206 vessels were recorded (see Appendix 2 of this thesis) (p. 83).

Author: Gardner, Carlotta, 2018

Title: Metalworking crucibles in Roman Britain

Institution: University College London

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.756332 **Type of material:** ceramic crucibles

Period of material: Roman

Size of the assemblage used: Over 500 Roman crucibles

English archive: Museum of London Archaeology (MOLA), Vindolanda Trust, Grosvenor Museum, Hill Farm Gesingthorpe, Arbeia Roman Fort and Museum, The Oxfordshire Museum, Museum of Archaeology and Anthropology, The National Trust (Housesteads), Historic England (Corbridge, Chesters, and Stanwick), Cotswold Archaeology, Wessex Archaeology, London Archaeological Archives and Research Centre (LAARC)

Assemblage: Over 500 Roman crucibles from 70 sites across Britain were assessed for this thesis. The two main case studies, London and Hadrian's Wall, were chosen specifically to answer the research questions set out in section 1.1, and account for 55 of the 70 sites the material came from. The remaining 15 sites were assessed to understand the spread of the trends identified in this research and on occasion when the material was presented to the author for analysis (i.e. Exeter). In addition to this material, a number of previously prepared polished samples were generously made available from Housesteads, Cologne, and Xanten by Professor Thilo Rehren and Dr. D. Dungworth (p. 70).

Roman material assessed and analysed in this study (p. 71):

Organisation / museum / individual	**Site/s**	**No. of crucibles**
Arbeia Roman Fort and Museum	Arbeia	11
Chesters Roman Fort	Coventina's Well	3
Corbridge	Corbridge	12
Corbridge	Housesteads	3
David Dungworth	Housesteads	6
Vindolanda Museum	Vindolanda	85
LAARC	44	172
MOLA	6	142
Grosvenor Museum, Chester	4	29
Cotswold Archaeology Exeter	4	8
Oxfordshire Museum	1	1
Hill Farm, Gestingthorpe	Gestingthorpe villa	5
Historic England	Stanwick	10
(Cologne)	(6)	(31)
Total	**70**	**512**

Author: Rubinson, Samantha Rebecca, 2010

Title: An archaeometallurgical study of early medieval iron technology: an examination of the quality and use of iron alloys in iron artefacts from early medieval Britain

Institution: University of Bradford https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.533588

Type of material: Metal (iron) artefacts

Period of material: Early medieval

Size of the assemblage used: Brent Knoll, Somerset; Christ Church, Canterbury, Kent; Six Dials, Southampton, Hampshire; Brandon Road, Thetford, Norfolk; South Manor, Wharram Percy, Yorkshire; Winchester, Hampshire; Deansway, Worcester, Worcestershire; Coppergate, York, Yorkshire

English archive: Worcester City Museum, Winchester Museum, York Archaeological Trust, Worcestershire Archaeological Service, Avon Archaeology, Canterbury Archaeological Trust, Southampton Archaeological Unit, The Wharram Percy Project, Winchester Archaeology Field Unit

Assemblage: This research project examined iron assemblages from eight early medieval sites distributed across Britain (p. 75). Sites were selected from archaeological excavations of both urban and rural early medieval settlements. These sites needed to be from different regions across England, to include a selection of both high and low status sites, to have provided ten or more iron artefacts of moderate preservation and excavations should not include cemeteries or other ceremonial sites. To address the objectives of this study it was necessary to sample a selection of artefact types from each site. This selection focused on edged tools, nails and stock iron, while including a variety of other artefacts. Specific artefacts were selected based on type and level of preservation. This was determined through visual examination, testing for magnetic properties and determining the amount of surviving metal, as determined through X-radiography (p. 53ff).

The sites are:

—Brent Knoll, Somerset, excavated by Avon Archaeological Unit during Christmas 2006–2007 (Young 2009),

—Canterbury: Canterbury Archaeological Trust excavated an area of Christ Church College in spring of 1995,

—Six Dials, Southampton, Hampshire, excavated for intermittent periods between April 1981 and August 1983 (Andrews 1997, 8),

—Brandon Road, Thetford, Norfolk (Atkins and Aileen 2002)

—Wharram Percy, North Yorkshire, excavated sporadically since the 1950s. The excavation of the South Manor is the most recent, occurring over ten seasons between 1981–1990. The excavation was carried out under the auspices of the Medieval Village Research Group, the Medieval Settlement Research Group, and the Department of Archaeology, University of York, under the direction of John Hurst (Stamper and Croft 2000: xi),

—Winchester, Hampshire: New Road, Sussex Street, Victoria Road, The Brooks,

—Deansway, Worcester, Worcestershire: excavation (Dalwood and Edwards 2004) began in 1988 in an area in Worcester City Centre between Deansway, High Street and Broad Street by the Deansway Archaeological Project,

—16–22 Coppergate, York: excavated between 1976 and 1983 an area 1000 square metres sitting on the land between the Rivers Ouse and Foss.

Author: Ruffle, Bob, 2012

Title: Pottery in the material culture of Early Modern England: a model from the archaeology of Worcester, 1650–1750

Institution: University of Worcester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.665696

Type of material: Pottery

Period of material Post-medieval (17th–18th centuries)

Size of the assemblage used: 3013 pottery sherds

English archive: Worcester City Museum; Worcestershire Historic Environment and Archaeology Service; Bristol Museum; West Midlands museums and commercial units

Assemblage: The City of Worcester Historic Environment Record was consulted, and some of the sites identified for study resulted from that search. A reasonably complete list of possible sources of post-medieval pottery for study was compiled and a specific sub-sets were selected on the assumption that it is not possible, desirable or necessary to study the entirety of the set. The choice rests on the following desiderata: the avoidance of over-reliance on one site; sampling across the city; including large enough sets to draw conclusions; finding contexts ideally uncontaminated by earlier or later material; the necessity to confine the collection of data to a manageable timescale (p. 54). The sites studied are:

Location	Date of excavation	No. of sherds
Broad St	1968?	470
Cathedral Chapter	1997/7	88
City Arcade	1998/9	455
Commandery	2005	95
Deansway	1988	1770
Sansome St	2003	135
Total		**3013**

The Deansway excavation was the largest single excavation ever undertaken in Worcester. It was carried out in 1988–89 by the then Hereford and Worcester Archaeological Service in advance of the construction of the Crowngate shopping centre, in the area between Deansway and the High Street (p. 57).

Author: Meek, Andrew, 2011

Title: The chemical and isotopic analysis of English forest glass **Institution:** University of Nottingham https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.539170 **Type of material:** Glass

Period of material Early modern

Size of the assemblage used: 179 glass samples

English archive: Guildford Museum; Stoke-on-Trent Potteries Museum; Hutton-le-Hole Folk Museum; Southampton Museum; Hereford Museum; Portland Basin Museum; Dorset County Museum; World Museum Liverpool

Sites: Raw glass samples from 12 English production sites in operation between the 14th and 17th centuries: Blunden's Wood, The Weald; Knightons, The Weald; Bagot's Park, Staffordshire; Little Birches, Staffordshire; Buckholt, Hampshire; Buckholt West, Hampshire; Hutton, North Yorkshire;

Rosedale, North Yorkshire; Glasshouse Farm, Herefordshire; Bickerstaffe, Lancashire; Kimmeridge, Dorset; Haughton Green, Greater Manchester.

Assemblage: A number of samples from production sites were selected; these were lumps of raw glass chosen from assemblages excavated at production sites (p. 99). Samples were analysed by electron microprobe for 25 major, minor and trace elements. In total 179 samples from 12 sites were analysed. These ranged from three from Buckholt to over 20 from some of the sites. The number of samples analysed per site was dictated only by the amount that was made available for sampling and analysis. This set of chemical compositions represents the largest study of English forest glass to date. Carrying out all the analyses using a single piece of equipment and methodology means they are all directly comparable. This alleviates many of the problems associated with looking at previous work.

Site	Sample	No. of samples	Ownership
Buckholt	Production	3	Southampton City Council Archaeological Unit
Buckholt West	Production	19	Southampton City Council Archaeological Unit
Bagot's Park	Production	17	Stoke Potteries Museum
Blunden's Wood	Production	20	Guildford Museum
Bickerstaffe	Production	12	Liverpool World Museum
Glasshouse Farm	Production	9	Hereford Museum
Haughton Green	Production	21	Portland Basin Museum, Manchester
Hutton	Production	10	Hutton-le-Hole Folk Museum
Knightons	Production	9	Guildford Museum
Little Birches	Production	11	Stoke Potteries Museum
Rosedale	Production	27	Hutton-le-Hole Folk Museum
Kimmeridge	Production	21	Dorset County Museum
Total		**179**	

Author: Massey, Freya R., 2014

Title: Ritualisation and reappropriation: special deposits and ritual activity in domestic structures in early modern England

Institution: University of Sheffield https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.643626

Type of material: Artefacts (pottery, leather, metal, organic) **Period of material:** post-medieval

Size of the assemblage used: c.505 artefacts

English archive: Northampton Boot and Shoe Museum; Norfolk Museums; Pitt Rivers Museum; Museum of London; Museum of Archaeology and Anthropology, Cambridge; Lynn Museum; St Edmundsbury Museums; Epping Forest Museum; Colchester Museum; Royal Albert Memorial Museum, Exeter; Braintree Museum; Saffron Walden Museum; Reading Museum; Ashby de la Zouch Museum; Dartford Museum; Tunbridge Wells Museum; Henfield Museum; Chateris Museum; Andover Museum; Cambridge and County Folk Museum; Hitchin Museum

Assemblage: The artefacts and details of their deposition used in this study were acquired through different channels and sources. Where possible, examples were collected from primary or secondary literature, such as archaeological reports in county journals, or from books or articles. In addition to this, requests for any details of known examples of post-medieval ritual deposits were sent by email to organisations which were deemed likely to hold any records or artefacts relating to the practice. A list was compiled of all museums

likely to hold relevant information or objects who were then contacted accordingly, as were all county Scheduled Monument Records and Historic Environment Records offices, although not all replied or were able to provide any information. In some cases, additional deposits were identified independently through electronic online databases. Requests for information were also sent to a small number of other individuals, such as buildings or local archaeologists, who had been recommended by some of the institutions already contacted (p. 79). Finds listed at museums in Appendix M of this thesis (consolidated):

Source/museum	No. of artefacts
Northampton Museum	459
Pitt Rivers	1
Norfolk museums	6
Norris Museum, St Ives	2
Museum of Archaeology and Anthropology, Cambridge	4
Lynn Museum	2
St Edmundsbury Museums	7
Epping Forest Museum	2
Colchester Museum	2
Abingdon Museum,	1
Saffron Walden Museum	2
Royal Albert Memorial Museum, Exeter	1
Braintree Museum	1
Reading Museum	1
Ashby de la Zouch Museum	1
Dartford museum	5
Tunbridge Wells Museum	1
Henfield Museum	3
Charteris Museum	1
Hitchin Museum	1
Cambridge and County Folk Museum	1
Andover Museum	1

Author: Liddy, Lisa Jane Howarth, 2015

Title: Domestic objects in York c.1400–1600: consumption, neighbourhood and choice

Institution: University of York https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.677381

Type of material: pottery, wood, metal, glass, bone, slate

Period of material: later medieval

Size of the assemblage used: unspecified

English archive: Yorkshire Museum and the York Art Gallery; collections at York University and York Archaeological Trust

Assemblage: The majority of the objects datable to the 15th and 16th centuries were recovered from four major York sites excavated during the 1970s and 1980s: 16–22 Coppergate (1976–81); Bedern Foundry and the College of the Vicars Choral at Bedern (1973–80); and 46–54 Fishergate (1985–86). Artefacts were also found at several smaller sites, including: the Coppergate watching brief (1981–83) and 22 Piccadilly (1987) near the main Coppergate site; 1–5 Aldwark (1976–77), 2 Aldwark (1978, 1979–80) and Bedern Chapel in the vicinity of Bedern; and 9 Blake Street near the sampled parish of St Helen, Stonegate (1975). Also included is evidence provided by more recent digs, such as the excavations undertaken at St Andrewgate in 1995, 9 Little Stonegate in the parish of St Helen, Stonegate in 1998, 41–49 Walmgate in 2000, the site of the former Henlys Garage in The Stonebow in 2004, 62–68 Low Petergate, partly in the parish of St Michael-le-Belfrey, in 2004–05, and Hungate in 2006–11. The excavation of 16–22 Coppergate covered about 1,000 square metres, running from the modern street frontage down towards the River

Foss. Finds of the 15th and 16th century were also recovered during the Coppergate watching brief, undertaken following the completion of the main Coppergate excavation during the redevelopment of the Coppergate Shopping Centre, extending from Castlegate in the west to Piccadilly in the east (20,200 square metres), and in four small trenches excavated at 22 Piccadilly in advance of redevelopment there. Of the other digs referred to in the thesis, Hungate is both the largest and most recent. With excavation only completed in 2011, very little from this site has been published thus far, yet examples of 15th and 16th century finds from the Hungate site have been provided where possible (pp. 21–23).

Author: Field, Samantha Jane, 2019

Title: Re-evaluating the use of dental wear as a tool for estimating age at death in British archaeological skeletal remains

Institution: University of Southampton

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.800775

Size of the assemblage used: 861 individuals

English archive: Bournemouth University; Corinium Museum, Cirencester; Dorset County Museum; Duckworth Museum, University of Cambridge; English Heritage; Hampshire Cultural Trust; Historic England; Lancaster Maritime Museum; Museum in the Park, Stroud; Museums Sheffield; Natural History Museum; The Wilson, Cheltenham; Wiltshire Museum, Devizes; York Museums Trust

Type of material: Human bone

Period of material Neolithic to post-medieval

Assemblage: Dental wear is frequently used to estimate age at death in archaeological remains. However, the most widely cited dental wear ageing methods rely on underlying principles which have not been examined. Furthermore, the most widely cited method for estimating age concluded that a single dental wear chart could be applied to multiple British archaeological periods. This statement has never been validated. Thus, this thesis presents a re-evaluation of dental wear as a method for estimating age at death of archaeological remains. This thesis employs well documented archaeological sites to answer the research questions set up in this thesis. These sites date from the British Neolithic to post-medieval period and consist of juvenile and adult human remains representing the general population. English sites included in the study are (pp. 63–87):

Neolithic sites	Primary Reference	No. molars	No. individuals
Adlestrop, Gloucestershire	Donovan (1938)	6	4
Ash Tree Cave, Whitwell Barrow	Armstrong (1956)	5	1
Avening, Gloucestershire	O'Neil and Grinsell (1960)	10	4
Backwell Cave, Somerset	Tratman (1938)	10	5
Belas Knap, Gloucestershire	Winterbotham (1866)	5	1
Dog Holes, Lancashire	Jackson (1909, 1914)	29	13
Figsbury Rings, Wiltshire	Guido and Smith (1982)	10	2
Fussell's Lodge, Wiltshire	Ashbee (1966)	3	2
Grimes Graves, Norfolk	Clarke (1915)	4	1
Hambledon, Dorset	Mercer and Healy	95	24
Hazleton North, Gloucestershire	Saville (1990)	77	16
Jackbarrow Longbarrow,	O'Neil and Grinsell (1960)	14	3

Neolithic sites	**Primary Reference**	**No. molars**	**No. individuals**
Abbots, Gloucestershire			
Lanhill, Wiltshire	Keiller et al. (1938)	3	1
Long Low, Staffordshire	Barnatt (1996)	10	1
Nutbane, Hampshire	Mallet Morgan (1959)	17	2
Swell, Gloucestershire	Rolleston (1876); Schuster	7	2
West Kennet, Wiltshire	Piggott (1958, 1962)	95	11
West Trump, Gloucestershire	Smith and Brickley	14	7
Total Neolithic sites		519	**156**
Bronze Age sites	**Primary Reference**	**No. molars**	**No. individuals**
Amesbury, Wiltshire	Christie et al. (1968)	12	1
Ballidon, Derbyshire	Bateman (1848, 1861)	11	1
Barrow near Arbor Low,	Bateman (1848, 1861)	5	1
Barrow near Castern, Derbyshire	Bateman (1848, 1861)	10	1
Barrow near Monsal Dale,	Bateman (1848, 1861)	3	1
Barrow near Staker Hill,	Bateman (1848, 1861)	8	1
Bee Low, Derbyshire	Bateman (1848, 1861)	13	2
Blake Low, Derbyshire	Bateman (1848, 1861)	9	2
Bole, Derbyshire	Bateman (1848, 1861)	11	1
Bostorn, Derbyshire	Bateman (1848, 1861)	12	1
Caldecott, Oxfordshire	Leeds (1934)	11	1
Canada Farm, Dorset	Bailey et al. (2013)	29	3
Cassington, Oxfordshire	Leeds (1934)	40	5
Cowlam, Yorkshire	Greenwell and Rolleston (1877), Schuster (1905)	38	4
Cross Low, Derbyshire	Bateman (1848, 1861)	12	1
Earl's Farm Down, Wiltshire	Christie (1964); Christie et al. (1968)	32	4
Easton Down, Hampshire	Fasham (1982)	31	3
Eyebury, Northamptonshire	Leeds (1915)	11	1
Flixton, Folkton, Yorkshire	Greenwell and Rolleston (1877)	23	2
Foxley Farm, Oxfordshire	Leeds (1938)	9	1
Ganton, Yorkshire	Greenwell and Rolleston (1877)	12	1
Goodmanham, Yorkshire	Greenwell and Rolleston (1877), Schuster (1905)	50	6
Gotham, Nottinghamshire	Bateman (1848, 1861)	9	1
Helperthorpe, Yorkshire	Greenwell and Rolleston (1877)	10	1
Long Wittenham, Oxfordshire	Leeds (1929)	16	2
Monsal Dale, Derbyshire	Bateman (1848, 1861)	6	1
Mouse Low, Staffordshire	Carrington in Bateman (1848, 1861)	11	1
Overton, Hampshire	Cunnington (1930)	14	2
Raystone Grange, Derbyshire	Marsden (1977)	3	2
Ridgeway Hill, Dorset	Grinsell (1959)	16	5
Rockley Barrow, Wiltshire	Cunnington (1987)	11	1
Rolley Low, Derbyshire	Bateman (1848, 1861)	10	1
Roman Road, Gloucestershire	Brett and Hart (2017)	15	2
Rudstone, Yorkshire	Schuster (1905)	12	1

Neolithic sites	**Primary Reference**	**No. molars**	**No. individuals**
Shaws land near Monsal Dale,	Bateman (1848,	11	1
Sherburn Wold, Yorkshire	Schuster (1905)	30	3
Smerril Moor, Derbyshire	Bateman (1848,	10	1
Stockbridge Down, Hampshire	Stone and Hill (1940)	9	1
Stonehenge, Wiltshire	Evans (1984)	4	1
Sutton Courtenay, Oxfordshire	Leeds (1923)	8	1
Waggon Low, Derbyshire	Bateman (1848,	9	1
Weaverthrope, Yorkshire	Greenwell and Rolleston (1877)	20	4
Wetton Hill, Staffordshire	Bateman (1848, 1861)	5	1
Wetwang Slack, Yorkshire	Dent (1983)	164	19
Woodhenge, Wiltshire	Cunnington (1929)	11	1
Total Bronze Age		**941**	**118**
Iron Age sites	**Primary Reference**	**No. molars**	**No. individuals**
Danebury, Hampshire	Cunliffe (1984)	213	36
Greystones Farm, Gloucestershire	Busby (2015)	16	2
Gussage All Saints, Dorset	Wainwright (1979)	32	3
Suddern Farm, Hampshire	Cunliffe et al. (2000)	107	12
Wetwang, Yorkshire	Dent (1983)	591	68
Total Iron Age		**969**	**122**
Romano-British sites	**Primary Reference**	**No. molars**	**No. individuals**
Ancaster, Lincolnshire	Cox (1989)	391	53
Alington Avenue, Dorset	Davies et al. (2002)	62	8
Bath Gate, Gloucestershire	McWhirr et al. (1982)	63	10
Lankhills, Hampshire	Booth et al. (2010)	578	67
Total Romano-British		**1094**	**128**
Anglo-Saxon sites	**Primary Reference**	**No. molars**	**No. individuals**
Gloucestershire	Boyle (1998)	620	68
Great Chesterford, Essex	Evison and Annable (1994); Inskip (2008)	439	54
Total Anglo-Saxon		**1059**	**122**
Medieval sites	**Primary Reference**	**No. molars**	**No. individuals**
Yorkshire	Dawes and Magilton	372	56
St. Peters church, Lincolnshire	Waldron (2007)	418	50
Total medieval		**790**	**106**
Post-medieval sites	**Primary Reference**	**No. molars**	**No. individuals**
St Peters church, Lincolnshire	Waldron (2007)	796	102
Total post-medieval		**796**	**102**

SECTION 4 Results

4.1 How Many Archaeology Theses Are There and How Many Used Material Archives?

A total of 834 theses was completed by UK archaeology departments between 2010 and 2020/1 of which 590 lay within the geographical and disciplinary scope of this project (i.e. involving English archives and with an archaeological focus). This total does not include ongoing research at the time of writing (July 2021); 152 theses (26%) were inaccessible or had their contents embargoed. Of the accessed 438 theses accessed for this report, 186 used materials archives in England, that is, 42.4% (Figure 2).

All PhDs from EThOS	PhDs 2010–2020/1	England archaeology	PhD text inaccessible	PhD text quantified	PhD based on finds archives
6,645	834	590	152	438	186

Table 2: Number of PhD theses investigated for this project

A list of all 186 PhD theses that used finds archives in England as a basis for their research can be found in Appendix 3; a brief index to these theses is provided in Appendix 1, ordered by the research period, and a list of types of finds per thesis is listed in Appendix 2.

The cost of this research can be roughly calculated by taking the current level of funding for an UK Research and Innovation (UKRI) doctoral studentship over three years (c. £60,000 including tuition fees and subsistence) and multiplying this by the number of doctoral projects successfully completed in the period 2010–2020. In point of fact, only a small proportion of the theses are UKRI funded, but this at least suggests a minimum equivalent of over £11M of funding for doctoral research into English archaeological archives in English museums over the past decade.

4.2 How Many Finds Have Been Researched Overall?

The analysis of the data concludes that *more* than 785,408 finds were examined between 2010 and 2020/1, that is, where museums or other repositories were visited and material was seen and recorded directly by the researcher. This total does not include the material used in 48 theses for which details were not available or those that were lacking specific detail.

It is important to note that not all students visited museums and repositories to examine only objects. Paper archives and specific site archives were also consulted in person and to these should be added information on collections and images which were provided by curators. Fourteen theses are in this category but have not been considered further in the analysis that follows.

4.3 How Do Researchers Identify the Materials Archives?

Judging by the methodology sections analysed for this report, most PhD research begins with a search of the Historic Environment Records (HERs) in order to identify further sources. This generally includes a search of grey literature and sites archives which then allows the identification of sites and assemblages of relevance to a particular thesis. The centrality of HER records to current doctoral research should not be underestimated and this should underline the importance of making clear in all reporting where the excavation/fieldwork archive will be finally deposited (where this is known).

4.4 Where Are the Finds?

The vast majority of finds analysed by PhD researchers are deposited in museums and consulted there. Most museums across England have been visited in order to record finds (see Appendix 5); a brief list of frequency by county is listed in Figure 3. London archives dominate as do the southern English counties, with the exception of repositories in North Yorkshire. However, it is hard to reconcile publicly available 'user' data gathered by museums with the data gathered for this report. As an example, there are 14 theses 2010– 2020/1 using materials from the Ashmolean Museum in Oxford (Appendix 3), but the Department of Antiquities itself records 180 Oxford postgraduates and 252 postgraduates from non-Oxford HEIs visiting in the period 2016–2020 (Ashmolean Museum email July 2020). The great majority of these must either be visiting non-UK collections (e.g. the Ancient Egyptian and Sudanese collections in the case of the Ashmolean) and/or not producing PhD theses or be visits to teaching collections; they do not include students coming into the museum for taught classes at undergraduate and postgraduate levels. In effect, the granularity of data gathered in universities and made available by and/or gathered by museums does not make for easy analysis.

County	Visit frequency
London	101
Hampshire	50
Oxfordshire	32
Dorset	28
Wiltshire	28
Gloucestershire	27
North Yorkshire	25
Devon	24
Norfolk	24
Somerset	21
Lincolnshire	20
Cambridgeshire	18
Essex	17
Berkshire	16
Kent	15
West Sussex	14

County	Visit frequency
Bristol	12
Greater Manchester	12
Cornwall	10
East Yorkshire	10
Lancashire	10
Leicestershire	10
Suffolk	10
Northumberland	9
Cheshire	8
Hertfordshire	7
Nottinghamshire	7
South Yorkshire	7
Tyne and Wear	7
Bedfordshire	6
Cumbria	6
Durham	5
East Sussex	5
Surrey	5
Derbyshire	4
North Hertfordshire	4
Northamptonshire	4
Shropshire	4
West Midlands	4
Worcestershire	4
East Midlands	3
East Riding of Yorkshire	3
Isle of Wight	3
West Berkshire	3
Buckinghamshire	2
Herefordshire	2
Isles of Scilly	2
Staffordshire	2
Warwickshire	1

Table 3: Frequency of visits to museums for PhD research by county. The 17 visits to different English Heritage/Historic England facilities have not been included above; they include 3 to Fort Cumberland, 2 to Helmsley, 1 to Hadrian's Wall Museums, and 11 to unspecified stores.

A further point raised in response to the draft of this report is that there are sometimes multiple locations for the depositing of material in some counties as well as the movement of collections in line with agreed collection policies within individual counties. At the same time, in order to ensure that collections from the same site are curated together, recent developer-led archives may be received by a 'non-usual' museum collection such as a national museum rather than a local one.

Other repositories have also been noted, such as universities which hold human remains collections or other teaching reference material such as clay pipes, for example Bournemouth, Bradford, Bristol, Cambridge, Durham, Kent, Leicester, Liverpool, Manchester, Oxford, Sheffield, Southampton and York.

Sometimes access to data and finds from commercial archaeological units is also

mentioned in the thesis, implying that the finds consulted there are the result of developer-funded fieldwork but not yet deposited in museums. The recording of this information is, however, far from systematic and should not be taken to represent the full extent of analysis of materials of this kind. Those directly recorded in the PhD texts are listed in Figure 4.

Access to material derived from commercial archaeological units is sometimes referred to when discussing the sources of the data in the thesis. Researchers may have approached large archaeological commercial companies directly on occasions (Appendix 3, no. 82).

Sometimes a thesis will simply make reference to 'finds from unpublished commercial units' (no. 78). The aim of the discussion in the thesis is to explain how the maximum amount of data has been gathered, but reference to PPG16 sites is not necessarily seen a must. The use of unpublished reports is frequent, and access to them seems to be through searching HERs and less often through the OASIS database.

PhD researchers also gathered data directly from museum databases and, more importantly, from archived projects housed in museum collections from within the study area considered by the PhD (e.g. no. 19). We found that there was sometimes little awareness on the part of researchers of the variability of searchable information about objects provided by museums online.

Company	**Thesis no. in Appendix 3**
Archaeological Project Services	106
Archaeological Research Services Ltd	56
Archaeological Services and Consultancy Ltd	90
Archaeological Services Durham University	41, 70, 80, 104
Archaeology South-East	25
Avon Archaeology	120
Cambridge Archaeological Unit	26, 106
Canterbury Archaeological Trust	25, 54, 101, 120
Colchester Archaeological Trust	46, 96
Context One Archaeological Services	150
Cornwall Archaeological Unit	18
Cotswold Archaeology	30, 35, 76
Headland Archaeology	70
Humber Archaeological Services	141
London Archaeological Archive and Research	12, 79, 83, 84, 143, 153, 165, 169
MAP Archaeology Ltd	57
Mike Griffiths & Associates	141

Company	Thesis no. in Appendix 3
Museum of London Archaeology	12, 71, 76, 77, 79, 91, 96, 109, 112, 151, 153,
Northampton Archaeology Unit	6
Northamptonshire Archaeology (MOLA)	4, 16, 79, 174
Oxford Archaeology	37, 47, 54, 61, 78, 114, 123, 125, 151,
Palaeoecology Research Services	78
Pre-Construct Archaeology	70, 84, 90, 159, 165, 167, 172
Southampton Archaeological Unit	120
Suffolk Archaeological Unit	43
Surrey Archaeological Trust/Unit	34, 114
Tees Archaeology	114,
Thames Valley Archaeological Services	37, 47, 174
University of Leicester Archaeological Services	96, 174
York Archaeological Trust	34, 79, 120, 123, 126, 141, 174
York Osteoarchaeology Ltd	16, 167
Wardell Armstrong Archaeology	36
Wessex Archaeology	5, 12, 15, 25, 30, 41, 76, 95, 174
West Yorkshire Archaeological Service	127
Winchester Archaeology Field Unit	120
Unspecified PPG16 or developer-funded	17, 21, 37, 51, 82, 113

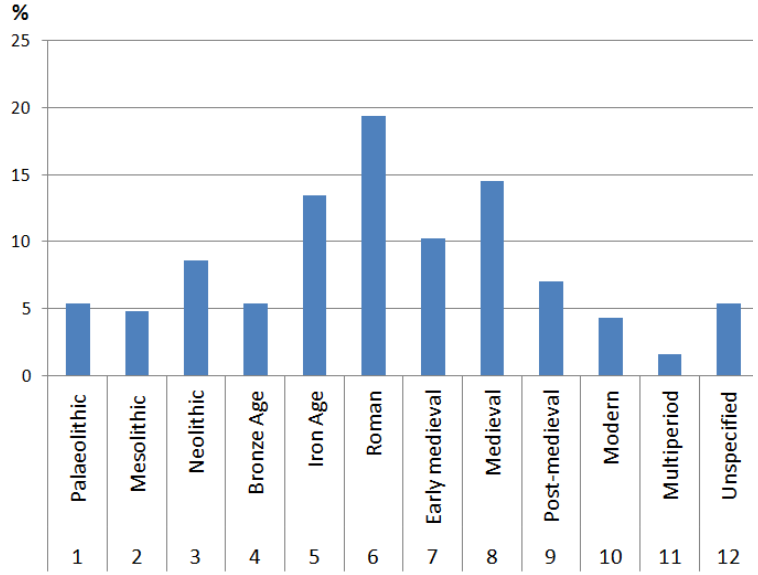
Table 4: PhD research that specifically uses archives derived from PPG16 or developer-funded archaeology

4.5 How Are the Finds Under Study Generated to Begin With?

The original source of the finds is not necessarily noted in all theses (even though it may be available in a museum database or accession register) and was not easy to identify quickly for the purposes of this report. In some cases, antiquarian finds have certainly been re-examined (Appendix 3, nos 12 and 43) but in only a handful of cases are the finds specifically linked to developer-led fieldwork undertaken since 1990 (see Figure 4).

4.6 What Period were the Finds Being Investigated?

All chronological periods were researched, but there was a marked preference for Iron Age, Roman and medieval material, which together make up for almost half (47%) of all the material investigated (Figure 5).



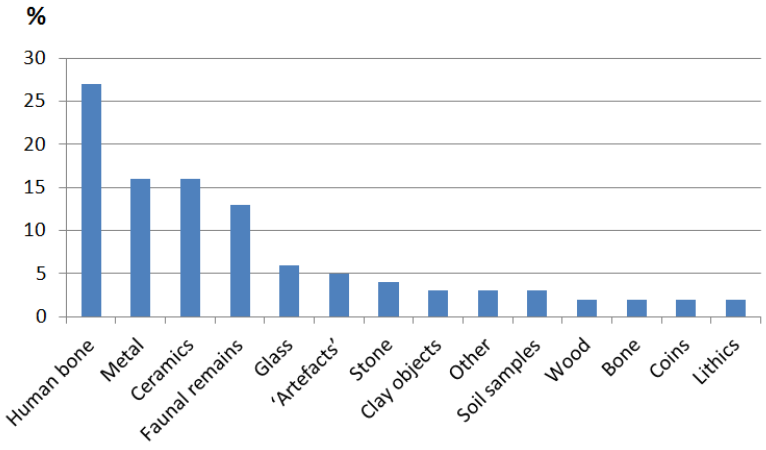
	Period		No. of	%
1	Palaeolithic	500,000–10,000	10	5
2	Mesolithic	10,000–4000	9	5
3	Neolithic	4000 BC–2400	16	9
4	Bronze Age	2400–700 BC	10	5
5	Iron Age	700 BC–AD 43	25	1
6	Roman	AD 43–410	36	1
7	Early medieval	AD 410–1066	19	1
8	Medieval	AD 1066–1540	27	1
9	Post-medieval	AD 1540–1800	13	7
1	Modern	AD 1800–1000	8	4
1	Multiperiod		3	2
1	Unspecified		10	5
	Total		**1**	**1**

Figure 1: Used archives by period of research

4.7 What Types of Finds Were Researched?

All types of finds were researched and these are listed in Figure 6. Many theses use the term ‘artefacts’, but these were not necessarily quantified by type. ‘Ceramics’ here includes both pottery and ceramic building material (only two theses, Roman in both cases; nos 73 and 74), whereas ‘clay objects’ include loomweights (no. 72) and claypipe figurines (nos 149 and 165). ‘Other’ include mammalian assemblages in a Palaeolithic thesis (no. 3), Later Iron Age and Roman industrial debris (no. 70), Roman fibre samples (goat hair and wool) (no. 81), early medieval shell, amber, gold and silver (no. 113), medieval slate (no. 126) and modern leather and organic materials (no. 170).

There has been a clear preference for human bones (27% of all the theses quantified), followed by metal, ceramics and faunal remains (Figure 6).



Type	No. of	%
Human bone	53	2
Metal	32	1
Ceramics	31	1
Faunal	25	1
Glass	11	6
'Artefacts'	10	5
Stone	8	4
Clay objects	5	3
Other	5	3
Soil samples	5	3
Wood	4	2
Bone	3	2
Coins	3	2
Lithics	3	2
Total	**198**	**100**

Figure 2: Used archives by type of find (note: the number of PhDs is higher than the total examined because a thesis researching two types of artefact will be counted twice)

4.8 How Big are the Assemblages Being Studied?

The number of finds recorded or used by thesis varies hugely (Figures 7 and 8). Research to do with conservation of archaeological artefacts, for example, or with samples, tends to use fewer finds (<50). In total:

- 26 theses used fewer than 100 finds,
- 62 more than 100 and fewer than 1,000,
- 38 more than 1,000 and fewer than 10,000
- 12 used greater quantities (Figure 7).

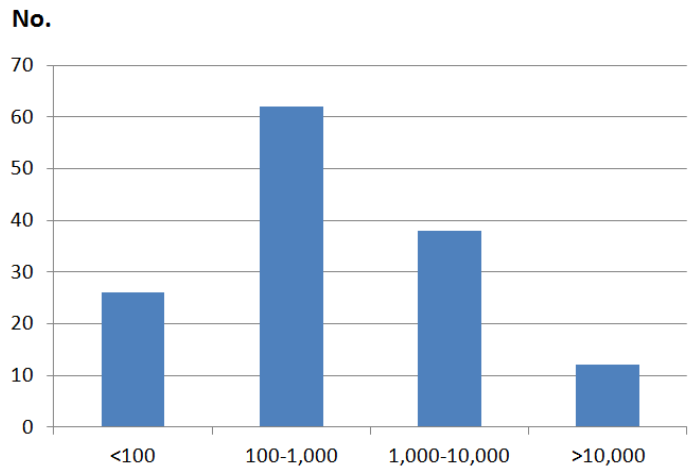


Figure 3: Size of assemblages used in PhD research

PhD no.	Period		No. of finds	Type of finds
80	06	Roman	169,291	Faunal remains
49	05	Iron Age	130,000	Faunal remains
68	05	Iron Age	80,000	Faunal remains
42	04	Bronze Age	77,000	Pottery
94	06	Roman	70,000	Pottery
103	06	Roman	40,000	Faunal remains
12	02	Mesolithic	38,157	Faunal remains
15	02	Mesolithic	27,803	Lithics
3	01	Palaeolithic	22,000	Lithics and mammalian
111	07	Early medieval	19,793	Faunal remains
19	02	Mesolithic	12,234	Pottery and artefacts
23	03	Neolithic	10,040	Faunal remains

Table 5: The largest assemblages studied for PhD theses

The nature of the 'find' itself has a bearing on quantification. Human remains have been counted in the theses as 'individuals' or 'skeletons' rather than bones. If individual bones were to be considered, at 213 (maximum number of) bones per skeleton, then the totals would change radically (Figure 9).

PhD no.	Period		Assemblage
172	10	Early modern (1750–1850)	1432 individuals
141	08	Medieval	1344 individuals
54	05	Iron Age to post-medieval	1203 individuals
84	06	Roman	967 individuals
35	03	Neolithic to post-medieval	861 individuals
135	08	Medieval	764 skeletons
85	06	Roman	601 skeletons
159	09	Post-medieval	539 individuals
139	08	Medieval	463 skeletons
157	09	Post-medieval	460 skeletons
168	10	Modern (18th–19thC)	358 skeletons
36	04	Early Bronze Age	312 individuals
151	08	Medieval to post-medieval	306 individuals
26	03	Neolithic	305 burials
183	12	Unspecified	294 individuals
158	09	Post-medieval	282 skeletons
174	11	Prehistoric to early post-medieval	169 individuals
25	03	Neolithic	136 individuals
114	07	Early medieval	86 individuals

Table 6: Largest assemblages of human remains studied in PhD theses

4.9 What About Projects Other Than Doctoral Theses?

The results discussed in this section are based on university theses (Level 8 qualifications) for which a satisfactory dataset can be collated and analysed. The same is not true of either undergraduate or Master's level dissertations (i.e. Levels 6 and 7). The latter in particular is something of an untapped resource and includes a great many useful projects which make use of materials archives. Gathering evidence on numbers and content, however, would be a lengthy process.

For UKRI projects, only 20 projects have been recorded in detail here, amounting to a total of 24,814 finds.

SECTION 5 Conclusions and Recommendations

5.1 Almost half of all doctoral theses quantified for this report (i.e. those using English archives and with an archaeological focus) have made use of materials stored in archaeological archives across England in the past decade and they are clearly vital to the progress of archaeological knowledge. More than 785,000 individual objects have been examined and included in some way in doctoral theses awarded by UK universities.

Recommendation: Further work is necessary to quantify more closely the specific use of finds from different periods of archaeological endeavour. To what extent, for example, do materials generated by developer-led fieldwork since 1990 feed into the 186 doctoral theses identified for this report? How does this compare against academic research projects or older antiquarian collections?

5.2 Most materials are held by regional and national museums and consulted there, but not all. Frequent use is also made by doctoral researchers of site materials held by universities and (often temporarily) by commercial units (e.g. Sheffield University make use of materials from Cambridgeshire archives).

No further analysis has been made here of the list of counties in Figure 3 and the extent to which the frequency of recorded visits might be influenced by 1) the distribution of University archaeology departments, 2) online information about collections in storage, 3) access to collections, or 4) regional densities of post-PPG16 archaeological sites.

5.3 HERs are fundamental to the identification of sites appropriate to object-based theses. Other factors influencing the choice of archives seem to include personal recommendation, personal networks, distance and expense, previous publication or grey literature and websites; OASIS V has the facility for museum information to be added. Anecdotal evidence suggests that accessibility may vary too and that, even with the best intentions, collections may not be accessible during the period of doctoral research.

Recommendation: No detailed exploration of these 'avenues to archives' was undertaken for this project, but they would be useful to quantify in great detail. How many HERs include references to museum accession codes, for example? How do researchers find out where archives are stored?

5.4 Finds of all periods are studied by doctoral students. There is little observable chronological bias in the materials being visited and researched with rough parity between the prehistoric, Roman, and medieval periods. Post-medieval and modern materials are less studied overall (see Figure 3).

5.5 Human remains are the most popular reason for doctoral researchers to consult archaeological archives whereas other materials types can be under-represented, for example ceramic building material (see Figure 4).

5.6 How aware museums are of the results of academic research produced on the basis of their collections has not been quantified here. Generally speaking, museums request that copies of results are provided once they become available, and may also ask for copies of any photographs taken. Anecdotal evidence suggests they are rarely provided.

Recommendation: The names of archives, their depositories and archive codes are inconsistently recorded in doctoral theses and this could be greatly improved and standardised. Researchers should redouble their efforts to make museums aware of their results and to provide copies wherever possible.

5.7 A quarter of all doctoral theses from UK Higher Education institutions are inaccessible or have their contents embargoed temporarily by their authors. There are some notable omissions in the lists produced for this report.

5.8 Evidence on research projects funded by UKRI and the Leverhulme Trust, as well as projects funded by Historic England, is also less easy to obtain, particularly without access to published outputs.

Recommendation: The names of archives, their depositories and archive codes are inconsistently recorded in UKRI projects, where they are provided at all, and fuller (and more consistent) acknowledgement would be welcomed.

5.8 Finally, some finds and archives are revisited time and time again, including antiquarian finds of the 19th century and more recent assemblages, such as Cunliffe's Danebury excavations of the 1980s. The reasons for this include the development of new technologies and techniques such as isotopes and aDNA, the testing of new hypothesis as fresh data comes to light and the re-interpretation of local, regional, national and international narratives. Archives in this category are usually well published and well known, while familiarity with archives by particular curators is also a factor when selecting site materials for further analysis. The significant conclusion to draw from this is that while archives may not be in use all the time, they are never redundant and there may be a time lag between accessioning an archive and its further analysis.

SECTION 6 References

Brown, D, 2011 *Archaeological archives: a guide to best practice in creation, compilation, transfer and curation*, Archaeological Archives Forum, London

Donnelly-Symes, B, 2019 *Planning for archives: opportunities and omissions*, Historic England Project 7756, April 2019 [historicengland.org.uk/images-books/publications/planning-for- archives]

Mendoza, N, 2017 *The Mendoza review: an independent review of museums in England*

Perrin, K, 2002 *Archaeological archives: documentation, access and deposition, a way forward*, English Heritage, London

Perrin K. et al, 2014 *A standard and guide to best practice in archaeological archiving in Europe*, EAC Guidelines 1

Swain, H, 1998 *A survey of archaeological archives in England*, English Heritage, London

APPENDIX 1

Abbreviated index to list of PhD included in Appendix 3, by entry number

Appendix 3 number	Period of material	Type of material studied
1	Upper Palaeolithic	Lithics
2	Palaeolithic	Artefacts
3	Palaeolithic	Artefacts (lithics) and mammalian assemblages
4	Palaeolithic	Faunal remains
5	Palaeolithic	Lithics
6	Palaeolithic	Lithics
7	Palaeolithic	Wooden spears
8	Lower Palaeolithic	Lithics
9	Palaeolithic and Mesolithic	Lithics
10	Palaeolithic and Mesolithic	Lithics and finds
11	Mesolithic	Faunal remains
12	Mesolithic	Faunal remains
13	Mesolithic	Lithics
14	Mesolithic	Lithics
15	Mesolithic	Lithics
16	Mesolithic and Neolithic	Human bone
17	Mesolithic to Bronze Age	Lithics
18	Mesolithic to Bronze Age	Lithics
19	Mesolithic to Bronze Age	Pottery and artefacts
20	Neolithic	Human bone
21	Neolithic	Pottery
22	Neolithic	Animal and human bone
23	Neolithic	Faunal remains
24	Neolithic	Human bone
25	Neolithic	Human bone
26	Neolithic	Human bone
27	Neolithic	Human bone
28	Neolithic	Lithics
29	Neolithic	Stone axeheads
30	Neolithic, Bronze and Iron Age	Human bone
31	Neolithic and Bronze Age	Human bone
32	Neolithic to Early Bronze Age	Lithics
33	Neolithic to Iron Age	Stone querns
34	Neolithic to post-medieval	Human bone
35	Early Bronze Age	Human bone

Appendix 3 no.	Period of material	Type of material studied
36	Early Bronze Age	Human bone
37	Early and Middle Neolithic	Ceramics
38	Bronze Age	Metal artefacts
39	Bronze Age	Metal artefacts
40	Bronze Age	Metal artefacts
41	Bronze Age	Pottery
42	Middle Bronze Ag to Early Iron Age	Pottery
43	Late Bronze Age and Early Iron Age	Metal artefacts
44	Bronze Age and Iron Age	Pottery and briquetage
45	Bronze Age to Late Iron Age	Pottery and stone
46	Iron Age	Artefacts
47	Iron Age	Ceramics
48	Iron Age and modern	Faunal remains
49	Iron Age	Faunal remains
50	Iron Age and early medieval	Faunal remains and human bone
51	Iron Age	Glass beads
52	Iron Age to Roman	Human bone
53	Iron Age	Human bone
54	Iron Age to post-medieval	Human bone
55	Iron Age	Human bone
56	Iron Age and early medieval	Human bone
57	Iron Age	Metal and bone artefacts
58	Iron Age	Metal artefacts
59	Iron Age to early medieval	Metal artefacts
60	Iron Age	Pottery
61	Iron Age	Pottery
62	Iron Age	Pottery and artefacts
63	Iron Age	Pottery and flint
64	Iron Age	Pottery and objects
65	Iron Age	Samples for radiocarbon dating
66	Iron Age	Soil samples for phosphate analysis
67	Iron Age	Metal brooches
68	Later Iron Age and Roman	Faunal remains
69	Late Iron Age and Roman	Pottery
70	Later Iron Age and Roman	Pottery and artefacts (flint, stone, metal, glass, industrial debris, bone)
71	Roman	Artefacts
72	Roman	Artefacts (bone, metal, stone), coins, glass, loom weights etc
73	Roman	Ceramic building material

Appendix 3 no.	Period of material	Type of material studied
74	Roman	Ceramic building materials
75	Roman	Ceramic samples
76	Roman	Ceramics
77	Roman	Coins
78	Roman	Faunal remains
79	Roman	Faunal remains
80	Roman	Faunal remains
81	Roman	Fibre samples (goat hair, wool)
82	Roman	Gems
83	Roman	Glass
84	Roman	Human bone
85	Roman	Human bone
86	Roman	Human bone
87	Roman	Human bone
88	Roman	Human bone for DNA
89	Roman	Metal
90	Roman	Metal (copper-alloy) artefacts
91	Roman	Metal (iron) artefacts
92	Roman	Metal figurines
93	Roman	Metal (pewter) artefacts
94	Roman	Pottery
95	Roman	Samples from human remains and material from burials
96	Roman	Stone
97	Roman	Objects
98	Late Roman to early Norman	Artefacts, including pottery
99	Roman and early medieval	Faunal remains
100	Roman and early medieval	Glass
101	Roman and early medieval	Human bone
102	Roman and early medieval	Metal (slag)
103	Roman to post-medieval	Faunal remains
104	Roman, early medieval and post-medieval	Human bone
105	Roman, medieval and post-medieval	Human bone
106	Roman, early medieval and later medieval	Human bone and faunal remains
108	Early medieval	Artefacts
109	Early medieval (400–1250 AD)	Faunal remains
110	Early medieval	Faunal remains
111	Early medieval	Faunal remains
112	Early medieval	Faunal remains (fish) and fishing-related artefacts

Appendix 3 no.	Period of material	Type of material studied
113	Early medieval	Glass
114	Early medieval	Glass and other types of beads (shell, amethyst, amber, gold, silver and copper alloy)
115	Early medieval	Human bone
116	Early medieval	Human bone
117	Early medieval (c. 850–1150)	Human bone
118	Early medieval	Human bone
119	Early medieval	Human bone
120	Early medieval	Metal (copper-alloy) artefacts
121	Early medieval	Metal (iron) artefacts
122	Early medieval	Metal artefacts
123	Early medieval	Pottery
124	Early medieval	Samples for archaeoparasitology
125	Early medieval and later medieval	Pottery
126	Early medieval (10thC) and medieval (14th–16thC)	Soil samples from human burials for micro-analysis
127	Medieval	Artefacts (all types: pottery, wood, metal, glass, bone, slate)
128	Medieval	Artefacts, animal bone
129	Medieval	Ceramics
130	Medieval	Coins
131	Medieval	Faunal remains
132	Medieval	Faunal remains
133	Medieval	Faunal remains
134	Medieval	Faunal remains (fish)
135	Medieval	Faunal remains (?)
136	Medieval	Finds
137	Medieval	Human bone
138	Medieval	Human bone
139	Medieval	Human bone
140	Medieval	Human bone
141	Medieval	Human bone
142	Medieval	Human bone
143	Medieval	Human bone and artefacts
144	Medieval	Human remains
145	Medieval	Metal (copper-alloy) artefacts
146	Medieval	Metal artefacts
147	Medieval	Pottery and glass
148	Medieval	Stone sculpture
149	Medieval	Wooden objects
150	Medieval	Wooden spears
151	Medieval to post-medieval	Ceramics, clay pipe, metal and wooden artefacts

Appendix 3 no.	Period of material	Type of material studied
152	Late medieval	Human bone
153	Medieval to post-medieval	Human bone
154	Late medieval	Metal artefacts
155	Post-medieval (c. 1650–1750)	Ceramic and glass
156	Post-medieval (16th and 17thC)	Ceramics
157	Post-medieval	Ceramics and stone
158	Post-medieval	Faunal remains
159	Post-medieval	Human bone
160	Post-medieval	Human bone
161	Post-medieval	Human bone
162	Post-medieval	Human bone
163	Post-medieval	Metal artefacts
164	Post-medieval (16th and 17thC)	Metal (pewter) vessels
165	Post-medieval	Clay pipe
166	Post-medieval (16th and 17thC)	Pottery
167	Post-medieval and modern	Pipeclay figurines
168	Modern (18th–19thC)	Faunal remains
169	Modern (18th–19thC)	Human bone
170	Modern (18th–19thC)	Human bone
171	Modern (18th–19thC)	Porcelain
172	Early modern	Artefacts (pottery, leather, metal, organic)
173	Early modern	Glass
174	Early modern (1750–1850)	Human bone
175	Early modern	Metal (jewellery)
176	Prehistoric to early post-medieval	Human bone
177	Prehistory to modern (19thC)	Metal (slags/ore/artefacts for analysis)
178	Multiperiod? (unknown (text not available)	Stone artefacts
179	Unknown (text not available)	Animal bone
180	Unknown (text not available)	Animal bone
181	Unknown (text not available)	Animal bone
182	Unknown (text not available)	Human bone
183	Unknown (text not available)	Human bone

Appendix 3 no.	Period of material	Type of material studied
184	Unknown (text not available)	Human bone
185	Unspecified	Human bone
186	Unknown (text not available)	Human bone?
187	Unspecified	Metal (iron) artefacts
188	Unknown (text not available)	Metal artefacts

APPENDIX 2

Abbreviated index to types of finds studied in PhD included in Appendix 3

Type of material studied	Period of material	Appendix 3 no.
Animal and human bone	Neolithic	22
Animal bone	Unknown (text not available)	180
Animal bone	Unknown (text not available)	181
Animal bone	Unknown (text not available)	182
Artefacts	Palaeolithic	2
Artefacts	Iron Age	46
Artefacts	Roman	71
Artefacts	Early medieval	108
Artefacts (all types: pottery, wood, metal, glass, bone, slate)	Medieval	127
Artefacts (bone, metal, stone), coins, glass, loomweights, etc	Roman	72
Artefacts (lithics) and mammalian	Palaeolithic	3
Artefacts (pottery, leather, metal, organic)	Early modern	173
Artefacts, animal bone	Medieval	128
Artefacts, including pottery	Late Roman to early Norman	98
Ceramic and glass	Post-medieval (c.1650–1750)	155
Ceramic building material	Roman	73
Ceramic building materials	Roman	74
Ceramic samples	Roman	75
Ceramics	Early and Middle Neolithic	37
Ceramics	Iron Age	47
Ceramics	Roman	76
Ceramics	Medieval	129
Ceramics	Post medieval (16th and 17thC)	156
Ceramics and stone	Post-medieval	157
Ceramics, clay pipe, metal and wooden artefacts	Medieval to post-medieval	151
Clay pipe	Post-medieval	165
Clay pipe figurines	Post-medieval and modern	167
Coins	Roman	77
Coins	Medieval	130
Faunal remains	Palaeolithic	4
Faunal remains	Mesolithic	11
Faunal remains	Mesolithic	12
Faunal remains	Neolithic	23
Faunal remains	Iron Age and modern	48
Faunal remains	Iron Age	49
Faunal remains	Later Iron Age and Roman	68

Type of material studied	Period of material	Appendix 3 no.
Faunal remains	Roman	78
Faunal remains	Roman	79
Faunal remains	Roman	80
Faunal remains	Roman and early medieval	99
Faunal remains	Roman to post-medieval	103
Faunal remains	Early medieval (400–1250 AD)	109
Faunal remains	Early medieval	110
Faunal remains	Early medieval	111
Faunal remains	Medieval	132
Faunal remains	Medieval	133
Faunal remains	Post-medieval	158
Faunal remains	Modern (18th–19thC)	169
Faunal remains (fish)	Medieval	134
Faunal remains (fish) and fishing-related	Early medieval	112
Faunal remains and human bone	Iron Age and early medieval	50
Faunal remains?	Medieval	135
Fibre samples (goat hair, wool)	Roman	81
Finds	Medieval	136
Gems	Roman	82
Glass	Roman	83
Glass	Roman and early medieval	100
Glass	Early medieval	113
Glass	Early modern	174
Glass and other types of beads (shell, amethyst, amber, gold, silver and copper alloy)	Early medieval	114
Glass beads	Iron Age	51
Human bone	Mesolithic and Neolithic	16
Human bone	Neolithic	20
Human bone	Neolithic	24
Human bone	Neolithic	25
Human bone	Neolithic	26
Human bone	Neolithic	27
Human bone	Neolithic, Bronze and Iron Age	30
Human bone	Neolithic and Bronze Age	31
Human bone	Neolithic to post-medieval	34
Human bone	Neolithic to post-medieval	35
Human bone	Early Bronze Age	36
Human bone	Iron Age to Roman	52
Human bone	Iron Age	53
Human bone	Iron Age to post-medieval	54
Human bone	Iron Age	55
Human bone	Iron Age and early medieval	56
Human bone	Roman	84
Human bone	Roman	85
Human bone	Roman	86

Type of material studied	Period of material	Appendix 3 no.
Human bone	Roman	87
Human bone	Roman and early medieval	101
Human bone	Roman, early medieval and post-medieval	104
Human bone	Roman, medieval and post-medieval	105
Human bone	Early medieval	115
Human bone	Early medieval	116
Human bone	Early medieval (c. 850–1150)	117
Human bone	Early medieval	118
Human bone	Early medieval	119
Human bone	Medieval	137
Human bone	Medieval	138
Human bone	Medieval	139
Human bone	Medieval	140
Human bone	Medieval	141
Human bone	Medieval	142
Human bone	Late medieval	152
Human bone	Medieval to post-medieval	153
Human bone	Post-medieval	159
Human bone	Post-medieval	160
Human bone	Post-medieval	161
Human bone	Post-medieval	162
Human bone	Modern (18th–19thC)	170
Human bone	Modern (18th–19thC)	171
Human bone	Early modern (1750–1850)	175
Human bone	Prehistoric to early post-medieval	177
Human bone	Unknown (text not available)	183
Human bone	Unknown (text not available)	184
Human bone	Unknown (text not available)	185
Human bone	Unspecified	186
Human bone and artefacts	Medieval	143
Human bone and faunal remains	Roman, early medieval and later medieval	106
Human bone for DNA	Roman	88
Human bone?	Unknown (text not available)	187
Human remains	Medieval	144
Lithics	Upper Palaeolithic	1
Lithics	Palaeolithic	5
Lithics	Palaeolithic	6
Lithics	Lower Palaeolithic	8
Lithics	Palaeolithic and Mesolithic	9
Lithics	Mesolithic	13
Lithics	Mesolithic	14
Lithics	Mesolithic	15
Lithics	Mesolithic to Bronze Age	17

Type of material studied	Period of material	Appendix 3 no.
Lithics	Mesolithic to Bronze Age	18
Lithics	Neolithic	28
Lithics	Neolithic to Early Bronze Age	32
Lithics and finds	Palaeolithic and Mesolithic	10
Metal	Roman	89
Metal (copper-alloy) artefacts	Roman	90
Metal (copper-alloy) artefacts	Early medieval	120
Metal (copper-alloy) artefacts	Medieval	145
Metal (iron) artefacts	Roman	91
Metal (iron) artefacts	Early medieval	121
Metal (iron) artefacts	Unspecified	188
Metal (jewellery)	Early modern	176
Metal (pewter) artefacts	Roman	93
Metal (pewter) vessels	Post-medieval (16th–17thC)	164
Metal (slag)	Roman and early medieval	102
Metal (slags/ore/artefacts for analysis)	Prehistory to modern (19thC)	178
Metal and bone artefacts	Iron Age	57
Metal artefacts	Bronze Age	38
Metal artefacts	Bronze Age	39
Metal artefacts	Bronze Age	40
Metal artefacts	Late Bronze Age and Early Iron Age	43
Metal artefacts	Iron Age	58
Metal artefacts	Iron Age to early medieval	59
Metal artefacts	Early medieval	122
Metal artefacts	Medieval	146
Metal artefacts	Late medieval	154
Metal artefacts	Post-medieval	163
Metal artefacts	Unknown (text not available)	189
Metal brooches	Iron Age	67
Metal figurines	Roman	92
Objects	Roman	97
Porcelain	Modern (18th–19thC)	172
Pottery	Neolithic	21
Pottery	Bronze Age	41
Pottery	Middle Bronze Age to Early Iron	42
Pottery	Iron Age	60
Pottery	Iron Age	61
Pottery	Late Iron Age and Roman	69
Pottery	Roman	94
Pottery	Early medieval	123
Pottery	Early medieval and later medieval	125
Pottery	Post-medieval (17th–18thC)	166
Pottery and artefacts	Mesolithic to Bronze Age	19
Pottery and artefacts	Iron Age	62

Type of material studied	Period of material	Appendix 3 no.
Pottery and artefacts (flint, stone, metal, glass, industrial debris, bone)	Later Iron Age and Roman	70
Pottery and briquetage	Bronze Age and Iron Age	44
Pottery and flint	Iron Age	63
Pottery and glass	Medieval	147
Pottery and objects	Iron Age	64
Pottery and stone	Bronze Age to Late Iron Age	45
Samples for archaeoparasitology	Early medieval	124
Samples for radiocarbon dating	Iron Age	65
Samples from human remains and material from burials	Roman	95
Soil samples for phosphate analysis	Iron Age	66
Soil samples from human burials for micro-analysis	Early medieval (10thC) and medieval (14th–16thC)	126
Stone	Roman	96
Stone artefacts	Multiperiod? (unknown (text not available)	179
Stone axe-heads	Neolithic	29
Stone querns	Neolithic to Iron Age	33
Stone sculpture	Medieval	148
Wooden objects	Medieval	149
Wooden spears	Palaeolithic	7
Wooden spears	Medieval	150

APPENDIX 3

List of all the PhD theses that have used finds archives in England between 2010 and 2020.

See Appendix 1 for an abbreviated list by entry number of the PhD theses included in Appendix 3 and Appendix 2 for an abbreviated index to types of finds studied.

Author: Piprani, John Hassan **PhD date** 2016 **1**

Title: Penetrating the 'transitional' category: an 'emic' approach to Lincombian Early Upper Palaeolithic technology in Britain

Institution: University of Manchester
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.697804

Period of material Upper Palaeolithic

Type of material: Lithics

Size of the assemblage used: Unknown (text not available)

English archive: British Museum; the Wells and Mendip Museum; the Natural History Museum; Ipswich Museum; Brighton Museum; Bolton Museum; Norwich Castle Museum; Ely Museum; Manchester Museum; Torquay Museum; Bristol Museum and Art Gallery; Cheddar Man Museum; Liverpool Museum

Other repository:

Sites:

Abstract: The Middle to Upper Palaeolithic transition is seen as an important research focus and key to understanding issues surrounding Neanderthal and modern human interactions. Because of this focus upon human type transitional industries without associated human fossil evidence have been marginalised within the debate. This perspective can be termed etic, looking at overall patterns and millennial timescales to answer 'big' questions. In contrast my research could be termed emic, using a small collection of 'transitional' stone tools to explore the perspective of the producers and users. Human type is not considered relevant here. This approach has allowed a shift in scale; from millennial and pan-European to seasonal and the uplands that now constitute Britain. To explore this emic perspective experimental production has been used to make material a manufacturing process. Metrical, formal and typological analysis has been applied to the archaeological type fossil corpus to more fully comprehend variability. Together these approaches have been used to construct a nuanced and comprehensive châine operatoire model for the industry. This model allowed comparative analysis to derive new understandings from old and new archaeological collections from three sites. Resultant material and behavioural patterns have been interpreted within their particular landscape and general faunal contexts. Emergent themes have been integrated into a seasonal structure to create the desired emic narrative. This process has revealed a maintainable, repairable and adaptable technology used to manage the predictable unpredictability associated with the hunting of migrating large fauna through a long summer season and in uplands of known and unknown stone resources

Author: Davis, R **PhD date** 2013 **2**

Title: Palaeolithic Archaeology of the Solent River: Human Settlement History and Technology

Institution: Reading University via email

Period of material Palaeolithic

Type of material: Artefacts

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Antiquarian finds

Abstract: (Not available)

Author: Juby, Caroline **PhD date** 2011 **3**

Title: London before London: reconstructing a Palaeolithic landscape

Institution: Royal Holloway, University of London
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.542433

Period of material Palaeolithic

Type of material: Artefacts (lithic) and mammalian assemblages

Size of the assemblage used: 22,000 artefacts

English archive: Museum of London; the Natural History Museum; the British Museum; local London Borough museums; the British Geological Survey Museum at Keyworth; Bromley Museum; Dartford Museum; Elmbridge Museum in Weybridge; Gunnersbury Park Museum; Hillingdon Museum; the Museum of Archaeology and Anthropology and the Sedgwick Museum of Earth Sciences at the University of Cambridge; Reading Museum; Redbridge Museum; Richmond Museum; Vestry House Museum, Walthamstow; Wandsworth Museum; Wardown Park Museum in Luton

Other repository:

Sites: All Palaeolithic artefacts from London sites

Abstract: (Not available)

Author: Smith, G. M. **PhD date** 2010 **4**

Title: A contextual approach to the study of faunal assemblages from Lower and Middle Palaeolithic sites in the UK

Institution: University College London https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.564792

Period of material Palaeolithic

Type of material: Faunal remains

Size of the assemblage used: 6,147 bones

English archive: Natural History Museum-London; British Museum

Other repository: Northamptonshire Archaeology

Sites: Boxgrove, Swanscombe, Hoxne, Lynford

Abstract: This thesis represents a site-specific, holistic analysis of faunal assemblage formation at four key Palaeolithic sites (Boxgrove, Swanscombe, Hoxne and Lynford). Principally this research tests the a priori assumption that lithic tools and modified large to medium-sized fauna recovered from Pleistocene deposits represent a cultural accumulation and direct evidence of past hominin meat-procurement behaviour. Frequently, the association of lithics and modified fauna at a site has been used to support either active large-mammal hunting by hominins or a scavenging strategy. Hominin bone surface modification (cut marks, deliberate fracturing) highlight an input at the site but cannot be used in isolation from all other taphonomic modifiers as evidence for cultural accumulation. To understand the role of hominins in faunal assemblage accumulation all other taphonomic factors at a site must first be considered. A site-specific framework was established by using data on the depositional environment and palaeoecology. This provided a context for the primary zooarchaeological data (faunal material: all elements and bone surface modification) and helped explain the impact and importance of faunal accumulators and modifiers identified during analysis. This data was synthesized with information on predator and prey behavioural ecology to assess potential conflict and competition within the site palaeoenvironment. Results indicate that association of lithics and modified fauna are not sufficient evidence of a cultural accumulation; two sites (Swanscombe, Hoxne) demonstrate evidence of fluvial accumulation and disturbance. Whereas at Boxgrove, hominins had primary access to all fauna, fully exploiting carcasses. At Lynford, the mammoth remains were not modified by hominins, whilst other species only indicated exploitation for marrow, which conflicts with existing interpretations. I argue that hunting and scavenging are a continuum of behaviour, not necessarily represented at each site.

Author: Egberts, Ella **PhD date** 2017 **5**

Title: The Palaeolithic of the Avon valley: a geoarchaeological approach to the hominin colonisation of Britain

Institution: Bournemouth University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.715383

Period of material Palaeolithic

Type of material: Lithics

Size of the assemblage used: 1,253 artefacts

English archive: Salisbury Museum; Bristol Museum; Wells and Mendip Museum; Pitt Rivers Museum; Ashmolean Museum; Wiltshire Museum; Birmingham Museum; British Museum

Other repository:

Sites: The artefact assemblages in the Avon valley: Bemerton, Milford Hill and Woodgreen. Over the past 150 years numerous Palaeolithic artefacts have been collected from the three sites. The artefacts from these sites have been studied before but only in general terms of number and types of tools present and broad descriptions of biface shapes (Roe 1968, 1969a; Wessex Archaeology 1993)

Abstract: This thesis presents the results of a geoarchaeological investigation into the Palaeolithic occupation of the Avon valley, Hampshire. In this area, the Palaeolithic archaeological record is dominated by three large concentrations of lithic artefacts, found at Bemerton, Milford Hill and Woodgreen, against a background scatter of isolated finds. These prolific assemblages are amongst the largest concentrations of Palaeolithic finds in Britain. Their contribution to the understanding of hominin presence and behaviour in northwest Europe has though remained largely obscured due to the complex depositional context of Pleistocene fluvial terraces and limited age constraints of these sites. This thesis discusses the current knowledge of the Pleistocene palaeogeography and hominin occupation of Britain and how a geoarchaeological reinvestigation into the Avon valley archaeological record can contribute to the understanding of the British Palaeolithic. The study of seven Pleistocene fluvial terrace exposures, sedimentological analysis, and examination of environmental indicators provide information about terrace formation and Pleistocene landscape evolution in the valley and the depositional context of the three main Palaeolithic sites. Optically stimulated luminescence dating of fine-grained sediments from a sequence of six different terraces is used to create a chronometric framework for landscape evolution and the archaeological record. The results indicate that hominins were present in the Avon valley between MIS 10 and 8, in a period that has previously been characterised by a general decline in Palaeolithic sites in Britain relative to MIS 13-10. The work demonstrates that hominins continued to reach the Avon valley, suggesting adaptive and cognitive developments to cope with colder climates and palaeogeographic changes in the Channel region. Furthermore, a comparison of the assemblages from Bemerton, Milford Hill and Woodgreen based on primary data gathered, shows that these assemblages are in 'proximal context' and represent the accumulation of lithic artefacts produced, used and left at these sites during repeated revisits over a considerable length of time, throughout all habitable phases of a glacial-interglacial or stadial-interstadial cycle. The location of these focal places within the river valley changed over time, either through transformations in the local environment and resource availability, through a difference in hominin landscape use and behaviour or through an interplay between these factors.

Author: Cole, James Nathan **PhD date** 2011 **6**

Title: Hominin cognitive and behavioural complexity in the Pleistocene: assessment through identity, intentionality and visual display

Institution: University of Southampton https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.543420

Period of material Palaeolithic

Type of material: Lithics

Size of the assemblage used: 6,184 artefacts

English archive: The British Museum, The Cambridge Museum of Archaeology and Anthropology

Other repository: Northampton Archaeology Unit

Sites: Lithics from Elveden; Warren Hill is located near Mildenhall, Suffolk; Elveden, Suffolk; Hoxne Upper Industry, Suffolk; Broom, Devon; Acton, London; Cuxton; Lynford Quarry located near Mundford, Norfolk

Abstract: The Social Brian Hypothesis predicts the cognitive ability of hominin species by utilising estimated brain and group sizes in relation to an ordinal scale of cognitive complexity expressed as orders of intentionality. The Social Brain Hypothesis predictions however, have never been correlated to the archaeological behavioural record in order to ascertain their behavioural validity. This thesis is concerned with testing the cognitive predictions of the Social Brain Hypothesis against the material culture evidence of hominin behaviour through a new theoretical construct termed the Identity Model. The Identity Model offers a theoretical perspective on the construction of individual and group identity through the Palaeolithic linked to a scale of cognitive complexity shared by the Social Brain Hypothesis. Embedded within the Identity Model are the notions that material culture / behaviour could be imbued with culturally significant social meaning once the ability to construct proxies had been achieved, this in turn feeds into the development of language from non-linguistic societies based on visual display to fully grammatical syntax. Using technological modes and widely held beliefs within the academic community relating to hominin behavioural practice and artefact manufacture as a heuristic, the Identity Model (and through the orders of intentionality, the Social Brain Hypothesis) has been related to the archaeological record, and the predictions preliminarily tested though a series of eleven case studies stretching circa 600,000–24,000 years before present. The results of the lithic analysis show that despite common perception (and the Social Brain Hypothesis predictions on cognitive potential), the use of lithic artefacts in actively negotiating hominin social relationships may not have had their genesis with the mode 2 (Acheulean) biface, but rather may be more securely associated with mode 3 prepared core technologies and the advent of the composite tool and pigment use. This in turn intimates that the Social Brain Hypothesis predicts the potential cognitive ability of ancient hominin species whilst the archaeology, through the filter of the Identity Model, illustrates the realised cognitive ability, and the two are not necessarily mutually exclusive. Based on the results and discussions of this thesis, it would appear that cognitive potential must therefore be in place before it can be realised, further suggesting that hominin physiological changes must occur before behavioural changes become evident within the archaeological record.

Author: Milks, Annemieke Giselle **PhD date** 2018 **7**

Title: Lethal threshold: the evolutionary implications of Middle Pleistocene wooden spears

Institution: University College London https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.747508

Period of material Palaeolithic

Type of material: Wooden spears

Size of the assemblage used: 1 (from England)

English archive: Natural History Museum; British Museum

Other repository:

Sites: Complete spears or spear fragments from the sites of Clacton-on-Sea, EssexClacton spear point, the Boxgrove scapula and scan, Swanscombe collections and B. Knight scapulae; the Swanscombe Waechter excavation archives

Abstract: This thesis provides empirical data pertaining to the use of the earliest weapons in the archaeological record, which are a collection of plain wooden spears dating to the Middle Pleistocene. These weapons have been variously interpreted as objects for scavenging, hunting and self-defence. It is important to test these functional interpretations with a multi-disciplinary data-led approach, as these interpretations have implications for theories on the origins of human hunting, shifts in cognition, social structures and language. This is the first time a systematic, holistic approach to these artefacts has been taken, and is timely as several of the key sites of the period are currently undergoing further detailed analysis, resulting in reinterpretations of human behaviours during Middle Pleistocene. In this document the performance of these artefacts is addressed through three research strands. The archaeological strand looks at both wooden spears as well as potential hunting lesions from their use. The approach to these include qualitative and quantitative analyses. The ethnographic strand comprises a review of the literature pertaining to the use of wooden spears in pre-industrialised societies. Alongside this, a morphometric analysis of a large sample of wooden spears from museum collections in the UK and Australia is presented for comparative purposes. The third strand consists of a multi-phase experimental programme, examining human performance when using replicas as thrusting and throwing spears; effectiveness of the spears on large mammals; hunting lesions resulting from use of the spears on large mammals; hammerstone impact damage to scapulae addressing questions of equifinality; and guided free-fall impact drop tests to better understand spear tip design. Results from the different approaches are brought together and compared, to better address the archaeological record from the Middle Pleistocene, including both the weapons themselves and potential zooarchaeological signatures resulting from their use.

Author: Drinkall, Helen Clare **PhD date** 2014 **8**

Title: Expanding our horizons: an exploration of hominin landscape use in the Lower Palaeolithic of Britain and the question of upland home bases or lowland living sites

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.614427

Period of material Lower Palaeolithic

Type of material: Lithics

Size of the assemblage used: 2,850 artefacts; plus 16 boxes at Luton Museum

English archive: British Museum; Luton Museum; St Albans Museum (primary analysis was undertaken on all the aretfacts at the British Museum, plus a sample of 16 out of the 29 boxes at Luton Museum. Caddington: 368 artefacts; Gaddesden: 98; Round Green: 282; Whipsnade: 196

Other repository:

Sites: Flint assemblages from Chiltern Hills of Bedfordshire and Hertfordshire and North Downs of Kent. Primary resarch on the 14 sites were discovered between 1886 and 1917 and were intensively monitored by the notable antiquarian Worthington George Smith: Caddington (TL 050193), Gaddesden Row (TL 028134), Round Green (TL 102226), and Whipsnade (TL 03351763) (White et al 1999; White 1997)

Abstract: The majority of Lower Palaeolithic assemblages are recovered from lowland fluvial locations, and hence most interpretation is based around these. It is clear, however, that these represent only a small fraction of the hominin landscape and this bias is potentially limiting our understanding of hominin organisation to only a single facet of behaviour. While recent authors have recognised the importance of upland sites, and other non-fluvial contexts, research is currently limited to highly specific studies (such as Boxgrove), and often fail to extend the purview to incorporate the wider landscape. Consequently we are still a long way from answering basic questions such as: how and why were hominids utilising particular locations? How, if at all, does behaviour respond to landscape context? Is the same pattern seen in continental Europe? This research applies a landscape approach to the British Palaeolithic, combining a technological, typological and chaîne opératoire methodology to determine assemblage signatures for a variety of landscape types (lowland riverine, lacustrine, grassland plains and uplands). An exploratory Geographical Information Systems (GIS)approach is applied to the upland study areas to gain a better understanding of settlement structuring and how behaviour responds to landscape context. The results are then considered in terms of behavioural variation, site choice, specialisation and provisioning across the landscape.

Author: Rosen, C **PhD date** 2016 **9**

Title: The Use of Caves during the Mesolithic in South West Britain

Institution: Worcester University via email

Period of material Palaeolithic and Mesolithic

Type of material: Lithics

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Collections of Upper Palaeolithic/Mesolithic lithics held by museums in England and Wales

Abstract: (Not available)

Author: Billington, Lawrence **PhD date** 2017 **10**

Title: Lithic scatters and landscape occupation in the Late Upper Palaeolithic and Mesolithic: a case study from eastern England

Institution: University of Manchester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.713589

Period of material Palaeolithic and Mesolithic

Type of material: Lithics and finds

Size of the assemblage used: 1,466 records (unspecified number recorded directly)

English archive: Museum of Archaeology and Anthropology, Cambridge; British Museum; Moyses Hall, Suffolk; Sedgwick Museum, Cambridge; Lynn Museum; Norfolk Museum Service

Other repository:

Sites: All finds of this date in the study area, by searching HERs, PAS, grey literature, published reports. Recorded directly, see PhD Figure 2.16

Abstract: Lithic scatters are the most abundant class of evidence relating to Late Upper Palaeolithic and Mesolithic activity in southern Britain. Many such scatters, especially those from surface and ploughsoil contexts, have long been characterised as being of low-interpretive value and have been marginalised both in academic studies of the periods and in the wider context of protecting and managing the historic environment. This vast body of evidence makes little contribution to contemporary understandings of the LUP and Mesolithic, which remains largely informed by work which privileges the investigation of well-preserved sites with in situ lithic scatters, especially those with associated faunal remains and palaeoenvironmental evidence. This has serious implications for our ability to characterise and interpret activity in locations and regions where such well preserved and intensively investigated sites are lacking, and in many areas of the country policy makers, fieldworkers and curators are not equipped with the information necessary to make informed decisions concerning the investigation, management and protection of the archaeology of these periods. This thesis explicitly address these issues through a detailed case study of the lithic scatter record from a study area in eastern England. This study is based around a comprehensive database of reported lithic scatters, assembled from a wide range of published and unpublished sources and encompassing all kinds of scatters, from well preserved and exhaustively analysed in-situ scatters to poorly provenanced collections of lithics amassed in the late 19th and early 20th century. This thesis provides the first comprehensive synthesis of the Late Upper Palaeolithic and Mesolithic of the study area and explicitly assesses the interpretative potential of the lithic scatter record, in terms of how it can be used both to develop narratives of landscape occupation and to inform future work on, and management of, lithic scatters in the study area and beyond.

Author: Holland, Andrew D. **PhD date** 2017 **11**

Title: Examining the taphonomic challenges to the 3D digitisation of fragmented bone

Institution: University of Bradford https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.738177

Period of material Mesolithic

Type of material: Faunal remains

Size of the assemblage used: 1 (from England)

English archive: Unspecified

Other repository: Star Carr research team

Sites: Collaborative work was carried out with the Star Carr project based at the Universities of York and Manchester on the digitisation of culturally altered deer frontlets (frontal bones of deer with the antlers still attached), probably used for ritual purposes

Abstract: The utilisation of 3D digitisation and visualisation has grown considerably since 2008 and is becoming an increasingly useful tool for the digital documentation and metric analysis of archaeological artefacts and skeletal remains. It provides public access to rare and fragile specimens of palaeontological and palaeopathological importance whilst reducing the physical impact on these remains. Research in engineering and computer vision provides some insight into the impact of surface properties such as colour, specularity, reflectance and shape on the quality of the recorded 3D image, but within the archaeological and palaeontological disciplines comparable work has not yet been developed. If archaeology and anthropology are to provide long term reliable data from archaeological and palaeontological specimens in a way that doesn't require repeated re-digitisation, we need to understand the impacts that the taphonomic histories of such samples have on our ability to 3D record them. Understanding the relationship of these taphonomic histories and the surface and optical properties will promote informed choices about the suitability of recording techniques. This thesis considers the taphonomic processes that affect the preservation of bone over archaeological, forensic and palaeontological timescales and the effect this has on the quality of 3D digital models. The digital refit of fragmentary bone samples is considered in relation to the effect of taphonomic alterations to bone. Conclusions regarding the key taphonomic factors and 3D digital model quality are drawn and areas of further work are identified.

Author: Overton, Nicholas James **PhD date** 2014 **12**

Title: Memorable meetings in the Mesolithic: tracing the biography of human-nonhuman relationships in the Kennet and Colne Valleys with social zooarchaeology

Institution: University of Manchester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.618086

Period of material Mesolithic

Type of material: Faunal remains

Size of the assemblage used: 38,157 bones

English archive: Natural History Museum, London; London Archaeological Archive Research Centre; Museum of London Archaeology; Reading Museum; Newbury Museum; Manchester Museum

Other repository:

Sites: Re-analysis of antiquarian, 1960s and commercial archaeological assemblages in Kennet and Colne valleys: sites of Faraday Road, Thatcham (sites I-V), Three Ways Wharf and the Former Sanderson Site

Abstract: As hunter-fisher-gatherers, the lives of Mesolithic humans in Britain would have revolved, to a great extent, around the daily encounters and interactions with animals that were necessary for the provision of nutrients for survival. Traditional narratives of human-animal relations have viewed animals through an economic lens, interpreting their significance in terms of the nutritional or material resources they provided Mesolithic humans. However, more recent studies argue human-animal relations in the past should instead be considered as developing through their daily interactions and engagements with each other, in which animals have the potential to play an active role in shaping human understanding. In such narratives, animals are no longer a resource: instead, they are potential agents. This thesis uses zooarchaeological data from four Early Mesolithic faunal assemblages from Southern Britain to characterise the appearance, habits and behaviours of the species and individuals within each assemblages. These are used to consider the specific encounters humans had at each site, and the particular understandings humans formed as a result. Ultimately, if human treatment of animal remains was guided by an understanding developed through encounter and engagements, it is vital these experiences are understood. Furthermore, negotiations of relationships developed through encounters are traced through processes of hunting, killing, butchery, consumption, and deposition, exploring how these understandings and relationships are manifest in the material record.

Author: Elliot, T **PhD date** 2019 **13**

Title: The Mesolithic in the Marches: Geochemical lithic sourcing in the lower Wye Valley

Institution: Worcester University via email

Period of material Mesolithic

Type of material: Lithics

Size of the assemblage used: Unknown (text unavailable)

English archive: Unknown (text unavailable)

Other repository:

Sites: Collections of Mesolithic lithics held by museums in England and Wales

Abstract: (Not available)

Author: Davis, Rona **PhD date** 2012 **14**

Title: The nature of Mesolithic activity at selected spring sites in south west England

Institution: University of Worcester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.665702

Period of material Mesolithic

Type of material: Lithics

Size of the assemblage used: 1007 artefacts

English archive: Roman Baths Museum (Bath and North East Somerset Council); Wiltshire Heritage Museum, Devizes; Dorset County Museum, Dorchester

Other repository:

Sites: Five Mesolithic spring sites in south-west England: two hot springs at Bath Spa and three tufa depositing springs at Langley's Lane (Somerset), Cherhill (Wiltshire) and Blashenwell (Dorset)

Abstract: This thesis examines the nature of Mesolithic activity at five spring sites in south-west England. The springs have unusual properties and the lithics associated with each site have been assessed in order to investigate whether they are indicative of unusual, or even ritualistic, behaviour related to the property of the spring. As well as lithics, some of the springs are associated with other types of material culture and in some cases features such as pits are also present. This thesis brings together the different classes of archaeological evidence and situates their study within the context of the spring and the wider landscape. Recently in Archaeology there has been an increasing interest in the significance of 'natural places', which has led to topographical features being seen as important, and sometimes even sacred, places in the landscape. By contrast, in Mesolithic studies, natural features such as springs are often predominantly viewed in a functional sense, as a source of potable water and a convenient focus for settlement. Occasionally however some sites, such as the Hot Spring, Bath one of the case studies presented here, have been suggested to be evidence of Mesolithic ritual behaviour. These polarised views usually arise from an analysis of lithic attributes and the contexts in which the lithics are found. The more unusual the context, and the better the quality of the artefact deposited into them, the more likely it will be equated with 'ritual' behaviour. The unusual nature of the five springs examined here: two hot springs at Bath Spa and three tufa depositing springs at Langley's Lane, Somerset, Cherhill, Wiltshire and Blashenwell Dorset, allowed that premise to be questioned and the results have demonstrated that aspects of mundane and ritual behaviour are virtually indistinguishable from the lithic record alone. Yet whilst there is a variance in the treatment of materials at springs with similar properties there are also certain commonalities between them, which may suggest that shared beliefs underpinned Mesolithic cosmologies, at least in the south-west region. The springs of this study were features in what were dynamic Mesolithic landscapes and the findings suggest the practices that were carried out reflected and embodied that dynamism. Mesolithic activity at springs remains an understudied topic within British archaeology, despite the potential these sites offer to engage with theoretical concepts such as landscape, praxis, belief and cosmology. This study has attempted to redress this imbalance and reinforces the potential of springs to elicit information that will enrich current knowledge of Mesolithic lifescapes and landscapes.

Author: Nilson, Raymond James **PhD date** 2016 **15**

Title: At the core of process: rethinking the early Mesolithic lithic assemblages from the Kennet Valley, Berkshire

Institution: University of Manchester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.694319

Period of material Mesolithic

Type of material: Lithics

Size of the assemblage used: 27,803

English archive: Reading Museum (Thatcham 1958-1961 sites); West Berkshire Museum (the other sites)

Other repository:

Sites: Extensive analysis of the lithic assemblages from six prominent early Mesolithic sites (Thatcham 1958-1961 Sites I, II, and III, Thatcham Sewage Works 1989, Greenham Dairy Farm, and Faraday Road); Thatcham sites excavated between 1958 and 1961 (Wymer 1962), the site of Greenham Dairy Farm excavated in 1963 (Sheridan et al. 1967), Thatcham Sewage Works (hereafter Thatcham 1989) excavated in 1989 (Healy et al. 1992), and Faraday Road excavated in 1997 (Ellis et al. 2003)

Abstract: This project focuses on the early Mesolithic in the Kennet Valley, Berkshire in southern England. Through an extensive analysis of the lithic assemblages from six prominent early Mesolithic sites (i.e. Thatcham 1958-1961 Sites I, II, and III, Thatcham Sewage Works 1989, Greenham Dairy Farm, and Faraday Road), this thesis explores the social and practical processes which hunter-gatherers engaged in during lithic activities. It investigates the very notion of process and how we as archaeologists, often negate such phenomena in favour of strict technical and functional aspects associated with lithic assemblages from this period. Drawing upon this argument, this study explores and critiques the traditional theory that Mesolithic inhabitations were nothing more than functional type sites (e.g. hunting and base camps). Instead, it advocates an approach which seeks to illuminate that these occupations were derived from many historical and contemporary social and practical processes, which were embedded within lithic activities that were largely responsible for the continual production of the early Mesolithic landscape in the Kennet Valley.

Author: Charlton, Sophy Jessica Laura **PhD date** 2016 **16**

Title: Lifeways at the Mesolithic-Neolithic transition: integrating new biomolecular approaches to skeletal material in Britain

Institution: University of York https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.685248

Period of material Mesolithic and Neolithic

Type of material: Human bone

Size of the assemblage used: 302 individual archaeological samples

English archive: Dorset County Museum; Corinium Museum

Other repository: York Osteoarchaeology Ltd., and Northamptonshire Archaeology (MOLA)

Sites: Nine different Mesolithic and Neolithic British sites: (6 English sites:) Banbury Lane, Northampton; Blick Mead, Vespasian's Camp; Hambledon Hill, Dorset; Hazleton North, Cheltenham; Banbury Lane, Northampton; Coldrum, Kent

Abstract: The Mesolithic-Neolithic transition is a period which has long held fascination for archaeologists, and yet the lifeways of individuals at this time are still not fully understood – in part due to the lack of human remains in Britain from the period. This thesis therefore aimed to adopt a combined biomolecular approach to determine more information about the lifeways of both the Mesolithic and Neolithic of Britain, and of the transition between them, but utilising archaeological material not traditionally included within these debates – notably unidentifiable bone fragments, disarticulated skeletal remains, and dental calculus. Through analysis of these materials, the thesis focuses on five main areas of interest: identification, diet, mobility, chronology, and health/disease; utilising six different techniques: ZooMS, δ13C and δ15N stable isotope analysis, 86Sr/87Sr isotopic analysis, AMS dating, and metagenomic and metaproteomic analysis of dental calculus. As such, this marks the largest combined application of biomolecular techniques to British Mesolithic and Neolithic material to date. The results of this study highlight the value which may be held within previously overlooked early prehistoric archaeological materials, and the information which they may be able to contribute to existing discussions of Mesolithic and Neolithic lifeways. Overall, it can be seen that the main outcomes of this study are (i) that additional human remains may be present within early prehistoric 'unidentifiable' fragmented bone assemblages; (ii) dietary complexity in both the Mesolithic and Neolithic of Britain may be greater than previously thought; (iii) enhanced understanding of Neolithic mobility; (iv) a reconsideration of the approach to chronology at the Mesolithic-Neolithic transition; and (v) that dental calculus may provide a suitable and useful new medium via which to study prehistoric health and disease in future studies.

Author: Eastment, Janet **PhD date** 2020 **17**

Title: Reconstructing a past landscape: an investigation of prehistoric activity in the Middle Thames Valley from a study of the lithic evidence

Institution: University of Winchester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.821180

Period of material Mesolithic to Bronze Age

Type of material: Lithics

Size of the assemblage used: c.2,000 artefacts

English archive: Ashmolean Museum, Oxford; Oxfordshire Museum Service, Resource Centre, Standlake; The British Museum and Reading Museum

Other repository:

Sites: South Oxfordshire prehistoric sites; old collections also included

Abstract: The Middle Thames Valley has experienced major developments in recent years, which in line with legislation have undergone archaeological investigation prior to building. The evidence gained from developer funded excavations to the south of Reading and in the Maidenhead to Windsor area have demonstrated that settlement, especially during the Bronze Age, was much greater than previously thought. However with recent changes in the Planning Policy, combined with cutbacks across all sectors of Local Government, funding for future developments will rely more heavily on Desktop Based Assessment for archaeology, with an emphasis on the entries available in the Historic Environments Records (HER) for planning decisions. This highlights the risk to under-studied landscapes such as this area of South Oxfordshire, which because of its location, may in the future be under considerable pressure for development resulting in the loss of a landscape with a high level of archaeological potential. New research demonstrates that the extent of prehistoric activity, where the study has been carried out, is much greater than current records indicate. The results of the fieldwalking surveys and the subsequent analysis of the lithics collected, alongside museum archives, show that there is a significant quantity of worked flint dating from the Mesolithic through to the Bronze Age present in surface scatters of the fields closest to the river, this appears to diminish as the distance from the river gets greater. Cropmarks on the first river terrace above the floodplain within the study area, indicate a possible causewayed enclosure at Eye and Dunsden and lithics, which relate to the earlier Neolithic period, formed part of the assemblage from fieldwalking here. A geophysical survey revealed archaeological features present in the sub-soil corresponding to the cropmark. The results of this research, carried out to the west of Henley-on-Thames, demonstrates the wealth of archaeology present as lithics in the sub-soil, which, when analysed, can contribute to our understanding of prehistoric activity in the landscape, north of the River Thames, during the Mesolithic through to the Later Bronze Age periods.

Author: Stewart, Rosemary **PhD date** 2015 **18**

Title: Carved by time out of a single stone: a geological appraisal of archaeological chert

Institution: University of Reading https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.720362

Period of material Mesolithic to Bronze Age

Type of material: Lithics

Size of the assemblage used: 2,929 implements

English archive: Alexander Keiller Museum, Avebury; North Devon Museum; Plymouth Museum; Royal Albert Memorial Museum, Exeter; Royal Cornwall Museum; Sidmouth Museum; Torquay Museum; Watchet Museum

Other repository: The Cornwall Archaeological Unit; details of museum and excavators for each collection in PhD Ch 4

Sites: English sites (see PhD Appendix 10): Mesolithic: Poldowrian, Kynance Cove, Lands End, Rame Head and Trevose (Cornwall). Earlier Neolithic: Broadsands passage tomb (Devon). Causewayed enclosures: Windmill Hill (Wilts), Hembury Hillfort, Raddon Hill and Hazard Hill (Devon), Helman Tor and Carn Brea (Cornwall). Later Neolithic-E.Bronze Age: Carngoon Bank and Porthcurno-Sennen pipeline (Cornwall), Kentisbury Down (Devon); Batworthy (Dartmoor). Mixed: Down Farm (Dorset), Dozmary Pool (Bodmin Moor), North Land's End pipeline (Cornwall). Also finds from various locations in Cornwall, Devon plus Isles of Scilly

Abstract: (Not available)

Author: Cockrell, Tim **PhD date** 2016 **19**

Title: The Don Valley in Prehistory: upland and lowland developments and interactions

Institution: University of Sheffield https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.700869

Period of material Mesolithic to Bronze Age

Type of material: Pottery and artefacts

Size of the assemblage used: 12,234 individual records in database (not clear how many seen firsthand)

English archive: Doncaster Museum and Art Gallery; North Lincolnshire Museum, Scunthorpe; Bassetlaw Museum, Retford; Clifton Park Museum, Rotherham; Mansfield Museum; Museums Sheffield

Other repository:

Sites:

Abstract: This thesis fills a lacuna in the sequence of regional archaeologies in Britain. No work of synthesis exists for the Mesolithic to Bronze Age of the study area, consisting of South Yorkshire and much of the north midlands. Is it possible to detect regional senses of identity using archaeological methodologies? The nature of regional identity is well attested in the recent past.
Rooted in familiar landscapes, environments and locales, identity at the regional scale is related to and expressed through the undertaking of particular or routine tasks with familiar people. In this thesis a relational approach accounts for the complex and sophisticated interaction between people and materiality. The sources for this include the databases of HERs, museums and national datasets. They also include both publications and unpublished reports. Most importantly, the largely untapped resource of museum collections have been a crucially important source of information. This has resulted in a database for the thesis consisting of 12,234 individual records. All classes of artefacts and structures have been considered in historical sequence, together with and in relation to the landscapes and environments within which they were deposited. In the Mesolithic, different home ranges overlapped on the southwest side of the study area on the Gritstone uplands. The home ranges were probably centred in the Peak District and to the northeast of the study area respectively. Groups predominantly journeyed along river valleys. In the Neolithic, tasks related to pastoral lifeways became concentrated on the higher and drier areas flanking the middle reaches of the major rivers and the Humberhead Levels. The Magnesian Limestone Plateaux acted as the centre of gravity of communities, expressed through the material remains of their activities, and the structures they built. This continued in the Bronze Age, but the Gritsone uplands to the west became settled once more. People expressing affinities both to the southwest and northeast occupied locales that were connected in both directions by river valleys. The Magnesian Limestone plateaux, however, remained a strong focus for communities established between low lying wetlands.

Author: Wysocki, Michael Peter **PhD date** 2010 **20**

Title: The re-examination of extant human skeletal remains from excavated earlier Neolithic long barrows and chambered tombs in southern Britain

Institution: University of Central Lancashire https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.727067

Period of material Neolithic

Type of material: Human bone

Size of the assemblage used: Unknown (text unavailable)

English archive: Natural History Museum, London; Reading Museum Services

Other repository:

Sites: Re-examination of previously excavated Earlier Neolithic human remains from Southern Britain, sites in the Cotswold-Severn region

Abstract: A series of seven published peer-reviewed papers and reports are presented. The body of work to be considered is concerned with the re-examination of previously excavated Earlier Neolithic human remains from Southern Britain. These form the subject of a Synoptic Overview. The Synoptic Overview places the papers within the context of academic debate and knowledge as it stood in the mid-1980s and 1990s. The background events surrounding the writing of the papers and the extent of the author's involvement in collaborative papers are detailed. The papers present new information concerning earlier Neolithic mortuary assemblages and their formation and subsequent taphonomic histories, new information concerning the extent of interpersonal violence in the Earlier Neolithic and new chronological data and interpretations. The contribution to knowledge of each of the papers is summarised and critically reflected on.

Author: Wiltshire, I **PhD date** 2021 **21**

Title: Compound-Specific Radiocarbon Dating of Early Neolithic Pottery in Britain

Institution: Bristol University, via email

Period of material Neolithic

Type of material: Pottery

Size of the assemblage used: 326 samples

English archive: Southend Museum, Wiltshire Museum, Chelmsford Museum, Surrey History Centre, Maidenhead Heritage Centre, Derby Museum and Art Gallery, Royal Cornwall Museum, Great North Museum: Hancock, Sewerby Hall Museum & Art Gallery, Museum of London

Other repository:

Sites: Many collections recovered as a consequence of PPG16/commercial archaeology

Abstract: (Not available)

Author: Banfield, E **PhD date** **22**

Title: The Ontological Tern: an examination of the role and meaning of faunal remains in the Neolithic long barrows of Wiltshire

Institution: Leicester University via email https://ethos.bl.uk/ProcessOrderDetailsDirect.do?documentId=1&t

Period of material Neolithic

Type of material: Animal and human bone

Size of the assemblage used: 9,391 specimens

English archive: Wiltshire Museum, Devizes; Salisbury Museum; Leverhulme Centre for Human Evolutionary Studies (LCHES); Duckworth Laboratory, Cambridge

Other repository:

Sites: Involved extensive analysis of museum faunal collections from Wiltshire Museum and others; Neolithic long barrows in and around Salisbury Plain

Abstract: Not available

Author: Parmenter, Philippa Claire Rousell **PhD date** 2014 **23**

Title: A reassessment of the role of animals at the Etton Causewayed Enclosure

Institution: University of Exeter https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.659385

Period of material Neolithic

Type of material: Faunal remains

Size of the assemblage used: 10040

English archive: Natural History Museum

Other repository:

Sites: Re-examination of animal bone assemblage from Francis Pryor's excavation at Etton in the 1980s; study of bones from Staines carried out first as a pilot study

Abstract: In recent years, causewayed enclosures have come to be regarded as being ceremonial or ritual sites. This classification is derived from a perceived lack of evidence pertaining to domestic settlement, in the form of houses and 'typical' domestic animal bone assemblages, and a perceived abundance of 'atypical' material and methods of deposition. This thesis explores the animal bone from the Etton causewayed enclosure in order to ascertain whether these perceptions have an empirical basis. Etton was excavated in the 1980s, and the published literature relating to the site appeared to conform to the stereotypes established for causewayed enclosure sites, however during preliminary analysis, it became clear that the animal bone data was not complete and that many of the inferences regarding the role of animals at Etton were the result of presumption or data being taken out of context. Specifically, this thesis looks at the nature of the fractures on the animal bones from Etton, and also from a similar causewayed enclosure at Staines in order to establish a clear taphonomic history for the faunal remains on the site, from which aspects of the role of animals can be deduced. In archaeological literature the absence of 'fresh', or helical fractures (which tend to result from the conscious decision to break a bone for marrow) is said to support the hypothesis that sites of this type were not domestic in nature. This assertion has been made despite the fact that no detailed studies into bone fracture at Neolithic sites have ever been undertaken. This thesis demonstrates that at both Etton and Staines, fresh fractures were abundant and considers the potential implications of this for these sites. In so doing it highlights the dangers of presuming evidence exists or does not exist, and of cherry-picking data to fit a preordained ideal rather than allowing the data to speak for itself. At Etton and Staines, the animal bone speaks not necessarily of a categorically ceremonial or ritual economy, divorced from the domestic economy of the time, but of a more mundane economy, with occasional 'atypical' activity, that was standard for the inhabitants of causewayed enclosures, whether at this type of site or elsewhere.

Author: Neil, Samantha Alison **PhD date** 2017 **24**

Title: The application of strontium and oxygen isotope analysis to study land use and mobility patterns during the earlier Neolithic in England and Wales

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.723720

Period of material Neolithic

Type of material: Human bone

Size of the assemblage used: 53 individuals/samples

English archive: Dorset County Museum; Corinium Museum; Creswell Crags Museum (Creswell Heritage Trust)

Other repository:

Sites: Human burial assemblage from Whitwell cairn (Creswell Hazleton North (not in a museum), Hambledon Hill (Dorset County Museum)

Abstract: The nature of the Mesolithic-Neolithic transition in Britain has often been debated. This thesis represents the first application of strontium and oxygen isotope analysis to study land use and mobility during this period (c. 4000-3500 BC). Results of analysis of populations from a sample of long cairns and a causewayed enclosure complex are described and interpreted in relation to current archaeological evidence for the period. Limitations to the application of oxygen isotope analysis as a direct proxy for landscape use are identified. The potential of strontium isotope analysis to study the period is demonstrated and prospects for future development and application of this method are discussed.

Author: Cansfield, Dawn **PhD date** 2019 **25**

Title: A demographic analysis of mortuary practice across time and space in south-east England during the Early Neolithic period

Institution: University of Winchester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.809629

Period of material Neolithic

Type of material: Human bone

Size of the assemblage used: 136 individuals

English archive: Brighton Pavilion and Museums; Hampshire Cultural Trust; Worthing Museum; Novium Museum; Natural History Museum; Croydon Museum; Reading Museum; British Museum; West Berkshire Museum Service

Other repository: Sussex Archaeological Society

Sites: Human remains from the Early Neolithic era in south-east England (where no recent osteological study had taken place, any previous written reports were obtained and reviewed and, where the surviving skeletal remains were accessible and well enough preserved, these were subjected to a full osteological examination by the author.). See PhD Table 2 for a list of sites

Abstract: In the study of past societies, differential ritual treatment of the dead can be indicative of individuals' identities in life. The archaeological record for burials in the Early Neolithic period (4000–3300 BC) comprises a disparate body of evidence collected over hundreds of years since the antiquarian investigations of the 18th century. As such, it poses certain challenges arising from the variety of archaeological methods deployed and the resultant data, and the different interpretative frameworks used over time as the discipline has developed and practices have gone in and out of fashion, and indeed as modern society itself has changed. Furthermore, burial practice for the period has received relatively little attention in the south-east compared to the south-west side of England. Set within the radiocarbon dating frameworks which have recently transformed the study of this period, the evidence for burial locations, positions, orientations and grave goods is subjected to osteoarchaeological, statistical, palaeodemographic and archaeothanatological analyses to build a demographic profile of the Early Neolithic burial population and practices in south-east England. This research has found that there are some aspects of demographic variation geographically across the region and in the locations of burials, with causewayed enclosures comprising a more egalitarian burial population than long barrows. This regional variation seems to result from the temporal spread of cultural ideas at this time. Burial orientations and grave goods also highlight demographic differentiation and indicate potential localised practices and customs. It is suggested that the archaeologically visible burial practices in the record for the Early Neolithic period of south-east England, which are limited in quantity, rather than memorialising the dead, may reflect an overriding concern with containment of deceased individuals of all demographic groups who were feared, perhaps due to their actions or relationships in life, for the protection of the living.

Author: Cuthbert, G. S. **PhD date** 2019 **26**

Title: Enriching the Neolithic: the forgotten people of the Barrows

Institution: University of Exeter https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.768611

Period of material Neolithic

Type of material: Human bone

Size of the assemblage used: 305 burials

English archive: Maidstone Museum; Stroud Museum; South-West Heritage (Taunton); Cirencester Museum; Cheltenham Museum; Torquay Museum; Salisbury Museum; Devizes Museum

Other repository: Leverhulme Centre for Human Evolutionary Studies (Duckworth Laboratory); Cambridge Archaeology Unit

Sites: Neolithic long barrows from southern Britain, 42 sites, ranging from Lincolnshire, to Devon with the sites from the Cotswolds; see PhD Appendix 2 for detailed list

Abstract: This detailed study involved the osteological examination of over 36,000 human bone specimens (the majority of which were highly fragmented) representing a minimum of 305 individuals from 42 Neolithic sites, and is the most up-to-date synthesis on the health, lives and demography of the people from southern Britain. The aim of the project was to analyse the collections excavated in antiquity which had never been examined by an osteologist, or to re-examine those that have not benefitted from modern techniques, with the intention of collecting demographic data, recording palaeopathology, stature and any dietary deficiencies that affect the skeleton. The importance of re-analysing previously examined collections was particularly illustrated by the extensive assemblage from Hazleton North long barrow, which comprised over 21500 fragmented and whole bones. This site had evidence of multiple funerary behaviour in the form of inhumation, cremation, and excarnation, a practice that was previously unrecognised at the site. Important discoveries were made in the field of palaeopathology - 67% (4/6) of those affected by Vitamin C deficiency in this study were excavated from the site, together with one case each of suspected poliomyelitis, DISH, septic arthritis, and high prevalence rates of dental and joint diseases. The re-examination of extant Neolithic collections also revealed new evidence of infectious disease, in the form of six cases of otitis media and one of meningitis; metastatic cancer in a child; metabolic disorders, including scurvy and rickets; various congenital disorders including muscular torticollis; and 12 likely cases of trauma caused by inter-personal violence; together with a comprehensive evaluation of non-specific indicators of stress in the population. The project stresses that even very fragmented and disarticulated collections of human bone can reveal a wealth of information about the people who underwent a major shift in subsistence practices, culture and worldview, which can only add value to the archaeological record of such an important time in prehistory.

Author: Willis, Christina Catherine **PhD date** 2020 **27**

Title: Stonehenge and Middle to Late Neolithic cremation rites in mainland Britain (c.3500-2500 BC)

Institution: University College London https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.807885

Period of material Neolithic

Type of material: Human bone

Size of the assemblage used:

English archive: Unknown (text not available)

Other repository:

Sites: Sites from mainland Britain whereby three or more cremated human deposits have been recovered from the Middle to Late Neolithic periods: cremated bones from West Stow, Suffolk

Abstract: This thesis examines the role of cremation in the Middle to Late Neolithic mortuary and funerary practices in mainland Britain between 3500–2500 BC. It is based on analysing osteological, contextual and chronological data to produce a comprehensive dataset of cremated human bones from mainland Britain. The funerary and mortuary rites in the Early Neolithic (c.4000-3500 BC) are characterised by their diverse variety in location and method of decomposition; however, most archaeologically visible rites contained collective male inhumations within rectangular monuments. During the Middle Neolithic (c.3500-3000 BC), this funerary rite shifted towards an emphasis on individual burials, and a rise in cremation cemeteries in association with circular monuments. By the Late Neolithic (c.3000-2500 BC), cremation was the dominant funerary rite mainly represented by token deposits within or near circular monuments (such as henges, stone/timber circles, pit circles and enclosures). Formal inhumation burials re-appeared in the Chalcolithic (c. 2200-2000 BC) and Beaker (c.2500-1850 BC) periods by continuing to construct (and often re-use) traditional forms of circular monuments. Cremation continued alongside these burials and were deposited in either specifically-made cremation cemeteries or into monuments as secondary deposits. This study found a high prevalence of female cremated remains within circular monuments throughout the Middle and Late Neolithic. This indicates that a shift in socio-political beliefs transpired at a time when paleoclimatic conditions fluctuated, the population sharply decreased, and a reliance on wild plant foods (rather than cultivated cereals) resulting in widespread cultural and funerary change. The number of recovered cremations (and indeed inhumations) accounts for only a small proportion of the Neolithic population, suggesting cremation was used for specific members of society and that the majority of the population was disposed of in some other, archaeologically invisible, way.

Author: Pouncett, John **PhD date** 2019 **28**

Title: Neolithic occupation and stone working on the Yorkshire Wolds

Institution: University of Oxford https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.780724

Period of material Neolithic

Type of material: Lithics

Size of the assemblage used: 340 artefacts

English archive: Hull and East Riding Museum

Other repository:

Sites:

Abstract: This thesis explores the evidence for Neolithic occupation and stone working on the Yorkshire Wolds based on stray finds and lithic scatters from surface contexts. Traditional models for Neolithic occupation are based largely on evidence from excavated contexts, in particular the groups of Neolithic pits at Rudston, and Neolithic houses on the Holderness coast. Extensive scatters of worked flint, however, have been identified on the Yorkshire Wolds. These scatters have not been incorporated into accounts of Neolithic occupation for two reasons: 1) the lithic scatters are typically characterised by low-densities of artefacts, and; 2) the scatters typically contain few artefacts which are typologically diagnostic. A methodology that addresses both of these problems was developed, using: 1) an implementation of Tobler's resel-based GIS to apply focal functions/spatial filters to polygon features in order to identify spatial patterning in survey data characterised by low-densities of artefacts, and; 2) a method for assigning dates to stone tools and lithic debitage using artefact scores based on diagnostic traits identified through the analysis of lithic assemblages from excavated contexts. The methodology was developed using case studies drawn from a study area centred on the parish of Fimber that had previously been investigated in the nineteenth century by J.R. Mortimer. Analysis of lithic assemblages from sixteen of the Neolithic burial mounds excavated by Mortimer and a surface scatter at Wharram-le-Street close to the former source of the Gypsey Race was carried out. This analysis indicates that traditional models of Neolithic occupation based on a distinction between the High Wolds and Low Wolds cannot be sustained on the basis of evidence from surface contexts and that Neolithic stone working traditions on the Yorkshire Wolds were constrained by the nature of the raw materials available to local communities.

Author: Walker, Katharine **PhD date** 2015 **29**

Title: Axe-heads and identity: an investigation into the roles of imported axe-heads in identity formation in Neolithic Britain

Institution: University of Southampton https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.675149

Period of material Neolithic

Type of material: Stone axeheads

Size of the assemblage used: c.200

English archive: Brighton Museum and Art Gallery and stores; Bristol Museum and Art Gallery and stores; Canterbury Heritage Museum and stores; Ipswich Museum and stores; Maidstone Museum; Norwich Castle Museum and stores; Ryedale Folk Museum and stores, Hutton Le Hole; Sea City Museum and Southampton Museum stores; The British Museum and stores; Museum of Archaeology and Anthropology, Cambridge and stores (a selection only); The Rotunda Museum, Scarborough and stores; and Yorkshire Museum and stores

Other repository:

Sites: Finds of imported stone axeheads: corpora have been compiled of imported axe-head specimens of various type. The axe-heads were located so that first hand examination could be performed and the greatest level of accuracy could be achieved

Abstract: This thesis addresses the significance accorded, past and present, to those axe-heads of flint and stone that were imported to Britain from the Continent. It starts from the premise that this poorly understood body of material has been overlooked and has been made effectively 'peripheral' in Neolithic studies, particularly over the past five decades or so. This is due to the insularity of British Neolithic scholarship as a reaction against the invasion hypothesis and diffusionist models. The aim of the study is to redress this imbalance, pulling material back into focus, establishing a secure evidential base and exploring the likely conditions in which these often distinctive items made their way across the water. The work presented here rests upon the argument that these 'imported' axe-heads of flint and stone made their way into what is today called Britain as objects of considerable significance. Specifically, they were items of high symbolic value that played a crucial role in fostering the particular ways of thinking about, and addressing, social identity that are associated with the Neolithic. These issues are effectively the intellectual or academic context or background for the project, whose main objectives are the close and detailed cataloguing of relevant material, and a documentation of the 'detective work' needed to establish the credentials of each artefact.

Author: McCarrison, Kirsty Elizabeth **PhD date** 2012 **30**

Title: Exploring prehistoric tuberculosis in Britain: a combined macroscopic and biomolecular approach

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.551419

Period of material Neolithic, Bronze and Iron Age

Type of material: Human bone

Size of the assemblage used: 13 individuals

English archive: Oxford Museums Resource Centre; Norwich City Museum; The Duckworth Laboratory, Cambridge; Cheltenham Art Gallery and Museum; Hampshire Archaeology; Wessex Archaeology; Natural History Museum; Gloucester County Archaeology Service; Div. of Archaeological Sciences, University of Bradford; Durham University Museums

Other repository: Abingdon Pipeline, Oxford, evaluation by Cotswold Archaeology in 2003. Ascott-under-Wychwood Long Barrow, Oxford, excavations 1965-1969 pre roadworks. Boscombe Airfield Fire Hydrant, Wilts, 2006 watching brief by Wessex Archaeology. Bourton-on-the-Water Primary School, Glos, excavations 1995 by Cotswold Archaeology and Gloucestershire C.C. Archaeological Service in advance of building. Twyford Down, Hants, excavated by Wessex Archaeology 1990-1993 prior to an extension of the M3 motorway. Waterhall Farm, Chippenham, Cambridgeshire, 1973 excavation by E. A. Martin in advance of roadworks for the Newmarket bypass. West Tump Long Barrow, Glos, 19thC excavation. Eyebury, Peterborough, early 20thC excavation. Wetwang Slack, Yorkshire, excavated in 1975 and 1979 by Dent. Wilsford Barrow G1, Normanton Down, Wilts, 1060 emergency excavations on behalf of the Ministry of Works. Methwold Severalls, Norfolk

Sites: Thirteen individuals from Neolithic, Bronze and Iron Age sites in the south of England (comprising inhumations of reasonable preservation), were selected for inclusion in the project, based on non-specific evidence of infection, potentially representative of early tuberculous skeletal involvement

Abstract: Tuberculosis (TB) is a bacterial, infectious disease, currently responsible for millions of deaths worldwide. Although the aetiology of the disease in its current form is well documented in the clinical literature, little is known of the form the disease took in earlier times, or the time at which it first entered Britain. This study aimed to test the hypotheses that TB was present in British prehistory, (as it was in Europe), prior to that previously identified in the Iron Age (Mays and Taylor, 2003) and that the infection was caused by both M. tuberculosis and M. bovis; the latter most commonly contracted from cattle. The objective of the project was to use ancient DNA (aDNA) from human skeletons to study the bacteria responsible for TB (M. tuberculosis complex) in order to then study the origin and evolution of the strains of the bacteria causing TB in prehistoric Britain. Thirteen individuals from Neolithic, Bronze and Iron Age sites in the south of England (comprising inhumations of reasonable preservation), were selected for inclusion in the project, based on non-specific evidence of infection, potentially representative of early tuberculous skeletal involvement. A biocultural approach was employed in order to better understand the environmental and social context from which the samples originated. The geographical area under study was limited to the south of Britain, (with the exception of Wetwang Slack in Yorkshire) because of the direct contact between Britain and the continent in this region. Biomolecular analysis did not produce positive results for TB, the reasons for which may include poor preservation of pathogen aDNA, and thus, no conclusive evidence was found of the presence of TB in prehistoric Britain prior to that already identified. Problems encountered during the project were highlighted in an effort to improve efficiency of future projects, with suggestions as to how this study may be extended in order to allow development of a much more comprehensive history of TB in Britain to be formed; its origins, spread and possible impact on ancient British populations.

Author: Snoeck, Christophe **PhD date** 2014 **31**

Title: A burning question: structural and isotopic analysis of cremated bone in archaeological contexts

Institution: University of Oxford https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.711733

Period of material Neolithic and Bronze Age

Type of material: Human bone

Size of the assemblage used: c.40 from HE sites (others from Ireland and Oxford ?Univ sites)

English archive:

Other repository:

Sites: English Heritage (Asfordby) and C. Willis, M. Parker-Pearson and P. Marshall on behalf of UCL and English Heritage (Stonehenge); English Heritage: Haddenham Causewayed Enclosure, WallyCorner (Berinsfield) and Imperial College Sports Ground, Sipson Lane

Abstract: Cremated bone occurs in many archaeological sites as small grey and white fragments. The high temperatures reached during heating induce structural, chemical and isotopic changes to bone apatite (the inorganic fraction of bone). These changes are investigated here by infrared spectroscopy and mass spectrometry (d13C, d18O and 87Sr/86Sr) in both modern heated bone and archaeological cremated specimens. The results of various heating experiments (in laboratory and natural conditions) highlight the significant carbon and oxygen exchanges with the fuel used as well as with bone organic matter (mainly collagen). While not informing on dietary practice and hydrology as is the case with unburned bone, the d13C and d18O values of calcined samples together with infrared results provide information on the conditions in which the bone was heated (e.g. presence of fuel, size of the pyre, temperatures reached, dry or fresh bone, etc.). In parallel, the effect of heat on the strontium present in bone is minimal, if not undetectable. Furthermore, as observed through artificial contamination experiments, post-burial alterations also appear to be extremely limited, which is to be expected due to the higher crystallinity of calcined bone apatite compared to tooth enamel and unburned bone. These experiments demonstrate that calcined bone provides a reliable substrate for mobility studies using its strontium isotope composition. The application of these results to the study of six Neolithic and one Bronze Age sites from Ireland showed the possibility of discriminating cremated individuals that ate food originating from different regions, as well as highlighting possible variations in cremation practices between different sites. The results of this thesis greatly extend the application of strontium isotopes to places and periods in which cremation was the dominant mortuary practice, or where unburned bone and enamel do not survive. They also provide insights into the reconstruction of ancient cremation practices.

Author: Mitcham, Douglas James **PhD date** 2017 **32**

Title: Life with the stones: monuments, fields, settlement and social practice: revealing the hidden Neolithic-Early Bronze Age landscapes of Exmoor, SW Britain

Institution: University of Leicester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.718714

Period of material Neolithic to Early Bronze Age

Type of material: Lithics

Size of the assemblage used: c.100?

English archive: Taunton Museum; the Museum of Barnstaple and North Devon

Other repository: A synthetic study of HER records and published sources was undertaken to create a new assemblage in the form of a database of Exmoor's lithic finds and to identify the current location of the material if possible (see appendix 9, on CD-ROM).

Sites:

Abstract: This thesis characterizes and interprets the nature of Exmoor's late 3rd and early 2nd millennium BC landscapes, including an unusual array of 'minilithic' stone configurations. It develops a new theoretical framework using an ontology of assemblages, the concept of affectivity and perspectives on miniaturisation and scale, adopting a Deleuzian understanding of materiality. This promotes an exploration of the processes which led to the appearance, use and dispersal of archaeological entities as assemblages. It includes all forms of people's interactions with materials, monuments, material culture (lithics) and landscapes; questioning the value of classificatory approaches and studying such themes as monumentality in isolation. The first detailed study of the lithic collections explores how the ontological significance of stone developed over millennia, leading to the emergence of upright stone configurations in the landscape. A detailed synthesis of the available archaeological evidence from excavation, survey, HER and museum datasets is then presented focusing on three case study zones, with entirely new interpretations developed for key sites at multiple scales. It then goes on to explore their wider relationships in terms of chronology, spatial placement, archaeological and landscape context. This is achieved through GIS analysis, original fieldwork (field visits, surveys, geophysics and excavation) and the synthesis and re-interpretation of secondary and archive data. The wider context of Exmoor is then briefly assessed, particularly drawing on evidence from Bodmin Moor. Tendencies to dismiss Exmoor as a poorer relation of such regions is challenged. Exmoor's monuments challenge thinking on monumentality, particularly regarding the establishment of authority, through the choreography of space, movement and visibility. The miniliths had distinct affective qualities, with a unique capacity for frequent reconfiguration, quite different from megalithic sites elsewhere; yet many of the same practices are apparent. On Exmoor however, what people were doing with these practices was wholly different.

Author: Watts, Susan Rosina **PhD date** 2012 **33**

Title: The structured deposition of querns: the contexts of use and deposition of querns in the south-west of England from the Neolithic to the Iron Age

Institution: University of Exeter https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.572147

Period of material Neolithic to Iron Age

Type of material: Stone querns

Size of the assemblage used: Total: 988 querns from 103 sites (unspecified number seen in person)

English archive: Royal Cornwall Museum, Truro; Royal Albert Memorial Museum, Exeter; Museum of Somerset, Taunton

Other repository: South Cadbury Archive; published and unpublished, grey and on-line literature

Sites: Many of the querns themselves were also examined from sites such as Shaugh Moor in Devon, Trethellan Farm in Cornwall and also Cadbury Castle and those surviving from Glastonbury and Meare

Abstract: It is now widely assumed that many artefacts found in the prehistoric archaeological record were not casually discarded as unwanted material but were deposited in features and contexts with structure and meaning. This appears to include saddle and rotary querns for they are often found whole and apparently still usable or, conversely, deliberately broken. Analysis of the structured deposition of querns in the south-west of England shows that they were deposited in features on both domestic and non-domestic sites. Furthermore, the location and state of the querns, together with the artefacts found in association with them, indicates that they were deposited with different levels and layers of meaning, even within the same type of feature. The deposition of querns appears to have pervaded all aspects of prehistoric life and death suggesting that they played a role above, but nevertheless related to, their prime task of milling. An exploration of the object biography of querns demonstrates the importance of what are often considered to be mundane tools to subsistence communities. Each quern has its own unique life history, its meaning and value determined by the reasons that gave cause for its manufacture, the material from which it was made, the use(s) to which it was put and who used it. However, all querns share points of commonality, related to their function as milling tools, their role as transformers of raw material(s) into usable products (s), their association with women and the production of food, and the movement of the upper stone. Through these, symbolical links can be made between querns and agricultural, human and building life cycles, gender relations and the turning of the heavens. The reason for a quern's deposition in the archaeological record may have drawn upon one or more unique or common values.

Author: Hirst, Cara Stella **PhD date** 2019 **34**

Title: How has the morphology of the human mandible varied in response to the dietary changes that have occurred in Britain between the Neolithic and post-medieval periods?

Institution: University College London https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.785145

Period of material Neolithic to post-medieval

Type of material: Human bone

Size of the assemblage used: 991 specimens

English archive: Museum of London; Hampshire Cultural Trust; Manchester Museum; Bedford Museum; Chichester District Museum

Other repository: Collections from Bournemouth University; York Archaeological Trust; Surrey Archaeological Trust; Sheffield University; Duckworth collection in Cambridge; University of Bradford; Royal College of Surgeons; KORA part of the University of Kent; Durham University

Sites: Some 150 different archaeological sites (see PhD Appendix 3). To aid later analysis the material was grouped into six periods: Neolithic, Bronze and Iron Age, Roman, Anglo-Saxon, medieval, and post-medieval. See PhD Table 5.2.2: British archaeological sites and locations

Abstract: Unlike cranial morphology, human mandibular morphology has been found to be influenced primarily by environmental as opposed to genetic factors. Previous research has demonstrated that significant morphological changes have occurred in the mandible during the Agricultural and Industrial Revolutions when widespread dietary changes occurred, and diet became softer. During this time the size of the mandible decreased, and mandible morphology became more gracile. This research however has typically focussed on comparisons between two time periods associated with a large dietary transition. For this reason, it is not known if the reported changes in mandible morphology represent a consistent reduction in mandibular robusticity or rather fluctuation between periods associated with dietary variability. Furthermore, it is unclear how susceptible the mandible is to smaller dietary changes. The aim of this thesis is to investigate how responsive mandible morphology is to the dietary changes that have occurred in Britain from the Neolithic through to the Post-Medieval periods. It is hypothesised that mandible morphology is responsive enough to mechanical stimuli that more minor dietary changes will also result in morphological variation. Results indicated that in general mandible morphology became increasingly gracile over time, while more pronounced morphological changes are associated with major dietary transitions such as the intensification of agriculture and the Industrial Revolution. Moreover, significant increases in gracilisation occurred between the Anglo-Saxon and Medieval period, potentially indicating that the dietary changes that occurred during the Industrial Revolution were more gradual than previous research has indicated. In addition to the more prominent morphological changes, smaller morphological fluctuations occurred such as during the Roman occupation. It is concluded that the mandible is more responsive to smaller dietary changes than demonstrated by previous research and the morphological variation associated with these major dietary transitions may not have been as simple or rapid as previously assumed.

Author: Field, Samantha Jane **PhD date** 2019 **35**

Title: Re-evaluating the use of dental wear as a tool for estimating age at death in British archaeological skeletal remains

Institution: University of Southampton https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.800775

Period of material Neolithic to post-medieval

Type of material: Human bone

Size of the assemblage used: 861 individuals

English archive: Bournemouth University; Corinium Museum, Cirencester; Dorset County Museum; Duckworth Museum, University of Cambridge; English Heritage; Hampshire Cultural Trust; Historic England; Lancaster Maritime Museum; Museum in the Park, Stroud; Museums Sheffield; Natural History Museum; The Wilson, Cheltenham; Wiltshire Museum, Devizes; York Museums Trust

Other repository: Cotswold Archaeology; University of Bristol Spelæological Society; University of Bradford; University of Manchester Museum; University of Southampton

Sites:

Abstract: Dental wear is frequently used to estimate age at death in archaeological remains. However, the most widely cited dental wear ageing methods rely on underlying principles which have not been examined. Furthermore, the most widely cited method for estimating age concluded that a single dental wear chart could be applied to multiple British archaeological periods. This statement has never been validated. Thus, this thesis presents a re-evaluation of dental wear as a method for estimating age at death of archaeological remains. Three key underlying principles were identified and tested for three dental wear ageing techniques. Dental wear was measured using an ordinal scale and continuous measurements, and dental wear rates calculated for well-documented samples dating from the British Neolithic to Post-Medieval periods. Dental wear was measured on the permanent molars of 861 individuals, aged from 6 years old to adults displaying high degrees of dental wear and ante-mortem tooth loss. A review of dental wear rates revealed molars of the same type wear at a similar rate. The third molar showed a relatively slower wear rate compared to the first and second molars, although this difference was not great. This difference in wear rate between molar types remained constant throughout the life of the dentition, validating one of the key assumptions of dental wear ageing methods. These findings support the use of a single dental wear rate for all molars in methods of estimating age using dental wear. The relationship between dental wear and age was confirmed across all temporal samples, supporting the continued use of dental wear as an ageing method for archaeological remains. A comparison of dental wear rates across temporal samples indicate a single wear rate may be used to estimate age in multiple archaeological populations. However, this thesis strongly recommends the development and use of population-specific wear rates to obtain the most reliable estimates of age.

Author: Walsh, Samantha **PhD date** 2013 **36**

Title: Identity as process: an archaeological and osteological study of Early Bronze Age burials in northern England

Institution: University of Central Lancashire
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.686400

Period of material Early Bronze Age

Type of material: Human bone

Size of the assemblage used: 312 individuals

English archive: Buxton Museum, Manchester Museum, Tullie House Museum, Harrogate Museums, Grosvenor Museum, Bury Museum and Art Gallery, Towneley Hall, Derby Museum, Bolton Museum, Rochdale Museum, and, the Harris Museum; British Museum and the Natural History Museum, London

Other repository: Remains all inaccessible due to being held by Sheffield museum and Mortimer collection at Hull Museum. Some small assemblages at Warrington Museum were also not analysed due to difficulties in their strict access and loans policies

Sites: Case study sites are: Hindlow, Derbyshire; Church Lawton, Cheshire; Whitelow, Lancashire; Green Howe, Yorkshire; and Brackenber, Cumbria; see PhD Appendix 2 for list of details

Abstract: Osteological and archaeological approaches are brought together to investigate questions on the mortuary practices, health, demography, identities, and chronology of Early Bronze Age burials in northern England. Processes of life, death and burial are identified as a way of evaluating the life course and burial processes of Early Bronze Age individuals. Different burial practices have similar themes of the wrapping and enclosing of the dead which are carried out using both temporary and permanent materials. The results of the PhD refute previous assumptions on the status of men, women and different age groups while revealing new aspects of identity seen through health and burial. Although the burials of adult men are greater in number, the burials of adult women are more commonly associated with artefacts. Men and women suffered from different health problems. Even though women were more likely to live to a greater age, they were also more likely to suffer malnutrition which was seen osteologically through cribra orbitalia. Burial patterns demonstrate a continuum of events from the preparation of the body, through to sequences of burial and closure. Case studies are used to investigate identities over individual and site levels in different areas of northern England. New radiocarbon dates reveal differences in site histories which contributed to the formation of group identities. Individual case studies are used to evoke the life history and identities of individuals, whilst bringing forth the humanness of these past people. Identities of men, women and children in the Early Bronze Age are explored. Different possible identities based on occupations, family structures and relations, and, social age groups are revealed. Male and female differences in burials and grave-goods may indicate the local ties of men and more fluid object-related identities among women.

Author: Sibbesson, Emilie **PhD date** 2014 **37**

Title: From content to context: a food residue study of ceramics of the fourth millennium BC in the Upper and Middle Thames Valley, UK

Institution: University of Southampton https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.640741

Period of material Early and Middle Neolithic

Type of material: Ceramics

Size of the assemblage used: 44 pots analysed

English archive: Oxfordshire Museum Resource Centre

Other repository: Oxford Archaeology; Thames Valley Archaeological Service

Sites: Pit deposits from South Stoke, Benson, Horcott Pit, and Cotswold Community

Abstract: This research explores the extent to which food residues from ceramics can contribute to archaeological understanding of the fourth millennium BC. Known archaeologically as the Early and Middle Neolithic, this prehistoric period is disputed among archaeologists and food-related evidence is especially contested. This research explores food-related evidence from new angles in that traditional approaches to diet are abandoned in favour of smaller-scale study of cookery practices. Food residues from Early and Middle Neolithic ceramic vessels were analysed by GC/MS and GC/C/IRMS. The techniques target the lipid (fats, oils, and waxes) component of foods that were cooked in the ceramic vessels in prehistory. The scientific datasets thus obtained were integrated with contextual information from the ceramic assemblages and the sites at which they were recovered. The sampled ceramic assemblages were recovered from archaeological sites made up primarily of pit features, which contain important evidence of life beyond the conspicuous monuments of the Neolithic. Several pit sites have come to light in the Upper and Middle Thames Valley during developer-funded excavation in the last couple of decades, and a new picture of everyday lives in the fourth millennium BC is emerging. This research contributes to this emerging picture in that it reveals local variation and regional consistency in foodways and pottery use. It demonstrates that pottery and food were closely connected during this period and that potters actively responded to the requirements of food preparation. This interplay between pottery and food has implications for more traditional typological studies of the ceramic record. It is argued that food residues from ceramics can be a source of information for material culture studies as well as for dietary reconstruction.

Author: Knight, Matthew Giuseppe **PhD date** 2018 **38**

Title: The intentional destruction and deposition of Bronze Age metalwork in South West England

Institution: University of Exeter https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.754240

Period of material Bronze Age

Type of material: Metal artefacts

Size of the assemblage used: 4,211 metal objects

English archive: (see PhD Table 7.1, The museums visited and number of objects studied) Ashmolean Museum, Bristol City Museum and Art Gallery, Blandford Town Museum, the Museum of Barnstaple and North Devon, Penlee House Galley and Museum (Penzance), Priest's House Museum and Garden (Wimborne), Poole Museum, Russell-Cotes Art Gallery andM useum (Bournemouth), Red House Museum and Gallery (Christchurch),Salisbury Museum, Totnes Elizabethan House and Museum, Wells and Mendi Museum and Wareham Town Museum; Royal Albert Memorial Museum; Museum of Somerset, Taunton; Dorset County Museum; Torquay Museum;Plymouth City Museum and Art Gallery; at Royal Cornwall Museum

Other repository:

Sites: Bronze Age sites in SW of England; see PhD Table 7.1 for a complete list of museums visited and number of objects studied

Abstract: The intentional destruction of Bronze Age metalwork prior to deposition is frequently recognised within assemblages, but rarely forms the focus of study. Furthermore, most research focuses on why metalwork was deliberately destroyed without considering how this process was undertaken. This thesis therefore analyses how metalwork might have been intentionally damaged and uses this to better interpret why. The material properties of bronze are considered alongside past research into the use of different implements, before a series of experiments are presented that explore how one might best break a bronze object. A better understanding of the methods by which Bronze Age metalwork might become damaged means one can identify intentional damage over that sustained accidentally, through use or post-deposition. This culminates in a Damage Ranking System, which can be utilised to assess the likelihood that damage observed on archaeological specimens is the result of intent. The Damage Ranking System is applied to Bronze Age metalwork from South West England (i.e. Cornwall, Devon, Dorset and Somerset). The catalogue of metalwork from this region was recently updated, highlighting instances of deliberate destruction that would warrant further study (Knight et al. 2015). The present research builds on this catalogue and involved analysis of complete and damaged objects from across the study region and from throughout the Bronze Age. Approximately 1300 objects were handled and studied and set within the Damage Ranking System alongside a contextual analysis of the findspots. This allowed trends in damage and depositional practices to be observed, demonstrating increased intentional destruction throughout the Bronze Age. It is shown that the deliberate destruction of metalwork throughout the Bronze Age related to the construction of personhood and emphasised links with other regions of Bronze Age Europe. This research demonstrates a new approach to the material that has wide-reaching applications in future studies.

Author: Lee, Robert William **PhD date** 2014 **39**

Title: Influences of wood-crafting on technological development in Middle to Late Bronze Age Southern England

Institution: University of Southampton https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.632599

Period of material Bronze Age

Type of material: Metal artefacts

Size of the assemblage used: 141 artefacts

English archive: The Novium, Chichester & District Museum; The British Museum; Dover Museum; Norwich Castle Study Centre; Maidstone Museum; Salisbury Museum; Wiltshire Heritage Museum; Brighton Museum; Bristol Museum; Littlehampton Museum; Dorset County Museum

Other repository: Certain museums had to be discounted for a variety of reasons. Somerset County Museum was closed whilst undergoing a move to new premises. Several hoards from the Powell Cotton Museum, Kent, and Kent Archaeology, were on display in France. The Barbican House Museum in Lewes, Sussex, did not respond to any form of communication. Worthing Museum, Sussex, refused access to - or even provision of any details of - their collections unless a significant payment was made, which was not viable

Sites:

Abstract: This study explores the relationship between wood-crafting activity and technological development in metal tools during the Late-Middle and Late Bronze Age in Southern England. It suggests that a number of tool types and forms can be characterised as direct responses to specific crafting processes. The study further suggests that through analysis of those tools and crafting processes, the socio-technological relationships between craftspeople and materials can be better explored. The thesis makes a case for the importance of wood-use during the British Bronze Age as a material key both to a range of craft activities and technological change. The discussion highlights the lack of a cohesive analysis of its use, potential and material relationships. It suggests that a semantic approach to craft practice can inform as to how those practices were facilitated, and that particular craft processes focussed on wood-use are manifested in surviving tools. Four tool types are examined - socketed axes, gouges, chisels and saws; their morphology and structure are analysed to discern variations in function and structural trends which are suggestive of common approaches to production and use. The results of this analysis are linked to woodcrafting practices to highlight how particular forms of each tool type were targeted to activity. The study concludes by arguing that Bronze Age tool forms, and their production, were the result of a complex network of social, technological and developmental influences. It finds that a number of forms were indeed targeted to specific wood-crafting tasks, and that tools ostensibly produced separately followed common structural trends which derived from those tasks. The study also concludes that certain tool forms such as saws manifest multi-material developmental origins, and that analysis based on crafting functions has the potential to provide a more cohesive perspective of Bronze Age tool development than has previously been developed.

Author: Fregni, Elpidia Giovanna **PhD date** 2014

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Title: The compleat metalsmith: craft and technology in the British Bronze Age

Institution: University of Sheffield https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.617167

Period of material Bronze Age

Type of material: Metal artefacts

Size of the assemblage used: 115

English archive: Colchester Museum Services; Weston Park Museum, Sheffield ; Kelham Island Museum, Sheffield; Ashmolean Museum; British Museum; Bowes Museum; Clifton Park Museum, Rotherham; Wiltshire Heritage Museum in Devizes; Isle of Wight Heritage Service Museum Service; Northampton Museum; Norwich Castle Museum; Salisbury & South Wiltshire Museum; Southend Museums Services, Essex; Taunton Museum, Somerset; Winchester Museums Services; St Edmundsbury Heritage Service, Suffolk

Other repository:

Sites: See PhD Appendix 4 for an inventory of tools examined organised by type, with museum and accession numbers

Abstract: This thesis explores the craft of metallurgy in the British Bronze Age through an examination and analysis of metalworking tools. The goal of this research was to reassemble the Bronze Age metalsmithing toolkit based on an understanding of the craft and its practice. The first chapters examine the smith and metalsmithing tools through literary sources to establish a theoretical framework for understanding the significance of tools and smiths in the British Bronze Age. This is followed by a study of metalsmithing tools in museum collections. These examinations focussed on wear, design, and chemical composition. Tools were cross-referenced to contemporary tools, descriptions from ethnographic literature, and tools in modern workshops. This research also supplied data to create replica tools for use in an experimental programme to explore tool use and performance. The research culminated in establishing a system called Minimum Tools Required (MTR). It is based on the idea that the presence of an object implies the existence of the tools and materials necessary for its manufacture, and that the presence of tools implies a purpose, and the possibility of other tools and materials that are associated with that purpose. Using this system provides a means to assess assemblages and aids in understanding the kind and the number of tools and materials that were a necessary part of the Bronze Age metalsmith's toolkit. The system also allows for more precise interpretations to be made of hoards. Tools can indicate the types of metal objects being made, or represent specific metalsmithing tasks. Thus by recognising the tools and their function, statements can be made about how these tools were used and the processes by which metal objects were made in the Bronze Age, resulting in a more complete understanding the organisation of the metalsmith's craft in antiquity.

Author: Wilkin, Neil C. A. **PhD date** 2014 **41**

Title: Food vessel pottery from Early Bronze Age funerary contexts in Northern England: a typological and contextual study

Institution: University of Birmingham https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.607314

Period of material Bronze Age

Type of material: Pottery

Size of the assemblage used: 544 vessels (see PhD Appendix F)

English archive: British Museum Greenwell Collection; Shrewsbury Museum and Art Gallery (Shropshire Council); Leicestershire County Museums; Northumberland National Park; Hull and East Riding Museum (Hull City Council); Birmingham Museum and Art Gallery (Birmingham City Council); Great North Museum (Tyne & Wear Archives & Museums); Tullie House Museum and Art Gallery Trust; Grantham Museum (Lincolnshire County Council); The Collection: Art and Archaeology in Lincolnshire (Lincolnshire County Council); Yorkshire Museum (Yorkshire Museums Trust); Alnwick Castle Museum

Other repository: Archaeological Services Durham University; Wessex Archaeology Ltd

Sites: The Food Vessel burials of North East Yorkshire, the Central Lowlands & North West England, South East Yorkshire

Abstract: This thesis demonstrates the significance of Food Vessel pottery and burial in Northern England during the Early Bronze Age (c.2200 to 1800 cal BC). It represents the first original and sustained study of this burial tradition for several decades. It is argued that the interwoven relationships between Food Vessels, other ceramic types, and trade and exchange networks are both a reason why the tradition has posed interpretative problems for prehistorians, and a central component of its significance during the Early Bronze Age. The chronological relationships between British Food Vessels and other ceramic and funerary traditions are reviewed using the first comprehensive and critically assessed dataset of radiocarbon determinations. Previous approaches to Food Vessel typology are critically reviewed and a new approach based on the 'potter's perspective' and contextual studies is proposed. A contextual approach is applied to Food Vessels from three regions of Northern England: the Northern Counties; North-East Yorkshire, the central lowlands and North-West England; and South-East Yorkshire. Each study reveals significant inter- and intra-regional similarities and differences in how Food Vessels were used and understood. The significance of Food Vessel pottery and burial is then discussed at a national scale.

Author: McNee, Barbara **PhD date** 2012 **42**

Title: The potters' legacy: production, use and deposition of pottery in Kent, from the middle Bronze Age to the early Iron Age

Institution: University of Southampton https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.586172

Period of material Middle Bronze Age to Early Iron Age

Type of material: Pottery

Size of the assemblage used: 77,000 sherds (?)

English archive: Not specified

Other repository:

Sites: 66 sites across Kent

Abstract: The aim of this thesis is to provide a comprehensive study of prehistoric pottery throughout the region of Kent. Research will focus specifically on middle Bronze Age through to early/middle Iron Age pottery, a date range of approximately 1500 to 400 BC. The study of pottery offers a wealth of information relating to many aspects of the past and yet despite this, prehistoric pottery has been under-researched in Kent. A growing number of important pottery assemblages have been excavated and recent development-led archaeology has produced a great deal of new evidence from excavation and evaluation. This offers an important key to understanding the chronology and interpretation of settlement and burial sites. The basis of this study is to analyse pottery assemblages in order to develop an understanding of the societies who produced and consumed the ceramics, and to provide the foundation for a ceramic typological and chronological framework. This was undertaken through the study of some 77,000 pottery sherds from 66 sites across the region. The data was collected from personally recording and illustrating large assemblages of pottery sherds and by using data from 'grey literature', published reports and research by a number of pottery specialists. A form type series was devised, which demonstrates the range of pottery types present in Kent from the middle Bronze Age to early/middle Iron Age. A chronological sequence has been tentatively suggested, which is in need of refinement when more radiocarbon dates are available. A fabric series has been created and presents a brief summary of the types of fabrics used to make the vessels. Key areas were studied, namely, the production and distribution of the ceramics across Kent and how this compares to surrounding regions. Changes in both pottery form types and fabrics over 1000 years of potting history are evident and offer insights into the changing nature of social practises and settlement patterns. Consideration of how the ceramics have been deposited may also offer glimpses into the past, and also serve to highlight the complexities of site formation. This study contributes to a growing body of research on the prehistory of Kent. The limitations are also addressed and the scope for further research.

Author: Boughton, Dot **PhD date** 2015 **43**

Title: The Early Iron Age socketed axes in Britain

Institution: University of Central Lancashire https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.689200

Period of material Late Bronze Age and Early Iron Age

Type of material: Metal artefacts

Size of the assemblage used: 1,408 specimens, both antiquarian and modern finds

English archive: British Museum; Suffolk County Museum, Ipswich; Norwich Castle Museum; Devizes Museum; Salisbury Museum; Andover Museum; Ashmolean Museum; Bristol Museum and Art Gallery; University of Cambridge Museum of Archaeology and Anthropology; Lancaster City Museum; Tullie House Museum & Art Gallery Trust; Dock Museum

Other repository: Suffolk Archaeological Unit

Sites: Collection at Moyse's Hall (Bury St Edmunds) and the unpublished Late Bronze Age hoards stored at Suffolk Archaeological Unit

Abstract: This thesis examines metalwork deposition, distribution and association in the British Early Iron Age (800-600BC) through the medium of the socketed axe. Out of 1412 known Early Iron Age axes, 954 specimens were analysed in detail for this thesis: 680 associated finds and 274 single finds. The methodology was governed by two main objectives: firstly, to propose a reworked and more comprehensive typology of Early Iron Age cast copper-alloy and wrought iron socketed axes in conjunction with their metallurgy, distribution and deposition, and secondly, to discuss their place within Early Iron Age society and what part they may have played in the people's life, work, trade and exchange, ritual and death. As a result, this thesis introduces, defines and discusses 12 new types of transitional and Early Iron Age socketed axes. While the transitional type can be dated to the Late Bronze Age-Early Iron Age transition (c. 850-750BC), the remaining 11 types can be dated to the fully developed Early Iron Age (800-600BC). The 11 types of bronze Early Iron Age socketed axes display a great variety of decoration, shape, size, weight and colour. While Late Bronze Age axes are plain or simply ribbed, almost all Early Iron Age socketed axes are decorated with ribs- and-pellets, ribs-and-circlets or a more elaborate version thereof. Some axe have a shiny silver surface colour (Portland, Blandford, East Rudham and Hindon types). More than three quarters of Early Iron Age socketed axes were found in association with other metalwork. These hoards can be divided into two main groups: axe hoards and mixed hoards. The eight geographical regions outlined in this thesis are defined by different contexts, associations and the predominance of different Early Iron Age axe types, and in terms of depositional contexts this research suggests that the depositional contexts of Early Iron Age hoards containing socketed axes was different from the deposition of single finds: while hoards were often found in retrievable places, single finds were not. The survival of a large number of complete and almost undamaged bronze axes suggests that in the British Early Iron Age socketed axes were not just commonplace tools that were in use until they reached the end of their life. The changes in looks and shape, and consequently the adaption of a new and improved typology of socketed axes in the British Early Iron Age were accompanied by a change in conceptualisation and the overall meaning of socketed axes. Even when used in a different context their basic, very recognisable socketed-axe-shape was always maintained, that is a wedge of different dimensions with a socket and a small side loop for suspension or possible attachment of other items of metalwork. Throughout British prehistory axes were one of the most familiar objects in daily use: as a tool, socketed axes were omnipresent and thus an established part of British Late Bronze Age life – a life that appeared to be foremost practical rather than ritual, with the majority of Late Bronze Age socketed axes showing clear signs of use and resharpening. In the Early Iron Age socketed axes adopted a previously unseen duality in function and meaning (that is materialistic and symbolic).

Author: Laing, M **PhD date** **44**

Title: Making childhood: exploring children lives and deaths in eastern England in the Bronze and Iron Ages

Institution: Leicester University via email

Period of material Bronze Age and Iron Age

Type of material: Pottery and briquetage

Size of the assemblage used: Unknown (text unavailable)

English archive: Unknown (text unavailable)

Other repository:

Sites: Examining children's fingerprints on pots etc.

Abstract: (Not available)

Author: Pacheco Ruiz, Rodrigo **PhD date** 2015 **45**

Title: Maritime lives in Iron Age Britain

Institution: University of Southampton https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.668791

Period of material Bronze Age to Late Iron Age

Type of material: Pottery and stone

Size of the assemblage used: 70 pottery fragments and 5 stone objects

English archive: Archaeological Museum in St Mary's, Isles of Scilly

Other repository:

Sites: Material from Nornour, Isles of Scilly

Abstract: Iron Age coastal communities in England have been poorly understood since the beginning of our discipline. This is mainly as result of the lack of evidence for everyday maritime activities and also the focus of research on explaining an agro-pastoral way of living. Evidence of fishing, boats, harbour structures and ports are very rare archaeologically, and thinking about people living by the sea in this period has been widely overlooked as most of the interest has been the nature of the connections and trade-networks (mainly by Cunliffe 2008). In contrast, evidence for non maritime activities, such as farming and cattle rearing is so rich that looking to the coast only happens in special situations. Using the Isles of Scilly as a case study, this research challenges the established views that societies on the coasts of south-west of England were mainly cattle herders and farmers. Through palaeolandscape reconstruction, site analysis and material culture study, this research argues that settlement on the coastline is as important as that found inland. It shows that Iron Age maritime aspects of culture were deeply embedded within cultural traditions and that the maritime way of living had little to do with extraordinary or unusual situations. This research shows that preconceived ideas of what a maritime site should look like, as is the case of harbour structures and important ports, divert the attention from the subtleties of recognising maritime culture's signature. It is through the study of archaeological context and environmental evidence that these are likely to become more obvious. Therefore, throughout this document the analysis of maritime landscape, settlement pattern and material culture generates new perspectives on how to approach the study of maritime societies in archaeology.

Author: Jackson, Emma Louise **PhD date** 2017 **46**

Title: Oppida: a settlement phenomenon of the later Iron Ages in Britain and temperate Europe: an analysis of Colchester, Titelberg, and Canterbury

Institution: University of Kent https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.718507

Period of material Iron Age

Type of material: Artefacts

Size of the assemblage used: Unspecified

English archive: Colchester Museum

Other repository:

Sites: Colchester and Canterbury

Abstract: The later Iron Age was a time of considerable change in both Britain and Temperate Europe, with this period ultimately culminating in many areas of these regions coming under Roman rule. Much of the evidence attributed to the c.200 years this period spanned, (150/100 BC - AD 43), has received considerable attention from archaeologists over the years; however, there are certain bodies of this evidence that remain, by and large, a mystery. Arguably one of the most enigmatic entities ascribed to this period of prehistory are the oppida; a class of settlement said to have spanned from Hungary in the East to northern Gaul and Britain in the West. Initially the term oppida, Latin for town, was applied to large, fortified settlements of later Iron Age date said to display evidence of urbanism. Over the years this definition has altered in light of studies designed to ponder the functions of these sites; meaning that today there are multiple characteristics sought in, and applied to, potential oppida. Since the 1990s pre-existing interpretations of this term, and those sites labelled thus, have been the subject of papers designed to reassess the functions of so-called oppida and question whether existing suppositions of these are correct; a process that has led some to conclude that this term may no longer be fit for purpose. This thesis aims to explore this notion further, and in doing so ascertain whether the term oppida continues to be one of relevance today. In doing this the author explored, in depth, the morphological and artefact records of three oppida, (Colchester, Titelberg, and Canterbury), using a pre- determined methodology in order to establish these sites' functions. The inferences borne from this process were then compared to those for a number of contemporaneous oppida and non-oppida settlements in order to broaden the scope of the study and strengthen the conclusions drawn. These conclusions suggest that we do indeed need to reconsider our use of the term oppida today; as the characteristics sought in sites labelled thus fail to be reflected at the sites considered herein. This reconsideration is necessary, because, as the author argues, at present a site's characterisation as an oppidum ultimately lies in the hands of those responsible for its archaeological examination and subsequent publication, irrespective of whether the parameters of the term are met.

Author: Sutton, A D **PhD date** 2017 **47**

Title: At the Interface of Makers, Matter and Material Culture. Techniques and Society in the Ceramics of the Southern British Late Iron Age

Institution: Reading University https://ethos.bl.uk/ProcessOrderDetailsDirect.do?documentId=1&t

Period of material Iron Age

Type of material: Ceramics

Size of the assemblage used: 189 samples

English archive: Hampshire County Museums Service; Reading Museum; Museum of English Rural Life; North Hertfordshire Museums Service; Verulamium Museum; St Albans Museums Service; Three Rivers Museum

Other repository: Thames Valley Archaeological Services; Oxford Archaeology East

Sites: Two study-regions: the area of the middle Thames Valley occupied by the modern county of Berkshire and the northernmost part of Hampshire; and the area of Hertfordshire and the north Chilterns (see PhD table 3.1; larger assemblages seen listed in Appendix C, but this is not online)

Abstract: Changing pottery production methods are one of numerous significant developments in the archaeological record of Later Iron Age southern Britain. Previous studies of ceramic technology in this period suffered from a lack of empirical data with which to characterise technological change, and only sparingly engaged with material culture theory. Our understanding of the social significance of changing technology has therefore remained largely obscured. Clay is a plastic medium upon which numerous traces of technological practices leave their mark. These practices yield valuable information pertaining to how people interacted with the material world in socially-constructed ways, and how this changed during periods of upheaval. On this basis, this study provides the first attempt to empirically characterise the nature of ceramic technological change in two study regions: Berkshire and northern Hampshire; and Hertfordshire. Petrographic and SEM analyses were used to characterise technological properties of Middle and Late Iron Age ceramic fabrics from the two regions; and radiographic analysis of 428 vessels revealed details of forming methods employed. Elements of continuity are identified for the first time: for example, in patterns of clay preparation or the use of coil-building; as well as in the continued production of flint-tempered pottery in Hampshire. Novel technology was variably employed alongside this continuity: for example, in both regions the potter's wheel was employed in at least two different ways - wheel-coiling, and throwing. Results point to a Middle Iron Age characterised by numerous localised systems of technical practice, from which emerged a Late Iron Age that saw technical knowledge flow more freely between groups of producers. This enriched technological background provided the means for the constitution of new forms of identity, and the reconfiguration of what it meant to be a craftsperson in a rapidly changing society.

Author: Wooding, Jeanette Eve **PhD date** 2010 **48**

Title: The identification of bovine tuberculosis in zooarchaeological assemblages: working towards differential diagnostic criteria

Institution: University of Bradford https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.541069

Period of material Iron Age and modern

Type of material: Faunal remains

Size of the assemblage used: 6,300+ bones

English archive: Hull and East Ridings Museum; Priest's House museum, Wimborne Minster; Hampshire museums; Grosvenor Museum, Chester

Other repository:

Sites: Wetwang Slack, Wetwang, East Riding of Yorkshire; Barton Field, Tarrant Hinton, Dorset; Danebury Hillfort, Nether Wallop, Hampshire

Abstract: The study of human palaeopathology has developed considerably in the last three decades resulting in a structured and standardised framework of practice, based upon skeletal lesion patterning and differential diagnosis. By comparison, disarticulated zooarchaeological assemblages have precluded the observation of lesion distributions, resulting in a dearth of information regarding differential diagnosis and a lack of standard palaeopathological recording methods. Therefore, zoopalaeopathology has been restricted to the analysis of localised pathologies and 'interesting specimens'. Under present circumstances, researchers can draw little confidence that the routine recording of palaeopathological lesions, their description or differential diagnosis will ever form a standard part of zooarchaeological analysis. This has impeded the understanding of animal disease in past society and, in particular, has restricted the study of systemic disease. This research tackles this by combining the disciplines of human palaeopathology and zoopalaeopathology and focusing on zoonotic disease. The primary aim of this research was to investigate the skeletal manifestation of bTB in cattle, sheep/goat and pig to establish differential diagnostic criteria for its identification in zooarchaeological assemblages. Methods commonplace in human palaeopathology were adapted and applied to zoopalaeopathology, in addition to radiography and aDNA analysis. The results emphasise the difficulties but also the potential associated with the identification of systemic diseases in zooarchaeological assemblages. An approach to the classification of potentially infectious lesions is presented that enables the calculation of crude prevalence in disarticulated assemblages. In addition, the potential for a DNA analysis to shed further light on animal disease in the past is emphasised.

Author: Randall, Clare Elizabeth **PhD date** 2010 **49**

Title: Livestock and landscape: exploring animal exploitation in later prehistory in the South West of Britain

Institution: Bournemouth University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.518511

Period of material Iron Age

Type of material: Faunal remains

Size of the assemblage used: 130,000 fragments of animal bone

English archive: Somerset County Museum, Cornwall County Council

Other repository:

Sites: Cadbury Castle and Ham Hill animal bone assemblages

Abstract: The animal remains from British later prehistory have frequently been treated as generally only able to inform us about economy, and occasionally about symbolic behaviour. On the other hand, the use and division of landscape has been largely discussed in terms of social organisation. There has been a failure to appreciate that there is a reflexive relationship between pastoral farming and the utilisation and inhabiting of landscapes. The nature and needs of livestock and consideration of husbandry methods have informed identification of the types of archaeological data we can use to discuss husbandry practices. This thesis integrates faunal, field and environmental data to achieve a holistic understanding. Husbandry practices and animal consumption and deposition identified from analysis of over 130,000 fragments of animal bone from Cadbury Castle, Somerset, and sites in its environs, have been considered in the light of successive arrangements of fields in the area. The relationship between changes in landscape organisation and in animal exploitation has been established and can also be detected across the south west. The fields of the earlier Bronze Age apparently relate to continuation of extensive husbandry regimes, whilst fixing the activity within the landscape. Small scale arable farming was integrated during the Middle Bronze Age. Subsequently there was a return to extensive grazing and mobility. An approach dominated by sheep farming began in the Early Iron Age. This gained ascendency in the Middle Iron Age, with new, small, fields that are indicative of a highly integrated arable and pastoral system and which were both intensive, localised, and reflect the technical, social and ideological complexity surrounding animals. This thesis has found that the form of landscape division and organisation was intimately bound up with the practicalities of livestock management. It has identified a variety of features and arrangements that can assist in understanding livestock management elsewhere in Britain and beyond. At different times and places this involved different social and technological choice, but was founded in the needs of managed animals.

Author: Warham, Joseph Olav **PhD date** 2011 **50**

Title: Mapping biosphere strontium isotope ratios across major lithological boundaries: a systematic investigation of the major influences on geographic variation in the 87Sr/86Sr composition of bioavailable strontium above the Cretaceous and Jurassic rocks of

Institution: University of Bradford https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.566169

Period of material Iron Age and early medieval

Type of material: Faunal remains and human bone

Size of the assemblage used: 50 samples (42 faunal + 8 human)

English archive: Oxfordshire Museums Service; Buckinghamshire County Museum; Winchester Museums

Other repository:

Sites: Faunal material analysed from assemblages made up of the commingled, disarticulated skeletal remains; only complete mandibles or mandibular fragments bearing a significant proportion of each tooth row were selected for analysis. Selected teeth from the individuals interred at Old Dairy Cottage (ODC89) were provided by Winchester Museums Service. Faunal samples from Ivinghoe Beacon; Ward's Coombe, Bierton Vicarage Garden, Bicester Fields Farm. Human samples from graves, which each contained the articulated remains of one individual and included the remains of a skull

Abstract: Strontium isotope analysis has provided archaeologists with an unprecedented opportunity to study the mobility of humans and animals in the past. However, a lack of systematic environmental baseline data has seriously restricted the full potential of the analytical technique; there is little biosphere data available against which to compare measured skeletal data. This thesis examines the extent to which geographic variation in biosphere 87Sr/86Sr composition can be spatially resolved within the lowland terrain of England, in a geographically and geologically coherent study area. Systematically collected samples of vegetation, stream water and surface soils, including new and archived material have been used. The potential of these sample media to provide reliable estimates of the $^{87}Sr/^{86}Sr$ composition of bioavailable strontium are evaluated under both high- density and low-density sampling regimes, and against new analyses of local archaeological material. Areas lying south of the Anglian glacial limit, display a pattern of geographic $^{87}Sr/^{86}Sr$ biosphere variation (0.7080-0.7105) controlled by solid geology, as demonstrated by high-density biosphere mapping. Data collected at a wider geographic scale, including above superficial deposits, indicate the dominant influence of re-worked local rocks on the biosphere. These methods have enabled a reclassification of the archaeologically important Cretaceous Chalk domain. Analysis of rainwater and other indicators of atmospheric deposition show that, in this setting, local biosphere variation is not significantly perturbed by atmospheric inputs. Time-related data from archaeological cattle and sheep/goat tooth enamel suggest that the modern biosphere data can be used to understand livestock management regimes and that these are more powerful than using an average value from the enamel. A more complete understanding of possible patterns of mobility in a group of humans has been achieved through analysis of material from Winchester and comparison with the Chalk biosphere domain.

Author: Foulds, Elizabeth Marie **PhD date** 2014 **51**

Title: Glass beads in Iron Age Britain: a social approach

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.600948

Period of material Iron Age

Type of material: Glass beads

Size of the assemblage used: c. 1,788 beads

English archive: The British Museum; The Museum of Somerset; Wiltshire Heritage Museum, Dorchester Museum; Gloucester Museum; Poole Museum; Gillingham Museum; Bristol City Museum; Red House Museum; Corinium Museum, Cirencester; Stroud Museum; Ashmolean Museum; Norwich Castle Museum; Yorkshire Museum; Hull Museum.

Other repository: Access to unpublished material: Museum of London; Archaeological Project Services

Sites: See PhD Appendix E for list of excavations examined. Use of published research excavation reports, published and unpublished (grey-literature) developer-funded reports (through HERs, OASIS database through the Archaeology Data Service website)

Abstract: Studies of Iron Age artefacts from Britain tend to be dominated either by the study of metalwork, or pottery. This thesis presents a study not only of a different material, but also a different type of object: glass beads. These are found in a range of different sizes, shapes, colours, and employ a variety of different decorative motifs. Thus far, glass beads have been studied through typology (Guido 1978a) and compositional analysis (Bertini 2012; Henderson 1982), yet a thorough analysis of the social context of glass beads remains absent. Through an analysis of glass beads from four key study regions in Britain, this thesis aims not only to address regional differences in appearance and chronology, but also to explore the role that this object played within the networks and relationships that constructed Iron Age society. It seeks to understand how they were used during their lives and how they came to be deposited within the archaeological record, in order to establish the social processes that glass beads were bound within. The results indicate that glass beads were a strongly regionalised artefact, potentially reflecting differing local preferences for colour and motif. In addition, glass beads, in combination with several other types of object, were integral to Middle Iron Age dress. Given that the first century BC is often seen as a turning point in terms of settlements and material culture, this supports the possibility of strong continental exchange during an earlier period for either glass beads or raw materials. However, by the Late Iron Age in the first century BC and early first century AD, their use had severely diminished.

Author: Carroll, Emily **PhD date** 2019 **52**

Title: Burning by numbers: cremation and cultural transitions in Late Iron Age and Roman Britain (100BC - AD410)

Institution: University of Reading https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.781215

Period of material Iron Age to Roman

Type of material: Human bone

Size of the assemblage used: 102 cremation deposits

English archive: North-Hertfordshire Museum; Verulamium Museum; Museum of London

Other repository:

Sites: Cremation deposits in Hertfordshire

Abstract: Late Iron Age and Roman Britain witnessed numerous cultural transitions. While these processes have received significant attention with regards to material culture, it is only recently that bioarchaeological research has considered the role of funerary practices and what they can contribute to our understanding of these phenomena. The primary mortuary rite during this period was cremation. Although previously thought to contain limited information compared to inhumation burials, current research now recognises that they hold the potential to reconstruct entire funerary sequences, from the building of the pyre, to the final deposition within the grave. Recent methodological advances in the field allow us to infer a wealth of information concerning burning practices and pyre technology that could not be achieved before. This study conducted a large survey of 2375 cremation deposits dating from the 1st century BC to the 4th century AD from Britain to establish trends according to both region and settlement type. The results found that while age, grave and pyre goods remained consistent across all settlement types and regions, the male / female ratio and burial type changed following the Roman conquest. This demonstrates the prolonged continuation of Late Iron Age traditions, alongside the uptake of more Roman-styled customs. Further trends were identified primarily rooted in different methodological practices adopted by different analysts and emphasise the need for standardisation. The primary analysis in this thesis focused on 102 cremation deposits from Hertfordshire combining archaeological, environmental, and osteological data. It found that cremation technology differed on an inter-cemetery and settlement type basis. It is possible that this was caused by the introduction of ustores or professional cremators to Roman towns, representing increased 'industrialisation' of funerary practices. This project also developed a new method for quantifying microscopic heat-induced alterations in burned bone using petrography. This technique reduces the risk of inter-observer bias that hinders other, qualitative methods and allows for the statistical categorisation of burning intensity. Overall, this thesis has demonstrated the value of funerary data (cremation) in the examination of cultural transitions in Late Iron Age and Roman Britain; it highlights how society was a fluid concept characterised by the continuation of pre- conquest ideals, the uptake of Roman customs and the creation of new cultural identities.

Author: Anctil, Mallory J. **PhD date** 2021 **53**

Title: Ancient Celts: a reconsideration of Celtic identity through dental nonmetric trait analysis

Institution: Liverpool John Moores University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.822491

Period of material Iron Age

Type of material: Human bone

Size of the assemblage used: 190

English archive: Unspecified

Other repository:

Sites: The skeletal material from Wetwang Slack (East Yorkshire, Britain), which consists of a total of 180 individuals. The skeletal material from Rudston Makeshift (east Yorkshire, Britain), which comprises a total of 175 individuals, of which a sub-sample of 45 randomly chosen individuals were selected for analysis (see PhD Table 8 Ch 5)

Abstract: The Celts are a collection of tribes and/or populations that inhabited much of Central Europe during the Iron Age and are still something of an enigma. The relationship among the spread of their material culture, Celtic ethnicity, population movements among the diverse populations possessing Iron Age Hallstatt and La Tène artefacts throughout Central Europe believed to have been spread by Celtic people, and/or spoken languages identified as Celtic have long been questioned by researchers. However, previous research has primarily focused only on chronological and typological descriptions and documentation of diachronic change. Diverse populations throughout Europe have been intrinsically linked based on perceived similarities in burial practice, art styles and material culture. Subsequently, these associations have resulted in the creation of the so-called La Tène=Celtic paradigm. Under this paradigm, the presence of La Tène artefacts designate a population as Celtic. The underlying biological diversity among presumed Celtic populations and processes driving the observed variation in artefacts, art styles and burial practices throughout the core and expansion regions are not well understood. The present study helps fill the void in the current understanding of underlying biological diversity among these populations in several ways. First, 36 morphological traits in 586 dentitions from 11 regional samples, from Britain and Europe, were collected using the Arizona State University Dental Anthropological System (ASUDAS). The above samples represent the core and expansion regions, along with a comparative European Iron Age sample outside the known range of Celtic expansion. Frequencies of occurrence for each dental and osseous nonmetric trait were recorded by sample. Second, the suite of traits was compared among samples using principal components analysis, (PCA) and the mean measure of divergence (MMD) distance statistic. Multidimensional scaling was subsequently employed on the symmetric MMD matrix to illustrate graphically inter-sample relationships. Phenetic patterns of overall biological similarity and dissimilarity among individuals and populations based on morphological traits were determined. MMD distances were then compared with geographic distances among samples, under the assumption that genetic affinity is inverse to spatial distance.

Author: Bernofsky, Karen Stacy **PhD date** 2010 **54**

Title: Respiratory health in the past: a bioarchaeological study of chronic maxillary sinusitis and rib periostitis from the Iron Age to the Post Medieval Period in Southern England

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.528622

Period of material Iron Age to post-medieval

Type of material: Human bone

Size of the assemblage used: 1,203 individuals

English archive: Hampshire County Council Museums & Archives Service; Cambridge County Archaeological Services; Natural History Museum, London; St Albans Museum; Museum of London; St Bride's Church Fleet Street

Other repository: Suffolk County Council Archaeological Service; Oxford Archaeology; Canterbury Archaeological Trust

Sites: To study human bone health

Abstract: Respiratory disease has affected human populations throughout our history and remains a significant cause of morbidity and mortality today. In spite of this, there is a dearth of bioarchaeological research on this important subject. Previous research has suggested a relationship between poor air quality and the prevalence of chronic maxillary sinusitis and rib periostitis. These conditions have many causes (e.g. congenital disorders, allergies, poor air quality, climate, infectious disease). Chronic maxillary sinusitis and rib periostitis are recognised as bone formation and/or destruction, indicating long-term inflammation of the soft tissues of the sinuses and ribs in some upper and lower respiratory tract conditions. If air quality is a significant contributor to respiratory disease, the highest prevalence rates would be expected in populations exposed to high concentrations of indoor and outdoor pollutants. This study examines 12 skeletal samples from cemeteries located in southern England, ranging in date from the Iron Age to the Post Medieval Period. The samples were chosen to examine both synchronic and diachronic trends in respiratory disease, contrasting contemporaneous populations living in rural and urban contexts, as well as populations from high and low social status groups. A total of 1203 individuals were examined for this study. Of these, 1101 had at least one sinus preserved, and of these individuals, 546 (49.6%) had sinusitis in one or both sinuses. A total of 2091 sinuses were recorded. Of these, 854 (40.8%) had chronic maxillary sinusitis. 50.42% of 720 males and analysed had sinusitis and 47.85% of 372 females (not significant). Prevalence rates ranged from 30.6% (Post Medieval) to 75.44% (Iron Age) for chronic maxillary sinusitis and 1.59% (Iron Age) to 29.7% (Post Medieval) for rib periostitis, but, when combining the skeletal and archaeological/historical data, the hypothesis posed is not consistently supported. Based on archaeological evidence for lifestyle and housing, these results suggest that the causes of respiratory disease are more complex than this current hypothesis presumes.

Author: Tracey, Justine **PhD date** 2011 **55**

Title: Cultural behaviour or natural processes? A review of southern Britain iron age skeletal remains

Institution: University of Reading https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.558773

Period of material Iron Age

Type of material: Human bone

Size of the assemblage used: unknown (text not available)

English archive: unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: This thesis focuses on the British Iron Age and challenging the current hypotheses of exposing the dead on five Iron Age sites in Hampshire and one from Dorset, England. Current theories are based on anthropological analogies and classical texts to understand and interpret the burial record. However, this research focused on understanding the formation of the burial record employing a new science-based methodology. This new approach is both integrated and multidisciplinary, combining the osteological and context taphonomic physical or material evidence to discern cultural behaviour from natural processes. The approach utilises a wide range of forensic anthropology and taphonomy, including l 'anthropologie de terrain or archaeothanatology, to identify archaeological signatures from three key and interrelated areas: the remains, the deposition context, and the relationship between the corpse and its deposition circumstance. A new system of categorising Iron Age remains was developed to differentiate funerary and depositional behaviour between sites. The results show that during the Iron Age , several depositional practices can be observed: intentional exposure, propitiatory deposits and intentional practices where the body was kept whole in death which ran in parallel with each another. The research also identified the need to integrate burial data from the outset, including associated finds and stratigraphic evidence in order provide a comprehensive account of funerary and depositional practices.

Author: Harrison, D. L. **PhD date** 2016 **56**

Title: A multi proxy investigation into the effects of burial environments on nuclear DNA in bone over forensic and archaeological timescales

Institution: Cranfield University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.694974

Period of material Iron Age and early medieval

Type of material: Human bone

Size of the assemblage used: 114 bones from 66 skeletons

English archive: John Hines and Archaeological Research Services Ltd

Other repository:

Sites: An Iron Age burial ground in Fin Cop, Derbyshire, and the Anglo-Saxon cemetery of Eriswell, Lakenheath, Suffolk. The skeletons from Fin Cop were stored at the premises of the Archaeological Research Services Ltd in Bakewell, Derbyshire. The sites were chosen due to the difference in time scales since burial of the human remains, the dissimilar burial environments, and the authorisation to use destructive techniques for the purpose of DNA and compositional bone analysis

Abstract: This research conducted a two-pronged approach to study the effects of taphonomic processes by conducting analysis of experimental burials of porcine femora and parallel analysis of ancient human archaeological remains from geologically distinct cemeteries. The aim of this study was to identify the major degradative factors from depositional environments that affect the bone composition and the retention and retrieval of nucleic DNA from archaeological bone. Four different experimental burial environments were designed. Analysis of the burial mediums and bones were conducted at regular intervals over an 18 month period. The analytical data collected on the diagenesis of the archaeological bone from both studies, was compared to the DNA profiling success rates. The research and optimisation of sample preparation and DNA analysis enabled the most cost-effective and appropriate methods to be identified and utilised in accordance with the preservation state of the bone samples. This allowed the analysis of ancient archaeological bone to be analysed in-line with forensic protocols, to enable a uniform accessible approach to produce comparable results across different laboratories. Drawing together the results from the various analytical techniques made it possible to identify the variables that affect bone diagenesis and the survival of nuclear DNA, and provide evidence that the rate of decomposition and bone degradation is affected more significantly by the burial environment than duration of burial, as stated in the research hypothesis. The presence of water, sand and the level of organic content were found to be the most degradative variables within the experimental burial conditions; causing changes in bone crystallinity, and infiltration of contaminants into the bone. The presence of lime, chalk or limestone in an environment was found to have preserving properties in both the porcine and human burials, by retarding the rate and degree of soft tissue decomposition, and reducing the diagenetic changes in bone composition evident from the other environments. Despite previous reports of success using analytical techniques as predictive models for DNA and bone preservation, no correlations with DNA survival could be established. However the use of a multi-disciplinary approach enabled the detection and identification of soil contaminants affecting the bone structure and the ability to amplify DNA, in relation to burial environments. This research highlighted the importance of utilising multiple analytical techniques, such as colourimetry, ATR-FTIR, XRF and genetic analysis in order to avoid misinterpretation and false reporting of the state of bone diagenesis or preservation and the survival of DNA, due to environmental contaminants within the hard tissue. The research confirms the idea that in order to establish optimised sampling and DNA analysis of archaeological bone, it is imperative that certain protocols are adhered to. Precautions must be implemented from excavation through to laboratory analysis to avoid contamination; and correct recording of burial environment is essential to enable consideration of extrinsic factors and contaminants when reporting results.

Author: Inall, Yvonne Louise **PhD date** 2015 **57**

Title: In search of the spear people: spearheads in context in Iron Age eastern Yorkshire and beyond

Institution: University of Hull https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.754590

Period of material Iron Age

Type of material: Metal and bone artefacts

Size of the assemblage used: c. 446 spearheads

English archive: The Treasure House, Beverley (for access to the South Cave Weapons Cache); the British Museum; the North Lincolnshire Museum (finds from Dragonby); The Collection, Lincoln (Fiskerton); Hull and East Riding Museum

Other repository: MAP Archaeology Ltd (Pocklington)

Sites: 49 Iron Age sites across Britain. Contexts included finds from burials, structured deposits, river deposits,sanctuary, and settlement sites. Examples recorded supplement with other published examples

Abstract: Spearheads have long been an understudied class of object for the Iron Age, and for the British Iron Age in particular. No satisfactory typology has yet been published and this thesis addresses that lacuna through the creation of a new typology of spearheads for Iron Age Britain. The typology is a significant step-forward in the study of Iron Age weaponry, and forms a useful tool which facilitates not only the study of martial practices but also contextual studies of this important class of object. The typology has been designed with the end-user in mind and offers guidelines for practical application. The data collection conducted for this thesis forms the largest dataset of Iron Age spearheads for Britain which has been conducted to date. This data is made freely available as an online resource to facilitate future research. To this end, the typology has been designed as an open system which can accommodate the addition of new types, should they come to be identified. Spearheads did not exist in a cultural vacuum and this work applies the typology in a number of contextual analyses. The Arras Culture of Iron Age East Yorkshire featured an unparalleled burial rite involving spears, known as the 'speared corpse' ritual. This practice serves as and entre-point for an examination of Iron Age spearheads in Britain, placing them in their broader martial, social and cosmological contexts. The contextual analyses explore the archaeological contexts from which spearheads have been recovered, examining the types of spear selected for inclusion in structured deposition and martial burials inter-regionally and through time. Consideration is given to the decision-making processes underlying the inclusion of spearheads in votive deposits as well as the specific placement of martial objects in Iron Age burials. The thesis also examines the role which spearheads and other martial objects played in the construction of martial identities in the British Iron Age. The research undertaken represents the most detailed study of Iron Age spearheads conducted for Britain to date, and demonstrates the importance of the spear within the cultures and cosmologies of the Iron Age peoples of Britain.

Author: Lewis, Anna Sian Grodecka **PhD date** 2015 **58**

Title: Iron Age and Roman-era vehicle terrets from western and central Britain: an interpretive study

Institution: University of Leicester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.660079

Period of material Iron Age

Type of material: Metal artefacts

Size of the assemblage used: 289 artefacts

English archive: British Museum; Ashmolean Museum; Bolton Museum; Chester HET collections; Grosvenor Museum, Chester; Royal Cornwall Museum, Truro; Derby Museum and Art Gallery; Royal Albert Memorial Museum, Exeter; Dorset County Museum, Dorchester; National Trust, Warminster; Chilcomb House, Winchester; Gold Hill Museum, Shaftesbury; Hull and East Riding Museum; Yorkshire Museum, York; Bristol Museum and Art Gallery; Gloucester City Museum; Corinium Museum; Manchester Museum; Manchester Museum; Lancaster City Museum; Bosworth Battlefield Heritage Centre; Leicestershire County Council; Collection Resources Centre, Barrow-upon-Soar; North Lincolnshire Museum, Scunthorpe; The Collection, Lincoln; University of Nottingham Museum; Northampton Museum and Art Gallery

Other repository: (Archive cont.) Piddington Roman Villa Museum; Bassetlaw Museum, Retford; Roman Aldborough; Tot Lord Collection, Lower Winskill Farm, Settle; Museums Resource Centre, Standlake; Peterborough Museum; Shropshire Museums; Shrewsbury Museum; Glastonbury Lake Village Museum; Somerset Heritage Centre, Taunton; Museum of Somerset, Taunton; Swindon Museum and Art Gallery; Clifton Park Museum, Rotherham; Herbert Art Gallery and Museum, Coventry; Market Hall Museum, Warwick; Roman Alcester; Warwickshire Museums; Wiltshire Museum, Devizes; Salisbury and South Wiltshire Museum; Marlborough College Museum; Castleford Forum, Wakefield; Yorkshire Museum, York. Univ. Leicester Archaeological Services; South Somerset Archaeological Research Group

Sites: Finds of terrets, or rein-guides, from western and central Britain; almost 80% are recorded through the Portable Antiquities Scheme (and object are in private hands). 185 museums in the study area were identified as possessing collections of potential relevance. These terrets were viewed at museums around the study area, as well as at the British Museum in London

Abstract: This thesis presents an interpretive study into the development, distribution, use and deposition of Iron Age and Roman-era terrets, or rein-guides, from western and central Britain. It is the first in-depth study of terrets as an artefact class and, unlike previous catalogues of Iron Age or "Celtic" metalwork, includes terrets of Continental or Roman stylistic origin as well as the "D- shaped" British series. The accompanying database records 596 terrets from within the study area. The "D-shaped" series first emerged around the third century BC, and appears to have taken a stylistic leap in the early first century AD, when terret design became increasingly varied and frequently involved the inclusion of colourful enamels. From the mid-first century AD, Continental-influenced forms became widespread in Britain. The D-shaped series continued to evolve, whilst adhering to basic conventions and constraints, until chariotry fell into decline around the end of the first century AD. The thesis re-assesses dating evidence for the development of the artefact class, and proposes a new typology organised into three main typo-chronological groups. The inter-relation of D-shaped and Continental varieties is investigated, the distribution across the study area of different forms compared, and depositional contexts reviewed. The social significances of D-shaped terrets in particular are also considered, as communicated both through their artistic development and through the behaviours evident in their deposition. Moving from the Late Iron Age into the Early Roman era, the thesis makes use of object theory and post-colonial theory to interpret the changing social roles of terrets in the context of Roman invasion and occupation.

Author: Booth, Anna Louise **PhD date** 2015 **59**

Title: Reassessing the long chronology of the penannular brooch in Britain: exploring changing styles, use and meaning across a millennium

Institution: University of Leicester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.666669

Period of material Iron Age to early medieval

Type of material: Metal artefacts

Size of the assemblage used: 2,621 brooches

English archive: British Museum; National Roman Legion Museum; Bristol Museum and Art Gallery; Dorset County Museum; Wiltshire Heritage Museum, Devizes; Salisbury and South Wiltshire Museum; Museum of Somerset; Hull and East Riding Museum; North Lincolnshire Museum, Scunthorpe; Yorkshire Museum

Other repository:

Sites: Over half of the British database (58%) derives from catalogues compiled by Fowler (1961), M. R. Hull, with revisions by C. F. C. Hawkes following his death (unpublished), and Donald Mackreth (2011). A further 31% of penannulars were added via a detailed literature search and visits to museums within the two case study regions and 175 (7% of the overall total) from the PAS database

Abstract: Penannular brooches are a simple form of dress fastener used in Britain from the late Iron Age, through to the Roman and Early Medieval periods. This thesis represents the first full study of their British development for fifty years. The catalogue of penannulars originally compiled by Elizabeth Fowler in the late 1950s has been more than doubled, allowing a thorough re- analysis of chronological variation and continuity in stylistic development, distribution, use and deposition. This has been carried out via broad analysis of the penannular database and two regional case studies looking at South-West England and Yorkshire and North Lincolnshire, the two areas where penannulars were concentrated throughout their chronology. Many previous studies have focused only on the later penannular types, leading to an unbalanced approach dominated by the preoccupations of early medieval archaeology. This has created the perception that penannulars had a simple evolutionary development that contributed to the straightforward survival of a 'Celtic' culture in some regions during the Roman period and beyond. To counterbalance this, analysis here has particularly focused on the earlier end of the penannular chronology. As a result an alternative picture is presented, of a highly complex development influenced by Continental parallels, which stands in deep contrast to the simplistic sequences proposed in most previous studies. The ever increasing corpus of theoretical work on bodily adornment has also been drawn on, enabling a more nuanced approach that moves us away from the idea that appearance is just an external manifestation of a single, static form of identity and instead recognises that it plays a vital role in an active and continual process of forming and maintaining multiple, complex, overlapping and sometimes opposing identities.

Author: Nishitani, Akira **PhD date** 2012 **60**

Title: Typological classification and the chronology of Iron Age pottery in central-southern Britain

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.548871

Period of material Iron Age

Type of material: Pottery

Size of the assemblage used: 'large amounts'

English archive: Hampshire Museums and Archives Service; Museum of the Iron Age

Other repository:

Sites: Hengistbury Head in Dorset

Abstract: Pottery has been one of the most popular artefacts in the study of the Iron Age in central-southern Britain because of its advantages of commonality, durability and volume. Pottery studies have provided important clues for understanding the society and culture in the region. These studies also have contributed to constructing the chronologies of the regions. However, pottery studies have tended to be unpopular in recent decades. Despite their crucial importance to the field of Iron Age archaeology, ceramic studies of classification and chronology have not been adequately developed. The lack of these places all related studies at a disadvantage, which can be clearly identified in recent works of the region. This thesis re- examines the existing fundamental studies of Iron Age pottery. The method of classification and chronology of pottery uses statistical analyses, considering the importance of objectivity and actual data, which appears to be lacking in the existing studies. According to this approach, a new framework of the Iron Age pottery is created. The analysis also addresses other important issues for ceramic studies including classification, stratigraphy and absolute dating. These issues are discussed in order to produce reliable studies in the future by providing useful approaches to ceramic chronology. Most importantly, this thesis aims to emphasise the importance of the classification and chronology of pottery and to encourage the continuous re-examination of these studies.

Author: Jones, Grace **PhD date** 2017 **61**

Title: Sourcing the clay: Iron Age pottery production around Poole Harbour and the Isle of Purbeck, Dorset, UK

Institution: Bournemouth University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.725474

Period of material Iron Age

Type of material: Pottery

Size of the assemblage used: 255 sherds

English archive: Dorset County Museum in Dorchester, the Priest's House Museum in Wimborne, Poole Museum

Other repository:

Sites: A total of 255 sherds of pottery was thin-sectioned, from 21 sites across Dorset and into Somerset. Almost all were of Iron Age date, with the exception of 12 from sites of Romano-British Black-burnished ware pottery production at Bestwall Quarry, Redcliff and East Holme. The samples were selected on the basis of previous identification as a Poole Harbour ware fabric, or suspected origin in the region

Abstract: One of the most ubiquitous types of Romano-British coarseware pottery, Black- burnished ware 1 (BB1), was produced around the shores of Poole Harbour, in South East Dorset. Previous researchers have shown that this industry was already well- established by the 1st century BC, while reports documenting excavations at earlier Iron Age sites in Dorset indicate that its roots can be traced back to around 700 BC. However, little is known about the production and circulation of wares during these formative phases of the industry, a topic that is addressed by the research presented here with a specific focus on the clays selected by potters working between 700 BC and 100 BC. A typology of Iron Age Poole Harbour wares has been compiled, drawing together the range of forms found on sites across Dorset. A programme of fieldwork revealed that the landscape of Poole Harbour and the Isle of Purbeck offered a range of clays and sands to the potters. Petrological analysis of 255 sherds of pottery illustrated that the Poole Harbour ware fabrics are characterised by the presence of elongated argillaceous inclusions and a low incidence of silt-sized quartz, with variability in the range of larger quartz grains. Thin sections of 105 clay samples revealed the silt content of the clays is greater than that of the pottery, suggesting potters levigated the raw clay rather than simply utilising a naturally sandy clay. Examination of the elongated argillaceous inclusions in the pottery, using petrology and a scanning electron microscope with energy dispersive X-ray spectroscopy, indicated they are a component of the clay rather than shale fragments added as temper. Compositional analysis of 100 samples of pottery and clay, using inductively coupled plasma spectrometry, demonstrated the potters selected the iron-rich, red- firing clays, rather than the malleable white-firing clays. It also revealed that during the earlier Iron Age the potters utilised the Wealden Clay deposits from the southern side of the Purbeck Ridge, but exploited the Poole Formation clays to the north during the later Iron Age. The wider cultural context of this change is considered and it is suggested that shifting settlement patterns may have influenced the location of the expanding production sites and their ties to communication networks.

Author: Norton, Shelagh Margaret **PhD date** 2019 **62**

Title: Assessing Iron Age marsh-forts

Institution: University of Birmingham https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.782350

Period of material Iron Age

Type of material: Pottery and artefacts

Size of the assemblage used: c.50 artefacts

English archive: Shropshire Museum Services; Shrewsbury Museum

Other repository:

Sites: The Berth was excavated in the 1960s, although the results were never fully published (Gelling, 1964; Gelling and Stanford, 1965 (1967); Morris and Gelling, 1991). The material remains from these investigations are held by Shropshire Museum Services and were investigated as part of this research

Abstract: Iron Age marsh-forts are large, monumental structures located in low-lying waterscapes. Although they share chronological and architectural similarities with their hillfort counterparts, their locations suggest that they may have played a specific and alternative role in Iron Age society. Despite the availability of a rich palaeoenvironmental archive at many sites, little is known about these enigmatic structures and until recently, the only acknowledged candidate was the unusual, dual-enclosure monument at Sutton Common, near Doncaster. This thesis assesses marsh-forts as a separate phenomenon within Iron Age society through an understanding of their landscape context and palaeoenvironmental development. At national level, a range of Iron Age wetland monuments are compared to Sutton Common to generate a gazetteer of potential marsh-forts. At local level, a case-study is presented of the Berth marsh-fort in North Shropshire, applying a multi-disciplinary approach which incorporates GIS-based landscape modelling, multi-proxy palaeoenvironmental analysis (plant macrofossils, beetles and pollen) and excavation. The results of both the gazetteer and the Berth case-study challenge the view that marsh-forts are simply a topographical phenomenon. These substantial Iron Age monuments appear to have been deliberately constructed to control areas of marginal wetland, and may have played an important role in the ritual landscape.

Author: Bates, Andrew **PhD date** 2017 **63**

Title: Making the invisible visible: new survey and investigation of the Iron Age Hillforts of Bigbury and Oldbury in Kent

Institution: University of Kent https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.739473

Period of material Iron Age

Type of material: Pottery and flint

Size of the assemblage used: c.150 sherds and artefacts

English archive: Maidstone Museum

Other repository:

Sites: Pottery from the Bigbury Archive, 1887 excavations; finds from Oldbury Archive (1944)

Abstract: Bigbury and Oldbury are two significant monuments of the Iron Age, yet their dates, use and importance are not well understood. This Thesis has employed a series of methods and approaches, with the aim of addressing the shortfall in our knowledge. The results help to place these sites in a wider landscape and contextual setting. Oldbury, at an area of 50ha, is one of the largest Hillforts in Britain; despite the scale of endeavour in constructing its massive earthwork circuit, it has been suggested by its excavators that it was probably not permanently occupied. This research, (in particular by the application of an extensive geophysics survey of over 50% of the interior), revealed that this suggestion requires further examination. The survey identified potential zones of activity within the interior and a possible indication that there may have been a smaller Hillfort or enclosure before the present ramparts were constructed. The research also brings together all of the available previous studies of the site for comparative analysis as well as relevant finds data from the Kent HER and other sources. Coupled with this data, the study investigates the location and visibility of Oldbury within the Iron Age landscape to understand the possible uses of the monument. Famous for its multifarious ironwork hoard, the Hillfort at Bigbury is thought by some to have been a forerunner to present day Canterbury and there is a consensus amongst the modern commentators that Bigbury was the Hillfort attacked by Caesar during his 54BC campaign in Britain (though this remains unproven). In fact, beyond the ramparts, little detail is known of the pre-historic character of Bigbury or the hinterland of Bigbury and how the monument sits within the much wider Iron Age landscape. This research, using a combination of disciplines, shows that stratified and dateable archaeology exists around the immediate Hillfort environs, much of it at depth not easily detectable with standard geophysics equipment. The results of the present study also reveal a much longer chronology to the site than hitherto realized, showing that an area just outside of the ramparts was occupied probably during the Bronze Age and through to the early Iron Age. When this is coupled with the evidence of Middle and Late Iron Age activity previously discovered on the ridge (a probable ancient route way), which the ramparts straddle, it clearly demonstrates a continuity of settlement in and around the Hillfort for at least 1500 years before the Romans arrived. This study also shows that the complex at Bigbury is not only the visible, spatially discrete, centred ramparts we see today but was probably part of a two tier complex of linear earthworks. One of these two is around 150m from the south eastern ramparts and could define the extent of the Hillfort overlooking the River Stour and the second is more extensive, stretching back west along the ridge several kilometres, putting Bigbury potentially in a similar category to that of the oppida at Chichester and Colchester with their associated dyke system.

Author: Chittock, Helen **PhD date** 2016 **64**

Title: Pattern and purpose in Iron Age East Yorkshire

Institution: University of Southampton https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.720137

Period of material Iron Age

Type of material: Pottery and objects

Size of the assemblage used: 145 recorded first hand; collection and analysis of data on 4,611objects (3064 ceramic sherds)

English archive: British Museum; Hull and East Riding Museum; Beverley Treasure House

Other repository:

Sites: 30 sites investigating material culture from Iron Age East Yorkshire

Abstract: This thesis presents a holistic study of Middle-Late Iron Age material culture from East Yorkshire (UK). It analyses the decoration, or pattern, of a whole range of different types of objects in order to answer the question; 'what did pattern do?'. A database of over 4600 plain and patterned objects has been compiled using information from museum databases, published literature, unpublished reports and the Portable Antiquities Scheme database. Analysis of this database showed that patterns found on some objects are inextricably linked to the materials they are made from the broad purposes of objects and the ways they were eventually deposited. An in-depth investigation into the biographies and itineraries of a sample of objects has allowed for further exploration of the development of the relationship between pattern and purpose during the 'lives' of objects. This multi-scalar analysis has led to the conclusion that pattern did different three things in Iron Age East Yorkshire. It allowed craftspeople to engage with materials in specific ways; to adhere to tradition and function within design rules whilst also creating individualised objects. Pattern also contributed to the overall purposes of objects during use and deposition. Finally, pattern was an important part of the accumulation of biographies; a process that added value and significance to objects. This work contributes to new directions of scholarship currently being pursued in the study of decorated Iron Age objects by reintegrating many famous Early Celtic Art objects from East Yorkshire with the full material assemblage in which they once belonged, providing them with context and directing attention towards lesser-studied groups of objects.

Author: Hamilton, William Derek **PhD date** 2011 **65**

Title: The use of radiocarbon and Bayesian modelling to (re)write later Iron Age settlement histories in east-central Britain

Institution: University of Leicester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.529593

Period of material Iron Age

Type of material: Samples for radiocarbon dating

Size of the assemblage used: unknown

English archive: Yorkshire Museums; Tyne & Wear Museum Services

Other repository:

Sites: Stanwick; East Brunton Farm

Abstract: This thesis focuses on the use of radiocarbon dating and Bayesian modelling to develop more precise settlement chronologies for later prehistoric settlements over an area extending from the Tees valley in the south to the Firth of Forth in Scotland and bounded by the Pennines to the west. The project has produced a corpus of 168 new radiocarbon dates from nine sites and used these, together with dates that were already available for another 10 sites to develop new chronological models for 18 settlements representative of different parts of the study area. The results of the modelling underline the dynamic character of later prehistoric social organization and processes of change in east-central Britain over a period of several centuries. A widespread shift from nucleated settlements to dispersed farmsteads apparently occurred over a period of no more than a generation on either side of 200 cal BC, with a subsequent move back to open sites in the period following Caesar's invasions in 55/54 BC. It is not yet clear why the settlement pattern became more focused on enclosed settlements around 200 cal BC, but whatever the cause, this seems to form a single archaeological horizon all the way from the Forth to the Tees. The shift to open settlement around 50 cal BC seems, however, to be tied to new economic forces developing in the region as southern England becomes more focused on economic and diplomatic relations with Rome in the century leading up to the Roman occupation of northern England shortly after AD 70. Questions of duration are also explored, related more specifically to the lifespan of settlements and even of individual structures or enclosure ditches. These questions lead to ones of tempo, whereby the cycle of rebuilding a roundhouse or re-digging a ditch is examined.

Author: Slater, Jessica L. **PhD date** 2014 **66**

Title: Envaluing past practice: a framework for the spatial analysis of metalworking in first millennium BC Britain

Institution: University of Sheffield https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.668282

Period of material Iron Age

Type of material: Soil samples for phosphate analysis

Size of the assemblage used: 5 samples

English archive: Dorset County Museum

Other repository:

Sites: Maiden Castle, Dorset, sediments collected in 1985-6

Abstract: This thesis explores how current understandings of craft have largely restricted its analysis to the domains of material and technique. Through a critique of existing approaches to space and a reconfiguring of what constitutes craft practice, it is argued that space needs to be considered as a vital element of craft and may benefit from being considered as a technological choice. Having reconsidered the role of space, the thesis reviews and explores approaches and methods to characterising space in both archaeological and experimental contexts. The study engages with a number of analytical techniques including geophysical and geochemical methods to develop approaches to the characterisation of space in both experimental and archaeological case studies. It is argued that the study of space and its inhabitation offers the potential to unite experimental and conventional archaeological excavation on a continuum of exploration that emphasises the active use of space and in craft contexts, encourages the use of dynamic reconstruction. A number of analytical constructs are advocated so as to allow the better use of spatial characterisation in archaeological syntheses. Ideas of technical routines and the signatures that they impart to open soil contexts are developed in the context of experimental and Iron Age case studies to demonstrate the utility of considering space as an element of craft.

Author: Adams, Sophia Anne **PhD date** 2014 **67**

Title: The first brooches in Britain: from manufacture to deposition in the Early and Middle Iron Age

Institution: University of Leicester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.593753

Period of material Iron Age

Type of material: Metal brooches

Size of the assemblage used: 512 brooches

English archive: Ashmolean, Oxford; Museum of Archaeology and Anthropology, Cambridge; Museum of London; Maidstone Museum and Bentlif Art Gallery; National Museum of Wales; Reading Museum; Somerset County Council Heritage Centre; and the Wiltshire Museum, Devizes; Hull and East Riding Museum

Other repository:

Sites: 183 brooches recorded on the Portable Antiquities Scheme database (125 recorded at the British Museum); 250 from H&H (1987); 3 from Grace Simpson's reworking of Hull's corpus and 76 from the British Museum's catalogue. The remaining 280 are from published and unpublished excavation reports including records on the county Historic Environment Record (HER); stray finds published in local archaeological journals; unpublished stray finds and Hattatt's volumes (1982, 1985, 1987, 1989) which are not in Hull and Hawkes (1987)

Abstract: This thesis explores the evidence for the earliest brooches in Britain. The first brooches were used and made in Britain in the Early Iron Age from c.450 BC. During this period, and into the Middle Iron Age, methods were devised for constructing brooches with mock springs and hinges. In tandem with these changes a greater variety of types came into use. Some are relatively widespread across Wales, England and into Scotland. Others are concentrated in central or western and eastern regions of England. Brooches were manufactured from both bronze and iron. Bronze brooches dominate in the earlier period but iron brooches are as common as bronze in the Middle Iron Age. Some bronze brooches are constructed with small elements of iron and vice versa. Other materials are also employed as decoration on the body of the brooch including coral and glass. A revised chronology and typology are proposed, drawing on both intrinsic attributes and external archaeological evidence. The evidence from burials shows brooches were used to clasp fabric. The fabric was probably a woollen cloak wrapped around the body as a shroud. The brooch was positioned so it was visible during the funerary process. Some brooches fastened bags and other small brooches were better suited as ornaments or badges. These have distinctive designs that would have made them recognisable, perhaps as objects belonging to a particular person and/or associating that person with a specific group. Brooches are also found at settlements, at hillforts and in rivers, as well as at sites with or deposits of a ritualised character. Aside from cemeteries these latter sites contain the highest numbers of brooches. The deposition of personal objects at these types of site may have asserted the individual's connection to the community in a manner comparable to the burial of a person in a cemetery.

Author: Maltby, Mark **PhD date** 2011 **68**

Title: Integrating zooarchaeology into studies of Roman Britain and Medieval Russia

Institution: Bournemouth University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.542126

Period of material Later Iron Age and Roman

Type of material: Faunal remains

Size of the assemblage used: 80,000+

English archive: Winchester Museums Service;

Other repository: PhD by publication

Sites: Wessex sites as part of the Faunal Remains Unit: Iron Age sites (Hants: settlements at Old Down Farm (Maltby 1981a), Winnall Down/Easton Lane (Maltby 1985a; 1989a), hillfort at Balksbury (Maltby 1995a). Rural settlements investigated during the 1980s: around Basingstoke (Hants: Viables Farm (Maltby 1982b), Cowdery's Down (Maltby 1983b), Oakridge II (Maltby 1994a), Brighton Hill South (Maltby 1995b), Owslebury, excavated in the 1960s (Collis 1968; 1970). Later Bronze Age sites on the Marlborough Downs (Maltby 1992) and Stonehenge Environs Project (Maltby 1990). Roman towns: Greyhound Yard site, Dorchester (Maltby 1993), sites in Silchester (Maltby 1984a). Roman Winchester (Maltby 2010b)

Abstract: This volume and supporting papers constitute the submission for an award of a PhD research degree by publication. Eleven works completed by the author within the last 15 years (eight published; three in press) have been submitted for consideration. All the papers are concerned with animal exploitation in late prehistoric and Roman Britain and/or Medieval north-west Russia. To put these submissions into context, Chapter 2 summarizes the author's academic career and the history of the research projects with which he has been involved. The next two chapters provide summaries and critically evaluative comments concerning the submitted works. Chapter 3 discusses the works concerned with the exploitation of animals and their products in the late Iron Age and Roman periods in Britain. Chapter 4 considers papers principally concerned with the exploitation of animals within the Medieval town and territory of Novgorod in north-west Russia. Chapter 5 presents an evaluation of the contribution the submitted works have made to furthering knowledge, not only of the specific periods and regions involved, but also more generally to the development of urban zooarchaeology (including comparisons between urban and rural faunal assemblages), the study of carcass processing, and the integration of zooarchaeology into general research questions.

Author: Greenwood, Caitlin E. **PhD date** 2020 **69**

Title: Foodways in the Roman Cirencester hinterland

Institution: University of Bristol https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.801597

Period of material Late Iron Age and Roman

Type of material: Pottery

Size of the assemblage used: 1,500 vesels

English archive: Corinium Museum, Chedworth Roman Villa, Wiltshire Museums, Swindon Museum and Gallery

Other repository:

Sites: Ten different sites, dating from the 1st century BC to the 4th century AD, with material recovered via PPG-16 commercial archaeology, including the key sites of Cirencester, Cotswold Community, Claydon Pike and Asthall

Abstract: This thesis explores changing foodways in late Iron Age and Roman Britain. Focusing on one region, Cirencester and its hinterland, the study uses organic residue analysis to investigate the use of pottery on a range of different site types: a major town and its Iron Age precursor, three small towns, three rural settlements and two villas. It aimed to characterise what pots were used for and to determine whether this was different on various types of site and whether this changed through time. A total of 573 potsherds were analysed from ten different sites, dating from the 1stcentury BC to the 4th century AD. These sites were Cirencester, Kingshill North, Asthall, Latton Lands, Whitewalls, Claydon Pike, Cotswold Community, Thornhill Farm, Kingscote and Chedworth. Organic residues were extracted from each sherd, following the protocol outlined by Correa- Ascencio and Evershed (2014), and the resulting total lipid extract (TLE) was screened using gas chromatography (GC). Combined gas chromatography and mass spectrometry (GC/MS) was used to identify biomarkers and gas chromatography-combustion-isotope ratio mass spectrometry (GC/C/IRMS) was used to determine the δ13C values of the C16 and C18 saturated fatty acids from suitable TLEs. The resulting δ13C values were then compared with suitable reference values to assign an origin to these residues. The results of the GC/C/IRMS analysis showed that more non-ruminant products, almost certainly deriving from pig and/or chicken, were processed in vessels at Cirencester than any other site. Moreover, dairy products, which had been frequently processed in the Iron Age, decreased in prevalence on rural sites by a considerable amount and were seemingly only rarely processed on other site types. It was suggested that pigs and chickens were not infrequently raised within Cirencester itself and that meat products began to be favoured over dairy products on other sites from the 2nd century onwards. In both cases, this was interpreted as part of a strategy of extensification undertaken by inhabitants of the Cirencester hinterland who sought to maximise food production as a result of increased pressures from taxation and the increasing population.

Author: Anderson, Arthur William **PhD date** 2012 **70**

Title: Traditions and transitions: later and Roman Iron Age communities in the North-East of England

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.694849

Period of material Later Iron Age and Roman

Type of material: Pottery and artefacts (flint, stone, metal, glass, industrial debris, bone

Size of the assemblage used: 1,257 artefacts

English archive: Old Fulling Mill Museum, Durham; Dorman Museum; Tyne and Wear Museums

Other repository: Archaeological Services Durham University; Headland Archaeology; Pre-Construct Archaeology

Sites: 187 Late Iron Age and Roman sites in North-East England (see list in PhD Appendix 2)

Abstract: This thesis aims to reintegrate the communities of later Iron Age north-east of England (from c300 BC) into wider narratives of later Iron Age and Roman-era Europe. Despite the significant contributions of George Jobey, Colin Haselgrove and others, the north-eastern Iron Age has been widely considered underpopulated and materially and culturally impoverished since such a view was put forward by Mortimer Wheeler and Stuart Piggott in the 1950s. In light of this impression, the region has been seen as a 'blank slate' for the establishment of a Roman military zone which has then been interpreted without fully considering an indigenous, civilian population. Recent work on later Iron Age settlements and non-military Roman era settlements in the region has called these older views more directly into question by building on the work of Jobey and Haselgrove and demonstrating that a substantial Roman and pre-Roman civilian population must have been present across the region throughout the period in question. Thus, this study has sought to bring together the available artefactual, depositional and architectural evidence for later Iron Age communities as well as those Roman-era communities who maintained connections with indigenous traditions. Though there can be no clear separation of 'indigenous' and 'Roman' settlements from the mid first century onwards, this study has focused on those settlements which continue to make use of roundhouse architecture. Given the variable state of the evidence from the long tradition of investigation in the region, only well contextualized excavated evidence is considered in order to best shed light on the practice of daily life. Alongside considering the range of material culture in use, contextual analysis of this evidence demonstrates that the noted lack of recovered material culture, particularly ceramics, can be shown to be the result of deliberate choices in acquisition, use and deposition of material culture which reflect the priorities of this decentralized society rather than the result of an inability to produce or trade. Despite this however, it is clear that north-eastern communities do appear to engage in similar depositional activities to other British and European Iron Age societies, albeit on a smaller scale which reflects the smaller scale of the communities involved, and a deep connectedness to wider traditions can be shown. Considered alongside this sometimes difficult dataset is the history of Iron Age studies in the region and how this has shaped research strategies. This is an illustrative example of the mechanisms through which older, broad brush understandings can continue to dominate regional archaeologies despite newer, more nuanced evidence. As well as a case study in the relevance of the history of archaeology to contemporary study, the narrative thus constructed provides a basis for understanding the north-eastern Iron Age within the expanding web of regionalization and connections which was Iron Age Europe. Additionally it provides a narrative of indigenous communities' interactions with and reactions to the dramatic changes related to the expansion of the Roman empire the early first millennium AD. This is ultimately key in order to better interpret the increasing evidence for non-military Roman era communities in the region and beyond.

Author: Myers, S. D.

Title: The River Walbrook and Roman London

PhD date 2016 **71**

Institution: University of Reading https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.706492

Period of material Roman

Type of material: Artefacts

Size of the assemblage used: Unspecified

English archive: Museum of London

Other repository:

Sites: The Museum of London was visited to view particular artefacts found in the course of archaeological investigations within the Urban Roman Walbrook Valley (URWV). Of particular interest were the few finds of large commercial-size milling querns that were exhibited at the Museum and held in the archived collection at Mortimer Wheeler House

Abstract: This thesis is concerned with the hydrology of the River Walbrook and its influence on Roman London. The Walbrook had a small catchment (4.7 km2), most of which was rural in the Roman period, and flowed to the Thames through urban Roman London. The research is based upon data abstracted from reports, plans and sections of seventy archaeological investigations in the urban Roman Walbrook Valley, supplemented by archaeological literature, maps, boreholes and modern data. A methodology specifically developed for the research is described and hydrological descriptors of the Roman Walbrook and catchment are recreated, as they would have been 2,000 years ago, for a river that has not flowed for at least 400 years. A mean base flow rate of the river in the Roman period of 87 litres/sec is derived by means of a surrogate river analysis. An analysis of geoarchaeological data using GIS (Geographic Information System) is used to re-create the pre-Roman and late Roman land surfaces and to define the course and bed slopes of the river through urban Roman London and hence its flow-full capacity. A storm flow regime is derived and used to assess flood frequency for key areas within urban Roman London for a range of 36 channel conditions. In the flat northern urban area, flooding would have occurred more than once a year and somewhat less frequently in the other areas. The effectiveness of Roman land-raising activity and river management to reduce flooding is assessed and indicates limited success until completion of the town wall in 220 CE that acted as a flood control device. The counter-intuitive siting of industry in the northern suburbs, in spite of marshy conditions and frequent flooding, is examined. The beneficial use of the Walbrook, by industry, including milling, farming and for water supply and rituals, is also discussed in the context of its hydrology.

Author: Birley, Andrew Robin **PhD date** 2010 **72**

Title: The nature and significance of extramural settlement at Vindolanda and other selected sites on the Northern Frontier of Roman Britain

Institution: University of Leicester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.522469

Period of material Roman

Type of material: Artefacts (bone, metal, stone), coins, glass, loomweights, etc

Size of the assemblage used: 1,000+

English archive: Vindolanda museum

Other repository:

Sites: Extramural settlement on the northern frontier of Roman

Abstract: The study of the nature and function of extramural settlement on the northern frontier of Roman Britain is often regarded as being binary; soldiers inside their forts and civilians confined to the adjacent "vicus" (Birley, Salway and Sommer), which is conceptualised here through the broader term 'extramural settlement'. The research of Driel-Murray, Allason-Jones and Allison provided evidence for women inside Roman forts, making this interpretation of frontier occupation no longer tenable. The aim of this thesis is to examine and challenge the view that extramural settlements were largely 'civil' and to place the work of Driel-Murray et al. into context. The thesis studies the nature and significance of the extramural settlement at Vindolanda and selected sites through the deposition of three domains of material culture selected to indicate the presence, location and activities of soldiers (combatants), non-combatants as exemplified by adult women, and shared activities that were common bonds across the whole community. According to Cool and Baxter 'finds have the greatest ability to illuminate the past when they are regarded as an integral part of the archaeological record', an idea which underpins this thesis (Cool & Baxter 2002:365). This approach differs from previous investigations of extramural settlements. Scholars such as Eric Birley, Peter Salway and Sebastian Sommer have studied the role of extramural occupation through site morphology and the very fragmentary epigraphic record without close scrutiny of the associated material culture. Spatial analysis of artefacts in this thesis will be used to show that the walls of a fort were no 'great divide' and were no absolute demarcation line between combatants and non-combatants. The thesis demonstrates that the nature and significance of extramural occupation is that the overall dynamics of military sites like Vindolanda were more complex, integrated and subtle than is commonly thought.

Author: Machin, Sara Louise **PhD date** 2018 **73**

Title: Constructing Calleva: a multidisciplinary study of the production, distribution, and consumption of ceramic building materials at the Roman town of Silchester, Hampshire

Institution: University of Reading https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.772735

Period of material Roman

Type of material: Ceramic building material

Size of the assemblage used: 2,049 sherds

English archive: Unknonw (text not available; Silchester?)

Other repository:

Sites: Ceramic building material retained from excavations at the Roman town of Calleva Atrebatum, Silchester

Abstract: Ceramic building materials (CBM) typically represent the largest category of artefacts recorded at Romano British sites. As it is subject to selective retention policies, the potential of CBM to contribute to our knowledge and understanding of the construction industry and the development of both individual buildings and settlements more generally is often overlooked. This project investigated an urban CBM assemblage, incorporating all forms of CBM recovered. A detailed analysis of the fabric and forms of all the CBM retained from excavations at the Roman town of Calleva Atrebatum, Silchester, has been completed (n=2049). A fabric series of the material has been established and compared with the local geology and known production centres to ascertain raw material sources and potential supply networks. The results have shown a reliance on local raw materials, with London Clay Formation sources dominating the collection (49.68%). Changes in the incidence of fabrics over the life of the Roman town demonstrates that other, more distant sources of material were sought when local supplies were unable to meet demand, such as the production centres at Minety, Wiltshire and Eccles, Kent. Comparison of the fabrics used contemporaneously at the forum-basilica and Insula IX has highlighted the use of different production centres for different building projects. Although relief-patterned flue-tiles have been shown to be part of the regular repertoire of tile makers, not a product of specialist workshops, they nevertheless provide evidence of the complexities of their manufacture and distribution. Footprint evidence gives insight into the environment in the vicinity of the different tileries and the footprints of neonate and young cattle, sheep, and pigs show that small-scale animal husbandry was practised alongside brick and tile production.

Author: Peveler, Edward **PhD date** 2018 **74**

Title: The supply of building materials to construction projects in Roman Oxfordshire: logistics, economics, and social significance

Institution: University of Oxford https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.757912

Period of material Roman

Type of material: Ceramic building materials

Size of the assemblage used: 5,951 sherds

English archive: Oxfordshire Museum Services

Other repository:

Sites: The built environment of Roman Oxfordshire, and the Roman building material assemblage from Dorchester-on-Thames

Abstract: Whilst Roman architecture has long stood as a discrete branch of classical studies, investigated for its artistic merit and cultural importance, the technical details of Roman construction have only recently started to receive considerable attention. This thesis contributes to a growing trend in Roman scholarship, that of the investigation of the processes, materials, and technologies behind the Roman built environment. The most prestigious buildings of the Empire often remain the focus of many of these studies, and so this thesis turns to explore the use of more everyday buildings and building materials, seeking a Romano-British vernacular, and investigating the processes of construction, building material production, and transport. It is argued, through using theoretical calculations of building material quantities, that even for relatively minor constructions, considerations of building material supply must have represented highly significant economic and logistical investment. To comprehend fully the subject it is asserted that building materials should not be treated, as they often are, as disparate artefacts, divided by substance into stone, ceramic, mortar, metal, etc., but rather they should be considered as related fragments of a building. They require synthetic analysis, through which a far truer understanding of the incredible effort involved in construction in the ancient world can be gained. The built environment of Roman Oxfordshire, and the Roman building material assemblage from Dorchester on Thames, are used as case studies. Primary analysis of building materials is carried out using an integrated analytical approach, combining thin section petrography with scanning electron microscopy and energy dispersive x-ray analysis. The outcomes of these analyses are interpreted against a background of archaeological and historical evidence for construction and material supply, in both the Roman and later periods, in the region and beyond.

Author: Duffy, Kate I. **PhD date** 2015 **75**

Title: Application of metabolomics to the analysis of ancient organic residues

Institution: University of Birmingham https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.636847

Period of material Roman

Type of material: Ceramic samples

Size of the assemblage used: 70 samples

English archive: VIndolanda Trust

Other repository:

Sites: Vindolanda excavations

Abstract: The grape is arguably one of the oldest cultivated products in human history and the analysis of its main product, wine, reveals clues to trade and associations of previous civilizations. In ancient times, wine was stored in clay amphorae, which, if not properly sealed with resin or pitch allowed the wine to wick into clay matrices, dry, and polymerize producing insoluble, intractable materials that may remain within the matrix for several thousand years. Presently, identification of wine residue is based upon the extraction of these polymeric materials from the ceramic matrix and analyzing/identifying the chemical fingerprints. Two main biomarkers have historically been employed for the identification of wine residue: tartaric and syringic acids. In some cases, the presence of one of these biomarkers has been designated as the confirmatory signature of wine often leading to false positives as amphorae were re-used in antiquity. Herein, a novel approach utilizing metabolomics has been applied to archaeological objects in order to further mine possible biomarkers for a more accurate assessment of the original foodstuff. An untargeted metabolic profiling method was combined with a targeted analytical method resulting in the successful validation of eight representative biomarkers in two separate archaeological sites.

Author: Gardner, Carlotta **PhD date** 2018 **76**

Title: Metalworking crucibles in Roman Britain

Institution: University College London https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.756332

Period of material Roman

Type of material: Ceramics

Size of the assemblage used: 500 vessels

English archive: Museum of London Archaeology (MOLA), Vindolanda Trust, Grosvenor Museum,Hill Farm Gestingthorpe, Arbeia Roman Fort and Museum, The Oxfordshire Museum, Museum of Archaeology and Anthropology, The National Trust (Housesteads), Historic England (Corbridge, Chesters, and Stanwick)

Other repository: Cotswold Archaeology, Wessex Archaeology, London Archaeological Archives and Research Centre (LAARC)

Sites: Over 500 Roman crucibles from 70 sites across Britain (see PhD Table 4.1) were assessed for this thesis. The two main case studies, London and Hadrian's Wall were chosen specifically to answer the research questions

Abstract: This thesis presents the results of a systematic study of Roman period crucibles in Britain. Detailed fabric and technical analysis were carried out on crucibles, from two major case study areas, London and Hadrian's Wall. The ceramic fabrics of the crucibles were characterised through macroscopic, microscopic, and chemical analysis. The results have revealed two distinct technological traditions that appear to correlate with site type. The first tradition identified is wheel-thrown vessels made of white firing, refractory ceramic. These crucibles often have a second layer of clay applied to the exterior surface (EOLs). These crucible types appear to predominate at large urban centres, such as London—the provincial capital of Britain. The evidence collected indicates a high degree of standardisation in the fabric and form, both across sites and over considerable time periods. In contrast, the second tradition identified, predominates at military and periphery settlements. The crucibles found in these settings are handmade and show large variation in form and, to a lesser degree, fabric. These results have been used to explore how the structure of industry varied within different socio-economic environments and identify cross-craft interactions between the metals and ceramics industry. The degree of interdependency between the two is also considered. The practice of applying a second layer of clay to crucibles has been identified as a widespread Roman practice and the impact of these layers have been investigated through a series of material tests. The results have shown that the EOL afforded the crucible protection against catastrophic failure during use at high-temperatures. These results have been used to suggest that metalworkers had an empirical understanding of their materials and tools.

Author: le Quelenec, V **PhD date** 2021 **77**

Title: Coins as Artefacts: How can the role of object biographies enhance our understanding of Roman coins in Lancashire?

Institution: University of Central Lancashire via email

Period of material Roman

Type of material: Coins

Size of the assemblage used: 1,400 seen in person (out of 1,800)

English archive: Harris Museum, Museum of Lancashire and Lancaster City Museum, Museum of London Archaeology

Other repository:

Sites: Coins from Lancashire, and Plantation Place, London, using a variety of museum archives in Lancashire and also the Museum of London Archaeology, Romano British coinage, unpublished reports and conservation records

Abstract: (Not available)

Author: Chuang, Richard **PhD date** 2016 **78**

Title: The acquisition of domestic equids in Roman Britain: the identification of domestic equids and case study with isotopic analyses

Institution: University of Southampton https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.698393

Period of material Roman

Type of material: Faunal remains

Size of the assemblage used: 89 bones? (see Appendix III)

English archive: Corinium Museum, Cirencester; Winchester Museum Service; Ribchester Museum

Other repository: University of Liverpool; University of Southampton; Palaeoecology Research Services

Sites: 5 Romano-British sites with relatively abundant equid remains were targeted: Healam Bridge, North Yorkshire; the Northern Suburb (Victoria Road, Hyde Abbey, New Road) and the Western Suburb (Crowder Terrace), Winchester, Hants; Thornhill Farm, Fairford, Gloucestershire; Bremetenacum, the Roman fort of Ribchester; Bleachfield Street, Alcester

Abstract: Domestic equids, namely, horses (Equus caballus), donkeys (Equus asinus), and their hybrid offspring, mules (Equus caballus x Equus asinus), played an essential role in the Roman world. As pack animals, they served in both public and private sectors in the Roman daily life. According to written sources, mules in particular were used predominantly as pack animals by the military and enabled the transport of troops, the transport of supplies, and large weaponry to every corner of the empire. The production of mules requires the presence of both male donkey and female horse, and thus mule breeding in northern Europe would necessitate the importation of donkeys to regions outside of their natural distribution and/or the import of mules from elsewhere. The importation and export of domestic equids has indeed been described in historical sources but not recognised in the zooarchaeological record. As a result, the significant predominance of horses over donkeys and mules in Roman Britain is not currently well understood. This is mainly due to the issue of species identification. The thesis aims to refine the existing methods and develop new techniques to more accurately distinguish between different domestic equid species in an attempt to obtain, not only the representative frequency of different domestic equid species in selected Romano-British sites, but also to observe different isotopic values (oxygen, carbon, and strontium) of selected specimens in order to discuss their localness. The results suggest that, while both donkeys and mules do exist in Roman Britain, the scarce presence of donkeys and the foreign isotopic signature of possible mules imply that these two species were not systematically introduced into Roman Britain. This study shows the potential of the use of species frequency and isotopic analyses for examining the procurement strategies of domestic equids in Roman Britain.

Author: Poland, James Gerard **PhD date** 2018 **79**

Title: A methodological approach to the identification of duck and goose remains from archaeological sites with an application to Roman Britain

Institution: University of Sheffield https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.758348

Period of material Roman

Type of material: Faunal remains

Size of the assemblage used: 530 bones

English archive: MOLA, LAARC, Fishbourne Palace Museum, York Archaeological Trust, Norfolk Museums Service, Jewry Wall Museum (Leicester)

Other repository:

Sites: 10 Gresham Street, London; Caister-on-Sea, Norfolk; Causeway Lane, Leicester; Docklands Light Railway (Monument Street), London; Fishbourne Palace, Sussex; Melton, Yorkshire; Owslebury, Hampshire; Plantation House, Chesterfield House (Plantation Place), London; Tanner Row, York; Ware, Hertfordshire

Abstract: The use of ducks and geese in Roman Britain is poorly understood and rarely discussed despite the frequent recovery of their osteological remains from archaeological sites. This is because it can be difficult to distinguish between the different genera, let alone different species, using a comparative reference collection. The main aim of this project was to develop a reliable method of taxonomic identification using morphometry in order to analyse archaeological assemblages and develop our understanding of the use of ducks and geese in the past. Linear measurements were taken from modern reference material to create a database of the different European anatids. Taxon distinguishing criteria was then identified using statistical analysis and the simplest reliable identification criteria are presented here for nine bones of the avian skeleton. The reliable taxon distinguishing criteria were applied to various archaeological assemblages from a range of Roman sites in Britain to discuss which taxa were used and in what way. Key questions that are discussed include the use of wild birds compared to domestic ones, the use of ducks compared to geese and whether there is variation in the use of anatids between types of sites. Further applications of this research will be that the identification method could readily be used by other researchers interested in the role of ducks and geese in the past, and that we will have a much better context for discussing the changes in the way ducks and geese were used during the Saxon and medieval periods in Britain.

Author: Clegg, Cameron Burgess **PhD date** 2017 **80**

Title: The bones at Binchester: an exploration of military and civilian identity through a zooarchaeological study of cattle remains from a Late Roman fort and vicus

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.716283

Period of material Roman

Type of material: Faunal remains

Size of the assemblage used: 169,291 bones

English archive: Archaeological Services Durham University

Other repository: Durham University

Sites: Binchester Roman fort excavations

Abstract: The interrelationship between forts and their attached vici during the Late Roman Period is still not fully understood, particularly in the North of Britannia. Furthermore, the Late/sub-Roman transitional period remains a nebulous topic of archaeological investigation, obfuscated not only by a dearth of dateable artefacts, but also by a paucity of large-scale research focusing on this time period. The site of Binchester, located in Bishop Auckland, is ideal for providing unique insight into both of these areas. Binchester shows evidence of continuous occupation through the Late Roman Period and into the 6th century, providing insight into the Late/sub-Roman transitional period. Furthermore, the current project features the simultaneous excavation within both fort and vicus, yielding large amounts of cultural material from each location. Among the finds recovered from both areas are robust assemblages of animal bones of Late Roman date, with the likely presence of sub-Roman inclusions. These faunal remains, particularly the cattle bone, representing a majority in both assemblages, provide a unique window into the practices, exchange and interrelatedness of the fort and vicus inhabitants, giving insight into the convergence or divergence of identity between these two areas. Morphological analysis of the species representation and utilisation of cattle resources at the fort and vicus suggests a surprising degree of similarity in practice between the fort and vicus, suggesting a high degree of social cohesion and a shared, if not identical, identity in both areas. Metric analysis of recovered cattle elements, conversely, indicates a distinction in identity between fort and vicus, providing evidence of the preferential provisioning of larger, likely castrated, cattle within the fort. Comparison between sites across a range of site functions, locations and chronological dates revealed a widespread trend of larger cattle within military sites, with civilian or urban sites seeing fewer likely castrates. This cross-site comparison also shows a great deal of morphological and metric similarity between Late and sub-Roman cattle populations, indicating a continuity of practice and maintenance of local control.

Author: Jabur, Alaa Wazir **PhD date** 2014 **81**

Title: Investigations of the physical and chemical structure of archaeological fibres

Institution: University of Manchester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.618016

Period of material Roman

Type of material: Fibre samples (goat hair, wool)

Size of the assemblage used: 2 samples

English archive: Vindolanda Museum

Other repository:

Sites:

Abstract: Investigations of the physical and chemical structure of archaeological fibres. Archaeological fibres can be defined as natural fibres that belong to different time periods, which found in cemeteries or excavation sites. The preservation conditions cause degradation, mineralisation and sometimes a complete deterioration of these fibres, because the chemical and physical structure of the fibres changed over time in response to the specific burial environments. The ancient fibres from different archaeological sites were analysed by several non-destructive analytical techniques such as optical Microscopy, Environmental Scanning Electron Microscopy, Attenuated Total Reflectance FTIR and Wide Angle X-Ray Scattering Analysis as well as destructive analytical techniques such as Scanning Electron Microscopy, Transmission Fourier Transform Infrared Spectroscopy, Energy Dispersive X-Ray Spectroscopy and Differential Scanning Calorimetry. These analytical techniques showed that keratin fibres from a central European climate have a larger damage at the fibre surface compared with frozen conditions. While bog conditions were the best in preserving the surface. FTIR analysis provides information about cystine oxidation changes in keratin fibres. For all ancient keratin fibres showed a silica peak at 1030 cm-1 which affected the symmetric cysteic acid peak at 1040 cm-1. For this reason the asymmetrical cysteic acid peak 1175 cm-1 was used for identification of cystine oxidation changes. Transmission FTIR gives a better view of the overall chemical changes in both cortex and cuticle compared to ATR analysis. All ancient wools and highly medullated Iceman deer hairs showed the highest concentration of cysteic acid compared with human hair and goat hair. Also it was shown that warm conditions have bigger effect on both the degree of oxidation of cystine and the ions uptake from the environment. The modulated DSC analysis gives a better view on the degree of degradation of hair proteins compared to WAXS analysis. To get a reliable result it is important to correct the DSC data according to the protein content of the fibre.

Author: Marshman, Ian James **PhD date** 2016 **82**

Title: Making your mark in Britannia: an investigation into the use of signet rings and intaglios in Roman Britain

Institution: University of Leicester https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.686572

Period of material Roman

Type of material: Gems

Size of the assemblage used: 2,012 artefacts

English archive: British Museum; Museum of London; Colchester Castle Museum; Reading Museum; University of Reading ?museum; English Heritage; Vindolanda Trust; Tyne & Wear Museums; Tullie House Museum; Yorkshire Museum; York Archaeological Trust; Malton Museum; Collection in Lincoln; Jewry Wall Museum in Leicester; Rutland County Museum; Norwich Castle Museum; Suffolk County Council Archaeological Service; Grosvenor Museum in Chester; Corinium Museum; Roman Baths Museum in Bath; the Novium; the Society of Antiquaries of London; Fishbourne Roman Palace

Other repository: All museums were contacted (see PhD fig 3.1 and Appendix 2) via email and asked if their collections contained any Roman signet rings, finger rings or intaglios

Sites: This research builds on Henig's original Corpus of Roman Engraved Gemstones from British Sites (1974; 1978) by going back to excavation reports and by studying the objects first hand. To bring this project's catalogue up to date has also required a fresh search of museum collections, excavation reports and databases produced since the publication of Henig's Corpus

Abstract: This project presents and analyses all of the signet rings and intaglios so far unearthed in Roman Britain to reinterpret how they were used and their role within provincial society. These small artefacts have traditionally been regarded as attractive but relatively insignificant minor objets d'art, with little relevance to the wider discourses of Romanists. This thesis attempts a more critical examination of how they were used and their role within provincial Roman society. I argue that signet rings were an essential element in provincial society that should no longer be overlooked. This project builds on the pioneering Corpus assembled by Martin Henig in the 1970s, including more recent discoveries and more than doubling the material available to him. This combined body of evidence includes 2,012 signet rings and intaglios, making it one of the largest contextualised assemblages of these objects ever studied. It also benefits from the results of developer funded archaeology and the advent of recording by the Portable Antiquities Scheme, enabling us to create a richer and more detailed picture how they were used. My approach has been to resituate these objects in terms of the archaeological context in which they were found, but also to consider them as functional as well as decorative objects. When studied in this way signet rings provide a unique perspective on the identity of their wearers, and how they wanted to present themselves to others. I have found growing evidence for the use of signet rings amongst local elites before the Roman invasion of Britain, and it is clear that they had a role to play in negotiating identity after the conquest. I have also been able to identify trends in the way that different communities used signet rings, both as regards their imagery and materiality. It is also apparent that in some parts of Britain these objects remained a feature of a type of dress and the hallmark of a society that remained alien to their inhabitants throughout the Roman period. However, for those who chose to wear them, signet rings could be more than just objects but reflections of themselves.

Author: Cottam, Sally Elizabeth **PhD date** 2019 **83**

Title: Developments in Roman glass vessels in Italy, France, Britain and the Lower Rhineland, c.A.D.40 - A.D.110

Institution: King's College, London https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.789214

Period of material Roman

Type of material: Glass

Size of the assemblage used: 568 vessels

English archive: Museum of London and the London Archaeological Archive and Research Centre; Peterborough Museum;

Other repository: Romano-British Glass Project, Durham University;

Sites: Unpublished Roman glass assemblages examined first hand

Abstract: This thesis focuses on Roman glass vessels from the mid-1st century A.D to the late 1st and very early 2nd century A.D., specifically c.A.D.40-110. These years have long been identified as representing a significant episode in the story of ancient glass and witness a particularly remarkable period of change in glass vessel production across the Roman world. The purpose of this thesis is to further our understanding of what these changes are, when they occurred and the causes behind them. The first chapter presents the background to the research and demonstrates how the thesis relates to previous work in this field. The following three chapters focus on identifying those aspects of glass vessels that changed during this period and establishing a firmer chronological framework for these developments than has previously been possible. This is achieved by the analysis of carefully selected, closely dated glass assemblages from Britain, France, the lower Rhineland and Italy. The rationale behind the choice of sites is explained and factors influencing dating and quantification are discussed. Glass vessels from the selected sites are examined in detail in Chapter 4 and information relating to changes in form, colour and decoration are analysed and discussed in chapters 5 and 6. The implications of these findings are then assessed in the context of the development of the early imperial glass industry, particularly in relation to raw glass manufacture, scales of production, relationships between glassworkers and their materials, and the impact of glass working techniques on vessel form and finishing. The final chapter discusses wider factors in the Roman world that might have played an influential role in the manufacture and consumption of glass during this period, such as patterns of production and trade, political and military events and trends in other categories of decorative media and proposes new approaches to understanding glass development during this period.

Author: Powell, Lindsay Anne **PhD date** 2014 **84**

Title: Childhood health and diet in Roman London: the palaeodemographic, palaeopathological and isotopic evidence

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.650197

Period of material Roman

Type of material: Human bone

Size of the assemblage used: 967 individuals

English archive: Museum of London

Other repository: Sample collection provided by Pre-Construct Archaeology; and site archives from London Archaeological Archive and Research Centre; see PhD Table 5.1 for details

Sites: 39 sites excavated between 1980 and 2007 of Roman London as recorded in the WORD database or Pre-Construct Archaeology

Abstract: Roman London has been extensively excavated, particularly over the last two decades, and substantial cemetery sites have been uncovered within and around the City. This study represents the first to undertake an integrated analysis of the palaeodemographic, palaeopathological, isotopic and funerary evidence from Roman London. This thesis seeks to identify social age transitions and the impact of these on the growing body. The specific aim of the research was to examine the perceptions of childhood and childcare in Roman London, utilising skeletal and funerary indicators of diet, health and social status. A total sample of 967 individuals formed the sample for analysis. The osteological data was obtained via the WORD database and the funerary data from archives and available publications. A further 120 number of individuals were sampled for carbon and nitrogen isotope analysis of diet. The results yielded a number of interesting patterns regarding age, sex and social status, and the impact of these identities on diet and well-being. Overall, subadults at Roman London were found to have experienced higher rates of health stress than their adult counterparts, with subadults exhibiting higher prevalence rates for four of the six stress indicators examined. Causative stressors identified within the population included poor living conditions and population mobility. Within the subadult age group, differences in the level of health stress were experienced during the life course, with weaning and the introduction of occupationally related activities being pivotal points of increased health stress. An infant feeding pattern specific to Roman Britain and distinctive from Roman Italy was identified and further evidence for a special breastfeeding diet for women implicated. Distinctions in diets between males and females were identified, with females yielding greater variation, potentially linked to social stratification. Shifting dietary isotope signatures and indicators of health stress throughout the growth period were linked to social age transitions. Temporal trends within Roman London were also identified, with health in the early Roman period being worse than the preceding Iron Age period, but declining further during the later period of Roman occupation. In times of economic uncertainty the exploitation of local freshwater fish also occurred, but these supplemented the diet of children alone. No statistically significant difference between diet, health and social status were observed, which suggests that status was not simply a linear, ranked, hierarchy, but cross-cut by other aspects of the social personae such as gender and age. This integrated approach is the first of its kind to be undertaken in order to examine the Roman perceptions of childhood. It makes a number of important contributions regarding the experience of infancy and childhood in Roman Britain and the Roman life course more generally.

Author: Bonsall, Laura **PhD date** 2013 **85**

Title: Variations in the health status of urban populations in Roman Britain: a comparison of skeletal samples from major and minor towns

Institution: University of Edinburgh https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.586526

Period of material Roman

Type of material: Human bone

Size of the assemblage used: 601 skeletons

English archive: Winchester Museums Service; English Heritage

Other repository:

Sites: Skeletal populations derived from a public town (Winchester ,Hants) and a small town (Ancaster, Lincs)

Abstract: Romano-British towns are conventionally divided into those that possessed administrative powers (the major or 'public' towns) and those that did not (the minor or 'small towns'). Public towns and small towns differed in terms of size and socioeconomic status, with the latter sometimes characterised as semi-rural rather than truly urban. Hitherto, research into the differing nature of the communities at public and small towns has focused primarily on variations in settlement morphology, architecture and material culture. This study provides a new perspective on the issue by examining osteological indicators of lifestyle and health in skeletal samples from these two categories of site. Roman populations from the small town of Ancaster, Lincs (N=271) and the public town of Winchester, Hants (N=330) dating to c. AD 200-410 were analysed using standard osteological methods. Data on age-at-death, growth and stature, and skeletal and dental pathology were recorded and compared using a range of statistical tests to identify potential differences. Additionally, published data for contemporaneous populations were collated for comparison. A biocultural approach was used to contextualise the data with reference to archaeological and historical evidence. Some differences in demography were observed, but were probably the result of sample biases. No marked differences in growth or stature were observed. Pathology prevalence rates were comparable for many conditions. However, higher rates of joint disease at Ancaster, and differences in the pattern of long bone trauma may point to the Ancaster population having experienced a more agrarian lifestyle, engaging in more frequent and/or extended periods of heavy labour. In contrast, there was more evidence for violent trauma at Winchester, and the frequencies of three non-specific indicators of ill health (cribra orbitalia, porotic hyperostosis and dental enamel hypoplasia) and scurvy were higher. This suggests that people at Winchester experienced greater levels of social, dietary and environmental stress, perhaps reflecting a larger, more heterogeneous population. Dental health status was generally poorer at Ancaster, which may be due to differences in diet, oral hygiene and/or other non-dietary factors. Published data for other populations broadly support the study conclusions, although comparisons were limited by incompatibilities in methodology and data presentation. Overall, the findings corroborate existing perspectives on the socio-economic characters of public and small towns, but differences were not pronounced. The significance of the findings is discussed in relation to the nature of settlement and society in Roman Britain.

Author: Rohnbogner, A. **PhD date** 2015 **86**

Title: Dying young: a palaeopathological analysis of child health in Roman Britain

Institution: University of Reading https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.680456

Period of material Roman

Type of material: Human bone

Size of the assemblage used: 953

English archive: Natural History Museum London (NHM); North Hertfordshire District Council Museums Service; English Heritage/Historic England; Oxfordshire Museums Service; Somerset Heritage Centre; Hampshire Arts and Museums Service; Peterborough Museum; Winchester Museum Service; Rutland County Museum; Corinium Museum, Cirencester; Colchester and Ipswich Museums; Luton Culture

Other repository: Biological Anthropology Research Centre at the University of Bradford (BARC)

Sites: Major urban sites (Poundbury Camp, Dorchester; Butt Road, Colchester; Gloucester; Bath Gate, Cirencester; Trentholme Drive, York; Winchester; London; Clarence St, Leicester. Minor urban (Ancaster, Lincs; Ashton, Northants; Baldock; Queenford Farm and Queensford Mill, Dorchester-on-Thames, Oxon; Great Casterton, Rutland; Dunstable, Beds; Springhead, Kent; Chesterton, Cambs). Rural (Cannington, Som.; Watersmeet, Cambs; Frocester, Glos; Bradley Hill, Som.; Owslebury; Babraham Institute, Cambs; Dorchester, Dorset; Catsgore, Som.; Bantycock Gypsum Mine, Nots; Huntsman's Quarry, Glos; Dewlish, Dorset

Abstract: Children represent the most vulnerable members of society, and as such provide valuable insight into past lifeways. Adverse environmental conditions translate more readily into the osteological record of children, making them primary evidence for the investigation of ill-health in the past. To date, most information on growing up in Roman Britain has been based on the Classical literature, or discussed in palaeopathological studies with a regional focus, e.g. Dorset or Durnovaria. Thus, the lifestyles and everyday realities of children throughout Britannia remained largely unknown. This study sets out to fill this gap by providing the first large scale analysis of Romano-British children from town and country. The palaeopathological analysis of 1643 non-adult (0-17 years) skeletons, compiled from the literature (N=690) and primary osteological analysis (N=953), from 27 urban and rural settlements has highlighted diverse patterns in non-adult mortality and morbidity. The distribution of ages-at- death suggest that older children and adolescents migrated from country to town, possibly for commencing their working lives. True prevalence rates suggest that caries (1.8%) and enamel hypoplasia (11.4%) were more common in children from major urban towns, whereas children in the countryside displayed higher frequencies of scurvy (6.9%), cribra orbitalia (27.7%), porotic hyperostosis (6.2%) and endocranial lesions (10.9%). Social inequality in late Roman Britain may have been the driving force behind these urban-rural dichotomies. The results may point to exploitation of the peasantry on the one hand, and higher status of the urban population as a more 'Romanised' group on the other. Comparison with Iron Age and post-medieval non-adults also demonstrated a decline in health in the Roman period, with some levels of ill-health, particularly in the rural children, similar to those from post-medieval London. This research provides the most comprehensive study of non-adult morbidity and mortality in Roman Britain to date. It has provided new insights into Romano-British lifeways and presents suggestions for further work.

Author: Quinn, Kendra **PhD date** 2017 **87**

Title: A bioarchaeological study of the impact of mobility on the transmission of tuberculosis in Roman Britain

Institution: Durham University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.725790

Period of material Roman

Type of material: Human bone

Size of the assemblage used: 21 samples

English archive: Unspecified

Other repository:

Sites: Sites: Cirencester; Poundbury, Dorset; Driffield Terrace, York, Yorks; Easington/Ganstead, East Yorks; Gambier Parry, Lodge, Glos; Chester Rd, Winchester; Victoria Rd, Winchester. The skeletons selected for this study were some of those previously used in the Natural Environmental Research Council funded aDNA study of tuberculosis between Durham and Manchester Universities (NE/E018564/1, 2007–2011). The individuals derive from a variety of Romano-British cemetery sites in England

Abstract: Tuberculosis (TB) is an infectious disease mainly transmitted to humans by the inhalation of infected droplets (produced when an infected person coughs or sneezes). It is caused by bacteria within the Mycobacterium tuberculosis complex, several species of which can cause infection in humans. In the early 1990s, the World Health Organisation (WHO) declared TB a global emergency and this continues to be the case today. We seem to be further from eradicating this killer disease than we have been at any point in our past, and the increase in global travel, including migration, is thought to be exacerbating its spread. Building on previous projects that extracted and analysed ancient DNA of M. tuberculosis complex organisms from skeletons with bone changes consistent with TB from the Roman period in Britain, this research tests the hypothesis that people buried in Roman Britain who were infected with TB had been mobile at some point in their lives, by the application of stable isotopic analysis (C, N, Sr, O) to the same skeletons to establish if their childhoods were local or non-local to their burial locations. This study uses bone and dental samples from skeletons from the ancient DNA projects who were buried on chalk geology and with bone changes suggesting possible TB and/or a positive TB ancient DNA result. The sites investigated were Driffield Terrace in York, Baldock, Easington, Winchester, Cirencester and Poundbury. Collagen was successfully extracted from bone for 19 out of 21 individuals. Carbon and nitrogen isotope analysis revealed that all but three of these people ate a diet based on C3 terrestrial ecosystems with limited aquatic food intake, and they were similar to other people buried in the same or other contemporary cemeteries. Enamel from the teeth of all 21 individuals was also subject to strontium and oxygen isotope analysis, which identified six people as not having been brought up in the local area where they were buried. The remaining 15 people were possibly raised locally, although other places of origin have been considered. It was concluded that linking mobility, as identified using stable isotope analysis, with transmission of infectious disease evidence in the skeleton is very challenging, particularly because there is no way of knowing how long people had been infected with the disease before or after they were mobile. Finally, some suggestions of how to take this important work forward were made. This includes repeating the work on an available larger sample size of possible TB sufferers without constraints of only testing those individuals buried on chalk geology.

Author: Barlow, Vicki **PhD date** 2015 **88**

Title: The development of enhanced experimental strategies for the DNA analysis of low-template or compromised forensic sample types

Institution: Northumbria University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.713841

Period of material Roman

Type of material: Human bone for DNA

Size of the assemblage used: 2

English archive: Vindolanda Trust

Other repository:

Sites: Two samples have been obtained from the Vindolanda Trust for DNA analysis

Abstract: Single-cell DNA analysis is not routinely carried out in a forensic setting as it is considered unreliable due to challenges associated with DNA amplification, contamination and profile interpretation. In light of the development of increasingly sensitive techniques, the question of the reliability of single-cell DNA analysis in terms of both processing and interpretation is addressed in the first part of this thesis. Optimising all stages of the DNA analysis process has provided a sensitive method which facilitates the successful outcome of a useable profile from single-cells. Although no consensus profile can be generated for this sample type, interpretation guidelines have been set to enable the robust analysis of single cells. It has been concluded that single-cells can be reliably amplified and profiled for forensic purposes. Both DNA and textile fibres have a proven track record in forensic casework yet their analysis is rarely combined. As an application of the aforementioned single-cell DNA analysis, this project explores the possibility that when fibres are transferred from one surface to another, they could also be acting as a vector for the wearer's own DNA, through cells that have adhered to the fibre surfaces. Fluorescent staining and microscopy is used to detect the cells in situ on the fibre surface, which are then recovered and processed for DNA using the previously optimised single-cell analysis methods, along with a newly developed DNA assay designed for the amplification of low DNA template samples. The results of this study have demonstrated that cells can be visualised in situ on the fibre surface and that there is potential for cell transfer to occur. It has been concluded however, that from a casework point of view, targeting transferred fibres for cells may not be the best approach as it is time consuming and has not been shown to be effective in this study. The final part of this thesis is focused on the efficacy of massively parallel sequencing (MPS) technology for samples that are expected to be severely degraded due to age or exposure to a hostile environment. The ability of both the recently launched Illumina ForenSeq™ DNA Signature Prep Kit for nuclear DNA markers and an in-house method for the sequencing of degraded mitochondrial DNA, have been tested to determine if MPS offers a more comprehensive evaluation of degraded material than the traditional PCR-CE methods. The results of the ForenSeq kit have demonstrated the effectiveness of its low molecular weight STR and SNP markers for amplifying low template, degraded DNA samples, with alleles amplified using less than 20 pg total DNA input. This kit has also therefore shown application in the field of bioarchaeology, as it can provide the biological sex of the sample, biogeographic ancestry information and also aids detection of sample/control contamination. The in-house mitochondrial DNA assay resulted in the successful amplification and sequencing of samples for which no nuclear DNA was amplified. The high depth of read coverage in these samples, average of 18,000, allowed for the identification of even low level variants.

Author: Andrews, Colin John **PhD date** 2010 **89**

Title: Roman seal-boxes in Britain

Institution: Open University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.536080

Period of material Roman

Type of material: Metal

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: (Not available)

Author: Lundock, Jason Richard **PhD date** 2014 **90**

Title: A study of the deposition and distribution of copper alloy vessels in Roman Britain

Institution: King's College London (University of Lo
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.677024

Period of material Roman

Type of material: Metal (copper-alloy) artefacts

Size of the assemblage used: Unspecified

English archive: British Museum; Museum of London; Vindolanda Trust;

Other repository:

Sites: Hoards (Eggers 1968; Kennett 1971); published reports; PAS; grey literature

Abstract: The following thesis surveys the deposition and distribution of copper alloy vessels in Britain during the Roman period and then applies this data to the study of culture change and the construction of identity in the province during this time. The principal research strategy was to categorize the objects from published sources within four groups based on Depositional Context and to then examine these data-sets for patterns in geographic and temporal distribution, object form and decoration as well as patterns among the findspots where these objects were discovered. The copper alloy vessels themselves are classified using forms and typologies familiar from previous scholarship, though a new system for classifying handled pans was found necessary and is introduced in this thesis. Multiple patterns emerged within Depositional Contexts, Site Types and regional distribution relating to vessel selection and decoration which indicate a variety of practice by diverse peoples. This analysis argues that the principal function of copper alloy vessels in Roman Britain was for ablutions, whereas it has been previously proposed that most vessels were used for dining or drinking services. Additionally, the spread of copper alloy vessels was found to be so wide across the province that it was determined that this commodity was utilized and adapted by much of the population of Britain. The conclusions were then applied to the principal paradigms currently ascendant in characterizing culture change in the province. It was found that the predominant theories, which largely rely upon a dualistic view of cultural aggression and resistance, are insufficient to characterize the complex interaction between cultures in Britain and the development of an integrated and fluid material culture as expressed through the repertoire, deposition and distribution of copper alloy vessels evident during the Roman period in Britain.

Author: Humphreys, Owen James **PhD date** 2018 **91**

Title: Craft, industry and agriculture in a Roman city: the iron tools from London

Institution: University of Reading
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.758135

Period of material Roman

Type of material: Metal (iron) artefacts

Size of the assemblage used: 837 objects

English archive: Museum of London; The British Museum; The Pitt Rivers Museum, Oxford; Salisbury Museum;

Other repository:

Sites: Tools from Roman London

Abstract: London was the administrative centre for and largest city in Roman Britain. After centuries of excavation, Londinium is one of the best understood cities in the Empire. London is also home to one of the most exceptional collections of craft and agricultural tools in the Roman world. These objects represent a wide range of practices, including woodwork, metalwork, leatherwork, masonry, agriculture, and animal husbandry. Due to excellent preservation in waterlogged contexts, many are in exceptional condition. This thesis brings together c.837 metal (mostly iron) tools from multiple collections, many of which have not been published before. Using a combination of detailed typological study and theoretical perspectives on technology and practice, this thesis provides an innovative insight into society and economy amongst the working people of a Roman city; a diverse population of locals, immigrants, specialists and amateurs. A typological discussion identifies these usually neglected objects with reference to French and German literature, highlighting new types for the first time in Britain, and demonstrating a close connection to Continental working practices. These artefacts are then used as the basis for a discussion of craft and agricultural practice in London, focussing on how tools were made, used and discarded. Tools are synthesised with evidence from finished objects, waste, tool marks, structures, epigraphy, iconography and classical sources. This discussion reveals that craft practices were highly specialised, with numerous distinct professions which cannot be accurately condensed to ‘woodworking’ or ‘leatherworking’. Tools were used in working practices which shaped peoples’ lives; either limiting their opportunities of social mobility or providing avenues to express pride in their work. Several industries were controlled in part by the state, or by Roman citizens. Finally, a detailed contextual analysis reveals high levels of metalwork consumption, with deposition in the Walbrook valley largely reflecting rubbish disposal, and not ritual activity.

Author: Durham, Emma **PhD date** 2010 **92**

Title: Metal figurines in Roman Britain

Institution: University of Reading
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.533780

Period of material Roman

Type of material: Metal figurines

Size of the assemblage used: 1,000+

English archive: British Museum, Ashmolean Museum, Roman Baths Museum-Bath, Bristol City Museum, University of Cambridge Museum of Archaeology and Anthropology, Tullie House Museum-Carlisle, Colchester Castle Museum, Corinium Museum-Cirencester, English Heritage Hadrian's Wall Museums, Gloucester City Museum and Art Gallery, Guildford Museum, Hampshire County Museum Service, Isle of Wight Heritage Service, Ipswich Museum, Jewry Wall Museum, Leicester, Museum of London, Great North Museum-Newcastle, Norwich Castle Museum, Reading Museum, Shrewsbury Museum and Art Gallery, Somerset Heritage Service, Verulamium Museum-S Albans, West Stow Anglo- Saxon Village and Country Park, Wiltshire Heritage Museum, Winchester City Museum, Yorkshire Museum

Other repository: Museum of London Specialist Services, Suffolk County Council Archaeological Service

Sites:

Abstract: This thesis is a study of metal figurines in Roman Britain. These small figures mainly depict deities and animals or birds, and occasionally priests or other human subjects. They are an important example of the changed religious practice of Romanised Britons, and provide fascinating insights into the spread of technology and forms of worship. Material was collected from publications, the Portable Antiquities Scheme database and museum collections, resulting in a corpus of over 1000 figurines. Analysis focuses on four principal areas: the spatial and social distribution of figurines, figurines as an expression of Romano- British art, their role in Romano- British religion and the evidence for the regional use of figurines. My research shows that there are differences in the use and production of figurines throughout Britain. For example, Eastern deities, particularly those of the Cybele and Isis cults, are predominantly associated with urban and military populations, and there is a concentration of such objects in London and Colchester. Traditionally, high quality figurines are thought to have been imported, poorly executed pieces locally produced, and moderate pieces are identified as possibly British or Gaulish. However, my research shows that figurines such as some of the horse and riders from eastern Britain are well-executed British products which exhibit a high level of technical competence. The presence of figurines at temples and in domestic contexts shows that figurines played an important role in the religious practices of Romano-Britons. The identification of figurines dedicated to Romano-Celtic deities shows that figurines were used in the worship of local deities. I also identified the production of figurines with a particularly Romano-British style in the southwest which show not only the development of a local style utilising elements of both native Iron Age and imported Roman art, but also the adoption of classical style to depict native deities.

Author: Smith, Lindsey **PhD date** 2011 **93**

Title: Pewter tableware: its function, significance and contribution to our understanding of life in Roman Britain through a case-study of material held in the British Museum

Institution: University of Reading
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.558791

Period of material Roman

Type of material: Pewter artefacts

Size of the assemblage used:

English archive: British Museum

Other repository:

Sites: Unknown (text not available)

Abstract: Romano-British pewter vessels have often been interpreted as functional, utilitarian pieces, which served as the typical dining equipment of wealthy villa owners in Late Roman Britain. A substantial collection of over 100 Romano-British pewter vessels held by the British Museum provides a case study from which to investigate the functional aspects of use alongside themes relating to wider social, economic, religious and art-historical issues. While this material often lacks detailed contextual information, it does represent one of the largest collections of Romano-British pewter and is the first time it has been examined as a whole. In addition to producing a detailed catalogue of the pewter vessels from 16 sites, this thesis examines the relationship of pewter vessels to contemporary ceramic, glass and silver forms and provides a comprehensive typology. New XRF analysis provides insights into manufacture and the use of raw materials in later Roman Britain. A number of the pewter vessels appear with previously unrecorded surface marks and scars that are discussed as possible evidence for function and use. In particular, a number of the vessels appear to have been 'ritually pierced' or 'deliberately holed' rendering them useless in terms of their perceived utilitarian function as plates or jugs. The 'ritual killing' of objects as sacrifice or as votives is well attested in Roman Britain and this study will consider the possibility that pewter vessels may have been specifically chosen to be deliberately buried as ritual or votive dedications.

Author: Dicks, Jonathan **PhD date** 2011 **94**

Title: The economic and social status of Romano-British rural villas in southern England

Institution: University of Southampton
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.548291

Period of material Roman

Type of material: Pottery

Size of the assemblage used: c.70,000 sherds

English archive: Portsmouth City Museum, Winchester City Museum, Hampshire County Museum Services, Chichester District Council Museum, Fishbourne Discovery Centre, Guildford Museum

Other repository:

Sites: Roman villas in East tHampshire and West Sussex

Abstract: The nature of rural settlement patterns and the economy during the Roman occupation of Britain from the Claudian invasion of AD 43 to the end of the fourth century in Hampshire and West Sussex formed the focus of this research. The objective is to define a method of measuring the attributes of Romano-British ceramic assemblages that can be linked to the socio-economic status of the original owners and their villas. It is the hypothesis of this study that domestic ceramic vessels can be used as a reliable indicator of social status. A tenet of this hypothesis is that the higher social and economically wealthy Romano British villa owners would be in possession of greater amounts of ceramic fine table wares. The pottery assemblages and the architectural features of twenty villas in West Sussex and Hampshire were analysed in order to test this hypothesis. The quantities of fine wares were measured by Estimated Vessel Equivalents (EVEs) and the Romanised architectural features present were quantified by their presence. The economics of the Roman Empire was integrated with wealth and power which in itself was reflected in the fashions of the material culture together with the aspirations to acquire status. Social mobility during the Rome Empire relied on wealth and the consequent display of that wealth. The way a person could demonstrate a change in status was to acquire and display higher quality material culture. This can be seen to be demonstrated in the display of Romanised architectural features present in Romano-British villas coupled with the evidence of high value ceramic fine wares present in the cultural artefacts. This demonstration of wealth can be seen as representing the status of an individual within society and by comparison the fewer high value status symbols would indicate a lower status or class of an individual. The differences in the quantity of these ceramic fine wares obtained by the villa owners can, therefore, be seen as an indicator and a measure of their relative social status. It is this theory that is the basis for the development of the methodology and the creation of a testable model.

Author: Brettell, Rhea C. **PhD date** 2016 **95**

Title: The final masquerade: a molecular-based approach to the identification of resinous plant exudates in Roman mortuary contexts in Britain and evaluation of their significance

Institution: University of Bradford
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.742723

Period of material Roman

Type of material: Samples from human remains and materials from burials

Size of the assemblage used: 195 archaeological samples and controls

English archive: Museum of Anthropology and Archaeology, Cambridge; Museum of London; Winchester Museums Trust, Winchester, Hampshire; Swindon Museum and Art Gallery, Wiltshire; Dorchester County Museum/Dorset Natural History and Archaeological Society, Dorset;Somerset County Council; Somerset Museums; York Museums Trust, York; Mersea Island Museum Trust, Essex

Other repository: Ancient Egyptian Animal Bio-Bank, KNH Centre for Biomedical Egyptology, University of Manchester, Manchester; Wessex Archaeology, Salisbury, Wiltshire. Section 6.2 says: There is an increasing reluctance among museum curators to permit the removal of samples for scientific analysis. This is exacerbated when the materials requested are in any way related to sensitive artefacts such as human remains.

Sites: Samples to identify resins found in mortuary contexts in Roman Britain: 38 inhumations from across Britain in which individuals had been interred in stone sarcophagi, lead-lined coffins and/or with plaster body-casings; 2 multi-container cremation burials from Purton, Wilshire, and the Mersea Island barrow, Essex; hair recovered from the lead-lined gypsum burial, Crown Buildings, Dorchester; 31 normative inhumation burials (wooden coffin and/or shroud) where plaster or unusual residues were also indicated

Abstract: This study provides chemical confirmation for the use of resinous plant exudates in mortuary contexts in Roman Britain. Analysis of amorphous masses, adhering residues and grave deposits using gas chromatography-mass spectrometry has revealed terpenoid biomarkers in sixteen inhumation and two cremation burials. The natural products characterized include European Pinaceae (conifer) resins, Pistacia spp. (mastic/terebinth) resins from the Mediterranean or the Levant and Boswellia spp. (frankincense) gum-resins from southern Arabia or eastern Africa. In addition, traces of a balsamic resin, probably Liquidambar orientalis, have been identified. A correlation between the use of these exotic exudates and interment in substantial, often multiple, containers with high-quality textiles and grave goods was observed. Theoretical consideration of this imported rite illuminates the multiplicity of roles played by resins/gum-resins in the mortuary sphere. The material properties of these highly scented substances speak to the biological reality of the decomposing body and to the socially constructed identity of the individual. On a practical level, they acted as temporary preservatives and masked the odour of decay. As social signifiers, they denoted the status of the deceased and promoted remembrance through conspicuous consumption and sensory impact. Encoded with ritual meaning, they purified the body and facilitated the final rite of passage to the afterlife. The recovery of these resinous traces provides us with new insights into the treatment of the body in the Roman period and establishes fresh links between the remote province of Britannia and the remainder of the Empire.

Author: Tasker, Alison Helen **PhD date** 2015 **96**

Title: The provenance of chalk tesserae from selected sites in Roman Britain

Institution: University of Leicester
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.677408

Period of material Roman

Type of material: Stone

Size of the assemblage used: c. 50(?)

English archive: Tesserae from Brading Roman Villa; the Isle of Wight District Council, for tesserae from Combley and Newport Roman Villas; Museum of London Archaeology for tesserae from six sites in London

Other repository: University of Leicester Archaeology Services (tesserae from the Vine Street Town House in Leicester); Colchester Archaeological Trust for tesserae from Gosbecks Park Temple Complex in Colchester.

Sites: Chalk tesserae from 13 sites in five locations> Away from chalk: the legionary baths at Caerleon (South Wales) and a town house in Leicester (East Midlands). Sites sited close to chalk outcrops: 3 villas on the Isle of Wight (Brading, Combley and Newport), from the temple complex at Gosbecks Park, close to Colchester in Essex. Finally, from six excavation sites in the City of London

Abstract: Microfossil analysis of chalk tesserae from mosaics at five sites in Roman Britain (Caerleon, Colchester, the Isle of Wight, Leicester and London) was undertaken in order to ascertain the biostratigraphical age of the chalk used and thereby to determine its lithostratigraphical position within the Chalk Group. This information was then used to determine its most likely geographical provenance. The foraminiferal evidence presented in this thesis strongly suggests that the source of the chalk used to manufacture the tesserae within the Roman province varied with time. Comparison of the results obtained with previous micropalaeontological analyses of chalk tesserae from Silchester, Norden (Dorset) and elsewhere in London suggest that Dorset may have acted as a regional source of chalk tesserae supply for mosaics dating to the first or early second century AD. This confirms previous suggestions that a 'geomaterials complex' was operating in the Poole-Purbeck area of south-east Dorset at this time. Chalk tesserae dating to later periods did not display this same pattern of supply and appear to have been derived from elsewhere in the province. Kent and Sussex are suggested as possible sources for chalk tesserae dating to the second and third centuries AD, whereas Baldock in Hertfordshire emerges as a possible source in the fourth. The geological evidence also shows that harder members of the Chalk Group do not seem to have been preferentially selected for use in tesserae manufacture. The results obtained confirm the value of the 'microfossil approach' to the problem of provenance in archaeological studies. It is suggested that the extension of this technique to chalk tesserae from other sites might enable some wider aspects of mosaic manufacture in Roman Britain to be investigated and two areas are put forward for future consideration.

Author: Pennick Morgan, Faith **PhD date** 2014 **97**

Title: Dress and personal appearance in Late Antiquity: the clothing of the middle and lower classes

Institution: University of Kent
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.666521

Period of material Roman

Type of material: Objects

Size of the assemblage used: Unknown (text not available)

English archive: 52 museum and archaeological collections

Other repository:

Sites: Unknown (text not available)

Abstract: This thesis examines the dress and personal appearance of members of the middle and lower classes during Late Antiquity. Although members of this social stratum are often represented in Late Antique written sources, their clothing is rarely described in any detail, nor can artistic depictions be relied upon to illustrate their garments realistically. Information has therefore been assembled on garments and garment fragments from over 52 museum and archaeological collections, in order to assess the ways that cloth and clothing was made, embellished, cared for and recycled during this period. Together with knowledge gained by making and modelling exact replicas based on extant garments, this has enabled both the accurate depiction of the dress of ordinary people during this period, and the more precise interpretation of Late Antique descriptions and depictions of the clothed figure. By further assessing this information using different theoretical approaches including that of 'object biography', this thesis goes on to explore the ways in which cultural meaning is invested in clothing, and what this tells us both about the people who made, wore and used it, and about the society of which they were a part.

Author: Tompsett, Imogen **PhD date** 2012 **98**

Title: Social dynamics in South-West England AD 350-1150: an exploration of maritime oriented identity in the Atlantic approaches and Western channel region

Institution: University of Nottingham
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.580164

Period of material Late Roman to early Norman

Type of material: Artefacts, including pottery

Size of the assemblage used:

English archive: Truro Museum

Other repository:

Sites: Pottery and archives from Kelsey Head, Perran Sands, Gunwalloe and Hays Close

Abstract: This research investigates the development of early medieval identities in the South West, and how various factors caused continuity and change in the insular material culture, the settlements, and ultimately in social identity. These cycles of change, brought about by influences both within and outside the region, appear to reoccur throughout the study period, and are evidenced through a regional (macro-scale) and micro-regional (site-specific) scale assessment of the evidence. An overriding sense of long-term continuity is perceived in the ability of these insular identities to retain former traditions and develop their material culture, despite the apparent political domination by far-reaching and overarching social groups in the Anglo-Saxon and Norrnan periods. These traditions include the ceramics, where an examination of developments in form and fabric have created a chronological framework that is more sympathetic to the archaeology of the region than the accepted broad periods of Early, Middle and Late Saxon, and which perhaps reflects a more accurate picture of social changes through time. Furthermore, the retention of both prehistoric and Late Roman practices, in particular the former, is seen throughout all aspects of the archaeological evidence and is examined here through the themes of settlement hierarchies, exchange mechanisms and identity, and their spatial differentiation, and with geographical determinism a deciding factor in the form and nature of communities. It is significant that prehistoric, Byzantine and Late Antique practices prevailed in the fifth to eighth centuries where Roman traditions did not, together with an introduction of Continental cultural indicators. and whilst insular traditions show similarities with those of other Atlantic regions. including Ireland. Scotland and Wales. The thesis also explores the development of Late Roman societies in an assessment of the impact of geographical determinism on identity, and the potential development of Atlantic and maritime identities within society as a whole.

Author: Rizzetto, Mauro **PhD date** 2019 **99**

Title: Developments in animal husbandry between the Late Roman period and the Early Middle Ages: a comparative study of the evidence from Britain and the Lower Rhineland

Institution: University of Sheffield
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.805416

Period of material Roman and early medieval

Type of material: Faunal remains

Size of the assemblage used: 8,498 bones (for England)

English archive: Unspecified

Other repository:

Sites: Sizeable faunal assemblages dated to Late Roman and/or to the Early Anglo-Saxon

Abstract: This study investigates changes in animal husbandry practices between the Late Roman and Early Anglo-Saxon periods in Britain; contemporary assemblages from the Lower Rhineland are used to provide comparative information on the nature and scale of change. All traditional zooarchaeological analyses have been employed; however, the main focus of this study rests on the comparison of biometrical data. Size improvements are a key feature of Roman influence on animal husbandry in western Europe; the nature and reasons behind such improvements highlight important characters of livestock exploitation during the Roman period, and their abandonment or maintenance can be informative of post-Roman husbandry strategies. The results indicate substantial discontinuity in the aims and scale of animal exploitation in Early Anglo-Saxon England. This pattern is enhanced by the continuity and accentuation of 'Romanised' animal husbandry practices into the Late Roman period: such continuity attests to the survival of efficient exploitation of the island's resources beyond the politico-military crisis of the 3rd century. The need to produce surpluses from agriculture and animal exploitation disappears with the end of the Empire. Zooarchaeological data from Early Anglo-Saxon assemblages reveal more generalised, relaxed animal husbandry strategies typical of self-sufficient communities, with pronounced variability dictated by local needs and environmental constraints. Cattle decrease in size, reflecting the fact that large, robust animals to exploit in intensive agricultural production were no longer needed. On the other hand, the improved sizes of sheep, horse, and chicken fitted well the aims of Early Anglo-Saxon herders, and were largely maintained; this evidence suggest that post-Roman communities did not simply cope with adverse economic conditions, but responded appropriately to the new circumstances.

Author: Sainsbury, Victoria **PhD date** 2019 **100**

Title: From trash to treasure: the recycling of glass in Roman and Early Medieval period Britain

Institution: University of Oxford
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.826309

Period of material Roman and early medieval

Type of material: Glass

Size of the assemblage used: 162 vessels

English archive: Unspecified

Other repository:

Sites: Fresh analysis of glass from the sites of Dorchester-on-Thames, Oxfordshire, and Lyminge, Kent.

Abstract: The main aim of this thesis is twofold; first to asses the ability of material studies to identify and quantify recycling in ancient glass, and then to compare the nature and extent of recycling of glass in the first to fourth centuries in Britain, Roman Britain, to the following Early Medieval period, fifth to eighth centuries. The first section of this thesis, the backbone, is a compilation of published values of glass analysed from English sites, and a comparative database from Europe. This also includes the expansion of the English database with the fresh analysis of glass from the sites of Dorchester-on-Thames, Oxfordshire, and Lyminge, Kent. The next section is a theoretical discussion of recycling and particularly the re- cycling of ancient glass. This includes both the ramifications of different forms of recycling for artefacts, in terms of traditional archaeological concerns such as trade, deposition and object biography, but more importantly the material studies changes that one might expect to witness from such recycling. This leads on to the chemistry of glass, and specifically how this can be used to demonstrate that recycling. Setting out and devising the material studies approaches to quantifying and qualifying ancient glass recycling, assessing which techniques are potentially of value. This synthesis and analysis includes both a large amount of legacy data, the database, as well as the small study of new glasses. In particular, the new glasses that will aim to increase the number of post-Roman glasses. The final portion of the thesis uses the architecture of the previous sections to compare the patterns of recycling across time in Britain, specifically the geographical components. This demonstrates the relationship between geography and trade, and how this changes in England as Roman influence falls and a new power takes Britain.

Author: Walther, Lauren Jo **PhD date** 2017 **101**

Title: All out of proportion?: stature and body proportions in Roman and Early Medieval England

Institution: Durham University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.725791

Period of material Roman and early medieval

Type of material: Human bone

Size of the assemblage used: 1,248 (details in flash drive, app 5, not included)

English archive: Ashmolean Museum; Colchester Castle Museum; the Museum Resource Centre in Oxfordshire; the North Lincolnshire Museum; Hampshire County Council and Archive Service; Winchester City Council Museums Service; Dover Museum; Norfolk Museum Service; Saffron Walden Museum; The Novium Museum; the Natural History Museum in London; Museum of London

Other repository: Canterbury Archaeological Trust**t**

Sites: As large a sample of Roman and early medieval skeletal remains from Britain as possible in order to address the primary aims and research questions

Abstract: The transitional period between the Roman occupation of Britain and the creation of smaller kingdoms during the Early Medieval period is one that is heavily debated. The shift in material culture from the fifth century onwards suggests Continental influences, but the extent to which this represents large-scale migrations or acculturation by indigenous people is contested. New bioarchaeological and isotopic studies of skeletal remains demonstrate an improvement in health from the Roman to Early Medieval periods, along with greater evidence of a much more complicated picture with respect to the direct association of particular grave goods with migrants. This comprehensive analysis of stature, body proportions, and health stress from the Romano-British to Early Medieval period represents an additional bioarchaeological contribution to these debates. A total of 1248 individuals excavated from 20 cemetery sites of Romano-British and Early Medieval date throughout southern and eastern England were analysed. Stature was examined as an indicator of health and growth as it is associated with childhood adversity, whilst body proportions can reflect adaptations to local environments. The stature and body proportions of individuals from all sites were determined through the reconstruction of living stature using Raxter et al.'s (2006, 2007) revised Fully anatomical method and through the analysis of a variety of indices. New mathematical regression formulae were created for each sample based on the reconstructed living stature. Comparisons of the anatomical and mathematical methods of stature calculation discovered a general overestimation of stature when the Trotter and Gleser, 1952, 1958 and Trotter, 1970 methods were used. The use of different indices aided in the assessment of examining differential body proportions within and between periods. In combination with the skeletal indicators of stress recorded, shorter tibial lengths, lower crural and higher intermembral indices, and shortened relative lower limb lengths demonstrated the negative impact that Roman occupation had on the residents of Britain. An improvement in overall health was noted within the Early Medieval sample with a decreased prevalence of these stress indicators, as well as increases in indices and stature. This thesis demonstrates the usefulness of utilizing the anatomical method when estimating stature of past populations in conjunction with the analysis of body proportions and stress indicators.

Author: Hall, Neil Stewart **PhD date** 2017 **102**

Title: An investigation into phosphoric iron production in Eastern England

Institution: University of Nottingham
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.719606

Period of material Roman and early medieval

Type of material: Metal (slag)

Size of the assemblage used: c.100

English archive: North Lincolnshire Museum

Other repository:

Sites: Iron slags from Quarrington; Flixborough and the Foulness Valley

Abstract: Looking at iron slags from Eastern England, this thesis was designed to assess the possibility of inferring the ore type in use by the chemical composition of the slag. A number of case studies are examined. The first is a group of material from the Foulness Valley, East Yorkshire, which is known to be produced from high phosphorus bog ore. This allows direct comparison between this and other assemblages, based on phosphorus content, to infer if bog or bedded ore was in use. Assemblages from Iron Age East Yorkshire, Roman Caistor St Edmund and the Saxon sites of Quarrington and Flixboroughwere examined to infer on ore exploitation and possible metal production. The background examination provides a definition of phosphoric iron based upon its material properties and the parameters which govern the creation of the alloy. Further discussion of ore exploitation and the reasoning behind why smelting sites are more difficult to locate are covered, while the current direction of research is examined. The body of experimental work is discussed with notable case studies drawn upon to demonstrate where the literature concentrates its focus. This allows for the suggestion of future possibilities based upon the impacts of these works. An experimental smelt was carried out in order to inform on the processes and record observations which helped to dictate the choices made on raw material selection. The experimental material was analysed alongside archaeological slags produced from the same ore, and treated in the same way as the material used in the archaeological case studies. The selection criteria applied to the archaeological assemblages, based on morphology and perceived mass are outlined. A description of the preparation methods for sample examination follows. The physics of electron microscopy are then discussed covering the various effects which govern the generation of the characteristic x-rays which are responsible for the chemical composition data. Each of the case study assemblages are dealt with individually presenting photographs of the pieces before sampling and backscattered electron images of the material. As this is the first scientific analysis conducted upon the Saxon assemblages from Quarrington and Flixborough, the data generated provides critical, new insight into Early Medieval iron production. The data using phase composition and phosphorus content are presented on a site by site basis before being assembled into an overall synthesis which further clarifies the inferences of different ore exploitation. Further comparisons of phosphorus and sulphur content are used to demonstrate the use of the bog ore and Frodingham Ironstone available at Flixborough. The interpretation of the data is then drawn upon for final conclusions and inferences of ore exploitation and the identification of ironstone use at Flixborough which further supports the archaeological and historical evidence for this practice from the 7th century A.D.

Author: Lauritsen, M. L. **PhD date** 2019 **103**

Title: Exeter from fort to city: a faunal perspective

Institution: University of Exeter
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.775799

Period of material Roman to post-medieval

Type of material: Faunal remains

Size of the assemblage used: 40,000 specimens

English archive: Exeter Museum

Other repository:

Sites: Sites excavated within the city of Exeter since the early 1970s

Abstract: This research project investigates Roman, medieval, and post-medieval faunal material from Exeter in the South West of England. This analysis aims to examine variation over time, as well as spatial variation within the city, for example, patterns of food consumption within higher and lower status areas of Exeter, and between secular and monastic communities. To study the variation, a range of analyses were employed, in particular, butchery analysis, fracture patterns, and metrics alongside complementary techniques such as skeletal part abundances, age profiles, and taphonomy. The analyses confirm the broad patterns identified in previous studies by Mark Maltby and Bruce Levitan and achieves a better understanding of the spatial variation and which methods are best suited to differentiate social groups.

Author: Forst, Jannine **PhD date** 2015 **104**

Title: Detecting and sequencing Mycobacterium tuberculosis aDNA from archaeological remains

Institution: University of Manchester
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.664577

Period of material Roman, early medieval and post-medieval

Type of material: Human bone

Size of the assemblage used: 7 samples

English archive: Gloucester County Archaeology Service; Gloucester City Museum.

Other repository: Archaeological Services Durham University; Division of Archaeological Sciences, University of Bradford; Gloucestershire County Council Archaeology Service

Sites: Rural Ashchurch cemetery, Gloucestershire, excavated in 2003 by Gloucestershire County Council Archaeology Service; Anglo- Saxon cemetery in Great Chesterford, Cambridgeshire (excavated in the 1950s, publ 1988); post-medieval cemetery St Oswald's priory in Gloucestershire; burial grounds of St Peter's Collegiate Church, an urban cemetery in Wolverhampton (excavated in 2001 and 2002 by the Birmingham University Field Archaeological Unit)

Abstract: Tuberculosis has been an important disease throughout human history, shaping countless past populations. The archaeological study of the causative agents of tuberculosis, members of the Mycobacterium tuberculosis Complex (MTBC), is hindered by the non-diagnostic nature of tuberculosis-associated skeletal changes. As such, ancient DNA (aDNA) or palaeogenetic analyses have become an important tool for identifying tuberculosis in past populations. However, due to the age and variable preservation of aDNA, there are often issues with sporadic results and false negatives. The overall aim of the work presented here was to use different methods, including traditional target-specific PCR, to identify and detect tuberculosis aDNA in archaeological remains. The main objectives within this overarching aim were to first test a method called whole genome amplification (WGA), used to non-specifically amplify all the DNA within a sample, and its potential to improve the yield of aDNA from skeletal remains (Chapters 3 and 4). To determine the extent of its impact, WGA was used in a comparative context, where each archaeological sample analysed was separately subjected to two methods of MTBC detection - the traditional targeted PCR method and the same method assisted by the initial application of WGA. The results show that applying WGA before the traditional targeted PCR methodology to detect the presence of MTBC pathogens in skeletal remains is only useful and viable in some cases, likely depending on the age and preservation of the sample. The second objective was to use next generation sequencing to obtain more information on the aDNA composition of certain archaeological samples and answer questions beyond the scope of traditional target-specific PCR techniques (Chapter 5). Although most of the sequencing runs were variably unsuccessful, the composition of two samples, both known to probably contain tuberculosis aDNA, could be analysed. The samples both contained similar amounts of mycobacterial aDNA and varying amounts of both human and even potentially human intestinal flora DNA. Finally, the third objective was to determine if MTBC aDNA could be detected in a rib sample from Private William Braine of the lost Franklin Expedition using standard target-specific PCR (Chapter 6). In this case study, no evidence of tuberculosis ancient DNA was found. The work done through-out highlights the difficulties of ancient DNA research and, in Chapter 4, shows the importance of using more than a single sample to evaluate methods for application in palaeogenetic contexts.

Author: Castells Navarro, Laura **PhD date** 2018 **105**

Title: DISH everywhere: study of the pathogenesis of Diffuse Idiopathic Skeletal Hyperostosis and of its prevalence in England and Catalonia from the Roman to the post-medieval time period

Institution: University of Bradford
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.782497

Period of material Roman, medieval and post-medieval

Type of material: Human bone

Size of the assemblage used: 281 bones

English archive:

Other repository: University of Bradford; University of Durham

Sites: Baldock; Kingsholm; Gambier Parry Lodge; Raunds; Fishergate House; Wolverhampton

Abstract: Diffuse idiopathic skeletal hyperostosis (DISH) is a spondyloarthropathy traditionally defined as having spinal and extra-spinal manifestations. However its diagnostic criteria only allow the identification of advanced DISH and there is little consensus regarding the extra-spinal enthesopathies. In this project, individuals with DISH from the WM Bass Donated Skeletal Collection were analysed to investigate the pathogenesis of DISH and archaeological English and Catalan samples (3rd-18th century AD) were studied to investigate how diet might have influenced the development of DISH. From the individuals from the Bass Collection, isolated vertical lesions representing the early stages of DISH ('early DISH') were identified. Both sample sets showed that the presence of extra-spinal manifestations varies significantly between individuals and that discarthrosis and DISH can co-exist in the same individual. In all archaeological samples, the prevalence of DISH was significantly higher in males and older individuals showed a higher prevalence of DISH. In both regions, the prevalence of DISH was the lowest in the Roman samples, the highest in the early medieval ones and intermediate in the late medieval samples. While when using documentary resources and archaeological data, it was hypothesised that the prevalence of DISH in the English and Catalan samples might have been different, the results show no significant differences even if English samples tend to show higher prevalence of DISH than the Catalan samples. This possibly suggests that the development of DISH depends on a combination of dietary habits and, possibly, genetic predisposition might influence the development of DISH. The individuals from the Bass Collection showed high prevalence of metabolic and cardiovascular conditions. In contrast, no association was found between DISH and rich-diet associated conditions (e.g. carious lesions and gout) or deficiency-related conditions (e.g. scurvy, healed rickets).

Author: Kendall, Ross **PhD date** 2014 **106**

Title: Past endemic malaria and adaptive responses in the fens and marshlands of eastern England

Institution: Durham University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.630086

Period of material Roman, early medieval and later medieval

Type of material: Human bone and faunal remains

Size of the assemblage used: 142 samples

English archive: North Lincolnshire Museums Service

Other repository: Cambridge Archaeological Unit; Archaeological Project Services

Sites: Investigation into the presence of English malaria in archaeological Fen cemetery populations from the Roman, Anglo-Saxon, and later medieval periods (c. AD 40-1600), using biomolecular analyses of human bone, and palaeopathological analyses via extant published data. A further aim was to investigate hypothesis concerning preferential survival of non-collagenous proteins (NCPs) within archaeological bone. Sites: cemeteries from Lincolnshire and Cambridgeshire Fens. See PhD Appendix 2 (pp 473-487) for a list of sites

Abstract: Changes in climate have increased concerns over the return of temperate malaria to the United Kingdom. Hence, studies of ancient disease are becoming more relevant for future health predictions in areas which are under threat of disease re- emergence. Conditions were likely ideal for Plasmodium vivax malaria from at least the Roman period, and recent research on Anglo-Saxon Fen populations has suggested an indigenous malarial presence. The primary aim of this project was to investigate the presence of English malaria in archaeological Fen cemetery populations from the Roman, Anglo-Saxon, and later medieval periods (c. AD 40-1600), using biomolecular analyses of human bone, and palaeopathological analyses via extant published data. A further aim was to investigate Masters' (1987) hypothesis concerning preferential survival of non-collagenous proteins (NCPs) within archaeological bone. Indirect evidence for malaria was sought by reassessing archaeological reports for osteological evidence of the genetic anaemia β thalassaemia at 13 cemetery sites (five Roman, seven Anglo-Saxon, one late medieval) closely associated with the Fens and marshlands of Lincolnshire and Cambridgeshire. A palaeodemographic comparison of 30 Fen (five Roman, 21 Anglo-Saxon, four late medieval) and 31 non-Fen (nine Roman, 18 Anglo-Saxon, four late medieval) cemetery populations was also undertaken to assess any impact of vivax malaria on mortality. Osteological evidence does not support the presence of past thalassaemia, with palaeodemographic analysis suggesting an acquired, rather than genetic immunity in the Fens. Possible evidence emerged for 'healthy adaptation' to the increased stresses of Fenland life, and one population provided tentative evidence of intrauterine growth restriction, a condition strongly linked to endemic P. vivax. Direct evidence was sought by attempting to extract and test anti-malarial antibodies from human bone samples from 13 Fen-associated cemetery sites (five Roman, seven Anglo-Saxon, one late medieval), encompassing 24 individuals. Bone preservation was assessed in over 200 samples to provide a baseline for sample selection for biomolecular analysis. Analysis of bone samples proved unsupportive of Masters' (1987) hypothesis. However, a range of endogenous proteins and a possible pathogenic disease marker were revealed, as was a correlation between bone preservation and NCP content. Evaluation of extraction protocols failed to yield antibodies which, if present, were consistently masked by collagen. Consequently, a novel antibody extraction technique has been developed. If successful, this could lead to a replicable technique of ancient, reactive antibody isolation, which would offer an invaluable new tool in biomolecular palaeopathology.

Author: Buchanan, Courtney Helen **PhD date** 2012 **107**

Title: Viking artefacts from southern Scotland and northern England: cultural contacts, interactions, and identities in peripheral areas of Viking settlement

Institution: University of Glasgow
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.666383

Period of material Early medieval

Type of material: Artefacts

Size of the assemblage used: unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: This thesis explores the portable, non-indigenous material culture strongly related, but not exclusive, to one specific ethnic group in the medieval period. It is based on the idea that people from different cultural backgrounds cannot come into contact with each other without their identities being altered in some significant way, and these altered identities will be expressed in their material culture. During the period c.800-1100, the Vikings initiated contact with the inhabitants of Britain, first by raiding and attacking, then by trading and settling amongst the local populations. Whereas most research of Viking and local interaction has focused on Viking settlements in the Northern and Western Isles or the Anglo-Scandinavian town of York, this thesis focuses on the peripheral areas of Viking political control: northern England and southern Scotland. It is in these regions where there are increasing amounts of evidence of Viking activities and interactions with the local peoples. Three key research questions are asked of the materials found within the study area: 1) how and why did items of 'Viking' material culture enter regions outside of the centres of traditional Viking settlements? 2) How and why were these items used to conduct meaningful contacts and interactions with those people already inhabiting this land? 3) How and why were identities constructed in these regions where multiple cultural traditions came into contact with one another? A multifaceted approach is adopted to answer these questions. First, the historical sources are analysed for different contexts of contact and interaction between Vikings and non- Vikings in the study area. Second, a postcolonial approach to studying the interactions between groups was adopted in order to move away from simplistic assimilation or acculturation narratives where one group subsumes the other. Rather, this approach argues for the creation of a new social dimension in which people's actions, routines, and identities are altered in order to negotiate and thrive within the new cultural landscape. It is argued that the hybridization seen in many of the artefacts, as well as other sources utilised throughout the thesis, is the material articulation of this new space. Finally, this thesis includes data recovered through the Portable Antiquities Scheme and Treasure Trove Scotland in addition to excavated finds. In the study region, 499 items are identified and catalogued as Viking or hybrid-Viking, many of which have no archaeological context as they are stray or metal-detected finds. Through the course of searching, three major concentrations were identified along major maritime inlets: the Solway Firth, the River Clyde, and the Forth and Tay Basins. These concentrations were turned into three case-study areas based upon concentrations of finds as well as the contextual aids of historical sources, place-names, and stone sculpture. The first case study examines the Solway Firth and determines that the Vikings were a very important part of the population, and a hybridized society is seen there. The second case study of Strathclyde also determines that the Vikings were active there; the evidence indicates smaller, more concentrated communities of Vikings that integrated into the British population of the region. The final case study of the Forth and Tay basins establishes the Vikings as important actors there.

Author: Grieve, Amanda **PhD date** 2012 **108**

Title: The human-dog relationship in early medieval England and Ireland (c. AD 400-1250)

Institution: University of Southampton
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.628633

Period of material Early medieval (400-1250 AD)

Type of material: Faunal remains

Size of the assemblage used: Unspecified (bones from 9 assemblages)

English archive: Winchester Museums Service, Southampton Museums

Other repository:

Sites: Archaeological data have been gathered from site reports, published and unpublished animal bone reports and museum archives (212 English sites). Nine assemblages were examined first-hand by the author

Abstract: This thesis aims to explore the human-dog relationship in early medieval England and Ireland (c. AD 400-1250) and so develop an improved understanding of how people perceived and utilised their dogs. In 1974, Ralph Harcourt published a seminal paper reviewing the metrical data for archaeological dog remains excavated from British antiquity. Nearly forty years on, many more dog bones have been excavated and recorded. His results from the Anglo-Saxon period illustrated that the degree of skeletal variability had reduced after the end of the Roman occupation, with an increase in the average size. He also observed two distinct groups in the estimated shoulder height measurements. The key areas that have been considered include: dog functionality, morphology, and treatment. Influences that may have led to changes in people's perception of dogs during this time period have been examined. Differences between England and Ireland are assessed, but variation in recording methods has meant the data obtained on the Irish dogs were limited. An interdisciplinary approach has been taken, combining archaeological, historical and anthrozoological information. New evidence has shown that humans' relationships with dogs were more complex and varied than previous research would suggest, especially in the treatment of dogs at their death. This was particularly evident in England, where a change in the burial location of dogs was observed from the end of the seventh century, and could be linked to the development of Christianity and its negative teachings towards the dog. More metrical data from English sites have shown that the two distinct groups observed in Harcourt's Anglo- Saxon results were no longer apparent.

Author: Holmes, Matilda Anne **PhD date** 2011 **109**

Title: Food, status and complexity in Saxon and Scandinavian England: an archaeozoological approach

Institution: University of Leicester
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.551712

Period of material Early medieval

Type of material: Faunal remains

Size of the assemblage used: Unspecified

English archive: Museum of London Archaeology; Winchester Museum Service;

Other repository: Only site reports that had been compiled since 1975 were consulted (259 sites)

Sites: Primary and secondary data recorded from animal bone assemblages from English Saxon sites across England. Primary data (recorded by the author) came from a number of sites made available to the author: Staple Gardens, Winchester; Worcester Cathedral; and Longstanton, Cambridgeshire, as well as assemblages from site reports previously undertaken in a commercial capacity

Abstract: The period between the decline of Roman influence and the Norman Conquest in England (AD 450-1066) is recognised as a time of great change, from a largely subsistence-based economy to one more urban-oriented with growing political and social complexity. Little is understood of the human-animal interactions that existed in Saxon and Scandinavian England, and this thesis will use archaeozoological data with the aim of furthering the knowledge of social, political and economic hierarchies, cultural differences and debates regarding the nature of the urban context through the presence and spatial organisation of status, craft production and trade. To this end, both primary and secondary data were recorded from animal bone assemblages from English Saxon sites, and the subsequent relative species quantities, mortality profiles, carcass part representation, butchery and metrical data analysed. The resultant trends have illustrated the increasing social complexity and widening gap between the farming and elite classes, and evidence for cultural distinctions between the Danelaw and Saxon areas of England in the late Saxon phase. Combined with this is the demonstration of evolving economic pathways using the provisioning networks apparent between producer and consumer sites. This is core to the major changes that take place throughout the Saxon phase, from the largely self-sufficient population of the early phase, through the redistribution of animals and animal products in the middle Saxon phase, towards a fully commoditised market system by the time of the Norman Conquest.

Author: Rainsford, Clare E. **PhD date** 2017 **110**

Title: Animals, identity and cosmology: mortuary practice in early medieval Eastern England

Institution: University of Bradford
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.787638

Period of material Early medieval

Type of material: Faunal remains

Size of the assemblage used: Unspecified

English archive: Norwich Castle Museum (collab award)

Other repository:

Sites: 47 cemeteries from Eastern England (29 were excavated before 1960) (see PhD Figure 4.1); assessments carried out for Illington, Field Dalling, Caistor-by-Norwich and Markshall

Abstract: (Not available)

Author: Reynolds, Rebecca Virginia **PhD date** 2015 **111**

Title: Food for the soul: the dynamics of fishing and fish consumption in Anglo-Saxon England, c. A.D. 410-1066

Institution: University of Nottingham
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.668636

Period of material Early medieval

Type of material: Faunal remains (fish) and fishing-related artefacts

Size of the assemblage used: 19,590 fish bones; 203 stone/bone/lead fishing artefacts

English archive:

Other repository:

Sites: Fish bones from Lyminge, Kent (see PhD Appendix 2); Sedgeford, Norfolk (see PhD Appendix3); Bishopstone, East Sussex (see PhD Appendix 4); and Staple Gardens, Winchester (see PhD Appendix 5) were studied by the author. The assemblages from Bishopstone and Lyminge were studied for previous research projects (Reynolds 2008, 2009). Both these assemblages were reanalysed here

Abstract: The taste for fish in England and the British Isles as a whole has fluctuated on several occasions and understanding the reasons behind these changes is vital, especially in light of the great importance fish held in later medieval diet and society. The beginnings of marine fishing have usually been thought to lie in the late Anglo-Saxon period and are believed to lie with economic changes. Indeed, most studies of fish in archaeology have centred around economic approaches. However it is extremely unlikely for economics to have been the sole reason. This thesis will attempt to fill in the gap currently extant in early medieval fish studies by taking a multidisciplinary approach to exploring the character of fishing and fish consumption in Anglo-Saxon England. Zooarchaeological data alongside isotope evidence, artefactual, structural and textual will be considered together to explore not just economic but also social factors, in effect, exploring the dynamics of fishing and fish consumption. This multidisciplinary approach will also hopefully highlight the fact that fish cannot just be studied in isolation; to gain a full understanding of the implications freshwater and marine fishing will have on communities and society as a whole all aspects of fishing must be considered.

Author: Broadley, R. E. **PhD date** 2017 **112**

Title: A study of the distribution, form and context of Anglo-Saxon vessel glass in 7th-11th century England

Institution: University College London
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.790759

Period of material Early medieval

Type of material: Glass

Size of the assemblage used: 1,266 sherds

English archive: Hull Museum (Flixborough); Fort Cumberland (Portchester); Southampton Museum? (Hamwic); MOLA (London); unspecified museums for: West Heslerton; Brandon, York, Lyminge, Butley and Barking

Other repository:

Sites: Glass from Hamwic, Brandon, London, York, Lyminge, Flixborough, West Heslerton, Butley and Barking, which together constitute more than 80% of the national corpus

Abstract: This thesis is a study of all known Anglo-Saxon vessel glass (2847 sherds) found at twenty-three settlement sites in England dating to between the seventh and eleventh centuries. This material reveals new understandings regarding economic and social structures, and identities in Anglo-Saxon England. Data collected from recording glass first-hand was combined with information gathered from publications, archives and personal communication with excavators and specialists to form the first national dataset. Quantification of individual vessel forms, colours and decoration, and mapping the distribution of all vessel characteristics has led to the creation of a new typological and geographical framework for understanding these objects. Glass vessels were used on three principal site types: emporia, monasteries and middle-ranking rural estate centres. Site assemblages of glass vessel fragments can now be characterized and compared to the national corpus to aid interpretation of the nature of the source settlement - and vice versa - because of the discovery that palm-funnel series vessels are much more prevalent at emporia and globular beakers at ecclesiastical sites, showing that glass was being supplied and used in different ways. Seven case studies of intra-site glass distribution revealed that the anticipated pattern of peripheral disposal alongside dining waste is widespread, but exceptions exist at the monastic sites at Lyminge, Kent, and Jarrow, Tyne and Wear. Preliminary study of similar material from the rest of the North Sea zone indicates largely parallel patterns of trade and consumption of glass vessels by the same three site types, with great potential for future work and comparison with English data sets.

Author: Haworth, K. **date** 2021 **113**

Title: Most Precious Ornaments: Necklaces in 7th-century England

Institution: Durham University, via email

Period of material Early medieval

Type of material: Glass and other types of beads (shell, amethyst, amber, gold, silver and coper alloy)

Size of the assemblage used: 1,458 objects

English archive: North Lincolnshire Museum; Cambridge University Museum of Archaeology and Anthropology; the Yorkshire Museum; Corinium Museum (Cirencester); the Museum of Somerset; Maidstone Museum; the Ashmolean Museum; the Beaney (Canterbury) and the British Museum

Other repository: Suffolk Archaeological Service

Sites: Excavations undertaken before the introduction of PPG16. Also objects from fairly recently discovered early medieval cemeteries, like Bloodmoor Hill and Exning (both Suffolk), which were covered by PPG16

Abstract: (Not available)

Author: Bohling, Solange N. **PhD date** 2020 **114**

Title: Death, disability, and diversity: an investigation of physical impairment and differential mortuary treatment in Anglo-Saxon England

Institution: University of Bradford
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.821409

Period of material Early medieval

Type of material: Human bone

Size of the assemblage used: 86 individuals

English archive: Novium Museum (Apple Down collection); Corinium Museum; Cambridgeshire Historic Environment Team (Cherry Hinton, Edix Hill, and Water Lane collections); Oxford Museums Services (Watchfield collection); Nottingham City Museums and Galleries (Windmill Hill collection); Hampshire Cultural Trust (Worthy Park collection); Portsmouth Museum (Bevis's Grave collection); The Higgins Art Gallery and Museum, Bedford (Elstow Abbey collection); English Heritage (St Peter's Church collection)

Other repository: University of Sheffield (Black Gate collection); University of Roehampton (Priory Orchard collection); University of Bradford (Raunds collection); Oxford Archaeology (Butler's Field collection); Tees Archaeology (Norton East Mill and Bishopsmill School collections); Duckworth Laboratory (Finglesham, Burwell, and Worthy Park collections); Eastbourne Borough Council (St Anne's Hill collection)

Sites: Anglo-Saxon cemeteries containing 50 or more individuals: 19 Anglo-Saxon cemetery populations (nine early, five middle, and five later)

Abstract: Until recently, individuals with physical impairment have been overlooked within the field of archaeology due to the controversy surrounding the topics of disability and care in the past. The current research adds to the growing body of archaeological disability studies with an exploration of physical impairment and the possibility of disability-related care in Anglo-Saxon England (5th-11th centuries AD), utilising palaeopathological, funerary, and documentary analyses. Palaeopathological analysis of 86 individuals with physical impairment from 19 Anglo-Saxon cemetery populations (nine early, five middle, and five later) was performed, and the possibility of disability-related care was explored for several individuals. The mortuary treatment data (e.g. grave orientation, body position, grave good inclusion) was gathered for the entire burial population at each site (N=3,646), and the funerary treatment of the individuals with and without physical impairment was compared statistically and qualitatively, both within and between the Anglo-Saxon periods. No obvious mortuary differentiation of individuals with physical impairment was observed, although several patterns were noted. In three early Anglo-Saxon cemeteries, spatial association between individuals with physical impairment, non-adults, and females was observed. Early Anglo-Saxon individuals with physical impairment were more frequently buried in marginal locations, and two such individuals were buried in isolation. In the middle and later Anglo-Saxon periods, the funerary treatment of individuals with physical impairment became less variable, they were less frequently buried in marginal locations, and at three middle Anglo-Saxon cemeteries, they were buried in association with socially significant features in the cemetery landscape. The provision of care to ensure survival was not necessary for a majority of the individuals with physical impairment, but several individuals (lower limb paralysis, mental impairment) may have received regular, long-term care. This research proposes that the decreasing variability of mortuary treatment of individuals with physical impairment observed throughout the Anglo-Saxon period suggests that more variable attitudes about disability existed both within and between early Anglo-Saxon communities, while the political, social, and religious unification starting in the middle Anglo-Saxon period may have led to the development of more standardised perceptions of disability in later Anglo-Saxon England.

Author: Hoogewerff-Gergelj, Ana **PhD date** 2014 **115**

Title: Human provenancing: combined isotopic and genetic profiling of limited bone and teeth material of ancient human remains

Institution: University of East Anglia
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.656075

Period of material Early medieval

Type of material: Human bone

Size of the assemblage used: 14 individuals (see PhD table 19 for details)

English archive: Norfolk Museums and Archaeology Service, Norwich

Other repository:

Sites: Anglo-Saxon cemetery, Snarehill Hall in Brettenham, Norfolk

Abstract: The ability to identify and to trace the origin and movement of individuals is of major interest in forensics, archaeology and anthropology. To date, DNA profiling is still the most effective approach for human identification. Despite the success story of DNA profiling, there is a constant search for additional methods to aid in the identification of human remains. In recent years increasingly strontium and lead isotopes analysis have proved particularly useful as tracers for individual residency and migration. The re-occurring problem of limited sample material in archaeological and forensic investigations led to the second objective to investigate where sample material could be saved. The development of a new method for the simultaneous extraction of both strontium and lead from bone and teeth on a single Pbspecific resin proved to be successful. Both elements could be purified in sufficient amounts for successive isotope analysis. This work also investigated for the first time the feasibility of using the remaining bone residues after DNA extraction for further Sr and Pb isotope analysis. The first isotope results were promising and did not show any significant differences between fresh bone and bone residues. However, a more extensive trial is required to validate these exciting preliminary findings. To maximize the evidence for individual identification an interdisciplinary approach was chosen for this study. DNA profiling and strontium/lead analysis were employed in two case studies on human remains from a) the Spanish Civil War (1936-1939) and b) from a Late Anglo-Saxon burial in Norfolk, UK. DNA analysis proved not to be achievable due to the degraded nature of the skeletal tissues in both case studies. Strontium and lead isotope analysis could identify two possible migrants among the Spanish burial population. In the Norfolk case, isotopic evidence implied that the group was unlikely to be of local (Norfolk) origin.

Author: Mattison, Alyxandra **PhD date** 2016 **116**

Title: The execution and burial of criminals in early medieval England, c. 850-1150: an examination of changes in judicial punishment across the Norman Conquest

Institution: University of Sheffield https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.714307

Period of material Early medieval (c. 850-1150)

Type of material: Human bone

Size of the assemblage used:

English archive: Royal College of Surgeons London (Sir Arthur Keith's unpublished notes on the Guildown skeletons); Leverhulme Centre for Human Evolutionary Studies at The University of Cambridge (Duckworth Collection) to examine the Bran Ditch skeletons

Other repository: Royal College of Surgeons London; University of Cambridge

Sites:

Abstract: In later Anglo-Saxon England, executed offenders and, probably also, other social deviants were separated from the rest of the community in death. They were buried in cemeteries far from settlements but in raised landscapes which would have been visible from frequented areas – so-called 'execution cemeteries'. However, from the second half of the eleventh century, these deviant cemeteries appear to have fallen out of use. This thesis seeks to discover where criminals where buried after the Norman Conquest and examines the influences behind the changes in funerary treatment of judicial offenders. Numerous published excavation reports and databases were analysed for evidence of funerary deviance – i.e. any trait unusual for normative Christian burial – but with particular focus on evidence for decapitation or for individuals remaining bound at the wrists at the time of interment, both of which are the most direct indicators of potential execution. While 343 individuals were buried in Anglo-Saxon execution cemeteries – sixty-two of these decapitated and seventy-three potentially bound – only three such deviants could be identified from the Anglo-Norman period. To inform on this transformation in burial tradition, historical evidence, particularly legislation and historical chronicles, were used to aid in an examination of capital punishment from c.850 to c.1150 to better understand the treatment of judicial offenders from conviction to execution. Using both the written and funerary evidence, it is argued that that capital punishment was modified but did not cease to be used after the Conquest and that offenders executed under Norman rule were buried among and in the same manner as other members of the Christian community. The influences behind these changes in the treatment of criminals around the event of the Norman Conquest were not simply a result of the transition to Norman rule but were also a reaction to theological developments occurring in European Christianity.

Author: Williams-Ward, Michelle L. **PhD date** 2017 **117**

Title: Buried identities: an osteological and archaeological analysis of burial variation and identity in Anglo-Saxon Norfolk

Institution: University of Bradford

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.742761

Period of material Early medieval

Type of material: Human bone

Size of the assemblage used: 3,016 bones

English archive: Norwich Castle Museum (collab award)

Other repository:

Sites: Multiple sites from Anglo-Saxon Norfolk to discuss the broader practices and questions regarding Anglo-Saxon burials and identity. Norfolk, East Anglia; incorporates both cremation and inhumation burials and the major site types in use within the Anglo-Saxon period

Abstract: The thesis explores burial practices across all three phases (early, middle and late) of the Anglo-Saxon period (c.450–1066 AD) in Norfolk and the relationship with the identity of the deceased. It is argued that despite the plethora of research that there are few studies that address all three phases and despite acknowledgement that regional variation existed, fewer do so within the context of a single locality. By looking across the whole Anglo-Saxon period, in one locality, this research identified that subtler changes in burial practices were visible. Previous research has tended to separate the cremation and inhumation rites. This research has shown that in Norfolk the use of the two rites may have been related and used to convey aspects of identity and / or social position, from a similar or opposing perspective, possibly relating to a pre-Christian belief system. This thesis stresses the importance of establishing biological identity through osteological analysis and in comparing biological identity with the funerary evidence. Burial practices were related to the biological identity of the deceased across the three periods and within the different site types, but the less common burial practices had the greatest associations with the biological identity of the deceased, presumably to convey social role or status. Whilst the inclusion of grave-goods created the early Anglo-Saxon burial tableau, a later burial tableau was created using the grave and / or the position of the body and an increasing connection between the biological and the social identity of the deceased, noted throughout the Anglo-Saxon period in Norfolk, corresponds with the timeline of the religious transition.

Author: Kendall, Ellen Jean **PhD date** 2019 **118**

Title: An isotopic study of environmental influences on early Anglo-Saxon health and nutrition

Institution: Durham University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.775435

Period of material Early medieval

Type of material: Human bone

Size of the assemblage used: 59 samples

English archive: Unknown (text unavailable; data from abstract)

Other repository:

Sites: 5-7th century cemeteries at Littleport and Edix Hill (Barrington A), Cambridgeshire

Abstract: Early life has long been associated with high vulnerability to morbidity and mortality, risks which are reduced in infancy and early childhood through strategically high levels of parental or alloparental investment. More recently, theories have emerged addressing the manner in which poor health and nutritional stress during early life may impact upon the future health of those who survive this period. Thus, the significance of early life health and parental care extends far beyond the domain of childhood studies and may provide insight regarding population-level biocultural responses to environmental pressures throughout the lifecourse. Skeletal and environmental data indicate that the 5-7th century cemeteries at Littleport and Edix Hill (Barrington A), Cambridgeshire represented similar communities with contrasting environments and states of population health. High prevalence of skeletal stress markers at Littleport suggests a community coping with unusual levels of biological stress, potentially a consequence of the endemic malaria historically known to be present in the Fens. In contrast, Edix Hill was an upland site which exhibited lower skeletal stress marker prevalence comparable to wider British data for the early medieval period. Early life stress levels and nutrition at Littleport (n=30) and Edix Hill (n=29) were investigated through carbon and nitrogen stable isotope analyses from incrementally-sampled deciduous and permanent molar dentine to identify variability in patterns relating to survivorship, sex, status, and disease. Meaningful variation in isotopic values within and between populations and sub-cohorts was observed. Isotopic data for Littleport demonstrated patterns of recurrent nutritional stress and health inequality between subpopulations during childhood, which were not mirrored at Edix Hill. These patterns are interpreted as consistent with the presence of malaria in the early medieval Fens. Characterisation of such inter-individual and inter-population variability should be a focus of future interdisciplinary archaeological childhood studies.

Author: Baker, Jocelyn Margaret **PhD date** 2013 **119**

Title: The colour and composition of early Anglo-Saxon copper alloy jewellery

Institution: Durham University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.600929

Period of material Early medieval

Type of material: Metal (copper-alloy) artefacts

Size of the assemblage used: 222 artefacts

English archive: North Lincolnshire Museum Service; East Riding of Yorkshire Council; Nottingham City Museums & Galleries

Other repository: Landscape Research Centre

Sites: Six cemetery sites in what was north-eastern Anglia

Abstract: Copper alloy artefacts are amongst the most prolific material remains from the early Anglo-Saxon period (450-650 CE). This research attempts to circumvent the limitations of previous disparate and unconnected typological and metallurgical approaches to these objects by investigating copper alloy jewellery from a holistic interdisciplinary approach. In particular, colour is used as a major new variable, a characteristic that would have been relevant to the Anglo-Saxons as craftsmen and as consumers. This method can reveal the choices that faced Anglo-Saxon craftsmen in the manufacture of these objects and in the use of their materials according to variables relevant and appropriate to their world. All past quantitative composition data relating to this period are reanalysed collectively, to interpret and model metal supply dynamics and recycling traditions. A visual context for copper alloys is created using linguistic frequency analysis of Old English colour words alongside a discussion of other Anglo-Saxon coloured material culture. The application of quantitative colour measurement to archaeological material and the factors affecting colour in various copper alloys on a structural level is also delineated, including quantification of the limits of human colour distinction and perception, the effects of tarnish on colour, and the overlap between copper and precious metal colour space. A new dataset comprising semi-quantitative ED-XRF composition data and quantitative colour measurements from over two-hundred archaeological samples allows the context of colour and composition to be discussed, providing insight into issues of value, aesthetics, trade and metal supply, and control.

Author: Rubinson, Samantha Rebecca **PhD date** 2010 **120**

Title: An archaeometallurgical study of early medieval iron technology: an examination of the quality and use of iron alloys in iron artefacts from early medieval Britain

Institution: University of Bradford

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.533588

Period of material Early medieval

Type of material: Metal (iron) artefacts

Size of the assemblage used: 280 artefacts

English archive: Worcester City Museum, Winchester Museum

Other repository: York Archaeological Trust, Worcestershire Archaeological Service, Avon Archaeology, Canterbury Archaeological Trust, Southampton Archaeological Unit, The Wharram Percy Project, Winchester Archaeology Field Uni

Sites: Brent Knoll, Somerset; Christ Church, Canterbury, Kent; Six Dials, Southampton, Hampshire; Brandon Road, Thetford, Norfolk; South Manor, Wharram Percy, Yorkshire; Winchester, Hampshire; Deansway, Worcester, Worcestershire; Coppergate, York, Yorkshire

Abstract: This project presents a study of iron technology in Early Medieval (fifth to eleventh centuries AD) Britain through the examination of iron found in settlement contexts. This is a period characterized by significant cultural, political and social changes. The effect of these changes on iron technology has never been investigated on a large scale. Previous studies on iron focused either on individual sites or on single artefact types, and did not provide any clear multi-region interpretive framework. A longstanding problem has been in identifying the extent of usage of a key alloy: phosphoric iron. This research project examined iron assemblages from eight settlement sites of varying size, culture, economic and social status from across Britain. From each settlement a mixed assemblage of iron artefacts was sampled, including edged tools, items of personal adornment, construction materials, and craft tools. Analysis was by traditional archaeometallurgical techniques alongside SEM- EDS elemental analysis. Alloy usage, specifically relating to phosphoric iron, was examined and the manufacturing techniques assessed. It was shown that elemental analysis is the only reliable method to determine the presence of phosphorus in iron and demonstrated that the traditional phosphoric indicators as observed during optical microscopy are insufficient. Results were subjected to a series of comparisons based on settlement size, the inferred social status, and cultural affinities. The results demonstrate the high technological level of iron artefact production across the country. All areas had access to the full range of iron alloys and employed a highly developed range of smithing techniques. Phosphoric iron was a prevalent alloy in this period. Based on these results, a model of the Early Medieval iron industry is generated, suggesting a vibrant economy in which both local and traded irons were significant.

Author: Brundle, Lisa Mary **PhD date** 2014 **121**

Title: Image and performance, agency and ideology: human figurative representation in Anglo-Saxon funerary art, AD 400-750

Institution: Durham University

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.650193

Period of material Early medieval

Type of material: Metal artefacts

Size of the assemblage used: 149 objects

English archive: Northern Lincolnshire Museum Services, Scunthorpe; Art and Archaeology in Lincolnshire; Grantham Museum; Ipswich Museum; Norwich Castle Museum; British Museum; Ashmolean, Oxford; Museum of Archaeology and Anthropology, Cambridge; Ely Museum; West Stow Anglo-Saxon Village, Suffolk.

Other repository:

Sites: See PhD Appendix 1.1 for a list of all the objects studied and their current location

Abstract: This thesis investigates the topic of human imagery and hybrid human imagery rendered on metalwork of early Anglo-Saxon date recovered within eastern England. It presents the first definitive catalogue of its kind in this region and timeframe. Taking inspiration from recent transitions in thinking on early Anglo-Saxon art, the major topics of consideration include: a) the interrelationship between image, object and the user, b) the changing portrayal of human representation and the social implications of such developments and c) the emergence of new bodily gestures in representational art. These key themes might provide an understanding of how and why human imagery changed as it did, how and by whom it was deployed in life and death and the role this type of imagery performed in the construction and presentation of social identity.

Author: Perry, Gareth John **PhD date** 2013 **122**

Title: United in death: the pre-burial origins of Anglo-Saxon cremation urns

Institution: University of Sheffield
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.570164

Period of material Early medieval

Type of material: Pottery

Size of the assemblage used: c.2,000 urns

English archive: North Lincolnshire Museum (Scunthorpe)

Other repository:

Sites:

Abstract: This thesis represents a major re-evaluation of pottery from early Anglo-Saxon (c. AD 425-625) England, examining the pre- burial origins of cremation urns through a variety of methods. It takes a use-alteration approach to the study of urns from two cemeteries, Elsham and Cleatham (North Lincolnshire), and the pottery recovered from 80 non-funerary find-sites that surround them, in order to determine a pre-burial biography for each individual urn. This reveals that the majority of urns were involved in production and consumption activities prior to their use as containers for the dead, whilst ethnographic comparisons indicate that the brewing of beer may have been their primary use in the domestic sphere. It is argued that this pre-burial use was an extremely significant concern in the selection of appropriate vessels for burial. The forms of cremation urns are then considered in light of their functional properties, and each form is placed in the context of pre-burial use. Meanwhile, analysis of the decoration of both the funerary and non-funerary pottery demonstrates that urn decoration was directly linked to pre-burial function, and that individuals may have been buried in plots relating to community, kin or household groups. These results are complemented by an analysis of ceramic fabrics, revealing that ceramic paste recipes were dictated by cultural, rather than geological, constraints. The distribution of these fabrics further supports the notion that the dead were buried in community or household areas. Finally, through detailed petrographic analysis of ceramic fabrics from the cemeteries and non-funerary sites, the geographical origins of vessels are identified, and the catchment areas of these large cremation cemeteries are revealed.

Author: Flammer, Patrik Guido **PhD date** 2014 **123**

Title: Molecular archaeoparasitology as a novel tool for the study of trading and migration networks through history

Institution: University of Oxford
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.711773

Period of material Early medieval

Type of material: Samples for archaeoparasitology

Size of the assemblage used: 144 samples

English archive: York Archaeological Trust; Oxford Archaeology London

Other repository:

Sites: York Archaeological Trust: Viking York, coprolite, c1080; Anglo-Saxon/Anglo-Scandinavian York (Hungate), cesspit sample, c6th- 8th. Oxford Archaeology London: Bristol Finzel's Reach site, medieval waste deposit; excavation 'The Wheatsheaf', medieval midden deposit/latrine; East Oxford Minchery Farm, medieval midden deposit; Oxford Radcliffe Infirmary Graveyard, grave deposits, c1770-1850; mid-Saxon deposits Ipswich, waste deposits; medieval graveyard Ipswich, grave deposits. Oxford Univ: Portsmouth Royal Navy graveyard, grave deposits, c16thC; Silchester Roman latrine deposit, dried latrine sample, c1stC

Abstract: This project represents the first comprehensive study applying molecular and genetic methods to study historical contexts such as migration and trade based on human parasites. Using specially developed techniques, the study focused on parasites with minor symptoms which allowed the infected person to go about their daily business. The combination of state of the art techniques in archaeology, molecular methods and phylogenetic analysis enabled us to develop a novel powerful tool to study historic events. Diseases have a considerable impact on societies. Various publications indicate that human intestinal parasites are commonly found in a variety of archaeological contexts, including latrines, graves and mummies. These parasites can be detected by microscopy which focuses the work on samples which do close association to humans; widespread prevalence and the possibility for reliable microscopic diagnostics suggest that these parasites are an attractive study system for human activities. Infectious diseases have a much short generation time which offers greater opportunity to track historical events at higher resolution. Looking at a range of human parasites, their different life-cycles allowed insight into various aspects of human culture, comparing different origins of the samples allows an estimation of the epidemiological burden of ancient populations. Application of a parallel sequencing approach (MiSeq) enabled building a comprehensive database of sequences from various archaeological sites dating as far back as 3630 BCE. Indepth phylogenetic analysis reveals patterns in the genetic signatures of both coding and non-coding genetic regions, taking various levels of selective pressure into account. This project has produced the oldest pathogen sequence and the most comprehensive database of ancient pathogen sequences.

Author: Jervis, Ben **PhD date** 2011 **124**

Title: Placing pottery: an actor-led approach to the use and perception of medieval pottery in Southampton and its region c. AD 700-1400

Institution: University of Southampton

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.543431

Period of material Early medieval and later medieval

Type of material: Pottery

Size of the assemblage used: Unspecified

English archive: Southampton Museum; Winchester and Hampshire Museums

Other repository:

Sites: Pottery from Southampton and Hampshire sites (see PhD Appendix 2): Nursling; Romsey; Romsey Abbey; St Margaret's Church, Wellow; King's Somborne; Alton; Kingsclere; Abbots Anne; Andover; Holbury; Christchurch; Basingstoke; Long Sutton; Liss; Overton; West Worldham; Havant. Winchester Museum: Old Arlesford; Micheldever; Sparsholt. University of Southampton: Chalton.

Abstract: This study considers the relationship between how we traditionally categorise pottery in archaeological analysis and the ways that it was understood in the past, using a case study from medieval Southampton (Hampshire, UK). In an effort to overcome the chronological fragmentation inherent in the study of medieval archaeology, a long temporal span is considered, from cAD700-1400. Traditionally pottery has been studied from an economic viewpoint and archaeologists have seen it as reflecting patterns of trade and wider economic or social trends. This study takes a nonrepresentative approach to the study of this material. Following work on 'Actor-Network Theory' it is argued that rather than reflecting an over-riding 'social', that engagements with pottery were active in constructing a patchwork of meanings and associations which constructed the medieval 'social'. The study begins with an overview of the state of medieval ceramic studies, demonstrating that the focus on economic issues developed from a need to provenance and date pottery, and that now we are in a position to ask more subtle questions about its role in everyday life. Chapter 2 outlines a history of categorisation studies, both in relation to archaeology and other disciplines, before moving on to introduce the non-representative framework utilised through the remainder of the study. The research questions are posed in chapter 3 and a methodology for answering them is proposed. In chapter 4 the archaeology and history of medieval Southampton is described, the pottery summarised and a résumé of other material evidence is also presented. The next three chapters reconstruct the engagements between people and pottery in medieval Southampton, through exchange, use and deposition. Chapter 8 then takes a regional perspective to these trends, looking at how pottery was exchanged, used and disposed of in Hampshire, other large towns in England and in northern France. Chapter 9 uses these engagements to examine the formation of categories of people through engagements with pottery, before these strands are all brought together in chapter 10, which considers how engagements between people and pottery were active in creating 'the social' in medieval Southampton, with a particular focus on the process of urbanism. Finally the effectiveness of the approaches taken are evaluated and ways forward for future research are outlined.

Author: Lang, Carol **PhD date** 2014 **125**

Title: The hidden archive of historical human inhumations locked within burial soils

Institution: University of York
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.631487

Period of material Early medieval (10thC) and medieval (14th--16thC)

Type of material: Soil samples from human burials for micro-analysis

Size of the assemblage used: 21 samples (English sites)

English archive: Oxford Archaeology;

Other repository:

Sites: Soil samples from around both single inhumations at sites in Belgium, England and Edinburgh, and mass grave burials from Ridgeway, England and France. English samples from: Cistercian priory nr Syningthwaite, York; cemetery at Ridgeway, Dorset. The excavation at Syningthwaite Priory was undertaken by the InterArChive project in 2009 following a previous large scale excavation during which c.100 bodies were located. Ridgeway site was discovered during the construction of the new A354 relief road, north of Weymouth, Dorset. The initial investigation was carried out by Oxford Archaeology in 2009

Abstract: The study of soils within an archaeological context is often limited to the examination of landscapes and the environmental impact anthropogenic interactions have on their formation. Similarly, archaeological research into human inhumations has mainly focused on the rituals surrounding death, whilst determining socio-cultural practices and perceptions. The majority of research into the interactions of human interment and its effects on the surrounding soil has been limited to macromorphological investigation and elemental analysis. Historic human burials and their degradation products have not, to date, been investigated with regards to their impact on soil pedogenic processes. This research explores the hypothesis: soils and sediments immediately associated with the decomposition of human interment serve as valuable and under-utilised archaeological record. Grave soils were analysed using micromorphological and associated techniques to aid in the understanding of pedogenic processes and elemental composition of the grave soils incorporating burial remains. The analysis provided a comprehensive inventory of information regarding the archaeological inhumations within the burial soil through the spatial analysis of soil features in relation to the body. The analyses was undertaken on the undisturbed soil samples collected from around both single inhumations at sites in Mechelen, Belgium, Syningthwaite priory, England and South Leith, Edinburgh, and mass grave burials collected from Ridgeway, England and Fromelles, France, with control areas also being sampled, so effects of human decomposition of soil pedogenesis could be studies. Micromorphological analysis identified distinct patterns of pedality and depositional pedofeature development associated with the skull and pelvis sample regions around the burial, whilst also determining differences in pedogenesis to that of the control samples. SEM-EDS inorganic elemental analysis provided mapping of the degradation products emanating from the burials and migrating into the surrounding soil matrix, with elevated levels in depositional pedofeatures and fine material incorporated in all burials investigated, but particularly in soils from the skull and pelvic regions. Micromorphological analysis of soil thin sections from contexts of archaeological human inhumation can aid the detection of degradation products from the burial and identify artefacts derived from pre-burial treatment, some of which are no longer visible to the naked eye.

Author: Liddy, Lisa Jane Howarth **PhD date** 2015 **126**

Title: Domestic objects in York c.1400-1600: consumption, neighbourhood and choice

Institution: University of York
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.677381

Period of material Medieval

Type of material: Artefacts (all types: pottery, wood, metal, glass, bone, slate)

Size of the assemblage used:

English archive: Yorkshire Museum and the York Art Gallery

Other repository: Collections at York University and York Arch Trust

Sites: Excavations at York by York Arch Trust during the 1970s and 1980s: 16–22 Coppergate (1976–81); Bedern Foundry and the College of the Vicars Choral at Bedern (1973–80); and 46–54 Fishergate (1985–86). Also: Coppergate watching brief (1981–83) and 22 Piccadilly (1987), 1–5 Aldwark (1976–77), 2 Aldwark (1978, 1979–80) and Bedern Chapel; and 9 Blake Street, Stonegate (1975). Also more recent digs, such as the excavations undertaken at St Andrewgate in 1995, 9 Little Stonegate in the parish of St Helen, Stonegate in 1998, 41–49 Walmgate in 2000, the site of the former Henlys Garage in The Stonebow in 2004, 62–68 Low Petergate, partly in the parish of St Michael-le-Belfrey, in 2004–05, and Hungate in 2006–11

Abstract: Focusing on object assemblages as revealed by documentary and archaeological sources, this thesis explores the material culture of 15th and 16th century York households. It examines the range of objects available to York residents while investigating the ways in which they were used and displayed and the values attributed to them. The first chapter introduces the key research questions, concerning the nature of object assemblages, change over time and interdisciplinarity. It discusses the data sets used and contains an overview of the historiography of urban material culture and household archaeology in England. The second chapter explains the methodology adopted, including prosopographical scoping of the individuals whose possessions have informed this work. Using information provided by surviving buildings and probate inventories, the third chapter investigates the size and composition of York houses, focusing on the ways in which object assemblages inform the spaces found within. It argues that rooms were defined by their contents rather than their physical structure or placement, and challenges the definition and timing of “rebuilding” within the city. The fourth and fifth chapters explore various types of value attributed to object assemblages. The fourth chapter concentrates on financial value as assigned in inventories and revealed by discard practices, and advocates consideration of functional value, leading to an examination of specialization of work and organization of production. The fifth chapter focuses on affective value as revealed through testamentary description, proposing an original methodology for applying the history of emotions to material culture. The sixth chapter draws upon findings from previous chapters to present a detailed overview of an individual household at the end of the period: the Starre Inne on Stonegate, c.1580. The thesis concludes by addressing the key research questions, stressing the necessity of an interdisciplinary approach for the study of material culture, leading to a discussion of “neighbourhood”.

Author: Thomason, Richard James Andrew **PhD date** 2015 **127**

Title: Hospitality in a Cistercian abbey: the case of Kirkstall in the Later Middle Ages

Institution: University of Leeds
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.689243

Period of material Medieval

Type of material: Artefacts, animal bone

Size of the assemblage used: Unspecified

English archive: Leeds on the Leeds Museums and Galleries database

Other repository: West Yorkshire Archaeological Service

Sites: Kirkstall Abbey's objects

Abstract: This thesis examines hospitality as provided by Cistercian communities via a case study of Kirkstall Abbey (Leeds, West Yorkshire). It analyses the practices of hospitality as enacted at Kirkstall over a long duration of time, and the place that hospitality had in the life of the community. Hospitality is explored through four concepts: the host, the space(s) of hospitality, the guest, and the welcome. Defining these elements enables the study of how they are represented in a wide variety of archaeological and textual sources. Spiritual writings, documentary evidence, and archaeological evidence are brought together to form a holistic, unified interpretation of Cistercian hospitality in its historical and material contexts. Chapter 1 is a study of Cistercians as hosts, and uses normative and spiritual texts to investigate how Cistercians conceived of hospitality within the framework of their observance. Chapter 2 analyses the spaces of hospitality with special reference to Kirkstall. In order to understand developments at Kirkstall more fully, a survey of Cistercian guest accommodation from the twelfth to sixteenth centuries is presented. Chapter 3 uses Kirkstall's small finds and documentary sources to examine the social status, personal identities, and gender of guests. Chapter 4 assesses the facilities provided within the guest house and what activities took place there, including provision of food. Ultimately it is argued that hospitality was a fully integrated component of Cistercian observance, which allowed monks to connect with the wider world in a practical way while upholding the tenets of their observance.

Author: Green, Kelly **PhD date** 2015 **128**

Title: Constructing masculinity through the material culture of dining and drinking in later medieval England

Institution: University of Sheffield
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.684582

Period of material Medieval **Type of material:** Ceramics

Size of the assemblage used:

English archive: British Museum, the Ashmolean Museum of Art and Archaeology, the Herbert Museum and Art Gallery

Other repository:

Sites: Five study areas were selected as case studies through which patterns in the production and consumption of anthropomorphic vessels: King's Lynn and Norwich in Norfolk; Lincoln in the East Midlands; Coventry in the WestMidlands; Bristol in the South West,

Abstract: The last two decades have witnessed a proliferation of medieval gender studies, yet few scholars have addressed the material culture of masculine identity in a late medieval context. This thesis is a response to this scholarly lacuna, focusing on the active role of anthropomorphic pottery in constructing masculinity in 13th- to 15th- century England. Whilst anthropomorphic vessels have been published in a variety of catalogues and reports, few systematic attempts have been made to assess the range and distribution of these vessels across a wide geographical area. To this end, an intensive review of museum collections, grey literature and published material was conducted across five study areas, centred on Norwich, Lincoln, Coventry, Oxford and Bristol, and their respective regions. It was found that, whilst exhibiting local variability, the anthropomorphic pottery from each study area adhered to the same basic set of themes and motifs. These are divided into two main categories: representations of elite masculinity, in which the knight-on-horseback plays a central role; and more overt representations of virility, expressed through the depiction of bearded men and phallic decoration. Whilst it was found that anthropomorphic vessels were not restricted to any particular site-type or social demographic, their distribution demonstrates a strong association with the commercial environs of medieval towns and ports. It is argued that these vessels, collectively, formed part of a cultural package that emerged in England during the 13th century, at a time when new forms of urban masculinity were competing with traditional understandings of what it meant to be a man in medieval society. This was, moreover, a package that placed women at the margins of the social aspects of drinking, reflected in the overwhelming preoccupation with masculine imagery on serving and drinking vessels, to the virtual exclusion of female attributes.

Author: Rohde, A **PhD date** 2019 **129**

Title: The English Coinages of William I (1066-1087) and William II (1087-1100) and their Implications for our Understanding and Public Representation of the Early Norman Period

Institution: Nottingham University via email

Period of material Medieval

Type of material: Coins

Size of the assemblage used: Unknown (text unavailable)

English archive: Unknown (text unavailable)

Other repository:

Sites: In-depth catalogue and primary analysis of the entire corpus of William I and William II coins (1066-1100) in public institutions in England

Abstract: (Not available)

Author: Salvagno, Lenny **PhD date** 2015 **130**

Title: The neglected goat: a methodological approach to the understanding of the role of this species in English medieval husbandry

Institution: University of Sheffield

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.695994

Period of material Medieval

Type of material: Faunal remains

Size of the assemblage used: 157 sheep and goat specimens

English archive: Fort Cumberland English Heritage; King's Lynn?

Other repository:

Sites: Assemblage from King's Lynn; Flaxengate; Woolmonger Street/Kingswell Street, Northampton

Abstract: The study of the goat has been largely disregarded by British archaeologists, partly because there is a methodological problem related to the difficulty of distinguishing goat remains from those of the more common sheep, and partly because the relative rarity of this species during the Middle Ages has contributed to the perception that this animal was not important. Despite the fact that different methodological approaches have been proposed, problems still affect our ability to correctly differentiate sheep and goat bones. The most commonly used approach relies on morphological traits that have been established by analysing goat specimens from many different parts of the world, and not all of them may necessarily apply to British populations. In addition, these criteria are based on morphological differences whose assessment may be highly subjective. The development of a more objective methodology is of paramount importance in order to address the various historical and archaeological questions concerning the role of the English medieval goat. For instance, why is the goat commonly recorded in the Domesday Book when it appears to be so scarce in the contemporary archaeological record? Is it under-represented in the archaeological record or over-represented in the Domesday Book? Why is the goat, when identified in English medieval animal bones assemblages, almost exclusively represented by horncores? This study provides a new methodology that is based on a combination of two approaches: morphological and biometric. Through the study of modern reference material, a short-list of reliable morphological criteria has been defined and a new biometrical approach focused on translating, whenever possible, morphological differences into Biometrical Indices, has been tested for a variety of mainly post cranial bones. This has permitted the development of a more objective tool for the assessment of archaeological sheep/goat identification. The new protocol has then been then applied to three English sheep and goat medieval assemblages so that a reassessment of the role this animal played in the Middle Ages could be carried out. The results obtained have confirmed what many researchers have previously observed: the goat was not a very common animal. When identified, it is mainly represented by horncores, which are more numerous than those of the sheep; when postcranial bones are considered, sheep by far outnumbers goat. It is likely that the abundance of goat horns is a consequence of an international trade in goat skins (containing horns) while only a relatively small number of goats lived on British soil, probably to be used for small scale household consumption.

Author: Foster, Hayley Jane **PhD date** 2016 **131**

Title: A zooarchaeological study of changing meat supply and butchery practices at medieval castles in England

Institution: University of Exeter
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.716763

Period of material Medieval

Type of material: Faunal remains

Size of the assemblage used: 2,305 bones (Edingham)

English archive: Historic England stores (Porchester, Edlingham and Beeston Castle animal bone assemblages)

Other repository:

Sites: Zooarchaeological assemblages that were analysed to conduct this research were three castle sites: Edlingham Castle located in Northumberland, Portchester Castle in Hampshire and Beeston Castle in Cheshire. Edlingham Castle was excavated between 1978 and 1982 by the Department of the Environment, the bone is unpublished

Abstract: This thesis investigates the changing meat supply and butchery practices at medieval castles in England. The analysis represents a departure from prevailing zooarchaeological butchery studies in that it considers the importance of analysing butchery patterns to gain a better understanding of social status, diet and changes in how animals were exploited over time and in various geographic locations in England. This research highlights the potential of butchery studies and reveals previously unestablished information about how butchery was carried out, how meat was supplied and the practical and social reasoning behind why animals were slaughtered and consumed in a certain way. A butchery methodology was implemented for identifying significant patterns detailing where butchery marks were occurring on bone. The methodology was tested on assemblages from three castle sites: Edlingham Castle, Portchester Castle and Beeston Castle. The methodology is further carried out in the form of assessments for comparison, on animal bone assemblages from medieval urban sites in Newcastle, Winchester and Chester. The methodology is successful in showing that analysing butchery practices of an animal bone assemblage, has the potential to reveal previously unestablished information about past butchery practices and consumption patterns. High status medieval castle assemblages predominately show a professional style of butchery, however this is not always the case. A key characteristic of this style is the longitudinal division of the spine of a carcass. This thesis hypothesises that a castle in close proximity to an urban area would display a professional style of butchery and therefore would likely have a significant amount of dressed carcasses brought to the castle from an urban centre. However, location is not the only variable to take in to consideration. This research shows that the level of status of a castle is also an essential factor to consider. Aspects of this research can be implemented as an extension of existing methods available to zooarchaeologists in order to gain a better understanding of butchery practices and social status. Issues highlighted by the case studies in question are explored and ideas for future research are suggested.

Author: Maccarinelli, Angela **PhD date** 2020 **132**

Title: The social and economic role of freshwater fish in medieval England: a zooarchaeological approach

Institution: University of Sheffield
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.823928

Period of material Medieval

Type of material: Faunal remains (fish)

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available) (data from abstract)

Other repository:

Sites: Eleven English sites of different status and type (castles, religious establishments and urban sites)

Abstract: Historical sources report how some species of freshwater fish were considered - from the 11th to the 15th c. AD - as a luxury food in England. The high retail price associated with species such as pike, salmon and sturgeon, as well as restrictions of fishing rights on rivers, estuaries and natural and artificial ponds demonstrate the role of these species as symbols of social privilege. The value of other freshwater and estuarine species, such as Cyprinidae and eel, is more complex and was associated with their size or source of fishing (fishponds). By analysing 11 English sites of different status and type (castles, religious establishments and urban sites), this thesis evaluates the extent to which the archaeological evidence supports the documentary sources. In particular, species selection and fish size are investigated as potentially meaningful variables. By and large, the historical information is supported but many further details are provided. Higher proportions of freshwater fish are found at high status sites. The size of a selected number of freshwater and migratory species is consistently larger in castles and distributed across a wide range of measurements. This suggests a managed use of the freshwater water resources and the availability of fresh fish throughout the year, probably as a consequence of the tenure of private fishponds. In religious establishments, the evidence of high status is less pronounced than in castles as widespread meat avoidance led to a different way to manage fish resources. The archaeological evidence from towns suggests an overall lower status but is also indicative of the complex and diversified social background of the urban dwellers. It is concluded that freshwater fish represent a valid indicator of high status in medieval England, though different lines of evidence - such as taxonomic frequencies and diversity, as well as fish size and age - need to be considered for sound archaeological interpretation.

Author: Margetts, A. **PhD date** 2020 **133**

Title: The wandering herd: the medieval cattle economy of South-East England, c.450-1450

Institution: University of Exeter
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.818690

Period of material Medieval

Type of material: Faunal remains?

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites:

Abstract: The pastoral identity of the South-East is synonymous with the economy of sheep pasture and the medieval right of swine pannage made famous by iconic images of the South Downs and the evidence presented by Domesday. Such strong perceptions could, however, mask a pastoral heritage in which a significant part was played by cattle. This aspect of medieval pastoralism is traceable in the region's historic landscape, documentary evidence and excavated archaeological remains. Past scholars of the South-East have been so concerned with the importance of medieval sheep, and to a slightly lesser extent pigs, that no systematic examination of the cattle economy has ever been undertaken. This thesis explores the categories of evidence highlighted above as well as excavations undertaken by the author. One of these, the Hayworth (West Sussex), comprised an early seasonal pasture which developed during the 12th and 13th centuries into a specialised cattle ranch known as a vaccary. Vaccaries are most often associated with wild northern uplands and expanses of Forest and Chase. Here they comprised leased pastures producing beef stock (herd wicks), milk and cheese (dairies) and the draught oxen necessary for medieval agriculture. Toponymic and documentary evidence indicates the presence of comparable as yet unexplored livestock establishments within the South-East and by adopting a multi-disciplinary approach these specialised settlements are examined. This study represents a deep exploration of the medieval cattle economy, especially its importance within the evolution of medieval society, settlement and landscape. Nationally, medieval cattle have been one of the most important and neglected aspects of the agriculture of the medieval period. As part of both a mixed and specialised farming economy they have helped shaped the countryside we know today.

Author: Townend, Peter **PhD date** 2017 **134**

Title: The archaeology of the Monastic Order of the Gilbertines

Institution: University of Sheffield
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.739869

Period of material Medieval

Type of material: Finds

Size of the assemblage used: Unspecified (listed no. boxes)

English archive: Lincoln City Museum

Other repository:

Sites: Lincoln Museum Archive: artefacts from excavation and surface collection at Haverholme, North Ormsby, Bullington and Sempringham. This archive consists of 138 boxes of mixed artefacts from the 1961-4 Jones excavations at Haverholme, 16 boxes of pottery and animal bone from Dornier's 1966 excavations at North Ormsby, 3 boxes collected from Bullington between 1976 and 1980, examples of pottery, quern stones and ceramic building material, collected by Hassock from Catley in 1980, and 81 boxes of mixed artefacts from Cope-Falkner's surface collection at Sempringham between 2001-2003

Abstract: The Order of St Gilbert of Sempringham was founded around 1130 and was notable both for its double houses, containing canons and nuns, and the claim of later historians that it was the only truly 'English Order'. Rose Graham and Brian Golding have studied the history of the Gilbertines, however the archaeology of the order has never been comprehensively researched. Of the original 27 monastic houses, 13 have been destroyed or have had their original monastic plans obscured by later buildings. For the remaining 14 houses, there is good archaeological evidence surviving. Using this data, and especially the elements that enable the spatial reconstruction of each site, this thesis focuses on establishing the layout of the monastic buildings and precincts. The thesis takes a holistic approach to the study of the subject utilising a range of sources including data from excavation, geophysical survey, topographic survey and aerial photography. The thesis recreates the layouts of double and single houses in order to understand the relationship between the men and women of the Gilbertine order. It also identifies and addresses the transition from the Gilbertine double house to the prevalence of the single house following the death of St Gilbert c.1190 and the order's subsequent decline. The study argues that the Gilbertine order formulated a number of distinctly Gilbertine forms of monastic layout, usually related to their distinctive role of accommodating both men and women, which are mostly visible on the sites of double houses in the first instance. This distinctive style was continued to a less extent in the foundation of later single houses through the recurrent placement of cloisters to the north of the priory church.

Author: Krakowka, Kathryn **PhD date** 2015 **135**

Title: Understanding violence in medieval London: an examination of the skeletal evidence

Institution: University of Oxford
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.740788

Period of material Medieval

Type of material: Human bone

Size of the assemblage used: 764 skeletons

English archive: Museum of London

Other repository:

Sites: Seven collections from six distinct sites were examined for this research from across medieval London. The collections include the three parish cemeteries of St Nicholas Shambles (GPO75), St Lawrence Jewry (GYE92), and St Benet Sherehog (ONE94), the two religious houses, Blackfriars (PIC87) and St Mary Graces (MIN86), and the two cemeteries from the medieval hospital and religious house of St Mary Spital (NRT85 and SRP98)

Abstract: It is often presumed that the medieval period was an exceptionally violent one. But, previously, this idea has predominately been based on historical evidence of violence. As this data is subject to numerous biases based on past perception of what connoted criminally violent behaviour, this assumption of excessive medieval violence can be called into question. This study attempts to rectify this problem by adding evidence of violence from the skeletal record, helping to create a more well-rounded picture of medieval violence. In total, data from over 6,000 skeletons, representing six different sites from medieval London, were analysed for evidence of violence-related injuries. The skeletal evidence was then interpreted using an approach that integrates both the historical evidence and cultural patterns of violence. The overall findings suggest that violence was prominent and affected all aspects of medieval London society, but how that violence was characterised depended on an individual's sex, age, social status, and century of life.

Author: Penny-Mason, Bennjamin James **PhD date** 2020 **136**

Title: Requiem for the ChIldren: the bioarchaeology of non-adult life course morbidity and maturation in Late Medieval and Tudor England, c. 1450-1600

Institution: Durham University

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.818484

Period of material Medieval

Type of material: Human bone

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites:

Abstract: This study employs life course theory to palaeopathological evidence of morbidity from skeletons, and in doing so, endeavours to uncover new insights about the lives of medieval children in England. This research explores life course theory, through a bio-historical approach, to non-adult bioarchaeological evidence. Through the implementation of a holistic research approach, this study aims to address an important gap in our knowledge of childhood in the past, as well as demonstrate the value of engaging with – and integrating approaches from – multiple disciplines. This research examines the prevalence of skeletal disease in non-adults (in this study ≤25-years-old) in England between AD 1200 and 1700. Data for 3,466 non-adults from 146 later medieval sites and an additional 753 non-adults from 41 Tudor sites were collated from published and unpublished skeletal reports and analysed for evidence of skeletal changes reflective of disease. It was observed that, adopting a life course perspective was vital for understanding the lived experience of childhood in the past. It was noted that evidence of morbidity during childhood (≤11-years-old) was low, potentially indicating a period of effective childcare. At around12-16-years of age the transition into youthhood occurred and this was accompanied by a change in morbidity patterns. It was also noted that patterns of morbidity in the life course changed according to different scales of analysis – such as regional, temporal, social status, urbanism. There was also potentially a difference in morbidity and burial evidence between later medieval and Tudor childhood. Evidence of violent trauma suggests that youths might have participated in warfare activities from the age of 14-17- years-old. Finally, the approach of composite life course analysis revealed that progressive tuberculosis was likely to have been a significant childhood experience, during which children were cared for by their familial units.

Author: Rutterford, Joanna **PhD date** 2019 **137**

Title: A neglected disease: perspectives on living with arthritis, past and present

Institution: University College London
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.772019

Period of material Medieval

Type of material: Human bone

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Anglo Saxon and Medieval assemblages found in Norfolk

Abstract: This thesis considers and evaluates the efficacy of methods and approaches used to explore the presence and impact of disease in the past and the present. It demonstrates the breadth of information available when multiple disciplines and perspectives are considered concurrently, and highlights the areas where the effects of disease on past societies remain invisible. In this thesis, arthritis is considered from three different perspectives, the first of which is the clinical understanding of the disease. Modern data and theories relating to the causes and distributions of joints diseases are explored, followed by the historical understanding of disease and changing theories and terminology. Both modern and historic treatments are also considered, as well as the social and economic impact of the disease. In addition how arthritis relates to the concept of disability, both modern and historic, is considered. The second perspective explores archaeological evidence for the presence of arthritis in the past, in the form of a case study analysing two samples from Anglo Saxon and Medieval assemblages found in Norfolk, UK. Finally, the cultural representation of joint diseases are discussed, considering their presence in works of art and references in literature. Joints diseases form a category of some of the most disabling conditions, of which osteoarthritis is the most prevalent in both modern and historic populations. The cultural record is however liable to underestimate its presence, and instead place more emphasis on conditions such as rheumatoid arthritis, which may be more visible. The costs, both direct and indirect, are high for these conditions today, and are likely to have been so for past societies, although evidence for this remains elusive. It is necessary therefore to consider joint disease from a multidisciplinary perspective, in order to gain a broad understanding of its impact.

Author: Burrell, C. L. **PhD date** 2018 **138**

Title: Skeletal variation as a possible reflection of relatedness within three medieval British populations

Institution: Liverpool John Moores University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.740051

Period of material Medieval

Type of material: Human bone

Size of the assemblage used: 977 bones

English archive: Gloucester City Museum, for the use of the St Owen's Church Collection

Other repository: Liverpool University (Poulton Chapel Collection); Trust of the Norton Priory Museum and Gardens

Sites: Medieval cemeteries from the Medieval Poulton Chapel, St. Owen's Church and Norton Priory Collections

Abstract: Nonmetric traits (NMTs) are often used by osteoarchaeologists in the study of human variation. Some NMTs are affected by environmental factors whereas others are genetic in origin. Such genetic variants have long been used to support the hypotheses on the history and divergence of human populations suggesting that some population groups can be genetically distinguished. However, when genetic NMTs occur in higher than expected frequency these can be interpreted as possible indicators of relatedness. This method is applied to a sample of 977 individuals from the Medieval Poulton Chapel, St. Owen's Church and Norton Priory Collections, U.K. One hundred and twenty-six cranial and postcranial NMTs were examined to determine: 1) the prevalence, 2) whether there are significant differences between the sexes and/or by age category, 3) if there is variation in mechanical and genetic NMT frequency between the three samples and, 4) to explore possible familial relationships through hierarchal cluster analysis and burial spatial distribution. It is thought that family members are often buried near one another, suggesting that individuals sharing similar genetic NMTs would be buried within close proximity to each other. This thesis has revealed the frequency of 126 NMTs for each sample. No significant differences were reported between the sexes at Poulton Chapel whereas significant differences were noted at St. Owen's Church and Norton Priory, especially for NMTs considered genetic in origin. For all samples, significant differences were found among the age categories. Intra-populational differences were explored between the three samples. The results of these comparisons highlight that 60 NMTs are shared between the Poulton Chapel and Norton Priory Collection, while St. Owen's Church only shares few traits with both sites. This suggests a probable geographical north-south divide between the three sites. Finally, the hierarchal cluster analysis identified probable familial relationships for the Norton Priory sample. This is supported by the burial spatial distribution and historical documentary evidence. Unfortunately, this analysis was unsuccessful for St. Owen's Church with limited results for the Poulton Chapel sample. Future research is required to incorporate aDNA analysis to confirm the likelihood of familial links within these sites, supporting the use of certain NMTs is the use of establishing familial relationships.

Author: Kingdom, M. **PhD date** 2019 **139**

Title: The past people of Exeter: health and status in the Middle Ages

Institution: University of Exeter
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.783965

Period of material Medieval

Type of material: Human bone

Size of the assemblage used: 463 skeletons

English archive: Unknown (text unavailable; data from abstract); Exeter Museum?

Other repository:

Sites:

Abstract: This thesis explores the skeletal health and socio-economic status across Exeter's medieval population. Excavation and historical sources illustrate the founding and development of Exeter as a city. However, little is known about the people who made that development possible, those who lived, worked and died there. The presence of a large collection of human skeletal remains (n=463) from Exeter is particularly important, considering that bone frequently does not survive well in the acidic soils of Devon. The analysis of this large collection of skeletal remains, from different periods and burial locations across medieval Exeter, is unparalleled. Combining the osteological analysis with archaeological and historical data, has enabled this study to form a synthesized and comprehensive picture of Exeter's medieval past, greatly increasing our knowledge of the health and status of this population. It was observed that during the Late Anglo-Saxon period, the less urbanised population of Exeter had an adequate diet supplemented with marine resources. They had few indicators of skeletal stress, but a lower age-of-death profile than the later-medieval population. The differences seen in skeletal health between Exeter's later-medieval groups were in no way marked and more marginal than expected, considering the differences in burial location and type. Although, the females buried at the Dominican friary and St Katherine's Priory do appear to have led a more genteel and less physically demanding life, whilst a more diverse population were buried at later medieval Cathedral Green. Overall, the majority of individuals studied from Exeter's medieval population had adequate to good nutrition, health, status and longevity.

Author: Saunders, Emma Louise **PhD date** 2020 **140**

Title: Femoroacetabular impingement and cam morphology: contributions to bioarchaeology and forensic anthropology

Institution: Cranfield University https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.818389

Period of material Medieval

Type of material: Human bone

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Wharram Percy collection

Abstract: Femoroacetabular impingement is a clinical disorder of the hip caused by premature contact between the femur and the acetabulum. A lead cause of this condition is cam morphology, additional bone growth on the anterior aspect of the femoral head. Cam morphology has been associated with physical activity due to its high prevalence rates in athletes compared to non-athletes. A link between non-metric traits of the femur, particularly; Poirier's facets, plaque and cribra, and cam morphology has been suggested due to their shared location and suggested aetiology. Osteitis pubis, an overuse syndrome of the pubic symphysis, is believed to be a compensatory injury of femoroacetabular impingement. The overall aim of this study was to determine the contributions of femoroacetabular impingement to the disciplines of bioarchaeology and forensic anthropology, with regards to femoral non-metric traits analysis, activity reconstruction and awareness of conditions that may affect the formation of biological profiles. To achieve this, this study aimed to establish if there is a link between cam morphology and non-metric traits of the anterior aspect of the femur. This would provide further understanding of the respective/joint aetiologies through the use of multidisciplinary literature. It also aimed to determine if the development of cam morphology is linked to occupational physical activity. Additionally, this study looked to determine if any osseous changes are present in individuals with femoroacetabular impingement in association with cam morphology, to allow the identification of symptomatic individuals when the presence of clinical information is not available. Finally, it also aimed to determine if there is a link between cam morphology and osteitis pubis at the pubic symphysis. This would contribute to both bioarchaeology and forensic anthropology, by highlighting a condition which may impact an area commonly used for the age estimation. Two skeletal collections, the Wharram Percy collection and the Luís Lopes Identified Skeletal Collection, and a clinical comparison sample were utilised. These collections were selected due to presence of contextual information regarding lifestyle and occupation in different forms. The clinical comparison sample consisted of 3D volume ii rendered CT models of individuals being investigated for femoroacetabular impingement and a control sample. Non-metric traits of the femur and commonly used clinical measures to determine the presence of cam morphology were recorded on all samples. Recording criteria for osteitis pubis was developed and applied to the pubic symphysis of the two skeletal collections. Comparisons of these measurements were made within and between the samples. The results of this study have shown there is a link between Poirier's facets and plaque with cam morphology. Through the use of contextual information, it is recommended this association is a functional adaptation. There was no association between cam morphology, alpha angle size and occupational physical activity groups in adults. It is suggested cam morphology is therefore a better indicator of activity levels, or other extrinsic factors, requiring additional stability at the hip during skeletal maturation. No clear osseous indicators of the presence of FAI due to cam morphology were identified. Therefore, it is not possible to identify symptomatic individuals through skeletal changes alone. There was also limited evidence of a link between osteitis pubis traits and alpha angle size. Although eburnation could be an indicator for the later stages of this condition, however, there is the requirement for further study to confirm this.

Author: Tallyn, Ashley Elizabeth **PhD date** 2014 **141**

Title: Quality of life in medieval monasteries and nunneries

Institution: Durham University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.614441

Period of material Medieval

Type of material: Human bone and artefacts

Size of the assemblage used: 1,344 individuals; plus c. 1,000 artefacts

English archive: Winchester Museums for Nunnaminster archive; Potteries Museum for access to Nunnaminster skeletal population as well as the Hulton Abbey; Newham Heritage Services, Newham Archives and Museum of London for access to the Stratford Langthorne archive

Other repository: Mike Griffiths & Associates for Sinningthwaite archive; York Archaeological Trust for archive for Clementhorpe and St Andrew's Priories; Humber Archaeological Services and Biological Anthropology Research Centre at University of Bradford for Hull Austin Friars' archive; Elstow Abbey archive; Bristol Archaeological Services for St James' Priory collection

Sites: See PhD Table 3.1: The eight sites identified for this study are Clementhorpe Priory, York; Elstow Abbey, Bedford; Hull Austin Friars, Hull; St Andrew's Priory Fishergate, York; St James Priory, Bristol; St Mary's Abbey (Nunnaminster), Winchester; Sinningthwaite Priory, Bilton-in-Ainsty; Hulton Abbey, Stoke-on-Trent

Abstract: The purpose of this thesis was to explore the possible differences of quality of life in medieval monastic institutions based on the sex of their inhabitants, their location, and/or their ideology. The use of the term quality of life, however, is not commonly used in reference to archaeological or historical populations. This thesis explores the use of the term quality of life in a variety of fields and evaluates its use in relation to the populations being studied as well as the socio-cultural and theological implications of the medieval society that would have shaped these individuals' lives. Eight monastic sites were chosen based on their adherence to the requirements of the research, in terms of location and ideology, as well as the availability of skeletal remains from the sites. The presence or absence of previously identified health indicators were compared, as were the proportion of different types of artefacts and contemporary financial data, to assess any differences in quality of life. It was found that there were differences between the various types of sites, but that wealth appears to have had a greater influence on quality of life than the sex of the inhabitants, location, or ideology of a particular monastic institution. These factors could play an important and influential role, but that the wealth of the institution most likely played a larger role. The conclusion of this research is that the term quality of life is appropriate when used in relation to archaeological or historical populations, but that the definition of it must be explicitly stated. It also concludes that individuals entering into medieval monasteries and nunneries could expect to have a higher quality of life than a lay person, but that their own experience would have been heavily influenced by the wealth of the particular house to which they belonged.

Author: Radini, Anita **PhD date** 2016 **142**

Title: Particles of everyday life: past diet and living conditions as evidenced by micro-debris entrapped in human dental calculus, a case study from medieval Leicester and surroundings

Institution: University of York

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.714420

Period of material Medieval

Type of material: Human remains

Size of the assemblage used: Unknown (full text not available)

English archive: Unknown (full text not available)

Other repository:

Sites: Populations from medieval Leicester (St Michael's and St Peter's, Leicester, c. 1250-1450 AD) and its surroundings (Empingham, Rutland and Rothley, Leicestershire, c. 500-900 AD)

Abstract: Dental calculus, or tartar, is commonly found on archaeological skeletons since its inorganic nature remains stable even after many thousands of years. Dental calculus has long been seen as a valuable source of information on the nutrition and dental hygiene of past populations. As calculus forms in the mouth food consumption has been the major focus of research conducted so far, looking almost exclusively at dietary remains entrapped in it. The current PhD approaches the human mouth as a 'depositional environment', in which solid microscopic debris of different origins can become entrapped in the dental calculus matrix during its formation. The overall potential of dental calculus as a reservoir of dietary and non-dietary debris, which can offer insights to the natural and anthropogenic environment, is explored. Populations from Medieval Leicester (St Michael's and St Peter's, Leicester, c. 1250-1450 AD) and its surroundings (Empingham, Rutland and Rothley, Leicestershire, c. 500-900 AD) were used as the study material. A wide range of microscopic remains of staple food crops were retrieved during analysis together with luxury foods, among others, as well as non-dietary debris, potentially from the indoor environment and craft activities, such as wool and plant fibres. Diachronic changes in their occurrence were detected between the Early and Later Medieval periods, often statistically significant, implying important shifts in life quality during Medieval times. The originality of this research and its contribution to the field lies in the fact that it demonstrates the potential of dental calculus microdebris at a population level. The results provide strong evidence regarding the archaeological value of human dental calculus in offering new insights not only into diet, but also into past environment and living conditions.

Author: Howsam, Charlotte L. **PhD date** 2016 **143**

Title: Book fastenings and furnishings: an archaeology of late medieval books

Institution: University of Sheffield
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.686510

Period of material Medieval

Type of material: Metal (copper-alloy) artefacts

Size of the assemblage used: 336 artefacts

English archive: English Heritage (collections at Helmsley, North Yorkshire) Museum of London Archaeological Archive

Other repository:

Sites: This thesis explores the archaeological collections held by English Heritage (which primarily derive from large scale Ministry of Works excavations on monastic sites in England) together with published excavation reports, investigating late medieval book fittings which have been archaeologically recovered from English monastic sites

Abstract: Throughout the late medieval period, books were an integral part of religious monastic life, and yet such objects have received little attention from an analytical archaeological perspective, despite the significant quantity of metal book fittings recovered from archaeological sites. This thesis explores the archaeological collections held by English Heritage together with published excavation reports, investigating late medieval book fittings, dating between the mid-eleventh and mid-sixteenth centuries, which have been archaeologically recovered from English monastic sites. This work presents the first typology of these artefacts and considers in detail the many and varied forms of late medieval book fittings. In order to contextualise and give a clear understanding of this material, this study investigates late medieval book production, monasticism, and the types of books housed within monasteries and the locations in which they were used and stored. This research goes on to examine the wider social and cultural contexts of book fittings within late medieval monastic society using pictorial and documentary evidence, and extant late medieval book-bindings and library catalogues, in conjunction with the archaeological material. The themes explored include the types of books on which book fittings were used, the influences of different monastic orders, their geographical distribution and the significance of their deposition, particularly as part of the Dissolution of the Monasteries. By undertaking these methods of investigation, it has become clear that, within the catalogue, different forms of book fittings and styles of decoration were more commonly used in certain regions and by particular monastic orders, and that significant numbers of books were destroyed and their fittings disposed of during the Dissolution in the 1530s both on and away from monastic sites. This research brings together both archaeological and historical approaches to the study of late medieval book fittings, creating an innovative and broad-based study of this particular form of material culture so leading to a new insight into the archaeology of late medieval books.

Author: Schmoelz, Michael **PhD date** 2017 **144**

Title: Pilgrimage in medieval East Anglia: a regional survey of the shrines and pilgrimages of Norfolk and Suffolk

Institution: University of East Anglia
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.716437

Period of material Medieval

Type of material: Metal artefacts

Size of the assemblage used: Unspecified

English archive: King's Lynn Museum and Norwich Castle Museum and Art Gallery(?)

Other repository:

Sites: East Anglia pilgrimage sites

Abstract: This thesis seeks to give an overview of the practice and manifestations of pilgrimage in medieval East Anglia. Unlike previous works on this subject it focuses not on a specific time period or a certain shrine, but attempts to give an overview of every shrine and associated locus within Suffolk and Norfolk (and where appropriate also of locations just beyond these boundaries) from the Anglo-Saxon conversion period to the Reformation. Inherent in this aim is a certain degree of editorial severity to fit the bounds of the format. This thesis seeks to amalgamate approaches and sources from a variety of disciplines, chief amongst them ecclesiastical history, archaeology, art history, landscape archaeology and antiquarian history to present a narrative for each shrine as well as to attempt to identify patterns, trends and changes in devotional behaviour across the region. The thesis comprises detailed case studies of the larger shrines across the region as well as an extensive gazetteer of minor locations and secondary focal points for pilgrimage, such as wells and other landscape features

Author: Watson, Gemma **PhD date** 2013 **145**

Title: Roger Machado: a life in objects

Institution: University of Southampton
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.628672

Period of material Medieval

Type of material: Pottery and glass

Size of the assemblage used: Unspecified

English archive: Southampton M useums

Other repository:

Sites: Objects excavated from his Southampton residence in 1977: Southampton Archaeological Research Committee, tenements 423 and 424 on the corner of Upper Bugle Street and Simnel Street

Abstract: This thesis is the micro-history of Roger Machado, who is best known as Leicester Herald for Edward IV, Edward V, and Richard III, and the senior herald, Richmond King of Arms, for Henry VII. Prior to this thesis, Machado has only been sparsely considered by scholars because he is elusive in the historical record. There is, in the College of Arms, his extant memorandum book, but otherwise, sources referring to him are few and far between. However, in the 1970s, Machado's Southampton residence was excavated, which unearthed a rich artefact assemblage associated with his occupancy. This discovery has allowed for a fresh perspective on Machado's life. This thesis, therefore, uses both documentary and archaeological sources to unlock the man from the records, and consequently, places a strong emphasis on the importance of interdisciplinary research. By pursuing a micro-historical approach that focusses on Machado's engagement with objects, this thesis uses Machado as a window into the world in which he lived. Machado lived through the later years of the Wars of the Roses and through the entire reign of the Tudor dynasty's first monarch, Henry VII. Therefore, his life is well placed to enable this thesis to consider broader themes. The first chapter discusses the micro-historical approach. The second chapter discusses how Machado, as a foreigner, came to work and live in England, how he came to join the exiled Henry Tudor, and examines the herald and Office of Arms in the fifteenth century. The third chapter considers the ceremonial role that Machado and the heralds played at the Yorkist and early Tudor courts. The fourth chapter considers Machado's life and home in early Tudor Southampton, using the objects excavated from his house and others recorded in his extant inventory. The fifth chapter discusses how Machado would have used such objects in dining.

Author: Turnock, Jonathan Andrew **PhD date** 2018 **146**

Title: Landscapes of patronage, power and salvation: a contextual study of architectural stone sculpture in Northern England, c.1070-c.1155

Institution: Durham University

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.761453

Period of material Medieval

Type of material: Stone sculpture

Size of the assemblage used: Unspecified

English archive: English Heritage Helmsley Archaeological Store; Durham Cathedral Priory lapidarium; York Museums Trust

Other repository:

Sites: Fragmentary remains that have been found at ecclesiastical sites and are now stored or exhibited elsewhere in the North-East of England

Abstract: This thesis explores architectural stone sculpture produced in northern England between c. 1070 and c. 1155. It proposes an integrated interdisciplinary approach to sculpture, weaving together documentary sources, art history, architectural history and archaeology, in order to situate the visual material within its historical context and contemporary networks of patronage. In other words, establishing who commissioned sculpture and why. Patrons of sculpture included the secular elite, ranging from royal individuals to minor lords, and religious communities or individual prelates. It is argued that many patrons selected particular motifs and craftsmen to express their lordship, power, and affinities with other patrons. The spiritual functions of sculptural schemes are also explored, especially in relation to church reform movements of the later eleventh and early twelfth century. The thesis demonstrates that the study of sculpture can contribute to a number of key historiographical debates, including the effects of the Norman Conquest, behaviours and conditions during the conflicts of Stephen's reign (1135–54), and experiences of 'church reform'. By establishing a close dialogue between sculptural case studies and written sources, it is possible to highlight discrepancies between the material evidence and historical narratives, and subsequently propose new questions and interpretations. Equally, the study of sculpture and patronage networks provides a wealth of new cultural information that can augment existing historical knowledge. Part 1 charts the development of architectural sculpture from the Norman Conquest until the middle of the twelfth century, identifying patrons and relationships between different sites. Part 2 proceeds to apply these findings in order to explore how sculptural schemes were used to express lordship and power, and reform the behaviours of ecclesiastics and the laity.

Author: Hunt, Sarah J. **PhD date** 2020 **147**

Title: Characterisation and monitoring of acidic emissions from marine archaeological wood

Institution: University College London
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.816068

Period of material Medieval

Type of material: Wooden objects

Size of the assemblage used: 8 samples

English archive: The Mary Rose Museum, Portsmouth

Other repository:

Sites:

Abstract: The marine archaeological collection at the Mary Rose Museum contains wooden and metal artefacts displayed inside the same environment. This project investigated acidic emissions from archaeological wood to evaluate if they could cause chemical damage to the metal artefacts displayed alongside. Thermogravimetric analysis (TGA) was used to quantify biopolymers within sound and archaeological wood from the Mary Rose Museum. In addition to good relative agreement with traditional methods, TGA detailed chemical changes of the biopolymers and interactions with PEG, which could be used to evaluate future treatments. Solid phase micro extraction-gas chromatography-mass spectrometry identified PEG treatment of sound wood near eliminated emissions by acting as an impenetrable barrier. In contrast, PEG treated wooden artefacts from the Mary Rose Museum emitted a greater array of compounds compared to sound oak, including acetic acid and sulphur compounds, which corroded pure lead and silver, highlighting that emissions from archaeological wood can accelerate metal corrosion. However, environmental monitoring inside display cases at the Mary Rose Museum identified no relationship between the presence of archaeological wood and accelerated lead corrosion. Rather, smaller cases had higher acidic concentrations despite the cases being modern and having sodium hydroxide impregnated activated carbon charcoal filters to remove acidic vapours. The causes of corrosion are complex and depend on other factors, such as case materials, filtration systems and surface area. To enable quick risk assessments of display environments, a real-time acetic acid sensor was developed. This self-contained, affordable device used lead oxide coated quartz crystal microbalances, which quickly reacted to acetic acid vapour at ppm concentrations. Moreover, the rate of signal change correlated with volume of acetic acid injected into the test chamber. Therefore, this sensor design has potential to monitor acetic acid build up inside cases and further development is recommended to increase the repeatability of this sensor.

Author: Sanchez Perez, Enrique **PhD date** 2019 **148**

Title: Multifunctional nanocomposites for the conservation of marine archaeological wood

Institution: University of Sheffield
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.792062

Period of material Medieval

Type of material: Wooden spears

Size of the assemblage used: Unspecified

English archive: The Mary Rose Museum, Portsmouth

Other repository:

Sites:

Abstract: Marine archaeological wood often suffers from acidification processes that lead to the degradation of the fibres, threatening the integrity of archaeological artefacts. Iron ions originating from corroded fixtures, nails, or other objects diffuse into the structure of waterlogged wooden artefacts over time, playing a key role in their degradation. The presence of iron ions and oxidised sulphur species in marine archaeological wood has been linked to the formation of sulphur-based acids and to the oxidative degradation of cellulose and hemicellulose. These processes have deleterious effects on the structural integrity of wooden artefacts and pose a major challenge in the long-term conservation of marine archaeological wood. This thesis describes the design, synthesis, characterisation, and preliminary tests of a series of conservation treatments aiming for the sequestration and complete removal of harmful iron species present in waterlogged wood, thus preventing the formation of acidic species. These treatments consist of magnetic nanocomposites which contain iron chelating agents and are encapsulated in a polyethylene glycol-based, thermo-responsive polymer for a safe and controlled application. The iron sequestering capability of the nanocomposites range between 39 and 80 % when tested in aqueous solution. Far IR spectroscopy studies on preliminary treatments on artificial archaeological oak and Mary Rose wood samples indicate that iron ions are successfully removed from the wood by the nanocomposite-laden polymer. These conservation treatments are capable of removing harmful iron ions from marine archaeological wood, and a number of parameters in their preparation can be adjusted to meet the requirements of different artefacts to be treated. The combined magnetic and thermo-responsive properties of these materials allow for a safe and controlled application of the treatments and opens new possibilities in the design of novel non-invasive conservation strategies. While previous conservation treatments aimed to remove the iron ions or to neutralise the acidic species present in the wood, the approach presented here manages to physically remove iron ions from not only the surface, but also from the wood structure. Due to the high tunability of the systems developed, these can be applied for the conservation of many other materials such as stone, paintings, fabric, or leather.

Author: Whatley, S **PhD date** 2021 **149**

Title: Copenhagen, Bristol and their Harbours

Institution: Bristol University, via email

Period of material Medieval to post-medieval

Type of material: Ceramics, clay pipe, metal and wooden artefacts

Size of the assemblage used: 6,000 artefacts

English archive: Bristol Museum, Museum of London, British Museum and Victoria and Albert Museum

Other repository:

Sites: Some rescue archaeology pre PPG-16 excavations, some PPG-16

Abstract: (Not available)

Author: Dawson, Heidi Suzanne **PhD date** 2011 **150**

Title: Unearthing late medieval children: health, status and burial practice in southern England

Institution: University of Bristol

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.539760

Period of material Late medieval

Type of material: Human bone

Size of the assemblage used: 65

English archive: Gloucester Museum, University of Reading, University of Kent.

Other repository: The priory of St Peter and St Paul, Taunton, excavated by Context One Archaeological Services in 2005 prior to development work. St Oswald, Gloucester, excavated in 1967, 1975-6, 1977, 1978 and 1983 (Heighway & Bryant 1999, 47) (the collection has recently been moved to the University of Reading). Canterbury site excavated between 1988 and 1991 by the Canterbury Archaeological Trust, in advance of redevelopment

Sites: Skeletal remains from three monastic sites which were all under the rule of the order of St Augustine. Skeletal remains and archive information from: the priory of St Peter and St Paul, Taunton; the priory and cemetery of St Oswald, Gloucester; and the skeletal remains and archive for the priory and cemetery of St Gregory, Canterbury

Abstract: (Not available)

Author: Banton, M. **PhD date** 2017 **151**

Title: Diarrhoea, dysentery, and the clap: connecting the military lifestyle to literary & skeletal evidence of reactive arthropathy induced by bacterial infections

Institution: University College London

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.790840

Period of material Medieval to post-medieval

Type of material: Human bone

Size of the assemblage used: 306 individuals

English archive: University of Bradford (BARC): access to the Towton assemblage. Oxford Archaeology and Centre for Human Bioarchaeology (MOLA): access to the Greenwich Hospital assemblage. Centre for Human Bioarchaeology (MOLA): access to the Chelsea Old Church and St. Brides Lower assemblages. University of Sheffield: access to the All Saint's Church assemblage.Bournemouth University: access to the Plymouth Hospital assemblage

Other repository:

Sites: Military assemblages were selected based on them having a background of army or naval service. The burial context of several assemblages were mass graves, including remains from the 1461 Battle of Towton and the 1644 Siege of York. The remaining military assemblages were cemetery contexts from the Stonehouse Royal Naval Hospital in Plymouth and the Royal Hospital Greenwich; both date to the late 18th and early 19th centuries. These military assemblages were matched with non-military (control) assemblages with comparable dates

Abstract: Military combatants are frequently exposed to physical exertion, sleep deprivation, deficient diets, and stress, which can all reduce the immune system's ability to ward off infections. Making matters worse, combatants frequently inhabit overcrowded and unsanitary living conditions, which allow bacteria to thrive. As a result of these circumstances, the military lifestyle is associated with increased exposure and susceptibility to infectious diseases. This explains why epidemics are extremely common during times of war, especially in pre-twentieth century conflicts. Though military infectious diseases have been the topic of much research, bioarchaeological contributions have been limited, as most infectious diseases do not cause direct skeletal changes. For example, diarrhoea, dysentery, gonorrhoea, and tonsillitis do not cause skeletal changes, but all are known to have been common among historical combatants. Though direct skeletal changes are not produced, the pathogenic bacteria causing these ailments can trigger reactive arthropathies (arthritic conditions caused by microbial infections), which includes the Spondyloarthropathies. Spondyloarthropathies cause skeletal changes and can be observed in archaeological remains. As such, the present research has chosen to explore the potential consequences of military infectious disease by answering the following question: were reactive arthropathies an occupational hazard to past military combatants? This question is answered through two methods. First, historical research methods were employed to investigate the primary research question and to provide a detailed medical history of the emblematic example of reactive arthropathy, Reactive Arthritis. Secondly, a palaeo-epidemiological study was designed and implemented to understand the prevalence of reactive pathology in military skeletal assemblages; this is a novel bioarchaeological means of understanding the potential impact of military infectious diseases.

Author: Cassels, A. K. **PhD date** 2013 **152**

Title: The social significance of late medieval dress accessories

Institution: University of Sheffield
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.605382

Period of material Late medieval

Type of material: Metal artefacts

Size of the assemblage used: 2,576 artefacts

English archive: The Museum of London; York Archaeological Trust; Winchester Museums; Southampton Museums; The Royal Albert Memorial Museum, Exeter; Plymouth City Museum & Art Gallery; Hereford Museum; Worcester City Art Gallery & Museum; Gloucester Museum Services; Grosvenor Museum, Chester; Northampton Museum & Art Gallery; The Herbert Art Gallery & Museum, Coventry; Leicester Arts and Museum Service; Lincoln Museum; Oxfordshire Museums Resource Centre

Other repository:

Sites: Collections of dress accessories from 15 towns and cities

Abstract: This thesis uses belt fittings excavated from fifteen of the major towns and cities of late medieval England and is the first national survey of dress accessories from the urban centres of this period. This research moves beyond the identification and categorisation of these objects, which have been the traditional foci of studies of this type, to examine the wider social significance of dress accessories within contemporary late medieval society. The themes explored include the regional variation between the assemblages and the significance of this in terms of the expression of regional identities; the changes in production techniques and technology for the manufacture of dress accessories and the related changes in dress and its social perception from the mid-thirteenth century; the significance of dress accessories within a funerary context; the use of the acorn as a repeated decorative motif and the significance of this within the construction, maintenance and manipulation of personal identities; and the use of text on belts and belt fittings and importance of this in the construction of the symbolism of the belt within late medieval society. An interdisciplinary approach is used throughout which combines the material evidence with other forms of archaeological, literary, historical, and art historical evidence in order to place the dress accessories within their wider social context.

Author: Duensing, Stephanie N. **PhD date** 2015 **153**

Title: Taverns, inns and alehouses?: an archaeology of consumption practices in the City of London, 1666-1780

Institution: University of Manchester
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.634915

Period of material Post-medieval (c.1650-1750)

Type of material: Ceramic and glass

Size of the assemblage used: 1,075 glass sherds and 1,864 ceramic sherds

English archive: Museum of London Archaeology and the LAARC in London

Other repository:

Sites: 11 different sites offered for analysis by Museum of London Archaeology (MOLA): outstanding quality at two sites - BAZ05 at 35 Basinghall Street (McKenzie et al. forthcoming) and KIG95 at 15–17 King Street (Blair 2005); contextual historic record of the associated neighbourhood was excellent at another one – NGT00 at the Newgate Triangle on Newgate Street (Watson et al. 2010)

Abstract: This thesis set out to explore the changing nature of consumption patterns in seventeenth- and eighteenth-century London through the analysis of archaeological evidence previously excavated by the Museum of London Archaeology. The aim of this research was to address existing gaps and limitations within the existing methodology related to the excavation and analysis of these environments, to establish a more holistic method of approaching consumption practices from this period, and to explore the complexities which were being performed within the setting of these establishments. To do this, a typological system for artefact classification was developed which enabled the categorization of material by their fabric, form and their associated functions. The distribution patterns of the various types and functions across three sites and five establishments in the City of London were analyzed. The material was then assessed for patterns indicating changes in consumption. Linkages from these patterns are then made between historical themes and theoretical frameworks outlined within the thesis. Particular focus will be given to developing a better understanding of how these venues changed over time based on the degree of variation that can be perceived between the late seventeenth to the late eighteenth centuries. By exploring the character of consumption practices, I will demonstrate how they work together to provide a more complete picture of the complex systems at work. During the course of this research, specific objectives have been achieved and conclusions reached which make original contributions to the wider dialogues surrounding how meaningful patterns of consumption can be perceived and interpreted through material goods from establishments of social or public consumption. The focus on the everyday materials from closed deposits related to clearance episodes (Pearce 2000) from these establishments and their how they relate to emergent and shifting patterns of social trends in consumption is what separates this thesis from other scholarship on these and similar spaces. Significantly, this research differs from the previous examples by attempting to detect social change across a variety of classes and in a variety of different settings, all brought together in relatively modest atmospheres of social and public consumption. This has allowed for both the subtle and the overt shifts in social patterns to be detected, and from there, conclusions are drawn regarding wider social ideology.

Author: Newstead, Sarah Rose **PhD date** 2015 **154**

Title: The oldest alliance: a material exploration of early modern English-Portuguese relationships

Institution: University of Leicester
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.657586

Period of material Post medieval (16th and 17thC)

Type of material: Ceramics

Size of the assemblage used: 3,338 sherds

English archive: Plymouth City Museum & Art Gallery

Other repository:

Sites: Assemblages from nine sites around Plymouth harbour were chosen for research.

Abstract: Social and economic ties between England and Portugal stretch back to the 12th century. Focusing on the 16th and 17th centuries, this thesis traces relationships between the two countries for a period which has received little scholarly attention from historians, adding material culture as a new source of evidence to describe historic Anglo-Luso interactions. Plymouth, UK, holds the largest collection of Portuguese ceramics recovered archaeologically in Britain. These provide a nuanced insight on the breadth of England's consumption of Portuguese goods during the 16th and 17th centuries. English acquisition of Portuguese products is a difficult activity to track in the available documents, as many of these objects flowed into English markets and households unrecorded. Routes and reasons for the trade of these ceramics to Plymouth are discussed with the aim of situating the port within the complex networks of the early modern Atlantic World. The general factors influencing the English acquisition of Portuguese ceramics are also explored. Building upon the ceramic case-study at Plymouth, a broader discussion is presented, engaging with Portugal's material and socioeconomic influence on early modern Atlantic networks with a particular focus on the period of Iberian Crown Union. Beyond the discussion of English-Portuguese interaction, this thesis also provides practical information for the future identification of Portuguese earthenwares recovered archaeologically in the UK. This information includes a form typology and production zone provenance criteria. Finally, the research presented here provides an excellent case-study for the integration of text and material evidence in the study of early modern transnational and transcultural interaction.

Author: Suttie, Neil **PhD date** 2010 **155**

Title: Geomagnetic field archaeointensities from Britain and the application of the microwave palaeointensity method to materials of differing dielectric properties

Institution: University of Liverpool

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.539744

Period of material Post-medieval

Type of material: Ceramics and stone

Size of the assemblage used: 42 samples

English archive: Museum of Liverpool; Museum of London Archaeological Services,

Other repository:

Sites: Kilns: Hindhead pottery kiln; pottery at Brookhill, Buckley; tile kiln from Tylers Green, Buckinghamshire; St John's School, Glastonbury bell-casting kiln; sandstone from glassmaking Bolsterstone near Sheffield; brick from kiln floor, Luneside East, Lancaster

Abstract: The strength of the geomagnetic field is a subject of both scientific and public interest, with the decay over the past 160 years leading to speculation as to whether we are entering a geomagnetic reversal. Prior to 1840, there was no capability for direct measurements of geomagnetic field strength; to investigate the field strength at this time, palaeomagnetic and archaeomagnetic determinations must be made. Here we investigate the strength of the field in Britain over the past 1500 years as recorded by archaeological artefacts including ceramics, brick and burnt sandstone. Results are derived using both microwave and thermal demagnetisation. The theory of microwave demagnetisation is fully explained and equations governing the absorption of energy by an archaeomagnetic sample in a microwave cavity are derived. As a result, the possibility of demagnetising a palaeomagnetic sample using microwaves without significant heating is demonstrated for the first time. Geomagnetic field archaeointensities from seven British sites are reported. A meta-analysis of global archaeointensity and palaeointensity data from 1590 to 1990 reveals that significant bias has been introduced to field models through inconsistent error estimation. It is shown that the principle source of uncertainty in archaeointensity should be considered as systematic, rather than experimental and that data of arbitrarily high precision can only marginally increase our knowledge of the field. Correspondingly, it is argued that while large data sets are informative enough to constrain the evolution of the geomagnetic field, archaeointensity can only have a limited application as an archaeomagnetic dating tool. It is demonstrated that when the uncertainties are properly quantified, the global data implies that the recent decay of the dipole, evident in magnetic observatory data from 1840 until the present day, is part of a longer term trend, starting as early as 1600.

Author: Gordon, Rebecca Louise **PhD date** 2016 **156**

Title: Feeding the city: zooarchaeological perspectives on urban provisioning and consumption behaviours in post- medieval England (AD1500 - AD1900)

Institution: University of Leicester

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.689363

Period of material Post-medieval

Type of material: Faunal remains

Size of the assemblage used: Unspecified

English archive: Chester Museum?

Other repository:

Sites: Chester's Roman Amphitheatre, Nicholas Street Mews and 12 Hamilton Place (see PhD Appendix 1). Chester's Roman Amphitheatre: large excavations in 1965 for four years by F. H. Thomas. In 2002, English Heritage and Chester City Council conducted a collaborative excavation in 2004-2005. Nicholas Street Mews: excavated by Grosvenor Museum in 1988 prior to house building in the area. 12 Hamilton Place: excavated in 1994 for Chester City Council's Archaeological Services by a team managed by GTMS Ltd and Gifford & Partners Archaeological Consultants

Abstract: Zooarchaeological enquiry of animals and their products in the post-medieval period has largely been disregarded in British archaeology. Yet, there is multitude of ways in which animals can inform upon the profound social and economic changes that took place during this era. This research reveals how fruitful the study of post-medieval animals can be in improving our understanding of: the meat trade; agricultural economies; urban history; industries; livestock 'improvement'; urban culture; and food consumption in England. The thesis explores the transformations in the production and consumption of animals and animal products by drawing upon primary and secondary faunal data and historical accounts. Primary investigations of animal bones excavated from Chester were analysed along with secondary faunal data from the city, in order to undertake a detailed zooarchaeological analysis of an urban centre, and to consider the potential challenges of undertaking post-medieval faunal analyses. Zooarchaeological data from urban sites in England were also sourced from grey literature and published reports to conduct a regional review of animal bones from the post-medieval period. These investigations showed that innovations in agriculture and the industrialisation of food production had a considerable effect on the size and shape of livestock, which coincided with the introduction of imported breeds and morphotypes. Animals provisioned to towns and cities reflected regional husbandry practices as well as urban supply and demand for various meat and animal products for consumption, crafts and industries. The diversity of wild mammals and birds on domestic sites demonstrated the increasing wealth generated in industrial Britain and the emergent middle classes' desire to emulate elite tastes. Other evidence points to the environmental repercussions that hunting, urban expansion and industrialisation had on the proportion of wild species.

Author: Valme, Sascha-Ray **PhD date** 2019 **157**

Title: Puberty and adolescent health in post-medieval England (1550-1850)

Institution: University of Reading

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.800350

Period of material Post-medieval

Type of material: Human bone

Size of the assemblage used: 460 skeletons

English archive: Unknown (text not available) (data from abstract)

Other repository:

Sites:

Abstract: Adolescents are a dynamic and underrepresented part of the archaeological record. Through the use of osteological, historical, and archaeological sources this project aims to assess the health of post-medieval adolescents, aged 10 to 25 years. While there has been recent research into puberty in medieval and roman England, the post-medieval period has been largely untouched. This study sets out to fill in this gap in research by providing the first large scale analysis of post-medieval adolescent health and puberty and to address the changes in urbanization and industrialization, and the effects that they would have on a child growing into adulthood. A primary sample of 460 skeletons was examined for age, sex, pubertal stage, stress, and pathology. While a secondary reference database was established with 424 adolescent aged individuals from published and unpublished sources. An examination of the 6 pubertal stages indicated that there was an average overall delay in pubertal growth in both boys and girls of 2 years to modern studies. Additionally, the average age of menarche for post- medieval females (16.2 years) to Modern (12.6 years), Medieval (15 years), and Roman (14.1 years) time periods were recorded. In support of historical sources, London was found with the highest rates of rickets reflecting the worsening air pollution. Naval sailors were found with the highest rates of tuberculosis and maxillary sinusitis suggesting that ship based life was more dangerous than commonly expected. The results indicated that the semi-urban cohort had the least exposure to pathology and ultimately are an unexplored demographic in the population that is beginning to arise in the period. Overall adolescents in the post-medieval period had more pathology than the medieval period and the stresses indicated that while DEH was present that these adolescents were likely well enough to survive childhood before encountering further environmental difficulties. This research provides the most comprehensive study of adolescent morbidity and mortality in post- medieval England to date and it has provided new insights into post-medieval puberty and health while presenting suggestions for further work.

Author: Yorke-Edwards, Victoria **PhD date** 2020 **158**

Title: Obesity in London, 1700-1850: the evidence

Institution: University College London
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.807795

Period of material Post-medieval

Type of material: Human bone

Size of the assemblage used: 282 skeletons

English archive: 227 skeletons remain in the crypt as a research collection under the auspices of the Museum of London and are the assemblage from this site sampled in this study.

Other repository:

Sites: Two assemblages from the parish of St Bride's, London, comprising the collection of named burials from the Crypt and a sample from the Farringdon Street burial site. Unfortunately, issues with preservation and with the original excavation of specific skeletal elements required for the analysis meant that the original wish to carry out the comparison solely within one parish was untenable. Therefore, two further sites were added at the conclusion of the pilot study: Cross Bones and Chelsea Old Church (see PhD Table 6.3)

Abstract: This study explores the potential of macroscopic osteoarchaeological techniques to reveal the presence of obesity in 282 skeletons drawn from 1700-1850 London. Obesity-related pathology (diffuse idiopathic skeletal hyperostosis and distal- interphalangeal, knee and hip osteoarthritis) and bone geometry (femoral cross-sectional measurements and 1st lumbar vertebral area) are compared in assemblages of high and low status, with the hypothesis that those of high status were more likely to have had an obesogenic lifestyle than their lower status counterparts. It explores the reasons for studying the osteoarchaeology of obesity in skeletons, briefly investigating the extent of obesity in this historical and geographical context and its link with status. The study provides a history of obesity during the period, looking at the language used to describe it, how the medical profession understood it, and how the obese were viewed by wider society. Thereafter follows a literature review of the osteology of obesity, including examination of the clinical and archaeological research on body mass indicators. The thesis then describes the methodology employed in the study, along with detailed study questions and hypotheses. The four sites from which the skeletons were selected are then discussed and the historical context of life and burial in London given. There is an extensive presentation and discussion of the study's results, including methods used to calculate prevalence and diagnostic criteria. The study found that DISH and femoral cross-sectional measurements show promise as obesity indicators, producing results consistent with those of higher status having a greater prevalence of obesity, although osteoarthritis and 1st lumbar vertebral area failed to indicate that those of higher status had a higher prevalence of obesity. In conclusion, recommendations are made regarding the calculation of prevalence, diagnostic criteria for DISH, and the need for larger sample sizes supported by large multi-site databases.

Author: Craps, Davina Denise **PhD date** 2015 **159**

Title: Exploring new research avenues for osteoarthritis and rheumatoid arthritis in palaeopathology: interdisciplinary approaches focusing on methodological techniques

Institution: Durham University

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.650208

Period of material Post-medieval

Type of material: Human bone

Size of the assemblage used: 539 individuals

English archive: English Heritage (the Barton-upon-Humber collection); Museum of London (collections for the rheumatoidarthritis analysis)

Other repository: Durham University (Fewston collection); Pre-Construct Archaeology and the Fenwick Laboratory at Durham University (the Coach Lane, North Shields collection); University of Sheffield (Coronation Street, South Shields collection)

Sites: Post-Medieval Period in the North of England: Fewston,NorthYorkshire1064.1.2.ii.StPeter's Church Barton-upon--Humber, North Lincolnshire (BuH)107Fewston, North Yorkshire; St Peter's Church, Barton-upon-Humber, North Lincolnshire; Coach Lane

Abstract: This project sought to examine and critically evaluate current methodologies for the analysis and interpretation of osteoarthritis and rheumatoid arthritis within palaeopathology, with reference to clinical research. A compartmental recording method was developed for osteoarthritis and a distinction between degenerative joint changes and osteoarthritis was maintained. This method was applied to the analysis of five Post-Medieval skeletal populations from both rural and urban sites from northern England. An analysis of the pattern and distribution of osteoarthritis and DJC between the sites, including rural versus urban differences, age and sex-specific comparisons, and, where possible, a comparison with contemporaneous sites from southern England was undertaken. A set of diagnostic criteria for rheumatoid arthritis was developed, applied, and tested on potential cases of rheumatoid arthritis within the archaeological record. Given this condition's scarcity within the palaeopathological context, a wider geographical and temporal analysis was conducted. Results, based on clinical research and differential prevalence rates, indicated that DJC and osteoarthritis should be assessed separately. General rural-urban patterns were similar for DJC, even when compared with age or sex, which was not the case for osteoarthritis. The compartmental approach indicated differential distributions between mobile and stable elements of ball-and-socket and between skeletal elements in hinge joints respectively, which was explained through osteophyte-development and biomechanical analysis. The results were compared with clinical research to explore the impact of degeneration on the daily lives of past individuals, while not relying on activity reconstruction. A foundation for future research on rheumatoid arthritis was created by the development of the set of diagnostic criteria and a visual comparative study of the erosive lesions between palaeopathological cases. Remarkable similarities were found in the expression of erosions in several skeletal elements (ulna, radius and cervical vertebrae). By analysing clinical, palaeopathological and historical information this project concluded that the disease is not of recent origin.

Author: Aggleton, Jessye **PhD date** 2020 **160**

Title: First-hand experience: a methodology for exploring bone architecture adaptation and biomechanics in human hands and zebrafish models

Institution: University of Bristol

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.801602

Period of material Post-medieval

Type of material: Human bone

Size of the assemblage used: 96 bones from 6 individuals sampled (English sample)

English archive: Museum of London

Other repository:

Sites: St Bride's Church, situated on Fleet Street, Farringdon, London, is a site of rich archaeological history. Excavations in the 1950s following damage to the church from the Blitz uncovered crypts at St Bride's containing 227 individuals consisting of 14 subadults and 213 adults (Milne 1997, Museum of London ndb)

Abstract: Cancellous bone structure functionally adapts to loading forces. It has previously been proposed that evidence of behavioural activities, particularly manual behaviours, can be derived from analysis of the cancellous bone structure. However, a comprehensive method of analysis that combines a localised analysis of the bone structure with biomechanical data of specific activities does not yet exist. This work outlines such a method and tests it on pilot data from two distinct populations: an archaeological modern human population with known life histories, and a group of Neanderthal hand bones. Novel datasets are produced in this research. It is shown that the resulting new methodology can be applied to specific hand bones to compare biomechanical inferences to morphometric analyses with the potential for evaluating functional adaptation to certain manual activities. The biomechanical portion of this methodology is further developed in analogue skeletal models (larval zebrafish lower jaws) to investigate the relationship between different types of loading and musculoskeletal development. We found that in these models, genetic mutations significantly affect normal biomechanical functions, with implications for joint morphology change, and that certain hypergravity levels affect the material properties and function of the skeletal structure.

Author: Hoile, Sarah Ann Essex **PhD date** 2020 **161**

Title: Death, time and commerce: innovation and conservatism in styles of funerary material culture in 18th-19th century London

Institution: University College London

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.807953

Period of material Post-medieval

Type of material: Metal artefacts

Size of the assemblage used: 1,200 coffin plates plus 259 jewellery objects

English archive: Museum of London; York Museums Trust; Museum of English Rural Life; Reading Museums

Other repository:

Sites: Assemblages from the vaults of St Marylebone Church and St Bride's Church and the lead coffin plates from Islington Green burial ground, all sites in central London. These sites include both church vaults and burial grounds, although the majority of the material is from vaults. Some of these assemblages are from archaeological excavation while others were recovered during a watching brief by archaeologists. The largest collection within this project, from St Marylebone Church, was recovered during an exhumation clearance without archaeological recording

Abstract: This thesis explores the development of coffin furniture, the inscribed plates and other metal objects used to decorate coffins, in eighteenth- and early nineteenth-century London. It analyses this material within funerary and non-funerary contexts, and contrasts and compares its styles, production, use and contemporary significance with those of monuments and mourning jewellery. Over 1200 coffin plates were recorded for this study, dated 1740 to 1853, consisting of assemblages from the vaults of St Marylebone Church and St Bride's Church and the lead coffin plates from Islington Green burial ground, all sites in central London. The production, trade and consumption of coffin furniture are discussed in Chapter 3. Chapter 4 investigates coffin furniture as a central component of the furnished coffin and examines its role within the performance of the funeral. Multiple aspects of the inscriptions and designs of coffin plates are analysed in Chapter 5 to establish aspects of change and continuity with this material. In Chapter 6 contemporary trends in monuments are assessed, drawing on a sample recorded in churches and a burial ground, and the production and use of this above-ground funerary material culture are considered. In Chapter 7 a dated sample of mourning jewellery is explored in order to place the funerary objects of this study within a broader contemporary context. Limited innovation is identified in coffin furniture, in contrast with monuments and mourning jewellery, and it is suggested that its conservatism relates to the role of undertakers in its selection, as well as to the particular circumstances of its use. It is argued that coffin furniture was an important aspect of funerary rituals of this period and can be interpreted as one aspect of a broader emphasis on commemoration and the use of objects to materialise and manage experiences of separation and loss.

Author: Weinstein, Rosemary Isabel **PhD date** 2011 **162**

Title: The archaeology of pewter vessels in England 1200-1700: a study of form and usage

Institution: Durham University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.543947

Period of material Post-medieval (16th-17thC)

Type of material: Metal (pewter) vessels

Size of the assemblage used: 200 artefacts

English archive: Shakespeare Birthplace Trust, Stratford-upon-Avon; The National Maritime Museum, Greenwich; Ramsgate Maritime Museum; Chatham Historic Dockyard; The Royal Naval; Museum, Portsmouth; Shipwreck Heritage Centre, Hastings; Poole Waterfront Museum; Falmouth Maritime Museum; English Heritage Helmsley store; St Austell; Isles of Scilly Museum; Isle of Wight Archaeology Service

Other repository:

Sites: Some 200 objects, over half from marine sites, such as the Mary Rose, Stirling Castle, Henrietta Marie and Port Royal, Jamaica and of post-medieval date. The other half were retrieved from élite ecclesiastical and secular sites, both as random finds and from controlled excavations and date to the medieval and postmedieval periods. Controlled excavations were: Tong Castle; Weoley Castle; Baconsthorpe House, Norfolk; Nonsuch Palace, Cheam; Austin Friary, Leicester; Beeston Castle, Cheshire. Urban sites: London Waterfront City; Exeter; Southampton (merchant's house); Stoke-on-Trent; Poole.

Abstract: The first aim is to study the main types of pewter vessels surviving for the period, and to show how they were suited to their domestic purpose, especially the serving of food, and as eating and drinking implements. The second aim is to attempt to further investigate the alloy 'trifle' by having a sample of typical objects analysed by ICP-OES (Inductively Coupled Plasma Optical Emission Spectrometry). This alloy was introduced by the Pewterers' Company (WCP) by the 16th century for the purpose of providing an extended range of wares in a more durable metal than 'lay' metal, but less expensive than 'fine' metal, as specified by the Company. The third aim is to explore the occupations of the differing types of 'potter' who worked within the Company during the second half of the 17th century. The growth of this separate capitalist group of middle-men 'potters' or retailers of ceramics and glassware has not previously been noted. The differing levels of wealth and work of other, mainstream, Pewterers is explored by comparison. The majority of the finds came from anaerobic marine rather than traditional land sites and consisted chiefly of medieval to 17th century tablewares – dishes, saucers, plates, porringers, salts, beakers and other smaller drinking vessels, together with a few larger flagons. Such smaller drinking vessels were frequently listed as 'trifles' from the early 17th century in the Company records. Individuals described as potters were sometimes identified amongst the Company's membership. It was decided to try to determine their actual occupations by further examining the Court Minutes and wills and inventories of likely individuals. It was found that the various dishes, saucers and platters were component parts of the 'garnish' the chief serving vessels used between the 14th to 18th century to serve food to the middling sort of people, and that this played a central role not only as utilitarian wares but as objects of decoration and status as well. The Pewterers' Company members were highly innovative and also produced the country's first plate (apart from in silver) by the mid-16th century and which remained in use unaltered until the 1670s. Linear dimensions were correlated with the more usual sizes by weight for the first time from the remains of the garnish on the Mary Rose, lost 1545. Analysis of a sample of the smaller drinking vessels by Sheffield Assay Office detected an alloy of some 4-6% lead and this was likely to qualify as trifle alloy. While some individuals did indeed make drinking wares, it was discovered that the term potter usually applied to retailers of glassware and ceramics – a new occupational label. A number of such individuals within the Pewterers' Company played formative roles in setting up a new Glass Sellers Company in 1664. The business activities of this group – typical of individualist ventures during the 17th century – had not previously been noted by historians of the Company and indicated the Pewterers' heterogeneous and commercial make up from this time.

Author: Fittock, Matthew G. **PhD date** 2018 **163**

Title: Fragile gods: ceramic figurines in Roman Britain

Institution: University of Reading
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.772733

Period of material Post-medieval

Type of material: Claypipe

Size of the assemblage used: 1,000(?) (text unavailable)

English archive: 'Multiple museums, in particular London'

Other repository:

Sites: 1,000 published and unpublished pipeclay objects found in Britain, including figurines, busts, shrines, animal vessels and masks

Abstract: As small portable forms of statuary, pipeclay objects provide a valuable insight into the religious beliefs and practices of the culturally mixed populations of the Roman provinces. This thesis provides a complete catalogue of the nearly 1000 published and unpublished pipeclay objects found in Britain, including figurines, busts, shrines, animal vessels and masks. This research is the first study of this material conducted since the late 1970s. Pipeclay objects were made in Gaul and the Rhine-Moselle region but not in Britain. Attention thus focuses on where and how the British finds were made by analysing their styles, types, fabrics and any makers' marks. This reveals how the pipeclay market in Britain was supplied and how these objects were traded, and suggests that cultural rather than production and trade factors were more influential on pipeclay consumption in Britain. A typological, chronological and distributional analysis of this material is conducted to highlight pipeclay consumption in Britannia. As in many other provinces, deities are the most common depiction and Venus figurines the most common type. Comparison with Continental collections highlights distinctive regional consumption patterns, with Britain having several rare and exotic types, especially in London. The social distribution and contexts of the British finds shows that pipeclay objects were mainly used by civilians - probably in domestic shrines and occasionally in temples and in the graves of often sick children. Rare types (both in terms of origin and fabric) probably belonged to higher status foreigners. This thesis identifies previously unidentified subtle differences between the use of pipeclay and metal figurines. While ostensibly the same function, significant differences in style and iconography show ceramic figurines overwhelmingly depicting goddesses while metal figurines tend to depict male deities. Similar numbers of each mean that both are rare in Britain, but subtle differences in their social distribution suggests different groups used 'higher-status' metal and 'lower-status' ceramic figurines in the province. Fragmentation experiments suggest that deliberately breaking figurine heads was an important ritual practice.

Author: Ruffle, Bob **PhD date** 2012 **164**

Title: Pottery in the material culture of Early Modern England: a model from the archaeology of Worcester, 1650-1750

Institution: University of Worcester
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.665696

Period of material Post-medieval (17th-18thC)

Type of material: Pottery

Size of the assemblage used:

English archive: Worcester City Museum; Worcestershire Historic Environment and Archaeology Service; Bristol Museum

Other repository:

Sites: Worcester sites; Studied collections of post medieval pottery held in West Midlands museums and by commercial units

Abstract: The objective of this thesis is to place the pottery used by people in 17th and 18th century Worcester into context, flowing from a desire to see the archaeological study of pottery placed within the wider study of material culture. It develops a model for doing so by addressing both a corpus of pottery drawn from a number of sites in the city and a sample of probate inventories covering the century 1650-1750. This century is of interest in local ceramic studies because it is transitional between a period in which the prime provider of pottery for the whole region was the Malvern industry, and the later period of industrial scale manufacture and distribution in Staffordshire. The thesis begins by reviewing possible theoretical approaches to the study of pottery and adopting a standpoint based on a phenomenological view of material culture as embodied experience, as opposed to the idealist representation of meaning. Since an implication of this standpoint is that the experience of past people encompassed more than the use and possession of pots, the subsequent Chapter explores the physical development of Worcester over the century under review. The next section then embarks on the consideration of 11 groups of pottery drawn from six sites in the city. Each group is considered and interpreted in turn, in its archaeological context, before the resulting data is combined to form images of the ceramic 'repertoire' for each of three Stages covering the century. A product of this process is the draft of a Type Series for later early modern pottery in Worcester. A sample of probate inventories taken at ten year intervals is then considered, and images of household material culture developed for three similar temporal Stages. Finally information from both the archaeological study and the analysis of inventories is combined imaginatively in 'walking through' three houses, one for each Stage, in order to experience, at least vicariously, the place of pottery in each. The model thus endeavours to establish for a particular locality both the nature of the ceramic repertoire for the period under review, using a development of 'traditional' archaeological methodology, and the position within particular households which it appears to have occupied. This approach combines the archaeological study of pottery, often pursued in isolation, with the detailed consideration of related historical data, in a way which illuminates both and can be further refined and applied elsewhere.

Author: Crichton-Turley, Cou **PhD date** 2018 **165**

Title: Investigating London's post medieval pipe clay figurines from 1500-1800: critiquing 3D approaches to mould generation analysis via English and transatlantic case studies

Institution: University of Sheffield

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.770213

Period of material Post-medieval and modern

Type of material: Clay pipe figurines

Size of the assemblage used: 200 figurines

English archive: The British Museum, Museum of London, Museum of London Archaeology, the National Pipe Archive at the University of Liverpool

Other repository: London Archaeological Archive Research Centre, Pre-Construct Archaeology Ltd, National Pipe Archive at the University of Liverpool

Sites: All sites providing clay pipe figurines in London

Abstract: This thesis has two main strands to its research, one being the first comprehensive synthesis of London's post-medieval pipe clay figurines dating to the period 1500-1800, combined with examining the potential for inexpensive 3D imaging technology to carry out a new digitised methodology for mould matching and figurine generational analysis. By applying this new digital methodology new insights have been gained on the wider context of these artefacts. The thesis also contextualises the London material with a broad array of academic publications on pipe clay figurines from Britain, Germany, the Netherlands, Poland, Jamaica, and America. This has included an extensive comparison between the previously unappreciated pipe clay figurines from London and figurines from Germany and the Low Countries and a specific comparison with data collected from the United States of America. This compendium of data provides more information to examine a range of questions, such as production, distribution, iconography, intended audience, and the general economic, social, and religious setting in which they operated. By drawing upon these resources and new avenues of research this investigation offers an insight into pipe clay figurines within Germany and the Low Countries by examining a series of archaeological and contemporary literary sources. Following chapters go on to explore both the London and New World assemblages, presenting details on the distribution of these collections, a contextualised discussion on consumer markets, and iconographical relations of specific case studies. It is from this assemblage that figurines presenting similar stylistic qualities were selected for further analysis via 3D imaging methodologies to comprehend how closely, if at all, the morphometrics of the figurines compare and whether these figurines were produced from related mould groups. The parameters for this analysis are developed in Chapters 4 and 6, which discuss controlled datasets and a series of tests investigating the accuracy of inexpensive 3D imaging technology and their suitability for pipe clay figurine 3D imaging. These tests also analysed other potential influences on the morphometrics of the figurines and designed error parameters to be taken into account so that potential mould relationships could still be observed between figurines that had experienced damage, erosion, or manipulated on removal from their mould. These two strands are then brought together in Chapter 8, where new theories are discussed concerning the causes behind the changing iconography of these figurines, particularly those from London and the New World. This thesis also highlights the wider potential of 3D modelling for artefact studies and the limitations of Structure from Motion in the field of mould analysis. Overall, the research covered within this thesis has provided new details on a previously unstudied dataset alongside a much-needed critique of a new technological approach to 3D modelling and a brand new and revitalising means of carrying out mould-matching analysis of artefacts and other archaeological material.

Author: Campana, Michael Gray **PhD date** 2011 **166**

Title: Diachonic DNA analyses of animal breeds and populations

Institution: University of Cambridge
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.555205

Period of material Modern (18th-19thC)

Type of material: Faunal remains

Size of the assemblage used: 16 samples

English archive: Natural History Museum, London; Zoology Museum, Cambridge

Other repository: McDonald Institute for Archaeological Research; University of Leicester and Oxford

Sites: Samples of horse bones for aDNA

Abstract: Ancient DNA analyses have typically focussed on large-scale biogeographic patterns in time and space, such as the spread of domesticates or the movements of peoples. Few studies have attempted fine-scale diachronic analysis within single animal populations or breeds. This is largely due to restricted sample availability and the limited phylogenetic resolution provided by the mitochondrial genome, the most commonly used ancient DNA marker. In this thesis, I demonstrate that fine-scale diachronic analyses within single animal populations and breeds over short time scales are feasible. First, in order to address the limitations of sample size, I assessed three sample screening methods' abilities to select samples in which DNA was preserved and analysed the utility of parchment as a novel source of ancient and historic DNA. None of the screening methods accurately predicted DNA preservation, but collagen preservation was able to weed out extremely poorly preserved samples from further analysis. I assessed whether analysing the nuclear genome could permit fine-resolution diachronic genetic studies. Since single nucleotide polymorphisms are ideal candidate nuclear markers for diachronic DNA analyses, I assessed the accuracy of the nuclear SNP-typing methodology, SNaPshot™, by genotyping three coat colour markers for a sample of historic Thoroughbred horses for which both phenotypic and correct genotypic information were known from pedigree information in the General Stud Book. Finally, as a proof of method, I compared the diachronic information provided by the mitochondrial and nuclear genomes in Icelandic and Thoroughbred horses. Specifically, in the Icelandic horse, I analysed the mitochondrial D-loop and three coat colour genes in modern and historic populations. In the Icelandic horse, I found statistically significant evidence for genetic change in the mitochondrial genome over the last 150 years. I found no evidence for change in coat colour allele frequencies. Conversely, in the biased and small historic Thoroughbred dataset, the mitochondrial genome was insufficient to provide population-level information, but I was able to show that allele frequencies in the nuclear MSTN gene, a gene previously shown to influence racing performance, have changed significantly in the past century.

Author: Tancock, Devon Lee Kase **PhD date** 2014 **167**

Title: Congenital defects in 18th and 19th century populations from rural and urban northeast England

Institution: Durham University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.600981

Period of material Modern (18th-19thC)

Type of material: Human bone

Size of the assemblage used: 626

English archive: York Osteoarchaeology; Fort Cumberland, English Heritage

Other repository: York Osteoarchaeology (Fewston collection); Pre-Construct Archaeology and Durham University (North Shields collection); Sheffield University (South Shields collection); English Heritage at Fort Cumberland (Wharram Percy collection)

Sites: Skeletal remains from cemeteries associated with two coastal urban centres and two inland rural sites in Northeast England dated largely to the 18th and 19th centuries AD: Quaker burial ground, Coach Lane, North Shields, North Tyneside (excavated in 2010 by Pre-Construct Archaeology), St Hilda's church, Coronation Street, South Shields, South Tyneside churchyard of St Michael and St Lawrence, Fewston, North Yorkshire cemetery associated with St Martin's church, Wharram Percy, North Yorkshire

Abstract: In England, the 18th and 19th centuries marked an increase in urban living and the development of industrialisation. The movement of large numbers of individuals into newly created urban, industrial centres led to a decline in the standard of living conditions. In overcrowded towns, infectious disease easily spread amongst the improperly fed masses exposed to air and water pollution from nearby factories. To investigate the effects of these poor living conditions on populations in the post- medieval period, the prevalence of congenital defects, anomalies present at or before birth, were chosen for study in skeletal remains. Using an analysis of the prevalence of congenital defects, the hypothesis tested was that there should be a greater prevalence of congenital defects in people in urban centres due to the inferred poor state of health present there at the time compared to individuals from rural areas who may not have been as heavily exposed to unsanitary environmental conditions. This research focused on populations from four sites in Northeast England. The two urban sites were the Quaker burial ground, Coach Lane, North Shields (1711-1857 AD) and St Hilda's, Coronation Street, South Shields (1816-1856 AD), both in Tyne and Wear. The two rural sites were St Michael and St Lawrence, Fewston (post-medieval-1896 AD) and St Martin, Wharram Percy (1540-1850 AD), both in North Yorkshire. Collected data showed that there was no statistical difference between prevalence rates at the urban and rural sites for individual or combined defects. This may indicate that the quality of the living conditions were similarly detrimental to health at both site types and raises the issue of how urban and rural can be better defined for the post-medieval period. Furthermore, these findings call into question the use of congenital defects as markers of overall health unless combined with "stress" indicator data and research into past living conditions.

Author: Sinnott, Catherine Agnes **PhD date** 2015 **168**

Title: A bioarchaeological and historical analysis of scurvy in eighteenth and nineteenth century England

Institution: Cranfield University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.637498

Period of material Modern (18th-19thC)

Type of material: Human bone

Size of the assemblage used: 358 skeletons

English archive:

Other repository: Oxford Archaeology, the Institute of Archaeology of Oxford University

Sites: Assemblages derived from the Georgian period Navy that were known to suffer from endemic scurvy, namely Haslar hospital near Portsmouth and Stonehouse hospital in Plymouth. These assemblages were complemented by two Non-Naval skeletal collections of a broadly contemporaneous time period, one of which was a prison assemblage from Oxford Castle in Oxford and the other was from Darwen, Lancashire and consisted of a Primitive Methodist cemetery

Abstract: The identification of metabolic diseases is a crucial aspect of osteoarchaeological analysis and of paleopathological studies. This study is specifically concerned with the study of scurvy and its bony manifestation. This investigation considers the recognition of the bony lesions of scurvy in adult skeletons that originate from English archaeological contexts dating to the Post Medieval period. In order to identify scorbutic bony lesions, assemblages were analysed that derived from the Georgian period Navy that were known to suffer from endemic scurvy, namely Haslar hospital near Portsmouth and Stonehouse hospital in Plymouth. These assemblages were complemented by two Non-Naval skeletal collections of a broadly contemporaneous time period, one of which was a prison assemblage from Oxford Castle in Oxford and the other was from Darwen, Lancashire and consisted of a Primitive Methodist cemetery. For the purpose of this study, an extensive literature review was carried out and a specially modified scurvy recording form was created. In total three hundred and fifty-eight skeletons were analysed using the scurvy recording form on which a total of twenty-one potential scorbutic indicators were scored. The data was then subject to statistical analysis and a set of primary and secondary scorbutic indicators was established. The primary scorbutic lesions were femur, sphenoid, posterior maxilla, scapula, endocranial and mandible. Nine secondary lesions were also established and these were lesions of the foot, humerus, ulna, radius, hand, clavicle, innominate, fibula and the ectocranial surface of the skull. In total, 66.7% of the Haslar assemblage was found to have suffered from scurvy, followed by Plymouth with 20.6%, Darwen with 16.4% and Oxford Castle with 7.9%. It was found that scurvy could be identified in adult skeletal material through the recognition of a number of lesions that could not be attributed to any other disease process. The results indicated that scurvy was present in all of the skeletal collections studied but was more common in the Naval assemblages. This is an important development in the detection of scurvy in the archaeological record and is crucial in the reconstruction of past diets and metabolic disease patterns.

Author: Dunster, Joanna Margaret **PhD date** 2016 **169**

Title: Developing a methodology for the non-destructive analysis of British soft-paste porcelain

Institution: Cranfield University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.738619

Period of material Modern (18th-19thC)

Type of material: Porcelain

Size of the assemblage used: 219 samples and objects

English archive: British Museum; Ashmolean Museum, Oxford; London Archaeological Archive and Resource Centre, and the Museum of London Archaeology

Other repository:

Sites: Samples from productions sites; plus complete museum vessels from Ashmolean

Abstract: Soft-paste porcelain was produced in Britain in great quantities between the mid-18th and early 19th centuries. Due to industrial secrecy and the complexities of creating a product that would survive high-temperature firing, a range of paste recipes was employed by dozens of factories. This has resulted in an array of porcelains which vary in their elemental composition and mineralogy. This research carries out a meta-analysis of the published data for porcelain bodies and glazes and concludes that some discrimination can be achieved using the major and minor elemental composition of the bodies, and that for the glazes intra-factory variation is often greater than inter-factory variation in composition. A pilot investigation of the trace elemental composition of British porcelain is carried out using Laser Ablation Inductively Coupled Plasma Mass Spectroscopy, which finds compositional groups corresponding to different sources of clay and silica raw materials. In the interests of preserving intact objects, there is recognised a need for a non-destructive method for analysing British porcelain, in order to provenance and date objects. Such a method would rely on data from the surface of the object, which is typically covered by glaze and over-glaze coloured enamels, and this research demonstrates that the formulae used for the glaze and enamels are in some cases characteristic of the factory, or workshop, and period at which they were created. Hand-Held XRF analysis is used to analyse the glaze, underglaze blue and polychrome enamels on a selection of porcelain objects from different factories, and compositional traits are identified that allow some factories and periods to be distinguished. Glass standards are developed, which are representative of the glaze and enamel composition, and which could allow X-ray fluorescence (XRF) data to be calibrated for fully quantitative results.

Author: Massey, Freya R. **PhD date** 2014 **170**

Title: Ritualisation and reappropriation: special deposits and ritual activity in domestic structures in early modern England

Institution: University of Sheffield

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.643626

Period of material Early modern

Type of material: Artefacts (pottery, leather, metal, organic)

Size of the assemblage used: c.500 artefacts

English archive: Northampton Boot and Shoe Museum; Norfolk Museums; Pitt Rivers Museum; Museum of London; Museum of Archaeology and Anthropology, Cambridge; Lynn Museum; St Edmundsbury Museums; Epping Forest Museum; Colchester Museum; Saffrom Walden Museum; Royal Albert Memorial Museum, Exeter; Braintree Museum; Saffrom Walden Museum; Reading Museum; Ashby de la Zouch Museum; Dartford Museum; Tunbridge Wells Museum; Henfield Museum; Chateris Museum; Andover Museum; Cambridge and County Folk Museum; Hitchin Museum

Other repository:

Sites:

Abstract: While the act of concealing objects within the structural fabric of houses in the sixteenth and seventeenth centuries has long been acknowledged, there has been no comprehensive survey and analysis of this practice within England. Earlier studies had been selective in the types of objects on which they focused, which resulted in an overemphasis on the ritual relating to contemporary beliefs in witchcraft and the supernatural. Four primary categories of objects can be identified: magical items, animal remains, natural materials and everyday objects. The use of such a broad range of objects suggests that the value that is held to be inherent in these items does not derive from their material or original function. Furthermore, a significant proportion of objects appear to have been either subject long-term use prior to their concealment, or were otherwise items of little or no monetary value. Therefore, it is concluded that the value of these items and the processes which lead to their ritualization are not as a result of any symbolic or apotropaic attributes they may hold, but is due to their prolonged use within the household and by its inhabitants. Despite differences in intention which differing treatments of object types may represent, all deposited items clearly relate back to the domestic space as a dynamic and valued space. All inevitably rely on the structural soundness and protection the house provides while simultaneously making use of objects which facilitate everyday activities and ensure the success and wellbeing of the household as a whole. The objects selected for deposit were not inherently of explicit ritual worth, but their regular use in one functional context allowed them to be functionally transformed and reused in a new one, albeit one directly linked to and informed by an earlier stage in their use-life. Therefore, these deposits are representative of the recursive interlinking of people, material culture and domestic space.

Author: Meek, Andrew **PhD date** 2011 **171**

Title: The chemical and isotopic analysis of English forest glass

Institution: University of Nottingham
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.539170

Period of material Early modern

Type of material: Glass

Size of the assemblage used: 179 glass samples

English archive: Guildford Museum; Stoke-on-Trent Potteries Museum; Hutton-le-Hole Folk Museum; Southampton Museum; Hereford Museum; Portland Basin Museum; Dorset County Museum; World Museum Liverpool

Other repository:

Sites: Raw glass samples from 12 English production sites in operation between the 14th and 17th centuries: Blunden's Wood, The Weald; Knightons, The Weald; Bagot's Park, Staffordshire; Little Birches, Staffordshire; Buckholt, Hampshire; Buckholt West, Hampshire; Hutton, North Yorkshire; Rosedale, North Yorkshire; Glasshouse Farm, Herefordshire; Bickerstaffe, Lancashire; Kimmeridge, Dorset; Haughton Green, Greater Manchester

Abstract: Glass is one of several early modern industries where the development from small-scale workshop to large-scale industry offers a valuable insight into wider socio-economic trends. Previously, medieval and early modern forest (wood ash) glass has been studied using a range of analytical techniques. However, characterisations of production centres and exchange systems for forest glasses are difficult to verify, in part because very few examples of raw glass from furnace sites have been investigated. The necessity for an independent means of provenancing glass used in the study of exchange systems is clear. Compositional analysis can provide evidence for the raw materials used and can sometimes provide compositional groupings specific to sites. However, strontium, neodymium and oxygen isotope determinations can actually provenance the glass by linking the geological ages, or sources, of raw materials to production sites. The potential of using Sr and O isotopes in the study of plant ash glasses has recently been established (Henderson et al., J. Archaeol. Sci., 32, 2005). Using EPMA-WDS over 179 raw glass samples from 12 English production sites in operation between the 14th and 17th centuries have been analysed. These analyses have shown compositional types which are relatable to the region or, in some cases, the period of production. Over 60 archaeological glass, raw material and model glass samples from these sites have also been analysed using mass spectrometry to determine strontium, neodymium and oxygen isotope ratios. The isotopic analyses have also been very effective in showing differences between sites, even those within the same region. This thesis will argue that the combination of these techniques offers a promising new way of provenancing archaeological glass and provide an insight into the organisation of production at this time.

Author: Newman, Sophie Louise **PhD date** 2016 **172**

Title: The growth of a nation: child health and development in the Industrial Revolution in England, c. AD 1750-1850

Institution: Durham University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.683973

Period of material Early modern (1750-1850)

Type of material: Human bone

Size of the assemblage used: 1,432 individuals, including 575 sub-adults

English archive: Museum of London

Other repository: University of Sheffield (Coronation Street collection); Durham University (Coach Lane collection)

Sites: Six skeletal collections were identified to represent urban populations from the post-medieval period, from a diverse range of backgrounds. Two sites were selected from the North-East of England, and four from London: Coach Lane, North Shields; St Hilda's Parish Church, Coronation Street, South Shields; All Saints, Chelsea Old Church, Chelsea, London; St Benet Sherehog, City of London; Baptist Congregational burial ground, Bow Baptist Church, London; Cross Bones burial ground, Redcross Way, Southwark, London

Abstract: The Industrial Revolution of 18th-19th century England was a period of marked social, economic, and political change through which urban landscapes were irrevocably transformed. Increasing industrialisation brought with it issues of overcrowding, deteriorating sanitary conditions, and rising air pollution. Disease was rife, and life on the epidemic streets brought significant risks to child mortality and morbidity. This study undertook a comprehensive analysis of health in urban children from the 18th- 19th centuries. Six skeletal collections were selected from urban-based sites to attempt to broaden existing knowledge on the impact of industrialisation on child health from a range of geographical and social contexts. Growth parameters (long bone length, cortical thickness, and vertebral dimensions) and non-specific indicators of stress (dental enamel hypoplasia, metabolic disease, cribra orbitalia, and periosteal new bone formation) were selected to assess health status in both children and adults, to identify differing patterns in health stress and longevity. No significant differences were identified between northern and southern-based sites, with social status being the primary determinant of child health. Lower status groups demonstrated the highest perinatal mortality rates, lowest growth values, some of the highest rates of pathology, and intrauterine onset of deficiency diseases, indicating a heightened exposure to poor maternal health and detrimental exogenous influences associated with poverty. However, the high status group from Chelsea Old Church, London, also showed significant deficiencies in growth values and a high rate of metabolic disease, suggestive of "fashionable" child-care practices. A potential association between the presence of non-specific indicators of stress and an earlier age-at-death was identified in adults, suggestive of a reduction in longevity associated with early life stress. Life in the city came with significant health risks for children, and the use of multiple growth parameters and indicators of stress proved an effective means to increase the osteobiographical understanding of past populations.

Author: Awais-Dean, Natasha **PhD date** 2012 **173**

Title: Bejewelled: the male body and adornment in early modern England

Institution: Queen Mary, University of London
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.594239

Period of material Early modern

Type of material: Metal (jewellery)

Size of the assemblage used: c. 300?

English archive: British Museum

Other repository:

Sites: Collections of early modern European jewellery within the department of Prehistory and Europe at the British Museum

Abstract: This thesis investigates the significance of the jewellery that was worn, owned, and circulated by men within 16th- and early 17th-century England, to provide a social and historical context for objects that are often viewed in terms of their materiality. Within the period 1509-1625 male consumption of jewellery was just as great as female consumption, yet jewellery has traditionally been considered a feminine preoccupation. This thesis readdresses this imbalance and in doing so aligns itself with the growing studies on masculinity, community, and sociability. Traditionally, studies on jewellery have adopted a more chronological or stylistic approach but there is now evidence of movement towards providing a social context for these objects and this thesis is a part of this development. In the early modern period jewellery was not valued purely for its intrinsic monetary worth; it had the ability to reflect meanings of magnificence and lineage, as well as sustain social bonds and networks of reciprocity. The myriad meanings of a man's jewelled possessions demonstrate that jewellery was important and therefore constituted a valid part of a society's material culture. This thesis centres on the collections of early modern European jewellery within the department of Prehistory and Europe at the British Museum. It is interdisciplinary in nature and combines strong object analysis with evidence from documentary, literary, archival, and visual sources, to provide a new context for these holdings. Finds continually reported through the 1996 Treasure Act have also been integrated into this research, to demonstrate the importance of jewellery for men across all social levels. Consequently, this thesis bridges the gap between traditional art history scholarship and archaeological work to provide a strong social and historical context for jewellery and men in Tudor and Jacobean England.

Author: Tucker, Katie **PhD date** 2012 **174**

Title: Whence this severance of the head?: the osteology and archaeology of human decapitation in Britain

Institution: University of Winchester
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.560584

Period of material Prehistoric to early post-medieval

Type of material: Human bone

Size of the assemblage used: 169 individuals

English archive: Dorset County Museum; Oxfordshire Museum Services; Rutland County Museum; Salisbury and South Wiltshire Museum; Leicester Arts and Museums Service; Hampshire Museums Service; Natural History Museum; Southampton Museums Service; English Heritage; York Museums Trust; Winchester Museum Service; Buckinghamshire Museums Service; British Museum; Luton Museums Service; Norfolk Museums and Archaeology Service

Other repository:

Sites: 52 different sites

Abstract: Decapitation burials (burials in which the cranium and mandible are displaced from correct anatomical position and replaced elsewhere in the grave) are a relatively common minority burial practice in Romano-British cemeteries. They have usually been ascribed to a post-mortem funerary ritual with various different motives being postulated. However, these interpretations seem to have largely been based on assumption rather than evidence from the archaeological context or the human remains, only small numbers of which have been subjected to detailed skeletal analysis. Decapitated burials are also found in the early medieval period, and, conversely, these are normally concluded to be the victims of judicial execution, an interpretation that is only very rarely used when discussing Romano-British examples. This thesis examines the archaeological and osteological data from a large sample of Romano-British decapitated burials and compares them with the wider Romano-British cemetery population, in order to better understand the differences between decapitated individuals and the rest of the population, in terms of burial practice, demographics, and ante-mortem health status. The evidence for decapitation in the Neolithic, Bronze and Iron Ages, early medieval, medieval and post-medieval periods was also examined, with the analysis of samples of decapitated individuals being undertaken where possible, in order to provide comparanda for the Romano-British examples, and assess whether there is any evidence for continuity in the practice between the periods. The thesis focuses particularly on the evidence for decapitation-related peri-mortem trauma, and this data is used to identify and describe a number of different types of decapitation amongst the samples of individuals. The complete body of evidence is then used to discuss the feasibility of each of the different interpretations previously suggested for the practice of decapitation, with the intention that it can be used to inform any future discussion of such burials. “Whence this severance of the head?” is quoted from Royce (1883: 77).

Author: Malham, Albertine **PhD date** 2010 **175**

Title: The classification and interpretation of tin smelting remains from South West England: a study of the microstructure and chemical composition of tin smelting slags from Devon and Cornwall, and the effect of technological developments

Institution: University of Bradford

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.535428

Period of material Prehistory to modern (19thC)

Type of material: Metal (slags/ore/artefacts for analysis)

Size of the assemblage used: c. 100

English archive: Plymouth City Museum and Art Gallery, Torquay Natural History Museum, Exeter City Museum, the Royal Institution of Cornwall Museum-Truro, St Agnes Parish Museum

Other repository:

Sites:

Abstract: Artefacts relating to tin smelting from tin mills or 'blowing houses' in Devon and Cornwall, plus material from smelting sites that cover a range of dates from the Bronze Age through to the 19th Century, were examined: these include metallic tin, furnace linings, ore samples and slag. Analysis of tin slags from over forty sites was carried out, to determine microstructure and chemical composition. Techniques employed included optical and scanning electron microscopy, X-ray fluorescence and ICP mass spectrometry. Analysis indicates that slag appearance and composition are heavily influenced by local geology. Composition, particularly iron content, is shown to have a strong effect on slag melting point and viscosity, and the implications for the purity of metal produced are discussed. Bringing together the evidence provided by slag chemistry, documentary sources and smelting remains in the archaeological record, changes in tin smelting technology through time, and the consequences thereof, are considered.

Author: Booth, Jennifer Harriet Halsey **PhD date** 2013 **176**

Title: Back to nature: geologically informed consolidants for stone museum artefacts

Institution: University of Oxford
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.604432

Period of material Multiperiod? (unknown (text not available)

Type of material: Stone artefacts

Size of the assemblage used: unknown (text not available)

English archive: British Museum

Other repository:

Sites: The large collection of limestone artefacts at the British Museum, some of which have deteriorated

Abstract: The Back to Nature project was developed as a collaborative doctoral award between the British Museum and the School of Geography and the Environment, University of Oxford. The British Museum has a large collection of limestone artefacts, some of which have deteriorated to an extent that a consolidation treatment, to improve internal cohesion, has been deemed necessary to ensure the value of the artefacts is maintained. Previous consolidation practices within the museum had centred on the use of organic consolidants. In the past, inorganic consolidants had been considered ineffective chiefly due to poor penetration depth and inconsistent deposition within the stone. Recent scientific developments within conservation, particularly the development of nano-limes, coupled with a trend towards treatments offering physical and chemical compatibility, led to the British Museum reconsidering the use of inorganic consolidants. Three inorganic consolidants: ammonium oxalate treatment, Calcite In-situ Precipitation System (CIPS), and CaLoSil have been investigated by the Back to Nature project to assess their potential for use on the British Museum's deteriorated limestone artefacts. The investigation involved a developmental sequence of four experimental phases to assess the effectiveness of each consolidant upon freshly cut, artificially pre-weathered, and naturally weathered stone samples. In all experiments an organic silane Wacker SILRES BS OH 100 was used as a comparison. A variety of analytical methods were used including: Equotip, GrindoSonic, Scanning Electron Microscopy, Karsten Tubes, Drilling Resistance Measurement System, spectrophotometry, X-ray Diffraction and Ion Chromatography. Experiments show that the CIPS treatment could hold promise for use as a consolidant. Ammonium oxalate only appears to provide consolidation at the surface level, and CaLoSil would need modifying and more investigation before using in the museum environment. The differences noted between experiments on artificially weathered and naturally weathered stone indicate that a two-step process, involving testing on both types of samples, would give the best indication of consolidant effectiveness. High variability between samples shows a large number are needed to give an accurate interpretation of change due to consolidation.

Author: Fowler, Thomas **PhD date** 2020 **177**

Title: The introduction of the brown hare to Britain and its bio-cultural impact: zooarchaeological and morphometric approaches

Institution: University of Nottingham

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.823417

Period of material Unknown (text not available)

Type of material: Animal bone

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: The introduction of new fauna is almost without exception not solely about enriching human diet. Instead, non-native fauna can be linked with the arrival new cultural phenomena, especially in the realm of religion. The religious and secular festival of Easter provides a case study with which to explore this phenomenon in the British archaeological and historical record, as its three associated animals - the brown hare, European rabbit, and chicken - are all not native to Britain. But, the circumstances and timing of the introduction of the brown hare (Lepus europaeus) to Britain have never been tackled with the aid of zooarchaeological evidence because zooarchaeologists have lacked the methods necessary to securely separate zooarchaeological brown hare remains from those of Britain's native lagomorph, the Scottish mountain hare (Lepus timidus). This thesis establishes a zooarchaeological baseline for the timing and cultural impact of the brown hare's introduction to Britain. It develops an identification method using traditional, linear morphometrics to separate brown and mountain hares in British populations and applies this to method to archaeological hare remains.

Author: McGrory, Simon **PhD date** 2011 **178**

Title: Integrating biomolecular and zooarchaeological approaches to the construction of mortality profiles for archaeological cattle

Institution: University of York

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.547370

Period of material Unknown (text not available)

Type of material: Animal bone

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: (Not available)

Author: Fraser, Tamsyn **PhD date** 2019 **179**

Title: Livestock and landscape: livestock improvement and landscape enclosure in late and post-medieval England

Institution: University of Sheffield
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.811315

Period of material Unknown (text not available)

Type of material: Animal bone

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: The late Medieval and early Post-Medieval periods in England are often associated with agricultural transformation and improvement. The contentious term 'Agricultural Revolution' is applied to this era, though it has been assigned broadly to numerous periods from the sixteenth to the nineteenth century. Zooarchaeological evidence from predominantly urban locations has demonstrated clear alterations in livestock size, shape and herd profiles from at least the fifteenth century, suggesting change in husbandry strategy. However, scarce data from rural areas has hitherto prevented a full assessment of livestock improvement in the primary centres of animal rearing. Livestock change is accompanied by historical evidence for widespread landscape alteration in the form of open field enclosure. This process has been proposed as the impetus for livestock improvement, as it potentially enabled greater control over livestock nutrition, disease and breeding. Three rural case study sites were selected to assess this potential association between landscape enclosure and livestock change. The sites were chosen to represent a range of geographical locations and enclosure mechanisms, to examine how enclosure and livestock change varied across England. Zooarchaeological analyses, including species frequencies, age profiles and metric assessment were applied to the material from the sites, to assess the extent and timing of livestock change. This was compared to historic evidence for livestock management, as well as evidence for the type and timing of enclosure on each site. In contrast to previous studies, the zooarchaeological evidence from the rural assemblages did not display a clear chronological trend in livestock management and size, but instead a more complicated picture of regional variation and exchange. In combination with the historic and landscape evidence, it indicated that enclosure may have influenced livestock change, but it more likely acted in combination with other factors like population, market demand, cropping innovations, and trade.

Author: Dunn, Philip James Harris **PhD date** 2011 **180**

Title: Marine resource exploitation and consumption amongst ancient human populations: unravelling the carbon isotope signal of bone collagen

Institution: University of Bristol

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.547841

Period of material Unknown (text not available)

Type of material: Human bone

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: (Not available)

Author: Klingle, David Adam **PhD date** 2011 **181**

Title: The use of skeletal evidence to understand the transition from Roman to Anglo-Saxon Cambridgeshire and Bedfordshire

Institution: University of Cambridge

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.609949

Period of material Unknown (text not available)

Type of material: Human bone

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: (Not available)

Author: Pitfield, Rosie **PhD date** 2019 **182**

Title: The biorhythm of human juvenile skeletal growth

Institution: University of Kent
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.789092

Period of material Unknown (text not available)

Type of material: Human bone

Size of the assemblage used: 188

English archive: Unknown (text not available)

Other repository:

Sites: 188 juvenile and young adults from four archaeological sites from medieval England.

Abstract: Biorhythms are cyclic changes in an organism's growth or functioning that can be driven by an internal biological clock and synchronised through environmental cues. Evidence of two biorhythms is retained in human tooth enamel in the form of incremental growth lines. The first biorhythm corresponds with a daily, circadian, rhythm that has been linked to the secretory activity of ameloblasts. The second biorhythm is a longer period infradian biorhythm that is marked by Retzius lines and can be quantified in days as Retzius periodicity (RP). There is some evidence to suggest that body size, basal metabolic rate, life history traits, and RP might be linked by a centrally coordinated autonomic biorhythm that is related to growth and development. Earlier studies have demonstrated links in adult humans between RP and body size, and between RP and aspects of cortical bone microstructure. If the biorhythm is related to the growth and development of the body, there should also be indications of this biorhythm retained in the juvenile skeleton. This thesis examines these links, for the first time, in skeletal samples of human children from one population. The aim of this thesis is to use 2D static histomorphometry to explore how, or if, evidence of an infradian biorhythm retained in tooth enamel as Retzius line periodicity is linked to the growth of human bone growth during ontogeny. In addition to the potential effect of a biorhythm on skeletal growth, many other factors may potentially affect bone microstructure. This thesis examines some of these influences prior to investigating the biorhythm. Variation in histomorphometric measures of cortical bone microstructure is sought between children of different regions in England (Canterbury, York, Newcastle), and between high- and low-status children from Canterbury. Additionally, bone microstructure varies between the bones in a single skeleton, so the intra-skeletal microstructural variation between eight bones from ten young adults was explored and compared to their RP. Finally, the potential for a relationship between RP and rib cortical bone microstructure is investigated. This thesis begins with a background review of the underlying biology of bone growth, enamel secretion, and biorhythms. The introductory sections are followed by a detailed materials and methods chapter. The investigative parts of the thesis are presented as three data chapters that have been designed as manuscripts that are suitable for publication. Each has a focus on a specific aim and has individual introduction, aims, methods, results, and discussion sections. Together, the three data chapters contain histomorphometric variables that were measured from the skeletal remains of 188 juvenile and young adults from four archaeological sites from medieval England. The RP of a permanent tooth from each skeleton was calculated and combined with measures of bone modelling - indicated by bone size variables - and remodelling - indicated by osteon population density, osteocyte lacunae density, and osteon size and shape. This thesis ends with a discussion of the main findings of each data chapter and how they contribute to the overall aim of the thesis, which is to assess evidence of the biorhythm in tooth enamel against aspects of growth in the juvenile skeleton. The results support the idea that an infradian biorhythm coordinates aspects of human hard tissue growth, particularly relative amounts of lamellar formation during modelling and remodelling. The biorhythm was related to the proportion of interstitial and osteonal lamellar bone, and to body size. These results imply that a child with a fast biorhythm tends to have a high proportion of lamellar bone and small Haversian canals in their osteons and a high proportion of bone in their ribs compared to the medullary cavities. Whereas, a child with a slow biorhythm tends to have a low proportion of lamellar bone and large Haversian canals in their osteons and a low proportion of bone in their ribs compared to the medullary cavities. The biorhythm did not relate to any measure of bone turnover, including osteon population density, intact osteon density, fragmentary osteon density, or osteocyte density. This biorhythm could be one of the many factors that affect macroscopic bone growth and microscopic bone modelling and remodelling during childhood growth in medieval Canterbury.

Author: Harrison, Donna **PhD date** 2017 **183**

Title: An evaluation of the methods used in the estimation of sex

Institution: University College London
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.746457

Period of material Unspecified

Type of material: Human bone

Size of the assemblage used: 294 individuals

English archive: Unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: Sex estimation is a fundamental component of demographic information for skeletal collections. When collections are undocumented, it is important to have established and accurate methods to determine sex. Many methods have been used since the 1800s. These methods, both morphological and metric, primarily focus on estimating sex on the pelvis, cranium, mandible, humerus and femur. The aim of this research is to establish which types of methods and which major bones are the most accurate for identifying sex in skeletons, especially when the pelvis is in poor condition or missing. A total of 67 morphological and metric methods were assessed on 294 adults from four diverse known sex samples. The study included assessment of 23 methods on 120 juveniles from two of the samples. The results indicate that while morphological methods are a reliable tool to sex adult skeletons, there are metric methods that are equally reliable, especially in the absence of the pelvis. Initial research in sex estimation of juveniles yielded several methods which scored over 75% accuracy when the samples were broken down into five distinct age groups. The study also demonstrated other possible uses for sex estimation, such as measuring variability in bones through hyper-sex codes (-2, +2) used in morphological methods, exploration of gender identification presented in two case studies, and exploring the effect of skeletal adaptation from occupation on sexual dimorphism in two African-American samples who share a common history but lived in different geographical locations.

Author: Davies, Thomas **PhD date** 2013 **184**

Title: Cross-sectional variation in the human femur and tibia: the influence of physique and habitual mobility on diaphyseal morphology

Institution: University of Cambridge

https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.608156

Period of material Unknown (text not available)

Type of material: Human bone?

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: (Not available)

Author: Rimmer, Melanie B. **PhD date** 2010 **185**

Title: Investigating the treatment of chloride-infested archaeological iron objects

Institution: Cardiff University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.584955

Period of material Unspecified

Type of material: Metal (iron) artefacts

Size of the assemblage used: 120 archaeological iron nails

English archive: Museum of London

Other repository:

Sites: Bulk iron with low archaeological value from sites that had been published, including sites in London (Wales and Scotland): Bermondsey Abbey, Southwark (BA84) 2 objects; Baynard's Castle, London (BC72) 3; Billingsgate, London (BWB83) 3; Pudding Lane, London (PDN81) 2; Swan Lane, London (SWA81) 4; Thames Exchange Buildings, London (TEX88) 3; Vintry, London (VRY89) 3

Abstract: Archaeological iron objects become infested with chloride ions during burial. These enhance electrochemical corrosion, acidify the pore solution and form hygroscopic p-FeOOH. Controlling chloride-induced corrosion requires <15% relative humidity (RH) this is difficult to achieve in practice. Iron objects are at significant risk when dry storage is not maintained. Alkaline deoxygenated solutions remove chloride ions from objects. A large quantitative dataset was needed to evaluate the chloride extraction efficiency, the relationship between chloride concentration and corrosion rate and the risks posed by aqueous treatments. Using 120 archaeological iron nails as sample material, and recording chloride extraction behaviour for each individual object, three treatments were tested nitrogen-deoxygenated 0.1M NaOH (20 C) and alkaline sulphite (0.1M NaOH/0.05M Na2S03) at 20 C and 60 C. Objects were subsequently digested to measure residual chloride. Chloride extraction efficiency was 60-99% in most cases 87% of treatments resulted in residual chloride levels <1000 ppm. Accelerated corrosion tests showed that treated objects were more stable than untreated. Post-treatment scanning electron microscopy identified chloride ions in corrosion products or within slag inclusions, but none at the metal/corrosion interface. The transformation of synthetic P-FeOOH showed that 0.5M NaOH or 0.1M NaOH/0.05M Na2S03 (60 C) produced the maximum transformation (c.50%) to a-FeOOH and/or a-Fe203. It could not be confirmed whether this reaction occurs on objects. Risk to objects was evaluated by assessing physical damage during treatment and modelling chemical residues. Less than 2% of objects experienced total fragmentation 69% experienced no change. The most likely chemical residue from alkaline sulphite is Na2S04 this poses no threat to objects at RH <76%. The research reported here is a substantial addition to the body of data about desalination treatment. It improves understanding of the benefits and risks of treatment in relation to developing improved conservation strategies for highly chloride-contaminated objects.

Author: Dane, Caryl **PhD date** 2012 **186**

Title: Enamelwork from early Anglo-Saxon contexts

Institution: Bangor University
https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.590649

Period of material Unknown (text not available)

Type of material: Metal artefacts

Size of the assemblage used: Unknown (text not available)

English archive: Unknown (text not available)

Other repository:

Sites: Unknown (text not available)

Abstract: This study concentrates upon two diverse categories of enamelled objects: items considered to be typical artefacts of the early Anglo-Saxon culture, which have essentially been dated to the sixth century, together with, approximately contemporaneous, enamelled hanging bowl furnishings. Much has been written about hanging bowls, which are frequently discovered in early Anglo-Saxon contexts, but enamelled early Anglo-Saxon metalwork is sparse and therefore, to date, has received comparatively little attention. This thesis is the first comprehensive study of enamelled early Anglo-Saxon metalwork. A substantial component of the study is cataloguing both categories of enamelled artefacts from Anglo-Saxon England, supported by photographs and drawings. Enamel was once believed to be a technique confined to the decoration of some Anglo-Saxon female dress-fasteners, but the catalogue extends the variety of known Anglo-Saxon artefact-types which carry enamel, by the addition of more recent finds. After a discussion of ways in which the Anglo-Saxon adventus has been viewed, the relationship between past and contemporary crafting skills, prevalent styles, and particular motifs associated with enamelwork, from the preceding Iron Age and Roman periods, and both classes of enamelwork, are examined and compared. A review of constituent analyses implies a technological change from Romano-British enamelling, but there is continuity in style and motifs. Caryl Dane Enamelwork from Early Anglo-Saxon Contexts ii Enamelled artefacts are further considered in terms of function, gender association, and status. These items were not 'poor-man's garnet', but created for a privileged minority. The study extends to analyses of the concentration, dissemination of, and interconnection between, many of the enamelwork find-sites. A regional focus on East Anglia is demonstrated, particularly, South Cambridgeshire and the Lark valley area. The distribution outliers are much more widespread than previously thought. It is suggested that early Anglo-Saxon metalworkers were influenced by those who produced hanging bowls but it is unlikely they were working in the same workshops.

APPENDIX 4

Other university-based research using finds archives by students at Departments of Archaeology in England, gathered from replied received via email.

Masters

Human remains

Arthur, N (2014) *Coming of age: the timing of puberty in Roman Britain, accessed through newly- developed osteological methods*, MSc dissertation, Durham University

Blevins, K. (2015) *Investigating the infant and childhood origins of tuberculosis*. MSc dissertation, Durham University

Clarke, S. (2014) *Calculus and SEM analysis: diet in two medieval British populations*. MSc dissertation, Durham University

Crane, A. (2016) *Osteoarthritis and impairment: A life course approach to joint disease in the St Brides church documented skeletal collection (AD1740-1852).* MSc dissertation, Durham University

Duane-Roche, D. (2015) *The quality of life for Royal Navy personnel in the 18th and 19th centuries*. MSc dissertation, Durham University

Filipek-Ogden, K. (2013) *Ill-fated? Exploring the nexus between childhood stress and leprosy. Susceptibility in bioarchaeology*. MSc dissertation, Durham University

Hewitt, W. (2020) *Acklam Wold, Garton Station and Kemp Howe: A study of three Anglo-Saxon cemeteries in East Yorkshire from the People and Place Project*. MSc dissertation – isotope data from 'People and Place Project', Durham University

Hunt, K. (2013) *The antiquity of cancer: a survey of palaeo-oncological case studies for identification and methodological improvement*. MSc dissertation, Durham University

Jedrzejewski, H. (2010) *Presence of metabolic disease in Roman London*. MSc dissertation, Durham University

Jones, A. (2015) *A biocultural approach to maternal health in medieval and post-medieval England*. MSc dissertation, Durham University

Kachur, A. (2015) *Standing tall in Shields: stature estimation from skeletal remains in north east England*. MSc dissertation, Durham University

Kase, D. (2010) *The frequency of congenital defects in late and post-medieval Great Britain (1050- 1850 AD).* MSc dissertation, Durham University

Kendall, E. (2011) *Climate, mobility and status in a 14th century Black Death cemetery population*. MSc dissertation, Durham University

LaCross, E. (2010) *A re-examination of skeletal scars of parturition in the Chelsea Old Church population*. MSc dissertation, Durham University

Lloyd, B. (2010) *Prevalence and patterns of disease in the late-Roman cemetery population of Frilford, Oxfordshire*. MSc dissertation, Durham University

Mant, M. (2010) *Diet, sex and status in post-medieval London*. MSc dissertation, Durham University

Ong, I. (2015) *Reassessing viability of identifying anaemia using cribra orbitalia*. MSc dissertation, Durham University

Penny-Mason, B. (2012) *Childhood health as a barometer of social change pre and postreformation*. MSc dissertation, Durham University

Perretto, N. (2017) *Scoliosis before and after corrective methods: impact on joint health and psychosocial implications in modern and bioarchaeological contexts*. MSc dissertation, Durham University

Reeve, I. (2014) *Differences in health between early and later medieval populations from London*. MSc dissertation, Durham University

Shaw, H. (2013) *Mobility and health in Roman London*. MSc dissertation, Durham

University Sohler, A.-M. (2011) *A possible relationship between low body mass index*

and susceptibility to
tuberculosis: evidence from the English archaeological record. MSc dissertation, Durham University

Stantis, C. (2011) *Reconstructing a catastrophic climate: exploring climate change in 14th century London using stable oxygen isotopes*. MSc dissertation, Durham University

Still, B. (2019) *Analysing human remains in Eastern England 1200–400 BC*. MA Dissertation, Durham University

Taylor, K. (2014) *The social status of non-adults in Roman Britain: An analysis of the archaeological data from three late Roman cemeteries*. MSc dissertation, Durham University

Tobin, A. (2015) *The costs of conquest: detecting changing environmental stress in the transition from Iron Age to Roman England*. MSc dissertation, Durham University

Wells, R. (2017) *Disability, identity, and war: Considering the medieval veteran*. MSc dissertation, Durham University

Whitley, L. (2010) *The blight of England: The effects of the potato famine on the working class in England*. MSc dissertation, Durham University

Artefacts

Banfield, L. Imported Roman quernstones in London. Master dissertation, Reading University.

Evans, M. (2020) *Early Bronze Age Mortuary Practices on the Mendip Hills, Somerset*. Masters by Research thesis, University of Worcester.

Smisson. R. (2016) *Late Antique Somerset. Cultural and political development in the British West from the fourth to the eighth centuries.* MPhil Bristol University.

Exceptional UG projects and MA research papers that had a traceable published outcome:

Lovell Stuart, M. (2017) 'South Shields 1875: an early excavation in context', *Archaeologia Aeliana* 5(46), 181-2019. Museum archives and collections. Publication of MA dissertation, Durham University. https://archaeologydataservice.ac.uk/library/browse/details.xhtml?recordId=3213712.

Shields, B. (2016) *The Outcast Dead: Health and Diet of London's Post-Medieval Poor (1540-1853).*
Masters thesis, Durham University.

Published Papers by MA in Conservation students, Durham University:

Beekman, B. (2021) 'The Conservation of 38 Birch Bark Rolls from Star Carr', in C. Caple and V. Garlick (eds) *Studies in Archaeological Conservation*, London: Routledge, 191-197. Object in the collections of the Scarborough Museums Trust

Bristow, H. (2021) 'Retreatment of an archaeological glass beaker', in C. Caple and V. Garlick (eds) *Studies in Archaeological Conservation*, London: Routledge, 67-75. Object in the collections of the Royal Albert Memorial Museum, Exeter

Marston, H. (2021) 'Interventive conservation of a waterlogged wooden bucket', in C. Caple and V. Garlick (eds) *Studies in Archaeological Conservation*, London: Routledge, 173-181. Object in the collections of Carlisle Cathedral

Nethaway, E. (2021) 'Conservation of a Roman skeleton', in C. Caple and V. Garlick (eds) *Studies in Archaeological Conservation*, London: Routledge, 245-253. Object in the collections of the Museum of London

Snow, K. (2021) 'Re-storage of archaeological textiles at the Museum of London', in C. Caple and V. Garlick (eds) *Studies in Archaeological Conservation*, London: Routledge, 207-216. Object in the collections of the Museum of London

Wilkinson, C.E. (2021) 'Conservation of a Pewter Dish from the wreck of the *Coronation*', in C. Caple and V. Garlick (eds) *Studies in Archaeological Conservation*, London: Routledge, 155-162. Object in the collections of Jersey Museums

APPENDIX 5

List of museums visited to consult finds archives and the number of visits as recorded in the text of the PhDs quantified

County	Museum	Visit frequency
Bedfordshire	Bedford Museum	1
Bedfordshire	Higgins Art Gallery and Museum, Bedford	1
Bedfordshire	Luton Museum	2
Bedfordshire	The Culture Trust, Luton	1
Bedfordshire	Wardown Park Museum, Luton	1
Berkshire	Maidenhead Heritage Centre	1
Berkshire	Museum of English Rural Life, Reading	2
Berkshire	Reading Museum	12
Berkshire	University of Reading Museum	1
Bristol	Bristol Museum and Art Gallery	12
Buckinghamshire	Buckinghamshire County Museum, Aylesbury	2
Cambridgeshire	Chateris Museum	1
Cambridgeshire	Ely Museum	2
Cambridgeshire	Museum of Anthropology and Archaeology, Cambridge University	8
Cambridgeshire	Museum of Cambridge	1
Cambridgeshire	Peterborough Museum and Art Gallery	2
Cambridgeshire	Sedgwick Museum, Cambridge	1
Cambridgeshire	University of Cambridge Museum of Archaeology and Anthropology	2
Cambridgeshire	Zoology Museum, Cambridge University	1
Cheshire	Grosvenor Museum, Chester	8
Cornwal	Truro Museum	1
Cornwall	Falmouth Maritime Museum	1
Cornwall	Penlee House Galley and Museum, Penzance	1
Cornwall	Royal Cornwall Museum, Truro	6
Cornwall	St Austell Museum	1
Cumbria	Dock Museum, Barrow-in-Furness	1
Cumbria	Tullie House Museum, Carlisle	5
Derbyshire	Buxton Museum and Art Gallery	1
Derbyshire	Derby Museums	3
Devon	Museum of Barnstaple and North Devon	2
Devon	North Devon Museum	1
Devon	Plymouth City Museum and Art Gallery	5
Devon	Royal Albert Memorial Museum, Exeter	9
Devon	Sidmouth Museum	1
Devon	Torquay Museum	5
Devon	Totnes Elizabethan House and Museum	1
Dorset	Blandford Town Museum, Blandford Forum	1
Dorset	Dorset County Museum, Dorchester	14
Dorset	Gillingham Museum	1

County	Museum	Visit frequency
Dorset	Gold Hill Museum, Shaftesbury	1
Dorset	Poole Museum	4
Dorset	Priest's House Museum, Wimborne	3
Dorset	Red House Museum, Christchurch	2
Dorset	Russell-Cotes Art Gallery and Museum, Bournemouth	1
Dorset	Wareham Town Museum	1
Durham	Bowes Museum, Barnard Castle	1
Durham	Durham Cathedral	1
Durham	Durham University	1
Durham	Durham University Museums	2
East Midlands	Rutland County Museum	3
East Riding of Yorkshire	Sewerby Hall Museum and Art Gallery	1
East Riding of Yorkshire	The Treasure House, Beverley	2
East Sussex	Brighton Museum and Art Gallery	4
East Sussex	St Agnes Parish Museum	1
East Yorkshire	Hull and East Riding Museum	10
Essex	Braintree Museum	1
Essex	Chelmsford Museum	1
Essex	Colchester Castle Museum	3
Essex	Colchester Museum	4
Essex	Epping Forest District Museum, Waltham Abbey	1
Essex	Hill Farm Gestingthorpe	1
Essex	Mersea Island Museum Trust, Essex	1
Essex	Saffron Walden Museum	3
Essex	Southend Museums Services, Essex	2
Gloucestershire	Chedworth Roman Villa	1
Gloucestershire	Cheltenham Museum	2
Gloucestershire	Corinium Museum, Cirencester	13
Gloucestershire	Gloucester City Museum	7
Gloucestershire	Museum in the Park, Stroud	1
Gloucestershire	Stroud Museum	2
Gloucestershire	The Wilson, Cheltenham	1
Greater Manchester	Bolton Museum	3
Greater Manchester	Bury Museum and Art Gallery	1
Greater Manchester	Manchester Museum	6
Greater Manchester	Portland Basin Museum	1
Greater Manchester	Rochdale Museum	1
Hampshire	Andover Museum	3
Hampshire	Chilcomb House, Winchester	1
Hampshire	Hampshire County Museum Services (Hants Cultural Trust)	4
Hampshire	Hampshire County Museum Services, Winchester	11
Hampshire	Mary Rose Museum, Portsmouth	2
Hampshire	Museum, Portsmouth	1
Hampshire	National Museum of the Royal Navy, Portsmouth	1
Hampshire	Portsmouth Museum and Art Gallery	2
Hampshire	Southampton Museum	8

County	Museum	Visit frequency
Hampshire	Winchester Museum Service	17
Herefordshire	Hereford Museum and Art Gallery	2
Hertfordshire	St Albans Museums Service	3
Hertfordshire	Three Rivers Museum, Rickmansworth	1
Hertfordshire	Verulamium Museum, St Albans	3
Isle of Wight	Brading Roman Villa	1
Isle of Wight	Isle of Wight Heritage Service Museum Service	2
Isles of Scilly	Archaeological Museum, St Mary's, Isles of Scilly	1
Isles of Scilly	Isles of Scilly Museum	1
Kent	Canterbury Heritage Museum	1
Kent	Chatham Historic Dockyard, Chatham	1
Kent	Dartford Borough Museum	2
Kent	Dover Museum	2
Kent	Maidstone Museum	6
Kent	Ramsgate Maritime Museum	1
Kent	The Beaney, Canterbury	1
Kent	Tunbridge Wells Museum	1
Lancashire	Lancaster City Museum	3
Lancashire	Lancaster Maritime Museum	1
Lancashire	Museum of Lancashire	1
Lancashire	Museum of Liverpool	2
Lancashire	National Pipe Archive, University of Liverpool	1
Lancashire	Ribchester Museum	1
Lancashire	Towneley Hall, Burnley	1
Lancashire	World Museum, Liverpool	1
Leicestershire	Ashby de la Zouch Museum	1
Leicestershire	Bosworth Battlefield Heritage Centre, Sutton	1
Leicestershire	Collection Resources Centre, Barrow-upon-Soar	1
Leicestershire	Jewry Wall Museum, Leicester	3
Leicestershire	Leicester Arts and Museum Service	3
Leicestershire	Leicestershire County Museums	1
Lincolnshire	Grantham Museum	2
Lincolnshire	Lincoln City Museum	3
Lincolnshire	North Lincolnshire Museum, Scunthorpe	11
Lincolnshire	The Collection Museum, Lincoln	4
London	British Museum	36
London	Bromley Museum	1
London	Croydon Museum	1
London	Gunnersbury Park Museum	1
London	Hillingdon Museum and Archives Services	1
London	'Local London Borough museums'	1
London	Museum of London	28
London	National Maritime Museum, Greenwich	1
London	Natural History Museum, London	16
London	Newham Archives	2
London	Redbridge Museum	1
London	Richmond Museum	1
London	Royal College of Surgeons, London	1
London	Society of Antiquaries of London	1
London	St Bride's Church Fleet Street	1

County	Museum	Visit frequency
London	Vestry House Museum, Walthamstow	1
London	Victoria and Albert Museum, London	1
London	Wandsworth Museum	1
Norfolk	King's Lynn Museum	4
Norfolk	Norfolk Museum Service	6
Norfolk	Norwich Castle Museum	13
North Hertfordshire	Hitchin Museum	1
North Hertfordshire	North Hertfordshire Museums Service	3
North Yorkshire	Dorman Museum, Middlesbrough	1
North Yorkshire	Harrogate Museums	1
North Yorkshire	Malton Museum	1
North Yorkshire	Rotunda Museum, Scarborough	1
North Yorkshire	Ryedale Folk Museum, Hutton-le-Hole	2
North Yorkshire	York Archaeological Trust	4
North Yorkshire	Yorkshire Museum, York	15
Northamptonshire	Northampton Boot and Shoe Museum	1
Northamptonshire	Northampton Museum	3
Northumberland	Alnwick Castle Museum	1
Northumberland	Hadrian's Wall and Housesteads	1
Northumberland	Vindolanda Museum, Hexham	7
Nottinghamshire	Bassetlaw Museum, Retford	1
Nottinghamshire	British Geological Survey Museum, Keyworth	1
Nottinghamshire	Creswell Crags Museum, Worksop	1
Nottinghamshire	Mansfield Museum	1
Nottinghamshire	Nottingham City Museums and Galleries	2
Nottinghamshire	University of Nottingham Museum	1
Oxfordshire	Ashmolean Museum, Oxford	14
Oxfordshire	Museum Resource Centre in Oxfordshire	1
Oxfordshire	Oxford Museums Services	1
Oxfordshire	Oxfordshire Museum Resource Centre	9
Oxfordshire	Pitt Rivers Museum, Oxford	3
Shropshire	Shrewsbury Museum and Art Gallery	3
Shropshire	Shropshire Museum Services	1
Somerset	Cheddar Man Museum, Cheddar Gorge	1
Somerset	Roman Baths Museum, Bath	3
Somerset	Somerset County Museum, Taunton	13
Somerset	Watchet Museum	1
Somerset	Wells and Mendip Museum	3
South Yorkshire	Clifton Park Museum, Rotherham	2
South Yorkshire	Doncaster Museum and Art Gallery	1
South Yorkshire	Kelham Island Museum, Sheffield	1
South Yorkshire	Museums Sheffield	2
South Yorkshire	Weston Park Museum, Sheffield	1
Staffordshire	The Potteries Museum and Art Gallery, Stoke-on- Trent	2
Suffolk	Ipswich Museum	6
Suffolk	Moyses Hall, Suffolk	1
Suffolk	St Edmundsbury Heritage Service	1
Suffolk	St Edmundsbury Museums	1
Suffolk	West Stow Anglo-Saxon Village, Suffolk	2

County	Museum	Visit frequency
Surrey	Elmbridge Museum, Weybridge	1
Surrey	Guildford Museum	3
Surrey	Surrey History Centre	1
Tyne and Wear	Arbeia Roman Fort and Museum, South Shields	1
Tyne and Wear	Great North Museum, Newcastle	3
Tyne and Wear	Tyne and Wear Museums, Newcastle Upon Tyne	3
Warwickshire	Shakespeare Birthplace Trust, Stratford-upon-	1
West Berkshire	Newbury Museum	1
West Berkshire	West Berkshire Museum Service	2
West Midlands	Birmingham Museum and Art Gallery	2
West Midlands	Herbert Art Gallery and Museum, Coventry	2
West Sussex	Fishbourne Discovery Centre, Chichester	3
West Sussex	Henfield Museum	1
West Sussex	Littlehampton Museum	1
West Sussex	Shipwreck Heritage Centre, Hastings	1
West Sussex	The Novium, Chichester & District Museum	7
West Sussex	Worthing Museum and Art Gallery	1
Wiltshire	Alexander Keiller Museum, Avebury	1
Wiltshire	Devizes Museum	2
Wiltshire	National Trust, Warminster	1
Wiltshire	Salisbury and South Wiltshire Museum	10
Wiltshire	Swindon Museum and Art Gallery	2
Wiltshire	Wiltshire Heritage Museum, Devizes	12
Worcestershire	Worcester City Museum	3
Worcestershire	Worcestershire Historic Environment and Archaeology Service	1

APPENDIX 6

List of main UKRI/major grant research projects that have used finds archives between 2010 and 2020. AHRC details are fuller than those supplied by Leverhulme.

AHRC

Project code:	AHRC AH/T001003/1
Date:	2019–2023
Project:	Arch-I-Scan: Automated recording and machine learning for collating Roman ceramic tablewares and investigating eating and drinking practices
PI:	Penelope Mary Allison
Institution:	Leicester University
Period of material:	Roman
Type of material:	Pottery
Size of assemblage:	More than 15,000, including: Museum of London Collection: 384 vessels Museum of London Archaeology Service: c. 7,000 sherds Collections of the University of Archaeology Service, many in the Jewry Wall Museum: 2,165 sherds Vindolanda Charitable Trust Collection: c. 5,200 sherds
Archive location:	Univ. of Leicester Archaeology Service; Museum of London; Museum of London Archaeology; The Vindolanda Trust; Colchester and Ipswich Museum
Aims and sites:	Extensive collections from different social and regional contexts in Roman Britain: London, Colchester and its environs, Vindolanda (on Hadrian's Wall), and Leicestershire
Abstract:	The Roman period is exceptionally rich archaeologically. The millions of artefacts from across the Roman world are infinitely more informative about people's lives than iconic monuments. However, these artefacts are currently under-utilised in studies of social practices - particularly the wealth of ceramic tablewares used by almost everyone from senator to slave. This under-utilisation is largely due to these artefacts' extensiveness and inherent difficulties in recording them all. For decades ceramics have been recorded and analysed selectively (e.g. only diagnostic sherds of specific vessel types) for chronological sequencing of individual excavations, or for investigating trade patterns between regions, rather than to answer socio-cultural questions, e.g. how were particular vessels used and in what circumstances. More comprehensive recording can facilitate consumption-oriented analyses for new levels of understanding of varying social practices among the diverse communities that made up the Roman world.

	This project develops a state-of-the art image-recognition and machine-learning service, Arch-I-Scan, a proof-of-concept experiment of which was successfully carried out for the AHRC network, 'Big Data on the Roman Table'. We will train this service and develop its machine-learning capacity on 100,000s of Roman tableware remains in extensive collections from different social and regional contexts in Roman Britain - London, Colchester and its environs, Vindolanda (on Hadrian's Wall), and Leicestershire. Machine training will move from recording complete/near complete vessels to more fragmentary remains. Used on handheld devices (e.g. mobile phones) by non-specialists and specialists, Arch-I- Scan will automatically recognise and record details of pottery remains and digitally collate and store large quantities of data. Roman tableware remains, often from large-scale production centres (e.g. Samian ware from South Gaul), constitute some of the most easily recognisable and extensive bodies of archaeological data with high levels of similarity, in ranges of forms and fabric types, across a wide geographical area. Thus, besides being crucial evidence for Roman food- and drink-consumption practices in different social contexts in Britain, the selected material comprises an excellent body of artefacts to ensure wider application of Arch-I-Scan at other Roman sites, in Britain and beyond. Once Arch-I-Scan is sufficiently trained and has recorded and 'learned' to classify the artefacts from these collections, the resulting datasets will be made freely available for other archaeologists to use as comparanda in their own analyses. This can lead to more comprehensive analyses across Roman archaeology for more socially-oriented questions. Arch-I-Scan can continue to 'learn' from these and other types of pottery as well as other archaeological artefacts.
Url:	https://gtr.ukri.org/projects?ref=AH%2FT001003%2F1#/tabOverview

Project code:	AHRC AH/S000380/1
Date:	2019-2022
Project:	Warhorse: The archaeology of a military revolution?
PI:	Oliver Creighton
Institution:	Exeter University
Period of material:	Medieval (Norman-Tudor)
Type of material:	Faunal remains and horse furniture
Size of assemblage:	Unknown (ongoing and affected by Covid/lockdown)
Archive location:	Unspecified
Aims and sites:	First, using cutting-edge methodologies, we will re-analyse the bones of horses and warhorses from archaeological excavations, across a sample of assemblages held by museums and archives. Second, we will produce a comprehensive survey of surviving horse apparel (for instance harness pendants and bridle bits) and armour. Third, we will conduct the first coherent archaeological

	study of horse breeding landscapes (especially studs). Fourth, we conduct a survey of published and unpublished historical materials to feed into the analysis of studs and to establish a historical baseline against which to cross-compare the archaeology
Url:	https://gtr.ukri.org/projects?ref=AH%2FS000380%2F1

Project code:	AHRC AH/S002693/1
Date:	2019-2022
Project:	Bottles concealed and revealed: examining the phenomena of stone and glass 'witch bottles' and their concealment in mid to late 17th-century England
PI:	Nigel Jeffries
Institution:	Museum of London Archaeology
Period of material:	17thC
Type of material:	Glass and pottery
Size of assemblage:	25 vessels
Archive location:	Discover Bucks Museum (Aylesbury) (2 bottles) London Archaeological Archive, Mortimer Wheeler House, London (2 bottles) Museum of London Ceramics and Glass store, Mortimer Wheeler House (6 bottles); Southwold Museum, Southwold, Suffolk (2 bottles); Colchester and Ipswich Museum (Colchester and Ipswich sites) (3 bottles) Museum of Archaeology and Anthropology, Cambridge (4 bottles); Pitt Rivers Museum, Oxford (2 bottles); Moye's Hall Museum, Bury St Edmunds, Suffolk (3 bottles) Norris Museum, St Ives, Cambridgeshire (1 bottle)
Abstract:	The use of glass bottles and German or English made stoneware bottles as 'witch bottles' and their placement/concealment in buildings, churchyards, ditches and riverbanks is an occurrence limited to the mid to late 17th century and (largely) particular to Greater London, Eastern England and certain South East counties of England. Whilst this represents the beginnings of 'witch bottles' and their concealment as a practice in the national context, it remains distinct from other forms of popular 'bottle' magic that emerge over the next two centuries across the British Isles. Since 'witch bottles' were first reported in the 19th century, they have featured in a varied range of publications, are curated in numerous museum/folklore collections and archaeological archives, and discussed on websites concerned with paganism and folklore studies. Their numbers have grown from the few first mapped by archaeologist and museum curator Ralph Merrifield (1987) and have since been recovered from archaeological sites, building recording surveys and or/ historic building renovations.

	Although many stoneware and glass 'witch bottles' and their contents survive in the present, it is a partial resource that has never been critiqued and surveyed as a whole collection. With bottles often considered individually, interpretations are reliant on Merrifield (1987) and whilst the scientific analysis of liquid contents has since been emphasised by Massey (2000), engagement remains limited to a few independent (i.e. Hoggard 2004; Hoggard in Hutton (ed) 2015) and academic scholars (Davies, ibid). Discussion is largely disconnected from the building types the bottles are found in and their cultural context, such as how medicine was administered and understood during the early modern period, and the role popular magic played.
Url:	https://gtr.ukri.org/projects?ref=AH%2FS002693%2F1#/tabOverview

Project code:	AHRC AH/R003556/1
Date:	2018-2022
Project:	Worked in Stone/Corpus of Anglo-Saxon Stone Sculpture
PI:	Rosemary Cramp and Sarah Semple
Institution:	Durham University
Period of material:	Early medieval
Type of material:	Stone objects
Size of assemblage:	c. 1,200 objects
Archive location:	Grosvenor Museum, Chester; British Museum, London; Great North Museum (Museum of Anlllquillles originally), Newcastle; Moyses Hall Museum, Bury St Edmunds, Suffolk; Ashmolean Museum, Oxford; Cambridge Archaeology Museum; National Museums Liverpool; Bowes Museum; Durham Cathedral; Museum of Somerset, Taunton; County Museum, Lincolnshire; Thirsk Museum; Museum of London; Yorkshire Museum; Blackburn Museum; Museum of Lancashire, Preston; Victoria and Albert Museum; Derbyshire Museum; Lincolnshire Museum; Sheffield City Museum; Buxton Museum; Lindisfarne; Owen's College Museum (Manchester); Manchester Museum; Fitzwilliam Museum Cambridge; Tyne and Wear Museums Service
Url:	https://gtr.ukri.org/projects?ref=AH%2FR003556%2F1

Project code:	AHRC AH/R00546X/1
Date:	2018–2020
Project:	Mobility of Objects Across Boundaries 1000–1700 (MOB)
PI:	Katherine Wilson
Institution:	University of Chester
Period of material:	Medieval
Type of material:	Pilgrim badges and devotional items, ceramics, tiles, shoes, chest, keys

Size of assemblage: c.100 objects

Archive location: Grosvenor Museum, Chester

Abstract: Mobility of Objects across Boundaries (MOB) is a research network which reconsiders the history of objects across Western Europe AD 1000-1700. It brings together art historians, historians, archaeologists, literary scholars, digital humanists and museum curators to examine selected objects from this period and understand the impact and consequences of mobility of objects to larger historical transformations 1000-1700.

The network is significant because during this period major transformations took place in material culture. Quite simply, more objects were manufactured and used than ever before and many objects travelled across geographic, political, religious, linguistic, class and cultural boundaries. There are several key problems to our current study of material culture 1000-1700. Firstly, what remains unclear to academics is exactly why these changes in material culture occurred and how the movement of objects may have resulted in these bigger historical transformations. Secondly, each academic discipline tends to work separately on objects from this period.

In order to solve these problems, MOB will start with the objects themselves to focus on their mobility. It will use new categories to examine objects from the period 1000-1700: thresholds and boundaries, framing and translation. Key objects from an under-explored collection housed by the Grosvenor Museum in Chester, will be the starting point: a shoe, a pilgrim badge, a chest, a hare tile and a key. These objects were produced in multiples and thus central to the everyday lives of individuals 1000-1700, but they were also extremely mobile. For example, shoes allowed people to move across thresholds, from public into private spaces, from secular to religious spaces. Chests moved possessions across urban streets and into the domestic sphere, while pilgrim badges were worn on the body but travelled with those who wore them. The tile of three hares modelled on a Chinese motif from Dunhuang reveals how images could travel and be translated in different ways, while keys reveal the way in which objects were stored or locked up, harnessing mobility. The network will allow a group of international interdisciplinary scholars to examine these objects and share their different disciplinary approaches as well as to establish future directions for studies involving the mobility of material culture.

In order to make the findings of the network available to everyone with an interest in objects from 1000-1700, MOB will use the expertise of the Digital Humanities Research Centre at the University of Chester (https://dhchester.org/) to connect the Grosvenor museum objects examined by the network to Europeana (http://www.europeana.eu), one of the most important cultural heritage digital initiatives worldwide, and which participates with more than 3,500 cultural institutions and contains more than 45 million items. This will allow anyone to compare the objects from the Grosvenor collection to hundreds of similar objects contained in

	thousands of different collections across Europe. In addition, the objects examined by MOB will be featured in short films, hosted on the Open Arts Web Archive (Open University) (http://www.openartsarchive.org/), accessible to the public and which can be used as teaching tools in schools. The films will provide an interactive link to a major series of OU projects on multiple platforms, from BBC film series to OpenLearn teaching.
Url:	https://gtr.ukri.org/projects?ref=AH%2FR00546X%2F1

Project code:	AHRC AH/N001931/1
Date:	2016–2021
Project:	Exeter: A Place in Time
PI:	Stephen Rippon
Institution:	Exeter University
Period of material:	Roman and medieval
Type of material:	Pottery and animal bone
Size of assemblage:	c.1000 pottery and tile
Archive location:	Royal Albert Memorial Museum, Exeter
Aims and sites:	Selected unpublished excavations to be studied, along with a programme of radiocarbon and dendrochronological dating and metallurgical analysis. AHRC funding will use existing excavated material to explore Exeter's relationship to its hinterland through further analysis of animal bones and pottery. In particular scientific analysis will be used to characterise where animals were grazing before they were brought to Exeter, and the extent to which livestock were moved from the fertile lowlands onto the uplands during the summer. A new analysis of the pottery will explore Exeter's trading networks both within the SW of Britain and continental Europe.
Url:	https://gtr.ukri.org/projects?ref=AH%2FN001931%2F1#/tabOverview http://humanities.exeter.ac.uk/archaeology/research/projects/place_in_time/

Project code:	AHRC AH/M008568/1
Date:	2016–2018
Project:	MELTING POT: Food and Identity in the Age of the Vikings
PI:	Steve Ashby
Institution:	University of York
Period of material:	Medieval
Type of material:	Ceramics
Size of assemblage:	500 sherds
Archive location:	York Archaeological Trust; English Heritage (Helmsley); Lincoln Museum and Archives; North Lincolnshire Museum; Newark Museum; Museum of London
Abstract:	This project will use cutting-edge bioarchaeological and materials-science techniques to undertake the first systematic and

interdisciplinary study of the role of food and cooking in forging social relationships in Viking-Age Britain. Though often seen in purely nutritional terms - in both archaeology and contemporary policy making - food is central to the production of identity, particularly in contexts of migration and culture contact, and is thus an important but overlooked element in the study of the Viking Age.

Understanding of this period is fundamental to the study of later and contemporary culture; it was the social, economic, political, and religious crucible of English and wider European society. We need to understand:

1. The role of material culture in cuisine. Is it possible to associate for the first time particular vessel forms with particular functions or foodstuffs?
2. The degree to which culinary practice was subject to change and innovation, was there variability in time and space, and can this be identified at individual sites?
3. The impact of migration, urbanisation and commercial expansion on local cuisines. Were the cuisines consumed in the cosmopolitan entrepôts of York and Ipswich significantly different to those experienced in contemporary rural sites?
4. The relationship between food and local politics: may distinctive cuisines be identified in politically disparate areas such as the 'Danelaw' settlement of northern and eastern England, or the southern areas of England governed by Anglo-Saxon Wessex, or the Scandinavian 'homelands' of Denmark?

Using cutting-edge scientific techniques to identify manufacturing techniques, wear analysis to characterise mode of use, and analysis of lipid residues to establish vessel contents, we will strategically record, sample, and analyse a large quantity of pottery from well-stratified sites across the British Isles and Scandinavia. Our work will be organised into four work packages. Each WP will assess variation in different traits, informed by evidence from environmental archaeology and documentary history, and supported by a successful pilot study.

Work package 1 will compare the results of residue analyses on ceramics of diverse ware and vessel form, with various characteristics of use-wear and damage. This will tell us if particular forms of vessel were being used selectively in order to store, transport, process, present, or consume particular foodstuffs, and thus what role was played by material culture in the making of cuisines
(Obj 1).

Work package 2 will consider intra-site variation, through controlled comparison between sherds from multiple contexts separated in time and space. This will tell us the degree to which culinary practice was subject to change and innovation at any given site (Obj 2).

Work package 3 will compare the results of residue analyses on ceramics from sites of diverse character. This will tell us if the cuisines consumed in the cosmopolitan entrepôts of York and

Ipswich were significantly different to those experienced in contemporary rural sites (Obj 3).

Work package 4 will compare the results of residue analyses on ceramics from sites in the Danelaw, southern England and southern Scandinavia. This will tell us whether distinctive cuisines can be identified in politically disparate areas (Obj 4).

Our results will be disseminated via open access journal articles, conference presentations, museum display materials, a website with blog, associated social media, and downloadable resources and events for the public and interest groups (Scouts, Girlguides and Young Archaeologists' Club). The project will benefit the scholarly study of the Viking Age, and of food studies more generally. Its application in events and resources for children and local communities will aid the effort to improve understanding of the complex expression of identity in today's world of global mobility and culture contact.

Url: https://gtr.ukri.org/projects?ref=AH%2FM008568%2F1

Project code:	AHRC AH/M008843/1
Date:	2015–2016
Project:	Big Data on the Roman Table
PI:	Penelope Mary Allison
Institution:	Leicester University
Period of material:	Roman
Type of material:	Pottery

Size of assemblage: More than 12 vessels

Archive location: Vindolanda Trust, Oxford Archaeology, Archaeology South-East, and the University of Leicester Archaeological Service (ULAS, Jewry Wall Museum in Leicester)

Aims and sites: In archaeological terms, the Roman period is exceptionally data rich. Yet infinitely more important for understanding people's lives across the Roman world are millions of artefacts unearthed during excavations. A great proportion of these artefacts, especially pottery vessels, are objects used by almost everyone from senator to slave to eat and drink from, and so hold essential information on the diversity of such practices among different social and cultural groups. However, this wealth of data is under-utilised due to its very complexity. For decades it has served to provide chronological sequences for individual excavations and to develop region-wide understandings of economic networks, rather than to answer socio-cultural questions. E.g., how can differing combinations of differing sizes, shapes and types of vessels, excavated from different contexts, provide more nuanced understandings of how individuals and communities throughout the Roman world used them and socialised around food and drink?

Many people are also familiar with studies that have focused on the idealised discourses of food consumption in ancient texts and visual culture. Authors such as Petronius, who wrote about the dinner party of the nouveau riche ex- slave Trimalchio, have done much to colour perspectives on dining practices throughout the Roman world. These texts are frequently used to interpret the architectural remains of, for example, dining rooms in Pompeian houses. While writings of ancient authors provide helpful insights, they are frequently limited to elites from urban centres, and, more importantly, lack the detail needed for consistent comparison across different context and different regions of the Roman world. Such perspectives obscure a more critical understanding of the everyday eating and drinking practices that would have provided the daily sustenance and communication opportunities for the majority of people living in this world - citizens and provincials, indigenous and immigrant families, shop- keepers, soldiers, and slaves, as well as the upper crust. The meals of these different kinds of people are not well recorded in the literary record but are prolifically documented by archaeological evidence, in particular artefactual remains.

More recently, archaeological scholarship on Roman food - notably through zooarchaeology, archaeobotany, osteoarchaeology - has begun to address some of the lacunae in literary-based studies and the biased views they portray of social behaviour in the Roman empire. However, these approaches focus on the kinds of food eaten, but not the contexts in which it was consumed and the experiences involved. It is timely for more impetus in studies of styles of consumption - crucial for understanding the diversity of Roman social and cultural differentiation - 'to catch-up' with bioarchaeological approaches, in the process harnessing the potential of what constitutes the largest surviving body of evidence from the Roman world - its artefacts.

By harnessing the 'big data' of Roman archaeology - artefactual datasets that are so large and complex that it is difficult to visualise fine-grained patterning using standard archaeological methods - this network seeks to set a new benchmark for the application of statistical, spatial and visualisation techniques to such data to provide fresh historical insights into social practice across the Roman world. In the current climate of recession and limited public funds for archaeological research, the network can point the way for the cost effective use of so-called legacy data from older excavations, and also for more efficient data collection in future excavations that can be used to build more robust and analysable datasets. Establishing best practice for the on-going collection and digital collation of materials enables future research that is also of public interest.

Url: https://gtr.ukri.org/projects?ref=AH%2FM008843%2F1

Paper by Tyukin *et al.* https://intarch.ac.uk/journal/issue50/11/index.html.

Other contributors to this project and authors in the resulting edited volume (https://intarch.ac.uk/journal/issue50/index.html) used other British and foreign collections

Project code:	AH/L013037/1
Date:	2014–2018
Project:	A third century crisis? The composition and metallurgy of Roman silver coinage; Septimius Severus to Valerian and Gallienus
PI:	Matthew Ponting
Institution:	University of Liverpool
Period of material:	Roman
Type of material:	coins
Size of assemblage:	2,000 coins
Archive location:	Roman Baths and Pump Room Museum, Bath; Bristol City Museum; The British Museum; Taunton Castle Museum, Somerset; The Ashmolean Museum, Oxford; The Manchester Museum
Aims and sites:	The aim of the project is to analyse 2,250 Roman silver coins for the period AD 194 to 260, to determine not only the fineness of the coins but also to use minor and trace elements, and lead isotope analyses, to inform us about sources of raw materials and production technology. One explanation for the dramatic fall in the silver content of the coinage is that the Roman empire ran out of stocks of fresh silver. If this is so, evidence of recycling should be readily apparent. In addition, weight standards will also be scrutinised. These are important for drawing comparisons between different denominations of silver coinage, but they are also an important component of the concept of monetary standards. Finally, a study of hoards will look for evidence that the public was aware of changes made to the coinage.
Url:	https://gtr.ukri.org:443/projects?ref=AH/L013037/1

Project code:	AHRC AH/J007935/1
Date:	2012–2013
Project:	New Tools and Old Stones: The Use of 3D Microscopy on Stone Tools to Understand Prehistoric Behaviour and Social Change
PI:	Adrian Anthony Evans
Institution:	University of Bradford
Period of material:	Palaeolithic
Type of material:	Stone objects
Size of assemblage:	Unspecified (email requesting details remains unanswered)
Archive location:	Unspecified
Abstract:	The assemblage studied is an Upper Palaeolithic set of stone tools from the site of Wey Manor Farm, a well preserved site from Surrey. It represents one of only a few discovered in the UK that show a good degree of preservation and was meticulously excavated, presenting a unique opportunity to match data from the location of tools at the site and activities carried out by their prehistoric users. The good preservation of the assemblage makes it highly suitable

for the project as the ability to gather useful data from the tools and high quality graphics illustrating a variety of different tool uses will serve to highlight the capabilities of the approach used.

The new technology introduced by this project aims to transform the approaches used through the addition of quantitative analysis wear and computed interpretation. The method changes the way that archaeological data is visualised and allows a shift of focus from method to interpretation.

The visualisation of data in this new way reduces the complexity of the interpretative problem. Experts will no longer needs to visually discern complex and often subtle textural information. The task of textural characterisation is taken up by the computing system as is the interpretation of what this implies for tool use. This reduces error in identification, improves consistency, and strengthens the reputation of the method as a whole. This allows the expert to shift focus to the interpretation of results and the implications of these in the broader context of the archaeological question at hand.

The reduction in need for the expert to be familiar with the visual system of remembering and cataloguing worn surface types for the purpose of future analysis also dramatically reduces the requirement for the associated extensive training (4-8 years is currently considered normal). Training requirements to use this new system will be on the scale of months; closer in line to other analytical systems in use across the applied sciences. This will make the technique more accessible across the discipline; a compound effect being the production of larger datasets pertaining to site function and subsequently a greater base for interpretation of heritage.

Url: https://gtr.ukri.org/projects?ref=AH%2FJ007935%2F1#/tabOverview

Project code:	AH/J005436/1
Date:	2012–2013
Project:	Foreigners and locals in Roman Britain: painting a more complex picture for school children
PI:	Hella Eckardt
Institution:	University of Reading
Period of material:	Roman
Type of material:	Human remains and grave goods (metal, glass, ceramics, ivory, jet)
Size of assemblage:	Unspecified
Archive location:	Yorkshire Museum in York and Winchester Museum
Abstract:	This project will address the gap between academic perceptions of mobility and migration in the Roman world and current primary (and secondary) school teaching by creating a website for children aged 7-14 and a teaching resource pack for teachers and community

	workers. To achieve this we will work with the Runnymede Trust, the UK's leading independent race equality think tank (http://www.runnymedetrust.org/), which has extensive previous experience of designing and promoting educational websites. This project will be of relevance to all primary schools in Britain as it will enable teachers, especially those working with children from diverse backgrounds, to portray images of the Roman world that are not only more relevant but reflect new academic research on the topic.
Url:	https://gtr.ukri.org:443/projects?ref=AH/J005436/1

Project code:	AHRC AH/I022228/1
Date:	2011
Project:	The archaeology of alchemy and chemistry in the early modern world
PI:	Marcos Martinón-Torres
Institution:	University College London
Period of material:	17thC
Type of material:	Pottery
Size of assemblage:	25 ceramic crucibles, 2 retorts, 2 flasks, 1 stoneware bottle, and 'numerous fragments thereof'
Archive location:	Ashmolean Museum, Oxford
Aims and sites:	Material discovered when contractors were digging in the rear prior to refurbishment of Ashmolean Museum. Bennett, Johnston and Simcock, Solomon's House; and Graham Hull 2003 'The excavation and analysis of an 18th-century deposit of anatomical remains and chemical apparatus from the rear of the first Ashmolean Museum (now Museum of the History of Science), Broad Street, Oxford', *Post-medieval Archaeology* 37, 1–28. The material has been re-analysed, re-dated and put into context (Martinón- Torres M (2012) *Inside Solomon's house: an archaeological study of the Old Ashmolean chymical laboratory in Oxford.* in Ambix)
Url:	https://gtr.ukri.org/projects?ref=AH%2FI022228%2F1

Project code:	AHRC NE/I014039/1
Date:	2011–2014
Project:	Rehydroxylation [RHX]: Towards a universal method for pottery dating
PI:	Moira Wilson
Institution:	University of Manchester
Period of material:	Roman and Anglo Saxon
Type of material:	Pottery
Size of assemblage:	2: An Anglo-Saxon fired-clay loomweight recovered at Lambourn (West Berkshire); a Samian-ware sherd from an excavation at Owslebury (Hampshire) in 1967 (provided by the Study Group for Roman Pottery)

Archive location: Foundation Archaeology

Aims and sites: A research ream from the UoM and UoE has recently proposed a radically new method of dating archaeological ceramics based on rehydroxylation kinetics. This rehydroxylation reaction underlies (and causes) the well known moisture expansion of brick masonry and tile structures and the commonly observed crazing in glazed ceramics. In a paper published by the Royal Society we presented proof of concept of this new method and compelling evidence that the age of ceramic samples up to 2000 y old can be estimated accurately from measurements of the slow progressive mass gain associated with the chemical recombination of water with the fired clay material. We call this method rehydroxylation [RHX] dating. Pottery is an increasingly common find on archaeological sites from the last 10 000 y onwards and many site chronologies depend upon them. However their dating still relies to a large extent on analysing stylistic changes. Radiocarbon dating cannot be applied unless carbon containing inclusions or residues are present and thermoluminescence can be prohibitively complex. Hence, a new method for dating such material is extremely significant. The basis of RHX is that all fired clay ceramics start to gain weight (and expand) as soon as they are removed from the kiln. The weight gain is caused by the chemical combination of atmospheric moisture with the ceramic (rehydroxylation) and continues over the lifetime of the ceramic. Central to RHX is a new time1/4 law, discovered by the applicants, that defines precisely the rate at which fired clay ceramics gain weight over time. This effectively provides the material with an "internal clock". A ceramic can be returned to its 'as fired' state by reheating to remove the chemically combined water. The older the material, the greater the mass of water removed by reheating. Following reheating the chemical reaction between ceramic and atmospheric moisture begins again. By monitoring the mass gain over several days we can determine the rate at which that particular material gains mass, and from this we calculate the time that it would take to replace the water removed by reheating. This gives the age of the sample. By the end of the project we aim to have demonstrated that RHX is a well-founded archaeological dating method, suitable for routine use. Its applicability to diverse archaeological scenarios will have been established. The overall objectives of the work are to validate RHX, to quantify the errors and uncertainties, to build end-user confidence and to optimise the methodology to increase sample throughput and hence reduce the cost per sample. The overwhelming response from the international archaeological community strongly indicates that RHX could be of enormous benefit. The method has been described as being 'of profound importance to archaeology' and as having 'the enormous potential to revolutionise the field of dating in archaeology.' Our method therefore has the potential to become as important for dating ceramics as radiocarbon dating is for organic materials.

Url: https://gtr.ukri.org/projects?ref=NE%2FI014039%2F1http://www.datingceramic.manchester.ac.uk

Project code:	AHRC AH/H037500/1
Date:	2010–2011
Project:	Reflectance transformation imaging systems for ancient documentary artefacts
PI:	Graeme Peter Earl
Institution:	Southampton University
Period of material:	Ancient texts and written artefact and other artefacts
Type of material:	1650 (in England)
Size of assemblage:	More than 2,000 objects
Archive location:	Created RTI data from the following collections: Ashmolean Museum, cuneiform texts (c. 1000 objects), Ashmolean Museum, Linear B tablets (c. 50 objects) Ashmolean Museum, Aegean seals (c. 600 objects) Ashmolean Museum, diverse objects (e.g., mummy masks etc.) Manchester, John Rylands Library (c. 300 objects)
Aims and sites:	The project set out to develop novel imaging tools for ancient documents and artefacts, to disseminate knowledge about these technologies to a broad audience, and to establish hubs for imaging practice in Southampton and Oxford. The project developed and trialled several Reflectance Transformation Imaging (RTI) systems - two domes, a miniaturised dome, microscope capture, highlight capture with multispectral capability, and a robotic gigapixel system. It explored underwater RTI capture techniques and high-speed interactive imaging in partnership with HP Labs. This led to further capture system design and on- going work to produce a turn-key RTI system suitable for non-specialists. Dissemination included data capture, collaboration and knowledge transfer activities with more than a dozen museums, many academic institutions, several commercial and non-profit partners such as Cultural Heritage Imaging, HP Labs, and public bodies such as National Archives of Scotland, English Heritage, the British School at Rome, the Serious Organised Crime Agency and the National Trust. In addition to local studies with bodies such as Southampton Museum Service and the Ashmolean the project has become involved in a series of high profile cultural heritage projects and sites including Catalhoyuk, Herculaneum, Pompeii, Portus and in diverse contexts, including rock art recording in Scotland and Libya. Much of this work was funded by the project solely in terms of staff and equipment, with all other costs gained through external sources. Collaborations continue, with recent examples being a knowledge transfer partnership between Traditional Owner Groups, University of Western Australia and University of Southampton funded by the World Universities Network, and an AHRC funding application to employ the RTI expertise and facilities funded by RTISAD to explore Neolithic art and artefacts.

	The Oxford hub has led to new research activities focused on Roman and Greek epigraphy and a successful funding application to the Mellon foundation for further RTI recording and open publication of cuneiform documents. At Southampton the hub now includes four part-time data capture experts, many undergraduate, masters and PhD projects, and further innovation. An internal application has been submitted to explore commercial possibilities for this hub and there is a formal pricing structure in place that includes overheads for long term sustainability. Examples of this hub in action include recent consultancy projects at the National Archives, at the Fitzwilliam Museum. Above all the project has sedimented Southampton's position as a centre for imaging and metrology of cultural heritage artefacts., and Oxford's position as a centre for document imaging.
Url:	https://gtr.ukri.org/projects?ref=AH%2FH037500%2F1 http://acrg.soton.ac.uk/research/projects/rtisad/

Project code:	AHRC NE/H015132/1
Date:	2010–2013
Project:	Assessment of biodiversity in Pleistocene Britain through comprehensive small- scale microsampling of vertebrate fossil remains
PI:	Michael Buckley
Institution:	Manchester University
Period of material:	Palaeolithic
Type of material:	Faunal remains
Size of assemblage:	Unspecified (email requesting details remains unanswered)
Archive location:	Unspecified
Aims and sites:	Pin Hole Cave, Creswell Crags, Derbyshire spanning ~40,000 years of human and animal occupation. This is the ideal site for this project because it has had a recent (1980s) highly-detailed small-scale excavation and a previous (1920s) full-scale excavation and is now used as the type-site for Marine Isotope Stage (MIS) 3 fauna. The detailed 1980s excavations at Pin Hole Cave, where approximately 18,500 bone finds were spatially-mapped, will be used to assess whether core sampling of archaeological deposits can yield information equivalent to full-scale excavation and, if so, the typical size, number and distribution of core samples necessary to obtain this information. This will ultimately offer a small-scale microsampling technique that could be used on forthcoming site excavations to investigate the biodiversity of Pleistocene Britain with minimal site destruction. To do this I propose to digitise the spatially-mapped finds and then identify all morphologically-unidentifiable bone fragments from 50% of the deposits (~7,500-15,000 bone fragments) from the recent small-scale excavations at Pin Hole Cave
Outcomes:	This research grant used a recently developed method of species identification in fragmentary domesticate animal bones (developed during a NERC-funded PhD studentship and subsequent NERC-funded postdoctoral research) to study changes in biodiversity in

	Britain over thousands of years during the Late Pleistocene period (~10,000-40,000 years ago). This required development of the methods to not only cover a much wider range of species than previously studied, but also to develop an approach to studying microfaunal remains, which we could further develop a high- throughput approach to the analysis. The result was a new technique that can analyse over 1,000 samples per week at relatively low cost.
Url:	https://gtr.ukri.org/projects?ref=NE%2FH015132%2F1#/tabOverview

Project code:	AHRC AH/H000879/1
Date:	2010–2013
Project:	Feeding Stonehenge: provisioning henges and households in southern Britain in the 3rd millennium BC
PI:	Michael Parker Pearson
Institution:	University College London
Period of material:	Neolithic and Chalcolithic
Type of material:	Faunal remains
Size of assemblage:	9 samples
Archive location:	Salisbury Museum; Wiltshire Museum (Devizes)
Abstract:	This project is the third in a trilogy of multi-institutional research investigations aimed at revolutionizing our knowledge of Stonehenge: investigating the monumental landscape of Stonehenge (the Stonehenge Riverside Project), the people of Stonehenge (the Beaker People Project), and the economic provisioning for Stonehenge and associated sites (Feeding Stonehenge, this project). This proposal is for a study of the material resources required for building Stonehenge and the other henge complexes of Wessex. It goes beyond already- completed surface analysis of finds and investigates inside them, using newly developed scientific analyses to find out about the animal, vegetable and mineral resources utilized by these prehistoric people - where the resources were found, how far they were brought, how they were prepared, and how they were consumed and discarded. All the proposed analyses have been trialled by pilot studies to ensure that they will deliver significant findings. Stonehenge and its associated sites undoubtedly attracted builders and celebrants from many parts of Neolithic Britain. Until now, archaeologists have only been able to speculate on the size and nature of these sites' catchments and on whether centres such as Avebury and Stonehenge were in competition with each other or were visited at different times in the seasonal round. Isotopic and age analysis of the herds slaughtered for feasting at Durrington Walls and other henges will reveal patterns of rearing, mobility and seasonality to answer these questions. Preliminary investigations have produced unexpected results: they indicate that the animals were brought considerable distances to ceremonial centres.

While much work has been done on the Welsh bluestones brought to Stonehenge, relatively little attention has been paid to the large sarsens. Excavations at Stonehenge in 2008 have revealed that sarsen-working methods varied within and around the monument, allowing earlier excavation results to be re-assessed, to increase our understanding of the methods, process and techniques of stone-working. From largely forgotten antiquarian observations 300 years ago, some of the quarry sites may have been about 20 miles from Stonehenge, between Avebury and Marlborough.

Recent excavations of the Stonehenge people's houses at Durrington Walls will also provide new information: scientific study of the finds will reveal detailed insights into the people's way of life. Geochemical and geophysical analysis of the house floors and yard surfaces will reveal spatial patterns of occupation and activities within a village probably inhabited by the builders of Stonehenge. Combined with the spatial mapping of artefacts, plant remains and animal bones (both large and microscopic), these analyses can reveal how interior and exterior domestic spaces, as well as ceremonial spaces, were used within this short-lived but large settlement occupied for less than 50 years around 2500 BC.

Study of the Durrington Walls settlement's animal bones will indicate dietary preferences, methods of carcass dismemberment and consumption patterns, and reveal differences between small-scale domestic and large-scale ceremonial settings. This settlement was inhabited about 50 years before copper tools are thought to have been adopted in Britain, and there is tantalising evidence that copper axes may have been used at Durrington Walls; the study of cut-marks on animal bones should reveal whether any were made by copper daggers as opposed to flint tools. Study of the hundreds of flint arrowheads, some embedded in pig bones, will reveal patterns of use and breakage as well as variations in manufacture by stone-tool makers with varying knapping skills.

The large quantity of pottery from Durrington Walls can be analysed to find out where it was made and what was cooked in it. Preliminary studies suggest local manufacture from riverine clay; contents included dairy products, pork and beef.

Url: https://gtr.ukri.org/projects?ref=AH%2FH000879%2F1

Project code:	AHRC AH/H500278/1
Date:	2010–2011
Project:	Hunter-gatherer behaviour in the landscape: reconstructing movement patterns in the British Late Upper Palaeolithic
PI:	Paul Pettitt
Institution:	Sheffield University
Period of material:	Upper Palaeolithic
Type of material:	stone tools
Size of assemblage:	50 tools

Archive location: Russell Coates Museum, Bournemouth; Torquay Museum; University of Bristol Spelaeological Society collecllions, Bristol; Manchester Museum; Creswell Crags Museum and Heritage Centre, Creswell Crags, Nr Worksop; Woking Museum; Oxford Archaeology; Manchester University

Abstract: The application of the LA-ICP-MS technique to a suitable sample size of artefacts, sites and sources will allow the unambiguous reconstruction of British Late Magdalenian raw material procurement networks for the first time. Hypotheses about territorial size, annual scheduling of resources and topographical keys to human behaviour will be testable for the first time at the context of the regional scale. This will, for the first time, allow British Upper Palaeolithic archaeology to move firmly beyond chrono-cultural ordering and provide data directly comparable to that of contemporary European Magdalenian groups.

Several research questions provide a context for such a comparison, each clearly addressable within the parameters of the results.

How variable in range and direction were lithic procurement networks and what does this reveal about the size of Late Magdalenian territories?

How do these compare with those of contemporary Late Magdalenian regions on the continent? Does similarity suggest the straightforward extension of continental adaptations onto the country? Alternatively, what factors might explain major differences?

Does the directionality of procurement networks support the notion that the Severn and Trent rivers formed the main communication axis in Britain in the Late Magdalenian?
Is the notion that major sites were produced by the same group justifiable in the light of raw material movements?

Have any sources remained unidentified which may be taken to suggest the operation of British groups outside the modem geographical limits of the country?

What are the implications of the results with regard to landscape learning processes; specifically, how and at what rate were procurement and subsistence rounds established and how did these relate to the apparent patterns of colonisation movement?
The overall significance of the project is that it will allow detailed, regional (in this case national) scale reconstruction of Late Pleistocene human behaviour directly relevant to major international research issues.

Url: https://gtr.ukri.org/projects?ref=AH%2FH500278%2F1

Project code:	AHRC AH/G010269/1
Date:	2009–2014
Project:	Glastonbury Abbey: Archaeological Excavations 1904–1979
PI:	Roberta Gilchrist
Institution:	Reading University
Period of material:	Prehistoric, early medieval, medieval
Type of material:	Ceramics, lithics, glass, metal, clay tobacco pipes, wood, charcoal
Size of assemblage:	Prehistoric lithics (37) (Mesolithic, Neolithic) Prehistoric pottery (78) (principally Iron Age) Roman tile (42) Roman pottery (256) Roman small finds (5) Post-Roman pottery (10,247 sherds) Medieval floor tiles (approx. 7,000) Medieval small finds (372) Medieval vessel glass (125) Slag and residue samples (3.99kg) Saxon glass: 23 artefacts (glass, tile, crucible, furnace superstructure) Medieval stained and painted window glass (2,085) Ex-situ wall plaster (474) Clay tobacco pipes (post-med) (24) Animal bone (981) Wood and charcoal (186) Medieval worked stone (83 Romanesque + 1,439 Gothic)
Archive location:	Glastonbury Abbey, Somerset
Aims and sites:	Glastonbury Abbey, Somerset
Abstract:	Glastonbury Abbey is crucial to understanding British monasticism, and it holds a special place in English popular culture. Thirty-four seasons of excavations took place between 1904 and 1979, but the results have remained unpublished. This project will analyse and publish the archive of excavations at Glastonbury Abbey by iconic figures in the history of archaeology: St John Hope (1904), Bligh Bond (1908-21), Peers and Clapham (1928-39) and Ralegh Radford (1951-64). The Trustees of Glastonbury Abbey are project partners and the results of the study will inform site interpretation and museum display. Glastonbury was one of the earliest monasteries in England, likely dating from the seventh century, and was reputedly the only one to have enjoyed continuous occupation to the sixteenth century. In 1191 the monks alleged that they had uncovered the graves of Arthur and Guinevere, and later they promoted a link with Joseph of Arimathea, claiming that he had founded the first church in AD 63. The Arthurian connection was developed after a devastating fire of 1184, when funds were needed to rebuild the Abbey. Archaeological excavations focused on the main claustral ranges and parts of the cemetery, and substantial assemblages were recovered of

worked stone, window glass, pottery, ceramic tiles and small finds. The site's central importance to archaeological scholarship stems from the interim publication of a series of early medieval churches, a vallum enclosure, potentially the earliest cloister in Britain, and craft-working activities including unique glass furnaces. This project will analyse the archive records and excavated finds to consider key research questions. Is there evidence for occupation pre-dating the early monastery? What is the form and date of the early 'family' of churches and the first cloister? Can continuous occupation be demonstrated? What was the scale and extent of the early craft-working centre? Is it possible to reconstruct the zoning and land-use of the early monastery and the subsequent development of the medieval precinct? Can we reconstruct the architectural form, style and development of the later medieval abbey? Did the emphasis placed on myth and cult activities create a distinctive layout in the medieval church and cloister?

Analysis of the archive will be complemented by a new geophysical survey of the precinct. The geophysics will enhance interpretation of the cloister excavations and increase knowledge of the broader precinct. It will also facilitate the assessment of surviving buried deposits, contributing to their conservation and guiding future research.

The full publication of the Glastonbury archive will achieve a major landmark in monastic archaeology. Beyond the intrinsic historical significance of the Abbey, the site is of demonstrated international importance in understanding early medieval glassworking, and for advancing understanding of the transition between the early and later medieval monastic plans.

Url:

https://archaeologydataservice.ac.uk/archives/view/glastonbury_ahrc_2014/

NERC

Project code:	NERC NE/N011317/1
Date:	2016–2021
Project:	Palaeolipidomics: a new biomarker approach to trace cereal agriculture in prehistory
PI:	Lucy Cramp
Institution:	Bristol University
Period of material:	Prehistoric, Roman, medieval
Type of material:	Pottery
Size of assemblage:	100 samples; 10 pottery samples from the Roman site of Vindolanda, plus unspecified number from medieval Oxford
Archive location:	Unspecified (email requesting details remains unanswered)
Outcomes	The aim of this project is to answer key questions surrounding the early establishment of cereals in European prehistory. It has involved the development of a new methodology for the extraction, enrichment, and highly selective analysis of diagnostic cereal biomarkers, which has been applied to early Neolithic pottery from Britain and other regions and time periods.
Url:	https://gtr.ukri.org/projects?ref=NE%2FN011317%2F1#/tabOverview https://gc-hrms-spectra.github.io/

Project code:	NERC NE/K012185/1
Date:	2016–2021
Project:	Palaeopopulation genomics of Mycobacterium tuberculosis
PI:	Terry Brown
Institution:	Manchester University
Period of material:	unspecified
Type of material:	Human bone
Size of assemblage:	22 skeletons
Archive location:	unspecified
Abstract	Tuberculosis is a reemerging infection that was also common in the past in Britain. Poverty, drug resistance, AIDS and migration are key factors in its occurrence today. The disease is usually caused by the bacterium called Mycobacterium tuberculosis, which exists as a variety of strains that have different degrees of virulence and are found in different parts of the world. Most tuberculosis infections occur in the lungs, because it is transmitted via coughing, but other parts of the body can also be infected, especially if the disease is caught by eating or drinking infected foods. If left untreated the infection can cause damage to different bones in the body, most commonly the spine, ribs, hips and knees.

Archaeologists have used this information to study tuberculosis in the past, but visual examination of skeletons does not reveal which of the various strains of M. tuberculosis is present. We would like to be able to distinguish different strains of M. tuberculosis in archaeological remains because this would enable us to study the evolution of the disease. We could, for example, ask if different strains of tuberculosis were present in different parts of Britain, and in particular if people living in the countryside and in towns were exposed to different types of tuberculosis. We could also examine how tuberculosis evolved in response to the increased urbanization that occurred during the medieval period. Until recently it was impossible to identify the particular strain of M. tuberculosis present in a skeleton, but now there are techniques for studying the small amounts of 'ancient' DNA that are preserved in some samples. In a previous project we used these methods with 491 skeletons from 145 archaeological sites from across all of Britain and Europe, most of these skeletons showing signs of tuberculosis, and dating from the Roman period to the 19th century AD. About half of the skeletons did not appear to contain any ancient DNA, but we achieved positive detections with enough samples to believe that meaningful comparisons can be made between tuberculosis strains from different places and periods. In the proposed project we will use new methods for sequencing ancient DNA in order to obtain the detailed information we need in order to compare an archaeological variety of M. tuberculosis with modern strains of the bacterium. We have already shown that these methods work, because we have used them successfully with one skeleton, of an adolescent female from 19th century Leeds, England. We showed that this person had been infected with a strain of tuberculosis that is rare today, but which we think was much more common in the past.

In the new project we intend using the same approach with 24 skeletons, 22 from Britain, one from France and one from the Ukraine. We hope to be able to obtain equally detailed information on the strains of tuberculosis in these other skeletons, and hence to show that ancient DNA sequencing has genuine potential as a means of studying the evolution of tuberculosis.

Url: https://gtr.ukri.org/projects?ref=NE%2FK012185%2F1#/tabOverview

Project code:	NE/K003259/1
Date:	2013–2016
Project:	Deciphering dog domestication through a combined ancient DNA and geometric morphometric approach
PI:	Keith Dobney
Institution:	University of Aberdeen
Period of material:	Middle Pleistocene all the way to post-medieval

Type of material: Faunal remains

Size of assemblage: 606 specimens

Archive location: Natural History Museum, London; Museum of London; University of Nottingham; Vindolanda Trust; Oxford University Museum of Natural History; University of York; York Archaeological Trust

Abstract: The shift from hunting and gathering to an agricultural way of life was one of the most profound events in the history of our species and one which continues to impact our existence today. Understanding this process is key to understanding the origins and rise of human civilization. Despite decades of study, however, fundamental questions regarding why, where and how it occurred remain largely unanswered. Such a fundamental change in human existence could not have been possible without the domestication of selected animals and plants. The dog is crucial in this story since it was not only the first ever domestic animal, but also the only animal to be domesticated by hunter-gatherers several thousand years before the appearance of farmers. The bones and teeth of early domestic dogs and their wild wolf ancestors hold important clues to our understanding of how, where and when humans and wild animals began the relationship we still depend upon today. These remains have been recovered from as early as 15,000 years ago in numerous archaeological sites across Eurasia suggesting that dogs were either domesticated independently on several occasions across the Old World, or that dogs were domesticated just once and subsequently spreading with late Stone Age hunter gatherers across the Eurasian continent and into North America. There are also those who suggest that wolves were involved in an earlier, failed domestication experiment by Ice Age Palaeolithic hunters about 32,000 years ago. Despite the fact that we generally know the timing and locations of the domestication of all the other farmyard animals, we still know very little for certain about the origins of our most iconic domestic animal. New scientific techniques that include the combination of genetics and statistical analyses of the shapes of ancient bones and teeth are beginning to provide unique insights into the biology of the domestication process itself, as well as new ways of tracking the spread of humans and their domestic animals around the globe. By employing these techniques we will be able to observe the variation that existed in early wolf populations at different levels of biological organization, identify diagnostic signatures that pinpoint which ancestral wolf populations were involved in early dog domestication, reveal the shape (and possibly the genetic) signatures specifically linked to the domestication process and track those signatures through time and space. We have used this combined approach successfully in our previous research enabling us to definitively unravel the complex story of pig domestication in both Europe and the Far East. We have shown that pigs were domesticated multiple times and in multiple places across Eurasia, and the fine-scale resolution of the data we have generated has also allowed us to reveal the migration routes pigs took with early farmers across Europe and into the Pacific. By applying this successful research model to ancient dogs and wolves, we will gain much deeper insight into the fundamental questions that still surround the story of dog domestication.

Url: http://gotw.nerc.ac.uk/list_full.asp?pcode=NE%2FK003259%2F1&cookieConsent=A

Project code:	NE/J012580/1
Date:	2012–2013
Project:	Microfossil provenance of British Iron Age lowland ceramic artefacts
PI:	Mark Williams
Institution:	Leicester University
Period of material:	Iron Age
Type of material:	Pottery, clay linings of floors, storage pits, stone walls
Size of assemblage:	34 samples
Archive location:	Unspecified
Abstract:	Burrough Hill sat in a densely occupied Iron Age landscape of farms and settlements. Archaeological evidence from an ongoing five-year programme of work already attests to the wide ranging contacts of the community living here, but this work has so far been limited to comparatively rare, high value or exotic items such as quern stones. Excavations during 2010 and 2011 have identified a range of ceramics from 4th century BC to 1st century AD at the main entrance and from houses and occupation deposits inside the northern edge of the hill- fort. At Burrough Hill and across the East Midlands generally, however, the ceramic repertoire of Iron Age communities is dominated by a stylistically conservative, geographically widespread and chronologically long-lived tradition of ceramics known as 'Scored wares'. Whilst the macroscopic diversity of its fabrics has long been recognised, it has rarely been possible to characterise and provenance this material. Mud daub from the round houses and clay used in the construction of the ramparts comprise other examples of Iron Age clay procurement in the hill-fort. Archaeological investigation has already identified several hundred storage pits within the hill-fort and a series of round houses to the lee of the ramparts as well as an extramural settlement immediately outside the ramparts to the east of the hill-fort. Excavations in 2011 and 2012 will sample each of these areas to get a cross section of material from the settlement. Burrough Hill is situated in a landscape of Mesozoic sedimentary carbonate and clastic rocks over which are smeared tills of late Quaternary age. The micropalaeontology of the Mesozoic rocks of the East Midlands is well documented. Less well known is the microfossil signature of the tills, which contain Cretaceous microfossils recycled from the Chalk Group of Yorkshire and Lincolnshire mixed with more locally derived Jurassic microfossils. Pilot studies at Burrough Hill already identify a rich repository of ostracods and foraminifera in ceramics, and in clay materials used to the construct walls. In conjunction with a detailed evaluation of the microfossil and sedimentological signature of the solid and drift deposits of the immediate vicinity of the hill-fort, the site provides an excellent case study by which to assess the geological provenance of ceramic and clay materials in a sedimentary landscape, and our study thus has widespread potential for interrogating other archaeological sites in the British landscape.
Url:	https://gtr.ukri.org:443/projects?ref=NE/J012580/1

LEVERHULME TRUST

Project code:	Leverhulme Trust Research Grant
Date:	2020
Project:	Ebb and flow: exploring rivers in later prehistoric Britain
PI:	Rick Schulting
Institution:	University of Oxford
Period of material:	Bronze Age
Type of material:	Human remains
Size of assemblage:	unknown (ongoing and much delayed by Covid/lockdown)
Archive location:	unspecified

Project code:	Leverhulme Trust Research Grant
Date:	2017
Project:	Setting artefacts free: an independent chronology for British Iron Age brooches
PI:	William Derek Hamilton
Institution:	University of Glasgow
Period of material:	Iron Age
Type of material:	Metal brooches
Size of assemblage:	224 objects and c. 255 organic remains (human and faunal remains)
Archive location:	British Museum, Dorset County Museum, Dorset Archaeological Society, Dover Museum, Hampshire Cultural Trust, MAP Archaeology, Oxford Archaeological Unit, Oxford Museums Service, Pre-Construct Archaeology, Royal Cornwall Museum, SWAT/Dana Goodburn-Brown Conservation, Thanet Trust for Archaeology, Wiltshire Museum

	Leverhulme Trust Research Grant
Date:	2017
Project:	Beyond the Three Age System: mapping a history of materials 3000–600 BCE
PI:	Oliver Harris
Institution:	Leicester University
Period of material:	Late Neolithic to the Late Bronze Age
Type of material:	Lithics and metalwork
Size of assemblage:	c.320 objects
Archive location:	Historic England, Oxford Archaeology, Cambridge Archaeological Unit, the British Museum, Wiltshire Museum

Project code:	Leverhulme Trust
Date:	2017
Project:	Lordship and landscape in East Anglia 400–800 CE
PI:	Christopher Scull
Institution:	University College London
Period of material:	Early medieval
Type of material:	Metal objects
Size of assemblage:	555 objects
Archive location:	Ipswich Archive held by Suffolk County Council

Project code:	Leverhulme Trust Research Grant
Date:	2016
Project:	In the footsteps of Caesar: the archaeology of the first Roman invasions of Britain
PI:	Colin Haselgrove
Institution:	University of Leicester
Period of material:	Roman
Type of material:	Metal, wood, human bone, charcoal, faunal remains
Size of assemblage:	350 objects
Archive location:	British Museum; Canterbury Archaeological Trust; Dover Castle; Hertford Museum; Maidstone Museum; Novium Museum (Chichester); Oxford Archaeology; Stevenage Museum; St Albans Museum; Thames Valley Archaeological Services; Ware Museum; Wessex Archaeology

	Leverhulme Trust Research Grant
Date:	2016
Project:	Maximising milk yield in early Neolithic cattle farming: stable isotopic analyses and the origins and spread of breeding cycle manipulation across Europe
PI:	Peter Rowley-Conwy
Institution:	Durham University
Period of material:	Neolithic
Type of material:	Faunal remains
Size of assemblage:	c. 1,700 bones
Archive location:	Salisbury Museum

Project code:	Leverhulme Trust Research Grant
Date:	2016
Project:	The Breckland Palaeolithic project: culture, technology and evolving humans
PI:	Simon Lewis
Institution:	Queen Mary, University of London
Period of material:	Palaeolithic
Type of material:	Lithics
Size of assemblage:	1,387 objects
Archive location:	British Museum, Ashmolean Museum Oxford, Pitt Rivers Museum Oxford, Museum of Archaeology and Anthropology Cambridge, Ipswich Museum, West Stow Anglo Saxon Village

Project code:	Leverhulme Trust Research Grant
Date:	2014
Project:	Making a mark: imagery and process in the British and Irish Neolithic
PI:	Andrew Jones
Institution:	University of Southampton
Period of material:	Neolithic
Type of material:	Decorated chalk, stone, antler, bone, wood
Size of assemblage:	c.1000 objects
Archive location:	All National Museums in UK and Ireland, also suite of smaller regional museums. A rough estimate of around 50-60 museums, including commercial units (Cornwall Archaeological Unit for Woodcock Corner, Truro site; Wessex Archaeology)

Project code:	Leverhulme Trust Research Fellowship RF-2013-148
Date:	2013–2014
Project:	Design for living: artefact function and everyday Roman social practice
PI:	Ellen Swift
Institution:	University of Kent
Period of material:	Roman
Type of material:	Small finds
Size of assemblage:	c. 500 objects
Archive location:	British Museum, Museum of London, Canterbury Museum, Reading Museum, Verulamium Museum, Castle Museum Colchester, Tullie House Museum Carlisle, Vindolanda Museum, Cirencester Museum

	Leverhulme Trust Research Grant
Date:	2013
Project:	(Re)dating Danebury hillfort and later prehistoric settlements in the environs: a Bayesian approach
PI:	Colin Haselgrove
Institution:	University of Leicester
Period of material:	Iron Age
Type of material:	charcoal (x134), charred cereals/plant remains (x48), animal bone (x117), human bone (x36), residues on polllery (x8),
Size of assemblage:	A minimum of 345 object/samples (many others were inspected in order to select the samples)
Archive location:	Hampshire Museums Service stores (Winchester)

Project code:	Leverhulme Trust
Date:	2012
Project:	Anarchy? War and status in twelfth-century landscapes of conflict
PI:	Oliver Creighton
Institution:	University of Exeter
Period of material:	Medieval
Type of material:	Metalwork
Size of assemblage:	c.50 objects
Archive location:	Museum of London Archaeology

	Leverhulme Trust Research Grant
Date:	2012
Project:	The South Oxfordshire Project: perceptions of landscape, settlement and society c. 500–1650
PI:	Christopher Wickham
Institution:	University of Oxford
Period of material:	Early medieval to post-medieval (c.450-1650)
Type of material:	Pottery and metalwork
Size of assemblage:	‘Hundreds of sherds’ plus 40 items of metalwork
Archive location:	Oxfordshire Museums Resource Centre in Standlake (mainly derived from commercial archaeology) and South Oxfordshire Archaeological Group's archive (derived from amateur excavations); Ashmolean Museum

Project code:	Leverhulme Trust
Date:	2011
Project:	Do larger molars and robust jaws in early hominins represent dietary adaptation?
PI:	Simon Hillson
Institution:	University College London
Period of material:	Middle Palaeolithic, Upper Palaeolithic, Mesolithic and Neolithic
Type of material:	Human remains
Size of assemblage:	Unspecified
Archive location:	Unspecified

HISTORIC ENGLAND

Project code:	HE 7716
Date:	2019
Project:	Excavations at Old Windsor between 1953 and 1958: Dr Hope-Taylor Archive. An Archive Assessment
PI:	Roland J C Smith and Gabor Thomas
Institution:	Berkshire Archaeology and Reading University
Period of material:	Anglo Saxon
Type of material:	Pottery, faunal remains, stone objects, lithics, slag, coal, ceramic building material, clay objects, fired clay, clay pipes, wood, soil samples, glass, metalwork, human remains
Size of assemblage:	85,400 items
Archive location:	Finds at Reading Museum
Aims and sites:	Between 1953 and 1958 the late Dr Brian Hope-Taylor undertook a series of excavations at Old Windsor, Berkshire. The excavations revealed a remarkable sequence of Saxon and Early Norman remains from the 7th- to 11th-centuries, including a mid-Saxon settlement, a 9th-century mill leat and watermill, and a series of high quality buildings and finds indicative of a late Saxon and early Norman royal complex. The results of Hope-Taylor's excavations led to the designation of the site as a Scheduled Monument (No. 1006995). Unfortunately Hope-Taylor's excavations have never been analysed or published beyond very short summaries. On Hope-Taylor's death in 2001, the site archive of his excavations was recovered from his home and deposited with Historic Environment Scotland (HES). The finds had previously been deposited with Reading Museum (RM), gifted by the landowner in 1971, while other paperwork and documentation was deposited with the Museum in the 1980s and 1990s following a programme of post-excavation work. In broad terms HES holds the primary excavation records and Reading

	Museum largely the material archive and the post-fieldwork records. There are some notable exceptions to this division of the archive. This project sought to undertake a rapid assessment and quantification of the archive so as to establish the division of the archive between the two institutions and its condition, completeness and coherence
Url:	https://research.reading.ac.uk/middle-thames-archaeology/projects/old-windsor/

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