

LUCERNA

ISSUE 51 • JULY 2016



THE NEWSLETTER OF
THE ROMAN FINDS GROUP



LUCERNA: THE NEWSLETTER OF THE ROMAN FINDS GROUP

ISSUE 51, JULY 2016

Editorial

Welcome to *Lucerna* 51.

This edition kicks off with a couple of updates from our AGM that was held during the RFG Spring Conference back in April and the revised list of RFG Committee members. In doing so we would like to welcome our newest committee member, Barbara Birley - you can read a bit more about Barbara, her work and what she hopes to bring to the RFG below. Congratulations also goes to Marta Alberti who has received the first ever RFG Grant that has helped her research on spindle whorls from Vindolanda. Furthermore, there's all you need to know about who's talking and how to book your place at the next RFG Autumn Conference at the University of Reading on the 9th and 10th September 2016. Don't miss out: we look forward to seeing many of you there.

This issue also contains a couple of interesting research pieces. The first is by Glynn Davis who gives us an insightful account of the use and significance of polished bone spatulate strips in London. The second, by Tatiana Ivleva, is an update about her ongoing research on the production, distribution and function of glass bracelets in Roman Britain. Many thanks to Glynn and Tatiana for their contributions.

Finally, we wrap up with a detailed summary of all the papers that were given at this year's RFG Spring Conference, followed by a summary of some upcoming events that may be of interest to members.

Matthew Fittock
Lucerna Editor

The RFG AGM

The RFG Annual General Meeting took place on the afternoon of Saturday 2nd April 2016 at the Spring Conference in York where, after a vote, Barbara Birley was newly elected to the Committee, replacing Roy Friendship-Taylor. It is also with regret that prior to the AGM Ellen Swift resigned from her position on the committee as well. The RFG would like to place on record its thanks to both Ellen and Roy for their work on the committee over the years and wish them well in the future.

It was therefore agreed that the Roman Finds Group Committee until the next AGM in the spring are:

Chairman: Justine Bayley
mail@justine-bayley.co.uk

Treasurer: Jenny Hall
jenny.m.hall@hotmail.com

Minutes Secretary: Evan Chapman
Evan.Chapman@museumwales.ac.uk

Membership Secretary: Angela Wardle
awardle@waitrose.com

Contents

RFG News and Notices	1
Bone Spatulate Strips From Roman London <i>Glynn J.C. Davis</i>	6
Ongoing Research: Global Glass Adornments Event Horizon in the Late Iron Age and Roman Period Frontiers (100 BC - AD 250) <i>Tatiana Ivleva</i>	13
The Roman Finds Group Spring Conference Reviews	15
Recent Publications	24
Conferences and Events	24

Communications Secretary (and Website Manager):
Nicola Hembrey
Nicola.Hembrey@HistoricEngland.org.uk

Meetings Co-ordinator: Stephen Greep
sjgreep@gmail.com

Lucerna Editor: Matt Fittock
m.g.fittock@pgr.reading.ac.uk

Datasheet Editor: Gill Dunn
gill.dunn@cheshirewestandchester.gov.uk

Committee Members:

Jörn Schuster - j.schuster@smallfinds.org.uk
Sally Worrell - s.worrell@ucl.ac.uk
Barbara Birley - barbarabirley@vindolanda.com

Barbara Birley Biography

Barbara Birley is the curator for the Vindolanda Trust. For 20 years she has been working closely with the Trust's archaeologists to understand the expanding Vindolanda collection and to accrue a comprehensive knowledge about the Roman Frontier and its material culture. She has been an active member of the RFG for 12 years and has produced datasheets on Roman beads and worked closely with the RFG to produce two of the new artefact films on beads and hair combs. From 2012 to 2016, Barbara has presented five papers at RFG meetings including updating the group about recent finds from the ongoing Vindolanda excavations. Barbara is keenly aware of the benefits that being a member of the RFG has brought to her work and in developing her professional relationships. The Roman Finds Group has been extremely supportive in her professional development, offering introductions to likeminded professionals and facilitating discussion for

Front cover image: Fortunata writing tablet from Number One Poultry, London (Hill & Rowsome 2011). Image copyright Museum of London Archaeology. See more information on page 24.

comparative work on collections. Barbara is passionate about supporting other individuals and organisations to further their own development and believes that one of the great strengths of the RFG is its supportive network. As a committee member, Barbara hopes to bring her experience and expertise to the group, commitment to wider engagement and collaborative work and an emphasis on nurturing future generations of artefact specialists.

RFG Grant Awarded to Marta Alberti (The Vindolanda Trust)

At this year's Spring Conference Marta Alberti of The Vindolanda Trust was awarded the first RFG Grant to the sum of £450 towards illustrations of whorls from excavations at Vindolanda as a part of a research project. Unfortunately Marta was unable to collect the award in person but the cheque was received on her behalf by Barbara Birley (fig. 1). As part of the award Marta will be producing a datasheet for the members of the RFG and has also kindly agreed to write an article for *Lucerna* that will be published in due course. The RFG would like to once again congratulate Marta and we look forward to seeing the results of her research.



Fig. 1. Barbara Birley accepting an RFG Grant on behalf of Marta Alberti at the RFG Spring Conference in York.

Upon accepting the award Marta provided us with an update of her ongoing work. She writes:

'In April of this year the Roman Finds Group generously awarded me, Marta Alberti, Site Archaeologist at Roman Vindolanda, a grant designed to help with my research on spindle whorls along the northern Romano British Frontier. The grant, together with a contribution from the Vindolanda Trust, substantially helped in covering the cost of professional illustration (provided by talented Mark Hoyle), for the most significant spindle whorls amongst the 69 found in the North West quadrant of the 3rd and 4th century fort at Vindolanda. All illustrations will be featured in a paper already prepared for the Vindolanda Research Reports to be published at the end of 2017. The paper will be part of a more comprehensive volume, which will conclude and summarize the results obtained in the 2008-2012 SMC.

In March, I had the privilege to present my original research on spindle whorls and spinners in the forts of the Romano British frontier to the prestigious audience

of TRAC 2016 in Rome. I have now been invited to submit my paper for publication and, in this instance, the illustrations obtained thanks to the RFG grant will play a key role. As the 2016 excavation season comes to an end at Vindolanda, my first winter project will involve the creation of a datasheet on spindle whorls. The diffusion of standard practices of analysis intends to be of help to the specialist audience of the RFG and all those interested in these objects. The datasheet's aim will be to spread awareness of key data that can be extracted from spindle whorls and to shed some light on what the implications of their presence or use might be, both on a practical and on a theoretical level.'

Further information about how to apply for RFG grants is provided below, on the RFG website or by contacting Stephen Greep, Chairman of the Grants subcommittee. The deadline for the next round of submissions is the 1st September 2016.

Membership Benefits

The objectives of the RFG are to promote the study, research, publication, teaching and conservation of the material culture of Roman Britain. Membership of the RFG will entitle individuals to:

- Two copies of our Newsletter, *Lucerna*, each year.
- Access to our Roman finds datasheets.
- Full access to the website (www.romanfindsgroup.org.uk) and twitter feeds, including the members only section which includes access to recent copies of *Lucerna*. The web site has been developed to include access to *Lucerna* and Datasheets and to include finds catalogues and other finds-related works which are currently out-of-print as pdfs.
- Reduced fees to our twice-yearly meetings, held in the spring (typically a two day meeting) and autumn of each year.
- Free/reduced entrance to major finds-related exhibitions, where this can be negotiated.
- Discounts on finds-related books, or pre-publication offers, where these can be negotiated.
- Access to small grants to help with small finds research. These grants are available to individual, fully paid-up, members and will be awarded for applications seeking to support our objectives e.g. publication drawings and maps or travel to museums for object research. Special consideration is given to articles offered to *Lucerna*. £1,000 is available each year (reviewable). Details on how to apply are on our web site (www.romanfindsgroup.org.uk).
- Access, through the web site, to educational films promoting the importance of finds research. Specialists talk about identifying different materials and objects in a series of films that might ultimately be themed around the chapters of Artefacts in Roman Britain or Nina Crummy's object categories.
- Group payment for individual RFG members to Instrumentum, the European bi-annual magazine. Join through RFG to receive four years' worth of Instrumentum membership for three years payment.

In addition the RFG will absorb the conversion fee in a bulk payment on your behalf. The next renewal date is 2016 and the cost for Instrumentum membership is currently 90 Euros for 4 years. Members will be notified by email, in *Lucerna* and on the website when the next renewal is due.

- Help us increase the Romano-British presence amongst a wider European small finds community e.g. by the provision of extra entries and links to objects in the Instrumentum/Artefacts website.

Membership Subscriptions

Membership to the RFG is £12 for single and £15 for joint membership, with subscription payable in January of each year. Thank you to everyone who has already paid the subscription for 2016, either by cheque, BACS or standing order. May we remind everyone else that the subscription of £12 was due on January 1st and I look forward to receiving your cheques if you have not done so already (made out to The Roman Finds Group and sent to: 1 Stebbing Farm, Fishers Green, Stevenage, Herts, SG1 2JB). Please also make sure that you update your existing standing orders if necessary.

Do remember that the preferential rate for September's Autumn Conference is of course only available to paid-up members. Please send Angela your cheque or ask her for bank details if you would like to make a direct payment. If we do not hear from you after two reminders, we shall have to assume that you no longer wish to belong to the group – and we would be very sorry to lose you!

If you have sent us your email address but are not receiving RFG emails, this means that the email address has failed, either because it has changed or we cannot read it. If you would like to receive RFG emails and are not receiving them, please email Angela at awardle@waitrose.com and she will update our records. Also, please, please, let us know if you change your address.

Jenny Hall, RFG Treasurer
Angela Wardle, Membership Secretary

Follow the Roman Finds Group Online

Twitter (<https://twitter.com/romanfindsgrp>)

Our Roman Finds Group Twitter feed continues to go from strength to strength. We regularly post photographs, news items and links that may interest people with a passion for Roman objects, as well as sharing up-to-date information on the group. We post live-tweets from our conferences under the hashtags #rfg2016 #rfg2015 etc., so that people from across the world can attend 'virtually'. We recently welcomed our 1190th follower! Do join us! @RomanFindsGrp

Website (www.romanfindsgroup.org.uk)

All of our tweets also appear in a scrolling feed on every page of our recently-revamped website www.romanfindsgroup.org.uk, which contains more information, as well as some beautiful images. Our new website is now fully operational and has been designed

to work well on mobile phones, tablets and on desktop browsers. All Members of the Roman Finds Group may log into the new website and view extra resources that are exclusive to Members of RFG. These include the latest four editions of *Lucerna*, the collection of Roman Finds Group Datasheets, and the a link to allow Members to download a facsimile of Manning's 1985 *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum*, a cornerstone of Roman small finds study, and now out of print. As Jenny Hall wrote in *Lucerna* 48, we have ambitions for this to become the central source for Roman finds; we are working to scan and host out-of-print finds catalogues, and to compile and maintain a detailed bibliography. Watch this space too for news on our forthcoming programme of short films on Roman finds!

Nicola Hembrey, RFG Communications Secretary

RFG Grants

A series of small grants are available from the Roman Finds Group to all fully paid-up members. The annual grant cycle will run from January 1st. Applications may be made at any time, but they will be reviewed and assessed on 1st April, 1st September and 1st December. The RFG has a target annual grant fund of £1,000, although this will be reviewed each year in light of available funds and demand.

Grants will be awarded against any area of the Group's objectives (to promote the study, research, publication, teaching and conservation of the material culture of Roman Britain) but applications must be very clear as to which of these objectives are being applied.

There is no specific application form, but the following details are essential:

- Name, address and institution (where applicable) including email address.
- Date of application – we will normally provide assessments and awards of applications within a six week period.
- Amount requested, other grants applied for and total amount of project. It will not be normal for RFG to fund an individual project to 100%.
- Details of the project and how it will meet the objectives of the Roman Finds Group.
- If it is a project leading to a publication where is the intended publication? Priority will be given to contributions for *Lucerna*.
- Confirmation of RFG membership and year of joining (will be checked!).
- A short citation from at least one referee (who does not need to be a member of RFG).

All applications will be evaluated by a sub group of three members of the RFG Committee. The committee reserves the right to seek further referee opinion and further information where it feels appropriate. The decision of the grant application 'subcommittee' (Stephen Greep, Nicola Hembrey and Sally Worrell) will be final.



Applications should be sent to the chairman of the grants sub group, Stephen Greep (sjgreep@gmail.com).

RFG Datasheets

A plea to all members to share their expertise and knowledge and contribute a datasheet (or two)! It could be on a particular find type, an industry or an update for ongoing research. They can be as short or as long as you like but all will be a valuable resource to students, people just starting off in their finds careers and curators alike.

Gill Dunn is co-ordinating this so please contact her at the address below if you are interested in writing a datasheet.

Gill Dunn, Publications Co-ordinator
Historic Environment Service
27 Grosvenor Street
Chester, Cheshire, CH1 2DD
gill.dunn@cheshirewestandchester.gov.uk

Notes for Contributors

Contributions to *Lucerna* from members and non-members are always welcome. Whether you're an undergraduate or graduate student, seasoned academic or hobbyist, the Roman Finds Group is keen to publish new and continuing research on Roman material culture to help inform others of ongoing work and forge valuable links between fellow members with skills, knowledge and expertise in the same field. As well as fuller research articles, we would be particularly interested to hear about any old or new discoveries anyone is happy to share, as well as any mystery objects that need identifying. On the other hand, perhaps you're part way through your research and looking for a way to present some preliminary results or a short summary outlining your ongoing studies? Whatever the case, please don't hesitate - we would be delighted to hear from you!

If you wish to participate, all contributions should be sent as attachments via e-mail to Matthew Fittock (*Lucerna* Editor) at m.g.fittock@pgr.reading.ac.uk. Submissions must be word-processed on Microsoft Word or an equivalent. The main article should include text only, with the paper title and author's name at the beginning and a full bibliography followed by contact details at the end, with no images but full reference to figures. The document should be single spaced with a full return in between each paragraph. All images should be provided as individual TIFF files at a minimum of 300 dpi, and all line-art as individual TIFF files at 1200 dpi, with captions in a separate document. Images in colour will appear in black and white in print and colour online. Tables must also be provided in a separate Microsoft Excel file with appropriate captions. There is no strict word limit but longer articles should be no more than 5000 words, excluding the bibliography. Submissions can be made at any time during the year: no later than the end of November for a January release and the end of June for the July edition, but please contact the editor in advance if you wish to discuss scheduling.

Submissions can be made by post to: Matthew Fittock, Department of Archaeology, University of Reading,

Whiteknights Box 227, Reading, Berkshire, RG6 6AB. Articles and images should ideally be provided on CD-ROM in the aforementioned formats but please get in touch with the editor prior to submission if this is a problem.

Upcoming RFG 2016 Autumn Meeting

Town and Country in Roman Britain
9th-10th September
University of Reading

The 2016 RFG Autumn Meeting is based in Reading and will be a two day conference from the afternoon on Friday 9th September until late afternoon on Saturday 10th September. It will be kindly hosted by the University of Reading's Archaeology Department and will take place in both the atrium of the Archaeology Building and the Ditchburn Theatre on Whiteknights campus.

The conference comprises five sessions of papers with eighteen talks covering various aspects of finds from the town and country in southern Britain and is an excellent opportunity to hear about recent finds and research in this region. As well as sessions on Research at Reading, London and Urban and Rural Britain, a quick-fire session entitled 'Small Finds, Short Papers' including five ten minute talks will take place. Research posters covering a wide range of topics and an artefacts table with finds from the excavations at Silchester will also be displayed during all tea and coffee breaks.

We are delighted to announce that the conference's Keynote Presentation will be given by Nina Crummy and Matt Phelps on Friday the 9th who will discuss their ongoing work on the Colchester Hoard.

Previous RFG meetings in Newcastle and York were oversubscribed so early booking is strongly advised. The cost of the meeting is £40 for fully paid up RFG members, £33 for students, £48 for non-members and a £25 day rate. Attendance applications can be made by filling out the enclosed form and returning it with the required payment to the address stated.

Please see the RFG's website www.romanfindsgroup.org.uk/meetings for further information and to download a booking form.

Conference Schedule

Day One: Friday 9th September

Session 1 – Research at the University of Reading

Hella Eckardt (University of Reading), Writing power and identity: the material culture of literacy

Tom Brindle (The Roman Rural Settlement Project, University of Reading), Country life: results from the Roman Rural Settlement Project

Carolina Lima (PhD student, University of Reading), A girl's best friend: the role of hairpins in defining female identity in Roman London

John Ford (PhD student, University of Reading), Ringing the changes: the social significance of finger-rings in Roman Britain



Session 2 – Finds from Urban Southern Britain

Martin Pitts (University of Exeter), Funerary object-scapes in the Roman West

Ruth Shaffrey (Oxford Archaeology), Understanding urban flour supply: the contribution of millstones and querns

Keynote Presentation

Nina Crummy (Freelance Small Finds Specialist/Silchester Town Life Project, University of Reading) and Matt Phelps (Institute of Archaeology, University College London), A hoard of military awards, jewellery and coins from Colchester

Day Two: Saturday 10th September**Session 3 – Finds from Roman London**

Mike Marshall (Museum of London Archaeology), A city of merchants and traders or a city of soldiers? The 1st century AD military equipment from Bloomberg London in context

Ben Paites (PAS, Essex), Roman city limits: finds from the Thames foreshore at the Tower of London

Glynn Davis (Colchester and Ipswich Museums), The tears of the Heliades: investigating amber from Roman London

Session 4 – Finds from Rural Southern Britain

Diana Briscoe (Archive of Roman Pottery Stamps (ARPS)), Stamped pottery in Roman Britain

Stuart McKie (PhD Student, Open University), Embedded magic: the sensory experience of cursing at the Temple of Sulis Minerva at Bath

Richard Hobbs (The British Museum), New insights into the Mildenhall treasure

Sian Thomas (PhD Student, Cardiff University), Objects and their place in ritual performances at Nornour in the Isles of Scilly

Session 5 – Small Finds, Short Papers

Rachel Cubitt (Museum of London Archaeology), Spoons, symbolism and survival. A new find from Roman London

Peter Warry (Independent Researcher), The evolution of roof tile in Southern Britain

Victoria Keitel (PhD Student, University of Reading), Small finds from Rockbourne Roman villa

Philip Smither (University of Reading Alumnus), Roman weighing instruments from Britain

Edwin Wood (PAS, Sussex), Portable Antiquities Scheme finds from Roman London with a focus on the Swan Lane area

Closing Talk

Hilary Cool (Barbican Research Associates), Approaches to writing finds reports; notes from Dr Cool's casebook



Bone Spatulate Strips from Roman London

Glynn J.C. Davis

Writing equipment has been a common category of Roman finds for discussion in the pages of *Lucerna* for a number of years. This article seeks to explore bone 'spatulate' strips whose function, although now strongly associated with writing equipment especially in burial contexts (e.g. Small & Small 2007, 168; Božič 2002; Eckardt forthcoming), remains enigmatic. Recent publications have suggested they are rulers (Božič 2002, 35; Božič & Feugère 2004, 39-40; Tomlin 2011, 148) however no explicit explanation has been given to explore their use. This article brings together the known London assemblage, over thirty years since Stephen Greep's (1983) previous synthesis. Since then significantly more have been uncovered, some published by the archaeological unit MOLA. Others have been recently re-discovered within the Museum of London's Archaeological Archive, through its ongoing Arts Council England (ACE) funded volunteer scheme to open-up the stored collections (Davis 2014). Study of the use wear of the London assemblage will hopefully demonstrate that these instruments are unlikely to function primarily as rulers. I hope at the least to introduce the London material to the growing international corpus and provoke further meaningful thought and discussion.

Identifying 'rulers' from other spatulate strips

Bone spatula-shaped implements would clearly have had a variety of uses within the Roman world and it is often difficult to assign an explicit function to such objects. Greep's (1983, 473-474) synthesis of 'polished bone strips' is a good example of the difficulty in separating these out, especially when using museum collections that rarely have stratigraphic context associated with them. Indeed, it is primarily through context that our bone 'rulers' have been identified as such, although there is some iconographic evidence (cf. von Boeselager 1989, 227; Božič 2002, 34). This article discusses those 'rulers' that have a defined head or tab which is often perforated and are to be associated with writing equipment. These should be distinguished from inscribed objects of overall similar shape but far smaller proportions that include tesserae nummulariae, gaming pieces, apotropaic charms and other uninscribed objects of similar form but clearly different function (Božič & Feugère 2004; Cruse 2004, Colour Plt. 1).

It is worth briefly noting another form of bone strip that clearly had a different function but is often grouped together with our 'rulers' and visa-versa (Greep 1983, 473; Gostenčnik 2000; Gostenčnik 2005, 238ff.). As explained by Božič & Feugère (2004, 40) these bone objects are equally long and polished but are differentiated by having a 'v' shaped groove along one edge. They commonly have an oval cross-section whereas our 'rulers' are often plano-convex. When found complete they can feature one bevelled or triangular shaped end, sometimes combined with teeth on their opposite short end or long edge. (e.g. Beal 1983,

Plt. LXI, 1323-1324; Crummy 2004, Fig.18.20; Deschler-Erb 1998, Taf.14, 374-378; Gostenčnik 2005, Taf.56, 1-3; Mikler 1997, Taf.39, 13; Schenk 2008, Fig.18.503). Three of these strips have been excavated from London (fig. 2, No. 13 & fig. 3), one in the Museum of London's core collection and another two with MOLA (Wardle 2013; Marshall 2014). They are functionally grouped with textile equipment and to my knowledge none have been found in graves in relation with writing equipment.

Towards a typology of bone rulers

Numerous examples of bone 'rulers' have been excavated from Britain and the continent. Through study of their morphology it is clear there are several distinct forms of these strips. Božič (2002, 34-35) has previously created a broad separation based on chronology (early and late) as well as size (width: broad and narrow). However, detailed study of their form would suggest a more nuanced division between these objects. The typology below has been created through examination of the perforated tab or head in relation to the shape of the blade and width of the blade, building upon Božič's previous work.

Type A

Type A 'rulers' have a perforated tab and wide blade (25 mm – 40 mm) that is either straight (A.1) or expanding towards the end (A.2). E.g. Cat. Nos. 1-3.

Type B

Type B 'rulers' have a perforated tab and narrow blade (12 mm – 20 mm) that is either straight (B.1) or expanding towards the end (B.2). E.g. Cat. No. 9.

Type C

Type C 'rulers' are noticeably different from types A and B. They distinctly do not have a perforated tab, which is as wide as the strip. The blade tends to be straight (C.1) or can taper towards the end (C.2). E.g. Cat. No. 11. The shape of the head/tab of type C strips can also be far more decorative and should be considered as a separate type (C.3) (e.g. von Carnap-Bornheim 1994, Fig.9.11-12).

All of the London spatulas catalogued below would have been made from uniform, dense animal (e.g. cattle) long bones. They are incredibly well made and feature a high degree of finish and polish exhibiting care and skill in their manufacture (pers. comm. Alan Pipe). A spatula blank from Southwark (Cat. No. 10, fig. 4) indicates one step in the manufacturing process: the sawing of flat blanks from long bones (see also Prévot 2010). The majority of type A and B strips are plano-convex in section and as such this indicates another step in the manufacturing process, the purposeful forming of a curvature to the top of the blade.

The perforated tabs of types A and B are created

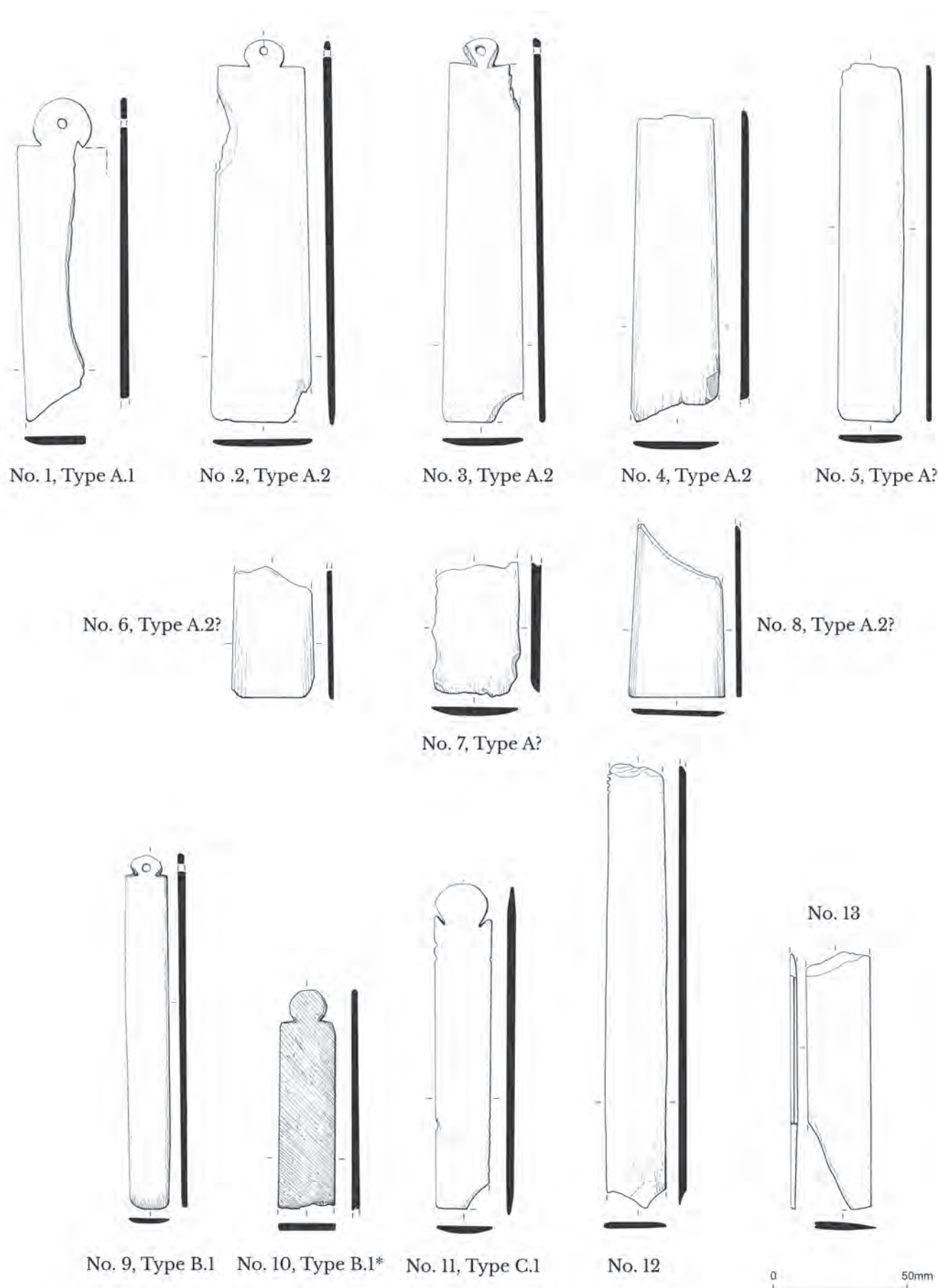


Fig. 2. Bone spatulate strips from London: No.1 WP83[3926]<384> Type A.1; No.2 13941 Type A.2; No.3 LCT84[3860]<553> Type A.2; No.4 28PS84[4199]<191> Type A.2; No.5 ASQ87[264]<142> Type A?; No.6 ETA89[1041]<1354> Type A.2?; No.7 DEN91[28]<58> Type A?; No.8 WP83[3000]<377> Type A.2?; No.9 PNS01[1405]<603> Type B.1; No.10 4STS82[0]<952> Type B.1*; No.11 BAX95[903]<141> Type C.1; No.12 CO88[4022]<27>; No.13 CASS72[12]/26368.



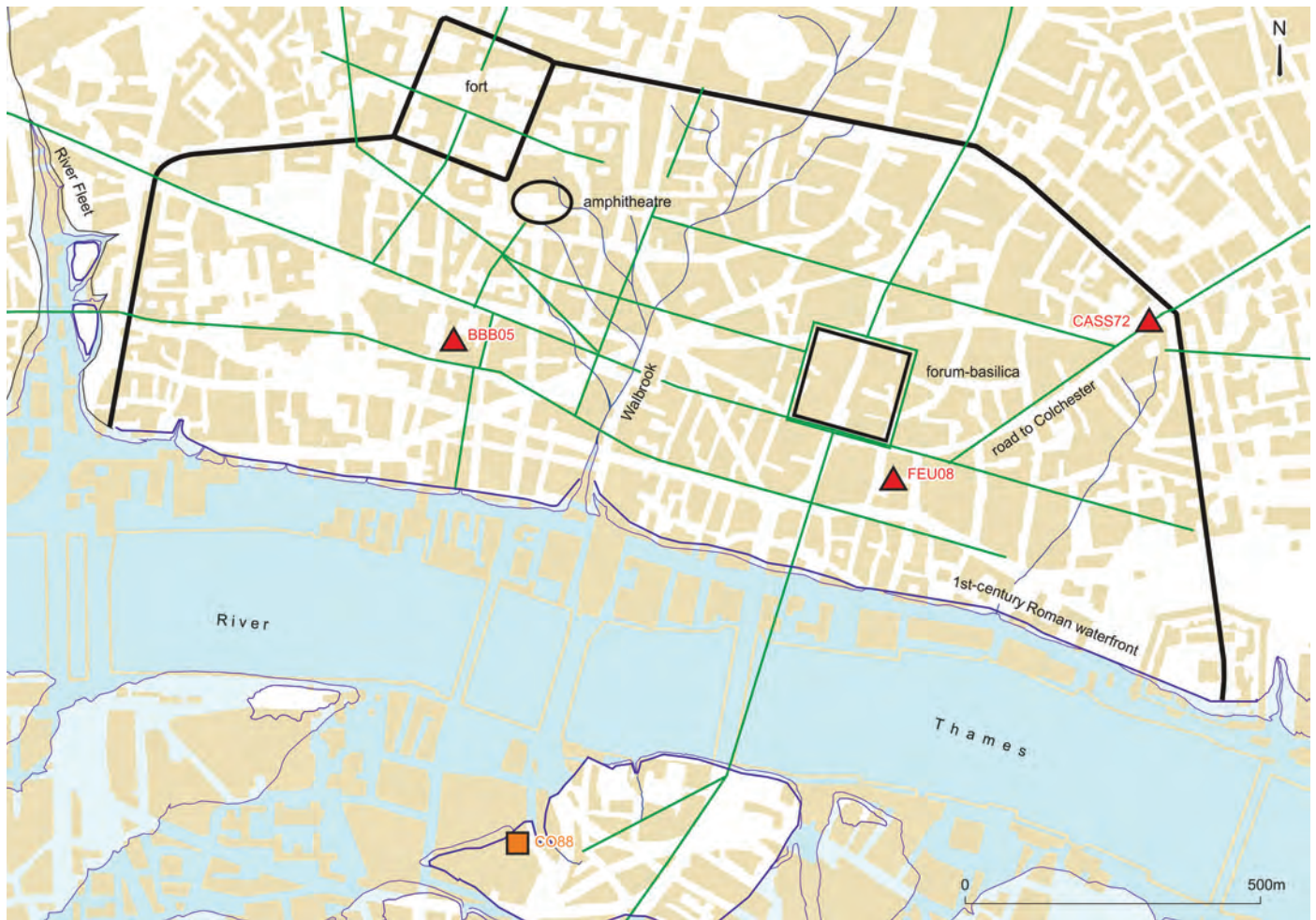


Fig. 3. Distribution of 'v' grooved bone strips (triangles) and serrated bone strips (square) in London.

through a reductive technique of removing bone to form the tab. As such the width of the tab is usually smaller than the width of the blade (e.g. Cat. Nos. 1 & 9). With type C strips the design and manufacture of the head is quite different. Here the tab is defined by the creation of (commonly angled) 'shoulders' cut into the strip (e.g. Cat. No. 11). As such the tab is normally no narrower than the blade.

Whereas the cross section of type A and B strips is commonly plano-convex, type C strips can also feature a lentoid cross-section, suggesting perhaps less differentiation between the function of the two faces of the strip. Whereas the blades of type A and B strips are straight or expanded, type C strips tend not to expand and can even taper towards the end of the blade. It is conceivable, especially considering the difference in chronology, that type C strips functioned differently or that they indicate a change in use as part of the Roman writing habit.

Study of the use wear of the London assemblage has revealed some interesting correlations between the objects. Although each strip exhibits possible manufacturing marks and significant degrees of post-depositional damage, use wear patterns can still be discerned under high magnification and variable light. Two common types of wear were identified on the London assemblage: longitudinal marks along the length of the blade (fig. 5) and short, parallel transverse marks across the blade (fig. 6). On average these transverse marks either appeared explicitly or far more predominantly on the 'top' side (face A) of the blade face, that is, across the apex of the curve of the blade.

Two of the bone spatulas illustrated (Cat. Nos. 12-13) are not considered 'rulers' as defined above. Cat. No. 12 has been mentioned briefly as a 'v' grooved textile implement. Cat. No. 13 is a bone strip that features indents or teeth at the very end of one long edge. This object could be a trial piece and it is unlikely to be



Fig. 4. Detail of saw marks on Catalogue No. 10.



Fig. 5. Example of longitudinal wear marks (Catalogue No. 4).

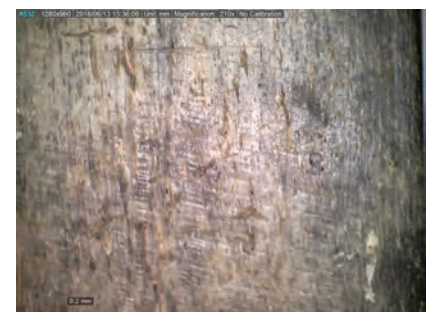


Fig. 6. Example of transverse wear marks (Catalogue No. 5).

associated with any objects discussed so far. Importantly, both these objects display different wear marks to any of the bone 'rulers'. The marks in general are far more irregular and neither display any of the short, parallel, transverse marks found on the other strips.

Catalogue of bone spatulate strips from Roman London

1. WP83[3926]<384>

Incomplete bone spatulate strip broken longitudinally along the blade and missing the lower part of the blade and end. Large, round perforated tab with a neatly drilled hole. Square shoulder. Surviving blade straight. Plano-convex section. Use wear: Face A – longitudinal marks and especially heavy, multiple sharp transverse wear marks along length of blade. Face B – comparable longitudinal wear marks to face A but less transverse wear. W (below head) 20.9+ mm; W (at end) 22+ mm; max L (including tab) 118.4+ mm; max L (blade) 101.4 + mm; max Th (blade) 3 mm. Context pottery spot date c. AD 80-90. Type A.1. References: unpublished (this object was not published in Francis 2005).

2. 13941

Incomplete bone spatulate strip. Perforated, subtriangular tab with cancellous tissue exposed on back (face B). Shoulders slightly angled inwards, with damaged to right side. Wide blade expanding towards the end with very slight twist along its length. Right corner of blade missing. Plano-convex section. Highly polished. Use wear: Face A – longitudinal wear along blade. Damage and multiple short transverse wear marks along centre of the blade. Short transverse marks to tip of the blade. Face B – multiple long, longitudinal marks along blade. Few transverse marks. Little damage and no evidence of use wear to edges of the blade. W (below head) 23.1 mm; W (at end) 29.5+ mm; max L (including tab) 143.2 mm; max L (blade) 133.8 mm; max Th (blade) 3.6 mm. Unstratified. Type A.2. References: Greep 1983, Fig. 349.9.

3. LCT84[3860]<553>

Incomplete bone spatulate strip, broken into four pieces and repaired. Perforated, ovoid tab with wear mark at the top of the perforation on both sides. Shoulders square. Wide blade expanding slightly towards the end with thin lentoid section. End edge rounded. Highly polished. Use wear: Face A – damage to top left side of blade and bottom right corner of blade. Predominantly longitudinal marks along length of blade, heavier to upper section of the blade. Multiple short, parallel, transverse wear marks along length. Face B – multiple long, longitudinal wear marks along length of blade, especially the mid-section. Multiple shorter transverse wear marks, especially lower section of the blade, although less frequent overall than on face A. No evidence of use wear to the edges of the blade. W (below head) 31.8 mm; W (at end) 36.8+ mm; max L (including tab) 142 mm; max L (blade) 132.4 mm; max Th (blade) 3 mm. Context pottery spot date c. AD 120-140. Type A.2. References: unpublished.

4. 28PS84[4199]<191>

Incomplete bone strip, blade flaring slightly towards the missing lower part of the blade and tip. Uneven surface of the bone at the top of the blade suggests a missing tab which has been polished smooth. Shoulders square.

Plano-convex section. Highly polished. Use wear: Face A – multiple longitudinal wear marks. Multiple transverse marks especially to mid-section of the blade. Face B – far lighter wear marks compared to face A. Long, longitudinal marks along length. Some transverse marks. Aside from slight damage, edges are polished and smooth showing no signs of use wear. W (below head) 28.3 mm; W (at end) 31.3+ mm; max L (including tab) N/A; max L (blade) 112.6+ mm; max Th (blade) 2.8 mm. Context pottery spot date c. AD 70-120. Type A.2. References: unpublished.

5. ASQ87[264]<142>

Incomplete bone spatulate strip. Missing tab, shoulders undefined. Straight blade. Plano-convex section. End edge squared. Reverse of strip (face B) shows signs of cancellous bone tissue. Use wear: Face A – longitudinal wear. Some short parallel, transverse marks. Face B – longitudinal marks and multiple parallel very short transverse wear marks. W (below head) 22.8 mm; W (at end) 22.9 mm; max L (including tab) N/A; max L (blade) 132.6+ mm; max Th (blade) 3.3 mm. No contextual date. Undefined type, possibly Type A. References: unpublished.

6. ETA89[1041]<1354>

Fragment of bone spatulate strip. Wide blade fragment expanding very slightly towards the end. Plano-convex section. End edge squared. Highly Polished. Missing both corners of blade tip. Use wear: Face A – multiple heavy, longitudinal wear marks. Face B – far fewer wear marks compared with face A. No sign of use wear to blade edges. Max W (at end) 30.2 mm; max L (blade) 48.5+ mm; max Th (blade) 2.4 mm. Context pottery spot date c. AD 120-160. Undefined type, probably Type A.2(?). References: unpublished.

7. DEN91[28]<58>

Fragment of bone spatulate strip. Wide, straight blade fragment. Heavy damage to surface and notching along all three edges. Plano-convex section. Slight concretions adhering to surface of bone. Use wear: Despite much damage, longitudinal and transverse wear marks similar to other strips are apparent on each face. Max W 31.2+ mm; max L (blade) 49+ mm; max Th (blade) 3.1 mm. Context pottery spot date c. AD 100-120. Undefined type, probably Type A. References: unpublished.

8. WP83[3000]<377>

Fragment of bone spatulate strip. Wide blade fragment, expanding towards end. Plano-convex section. Polished. End edge squared with visible saw marks and less polish than other edges. Use wear: Face A – some wear including longitudinal and transverse marks. Face B – heavier longitudinal wear compared to face A but equally few transverse marks. Blade edges show no sign of wear. Max W (at end) 35.1 mm; max L (blade) 63.8+ mm; max Th (blade) 2.3 mm. Thickness, colouration and width suggest a separate object to Cat. No. 1 and not a corresponding fragment. Residual (Roman). Undefined type, possibly Type A.2(?). References: unpublished (this object was not published in Francis 2005).

9. PNS01[1405]<603>

Complete bone spatulate strip. Rounded perforated tab. Shoulders square. Narrow, straight blade with



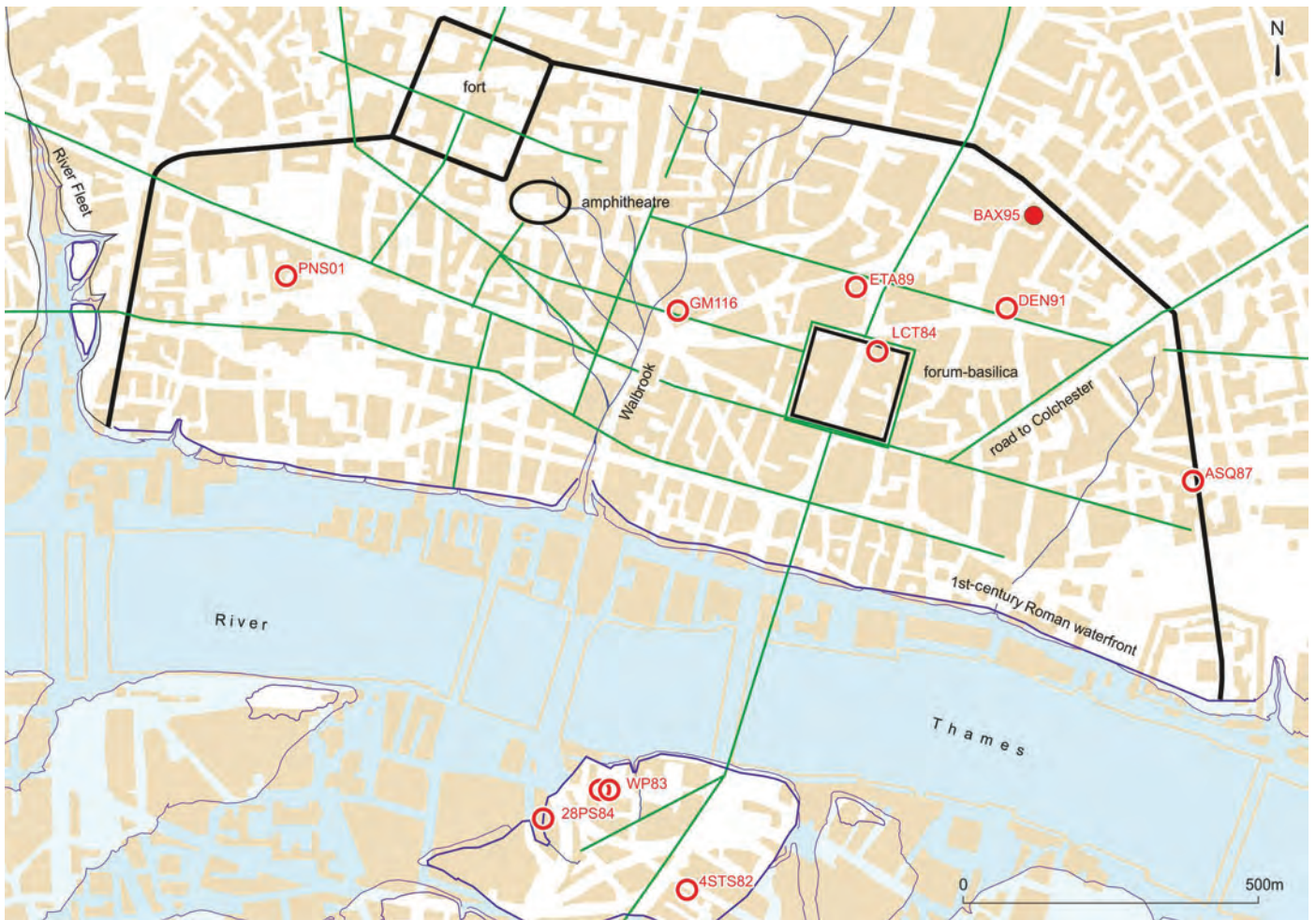


Fig. 7. Distribution of type A-C bone spatulate strips in London.

slightly rounded corners at end. Plano-convex section. Slight parallel, diagonal saw marks on face A of the tab and upper blade. Noticeable twist along length of blade. Highly polished. Use wear: Face A – multiple long, longitudinal marks, especially to upper and mid-section of blade. Short transverse marks to lower section. Some diagonal short marks to left side of blade edge. Face B – similar forms of wear but fewer marks compared with face A. W (below head) 15.3 mm; W (at end) 14.2 mm; max L (including tab) 132.1 mm; max L (blade) 124.7 mm; max Th (blade) 2.4 mm. Context date AD 160-300. Type B.1. References: Keily 2006, Fig.100, <S74>.

10. 4STS82[0]<952>

Incomplete bone strip with rounded, unperforated head. Square shoulders. Narrow, straight blade. Missing the majority the lower part of the blade. Square section. Parallel, diagonal saw marks on each face. No other wear other than manufacturing saw marks discernible. W (below head) 20.4 mm; W (at end) 20.8 mm; max L (including tab) 81.4+ mm; max L (blade) 69.3+ mm; max Th (blade) 2.9 mm. Unstratified. Type B.1* - this appears to be a blank and as such categorised as Type B.1 based on dimensions and the assumption that the tab would be perforated if completed. References: unpublished.

11. BAX95[903]<141>

Fragment of bone spatulate strip. Unperforated, ovoid tab. Shoulders sharply angled inwards. Narrow, straight blade. Lentoid section. End edge squared but missing right corner. Slight concretions adhering to bone

surface. Polished. Use wear: Face A – light, longitudinal marks (possibly from manufacture as opposed to wear) along blade. Short transverse marks, especially to upper and mid-section of blade. Face B: Less wear compared to side A and fewer transverse marks. W (below head) 20.9 mm; W (at end) 19.5+ mm; max L (including tab) 120.8 mm; max Th (blade) 3.9 mm. Residual (Roman). Type C.1. References: Wardle 2002, P.89, A<141>.

12. CO88[4022]<27>

Long bone strip broken at either end. Triangular cross-section. Polished. Four notches to end of one edge. Use wear: Both faces feature heavy, irregular wear marks across surface of bone. No short transverse wear marks common to spatulate 'rulers'. Max W 23.1 mm; max L 164.2+ mm; max Th (blade) 4.1 mm. Context pottery spot date c. AD 100-120. References: unpublished.

13. CASS72[12]<160>/26368

Bone strip, broken at one end. Other end of strip triangular. Light 'v' section groove running along short edge. Parallel edge sharp with no evidence of wear. Oval section. Polished. Use wear: Multiple, irregular wear patterns to both faces. No short transverse wear marks common to spatulate 'rulers'. Heavier wear marks towards the triangular end. W 23.3 mm; max L 95.1 mm; max Th 3.2 mm. Context date AD 70-100. References: Chapman & Johnson 1973, Fig. 23.19; Greep 1983, Fig. 348.2.

Discussion: rulers or smoothers?

The function of these bone strips as rulers seems perfectly plausible on the surface due to their purposefully made straight edges. Tomlin's (2016, 25-26) recent analysis of over 400 wooden, wax writing tablets recovered from the Walbrook in London suggests an average tablet size of c.140 mm wide by c.110 mm high. Our spatulas (at least types A and B) for the most part correspond in length and would therefore be able to be laid across the width of a tablet to draw straight lines. In questioning "did scribes rule their lines on papyrus" Turner (1987, 4-5) explicitly states that "they did so with a stylus on wax". Turner's example of a 'school tablet' is perhaps misplaced when seeking evidence for common lining of tablet wax as these were purposefully lined by the tutor to act as a guide for a pupil to copy a pre-written text. Despite the supporting dimensions of these bone spatulate strips and evidence for the lining of wax, analysis of the London spatulate strips presents evidence that would suggest the primary function of these tools was not as rulers.

Firstly, the morphology of the blades, when either expanding or tapering, is clearly purposeful. Considering the amount of effort to create such a defined shape it would suggest another use for this tool. In addition not all these rulers are perfectly flat with some having a natural, longitudinal twist down the length of the blade (e.g. Cat. Nos. 2 & 9). An exaggerated example of such a spatula featuring this was noted by Allen (1998, 6) previously in *Lucerna*. This object appears complete and functional and yet would not sit flat against the surface of any writing material be it tablet, papyrus or other. Perhaps most convincing in the argument against their interpretation as a simple rule is the study of wear patterns on the London examples. The longitudinal wear suggests the object being pulled lengthways. The transverse wear, which is more common of the purposefully curved face of the blade, suggests another specific action.

But what action or process would have caused this? Clearly the use wear suggests the blade was either being drawn across something or otherwise another object was drawn against the surface of the blade. Perhaps these tools were drawn across wax tablets to remove excess wax generated through scratching the surface? If larger metal wax spatulas were used to apply fresh wax perhaps these more refined bone counterparts were used to finish the surface of the tablet or prepare it for writing? This would of course mean that the inclusions within the wax would have to be somewhat coarse to create such marks (see Tomlin 2016, 284-286 for discussion of the analysis of tablet wax; Eckardt 2014, 187-188). Although we see regular forms of wear across both faces of the blades, the transverse wear is not regularly grouped along the blade. That is, if being drawn against a tablet of standard size we might expect to see more regular grouping of wear marks where the blade encountered the wooden frame for example. Although no papyrus or parchment survives in any meaningful quantity from Roman Britain (Tomlin 2011, 146) these objects may have been used in conjunction with these different media, although this has previously been dismissed somewhat out-of-hand (Božić & Feugère 2004, 39; Tomlin 2011, 148).

Unfortunately the distribution and stratigraphic context of the London assemblage does not help with further identification of the use of these objects (fig. 7,



Fig. 8. Preliminary distribution of type A-C bone spatulate strips in Britain.

see also fig. 8). Their distribution across the city is broad although mainly east of Walbrook and in Southwark. Their stratigraphic contexts, when not unstratified or residual, are from undefined dumping layers and fills. Their dating at least corroborates the growing trend that type A and B spatulas are in use during the 1st to early 2nd centuries.

Hopefully this brief outline of the London assemblage of bone spatulas will renew meaningful discussion about their exact function within the Roman writing habit. Future study of such objects should prioritise use-wear analysis in order to corroborate or explain the London wear patterns discussed. Experimentation to try and replicate such wear patterns would also be incredibly insightful towards their interpretation as primarily functioning as wax smoothers. Mapping against other writing equipment such as inkwells and styli etc. would no doubt also prove to be extremely fruitful (Eckardt 2014; Eckardt forthcoming).

Acknowledgements

This article has benefited from a number of people who have generously shared their time, knowledge and personal research and I would like to thank Nina Crummy (University of Reading), Hella Eckardt (University of Reading), Stephen Greep and especially Michael Marshall (MOLA). The London & Middlesex Archaeological Society generously funded the illustrations through a research grant awarded to the author: 'Rediscovering the Romans in the Archaeological Archive'. Thanks also to Hannah Faux and Juan Jose Fuldain (MOLA) for producing the illustrations and maps; Karen Stewart and Alan Pipe (MOLA) for discussing identification and working of bone; the Museum of London and Dan Nesbitt

(Museum of London Archaeological Archive) for access to Archive records.

Senior Collections & Learning Curator, Colchester Colchester & Ipswich Museum Service (formerly Archaeological Collections Manager, Museum of London Archaeological Archive)
Glynn.Davis@colchester.gov.uk

Bibliography

- Allen, V. 1998. 'Mystery objects from Clausentium', *Lucerna* XV, 6.
- Beal, J.C. 1983. *Catalogue des objets de tabletterie du Musée de la civilisation gallo-romaine de Lyon*, Lyon, Le Musée, Paris, Diffusion De Boccard.
- Bidwell, P.T. 1979. *The legionary bath-house and basilica and forum at Exeter: with a summary account of the legionary fortress*, Exeter, Exeter City Council, University of Exeter.
- Božič, D. 2002. 'A Roman grave with writing implements from Ljubljana (SI)', *Instrumentum*, 33-36.
- Božič, D. & Feugère, M. 2004. 'Les instruments de l'écriture', *Gallia* 61, 21-41.
- Chapman, H. & Johnson, T. 1973. 'Excavations at Aldgate and Bush Lane House in the City of London, 1972', *Trans. LAMAS* 24, 1-73.
- Ciugudean, D. 1997. *Obiectele din os, corn și fildeș de la Apulum*, Alba Iulia, Muzeul Național al Unirii, Alba Iulia.
- Crummy, N. et al. 2004. The small finds, in H. Brooks, *Archaeological excavation at 29-39 Head Street, Colchester, Essex: May-September 2000*, CAT Report 268, Colchester, Colchester Archaeological Trust, 34-50. URL: <http://cat.essex.ac.uk/reports/CAT-report-0268.pdf>. (Accessed 17th May 2016).
- Cruse, A. 2004. *Roman Medicine*, Stroud, Tempus.
- Davis, G.J.C. 2014. 'Opening up to archaeology – the VIP way', *The Museum Archaeologist* 35, 47-61.
- Deschler-Erb, S. 1998. *Römische Beinartefakte aus Augusta Raurica: Rohmaterial, Technologie, Typologie und Chronologie*, Augst, Römermuseum.
- Eckardt, H. 2014. *Objects & identities: Roman Britain and the North-Western Provinces*, Oxford, Oxford University Press.
- Eckardt, H. forthcoming. *Writing power in the Roman world: literacies and material culture*.
- Francis, P. 2005. Small finds, in B. Yule, *A prestigious Roman building complex on the Southwark waterfront: excavations at Winchester Palace, London, 1983-90*, London, Museum of London Archaeology Service, 145-151.
- Greep, S. 1983. *Objects of animal bone, antler, ivory and teeth from Roman Britain*, Unpublished PhD thesis, University of Cardiff.
- Greep, S. 1995. Objects of bone, antler and ivory from C.A.T sites, in K. Blockley, M. Blockley, P. Blockley, S.S. Frere and S. Stow, *Excavations in the Marlowe car park and surrounding areas*, Canterbury, Canterbury Archaeological Trust, 1112-1152.
- Greep, S. 1998. The bone, antler and ivory artefacts, in H.E.M. Cool & C. Philo (eds.) *Roman Castleford: excavations 1974-85. Vol. 1, The small finds*, Wakefield, West Yorkshire Archaeology Service, 267-285.
- Gostenčnik, K. 2000. 'Die Geräte zur Textilerzeugung und Textilverarbeitung vom Magdalensberg in Kärnten', *Instrumentum* 11, 18-19.
- Gostenčnik, K. 2005. *Die Beinfunde vom Magdalensberg*, Klagenfurt, Verlag des Landesmuseums Kärnten.
- Keily, J. 2006. The accessioned finds, in S. Watson & K. Heard, *Development on Roman London's Western Hill: excavations at Paternoster Square, City of London*, London, Museum of London Archaeology Service, 92-107.
- Marshall, M. 2014. The Roman accessioned finds, in R. Wroe-Brown, *Roman occupation south-east of the forum: excavations at 20 Fenchurch Street, City of London, 2008-9*, London, Museum of London Archaeology, 80-87.
- Mikler, H. 1997. *Die römischen Funde aus Bein im Landesmuseum Mainz*, Montagnac, Éd. Monique Mergoil.
- Prévot, P. 2010. 'Un atelier de fabrication de règles en os dans une villa gallo-romaine de Cuperly (Marne)? étude technologique d'ébauches de règles réalisées en série', *Revue archéologique de l'Est, Tome 59-2*, 539-565. URL: <http://rae.revues.org/6447>. (Accessed 13th June 2016).
- Schenk, A. 2008. *Regard sur la tabletterie antique: les objets en os, bois de cerf et ivoire du Musée romain d'Avenches*, Avenches, Association Pro Aventico.
- Small, A. & Small, C. (eds). 2007. 'Excavation in the Roman cemetery at Vagnari, in the territory of Gravina in Puglia, 2002', *PBSR* 75, 123-229.
- Tomlin, R.S.O. 2011. Domestic Life, in L. Allason-Jones (ed.) *Artefacts in Roman Britain: their purpose and use*, Cambridge, Cambridge University Press, 133-152.
- Tomlin, R.S.O. 2016. *Roman London's first voices: writing tablets from the Bloomberg excavations, 2010-14*, London, Museum of London Archaeology.
- Turner, E.G. 1987. *Greek manuscripts of the ancient world*, London, University of London, Institute of Classical Studies.
- von Boeselager, D. 1989. 'Funde und Darstellungen römischer Schreibzeugfalterale', *Kölner Jahrbuch Vor- und Frühgeschichte* 22, 221-239.
- von Carnap-Bornheim, C. 1994. 'Die beinernen Gegenstände aus Kastell und Vicus in Niederbieber', *BJb* 194, 341-395.
- Wardle, A. 2002. The Roman finds, in E. Howe, *Roman defences and medieval industry: excavations at Baltic House, City of London*, London, Museum of London Archaeology Service, 85-89.
- Wardle, A. 2013. The Roman accessioned finds, in I. Howell, *Roman and medieval development south of Cheapside: excavations at Bow Bells House, City of London, 2005-6*, London, Museum of London Archaeology, 57-63.

Ongoing Research: Global Glass Adornments Event Horizon in the Late Iron Age and Roman Period Frontiers (100 BC - AD 250)

Tatiana Ivleva

This piece is a brief summary of current research on the cross-cultural consumption of glass bracelets used by the inhabitants of the northwestern European regions from the Late La Tène period to the Roman period. The project aims to provide a detailed study of these artefacts from the inter-European perspective in contrast to previous studies, which have primarily been regionally focused. It will assess the evidence in four north-western European countries: Germany, the Netherlands, Belgium, and the United Kingdom, concentrating in particular on the latter. The project focusses now on three objectives relating to the United Kingdom: distribution of the British bangles, understanding their manufacturing technique, and understanding their function.

Distribution

Kilbride-Jones (1938) divided the British bracelets into three main types. Type 1 is a heavy bracelet with a core of milky blue glass and a coating of obliquely laid solid bands and twisted cords in various colours. Type 2 is a lighter bracelet decorated with one or more horizontal cords, usually in twisted rods of opaque white and cobalt blue. This type has been further divided into seven subtypes based on the number of cords and the patterns they created (Price 1988). Type 3 is also a light

bracelet, decorated with trails and curved terminals, so-called 'pot-hooks,' in a variety of colours. This type was also subdivided based on the main colour of the bracelet body and colours of the decorations (Kilbride-Jones 1938).

The distribution map is based on the last inventory in 1988, which totalled the number of fragments to roughly 580 (fig. 9). More dots are currently being added to the map, but the author's impression is that the final map would not be completely different from this one. The distribution of British glass bracelets is focused on northeastern England, following the line of Hadrian's Wall. The bracelets are also predominant in southeastern Scotland. They occur on both military and indigenous sites in the mentioned areas in the first and second centuries AD, with some exceptions appearing in third century contexts.

Production

The nature of production of the seamless British bangles has largely been speculative in the past. The author is now reconstructing the technique by working with Mr. Mike Poole, a modern glassmaker from Tillerman Beads, and through the close inspection of bracelet fragments.

The examination of the artefacts has hinted at the possibility that the Roman-period British glass bracelets were produced in a similar manner as some of the La Tène Continental bracelet types. French scholars, who identified two manufacturing processes (Rolland *et al.* 2012), reconstructed the La Tène technique. Two similar techniques were recognised upon inspection of the British glass bracelets. Decorated bangles of type 2 and 3 were plausibly made on a cone, whereby a hot blob of glass was placed on the cone's apex and subsequently enlarged by rotation (i.e. the hot glass slides to the cone's base, enlarging itself). Another technique may have been used for the undecorated bracelets: a blob of hot glass was worked on a stick and carefully stretched using a second stick.

Further examination sheds light on the production and application of the decorative features of the bracelets, namely cords and trails. The most common opinion is that the cords and trails were marvered flash, in which hot glass bracelets were rolled on a flat surface. Mr. Poole contested this. Some cords and trails on the glass bracelets' fragments protrude, while some are sunk deeply into the bodies of the fragments. The main difference between them is actually the time and workings of gravity: the longer a bracelet is left in contact with the fire, the deeper a cord or a trail will sink into the liquefied body of hot glass. Inspection of some fragments confirmed this. Housesteads' fragment has three cords: one side cord sunk deep into the body, while another side cord protrudes slightly, and the

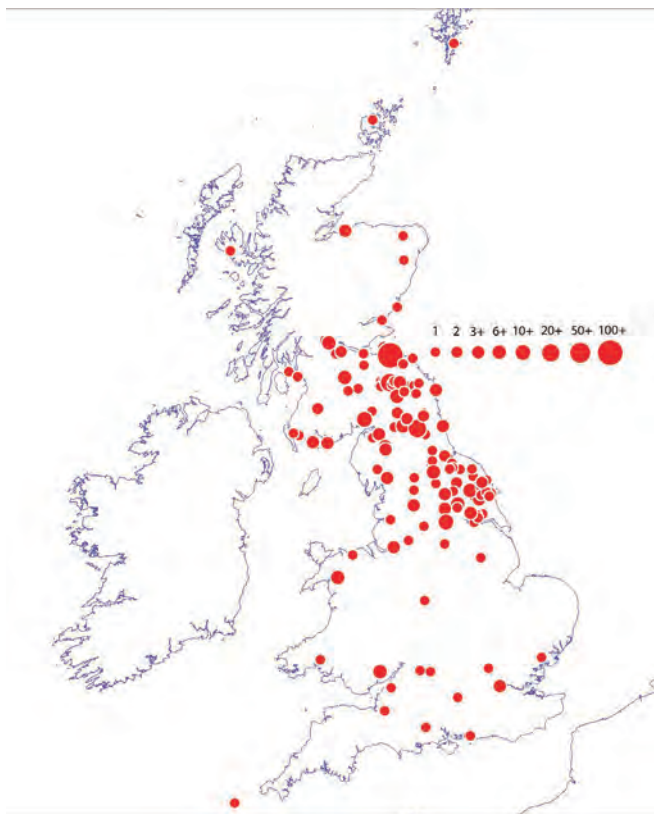


Fig. 9. Distribution of British bangles according to the 1988 inventory.

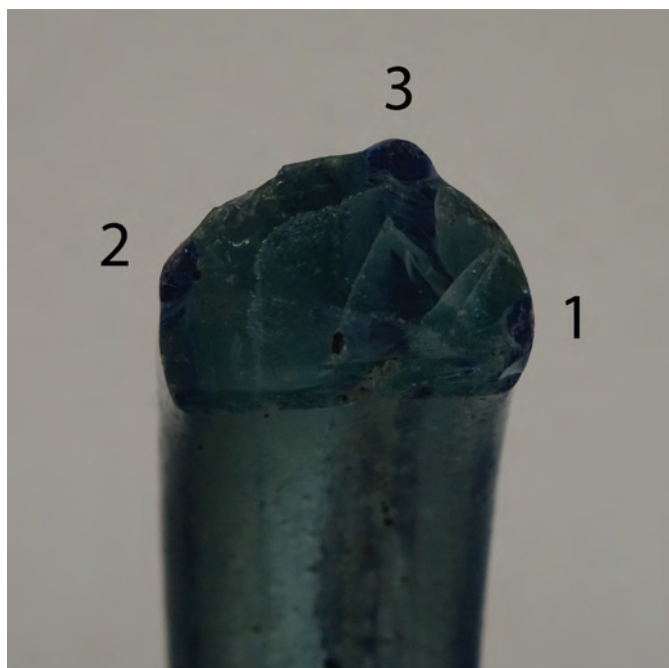


Fig. 10. Cut end of a fragment from Housesteads, showing the sequence in which the cords were laid.
© Great North Museum.

third central cord protrudes strongly. This suggests the sequence in which the cords were laid (fig. 10).

Function

Glass bangles are usually seen as women's adornments. On average, the diameter of British glass bracelets is about 60 mm, but smaller ones of around 40 mm and bigger ones near 70-80 mm are known. This variation in size argues for a range of uses. While 60-80 mm glass bracelets may have been worn by an adult, be it male or female, the 40 mm ones could not fit anyone except a child.

These artefacts do not only vary in size but it is commonly assumed that the glass artefacts ended their life cycles due to accidental breakages. Yet the analysis of almost 200 fragments of type 2 and 3 bracelets have

indicated that some pieces were deliberately broken and then polished to produce five different ends (fig. 11).

The reason for small diameter bracelets and polished ends will be further explored in this ongoing research.

Can you help?

If anyone knows of the existence of unpublished or recently found bangles, in particular from south Britain and Wales, I would be very grateful if you could get in touch with me.

More information about the project can be found at www.romanglassbangles.com.

Newcastle University
Tatiana.Ivleva@ncl.ac.uk

Bibliography

- Kilbride-Jones, H.E. 1938. 'Glass armlets in Britain', *Proceedings of the Society of Antiquaries of Scotland* 72, 366-95.
- Price, J. 1988. 'Roman-British glass bangles from East Yorkshire', in Price, J. and Wilson, P.R. (eds) *Recent Research in Roman Yorkshire*, BAR British Series 193, Oxford, 339-66.
- Rolland, J., Le Bechennec, Y., Clesse, J., & Rivoal, S. 2012. 'De parures celtiques aux verriers du Népal: un projet d'expérimentation des techniques de fabrication des bracelets en verre', *Bulletin de l'Association Française pour l'Archéologie du Verre*, 6-10.

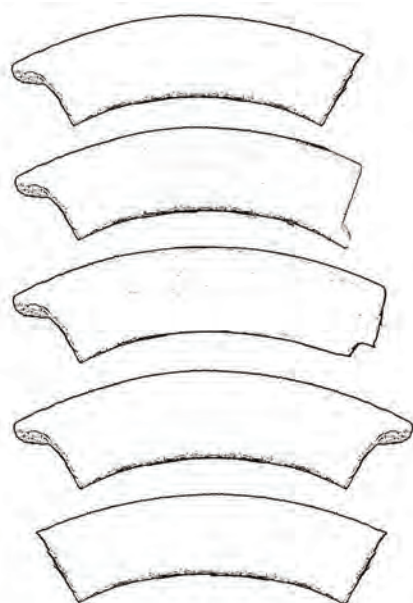


Fig. 11. Drawing of cut ends, occurring only on type 2 and type 3 glass bracelet fragments.

The Roman Finds Group Spring Conference

The University of York, 1st - 2nd April 2016

This year the RFG's Spring Conference was held in the Philip Rahtz Lecture Theatre, Kings Manor, University of York and was jointly hosted with the Department of Archaeology and the Yorkshire Museums Trust. The event had a full schedule of excellent papers from students and professionals alike and was attended by over 100 people over the course of the two days. The RFG would especially like to thank everyone who presented as well as the University of York and Yorkshire Museums Trust for having us and hosting such an enjoyable meeting. We look forward to seeing you all again on September 9th-10th at the University of Reading.

Session One: Papers based on current research in the Department of Archaeology, University of York

Recent research on the artefacts and landscape of an unusual late Roman temple site in Wiltshire

Dr David Roberts,
Department of Archaeology, University of York
Richard Henry,
Finds Liaison Officer, Wiltshire

In 2012/13 the Past Landscapes Project was established to investigate the landscape and contexts of finds in south-west Wiltshire where metal detecting has revealed approximately 8000 prehistoric and Roman finds since 2010, including several hoards. Focussing on three study areas and many sites, the project draws together this artefactual evidence with evidence from the PAS and other sources. This paper presented the results of the geophysical survey, fieldwork and post-excavation work that has been carried out at one of the sites: a late Roman temple in a late Iron Age to later Roman landscape where there were several areas of activity.

The results identified a great deal of settlement evidence located near to a probable temple, with hearths, inner rooms and a limestone paved area. Slabs taken up after metal-detector signals revealed a late fourth century coin as well as a substantial post-hole filled with objects. Interesting finds from the site include the only Roman lynch-pin with chains still attached, many iron objects and votive models, like a sword, four different types of hammer (in sets) and hammers with coins attached, as well as a curse tablet and coins with miniature spears around them. These miniature objects clearly had no conventional use and were probably votives. Experimental iron smelting has been carried out to try and re-create them. These finds, and the lack of information on the PAS database, makes this a very interesting site in Wiltshire and Britain.

Putting the Crambeck Ware industry into its landscape setting

Rachel Wood, Department of Archaeology,
University of York

This paper asked why landscapes are important to

the study of Roman pottery production and industry compared to some of the more traditional approaches? To address this an examination of surveys and excavations at Crambeck, Yorkshire, a small village to the north-east of York where a key pottery industry was based in the late Roman period through to the fifth century, was carried out - the first for 95 years.

The site is located inside an Iron Age promontory fort with extensive earthwork ditches. As the focus of her PhD, the results revealed activity on the site as far back as the Bronze Age as well as a number of unknown features in the Crambeck landscape alongside pottery and many interesting finds. There are few signs of occupation inside of the fort itself but other Roman activity has been identified nearby. Amongst the many graves are two cist burials, one of which is identified as a woman with two ceramic vessels and bone ware indicative of habitual squatting - possibly a potter. Other discoveries include an Iron Age cart burial just inside the fort boundary, a cremation of a 2-5 year old child with Crambeck pottery in the ditch, a number of beads and jet objects, and a kiln.

Overall, Crambeck is well preserved and the concentration of Romano-British pottery inside the fort suggests a multi-phase and multi-use site from the Iron Age until the fifth century.

The site at Heslington East, York: the challenges of integrating finds assemblages with stratigraphic, spatial and functional information

Steve Roskams, Senior Lecturer,
Department of Archaeology, University of York

In this thought-provoking paper Steve outlined the previous phases of artefact studies over the years (i.e. typological classification/social interpretation) and considered that although context is now vital to social interpretation, how good have we actually been at using it? After all, as he points out, the need for context has been a driving force in developing fieldwork as a profession distinct from treasure hunting and has given impetus to financing rescue archaeology fieldwork since the 1960s.

A recent study of the excavations and Roman finds from Heslington East just outside of Eboracum have provided many interesting results: work completed by YAT in 2011 and subsequently by the University of York before the site's redevelopment. The excavations yielded many interesting features - including a hypocaust - and finds such as coins (late third century to AD364), a range of metal work, numerous items of personal adornment, and some late second/early third century military objects. There was, though, a notable lack of weighing/measuring equipment and textiles.

Interpreting the social value of these objects is, however, limited considering 1) the varying levels of preservation, 2) the limited sampling methods used



and 3) the complexity of formation processes. With this in mind various analytical techniques orientated on comparative distributional analyses of pottery, coins, metal fittings and vessel glass have been used to show the shifting areas of activity on the site. Analytical problems persist regarding object categorisation, feature definition, recovery mechanisms, determining if a context represents use or reuse and the different ways objects enter the archaeological record, but a case study of a well that contained a large ceramic assemblage with complete vessels, good environmental evidence and other finds showing how it was constructed and used over time illustrated the benefits of taking such a detailed contextual approach to feature interpretation.

Thus it is recommended that we combine good phasing and grouping with collaboration and a full consideration of theoretical issues to get the most from material assemblages – and doing this in the field is not a bad place to start.

Matthew Fittock

Session Two: Papers based on finds from the Yorkshire Museum

Roman magic: The Eboracum case study

Adam Parker,
Assistant Curator of Archaeology, Yorkshire Museum

'Magic', in the Roman world, is a catch-all term used to describe all of the supernatural elements of daily life that fall outside the scholarly definition of 'religion'. It has traditionally been studied alongside religion, both as a related phenomenon and as a standalone concept. As a concept, 'magic' is difficult to define, largely because of its complex relationship with religion and other forms of ritual practice. Adam finds the definition of magic by Ralph Merrifield, eminent Roman London archaeologist, the most fitting in that the use of such practices were intended to bring occult forces under control and so to influence events.

His paper examined the range of material culture which has been variously described as 'magical' within its geographical, chronological and material contexts in order to assess the implications of this interlinked approach and what it can tell us about the functions of magic in the Roman world. Such material included



Fig. 12. A Jet Gorgoneion pendant from a female inhumation in Roman York. In the Yorkshire Museum.
© YORK MUSEUMS TRUST (Yorkshire Museum)
[CC BY SA 4.0].



Fig. 13. A copper alloy fist-and-phallus harness pendant from Roman York. In the Yorkshire Museum.
© YORK MUSEUMS TRUST (Yorkshire Museum)
[CC BY SA 4.0].

phallic charms, gold lamellae, Gnostic amulets, jet pendants and amber carvings amongst other objects.

Jet pendants and figurines – pendants consist of Medusa pendants and portraits (fig. 12). Ten have been found in Roman Britain, four of which come from York - such pendants are usually found in female burials. Seven bears, two from York and examples from Colchester and Chelmsford are usually found in infant burials. Some of the jet examples are worn or well-polished and jet has electrostatic properties if rubbed with a cloth and was, therefore, regarded as magical. Other jet objects from York include a jet eagle head from a handle and a bone pin with a carved eagle finial from York Minster.

Gold lamella – a small flat gold sheet, which would have originally been folded, had two lines of Greek text which translates as 'bound by spells'.

Amulets and amulet cases – the sheet was rolled and put inside the container. York has an example from the Church Street sewer but there is a better example from Krefeld-Gellup, Germany.

An Oculist stamp – detailing Julius Alexander's salves for eye irritations, also found in York.

Phallic symbols (fig. 13) – stone carvings come from military sites and a few villa sites. Three were found together from the Fortress Wall, York. Fist & phallus mounts have a north-western Empire distribution and York has an example from Blake Street, as well as a cavalry harness mount depicting the same. Vulvate imagery, especially on studs, was worn as a protection.

The material evidence for 'magic' in Roman Britain is the subject of the speaker's PhD studies and Adam is using Eboracum as a case study to show a microcosm of the potential results of this research.

Coins from Roman York in context

Dr Andy Woods,
Curator of Numismatics, Yorkshire Museum

Excavations over the past 200 years across the cityscape of York have produced thousands of Roman coins. Their interpretation has the potential to make a significant contribution to understanding the economic and social landscape of Eboracum.

Andrew looked at the new evidence caused by metal detecting and the PAS which has vastly increased the number of coins recorded. Yorkshire has over 15,000 coins but they lack the stratigraphic information. In order to establish a norm, the PAS use the Reece coin periods for site assemblages as it provides the analytical framework for further research. Philippa Walton (*Britannia* 2012) drew together the PAS material and site finds and showed the flow of denominations and currencies. She showed that there was a huge expansion of 3rd-century radiates and Constantinian nummi (Reece period 17). By looking at the Yorkshire finds, Andrew has found that Yorkshire hoards have a different spread and clusters to the individual finds on the PAS. The number of excavated site coins from Yorkshire is very limited. There are 10s of sites, 100s of hoards and 1000s of records on PAS. Excavations tend to be biased towards urban and military sites whereas the PAS records tend to be rural. Yorkshire is different to the national norm for single coins. It peaks in the Reece periods 4, 5, 10 & 12 whereas the PAS has large numbers that date to the 4th century.

Andrew then turned his attention to a small subset of the material, drawing upon coinage in the collections of York Museums Trust and York Archaeological Trust. He looked at whether coins were used in York and where and how and compared it with other sources of evidence. YAT has 3000 coins from 70 sites; YMT has 517 coins from 61 sites, 3500 from seven hoards, 202 from the York Minster site. In total there are about 7500 from 137 sites. Sites with more than 10 coins in York show an even spread but it is not known whether such coins are residual or in situ - records are limited. He compared the coins from the colonia south of the river and showed that there was a relatively consistent use of coins and had late assemblages whereas the larger regional dataset showed higher spikes in the Constantinian period (Reece period 17). Coinage from burials, where coins were found in the mouths of the dead or in cremations in the early period at Trentholme Drive would have been a ritual practice.

The project is ongoing but already shows a growing civilian use of coinage in the later periods. Context is vital if we are to unlock the value of coins.

Roman ivories from York and Brigantia in their Romano-British setting

Dr Stephen Greep, Roman Finds Group

Ivories have recently been described as exotic and rare and are generally considered one of the luxury products of the Roman world and Stephen has been looking at just how common and how luxurious they were. His paper examined finds of ivories from throughout the Roman period, concentrating on those from York and the north and placing them in a British and wider context.

The first problem is being able to identify ivory from bone. Elephant tusk has a thick amount of dentine (this is ivory) and it's not possible to distinguish between Indian and African ivory. Ivory has wavy layers, called Shreger Lines, which makes it ideal for carving.

There is good literary evidence for ivory being a valued product. Pliny says that it was rare and only obtained from India. An Egyptian papyrus stated that ivory had the same value as silver but by the time of the Diocletian's Price Edict it was worth 1/40th of its weight in silver.

There was a trade in both tusks and finished objects. Only one site for ivory working has been found in operation in Palestine from the 1st to 4th century. St Albans has a chunk of ivory which may be a waste product. Pliny refers to ivory workers in Rome where there was an ivory guild of workers in the 4th century and ivory objects are also mentioned by the Classical authors.

There are 125 ivory objects from 90 contexts in Roman Britain. When classified by site 50-60% come from major urban sites (including York and London). York has ivory scabbard chapes; YAT has a clasp-knife handle (2nd/3rd century) and a 4th century bracelet and YMT has fan handles, parasol ribs, a clasp-knife handle, composite bracelets and annular bracelets (from the York African woman burial). 'Bone' bracelets are actually made of antler as no bone is large enough. The South Shields gladiator is the best-known ivory object from Roman Britain. There are only three figural clasp-knife handles found from South Shields, Silchester and Lant Street in Southwark.

In conclusion, Stephen discussed the frequency, form, chronology and distribution of Roman ivories, placing the northern finds in their British context while examining the origins of the ivories themselves. Unsurprisingly, the largest concentrations of Roman ivories are found in the cities of Britannia - York has the largest concentration in the north; but there are ivories from smaller towns, forts, villas and even a Yorkshire cave.

Ivories are found throughout the Roman period, but it was never common, with under 100 find spots recorded so far - around 10% of Roman ivories are found in the north. Manufactured from elephant ivory and first appearing in Britain in pre-flavian contexts, one of the earliest examples comes from the north on hilts on two swords at South Cave. They had elephant ivory in the handles but also whale ivory in other decorative features. The north also has the best known ivory from Britain in the form of the York fan handles and the largest, and maybe latest, piece of ivory recovered from Roman Britain is the Goodmanham plane. Objects of ivory are most common in the 1st century and come from military contexts and used for bracelets in the 4th century. They most probably arrived in finished form as there is so little evidence for waste.

Keynote Presentation

'Whither Falco?'

Lindsey Davis

As a starter to her talk Lindsey reviewed how she became an author. She gained an English degree at Oxford and



spent 13 years in the Civil Service. It was difficult for women to get promoted at that time and she decided that she wanted to be a historical novelist but also had a mortgage to pay. Her favourite period was the English Civil War and she wrote stories that were turned down by publishers while working as a civil servant. There was no popular fiction set in the Roman period except for the likes of Rupert Graves and she chose the Romans because one of her teachers at school, interested in archaeology, had set up the Archaeology Society and as it was linked with the boys' school, the girls joined the society to meet boys and it meant days out looking at sites!

Lindsey has published some 30 books mainly about a Roman investigator Marcus Didius Falco (20 books). She wanted to make her characters witty and created Falco, as a Philip Marlowe type of private detective. She invented a large family to provide lots of characters and to enable him to travel round the Empire. Initially, she worked from Salway's *Roman Britain*. She revealed that she never has an idea of the murderer at the start of a book!

She reminisced about how she first met Stephen Greep in 1989 who was guide lecturer on a holiday tour which she went on to get a proper look at Italy – she had already written *Silver Pigs*. She also scolded Jenny Hall for changing how London's water-lifting machine operated after she had included it in her book, *The Jupiter Myth* (2002)!

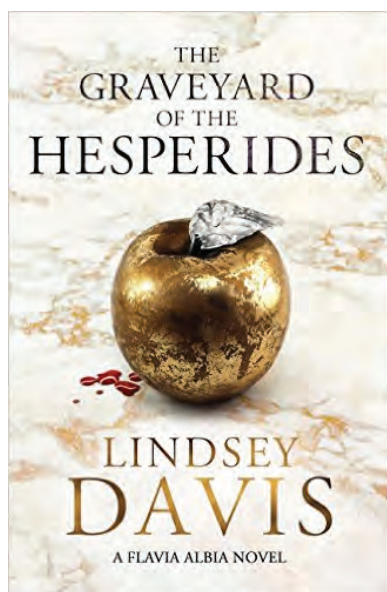


Fig. 14. Cover of Lindsey Davis' book, *The Graveyard of the Hesperides*.

She has now changed the main character to Flavia Albia (four books; fig. 14), the adopted daughter from Britain, and Lindsey then read some excerpts from her new book, *The Graveyard of the Hesperides*.

All in all, it was a very entertaining talk.

UK hardback, Hodder and Stoughton, April 2016, ISBN 9781473613362

UK paperback, Hodder and Stoughton, September 2016, ISBN 9781473613393

Jenny Hall

Session Three: Papers based on finds from York and the Yorkshire Museum

Containers and culture: perfume and medicine consumption in Roman North Yorkshire

Thomas J. Derrick,
School of Archaeology and Ancient History,
University of Leicester

In his contribution, Thomas examined the archaeological evidence for the consumption of Roman perfumes, medicaments and cosmetics in North Yorkshire. His presentation of the local evidence is set into the wider background of a doctoral project, at the University of Leicester, on the use of glass unguentaria and the consumption of unguenta and medicamenta in Roman Britain. Based upon the assumption that these vessels can be used as an indicator of the consumption of their assumed contents, the aim is to achieve a greater understanding of the role these substances played in society.

Thomas started with a definition of what unguentaria are (fig. 15). His chronology and typology is based on Isings 1957, Price & Cottam 1998 and Robin *et al.* 2012. The context and frequency of these vessels is used to investigate olfactorial, visual and medicinal aspects of social behaviour. Who used these vessels, where and why? Evidence from Italian funerary stelae provides depictions of unguentaria together with objects belonging in a female sphere. In the cemetery at Ornavasso, approximately 60% of female burials but only 30% of male burials contained unguentaria, probably related to the use of oils and/or perfumes in funerary pyres. In his British sample, comprising two regions (NE-England and Colchester/Essex) and four control sites (Leicester, Silchester, Caerleon and Usk), Thomas found that the vessels are seemingly much more common at urban and villa sites than at rural ones. A strong correlation of the use of unguenta and medicamenta was also found to exist with female burials and with military sites. The use of such substances in magic rituals was touched upon with reference to a crushed unguentarium found in the floor of the Silchester basilica.

Earlier, Thomas had already mentioned the interesting fact that the Capua perfume makers were located next to metalworking workshops because of the use of metal residues in perfumes, which can be explained with the magic/healing properties attributed to the gold colour of these residues. In a case study of York burials, he found that out of 78 unguentaria half the assemblage was fire damaged as they were found in bustum burials. It appears that unguentaria were an important part of

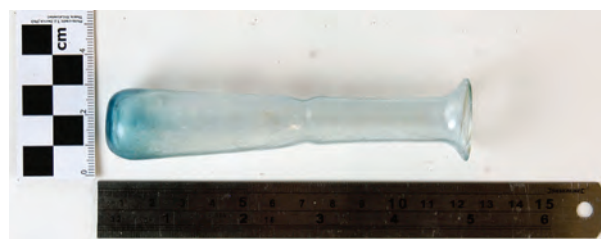


Fig. 15. Tubular unguentarium with flared rim and slight constriction in (natural) blue-green glass (Mid-late 1st-early 2nd C. AD, Provenance: Probably York, likely the railway cemetery). YORYM : HG32 – Cool, H.E.M. 1995 (unpublished), cat. no. 44 – Photo: TJ Derrick © York Museums Trust (Yorkshire Museum) [CC BY-SA 4.0].

burial rites during the 1st and 2nd centuries, with a decline in frequency during the 3rd and a comeback with slightly different shapes in the 4th century. With these preliminary results Thomas has touched upon an interesting aspect of Roman socio-corporeal behaviours in North Yorkshire, Britain and beyond, and we can look forward to the presentation of the final results in due course.

Bibliography

- Isings, C., 1957. *Roman glass from dated finds*. Doctoral thesis Utrecht University, J. B. Wolters, Groningen, Djakarta.
- Price, J. and Cottam, S., 1998. *Romano-British Glass Vessels: A Handbook*, Practical Handbooks in Archaeology 14, Council for British Archaeology, York.
- Robin, L., Silvino, T. with Garnier, N. 2012. Les «balsamiques» en contexte funéraire à Lyon-Lugdunum (Ie-IIe s. ap. J.-C.), un état de la question, 179-90, in D. Frère and L. Hugot (eds), *Les huiles parfumées en Méditerranée occidentale et en Gaule, VIIIe siècle av. - VIIIe siècle apr. J.-C. Actes du Colloque, Rome, École française de Rome, du 16 au 18 novembre 2009 organisé par l'Université de Bretagne Sud et l'Université de La Rochelle*, Archéologie de l'artisanat antique 6 = Collection du Centre Jean Bérard 38, Naples, Rennes.

Pipeclay figures in the Yorkshire Museum

Matthew Fittock,
Department of Archaeology, University of Reading

To start with, Matthew described pipeclay figurines as small terracotta statues measuring between 50 mm and 200 mm, widely distributed in Belgium, France, Germany, Switzerland, the Netherlands and the UK, and traditionally interpreted as toys, trinkets or votive figurines. They were not made in Britain but produced in manufacturing centres in Central Gaul and the Rhine-Mosel region. The assemblage considered in his contribution is based on the collection of the Yorkshire Museum, augmented by finds from York Archaeological Trust and previously published examples.

Apart from common deity types, such as Venus and Dea Nutrix, there are a number of rarer types, including a bald-headed child (*Risus*), a large bird and a unique, small, naked male. Many of the finds from York come from old excavations with limited contextual information. The better-recorded figurines from York are associated with the settlement's cemeteries while the figurines from Catterick derive exclusively from habitation deposits. In his national sample of over 900 figurines – recorded in the course of his ongoing doctoral research at the University of Reading – 68% represent deities, 12% animals/birds, 7% humans and 13% are other/unknown types. With 12% the frequency of human figurines from Yorkshire was larger than in the national sample.

In a fascinating excursion Matthew presented the results of his experiments examining the fragmentation of pipeclay figurines, for which he employed replicas of Venus and Dea Nutrix figurines. No damage occurred when the figurines were dropped from a height of 2m onto an earthen floor, whereas a drop from 50cm onto a hard floor produced breakage patterns similar to that

observed in the ancient examples. Among the finds from Yorkshire Venus figurines were frequently found with the head missing. In the discussion at the end of Matthew's instructive presentation, Brigitte Hoffmann made the interesting comment – based on personal observations in a Kindergarten – that one explanation for head loss may be damage caused by children playing.

The Driffield Terrace cemetery, York and the Ravenglass vicus, Cumbria: the finds and the interpretation of two sites excavated by the York Archaeological Trust

Kurt Hunter-Mann,
Post-excavation Researcher
Sandra Garside-Neville,
Finds Researcher

The last paper in this session looked at finds assemblages from two very different sites of Roman date, a vicus attached to the fort at Ravenglass on the Cumbrian coast and a cemetery at York. Kurt presented the preliminary findings of their careful interpretation of the assemblages, taking account of the context of the finds, the reliability of the excavation samples and the relationship of the 'sites' to the wider human land use. The Ravenglass diploma was found on the beach, but whether it comes from the fort or the port remains uncertain due to the rapid progress of coastal erosion in that area, amounting to as much as 1m per ten years. On previous evidence, the vicus was thought to be located to the north of the fort, but no excavations have yet been carried out to prove this assumption. The results of geophysical surveys in 2013–14 suggest that the vicus might have been located to the north and east of the fort. Four trenches have subsequently been investigated in the bathhouse area and near the road to Hardknott Castle. Large amounts of metalworking residues were found; however, these do not relate to the occupation of the buildings but were deposited prior to their construction. Metal slag was also used in the foundation of the road, providing a convenient means of disposing of metalworking residues. Kurt acknowledged that the investigated areas were not extensive enough to achieve a conclusive understanding of the activities within the buildings.

The finds included samian from the topsoil which could have derived from the vicus or the fort itself and had been put down as part of the levelling deposits. Nonetheless, it can reasonably be assumed that Ravenglass was used as the port for the supply of Hardknott Castle. At the current stage of analysis it is already evident that imports to Ravenglass came from all areas of Britain, with a slant to the western regions; slate used in the later phases came from the Lake District.

Excavations at Driffield Terrace in York in 2004–5 were carried out on part of the Mount cemetery, a high status burial ground. The excavated area measured 20x15m of a back garden, in addition to a smaller area in a second back garden two doors down from the first site where a tumulus grave was found. Half the burials were decapitated individuals, but not all individuals in multiple burials had been treated in this way. The decapitated burials had their heads placed in the anatomically correct position. A fascinating – yet gruesome – finding is the bite mark of a tiger or lion observed on one individual who might have been a gladiator (or convict?) mauled at a venatio. Apart from one female almost all the burials belonged to



well-built, healthy men between 18 and 45 years of age. The frequency of trauma caused by fighting or animal-induced perimortem traumata would support an interpretation of this cemetery as belonging to a gladiator population. One decapitated individual was buried with very crude iron leg rings, and there is evidence of infection in the area of the rings. Another burial was found with fragments of a horse. Other finds included miniature silver tongs (fig. 16), lamp fragments, tazze and a bone toggle.

The possible gladiator cemetery is likely to have been part of a larger burial ground, but the limited sample size currently precludes a clear-cut interpretation. Likewise the finds might derive from dumping. It remains to say that Kurt and Sandra deserve congratulations for the careful and considered interpretation of such fascinating results.

Jörn Schuster



Fig. 16. Miniature silver tongs from 6 Driffield Terrace.

Session Four : Papers based on finds from Brigantia

Scratching the surface; using artefact research to expand our understanding of Vindolanda

Barbara Birley,
Curator, Vindolanda Trust

Barbara presented a fascinating talk on recent finds from Vindolanda and research on some 'older' discoveries. The staves and base of wooden tankards are being researched by Rob Sands at Dublin University. Yew seems to be the favoured wood for tankards compared to larch or fir for barrels. Work is ongoing to determine why yew is selected – could it be the attractive colour? However, yew is thought to have an effect on food and Pliny records that red wine is poisonous if associated with it. No workshops have been found for the manufacture of the tankards so it is not known where they are from.

New work is also being carried out on a skull of a male (20-30 years old) found in 2001 in the Severan ditch. Associated rubbish includes cattle, pig, shoes, pottery and the skeleton of a dog which appears to have been skinned. The skull shows evidence of trauma at the time of death caused by a sharp weapon and also blunt trauma and evidence of being mounted on a pole. Isotope analysis on the teeth suggests a northern

European origin. However, recent DNA analysis by Victoria Barlow, Northumbria University, suggests that the individual is from Italy.

A third example of new research focussed on a cavalry sword, found in 2004 and dating to 105-120. Use/wear analysis has highlighted cracks and fragilities due to hammering and a strange oxidation, possibly due to an organic handle, on the tang. Analysis on the blade revealed v-shaped nicks which suggests blade on blade impact.

Barbara then treated us to some of the finds from 2015 including a rare complete fourth-century polished bone spinning set; a wooden bath clog (one of c. 25 from the site; fig. 17); a roof tile with a dog paw print and graffiti; part of the (re-used) frieze from the Temple of Diana and a human footprint on a tile, the first to be found on the site.



Fig. 17. Wooden bath clog from Vindolanda.

2015 in Yorkshire, Roman finds from the Portable Antiquities Scheme

Rebecca Griffiths,
Finds Liaison Officer for North and East Yorks

Rebecca gave us an introduction to the Portable Antiquities Scheme and discussed some of the recently recorded finds which are helping to shed light on Roman Yorkshire. There is currently more than a million records on the database, 300,000 of which are Roman.

Of the brooches, the headstud type are the most common, and more frequent in northern England. There are only five double headstud types (fig. 18), which have been identified through the work of the PAS and originally thought to have been a northern phenomenon, three of these are from Yorkshire with the others coming from Lincolnshire and the Isle of Wight. Examples of mis-cast fantail brooches found in Castleford suggest that they may have been made there.

There are more than 450 button and loop fasteners, used with harness equipment and clothing, on the database, with a marked concentration in the north east. New types have appeared, such as the double-headed examples, which are not in Wild's typology.

Coins are the most common finds with more than 230,000 on the database – more than 12,000 for North and East Yorkshire. Hoards were also discussed including one from Selby, and an arm purse (possibly a male military accessory) with four coins inside.

Statues have also been recorded recently, including a life-sized figure of an emperor or god; and a military diploma dated precisely to 17th July AD 118 giving an



Fig. 18. A new double headstud type brooch from Brantingham, East Yorkshire (YORYM-EDE045).

infantry soldier (unfortunately the name is lost) the rite of citizenship and marriage; and a re-used intaglio in a medieval seal matrix. Perhaps the most puzzling artefacts are the dodecahedrons which have been recovered from various contexts. Their use is unknown but there have been several suggestions, for example used in surveying, dice, an astronomical purpose or sceptre heads.

Rebecca demonstrated how important recording on the PAS is and how it can be used at any scale, ranging from national to parish level.

Perforated bone spoons: a peculiarly Brigantian form

Dr Sonia O'Connor,
Research Associate, University of Bradford
Dr Stephen Greep,
Roman Finds Group

This paper outlined the study of these bone spoon-shaped objects, looking at their typology, chronology and distribution. A surprisingly large number come from Yorkshire caves, for example those in the Settle area, though they are also found in forts, towns and villas. The four in the Yorkshire Museum are all from York.

They vary in shape, some of the terminals are decorated but unfortunately they don't form a useful typology. Various suggestions have been put forward as to their function, such as hair pins and garment fasteners, but they are not spoons.

Stephen outlined Sonia's work, in looking at the microscopic wear patterns. However, most examples are from nineteenth-century excavations and museum collections and so have been cleaned (and sometimes varnished), so microscopic techniques are not always useful. The technology does exist to look for residues inside an object but this results in the destruction of the object. They appear to have been made almost exclusively from cattle bone, but with the aid of zoom analysis to identify proteins, deer bone has also been recorded.

A high percentage of these artefacts are found in Yorkshire, with 50% coming from cave sites – so what is happening in Yorkshire that isn't happening elsewhere? The largest collection is from Victoria Cave (see M. Dearne's work) with the second largest, i.e. ten, coming from Dowkerbottom Cave in Settle (a site which also produced the earliest example in 1845, now in the British Museum), which are very different in terms of shape and form. Unfortunately the records are limited regarding the location of any associated finds.

The earliest example is of Flavian date, from Castleford, but their date range is right through the Roman period so that identifying what could be called early or late forms is difficult. Generally speaking, the ones from caves are crudely made and the early ones from Castleford look as though they are more professionally made. Similarly, those from forts and towns are of better quality. There are some possibly related forms with decorated terminals from Frocester Court (4th century), Wroxeter (4th century) and York.

RFG film project update

Jenny Hall,
Treasurer, Roman Finds Group

Jenny outlined the new film project that the RFG is currently working on. This is a series of short educational films designed to help with the identification of objects. By giving an introduction to specific topics and materials they will appeal to various audiences – students, volunteers, local society members or for those starting off in finds research.

A working party will devise the content of each film, which will run for a maximum of five minutes and will have a standardised format with finds specialists talking about objects for a particular topic. Themes for the films will be personal, domestic, working, religious, military and public. It is hoped that the films will be supplemented with bibliographies and backed up by the RFG website.

This is a long-term project with films being added as specialist, objects and filming opportunities arise. The Digital Media Services at Newcastle University have offered filming facilities and Reading University and the British Museum are also interested in being involved. The RFG has been awarded a grant from the Roman Research Trust for a young film maker to make more films.

Jenny showed a couple of films on furniture and fittings and wooden combs and asked for comments. It was suggested that sub-titles would make the films more accessible and more illustrative material would be useful.

Thanks are due to all those people who have helped in the project so far.

Gill Dunn

Session Five. Papers based on finds from Brigantia and beyond.

The Duchess of Northumberland: a fire and a fake excavation: tales from the lives of the Bartlow Hills Roman finds

Colin Wallace,
Consulting Archaeologist

Well-illustrated in the pages of the journal *Archaeologia* (25, 1834; 26, 1836; and 28, 1840) are the finds from the Roman barrows at the Bartlow Hills, on the modern Cambridgeshire/Essex border – sets of glass, wood, pottery and metal vessels accompanying cremation burials (mainly) in wooden chests, under barrow-mounds. The barrows were excavated in 1832, 1835, 1838 and 1840, and the finds are also known as being



among the more notable 'lost artefacts' of Roman Britain, having been destroyed in a country-house fire in February 1847. Recent fieldwork has probed the landscape, structure and nature of the barrow-complex, with useful results (e.g. Eckardt *et al.* 2009, 'The Bartlow Hills in context', *Proceedings of the Cambridge Antiquarian Society* 98, 47-64).

The paper presented material arising from a different resource assessment - on the history of the archaeology of the Bartlow Hills. All modern discussions of the history of the fieldwork suggest that the first excavations were in 1815, at the behest of the important Cambridge medical man Sir Busick Harwood (1750-1814). The most significant work, until recently, were the excavations by John Gage (1786-1842) in 1832, 1835, 1838 and 1840. Colin's research however quickly established that Harwood died in November 1814 and the source for the '1815' claim was not a contemporary one or an archive record, but a work of 1908, by Guy Maynard, the then curator of Saffron Waldon Museum, which recorded various finds from the most northerly barrow. In turn, his source seems to have been information that accompanied the material when it was finally accessioned late in the nineteenth century, as no proper registers were made in the early years of the 19th century. John Gage suggested that the site was Roman, but appears to have had no knowledge of any previous excavations, but Harwood's contemporary, Thomas Walford recorded Roman discoveries in Harwood's garden, just north of the barrows.

The bulk of the finds from Gage's excavations were destroyed by fire in 1847. The coming of the railway to the Bartlow Hills in 1863-4 prompted renewed interest in the site, although the archaeological response was slow and was too late for the line to be diverted. The crisis, which involved the Great Eastern Railway, the Archaeological Institute and local residents stimulated interest in the earlier finds by Gage, which included the well-known cremation burial in Barrow IV. This contained a glass urn, the bronze sphinx-handled flagon, a handled bronze patera with other vessels, an iron folding chair, strigils, glass and pottery vessels.

Part of the present display in Saffron Waldon museum is a replica of the small enamelled handled vessel from Barrow IV and indeed multiple copies were made of this artefact, the first mentioned in 1862, exhibited by William Twopenny, an antiquary and friend of Gage. The locations of the other copies included Alnwick Castle, the seat of the Duke of Northumberland, and the British Museum. Other finds were also replicated and the whole process sheds light on the replication of archaeological artefacts before the advent of electrotyping. The selection of recipients of the copies displays a network of antiquarian patronage.

It is accepted that the original Roman grave goods no longer exist, (although the enamelled bowl survived in a badly damaged state). Colin's research shows that the story of Gage's finds after excavation is actually very complex, and similar questioning might shed light on the more enigmatic fieldwork and discoveries outside the barrows.

Colin's study proved a fascinating insight into the social history of archaeology, whether choosing which aristocratic patron to gift a replica, or making up the history of an excavation to avoid embarrassment. Investigating the accuracy of the supposed history of

an assemblage can prove surprising.

Special treatment of some fourth-century glass tableware - the case of the Colliton Park bowl

Professor Jennifer Price,
Emeritus Professor, Department of Archaeology,
Durham University

A fragmentary late Roman hemispherical glass bowl with incised figured decoration showing a Bacchic scene was found in a pit during excavations at Colliton Park in Dorchester, Dorset in 1938. The bowl has been published on several occasions since then and is widely accepted as one of the finest pieces of fourth-century glass tableware from Britain. The greenish colourless hemispherical bowl with a figured scene of the Bacchic thyrsus, executed with a copper wheel, belongs to a distinctive 4th-century type, with angular schematic figures characterised by diamond shaped eyes shown in profile. Some 150 examples have now been found, centred on Rome, their likely origin.

In 2006, this bowl was included in a major exhibition held in the Yorkshire Museum to commemorate the 1700th anniversary of the proclamation of Constantine the Great as Emperor in York on 25 July 306. When it was displayed upside down, it was recognised that it had been divided into two pieces, possibly with a copper-alloy wire and abrasive powder, before being deposited in a pit. The reason for this is a matter for speculation. Clearly there was no intention to destroy the bowl, but perhaps the purpose was rather to continue its existence in two separate parts. It suggests that the bowl was of extraordinary significance, but what that was remains a mystery.

Although very rare the Colliton Park bowl is not unique and some other decorated late Roman glass vessels also show evidence of deliberate partition, as an example from a burial in Koln and one from the Antonine baths at Carthage show.

Finds from recent excavations at Binchester Roman fort

Dr David Petts,
Lecturer, Department of Archaeology,
University of Durham

Excavations on the fort and vicus at Binchester (County Durham) one day's march north of Piercebridge, have been undertaken every summer since 2009. This work has provided valuable insights into the development, and in particular, the final phases of activity at this important Dere Street fortification.

Recent excavations recovered most of a cavalry barrack block inside the fort and part of a vicus. The 2nd-century stone barrack block succeeded an earlier timber structure and activity continued not only into the sub-Roman period, but also into the later 5th-6th century, from which there was a large assemblage of butchered cattle.

A wide range of finds was recovered including ceramics and metalwork. A crudely carved figural slab appears to have been embedded in the barrack floor, and an early 4th century silver ring bore Christian imagery on the intaglio (fig. 19).



Fig. 19. An early 4th century silver intaglio ring from Binchester.

In the vicus strip buildings were excavated along the road and a bath block was exceptionally well preserved due to its infill with a massive dump of rubbish dating from the mid/late 4th century. This has produced substantial assemblages of domestic material, including metalwork, glass (vessel and window) and worked bone. There is also evidence for a range of craft and industrial activities in nearby structures, including a well-preserved non-ferrous metalworking area and jet working.

This paper gave a broad overview of the range of material recovered from both areas. High profile finds included two altars from the bath house and many items of personal ornament, with fine enamelled objects. The vessel glass included a painted cup showing a fish. Key research questions to be resolved during the forthcoming post-excavation analysis included the general chronology of the site and the activities carried out in the different areas.

Cataloguing and analysis of the Roman 'votive' assemblage from Piercebridge, County Durham: An Update

Dr Philippa Walton,
Research Fellow, University of Oxford

Over the past 20 years, more than 5000 Roman objects have been recovered from the bed of the River Tees at Piercebridge, Co Durham, by two divers. The objects which include, amongst other things, jewellery, military artefacts, coins, medical implements and figurines, appear to represent the remains of a nationally significant Romano-British votive deposit. Philippa's paper provided an update on the progress of the project.

The objects were concentrated in a small area, 5 x 5m, near the bridge structure and although there is little contextual information, evidence from the divers suggests that some were deposited in boxes. The objects range in date from the early Roman (1st century) to the medieval period, perhaps suggesting continuity of deposition, but most date from the 2nd or 3rd century. Philippa concentrated on personalia, which included toilet implements, razors and knives, and a wide

range (276 objects) of personal adornment - brooches, bracelets, finger rings (fig. 20) and so on, but lacking beads and items of jet. The brooches, which date chiefly from the 1st and 2nd century, include Colchester, headstuds and a repoussé disc, which is rare in northern Britain. There are also 3rd century knee brooches and divided bow brooches, thought to be military types. Zoomorphic brooches are also represented.

About 25% of the objects are fragmented, deliberately cut or bent, perhaps to put them beyond further use, but 75% are complete. The coins reflect the brooch dates, and about 10% are cut, but this is open to more than one interpretation - e.g. ritual or bullion? Fragments of gold jewellery are also cut, broken before deposition.

The deposit appears to represent deliberate deposition, mixed with a little rubbish, and it is possible that the River Tees was regarded as a significant point on the way to the frontier, prompting the deposition of ritual or votive objects. Some objects are burnt, suggesting that some may be from cremation burials. It is hoped that further detailed examination of the extraordinary assemblage might be able to tell us more about the identity of the devotees, their motivations for making offerings and the actual processes of deposition.

Angela Wardle



Fig. 20. Ring from Piercebridge.

Thanks from the Museum

After an interesting and successful meeting of the RFG in York in the first weekend of April I would like to take the time to pass on the thanks of myself and my colleagues at the Yorkshire Museum. We thoroughly enjoyed having sessions dedicated to parts of our collections and are particularly grateful for the researchers who had undertaken their research in-house before the event. My personal thanks to the members who came to the reception at the Museum on Friday evening for behaving so well and for the many interesting discussions I had whilst wandering around. Particular commendation should also go to the hidden team of washer-uppers who raced through the dirty glassware!

For future reference: to anyone who may have queries about the collections, our database is available online at the address below. All images are free to download and use under a Creative Commons License. If anyone has any particular comments or questions I can be contacted directly on adam.parker@ymt.org.uk.

[http://www.yorkmuseumstrust.org.uk/collections/search/?CL\[0\]=Archaeology](http://www.yorkmuseumstrust.org.uk/collections/search/?CL[0]=Archaeology)

Adam Parker, York Museums Trust



Recent Publications

Roman London's first voices: writing tablets from the Bloomberg excavations, 2010–14

Roger S O Tomlin, MOLA Monograph 72, 2016, ISBN 978-1-907586-40-8. £32 (fig. 21)

Recent excavations at Bloomberg London in the Walbrook valley have produced over 400 new wood writing tablet fragments, of which around 80 bear legible text, and members of the RFG may be interested to know that these have now been published in a new MOLA monograph *Roman London's first voices: writing tablets from the Bloomberg excavations, 2010–14* by Roger Tomlin.

These tablets provide many new insights into life in a provincial Roman capital including the earliest financial document from Britain, bearing the date AD 57, and what is probably the earliest reference by name to 'London' in a tablet dated to AD 65/70–80. Loan-notes, letters and various business transactions reflect a city 'very full of businessmen and commerce' (in the words of Tacitus) both before and after its destruction by Boudica in AD 60/1, with the military featuring strongly. Slaves, freedmen, traders, soldiers and the judiciary all make an appearance. Many of the documents were probably written in London, and many of 92 people named are potentially Roman Londoners. The book provides a full epigraphic analysis of the texts with commentaries on their typology, contents and significance along with discussions of the manufacture of the tablets, identification of wood species and analysis of the wax.

<http://www.mola.org.uk/publications/roman-londons-first-voices-writing-tablets-bloomberg-excavations-2010%E2%80%9314>



Fig. 21. Cover of *Roman London's first voices: writing tablets from the Bloomberg excavations, 2010–14*.

Conferences and Events

Archaeology in Gloucestershire

8th October 2016

The Guildhall, Gloucester

The annual symposium of the Bristol and Gloucestershire Archaeological Society's committee for archaeology in Gloucestershire will take place at the Guildhall, Gloucester and will focus on recent archaeology in the County. Talks will include recent excavations at Gloucester Castle, Llanthony Priory, Iron Age/Roman Mickleton, Welshbury Hill Fort, the Forgotten Landscape project at Oldbury Camp, Anglo Saxon Kempsford, Siddington and the Foresters' Forest project in the Forest of Dean. Cost £15.

Contact John Loosley email john@loosleyj.freemove.co.uk; tel. 01285 760460 for details, and for a booking form visit www.bgas.org.uk.

Romans and Natives in Central Britain

29th October 2016

Devonshire Institute, Grassington

One day conference exploring how recent large projects, many funded by developers, have highlighted a growing interest in the frontier lands on either side of Hadrian's Wall, an area that can loosely be called Central Britain. The focus of this geographical region is arguably centred on territory that came to be associated with the Brigantes, but a gulf still exists between the historical and archaeological evidence. From landscape studies and excavation to scientific artefact analysis, a range of papers at this conference will consider the evidence for interaction between native groups and Roman conquerors in and around this central zone. Details and booking form at:

<http://www.yas.org.uk/content/news/index.html>.

Archaeology in Cornwall Day

26th November 2016

The Queen's Hotel, the Promenade, Penzance

At this year's 'Archaeology in Cornwall' day, presentations will be focussed on work in the west of the county to mark the publication of *Archaeology and Landscape at the Land's End, Cornwall. The West Penwith Surveys 1980-2010*. The conference will be chaired by the Society's President, Nicholas Johnson.

The day will start at 10.00 am with registration and coffee, presentations from 10.30, lunch from 12.25 to 1.15 and an afternoon tea break from 3 to 3.30. The cost is £25 which includes coffee, a light lunch and tea (£15 for full-time students: Truro College students can get a form for the special rate from Caradoc Peters). There will be bookstalls and displays. There is parking at the Hotel and nearby. Booking forms downloadable at: <http://cornisharchaeology.org.uk/events/archaeology-in-cornwall/>.

TAG 2016

19th-21st December 2016

University of Southampton

The Theoretical Archaeology Group conference this year takes place at the University of Southampton and will be one of the events marking the 50th Anniversary of the Department of Archaeology. This year the theme is 'Visualisation'. The deadline for submitting session proposals is the 31st August and papers the 31st October 2016. Further information can be found at <http://www.southampton.ac.uk/tag2016/index.page>.

Hadrian's Cavalry Exhibition

April to September 2017

Various sites along Hadrian's Wall

Hadrian's Cavalry Exhibition is a dispersed exhibition taking in 10 of the Museums along Hadrian's Wall that will bring national, international and private collection loans together for the first time. The exhibition aims to tell the tale of Roman cavalry regiments and their key role in securing the Empire's frontiers, exhibiting a range of finely decorated objects. For further information and to sign-up to the mailing list, please visit <http://hadrianswallcountry.co.uk/events/hadrians-cavalry-2017>.